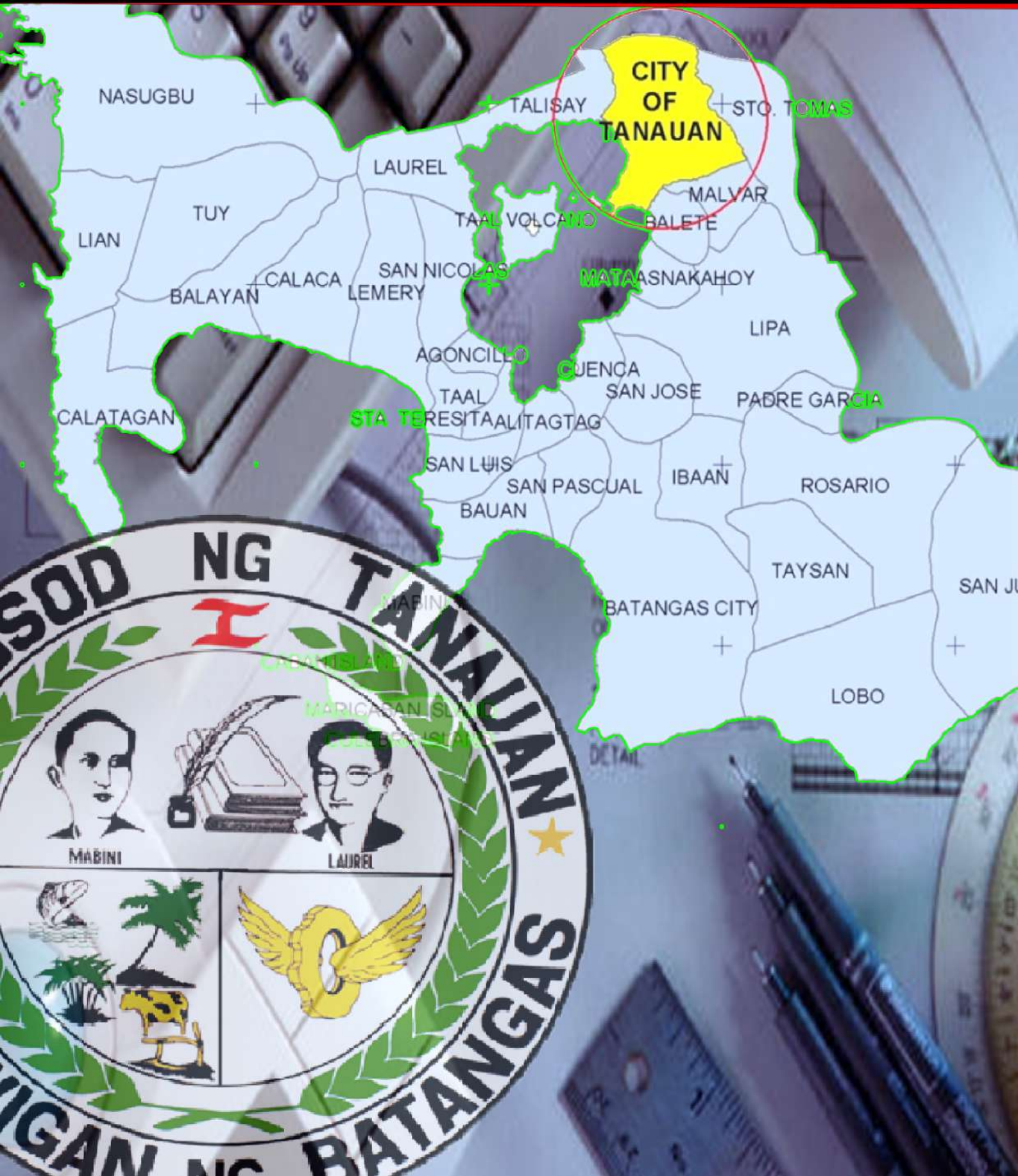


TANAUAN CITY

COMPREHENSIVE LAND USE PLAN

(CLUP) 2016-2025



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Republic of the Philippines
PROVINCE OF BATANGAS

Sangguniang Panlalawigan ng Batangas

Apolinario M. Mabini Legislative Building, Northwest Corner, Laurel Park, Capitol Compound, Kuminlang Ibaba, Batangas City 4200
Secretary's Office: (043) 786-0139 w/ Telefax * E-Mail Address: spbatangas@gmail.com

EXCERPT FROM THE MINUTES OF THE TWENTIETH REGULAR SESSION
OF THE SANGGUNIANG PANLALAWIGAN NG BATANGAS HELD ON MONDAY,
JUNE 18, 2018, FROM 11:00 AM AT THE SALVADOR H. LAUREL
SESSION HALL, APOLINARIO M. MABINI LEGISLATIVE BUILDING,
CAPITOL SITE, BATANGAS CITY

PRESENT:

<i>Hon. Sofronio C. Ona, Jr.</i>	<i>Vice Governor And Presiding Officer</i>
<i>Hon. Carlo Roman G. Rosales</i>	<i>Board Member-First District</i>
<i>Hon. Arlina B. Magboo</i>	<i>Board Member- Second District</i>
<i>Hon. Wilson Leandro T. Rivera</i>	<i>Board Member- Second District</i>
<i>Hon. Alfredo C. Corona</i>	<i>Board Member- Third District</i>
<i>Hon. Divina G. Balba</i>	<i>Board Member-Third District</i>
<i>Hon. Jesus H. De Veyra</i>	<i>Board Member- Fourth District</i>
<i>Hon. Jonas Patrick M. Gozos</i>	<i>Board Member- Fourth District</i>
<i>Hon. Maria Claudette U. Ambida</i>	<i>Board Member- Fifth District</i>
<i>Hon. Arthur G. Blanco</i>	<i>Board Member – Fifth District</i>
<i>Hon. Rowena Sombrano-Africa</i>	<i>Board Member- Sixth District</i>
<i>Hon. Lydio A. Lopez, Jr.</i>	<i>Board Member- Sixth District</i>
<i>Hon. Leo F. Malinay</i>	<i>Board Member-President of Provincial Councilor's League</i>
<i>Hon. Wilfredo M. Maliksi</i>	<i>Board Member- ABC President</i>

RESOLUTION NO. 377
Year 2018

APPROVING RESOLUTION NO. 2018-069 OF TANAUAN CITY,
BATANGAS DATED MARCH 05, 2018 ENTITLED "APPROVING AND
ADOPTING THE COMPREHENSIVE LAND USE PLAN (CLUP) OF THE
CITY OF TANAUAN FOR 2016-2025"

WHEREAS, the Committee on Housing and Land Utilization of this legislative Body thru Honorable Board Member Carlo Roman G. Rosales brought to the floor today its report concerning Resolution No. 2018-069 of Tanauan City, Batangas passed on March 05, 2018 titled "APPROVING AND ADOPTING THE COMPREHENSIVE LAND USE PLAN (CLUP) OF THE CITY OF TANAUAN FOR 2016-2025";

WHEREAS, in the said report, the committee stated its findings and recommendation as follows:

"Findings:

After careful review of the documents submitted to the Sangguniang Panlalawigan it reveals,

That, RA 7160, otherwise known as the Local Government Code of 1991 (LGC) provides that local government units shall, in conformity with existing laws, continue to prepare their respective Comprehensive Land Use Plans enacted through Zoning Ordinances which shall be the primary and dominant bases for the future use of land resources;

That, the Sangguniang Panglungsod is mandated by Republic Act No. 7160 otherwise known as the Local Government Code of 1991 to enact zoning ordinance that

is consonance with the approved Comprehensive Land Use Plan (CLUP), subject to existing laws, rules and regulations.

That, the City of Tanauan, Batangas Comprehensive Land Use Plan under Resolution No. 2018-069 of Tanauan City entitled "Approving and adopting the Comprehensive Land Use Plan (CLUP) of the City of Tanauan for 2016-2025", complied with the standards and guidelines and in conformity with the land use planning and zoning standard prescribed by the Housing and Land Use Regulatory Board (HLURB).

That, the Provincial Land Use Committee adopted Resolution No. 1-2017 entitled "Resolution indorsing to the Sangguniang Panglungsod the Comprehensive Land Use Plan 2016-2025 of the City of Tanauan, Batangas for adoption and enactment of the Zoning Ordinance.", that the said CLUP / ZO substantially complied with the Standards and Guidelines on Comprehensive Land Use Plan formulation and with the thrusts, goals and policies espoused in the Provincial Development and Physical Framework Plan 2014-2022.

That, the enactment of the Zoning Ordinance of the City of Tanauan which embodies the regulations on the allowed uses in each zone is an implementing tool of the CLUP to regulate land use and achieve desired development strategy;

Recommendation:

In view of the above findings the committee hereby resolves to approve Resolution No. 2018-069 of Tanauan City."


WHEREAS, the same was duly considered and adopted by the Board.

WHEREFORE, on motion of Honorable Board Member Carlo Roman G. Rosales, unanimously seconded,


RESOLVED, as it is hereby resolved, that the Resolution No. 2018-069 of Tanauan City, Batangas dated March 05, 2018 entitled "APPROVING AND ADOPTING THE COMPREHENSIVE LAND USE PLAN (CLUP) OF THE CITY OF TANAUAN FOR 2016-2025", be APPROVED, as the same is hereby APPROVED.

APPROVED: Monday, 18 June 2018 A.D. at Batangas City.

I HEREBY CERTIFY to the correctness of the foregoing Resolution No. 377, Year 2018 approved by the Sangguniang Panlalawigan ng Batangas during its Twentieth Regular Session held on June 18, 2018.


PASTOR U. UNTALAN
Assistant Provincial Board Secretary

ATTESTED:


SOFRONIO C. ONA, JR.
Vice Governor
and Presiding Officer



Republic of the Philippines
Province of Batangas
CITY OF TANAUAN

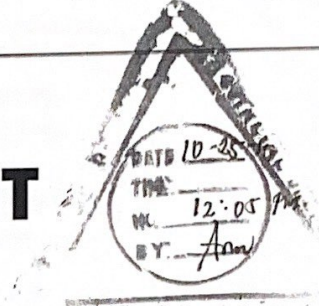
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TANAUAN City of Colors



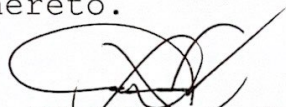
Website: www.tanauacity.gov.ph Tel no: (043) 778-1902

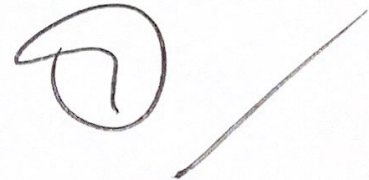
1st ENDORSEMENT

20 October 2016



Respectfully endorse to the **HONORABLE MEMBERS OF THE SANGGUNIANG PANLALAWIGAN**, Batangas Province, thru the Hon. Sofronio Ona, Jr., Provincial Vice-Governor and Presiding Officer, the hereto attached Comprehensive Land Use Plan (CLUP) of the City of Tanauan, Province of Batangas, for the year 2015-2025, duly supported by the Certification executed by the Honorable Members of the Sangguniang Panlungsod, this city, as regards the required Public Hearing conducted on September 22, 2016, which is self-explanatory, for your appropriate action, subject to all existing laws, rules and regulations applicable thereto.


ANTONIO C. HALILI
City Mayor





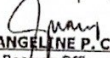
Republic of the Philippines
Province of Batangas
CITY OF TANAUAN

Office of the Sangguniang Panlungsod

March 13, 2018

Mrs. AISSA M. LEYESA
CGDHI - CPDO

Dear Mrs. Leyesa:

TRANSMITTAL NUMBER
OSSP-18-42
Date: 3/13/2018
 EVANGELINE P. CASAS Records Officer II

We are cordially furnishing you, copy of a passed Sangguniang Panlungsod Resolution numbered and titled:

Title

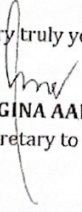
CO 2018-069

Approving and Adopting the Comprehensive Land Use Plan (CLUP) of the City of Tanauan for 2016-2025

For your information and/or appropriate action.

Please acknowledge receipt of the same. Thank you.

Very truly yours,


REGINA AALA OCAMPO
Secretary to the SP



Office of the Sangguniang Panlungsod

EXCERPTS FROM THE MINUTES OF THE 87th REGULAR SESSION OF THE SANGGUNIANG PANLUNGSOD OF THE CITY OF TANAUAN, BATANGAS HELD AT THE BULWAGANG EBRON SESSION HALL, NEW CITY HALL BUILDING, BARANGAY NATATAS, CITY OF TANAUAN, BATANGAS ON MARCH 05, 2018

PRESENT:

Hon. ATTY. JHOANNA C. CORONA-VILLAMOR	City Vice Mayor and Presiding Officer
Hon. Benedicto C. Corona	Member,
Hon. Marcelo Eric O. Manglo,	Member,
Hon. Rizaldrin Epimaco B. Magpantay,	Member,
Hon. Atty. Gileen V. Canobas-Manaig,	Member,
Hon. Joseph M. Castillo,	Member,
Hon. Marcial V. Goguanco, Jr.,	Member,
Hon. Angel V. Atienza,	Member,
Hon. Herman G. Trinidad,	Member,
Hon. Simeon M. Platon,	Member, and
Hon. Lim P. Tabing,	Member.

ON OFFICIAL BUSINESS:

Hon. Polmark L. Fajardo,	Member, (ABC President).
--------------------------	--------------------------

ABSENT:

None.

Res. No. 2018-069. – APPROVING AND ADOPTING THE COMPREHENSIVE LAND USE PLAN (CLUP) OF THE CITY OF TANAUAN FOR 2016-2025

WHEREAS, the proposed Comprehensive Land Use Plan (CLUP) of the City of Tanauan for 2016-2025 was forwarded to this Sanggunian via 1st Endorsement dated September 2, 2016 from the Office of the City Mayor;

WHEREAS, the matter was referred to the Committee on Housing and Land Utilization for study, proper evaluation and appropriate action;

WHEREAS, the committee conducted a public hearing on the matter on September 22, 2016 attended by officials of the different barangays, various non-governmental organizations and people’s organization, officials and representatives of concerned national agencies and other stakeholders;

WHEREAS, the committee in its Committee Report dated March 5, 2018 presented its findings, to wit:

“The City Planning and Development Office (CPDO) first presented the Socio-Economic Profile of the City of Tanauan, followed by the significant provisions of the Proposed Comprehensive Land Use Plan (CLUP) and Zoning Ordinance (Z.O.) for 2016-2025. These documents will serve as guides for land use planning and will set the direction for the implementation of the development strategies of the city government for the next ten (10) years.



Office of the Sangguniang Panlungsod

"After the presentation, there was an Open Forum where the attendees were able to inquire with the Resource Persons on the proposed changes on the zoning plan, for the classification and use of the lands covering their respective barangays. By virtue of the Local Government Code, the Sangguniang Panlungsod has the sole power to determine the classification and use of lands in their respective jurisdiction. Thus, the CLUP shall serve as the framework of development on the different clustered areas which are zoned based on their proper perceived use. For purposes of utilization of the land within the zone, reclassification and issuance of development permit shall still be sought before the Sangguniang Panlungsod. It is recommended by the Committee on Laws that a provision for this purpose shall be inserted in the Proposed Ordinance.

"The Committee submitted to the CPDO all relevant documents of the public hearing, which was then forwarded to the Provincial Land Use Committee (PLUC) on October 20, 2016, together with the Draft CLUP and Z.O. for 2016-2025, for its review and evaluation. From the PLUC, the documents were submitted to the Provincial Planning Office on July 25, 2017 and were further reviewed and evaluated.

"The comments and recommendations of the reviewing committees were all noted and incorporated in the CLUP, thus, on November 3, 2017, the Provincial Planning and Development Committee endorsed Resolution No. 1-2017, "Resolution Indorsing to the Sangguniang Panlungsod the Comprehensive Land Use Plan 2016-2025 of the City of Tanauan, Batangas for Adoption and Enactment of the Zoning Ordinance".

WHEREAS, the committee has recommended for adoption and approval of the said plan taking into consideration the comments and suggestion of the Provincial Planning and Development Committee (PLUC);

WHEREAS, this august body adopted and approved the aforementioned recommendation of the Committee;

NOW, THEREFORE, upon the recommendation of the Committee on Housing and Land Utilization, and on motion of Councilor Marcial V. Goguanco, Jr., seconded by Councilor Benedicto C. Corona, Be It Unanimously Resolved, to approve and adopt, as hereby is approved and adopted, the COMPREHENSIVE LAND USE PLAN (CLUP) OF THE CITY OF TANAUAN FOR 2016-2025.

ADOPTED this 5th day of March 2018 at the City of Tanauan.

Certified Correct:

REGINA M. AALA-OCAMPO
Secretary to the Sangguniang Panlungsod

Attested:

ATTY. JHOANNA C. CORONA-VILLAMOR
City Vice Mayor and Presiding Officer



Republic of the Philippines
Province of Batangas
CITY OF TANAUAN

OFFICE OF THE CITY MAYOR
TANAUAN City of Colors



Website: www.tanauacity.gov.ph Tel no: (043) 778-1902

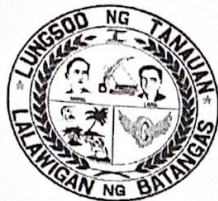
1st ENDORSEMENT

20 October 2016

Respectfully endorse to the **HONORABLE MEMBERS OF THE SANGGUNIANG PANLALAWIGAN**, Batangas Province, thru the Hon. Sofronio Ona, Jr., Provincial Vice-Governor and Presiding Officer, the hereto attached Comprehensive Land Use Plan (CLUP) of the City of Tanauan, Province of Batangas, for the year 2015-2025, duly supported by the Certification executed by the Honorable Members of the Sangguniang Panlungsod, this city, as regards the required Public Hearing conducted on September 22, 2016, which is self-explanatory, for your appropriate action, subject to all existing laws, rules and regulations applicable thereto.

ANTONIO C. HALILI

City Mayor



Republic of the Philippines
Province of Batangas
CITY OF TANAUAN

OFFICE OF THE CITY MAYOR
TANAUAN City of Colors

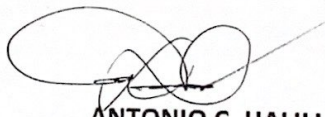


Website: www.tanauacity.gov.ph Tel no: (043) 778-1902

2nd ENDORSEMENT

30th June 2017

Respectfully, endorsed to the Provincial Land Use Committee (PLUC), thru MR. BENJAMIN I. BAUSAS, PPDC and PLUC Chairperson, the hereto attached Comprehensive Land Use Plan (CLUP) of the City of Tanauan, Province of Batangas, for the year 2016-2025 duly revised and edited as per comments of the PLUC Members during the presentation held last 17 March 2017, for your appropriate action, subject to all laws, rules and regulations applicable thereto.


ANTONIO C. HALILI
City Mayor



CAPITOL SITE R
PPDO

RECEIVED

DATE: 07/05/17



EXCERPT FROM THE MINUTES OF THE PROVINCIAL LAND USE
COMMITTEE MEETING HELD AT MAX'S RESTAURANT, J.P. LAUREL
HIGHWAY, TANAUAN CITY, BATANGAS LAST MARCH 17, 2017

Present:

Mr. Benjamin I Bausas	-	Provincial Planning and Development Coordinator, PLUC Chairperson and Presiding Officer
Engr. Pablito A. Balantac	-	Provincial Agriculturist
Mr. Luis A. Awitan	-	PGDH, PG-ENRO
Mr. Joselito A. Castro	-	PGDH, PDRRMO
Ms. Marissa C. Argente	-	Provincial Director, DTI
Ms. Marilou G. Dinoy	-	Punta Fuego Village Foundation, Inc.
Ms. Ana A. Dagñalan	-	HLURB
Ms. Marivic M. Roldan	-	DPWH, 3 rd Engineering District
Mr. Victor H. Mercado	-	PENRO
Ms. Ester B. Dator	-	DILG
Mr. Lauro Intalan	-	PARO
Ms. Jaide C. Luistro	-	PTCAO

Not Present:

Ms. Rebecca V. Labit	-	Regional Director, Department of Tourism
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PLUC Resolution No. 1-2017

**RESOLUTION INDORSING TO THE SANGGUNIANG PANLUNSOD THE
COMPREHENSIVE LAND USE PLAN 2016-2025 OF THE CITY OF TANAUAN,
BATANGAS FOR ADOPTION AND ENACTMENT OF THE ZONING ORDINANCE**

WHEREAS, RA 7160, otherwise known as the Local Government Code of 1991 (LGC) provides that local government units (LGUs) shall, in conformity with existing laws, continue to prepare their respective Comprehensive Land Use Plans enacted through Zoning Ordinances which shall be the primary and dominant bases for the future use of land resources,

WHEREAS, the City of Tanauan, Batangas had formulated and updated their Comprehensive Land Use Plan/Zoning Ordinance (CLUP/ZO) 2016-2025 in conformity with the Land Use Planning and Zoning Standards and Guidelines prescribed by the Housing and Land Use Regulatory Board (HLURB) pursuant to national policies;

WHEREAS, the CLUP of City of Tanauan is a document embodying land use development directions and proposals for guiding and regulating the growth and development of the said municipality and it designates the future use and reuse of land and the structures built upon its land;

1 RESOLUTION INDORSING TO THE SANGGUNIANG PANLUNSOD THE COMPREHENSIVE LAND
2 USE PLAN 2016-2025 OF THE CITY OF TANAUAN, BATANGAS FOR ADOPTION AND ENACTMENT
3 OF THE ZONING ORDINANCE

4
5 WHEREAS, the enacted Zoning Ordinance of the City of Tanauan which embodies the
6 regulations on the allowed uses in each zone is an implementing tool of
7 the CLUP to regulate land use and to achieve the desired development
8 strategy;

9
10 WHEREAS, the CLUP/ZO identifies cross-sectoral concerns on settlements
11 development, production land use, protection land use and infrastructure
12 development;

13
14 WHEREAS, pursuant to the Sangguniang Panlalawigan indorsement to the PLUC for
15 review of the Draft Comprehensive Land Use Plan and Zoning Ordinance
16 of the City of Tanauan, Batangas, dated October 25, 2016, the Provincial
17 Land Use Committee found out that the said CLUP/ZO substantially
18 complied with the Standards and Guidelines on Comprehensive Land Use
19 Plan formulation and with the thrusts, goals and policies espoused in the
20 Provincial Development and Physical Framework Plan 2014-2022;

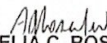
21
22 WHEREAS, premises considered, on motion of Ms. Ana A. Dagñalan, duly seconded
23 by the Body, be it:

24
25 RESOLVED, AS IT IS HEREBY RESOLVED to INDORSE TO THE SANGGUNIANG
26 PANLUNSOD THE COMPREHENSIVE LAND USE PLAN 2016-2025 OF THE
27 CITY OF TANAUAN, BATANGAS FOR ADOPTION AND ENACTMENT OF
28 THE ZONING ORDINANCE, SUBJECT TO THE INCLUSION OF
29 COMMENTS AND RECOMMENDATIONS OF EACH MEMBER OF THE
30 PROVINCIAL LAND USE COMMITTEE;

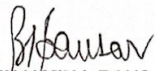
31
32 RESOLVED FURTHER, that a copy of this Resolution, CLUP/ZO and maps be
33 furnished to the Honorable Members of the Sangguniang Panlalawigan
34 and Housing and Land Use Regulatory Board for their information and
35 most favorable action.

36
37 UNANIMOUSLY APPROVED, this MARCH 17, 2017.

38
39 I hereby certify to the correctness of the foregoing resolution excerpted from the
40 Minutes of the Provincial Land Use Committee Meeting held at Max's Restaurant, J.P.
41 Laurel Highway, Tanauan City, Batangas last March 17, 2017.

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AMELIA C. ROSALES
Project Development Officer IV/
Head Secretariat

52 Attested.

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BENJAMIN I. BAUSAS
PGDH - PPDC and Chairperson, PLUC

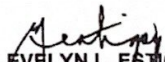


Republic of the Philippines
Province of Batangas
PROVINCIAL PLANNING AND DEVELOPMENT OFFICE
Telephone / Fax No.: (043) – 722-2359 / 786-0568
Capitol Site, Batangas City

CERTIFICATION

This is to certify that the **Comprehensive Land Use Plan /Zoning Ordinance (CLUP/ZO) 2016-2025 of Tanauan City, Batangas** has been reviewed and deliberated by the Provincial Land Use Committee (PLUC) on **March 17, 2017**. Same document has been approved by the Sanggunian Panlalawigan of Batangas, with **SP Resolutions No. 377 and 378** dated **June 18, 2018**.

Issued this 11th day of April 2022, for whatever legal purpose it may serve.


Engr. EVELYN L. ESTIGOY, EnP.
PGDH-PPDO and PLUC Secretary

Chapter I

HISTORICAL BACKGROUND

Tanauan City is associated with several labels. There are a few which ring a bell to the ears of the local folks. Tanauan is known as the “Cradle of Noble Heroes”, “City of Character” and the “City of Colors”. Unknown to many, Tanauan of today is not in its original site. It is generally believed that Tanauan was originally founded in 1572 by the Augustinian missionaries in the northern shore of Taal Lake (ancient Bonbon Lake) below the Tagaytay Ridge. This part of Tagaytay covers the present Talisay, Laurel and other parts of Barangay Montaña (formerly Barangay Ik-ik), Sulpok and Suplang, which constitute the first Tanauan.

Tanauan’s original site was confirmed by Buzeta and Bravo’s 1850-1851 Geographic and Historic Dictionary of the Philippines, Dean C. Worcester’s 1912 National Geographic map and the map of 1700’s (one is the famous Fr. Pedro Murillo Velarde map of 1734). Taal’s northwestern bay is called Tanauan Bay. Spanish map of 1800’ s marks it Seno de Tanauan.

Spanish records show that Tanauan was officially established in 1584. On May 5, 1584, the Augustinian accepted the house of Tanauan. It must be remembered that during Spanish regime, there was a political union of the church and state. The ecclesiastical organization was parallel and closely associated with the civil government. The missionaries played a significant role in the colonization of the Philippines, and in the town, the parish priest was the real power, representing the “power that be” of Spain.

In 1754, violent eruptions of Taal Volcano submerged the whole ancient town of Tanauan. (As 1857 map found in the Philippine National Archives shows Ruins de Tanauan along the northern shore of Taal Lake). Residents of said town moved to Sala, second site of Tanauan. It is the place which is presently called Bañadero. Today, ruins of the town of

Tanauan exists in Bañadero. On a hill overlooking the lake is a wall of about 10 to 122 meters along and 2.5 meters high. In the same site, pre-1754 maps show the old Sala.

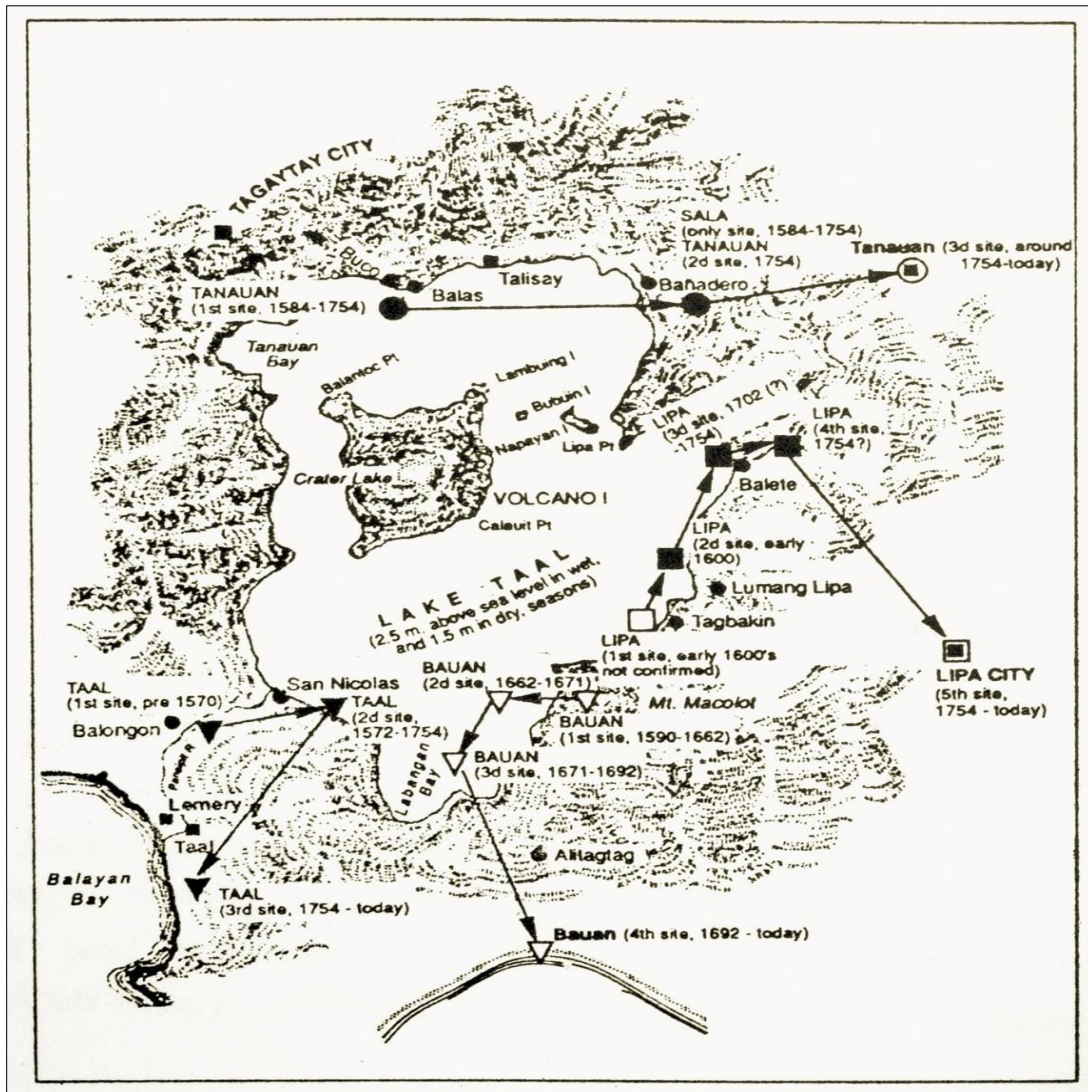


Figure 1. Map Showing the Movements of Tanauan

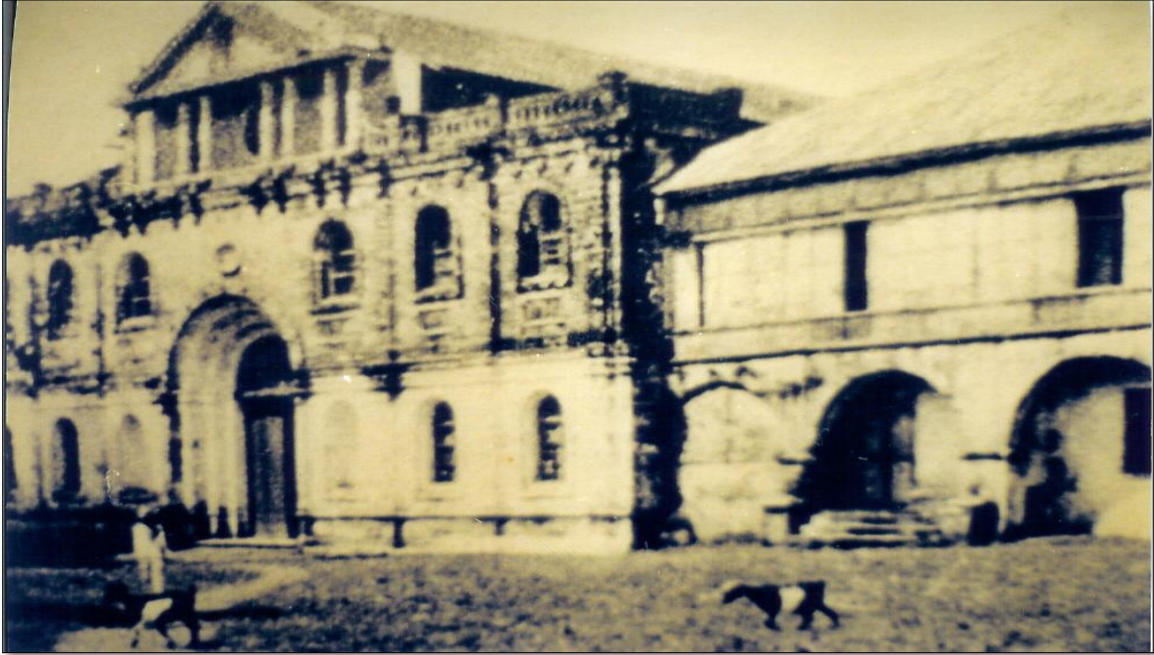


Figure 2. Old Church 1600`s



Figure 3. St. John The Evangelist Parish Church

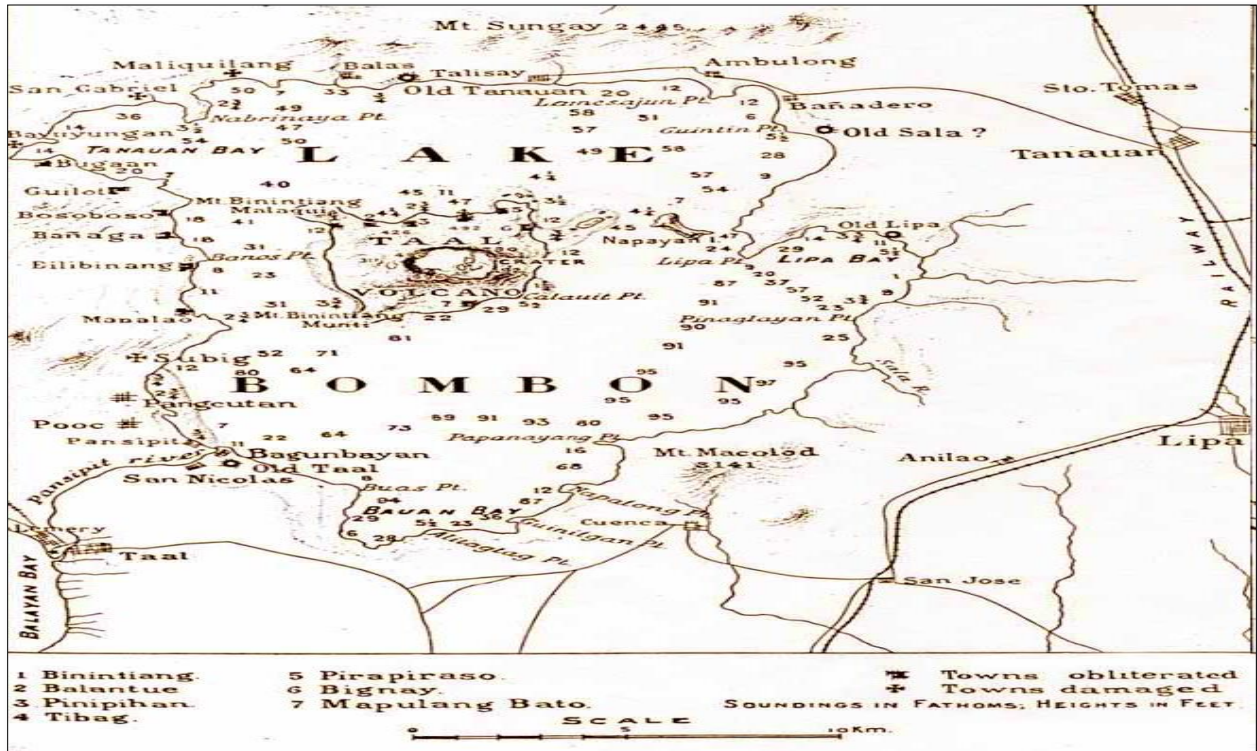


Figure 4. Map of Lake Bonbon (now Taal Lake)

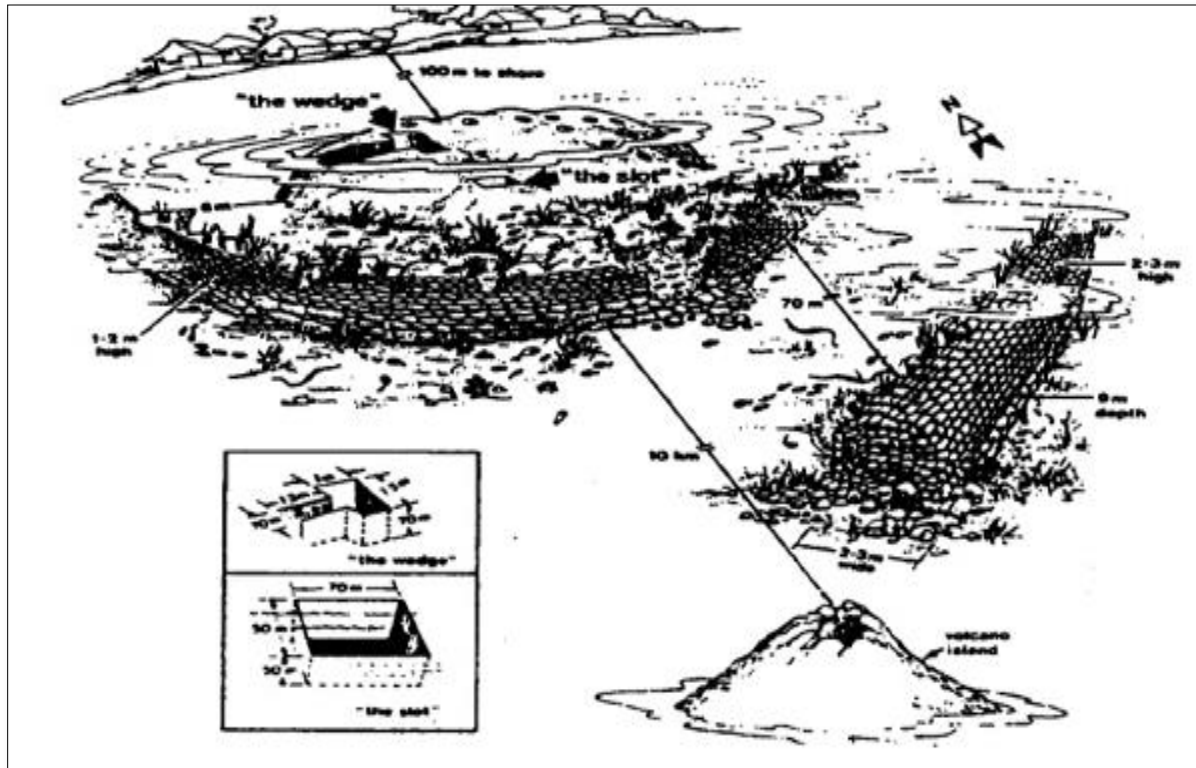


Figure 5. Taal Ruins

Due to continuous eruption of Taal volcano, the communities of Tanauan and Sala moved to safer locations, later that same year of 1754. It may be noted here that both the old Sala and Tanauan used to have a conflict regarding their geographical boundaries. In 1647, both Tanauan and Sala were vicariates of the church under the Augustinians. In 1668, Father Jose Duque, minister of both towns, settled their dispute.

In 1754, when both towns were relocated and fused into one town, each wanted its own name to be preserved. There was a disagreement between the two on whether to name the new town Tanauan or Sala. Finally, an agreement was settled in favor of Tanauan in line with the celebration of the feast of St. John the Evangelist, the patron saint of Tanauan, on December 27, 1754.

Subsequently, Sala became a barrio of Tanauan, and is located to where it is now. Tanauan on the other land, settled in its third and present site.

Today, Tanauan is situated on the northeastern part of Batangas. With a total land area of 10,987.43 hectares covering 48 barangays, it is bounded on the east by the Municipality of Sto. Tomas, on the southwest by the shores of Taal Lake, on the north by the Municipality of Calamba, Laguna and on the northwest by the Municipality of Malvar.

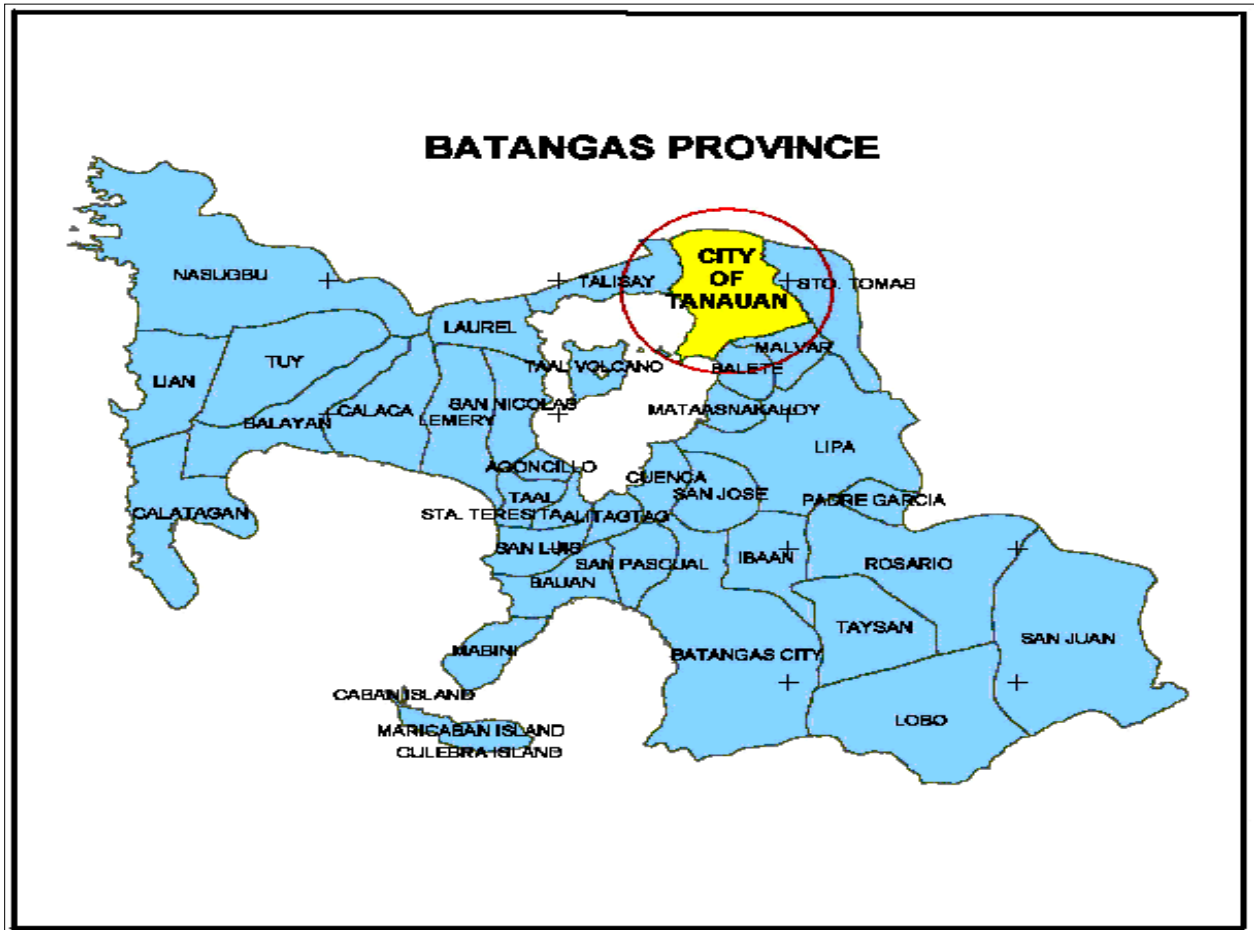


Figure 6. Map of Batangas Province

Tanauan of today must be in many ways like the Tanauan of the ancient day. It is highly probable that the ancient town of Tanauan enjoyed a relatively productive culture. According to Dr. Jose Rizal in his "The Indolence of the Filipinos", even before the Europeans came to the Philippine shore, the Malayan Filipino carried on an active trade with all its neighboring countries, aside from among themselves.

There was much wealth, food and different products abound. A Chinese manuscript of the 13th century, translated by Dr. Hith and mentioned by Dr. Jose Rizal, speaks of China's

trade relation with the natives of Luzon. Fr. Juan De Medina also wrote of Tanauan's extensive trade with the Chinese. He also mentioned that old Tanauan was a very fine town, rich and densely populated. As for the education of the natives, early Spanish writers like Morga and Chirino (whom Rizal believed to be reliable) testified that almost all of them knew how to read and write. As for the language of the natives, which is Tagalog, Chirino even went to the extent of crediting it as having the qualities of the world's four greatest languages: Hebrew, Greek, Latin and Spanish.

Old Tanauan also gives traces of infrastructures which undoubtedly contributed to the progress of the place. Just a few years ago, Thomas Hargrove, a scientist of the International Rice Research Institute (IRRI), discovered rows of wall-like stone structures 1 to 2 meters high and 20 cm. in diameter under Taal Lake. Some walls were vertical, some were crumbled, but joined together, could extend up to about 40 kilometers.

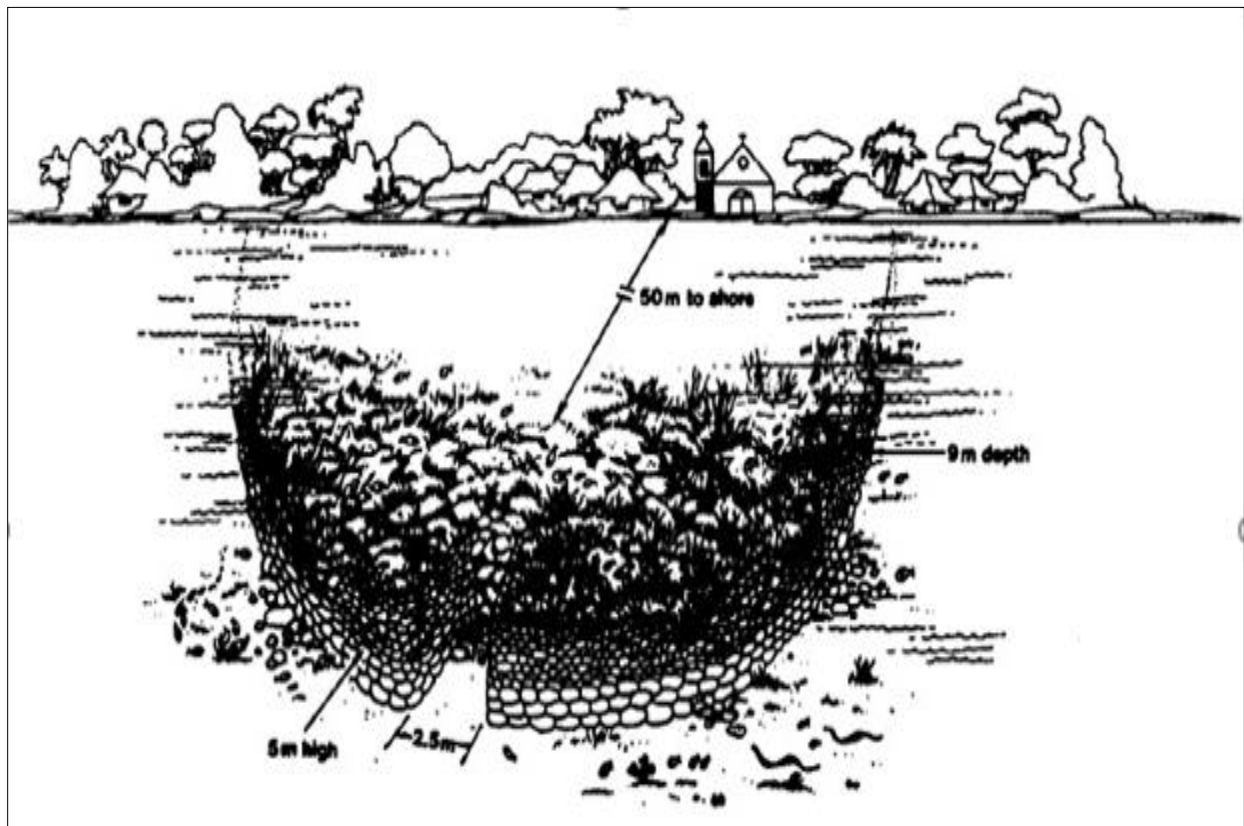


Figure 7. Artist's Rendition of the " Sapao" called the "fort" near where maps show Old Tanauan.

It is believed to be a dike or wall built to protect the town from inundation when the water by the shore rises, and at the same time, served as a road through which the natives traveled around the lake. Much had been said about the origin of the name of Tanauan.

One version is that the town was named after a shrub called “tanawa” which grew abundantly in the area and on the shore of Lake Bonbon (Taal Lake) during the town’s early history.

Another version, according to Fr. Juan de Medina, Spanish priest of Tanauan in the 1600`s, is that Tanauan came from the word “Tanawan” which literally means, a vantage point, a place from which to see (tan-awan). Augustinian priests and natives of Tanauan built a fortress with a watchtower which served as a lookout to warn the place against marauding outsiders or pirates from the southwest.

According to available record, Tanauan had its first church built before 1690 near Bonbon Lake. It was made of wood. In 1767, the town had its first stone church. In 1872, Father Jose Martin built the convent. In 1881, as the town grew bigger, Father Jose Diaz started the construction of a bigger church made of masonry and purportedly “one of the biggest in the province”. Both the church and convent, however, were totally destroyed in 1944 during World War II. The church was rebuilt in 1948 under the supervision of Monsignor Marino and the direction of Architect Jose L. Zaragoza. The present site of the church and the La Consolacion College (formerly Our Lady of Fatima Academy) used to be a public cemetery.

In 1898, the Spanish-American war broke out. After a brief war, Spain cede the Philippines to the United States for \$20,000,000.00 in accordance with the Treaty of Paris, December 10, 1898.

The incumbent American President McKinley declared a military government, decreed the separation of the Church and the State, and organized the municipal and provincial governments. Since then, Thirty-Three (33) mayors have served Tanauan. It was, however, during the term of General Mayor Antonio Dimayuga (1928-1937) when the old municipal building was constructed at the extreme eastern part of Calle Real (now A. Mabini Avenue).

When World War II broke out in 1941, the Japanese troops occupied Tanauan. With the joint effort of the Mayor Alfredo C. Magpantay (who served from 1937-1942) and Mayor Nicolas L. Gonzales II (1942-1943) the second floor of the municipal building was converted into a hospital. However, the “hospital” was later transferred to the Laurel ancestral home because the Americans incessantly bombed the municipal building causing it to be almost totally destroyed.



Figure 8. (Ruins of The Old Municipal Building After World War II)



Figure 9. Old Municipal Building (Museo Ng Tanauan)

During the term of Mayor Jose Corona (1945-1946), the Municipal Building was reconstructed. In the incumbency of Mayor Pedro Gonzales, the building was renovated and in 1957, housed the Municipal Library, Treasury Office, Police Department, Telegram Office, National Statistics Office, Health Office, Register of Deeds, DECS Division Office, Agrarian Reform Office, Department of Agriculture, Post Office and Daughters of Isabela Nursery School.

Finally, in 1960, the Municipal Government Office transferred to a new building of the Mount View Subdivision, leaving only the Municipal Building Library and the National Statistics Office in the old building.



Figure 10. (Tanauan City Hall Executive Building)



Figure 11. Dr Salvador H Laurel Memorial Building (Legislative Building)

In 1996, under Mayor Cesar V. Platon, the old Municipal building underwent total reconstruction with the left and right wings converted into the Social Hall and Library,

respectively. The central portion was reserved as assembly area for meetings, conferences, reunions and special or commemorative programs.

The second floor of the building was named Mayor Cesar V. Platon Memorial Hall on June 23, 2003 through Resolution no.01116 of the Sangguniang Panlungsod.

The central portion of the building was remodeled into a city museum and was inaugurated through Res. Number P005 dated January 19, 2004.

In 1996, Tanauan became a first class municipality. Later on, Tanauan became the City of Tanauan by virtue of Republic Act 9005, an Act Converting the Municipality of Tanauan into a Component City. This was signed into law by President Gloria Macapagal- Arroyo on February 2, 2001. Through a plebiscite on March 10, 2001, the proposed cityhood was duly ratified and approved.

On September 29, 2003, Tanauan was made a “City of Character” through Resolution 0-195, and on October 14, 2003, the City of Tanauan became a member of International Association of Character Cities together with 180 other cities and countries around the world.

Throughout history, Tanauueños have displayed characteristics of personal independence and nationalism. The town is considered the cradle of noble heroes because of the contributions to the revolutionary movement of its sons—the most notable is Apolinario Mabini, the “Brains of the Revolution”. The City also produced political leaders like the great statesman Former Pres. Jose P. Laurel and Jose P. Laurel V, Modesto Castillo and Nicolas Gonzales who served as governors of Batangas.

Greatness is not a monopoly of anyone’s race. Tanauan, called the “cradle of noble heroes”, can take pride in its prominent sons and heroes who have distinguished themselves in their respective fields and found a place in the pages of history.



Gat Apolinario Mabini



Pres. Jose P. Laurel Sr.

Figure 12. Noble Heroes

Culture can be a curious thing. To the outsider, a locality's unique features and characteristics may seem obvious, but such an outsider would be clueless about the complex interplay of values, beliefs, traditions-all shaped by that area's topography, climate, natural resources, seasonal cycles, economic activities, political structures and its particular history- that as a whole make up the gestalt of the daily lives of local residents. Then again, Tanauan's residents themselves might have taken for granted, busy as they are with routine, domestic struggles and challenges, that same complex whole that continues to shape their lives and will continue to do so for generations to come.

Hence, this portion on Tanauan Culture and History, which seeks to give the outsider a glimpse of Tanaueño culture in general, and some of the history that shaped that same culture as it exists and evolves in the present. As for our Tanaueño readers, may these words and images allow them to look at old, everyday things with new eyes, giving them a fresher perspective on what was previously taken for granted and begin to take pride in and treasure their unique cultural and historical heritage.

Historical Changes in Land Use Trends

The Cadastral Survey of Tanauan was executed and approved in 1920 to 1923 by the Bureau of Land during the Commonwealth Government. It was the first massive documentation of land in the Municipality of Tanauan. Approval of the survey plan was very relevant in the implementation of Commonwealth Act 141, otherwise known as Public Land Act providing compulsory or cadastral registration of land that was released from Forest or Timber Land Classification into Alienable and Disposable Land by the Government, respecting land titles that were issued by Spanish government.

As indicated in the approved Cadastral Plan, almost all lands in the Municipality of Tanauan have been released from Forest to Agricultural though Land Classification Plan of Tanauan is missing. The issue of 18 % slope which is the physical dividing line, between the agricultural and forestry, in some rolling and hilly were surpassed and settled by the approval of the plan. The Issuance of Decree and registration of land to the rightful owner that as per record, commence right after the approval of the Cadastral Survey further strengthen that almost all Land in Tanauan were classified as Agricultural and subject to alienation and disposition.

Also, as reflected in the Cadastral Plan of Tanauan, there are only 19 cadastral projects and as a rule in cadastral survey manual, there are only 19 Barangays during that time. There were 18 rural Barangays and only one urban Barangay, the Poblacion area.

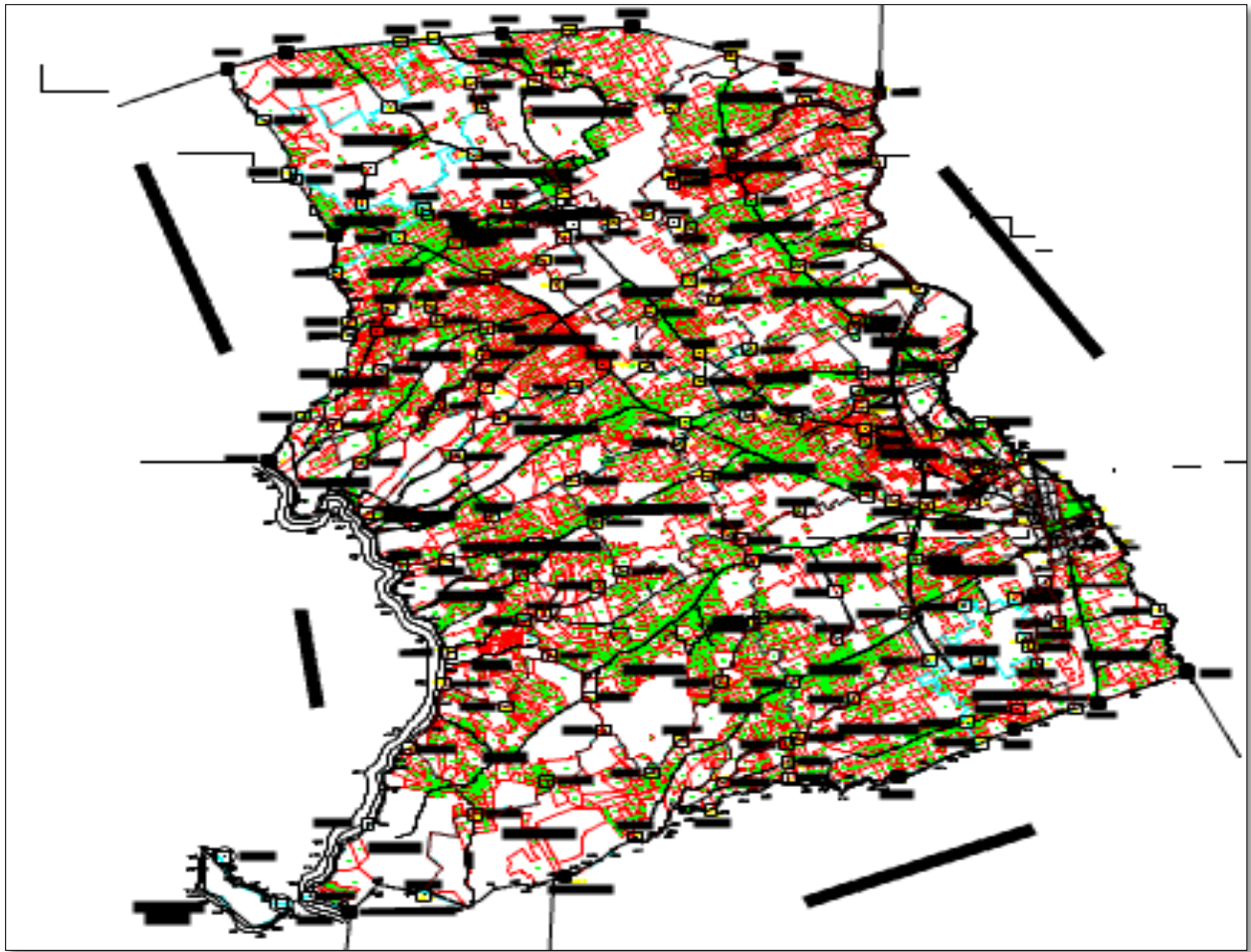


Figure 13. Cadastral Map of Tanauan

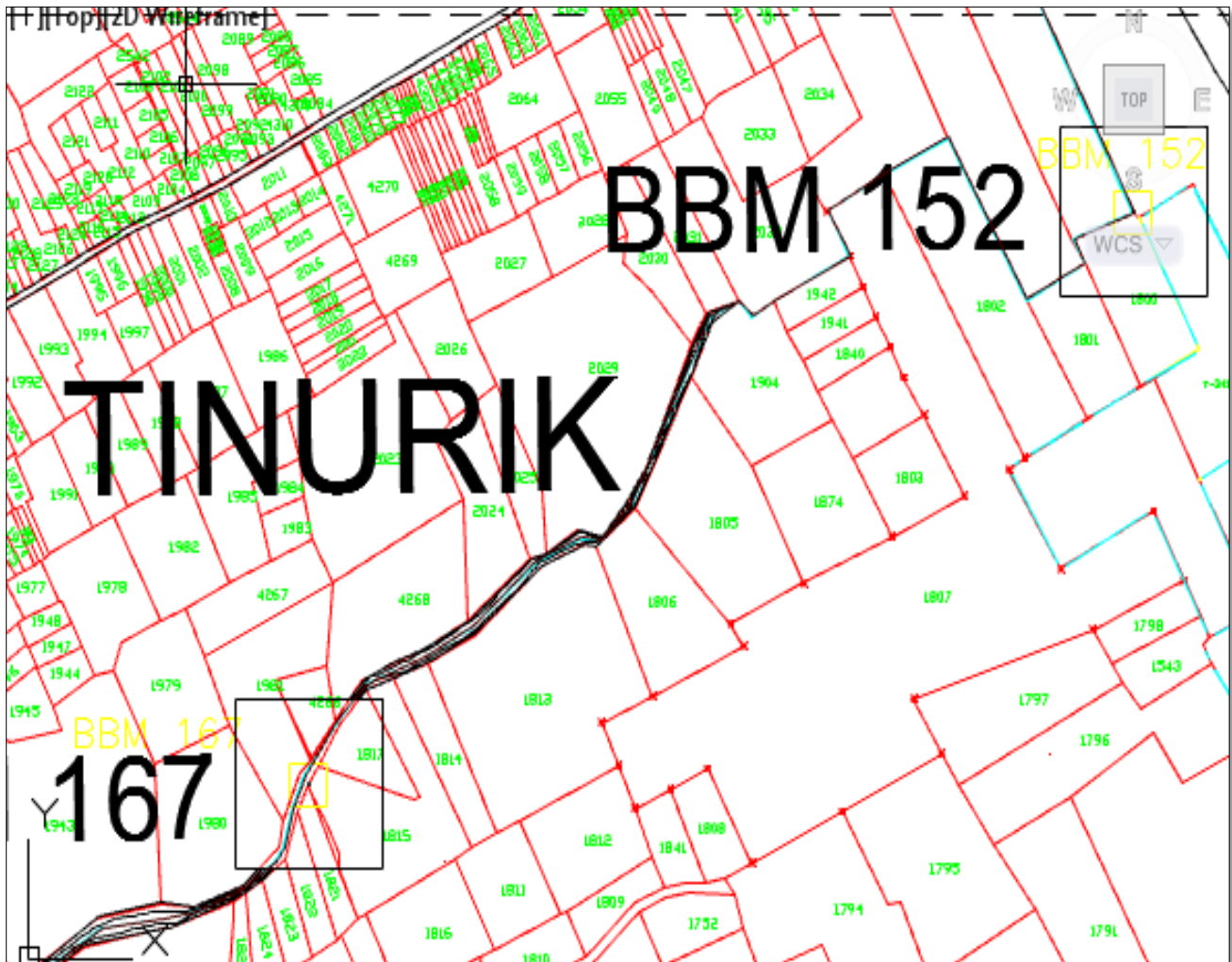


Figure 14. Portion of Cadastral Map

The approved Cadastral Plan and Land Registration showed that Social Stratification Pyramid, existed since time immemorial in the Municipality of Tanauan. Large land holdings belong to few rich and powerful personalities; the middle class owns parcels of land that are sufficient for their needs while the masses are the tenants of the large holdings.

Historically, land use is basically agricultural. After the World War II, when residents experienced hunger and famine, residents focused on crop production. Rice and corn as basic staple food became the dominant crops. It is the custom that the families' needs for the whole year were stored and only the excess were sold into the market. Lifestyle changes, with farming practices. Promotion of integrated agriculture and livestock

became popular in the municipality. Sugarcane, coconut, coffee, citrus, fruits and vegetable became the dominant crops in Tanauan, thus, the city become one of the significant food supplier of Metro Manila.



Figure 15. Sugar Cane and Corn Field

The eruption of Taal Volcano in 1965 affected the agricultural production of the municipality. Many looked for greener pasture and migrated in different places. Some transferred to places like Mindoro, Bicol and as far as Davao to continue their practices

in agriculture. Other migrated to Metro Manila and tries to seek job opportunities. For couple of years, most of the agricultural land in Tanauan became less productive.

After a decade, soil fertility was revived and agriculture became productive again. Subsequently, the National Government implemented the Masagana 99 program where the lead person was former Department of Agriculture Secretary Domingo Panganiban, who is from Tanauan. New farming technologies were introduced to the farmers with subsidies and assistance on farm inputs resulting to better crop production. However, the government overlooked the marketing aspect and the reality of the law of supply and demand. Higher crop production did not make a significant impact on economic status of the farmers.

During the Martial Law, in 1972, Agrarian Reform Program was also implemented. There was land distribution for the landless and emancipating the farmers from the bondage of soil. Record showed that Certificate of Land Ownership of Award (CLOA) and Emancipation Patent (EP) were granted by the Department of Agrarian Reform to qualified beneficiaries. An Agrarian Reform Community was even organized in Sitio Dayapan, Barangay Bilogbilog. However, there still are large landholdings that were covered by the Certificate of Coverage but were not distributed to the intended beneficiaries. Partially, agrarian reform program succeeded in the Tanauan assuring security of tenure to the beneficiaries.

Aside from security of tenure, transfer of technology and government assistance, necessary infrastructure and utility services such as provision of electric and water supply were identified as essential components needed to safeguard agricultural sustainability. The National and local government initiated the provision of electricity to rural barangays together with the provision of water supply system connected to every household. The provision of electric and water supply in the rural Barangays was a milestone in rural development that changed the lifestyle and way of life of its people. It also provided wide range of livelihood opportunities as source of income other than farming.

Accessibility and availability of basic services, opening of new livelihood opportunities tend Tanauenos to return back to their place of origin. Others even migrated to Tanauan.

In the later part of 1980's, the pattern for migration was further strengthened by the program of the national government to decongest Metro Manila.

Land Planning of the Poblacion area started in early 1960, even prior to the enactment of PD 1957 and BP 220 otherwise known as Subdivision and Condominium Buyers Protective Decree, there are Plan Unit Subdivisions that has been developed mostly in Poblacion area. Among these are Mt. View Subdivision in Poblacion 3, Maligaya Compound and Josefa Village in Barangay Sambat, Tapia Subdivision and Gloria Compound in Poblacion 6, Yatco Compound and Laros Subdivision in Poblacion 7. The said Plan Unit Development leads to the expansion of the original Poblacion which originally as reflected in the Cadastral Plan comprise of Barangay 1 and 2 only. During the term of Mayor Paquito Lirio, Poblacion was subdivided into seven Barangays.



Figure 16. Aerial View of Poblacion Areas



Figure 17. Road Network of Rural Barangays

Enactment of Republic Act 7160 otherwise known as the Local Government Code of the Philippines mandated the local government units to prepare Comprehensive Land Use Plan and Zoning Ordinance. Crafting and approval of the CLUP and Zoning Ordinance devolved and decentralized land use regulation to the municipality/city government.

The first CLUP and Zoning Ordinance covers the period 1995-2005 while the second covers the period of 2004-2014. In the preparation of the said land use, the national, regional and provincial plan was considered to realize its translation.



Figure 18. (Tanauan Public Market & Commercial Building)

The City Government of Tanauan is one with the National Government in its goal to improve the quality of life of its people, empower the poor and marginalized and enhance social cohesion within the region and with the neighboring towns and cities. The city government believes that this can be achieved through adopting a framework of inclusive growth which is defined as high growth that is sustained, generates mass employment, and reduce poverty. The framework of plans for this strategic development focuses on improved transparency and accountability in governance, facilitating infrastructure, boosting the competitiveness of the industries, particularly in agricultural produce. The development Plan 2011-2016 for the CALABARZON Region specifically identified centers, corridors and wedges areas in the province of Batangas as per the spatial development strategy. The overall spatial development strategy employs the Center/Cluster-Corridor-Wedge (CCW) planning approach seeking to direct and stimulate development and growth from west too east and strengthens north-south development and access corridors.

The cities of Antipolo in Rizal, Calamba in Laguna, Dasmariñas in Cavite, Batangas City in Batangas and Lucena in Quezon, as characterized by high population densities connected by congregated built infrastructures and multimodal transportation system, were identified as centers or the nucleus of economic activities.

The role of Tanauan City, on the other hand, together with San Jose, Bauan, Lipa City, Sto. Tomas and Malvar, from among the cities and municipalities of Batangas were as corridor areas which will primarily serve as transportation arteries linking centers to centers. These are accessible and connected areas which may serve as transit stations, interchange, established neighborhood or general corridor areas. These areas qualify to be the appropriate locations for the significant new growth.

In addition, Tanauan City, as among the identified growth centers, is expected to ease the decongestion of Metro Manila and address impacts of urban expansion.

In the Provincial Development and Physical Framework Plan of the Province of Batangas, the 3 cities and 31 municipalities of the province, were clustered in order to properly address the challenges of developments in a more specific and significant manner. Metro Lipa Urban Growth Cluster composed of municipalities of Sto. Tomas, Tanauan City, Malvar and Lipa City shall be developed and specialized as a service, institutional and commercial center. Population will increase in almost all municipalities and cities of the province and the demand for housing and other services, facilities and amenities will also increase particularly in those regions with high population growth for 2007-2013, Tanauan City is one identified area.

Classification of province's settlements into various levels indicates the functional role of cities and municipalities based in the services they provide and the extent of areas they serve:

Tanauan City – will be elevated from small city to medium city being near to Metro Manila which will catch the spillover of industries and other commercial activities.

Due to its strategic location, Tanauan City also serves as the Central Trading Post for Agriculture in the region. Some of the traders are from Mindoro, Quezon, Pangasinan, and other provinces from CALABARZON area. Various agricultural commodities such as fruits and leafy vegetables flow in and out of the city.

The City's auction market being ranked second to Padre Garcia in terms of livestock being brought and sold is one of the preferred choices of auctioneers to trade and sell livestock. The City has "AA" slaughterhouse producing safe meat that caters to the needs of meat

suppliers to local and domestic consumers. At present, the construction of the “AAA” slaughter house is underway.

In CALABARZON area, the City is the first and only LGU which owns and operates a Packaging and Service Center that offers labeling and packaging facility. It was established to make Tanauan Products worldwide competitive through appropriate packaging. Continuous improvement is being applied on the products with the assistance from DOST-CALABARZON.

Moreover, Tanauan City turns out to be a preferred choice for investments of different local and foreign investors as well, due to its accessibility and suitability. At present, the City has a total number of 1,982 registered business establishments taking also into consideration the two major industrial parks in the city, the Phil. Town Industrial Estate with three existing locators and the First Philippine Industrial Park with large scale manufacturing companies.



Figure 19 Star Toll Road Section Connecting Tanauan to other Cities and Provinces

Chapter 2

PHYSICAL AND NATURAL CHARACTERISTIC

2.1 Geographic Location, Land Area and Political Subdivision

Tanauan City is located within 121°02'30"-121°09'30" latitude and 14°01'30"-14°09'30" longitude at the North-Eastern part of Batangas. It is bounded by Talisay, Batangas in the West, Malvar and Balete in the South, Sto. Tomas in the East and Calamba City, Laguna in the North.

Because of its proximity to major growth centers like Metro Manila and Batangas City, the City of Tanauan is a recipient of urbanization. The City is also strategically surrounded by important life support eco-systems, Taal Lake, Mount Makiling, and Laguna Lake eco-system.

The City of Tanauan covers a total land area of 10,987.43 hectares which represents 3.47% of the total land area of the province (316,581 hectares) and comprised of 48 barangays. Nineteen (19) of which are considered urban while 29 are rural. The most thickly populated barangay is in the town proper, Poblacion 6, while the least populated barangay is Santol.

Table 2.1 shows the land area of every barangay in Tanauan City, as well as the corresponding percentage share of each barangay in the total land area of the city. Out of 48 barangays, Barangay Boot has the largest land area of 511 which is equivalent to 4.69% share in the total land area of the entire city.

Table 2.1 Total Land Area of Barangays

Barangays	Land Area (has.)	Percent Distribution
Altura Bata	160	1.47
Altura Matanda	51	0.47
Altura South	160	1.47
Ambulong	211	1.94
Bañadero	205	1.88
Bagbag	475	4.36
Bagumbayan	180	1.65
Balele	472	4.34

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Banjo East	210	1.93
Banjo West	220	2.02
Bilog-bilog	330	3.03
Boot	511	4.69
Cale	260	2.39
Darasa	390	3.58
Pagaspas	301	2.76
Gonzales	180	1.65
Hidalgo	80	0.73
Janopol Occidental	330	3.03
Janopol Oriental	220	2.02
Laurel	301	2.76
Luyos	130	1.19
Mabini	190	1.75
Malaking Pulo	439	4.03
Maria Paz	439	4.03
Maugat	310	2.85
Montaña	245	2.25
Natatas	245	2.25
Pantay Matanda	340	3.12
Pantay Bata	220	2.02
Poblacion 1	19.98	1.15
Poblacion 2	17.04	1.15
Poblacion 3	41.38	1.15
Poblacion 4	32.87	1.15
Poblacion 5	8.71	1.15
Poblacion 6	20.36	1.15
Poblacion 7	36.53	1.15
Sala	335	3.08
Sambat	100	0.92
San Jose	124	1.14
Santol	142	1.30
Santor	290	2.66
Sulpoc	310	2.85
Suplang	151	1.39
Talaga	415	3.81
Tinurik	310	2.85
Trapiche	190	1.75
Ulango	330	3.03
Wawa	260	2.39
TOTAL	10,887.71	100.00

Source: RA 9005 Charter of Tanauan City

However, with the implementation of the Barangay Boundary Settlement Project in 2011, wherein the Certeza Infosys Corporation (CIC) was commissioned by the city government to resurvey the political boundary of the City of Tanauan and determine the administrative boundary of each Barangay, land areas of all Barangays, upon the

execution of the said survey was affected. It has been noted that Napayong Island located in Barangay Maria Paz and the new rules and procedure in the implementation of political boundary by DENR, resulted to an increase in the total area of the city. New land areas of each barangay are shown in Table 2.2.

The survey plan of the said boundary settlement has been approved by the Land Management Services of the Department of Environment and Natural Resources (DENR) Region IV-A, but has not been adopted by the Sangguniang Panlungsod of the city up to this date. In view of this situation, the city government, in order to avoid conflicting data, adopts the old political boundary of the city and administrative boundary of each barangay.

For this planning exercise, the LGU deemed it proper to utilize 10,987.43 hectares as this is the actual survey on the ground. However, this area does not include the accretion of 71.71 hectares and the disputed area with the Municipality of Balete which is 569.09 hectares.

Table 2.2. Total Land Area by Barangay

Barangays	Land Area (has.)	Percent Distribution
Altura Bata	164.64	1.50
Altura Matanda	100.97	0.92
Altura South	102.18	0.93
Ambulong	218.38	1.99
Bañadero	189.28	1.72
Bagbag	569.67	5.18
Bagumbayan	239	2.15
Balele	620.43	5.66
Banjo East	145.92	1.33
Banjo West	308.45	2.80
Bilog-bilog	406.44	3.70
Boot	385.43	3.51
Cale	366.04	3.33
Darasa	327.28	2.99
Pagaspas	311.71	2.84
Gonzales	188.29	1.71
Hidalgo	97.31	0.89
Janopol Occidental	245.1	2.23
Janopol Oriental	289.91	2.64
Laurel	269.19	2.45
Luyos	183.23	1.67
Mabini	183.13	1.67

Malaking Pulo	543.6	4.95
Maria Paz	295.56	2.69
Maugat	222.69	2.03
Montaña	94.12	0.86
Natatas	374.79	3.41
Pantay Matanda	257.56	2.34
Pantay Bata	310.66	2.83
Poblacion 1	19.98	0.18
Poblacion 2	17.04	0.15
Poblacion 3	41.38	0.37
Poblacion 4	32.87	0.30
Poblacion 5	8.71	0.79
Poblacion 6	20.36	0.18
Poblacion 7	36.53	0.33
Sala	216.89	1.97
Sambat	88.82	0.81
San Jose	127.29	1.16
Santol	104.03	0.95
Santor	318.85	2.90
Sulpoc	400.18	3.64
Suplang	229.57	2.09
Talaga	442.62	4.03
Tinurik	229.82	2.09
Trapiche	241.21	2.20
Ulango	290	2.64
Wawa	112.93	1.03
TOTAL	10,987.43	100.00

Source: CERTEZA

2.2 Geology and Geomorphology

As Tanauan is situated between two volcanoes, Mt. Makiling and Taal Volcano, its geologic structure makes it prone to volcanic activities. The City is mostly composed of Pliocene to quaternary volcanic rocks of agglomerate, tuffs, cinders, andesite, dacite and pyroclastic layers. Thus, the City's geographical composition mostly came from igneous materials (refer to Map 2.1).

Quaternary volcanic rocks or Pliocene and recent igneous rocks are composed of active and non-active cones. Lava flows consist mainly of dark gray to black andesite, basalt, and aphanitic. Pyroclastic materials on the other hand, are ejecta consisting of unconsolidated materials of different sizes that are explosively or aerially deposited from volcanic vents. Volcanic tuff was formed mainly due to ashfall and continued lava flow.

2.3 Soil Type

There are four soil types that can be found in Tanauan City. Majority of the soil are Taal fine sandy Loam followed by Lipa loam (deep phase), Lipa Loam and Tagaytay Sandy Loam.

2.3.1 Lipa Loam

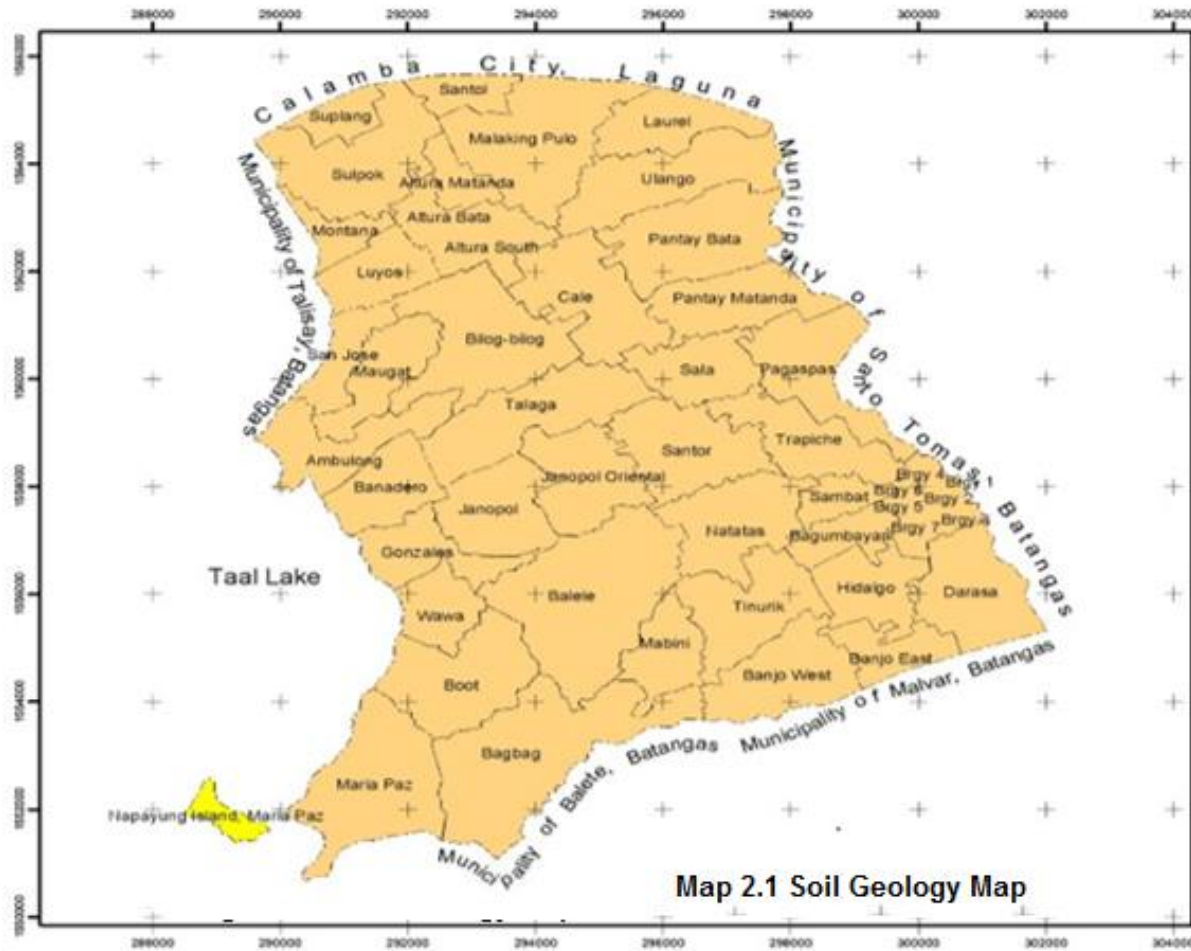
This comprises about 1,354.1 hectares or 12% of the total land area of the city. This type of soil can be found in the southeastern side of the city. All of the urban barangays have this type of soil and portions of rural barangays, namely: Banjo West, Banjo East, Hidalgo, Mabini, Tinurik, and Bagumbayan.

Lipa loam, like the Ibaan loam, is a residual soil representing the decomposition products of the underlying volcanic tuff material. It is dark brown, very friable, mellow, and easy to cultivate. Its depth ranges from 25 to 35 centimeters. The subsoil is dark, loamy in texture, and becomes heavy and waxy at a depth of 75 centimeters or more. In some areas, there are gravels and concretions that are exposed in highly eroded sloppy and hilly portions. According to Dorsey, this type of soil evidence is of lasting fertility. In fact, it has the best physical characteristics that can be found in any soil. However, the present system of agriculture has led to the depletion of the soil because of the pronounced effect of erosion. This type of soil is well developed in Lipa, Malvar, and Tanauan.

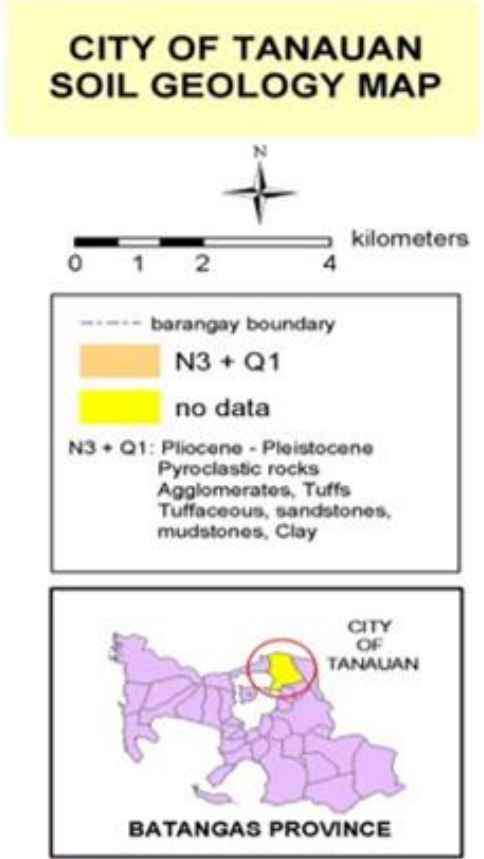
2.3.2 Lipa Loam (deep phase)

This type of soil covers about 2,541.4 has or 23% of the total land area of the city. It is usually found in the eastern portion of the city, along the San Juan River and some adjacent barangays. Lipa loam (deep phase) consists of 25 to 35 centimeters of surface soil and 57 to 100 centimeters of subsoil. The parent material is about 120 to 150 centimeters from the surface. These areas are located on the lowland of Santo Tomas and East of Lipa, near Halaraya Mountain.

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Map 2.1 Soil Geology Map




 Prepared by
 MACCOR Environmental Management Systems Inc.
 2023-2024

Table 2.3. Depth and Characteristics of Lipa Loam

Depth of Soil (cm.)	Characteristics
0 to 30	Very Friable, mellow and loose fine granular loam, usually brown to light brown.
30 to 65	Friable fine granular tuffaceous material with concretions, heavier than the surface soil.
100 to 120	High weathered tuff with tuffaceous gravel and concretions.
120 to 150	Tuff, light brown, fine-textured to candy.

Source: Bureau of Soils and Water Management, Department of Agriculture

2.3.3 Taal Fine Sandy Loam

Most of the barangays have this type of soil. It comprised almost 6,216.00 hectares or 56% of the total land area of Tanauan City. Taal fine sandy loam consists of light-gray loose and structureless fine sandy loam surface soil. When wet, the color is dark brown to black. The depth ranges from 0 to 40 centimeters. Below this surface, soils are several thin layers of volcanic sand separated by thick horizons of fine sand. In general, the surface and subsoil are loose and seldom compact.

Taal fine sandy loam is the biggest type of the Taal series. This comprises the rolling lands, hills, and mountains east, north, and west of Taal, covering portions of the cities of Lipa, Tanauan and the municipalities of Taal and Calaca.

This soil produces good crop of sugar cane every year. Because of its physical properties, it is easily prepared. Sugar cane is extensively planted in Calaca, Taal, and Talisay. Corn, rice, vegetables, and citrus trees are also grown. Cacao and coffee are planted in patches along shaded areas, especially in the backyards. Upland rice and coconut are also planted in this type of soil in Talisay and Tanauan City.

Table 2.4. Depth and Characteristics of Taal fine sandy loam

Depth of Soil (cm.)	Characteristics
	Light-Gray, loose fine sandy loam of volcanic Origin
30 to 75	Gray fine sand, loose and structure less.
75 to 120	Brown sandy loam, loose and structure less

Source: Bureau of Soils and Water Management, Department of Agriculture

2.3.4 Tagaytay Sandy Loam

This soil type covers only 951.2 hectares or 9% of the total land area of the city. It can be found in barangays northwest of the city, namely Suplang, Sulpoc, Montaña portion of Luyos, Altura Bata and Malaking Pulo.

The 12 to 50 centimeters of surface soil of the Tagaytay sandy loam is dark-brown to nearly black friable and granular sandy loam soil with considerable amount of volcanic sand. The subsoil is dark brown to very dark brown, and varies in texture from clay loam to clay. This is sub-clay or volcanic tuff. The tuffaceous material varies in depth according to the topography of the place.

In some places, especially near the ridge, there is a zone of volcanic ash accumulation just below the surface soil. This zone, however, disappears in well-cultivated or highly eroded areas.

2.4 Soil Fertility Status

The soil fertility status of majority of the barangays is moderate. Only a negligible area of barangay Luyos has poor fertility, (refer to Map 2.2). Barangays with high fertility on the other hand are Santor, Trapiche, Poblacion, Darasa, Banjo East, Banjo West, Sambat, Pagaspas, Ulango, Laurel and portions of Montana, Santol, Mabini, Tinurik and Pantay Matanda.

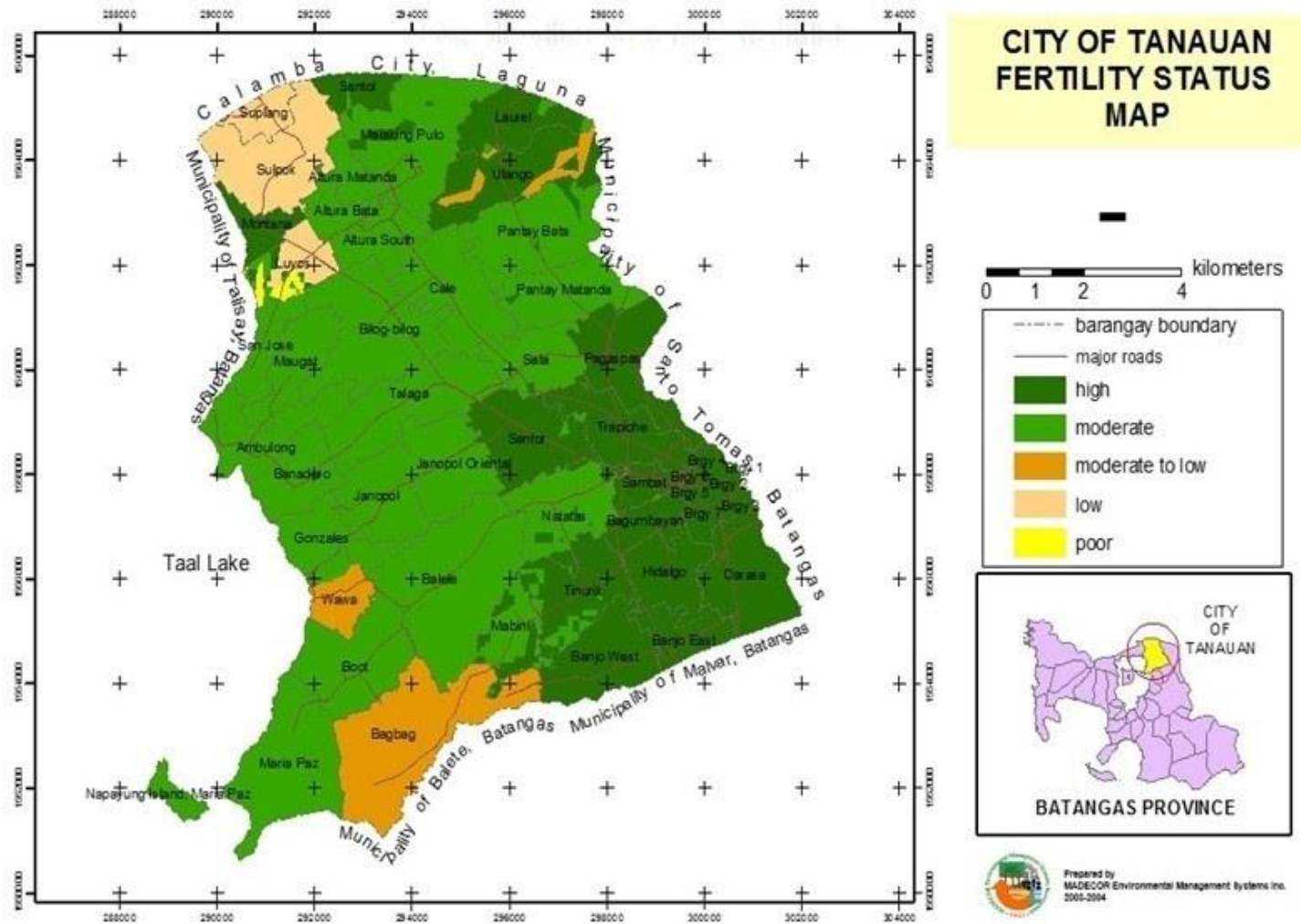
2.5 Topography, Slope and Elevation

Majority of the areas in Tanauan City belong to 0 to 15 percent slope that are undulating to rolling. Most of the areas with steep slope of more than 65 percent are located in Barangays Sulpoc, Montana, San Jose, Maugat, Ambulong, Bañadero, Talaga, Banjo West, portions of Darasa and Poblacion 3.

Steep hills and mountains with slope of 30 to 65 percent are located in Suplang, Sulpoc, Balele, Wawa, Boot and Maria Paz. Furthermore, Barangays which belong to 0 to 3 percent slope are portions of Laurel, Malaking Pulo, Altura Matanda, Altura Bata, Altura South, Montana, Luyos, Cale, Bilog-bilog, Pantay Bata, Pantay Matanda, Sala, Pagaspas, Trapiche, Poblacion Area, Natatas, Bagumbayan, Hidalgo, Sambat and Darasa. The slope in these barangays are gently sloping to undulating. The rest of the barangays have 8 to 15 percent slope that are undulating to rolling. Mt. Makiling, with a spot elevation of 1090m, is approximately within four (4) to five (5) kilometers from the city (refer to Map 2.3 Elevation Map).

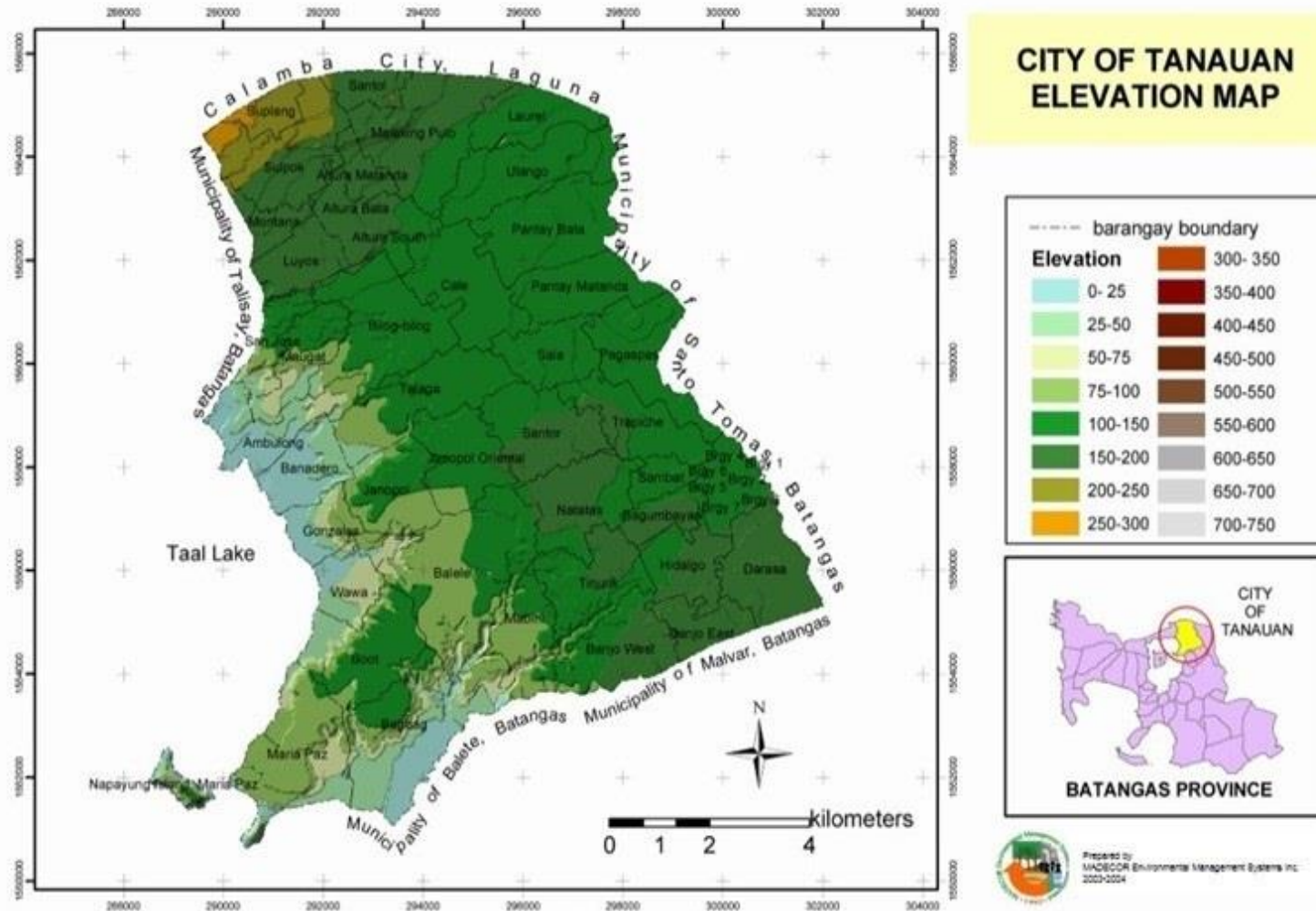
Majority of the city are composed of broad alluvial plains while portions of Trapiche, Santor, and Natatas are foot slopes (refer to Map 2.4 Soil Physiography). The river systems belong to encampments that can be found all over the City.

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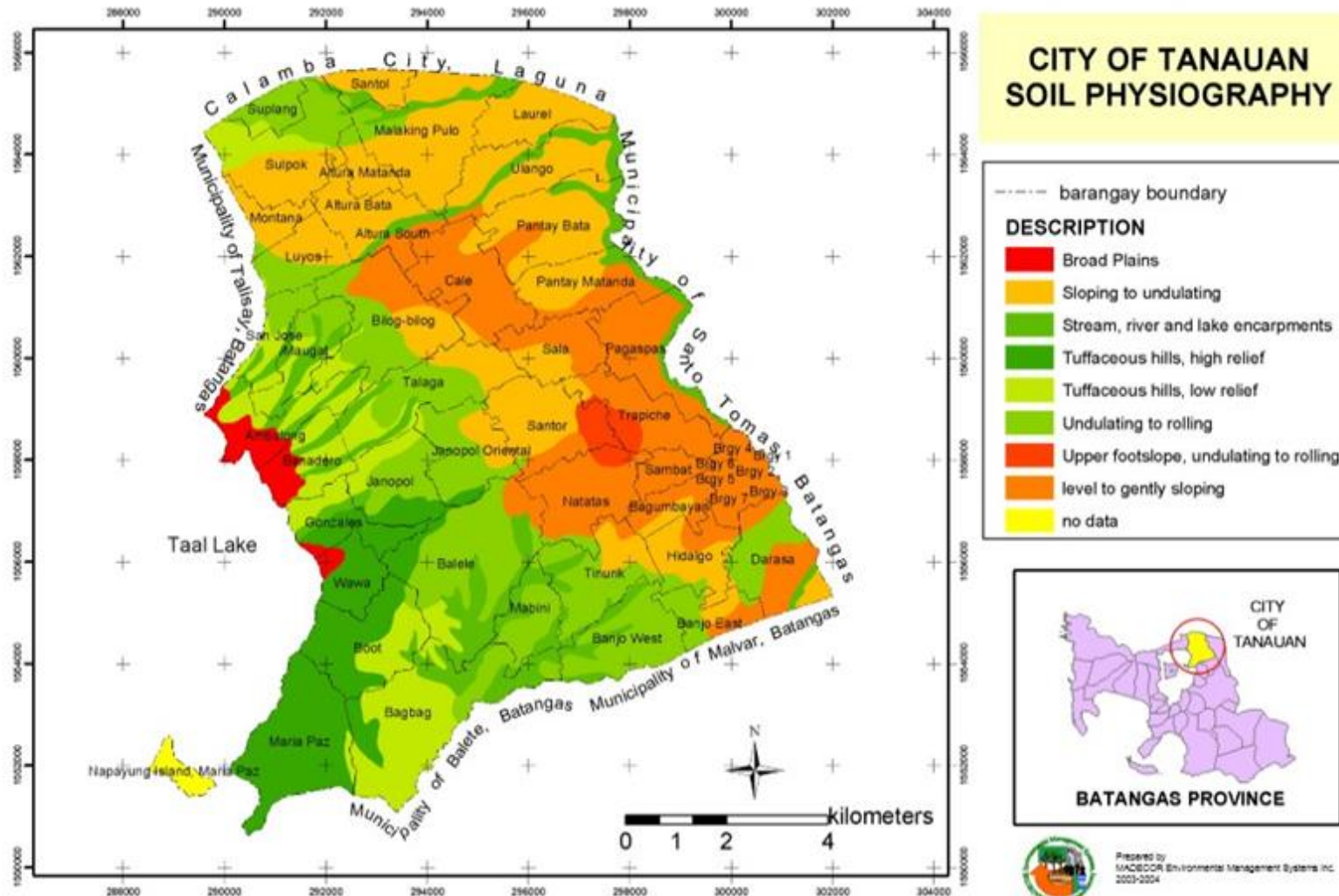


Map 2.2 Fertility Status Map

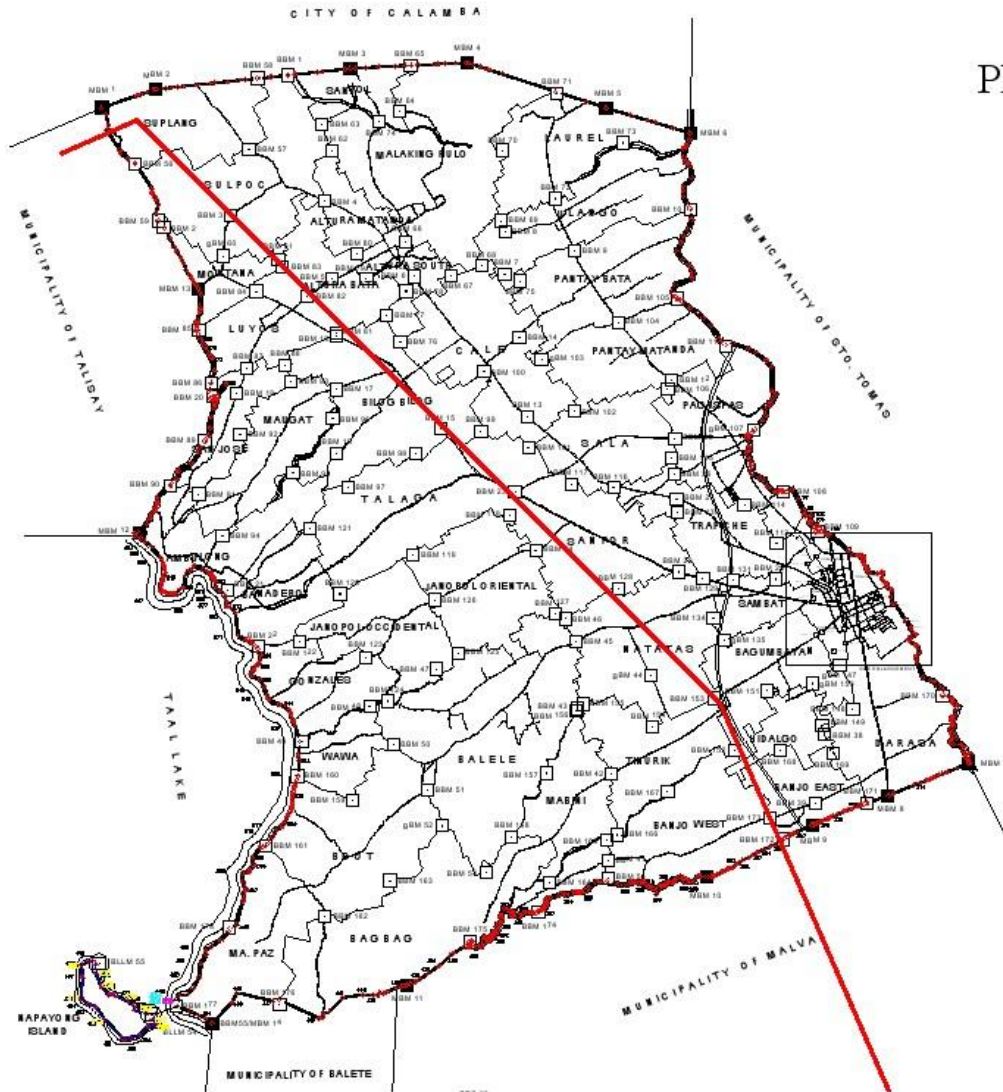
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Map 2.4 Soil Physiography



TAAL VOLCANO PROTECTED LANDSCAPE

LEGENDS:

- ⊗ SECONDARY CONTROL (S)
- ⊙ PRIMARY CONTROL (P)
- ⊠ PRS CONTROL (BTG/LAG)
- BARANGAY BOUNDARY MONUMENT (BBM)
- MUNICIPAL BOUNDARY MONUMENT (MBM)
- ⊕ LOCATION MONUMENT (LLM)
- CITY BOUNDARY
- BARANGAY BOUNDARY
- ROADS
- ~ RIVER/CREEK



Map 2.5 Taal Volcano Protected Landscape

2.6 Water Resources

2.6.1 Taal Lake

Taal Lake is located in the southwest portion of Tanauan City. The Lake has an area of 127 sq. kms. and 200 meters deep. There are six (6) barangays located along the shores of Taal Lake namely Ambulong, Bañadero, Gonzales, Wawa, Boot and Maria Paz.

2.61.1 Water Quality

Under the criteria set by DENR Administrative Order No. 34, Taal Lake is classified as Class B based on water quality criteria for surface waters; meaning the lake can be used for recreational purposes (i.e. bathing, swimming, skin diving, etc.) which are very beneficial for tourism.

Table 2.5 Water Quality of Taal Lake, 1st and 3rd Quarter, 2012

Parameters	1 st Quarter 2012					Acceptable Level
	19-Jan	2-Feb	15-Feb	22-Mar	Average	
Dissolved Oxygen, mg/L	6.5	5.5	6	6.1	6.02	>6.0
pH	8.5	8.25	8	8	8.19	6.5-8.5

Source: Compiled by EPA, 1973, 1979-80; Wedemeyer, et al. 1976; Alabaster & Lloyd, 1982; Hine 1982; Piper et al., 1982; Hellawell, 1986; Murty, 1986; DAO 34, Series 1990

Parameters	3 rd Quarter 2012					Acceptable Level	
	9-Jul	16-Jul	24-Jul	28-Aug	3-Sep		Average
Dissolved Oxygen, mg/L	6.34	8.8	8.2	7.6	6.13	7.4	>6.0
pH	8	7.5	8	8.58	8.67	8.15	6.5-8.5

Source: Compiled by EPA, 1973, 1979-80; Wedemeyer, et al. 1976; Alabaster & Lloyd, 1982; Hine 1982; Piper et al., 1982; Hellawell, 1986; Murty, 1986; DAO 34, Series 1990

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The PASU, with the help of the Provincial Government Environment and Natural Resources Officer (PGENRO) and BFAR, LGUs and academic institutions concerned will operationalize the appropriate monitoring stations for water quality for basic parameters monthly. (See Table 2.6)

Table 2.6. Water Quality for Basic Parameters Monthly

PARAMETER	CURRENT WATER QUALITY	TARGET LEVEL	BASIS
Biochemical Oxygen Demand		5 mg/L	DAO 90-34 for Class B Freshwater
Dissolved Oxygen		70% saturation or min of 5 mg/L	USEPA (1974)
Transparency (Secchi Disk)	1.65 - 3.5 meters	4-7 meters	
Turbidity	(variable)	not more than 30 mg/L increase	
Nitrates	0 -7.5 mg/L	< 1.0 mg/L	(for Class C waters to be applied to Taal Lake)
Phosphate as Phosphorus	0.2 to 1.2 mg/L total phosphorus in 2001	0.05/ 1 mg/L	DAO 90-34 for Class B Freshwater
Total Phosphorus	0-0.6 mg/L total phosphorus		USEPA (1974)
Total Coliforms		1000MPN (Most probable number)	DAO 90-34 for Class B Freshwater
E. coli and Fecal Coliform		nil	
Ph	7.5 - 9.3	6.5 TO 8.5 pH units	DAO 90-34 for Class B Freshwater
Ammonia-N	0 - 0.5 ppm	0.02 ppm	EPA, 1973 Widemeyer et al 1976
H ₂ S	0-1 ppm	0.002 ppm	USEPA 1973-1979-80
Chlorophyll	0-49.10 ug/L	< 4.0 ug/L	Anderson 1981, Ecology for Environmental Sciences

Baseline levels for heavy metals, pesticides and fertilizers and biological indicators to be selected by assisting experts shall be studied by Provincial Government Environment and Natural Resources Officers (PGENRO), State Universities and Colleges (SUC's) and the Department of Science and Technology DOST/PCMARD within the first year of monitoring.

BFAR is to continue monthly lake monitoring primarily productivity measurement in its four stations (Tanauan, Cuenca, for open water, and Manabao, Agoncillo and Sampaloc Talisay for cage areas). LGUs/MENROs shall monitor the following sites and parameters: (a) the mouths of the three major tributary rivers (Palsara, Lepote, Bagbag) to measure the contribution of tributary nutrient and sediments load and (b) the mouth of the Pansipit River.

Other institutions including academe and other permitted industries/developers shall be encouraged to establish monitoring of the above basic parameters using standardized procedures and to add other parameters that might be of concern in specific areas.

An early warning system for fish kill occurrence prediction and overturn using the basic parameters of DO, temperature profile and H₂S shall be established. Closely spaced monitoring would be done if parameters enter a threat level. Results should be immediately disseminated using information boards, SMS and the like.

In critical periods, a Quick Response Team under the PASu would be on alert 24 hours within the appropriate early harvesting of assessment of damage. The PASu shall institute proceedings for cancellation of fishcage permits and other remedies under the Clean Water Act upon finding of violation. He shall likewise take steps through PAMB resolution to lodge all bonds from the URR in a separate account with a representative of the fishcage owners and the PASu as signatory. Funds in this account may be used for clean-up cost of recovery of any sunk refuse from fishkill/events. Reimbursement under Sec 16 of the Clean Water Act (CWA) shall be sought if cleanup cost is higher than the amount of bond paid.

2.6.2 San Juan River



San Juan River is a 33.5 km river system that traverses the towns of Malvar and Sto. Tomas and the City of Tanauan, Calamba and Lipa. The depth of the river ranges from 0.04m to about 20m deep. The San Juan River is one of the 24 sub-watersheds

of Laguna de Bay (SJRRP, 2000).

San Juan River System exceeded almost all water quality parameters for Class C standard. These parameters include Dissolved Oxygen (DO), Biological Oxygen Demand (BOD), Oil and grease, total Coliform and Phosphorous. This means that the water of San Juan River is polluted with organic pollutants which is most likely coming from household/domestic wastes as well as animal wastes that are directly being discharged into the river or thrown into the creeks which flows into the river when heavy rains occur.

Other water bodies surrounding the city and serving as natural boundaries are Sangalo River (Malvar), Balete River (Balete), and Lipa Bay in the southern portion. Located in the West is the Angasin River, serving as a boundary between the municipalities of Talisay and Tanauan City.

2.6.3 Springs

Many springs and seepages are known to exist along the slopes and flanks of Mt. Makiling. From such, only three (3) springs can be considered potential sources of municipal water supply.

Each of the springs is provided with a spring box and the discharges are conveyed to a common transmission pipe. Volumetric measurement conducted last July 17, 1990, showed an aggregate discharge of 8.8 liters per second. Its expected minimum flow is 5 liters per second.

Mineral water spring found in Banjo West is being tapped by La Tondeña Mineral Water Plant. The mineral water is obtained from the five (5) springs found within the six (6) hectares that has plant in Sirang Tobok, the primary source. The springs are within the Makiling Watershed and drains into the Taal Lake. A total of 700 to 1,000 gallons per minute of water is pumped from the springs on a staggered basis (LLDA, 2000).

2.6.4 Ground Water

Ground water is a very important resource. and is about 0.6% of the hydrosphere. This very important resource is one of the sources of drinking water supply in Tanauan City. Ground water is a part of the subsurface water that fully saturates the pore spaces of bedrock zone and it is held in the unsaturated zone by capillary zone in tiny films adding to the mineral surfaces. The water level in Tanauan City is 38 meters below ground (relative to mean sea level). Based on the water level contour map of Batangas, Tanauan's flow pattern of ground water is towards Taal Lake.

Based on Potential Area Ground Water Development, Tanauan City is considered a low yielding Area. Its aquifer is considered under category expectable aquifer; meaning high yielding wells may not be expected because of their small number of recharges.

Based on the study conducted by Tanauan Water District, Tanauan and Sto. Tomas areas are rich in ground water resources and the amount of discharges during the conduct of the study is greater than aggregate of natural and artificial discharges in these areas.

2.7 Ecosystem Profile

There are four (4) major ecosystems that can be found in the city, namely, the coastal ecosystem, the agricultural ecosystem, the forest ecosystem and the urban ecosystem, (see Table 2.7). This profile is based on the SAFDZ map.

Table 2.7. Major Ecosystems, Tanauan City, Batangas, 2003

ECOSYSTEM	BARANGAY
Coastal Ecosystem	Maria Paz, Boot, Wawa, Gonzales, Bañadero, Ambulong
Agricultural Ecosystem (Refer to SAFDZ)	Altura Bata, Altura Matanda, Altura South, Malaking Pulo, Pantay Bata, Cale, Luyos, Bilog-Bilog, Santor, Sala, Trapiche, Bagumbayan, Balele, Hidalgo, Portion of Darasa, Montaña, Janopol, Tinurik
Forest Ecosystem (Watershed, Forestry Zone)	Suplang, Portion of Ambulong, Gonzales, Wawa, Bañadero, Hidalgo, Portion of Darasa, Montaña, Janopol, Tinurik, Laurel
Urban Ecosystem (Poblacion Area)	Poblacion 1 – 7, Sambat, Portion of Darasa

2.7.1 Agroforestry

Agroforestry is a farming system practiced by farmers in sloping and hilly agricultural areas by planting combination of cash crops, fruit and forest trees. The said farming system is the traditional farming practice since time immemorial even in flat terrain, however, through the years, demands of particular agricultural commodities require mono cropping system to produce the needed supply. Because of the economic benefits, most of the farmers shifted to the mono crop farming system, planting high value crops that require intensive cultivation.

Hilly and sloping land which is not suited to the said farming system, are also utilized to plant cash crops. The change in land use affected the eco-system and also as a result, soil erosion and soil degradation become a problem of the agriculture sector. The increase of the required fertilizers and other farm inputs become noticeable to the farmers. Added to these is cost of rehabilitation and mitigation of soil erosion and land slide.

To address the problem the farmers practice should be modified. Government as an institution with the capacity to do the research, manpower to do the development work, and influence to realize the intervention leads to the modification of the farmers practice.

Agroforestry is one of the most effective solutions that was disseminated. In the Province of Batangas this was started from the time of the former Governor Modesto Castillo who promoted diversified farming system.

The latest, intervention to protect the soil from erosion and degradation was the collaborative effort of the International Monetary Fund, South East Asia Soil and Water Management Board, Department of Agriculture, Bureau of Soil and Water Management Board, Philippine Council for Agriculture Forestry and Natural Resources, University of the Philippines, the City Government of Tanauan and other institutions in the implementation of the long term research study entitled Rehabilitation of the Sloping Land in the Philippines and Participatory Approach to Research Technology and Development. The pilot for the community based project is

located in Barangay Maria Paz, Tanauan City, which was the first established Conservation Farming Village in South East Asia.

Different farming practices, technologies and approaches were introduced to the farmers. Two of the most effective technologies were contour farming and agroforestry. In contour farming, farmers were taught to cultivate soil relative to the slope and integrate hedgerow using Napier grass or its equivalent. This technology is more favorable to farmers whose farming practice is integrated with livestock.

Agroforestry on the other hand, can address more severe soil erosion problems. Timber and perennial crops were planted on the part of farm land prone to soil erosion and landslides. For farmers with small farm landholdings and whose livelihood depends only on farming, there is difficulty to convince them to adopt this technology, because it will take years to reap what they sow on their farm. In this case, assistance must be provided for other sources of livelihood. Good varieties of planting that suits the farm lands must also be provided.

In project implementation, it was noted that it was not only the technology per se that was looked into and studied. The community based approach requires the understanding of the community and farmers before the concept of environmental conservation can be adopted.

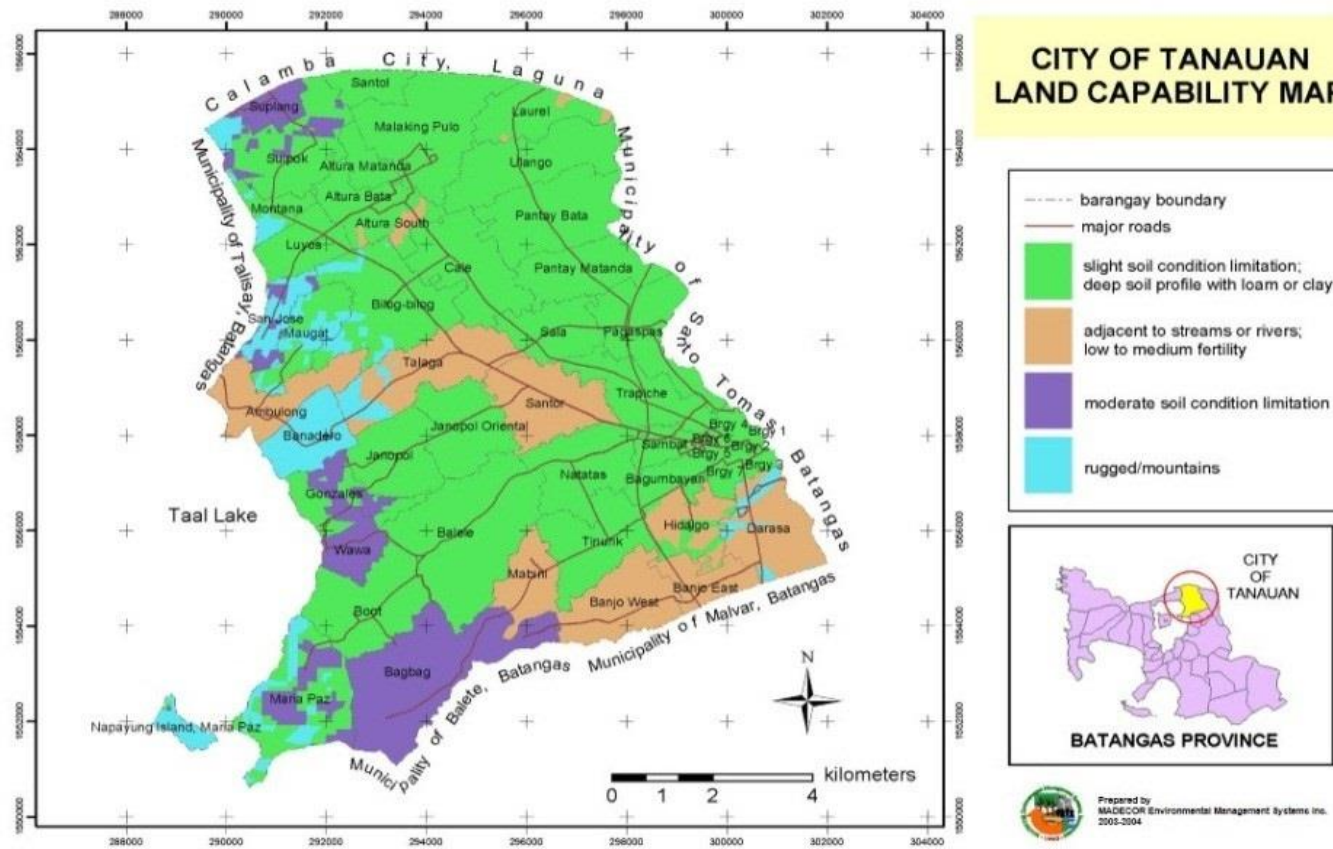
It is noteworthy to say that the sloping land portion of the City of Tanauan was located on the side of the City which was also declared and proclaimed a protected area, and as observed it is a well-kept portion of the Taal Volcano Protected Area Landscape. The implementation of the collaborative and community based project somehow influences the mindset of the people living in the community. To maintain and improve the condition and development of the sloping and hilly areas must always be included in the project and program of the City Government.

2.8 Land Capability

The land capability category for majority of the barangays is slight condition limitation with deep soil profile composed of loamy and clayey soil. Those adjacent to streams

or rivers have low to medium fertility while the rest have moderate soil condition and rugged mountains, refer to Map 2.6.

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Map 2.6 Land Capability Map

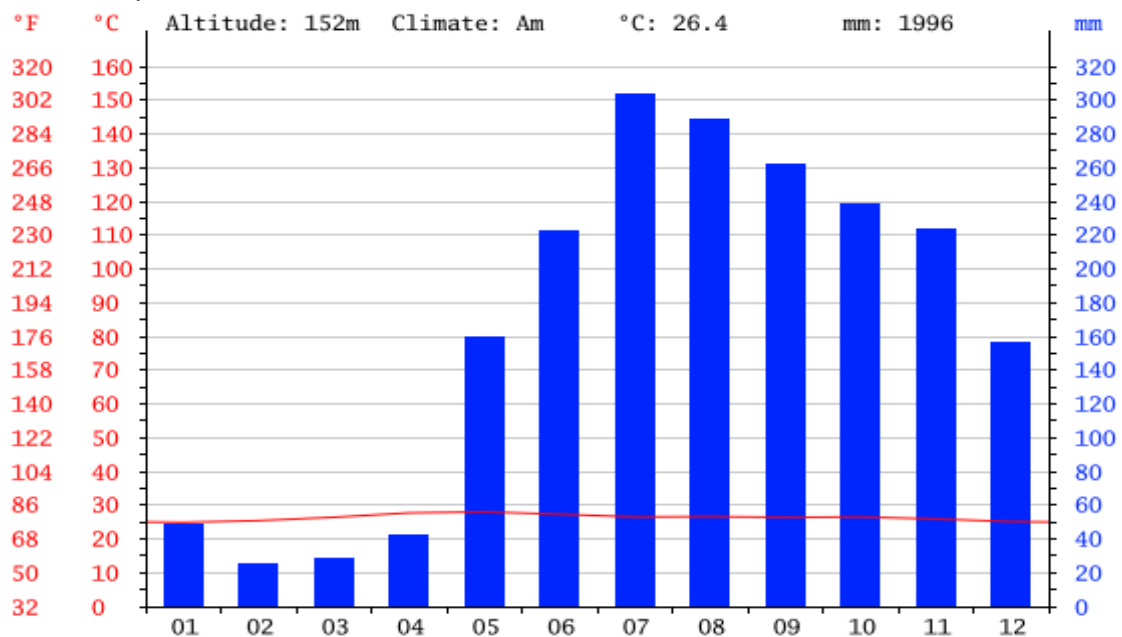
2.9 Climate

Tanauan City’s climate falls on Type I classification which is described as having two pronounced seasons, dry from November to April and wet during the rest of the year. Maximum rain period is from June to September.

On average, temperatures are high except during the month of January and December when there is a nice average temperature. A lot of rain falls during the month of May to November. On the average, the hottest month is May and the coldest is December. August is the wettest month and February is the driest. (weather-and-climate.com)

The climate here is tropical. There is significant rainfall in most months of the year. The short dry season has little effect on the overall climate. According to Köppen and Geiger, this climate is classified as Am. The temperature here averages 26.4 °C. Precipitation here averages 1996 mm.

Climate Graph:



Source: PDPFP, 2014-2022

The driest month is February, with 25 mm of rain. With an average of 303 mm, the most precipitation falls in July.

Batangas has two types of climate – Type I and Type III (see map 25.) Type I have two seasons: dry from the months of November to April and wet during the rest of the year. Meanwhile Type III has no very pronounced maximum rain period with a

dry season lasting only from one to three months, either during the period from December to February or from March to May. This type resembles types I since it has short dry season. Generally, the climate of the province is cool and air is humid.

However, the climate varies according to one's topography a month and the coldest month is February.

Historical temperature record of the province from 1971-2000 is shown in the foregoing table.

Table 2.8 Historical Average Temperature Record -1971 to 2000

Period (Months)	Average Temperature (in ⁰ C)
December –February	24.2
March –May	26.5
June - August	25.9
September –November	25.6

Source: Detailed Guidelines for Mainstreaming DRA and CCVA in the PDPFP, Dr. Candido A. Cabrido, Jr. National Consultant, NEDA DRM/CCA Mainstreaming Project

As projected, there will be more frequent hot temperatures in the country with almost all areas getting warmer and the dry seasons becoming drier. There will be an increase in the number of dry days nationwide in 2020 and 2050. Accordingly, temperature of more than 35⁰C may be felt for 8,010 days, and within the years 2006 to 2035, there will be 6,081 dry days. However, the years 2036-2065 will see lesser dry days with 6,049 and more days with temperature of more than 35⁰C, numbering about 8,016.

When there is a change of temperatures, El Niño and La Niña occur. El Niño Southern Oscillation (ENSO) is a large-scale natural fluctuation of the global climate system resulting from the interactions between the ocean and atmosphere in the Central and Eastern Equatorial Pacific (CEEP). El Niño is the unusual warming in the CEEP resulting to prolonged dry season, while La Niña is the unusual cooling in the CEEP resulting to prolonged rainy season. This climate cause heavy rains in some part of the Philippines. During a period of La Niña, the sea surface temperature across the equatorial Eastern Central Pacific Ocean will be lower than normal by 3–5 °C.

Both effects of El Niño and La Niña are very important for the climate and the weather conditions in the Philippines. Simply because El Niño bring dry weather and even droughts while La Niña stands for rainy weather and floods. Impacts are on stream flow, dam operation, water allocation, domestic water supply, irrigation, hydropower allocation, depth and recharge of aquifers, water quality, watersheds and fishery.

Projected percentage in seasonal temperature increases in years 2020 and 2050 shown in the succeeding table.

Table 2.9 Projected Seasonal Temperature Increases-Batangas Province

Months	2020 (in % - ⁰ C)			2050 (in % - ⁰ C)		
	High Range Emission Scenario	Medium Ranged Emission Scenario	Low Range Emission Scenario	High Range Emission Scenario	Medium Ranged Emission Scenario	Low Range Emission Scenario
December to February	0.5	1.0	0.5	1.4	1.9	1.4
March to May	0.6	1.2	0.4	1.8	2.2	1.2
June to August	0.7	1.9	0.3	1.6	1.8	1.1
September to November	0.8	1.0	0.3	1.7	1.9	1.3

Source: Detailed Guidelines for Mainstreaming DRA and CCVA in the PDPFP, Dr. Candido A. Cabrido, Jr. National Consultant, NEDA DRM/CCA Mainstreaming Project

Meanwhile, rainfall is almost equally distributed in the province, with observed baseline years 1971 to 2000 as follows:

Table 2.10 Monthly Rainfall Distribution

Period (Months)	Rainfall in mm
December to February	231.0
March to May	280.4
June to August	856.5
September to November	746.4

With regards to rainfall, the climate change projection in the Philippines noted that there will be a reduction in most part of the country, but there will be a rainfall increase during southwest monsoon and transition season in Luzon (including Batangas) and during northeast monsoon for Type I climate; with which some parts of the province are classified. The projection further stated that the wet seasons will become wetter.

With the projected rainfall baseline for years 1971 to 2000, rainfall projections for 2020 and 2050 is shown in the succeeding table.

Table 2.11 Projected Seasonal Temperature Increases-Batangas Province

Period (Months)	2020 (in % -mm)		2050 (in % -mm)	
	High Range Emission Scenario	Medium Ranged Emission Scenario	High Range Emission Scenario	Medium Ranged Emission Scenario
December to February	-38.8	-29.9	-34.5	-11.1
March to May	-4.2	-24.1	-11.7	-23.1
June to August	26.7	9.1	13.9	17.2
September to November	-6.0	.5	5.8	6.3

Source: Detailed Guidelines for Mainstreaming DRA and CCVA in the PDPFP, Dr. Candido A. Cabrido, Jr. National Consultant, NEDA DRM/CCA Mainstreaming Project

Frequency of extreme events in rainfall from 1971 to 2000 numbers about 6mm, and its likelihood of increasing to 14 mm is projected by year 2020; however, the frequency is projected to be reduced to 9 mm by year 2050.

From 1948 to 2009, there are 67 tropical cyclones which crossed the province 50 km from boundaries, 11 of which are tropical depressions, 21 are tropical storms, 33 are

typhoons and 1 is a super typhoon. It may be noted that most of these weather disturbances occurred during the “BER” months during the months of September (8), October (17) and November (11).

Meanwhile, sea level rise for the period Sept. 1992 to January 2012 is 8mm per year, and the sea surface height is 101 cm. On the other hand, sea surface temperature ranges from 28⁰C to 31⁰C depending on the months as follows:

Table 2.12 Sea Surface Temperature

December to February	28 ⁰ C
March	29 ⁰ C
April	30 ⁰ C
May to June	31 ⁰ C
July to November	30 ⁰ C

Source: Detailed Guidelines for Mainstreaming DRA and CCVA in the PDPFP, Dr. Candido A. Cabrido, Jr. National Consultant, NEDA DRM/CCA Mainstreaming

**Table 2.13 Frequency Table for 1-day rainfall based on observed values in 1951 –2010 & 2020
 - Batangas Province**

Observed Values	Frequency for 1-day rainfall based on observed values (1951 –2010)	Frequency of 1-day rainfall for 2020, bias-corrected (2006 –2035)
2mm	140.4	134.7
3mm	169.6	169.6
5mm	204.0	212.6
10mm	249.8	273.8
20mm	296.9	340.9
30mm	325.6	383.7
50mm	362.7	441.8
70mm	388.6	483.8
80mm	398.4	500.0
100mm	415.9	529.4

Source: Detailed Guidelines for Mainstreaming DRA and CCVA in the PDPFP Dr. Candido A. Cabrido, Jr. National Consultant, NEDA DRM/CCA Mainstreaming Project

Table 2.14 No. of Tropical cyclone which crossed the province 50 Km from boundaries (1948-2009) Batangas Province

Months	Total
January	1
February	0
March	0
April	2
May	5
June	6
July	8
August	4
September	8
October	17
November	11
December	5
Total	67
Tropical Depression	11
Tropical Storm	21
Typhoon	33
Super Typhoon	1
Total	67

Source: Detailed Guidelines for Mainstreaming DRA and CCVA in the PDPFP Dr. Candido A. Cabrido, Jr. National Consultant, NEDA DRM/CC Mainstreaming Project

Table 2.15 Frequency of Extreme Events in 2020 and 2050 under medium-range emission scenario for the Province of Batangas (Ambulong Station)

	OBS	2020	2050
No. of Days w/ T _{max} >35 ^o C		8010	8016
No. of Dry Days	8226	6081	6049
No. of Days with Rainfall >300mm	1	3	2

Source: *Climate Change in the Philippines/ Feb. 2011 (Adaptayo, PAGASA, MDIG Achievement Fund: Strengthening the Philippine Institutional Capacity to Adapt to Climate*

The coastal barangays of Ambulong, Bañadero, Gonzales, Wawa, Boot and Maria Paz are areas affected by the impact of climate change such as sea level rise, flooding, tropical cyclones or storm surges, water shed run-off, ocean acidification and sea surface temperature increase cannot be discounted.

Sea level rise affect the coastal wetlands, coral reef prolonged flooding, sea grasses or capacity of meadows to withstand wave impact.

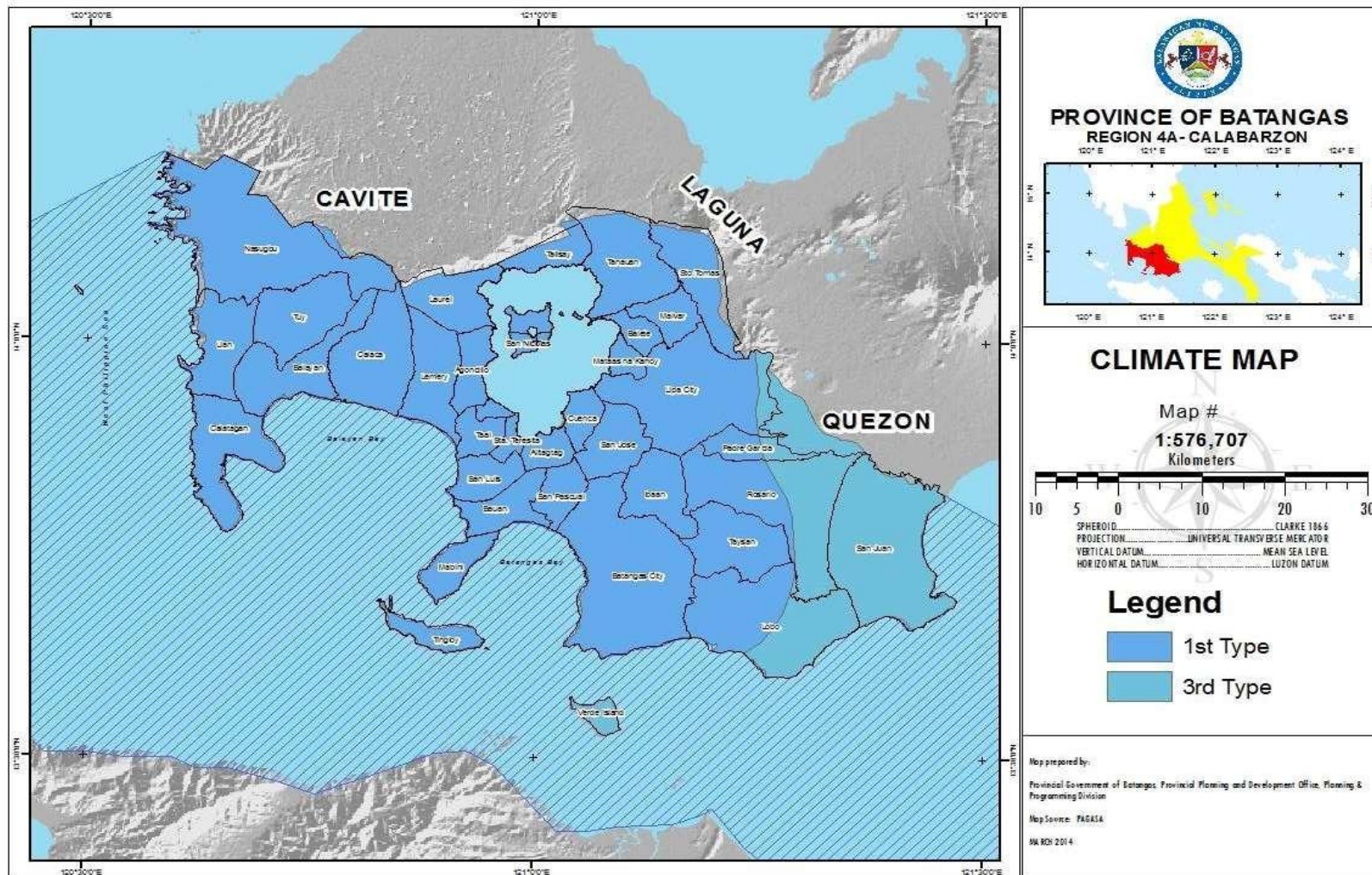
Agricultural lands and coastal settlements, coastal wetlands and water bird’s habitat are affected by flooding. Similarly, salinity, ground water intrusion and beach and coastal erosion are the results of flooding in some coastal areas. Destruction of coral reefs and plankton production are some of the effects of watershed run off, ocean acidification and sea surface temperature increase. These are the factors mostly affecting the fish and marine production.

Some of those that have exposure to sea level rise, flooding tropical cyclones or storm surges are physical assets and infrastructure, settlements and population, marine and coastal resources.

The number of families that are totally dependent on fishing as their source of livelihood and income, are the ones that are highly exposed to the hazards of sea surface temperature increase, ocean/water acidification, sea level rise / flooding

tropical cyclones and storm surges. Coral reefs, marine sanctuaries and reef fish production are also affected.

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Map 2.7 Climate Map

2.10 Geo-hazard

Geohazard is a geological state that may lead to widespread damage or risk. Geohazards are geological and environmental conditions and involve long-term or short-term geological processes (Wikipedia.org).

Tanauan is susceptible to different hazards. One of the most devastating hazards present is the volcanic eruption of the famous Taal Volcano. In the bay surge scenario, where a volcano erupts on their sides, the PHIVOLCS has designated a 17km radius buffer zone from the center to be the safest place. The coastal barangays that will be greatly affected are listed in Table 2.16.

Table 2.16 List of Coastal Barangays in danger zone in the event of Taal Volcano eruption.

NAME OF BARANGAY	POPULATION
Gonzales	1,701
Ma. Paz	2,278
Bagbag	2,761
Boot	4,207
Wawa	1,439
Bañadero	3,022
Ambulong	5,461

These barangays are also prone to flashfloods and landslides.

In the event that Taal volcano erupts, those low-lying lakeshore barangays are in high risk of ash fall. They are likely to receive greater than 10 centimeters of ash fall. The rest of the city is likely to receive 1-10 cm of ash fall. Barangay Darasa, Suplang, Santol and some parts of Malaking Pulo and Laurel are likely to receive less than one (1) centimeter of ash fall. A detailed plan of action is needed because of the magnitude of coverage of volcanic eruption.

There is a possibility of an acid rain in all parts of Tanauan City and neighboring localities in case Taal Volcano erupts; due to volcanic gases that the volcano may discharge that could reach as high as three (3) thousand meters. Precautions should be made when such things occur.

2.10.1 Results of the MGB Region IV-A (CALABARZON) Geo-hazard Assessment and Mapping (1: 10,000 scale) of Tanauan City

In line with the government’s effort aimed at reducing, if not totally preventing, the destructive effects and impacts of natural hazards on the populace, the Mines and Geosciences Bureau Region IV-A (CALABARZON) conducted a geohazard assessment of the 48 barangays of Tanauan City. The assessment was undertaken by technical personnel from the Geosciences Division composed of the following: Socorro P. Hernandez, Romali S. Umali, Fidel R. Zepeda, Patricia V. Kennedy, Perlito A. Angeles and Dick G. Bacuño.

The assessed areas were rated as having low, moderate, high and very high (critical) susceptibility to landslide and low, moderate and high susceptibility to flooding.

The landslide susceptibility rating parameters are as follows:

Very High	Areas usually with steep to very steep slopes and underlain by weak materials. Recent landslide, escarpments and tension cracks are present. Human initiated effects could be aggravating factor
High	Areas usually with steep to very steep slopes and underlain by weak materials. Areas with numerous old/inactive landslides.
Moderate	Areas with moderately steep slopes. Soil creep and other indications for possible landslide occurrence are present.
Low	Gently sloping areas with no identified landslides.

The flood susceptibility rating parameters are as follows:

High	Areas likely to experience flood heights of greater than 1.5 meters and/or flood duration of more than three (3) days. These areas are immediately flooded during heavy rains of several hours, also prone to flashfloods.
Moderate	Areas likely to experience flood heights of 0.5 to 1.5 meters and/or flood duration of one (1) to three (3) days. These areas are subjects to widespread inundation during prolonged and extensive heavy rainfall or extreme weather condition.
Low	Areas likely to experience flood heights of less than 0.5 meter and/or flood duration of less than one (1) day.

The barangay official/s was presented with a Landslide or Flooding Threat Advisory. This advisory informs them of their area's susceptibility to landslides or flooding and contains the corresponding recommendations particular to the barangay.

The results of the MGB Field Assessment are as follows:

In terms of landslide susceptibility:

- Barangays Boot, Maria Paz and San Jose were rated High
- Barangays Maugat and Sulpoc were rated Moderate
- Barangays Bañadero, Trapiche and Bilogbilog were rated Low to Moderate
- The rest of the barangays (40) were rated Low for landslide

In terms of flooding susceptibility:

- Eleven (11) barangays, namely Altura Bata, Altura Matanda, Altura South, Ambulong, Boot, Gonzales, Janopol Occidental, Malaking Pulo, Montana, Sambat and Wawa were rated High for flooding
- Rated Moderate to High in term of flood susceptibility are Barangays Banadero and Sulpoc.
- Barangays Bagbag, Bagumbayan, Balele, Hidalgo, Janopol Oriental, Poblacion VI and Tinurik were rated Low to Moderate for flooding
- The rest of the barangays (28) were rated Low for flooding

The tables below present the summary of the results of assessment:

Table 2.17 Results of Landslide Assessment

Barangays	Geographic Coordinates		Susceptibility	Remarks/Recommendations
	Northing	Easting		
Altura_Bata	14°07'41.2"	121°04'32.1"	Low	
Altura_Matanda	14°08'06.0"	121°05'03.1"	Low	
Altura_South_	14°07'45.5"	121°05'16.2"	Low	
Ambulong	14°05'19.9"	121°03'31.0"	Low	
Bagbag	14°02'10.1"	121°05'25.5"	Low	
Bagumbayan	14°04'29.0"	121°07'58.8"	Low	
Balele	14°03'50.4"	121°05'24.8"	Low	
Banadero	14°05'06.0"	121°04'10.5"	Low to Moderate	- Soil creep in Purok 2
Banjo_East	14°03'29.5"	121°08'29.6"	Low	
Banjo_West	14°03'15.5"	121°07'49.6"	Low	
Bilogbilog	14°06'56.2"	121°05'10.1"	Low to Moderate	- Putak area = prone to rock fall (boulder size/soil debris)
Boot	14°03'23.9"	121°05'04.3"	High	- Sitios Paradise and Subic (mountain side)
Cale	14°07'03.7"	121°05'50.1"	Low	
Darasa	14°04'07.8"	121°09'06.5"	Low	
Gonzales	14°04'22.0"	121°04'34.2"	Low	
Hidalgo	14°04'21.4"	121°06'21.9"	Low	
Janopol_Occidental	14°04'59.2"	121°09'06.9"	Low	
Janopol Oriental	14°05'23.5"	121°05'52.6"	Low	
Laurel	14°09'01.4"	121°06'29.7"	Low	
Luyos	14°07'31.2"	121°04'12.8"	Low	
Mabini	14°03'26.6"	121°06'33.2"	Low	
Malaking Pulo	14°08'24.4"	121°05'25.5"	Low	
Maria Paz	14°02'41.4"	121°04'07.7"	High	- Proper, so. Mahabang Buhangin, Ilayang Central, Kanluran - Steep slope facing Taal Lake - Soil creep is unstable at the barangay hall - Dissected by ravines/gullies
Maugat	14°06'08.6"	121°03'59.2"	Moderate	- Purok Uno – possible landslide due to quarrying which was stopped - Purok Tres – prone to rock fall. Slope stabilization measure and removal of exposed roots and rocks to prevent rock fall
Montana	14°07'46.5"	121°03'40.3"	Low	
Natatas	14°05'02.6"	121°07'23.1"	Low	
Pagaspas	14°05'58.9"	121°08'09.5"	Low	
Pantay Bata	14°07'35.6"	121°06'47.5"	Low	
Pantay Matanda	14°07'10.3"	121°07'07.8"	Low	
Poblacion I	14°05'19.4"	121°09'06.9"	Low	
Poblacion II	14°05'10.7"	121°09'06.2"	Low	
Poblacion III	14°04'49.5"	121°09'08.3"	Low	
Poblacion IV	14°05'26.8"	121°08'47.8"	Low	
Poblacion V	14°05'00.1"	121°08'48.2"	Low	
Poblacion VI	14°05'19.2"	121°08'39.9"	Low	

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Poblacion VII	14°05'00.2"	121°08'42.6"	Low	
Sala	14°06'25.6"	121°06'50.3"	Low	
Sambat	14°05'13.2"	121°08'07.6"	Low	
San Jose	14°06'46.9"	121°03'48.9"	High	- Purok 7 - Landslide (1.5-2.0 m high and 5 m wide) along the barangay road to Sitio Lodlod, Brgy. Ambulong making the road impassable. - Installation of warning signs in the area, stabilization measures and drainage system was recommended
Santol	14°09'13.9"	121°04'52.4"	Low	
Santor	14°05'36.6"	121°06'50.4"	Low	
Sulpoc	14°08'22.3"	121°03'53.2"	Moderate	- Possible accumulation zone - Houses of Lucia Alcantara, Nestor Alcantara and Dalmacio Alcantara to be affected by accumulation of debris materials
Suplang	14°09'11.4"	121°03'34.0"	Low	
Talaga	14°06'02.0"	121°05'25.4"	Low	
Tinurik	14°04'01.0"	121°07'26.4"	Low	
Trapiche	14°05'46.2"	121°07'47.2"	Low Moderate to	- Purok 3 is prone to soil creep
Ulago	14°08'07.1"	121°06'28.0"	Low	
Wawa	14°03'56.0"	121°04'29.5"	Low	

Table 2.18 Results of Flooding Assessment

BARANGAYS	GEOGRAPHIC COORDINATES		SUSCEPTIBILITY	REMARKS/RECOMMENDATIONS
	NORTHING	EASTING		
Altura Bata	14°07'41.2"	121°04'32.1"	High	- Zones 2, 4 and 5 are high in flooding - relatively flat area and Zone 3 has the highest elevation - concentration of flood water is at Zones 4 and 5. Flood height is >2.0m - affected by Typhoons Ondoy and Ofel
Altura Matanda	14°08'06.0"	121°05'03.1"	High	-
Altura Sout	14°07'45.5"	121°05'16.2"	High	-
Ambulong	14°05'19.9"	121°03'31.0"	High	- Purok 1 – 1.5 to 2.0m flood height - Ordinary heavy rains, flood coming from the upland barangays of Bilogbilog and Luyos - Purok 7-Sitio Lodlod, low-lying and catchment area, knee-high floodwaters coming from upland areas of Barangay San Jose - Heavy siltation was also observed
Bagbag	14°02'10.1"	121°05'25.5"	Low to Moderate	- Proper (Purok 3) - rolling topography with low slopes towards the creek - experienced flash flood of about 0.5 m specifically along the barangay road. Standing time is 30 mins

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Bagumbayan	14°04'29.0"	121°07'58.8"	Low to Moderate	<ul style="list-style-type: none"> - Purok 1, 2, 3 and 7 - relatively flat to rolling topography with low slope gradient - serves as catchment basin of surface water, prone to flash flood with flood height of 0.5m during Typhoons Ondoy and Milenyo
Balele	14°03'50.4"	121°05'24.8"	Low to Moderate	<ul style="list-style-type: none"> - Purok 3 near Elem. School - rolling topography with gentle and moderate slopes - flash flooding in Purok 3 with flood height of about 10 cms or 0.1m - Purok 3 is a small catchment basin
Banadero	14°05'06.0"	121°04'10.5"	Moderate to High	<ul style="list-style-type: none"> - Purok 6 Ibaba and Purok 6 Ilaya – knee-high flood waters; heavy and prolong rain or typhoons and swelling of Taal Lake - 3-4 days flood duration
Banjo East	14°03'29.5"	121°08'29.6"	Low	
Banjo West	14°03'15.5"	121°07'49.6"	Low	
Bilogbilog	14°06'56.2"	121°05'10.1"	Low	
Boot	14°03'23.9"	121°05'04.3"	High	<ul style="list-style-type: none"> - Sitio Aplaya (shore area) flood prone due to swelling of Taal Lake
Cale	14°07'03.7"	121°05'50.1"	Low	
Darasa	14°04'07.8"	121°09'06.5"	Low	
Gonzales	14°04'22.0"	121°04'34.2"	High	<ul style="list-style-type: none"> - Flash flood with water coming from the upland areas of Barangay Janopol Occidental - affected houses include that of Nilo Simon, Mateo Alvarez, Eliseo Gonzales and Atong Salise - Recommendations are proper drainage, creek/river should be cleared of waste materials, early warning system should be placed to warn motorists
Hidalgo	14°04'21.4"	121°06'21.9"	Low to Moderate	<ul style="list-style-type: none"> - Proper (Zone 1) - relatively flat to rolling topography with low slope gradient - flash flood (0.5m) during Typhoon Milenyo in Zone 1 due to obstruction of unnamed creek
Janopol Occidental	14°04'59.2"	121°09'06.9"	Low	
Janopol Oriental	14°05'23.5"	121°05'52.6"	Low to Moderate	<ul style="list-style-type: none"> - Purok 2 around Janopol Oriental Elementary School; knee-high flood water; ½ day; during Typhoon Ondoy - flood water coming from upland agricultural land - easily recedes after rain has stopped
Laurel	14°09'01.4"	121°06'29.7"	Low	
Luyos	14°07'31.2"	121°04'12.8"	Low	
Mabini	14°03'26.6"	121°06'33.2"	Low	
Malaking Pulo	14°08'24.4"	121°05'25.5"	High	
Maria Paz	14°02'41.4"	121°04'07.7"	Low	
Maugat	14°06'08.6"	121°03'59.2"	Low	
Montana	14°07'46.5"	121°03'40.3"	High	

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Natatas	14°05'02.6"	121°07'23.1"	Low	
Pagaspas	14°05'58.9"	121°08'09.5"	Low	
Pantay Bata	14°07'35.6"	121°06'47.5"	Low	
Pantay Matanda	14°07'10.3"	121°07'07.8"	Low	
Poblacion I	14°05'19.4"	121°09'06.9"	Low	
PoblacionII	14°05'10.7"	121°09'06.2"	Low	
Poblacion III	14°04'49.5"	121°09'08.3"	Low	
Poblacion IV	14°05'26.8"	121°08'47.8"	Low	
Poblacion V	14°05'00.1"	121°08'48.2"	Low	
Poblacion VI	14°05'19.2"	121°08'39.9"	Low to Moderate	- Zone 1 Mabini Avenue - house of Merlita A. Ter???(c/o Pat and Au)al; half meter flood for 4 days (located below road level)
Poblacion VII	14°05'00.2"	121°08'42.6"	Low	
Sala	14°06'25.6"	121°06'50.3"	Low	
Sambat	14°05'13.2"	121°08'07.6"	High	- Purok 4 Tikbalangin Area – low-lying area; 3 times evacuated; 2m high flood - drainage system is higher than Tikbalangin Area - Purok 7; beside STAR Tollway; knee-high flood water and stagnant for about one week; flood water coming from Barangays Tinurik and Bagong Bayan - install appropriate drainage system and if possible relocated those affected by flood
San Jose	14°06'46.9"	121°03'48.9"	Low	
Santol	14°09'13.9"	121°04'52.4"	Low	
Santor	14°05'36.6"	121°06'50.4"	Low	
Sulpoc	14°08'22.3"	121°03'53.2"	Moderate to High	- whole barangay
Suplang	14°09'11.4"	121°03'34.0"	Low	
Talaga	14°06'02.0"	121°05'25.4"	Low	
Tinurik	14°04'01.0"	121°07'26.4"	Low to Moderate	- Purok 2 which is a catchment basin
Trapiche	14°05'46.2"	121°07'47.2"	Low	
Ulago	14°08'07.1"	121°06'28.0"	Low	
Wawa	14°03'56.0"	121°04'29.5"	High	- Purok 4 and 5 - relatively flat area situated at the border of Taal Lake - road collapsed due to wave action (Ondoy event) in Purok 5

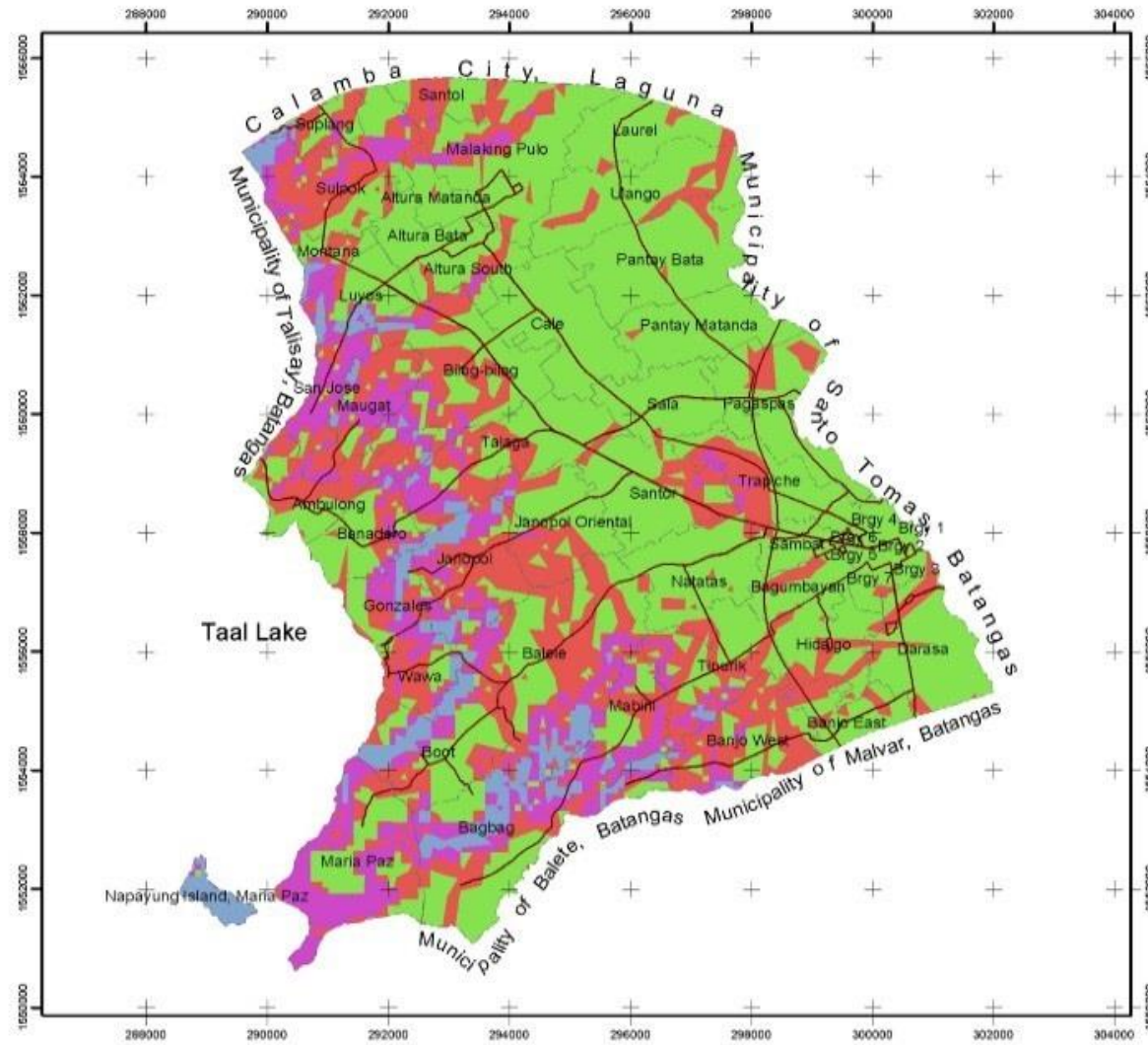
It should be noted that these susceptibility ratings were arrived at as of this field assessment. However, the rating could advance (e.g., from Low to Moderate, and Moderate to High) as the hazard progresses. Hence, the MGB IV-A (CALABARZON) constantly recommends strict and continuous monitoring by the barangays.

2.11 Soil Erosion

The lakeshore and its adjoining hilly barangays are prone to soil erosion and degradation due to its topography and soil type. Farmers practice soil cultivation which/and also contribute soil erosion and degradation. These are barangays located near or along the Taal Lake. Barangays with deep creeks that serve as natural water ways are also prone to erosion, as high intensity development continues, siltation of creeks and rivers that serve as natural drainage system will be flatten, thus, flooding in rural barangays will be aggravated. When heavy rains occur, topsoil is being washed away; leaving less fertile subsoil, which is not good for crop production. These areas need soil conservation and management approaches to prevent possible landslides and degradation. In the Poblacion area, an environment management system needs to be prioritized to keep the environmental condition from worsening, thus lessening the harmful effects of climate change.

The City Disaster Risk Reduction and Management Council had developed a contingency plan for the said incidents. They had prepared for the incidents from the evacuation process up to the rehabilitation of the affected areas. They had even invited that would be affected barangays and their disaster committees to integrate/incorporate their contingency plan to the city. The plans will be followed by series of drills and exercises for familiarizations.

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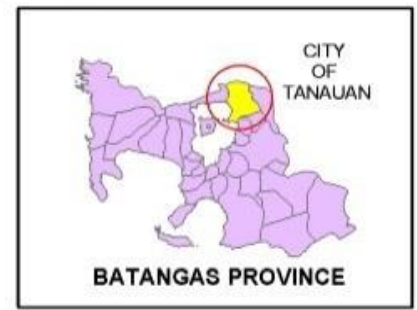


Map 2.8 Soil Erosion Map

**CITY OF TANAUAN
 EROSION POTENTIAL
 MAP**



- barangay boundary
- major roads
- not susceptible to erosion
- slightly susceptible to erosion
- moderately susceptible to erosion
- highly susceptible to erosion



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2.12 Flood

Flooding is defined as a body of water that inundates land that is not frequently submerged (Ward, 1978). It is a potentially damaging phenomenon occurring with a certain probability, within a specific period of time in a certain area. The degree of damages brought about by flood water differs depending on the depth of water, duration, water velocity, sediment load, rate of rise, and frequency of occurrence of floods.

There are identified flood prone areas in Tanauan City, as shown in Table 2.19. These flood prone areas need immediate attention to prevent greater damages when strong typhoons occur. Flooding could be due to inadequate drainage system and improper waste disposal, resulting to clogging of canals.

Upon the implementation of the flood control projects by the Department of Public Works and Highway, subsequent with the upgrading and widening of the national roads, flooding problem on road sections that were completed lessened or minimized. The City Government of Tanauan, through the City Engineering Office, completed the drainage system master plan in the Poblacion area, thus, it is expected that flooding in Poblacion will be reduced also.

However, low-lying rural Barangays such as Hidalgo, Bagumbayan, Trapiche, Sala and Pagaspas, Altura Bata, Altura Matanda, Altura South, Malaking Pulo, Sulpoc and Montaña continue to experience flooding problems. These problems were aggravated by the massive change in land use from agricultural to residential subdivision of the adjoining barangays with higher elevation and which does not tap their drainage to natural drainage systems.

Table 2.19 FLOOD PRONE AREAS

AREA/ BARANGAY	SPECIFIC LOCATION	ESTIMATED NUMBER OF FAMILIES AFFECTED	ESTIMATED NUMBER OF TOTAL POPULATION AFFECTED
Poblacion 1	P. Gonzales St & San Juan River	426	2017
Poblacion 3	Sitio Sampalucan and Mt. View, Subd.	50	
Poblacion 4	Dimayuga St., J. Gonzales St. cor V. Luna St. railroad alley	8	54
Ambulong	Low lying areas near creeks and shoreline	200	805
Altura Bata	1/3 of the whole barangay	17	93
Altura Matanda		50	120
Altura South		17	93
Bagumbayan	Zone 3 and 4	409	3230
Banadero		25	
Banjo East		100	
Boot	Sitio Uple and Sitio Aplaya	409	550
Cale	Purok 6, Brgy road from crossing to Chapel	36	300
Gonzales		30	65
Janopol Occidental			563
Natatas		50	114
Sambat		12	
Sulpoc		344	
Suplang	Purok 2 & 4		25

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Tinurik		14	68
Pagaspas		14	68
Pantay Matanda		70	
San Jose		3	10
Santor	Near the hospital going to the National Hiwayllaya	100	608
Ulango		409	856

Source: CDRMMC, 2014

2.13 Coastal Barangays

Taal Lake is considered the natural catch basin of surface run off of more than 65,000 has. of land, now declared as the Taal Volcano Protected Area Landscape (TVPL). This covers 12 local government units in the Province of Batangas and Tagaytay City, Cavite. The only outlet of the lake is the Pansipit River towards the Pacific Ocean. During rainy season, the water level of the lake rises and the edge of the water moves to the salvage zone. The farthest movement was in 1995, where the water reaches more than 100 meters from the shore line. Barangays along the coastal areas of Tanauan were adversely affected because the wind direction opposite to the Pansipit River maintains for a longer period of time and water level did not subside immediately.

San Juan River traverses barangays of Darasa, Poblacion 1, Poblacion 2, Poblacion 3, Poblacion 4, Pagaspas, Trapiche, Pantay Matanda, Pantay Bata, Ulango, and Laurel in Tanauan City section. The said river serves as the Natural Boundary of Tanauan City and the Municipality of Santo Tomas. Upstream of the River are Municipality of Malvar, City of Lipa and Municipality of Sto. Tomas. On the other side, down streams are the City of Calamba and Municipality of Sto. Tomas and terminates to Laguna de Bay.

San Juan River plays a vital role in addressing the flooding problem of the City of Tanauan. Outfall of storm drain and drainage systems is tapped directly to this body of water or to creek, canals and tributary river connected to the San Juan River. In Barangays Darasa, Poblacion 1, 2, 3 and 4 and Barangay Pagaspas, the river is wide and deep and there is no record that the river over flows.

During dry season, the water level of the river is shallow, and because of this, informal settlers construct shanties and house along the river banks. Considering that all the out falls of the storm drain and drainage system will be drained to San Juan River and land development not only in Tanauan City but also adjoining LGUs near river is at its peak, abrupt raising of water level can be expected during heavy rain fall and typhoon. This fact will increase the risk of the lives of people living on the river bank which has been the perennial problem of the City Government of Tanauan.

2.14 Volcanic Hazards

There are about more or less 300 volcanoes in the country and 23 are active, and 26 are potentially active, (or has erupted historically in the last 10,000 years) including Taal Volcano. Thus, one of the geologic hazards that can happen in the province is volcanic eruption. Hazards from eruption may be different in nature. These hazards include flowing of fast moving molten rocks and other ejecta. The ejected fragments range in size from fine dust (volcanic ash) to large boulders (volcanic blocks).

Among the potentially damaging eruptive and post eruptive phenomena are base surges, ash falls and ballistic projectiles, lava flows, seiches/tsunamis and flooding, lakeshore landslide, fissuring, ground subsidence, pyroclastic flows, and debris avalanche. According to the Office of Civil Defense, coastal municipalities that are at high risk in cases of the volcanoes to base surges eruption are Calaca, Lemery, Taal and San Luis; those in less danger include Calatagan, Balayan, Bauan and Mabini. Fault lines are also inferred along the coasts of Batangas City, Mabini and Lobo. (MGB, 2011).

Table 2.20 Historical Taal Volcano Eruptions

	Volcanic Activity- Taal Volcano
Number of Historical Eruptions	33
Latest Eruption	October 3, 1977
Years	1572,1591,1605,1611,1634,1635,1641,1645,1707,1709,1715, 1716,1729,1731,1749,1754,1790,1808,1825,1842,1873,1874, 1878,1903,1904,1911,1965,1966,1967,1968,1969,1970,1976, 1977
Eruption Type	Phreatic (1878,1911,1970); Phreatomagmatic (1749, 1965, 1966); Strombolian (1968, 1969), Plinian (1754)
Volcanic Hazards	Base surge, ashfall, ballistic projectile, lava flow, seich / tsunamis, flooding, lakeshore landslide, fissuring and ground subsidence
Affected Cities / Municipalities	Agoncillo, Alitagtag, Balete, Cuenca, Laurel, Mataas na Kahoy, San Nicolas, Sta. Teresita, Taal, Lemery, Talisay, Lipa City, Tanauan City

Source: DOST / Phivolcs (Batangas PDRRMO –Taal Volcano ConPlan 2013-2016)

The entire Taal Volcano Island is a permanent danger zone where an estimated 4,698 people live near the crater of Taal Volcano and remain at risk in case of its eruption. This population has not been permanently relocated but their temporary relocation including details of shelter assignments for the communities are described in the Taal Volcano Contingency Plan.

PROPOSED TANAUAN CITY EVACUATION CENTER

The Proposed Tanauan City Evacuation Center is a cluster of eight (8) buildings that will serve as the City's main evacuation hub. This project is a national project thru the office of Senator Loren B. Legarda. It shall be implemented by the DPWH Region IV – A and be turned over to the City Government upon completion of this project.

- **Accommodation Building**

This is a two-storey building that will serve as the main evacuation area with dining area, main kitchen, communication room, storage area (for relief goods), prayer room and breastfeeding section on ground floor. Accommodation area is located at its 2nd floor with a capacity of sixty-five (65) double deck beds. This building is accessible by a concrete ramp (compliant to accessibility law) and two (2) concrete staircases. The 2nd floor area can be converted into a multi-purpose area, i.e. Meeting Room or Function Hall. The total floor area is approximately 860 sq. meters.

- **CDRRMO/Office of the Civil Defense Building**

A two-storey edifice that will house the infirmary and pharmacy on ground floor and CDRRMO and OCD Office. The total floor area is more or less 280 sq. meters.

- **Male and Female Toilet and Bathe Building**

Single storey building separately built for men and women. Each has shower and toilet cubicles, lavatories and storage tanks for water. Each building has PWD accessible toilet and bath served by concrete ramps. Each toilet and bathroom has a floor are of 104 sq. meters.

- **Laundry Building with Overhead Tanks**

This is a 3-level building with washing area located at the ground level, drying area at the second level and overhead water tanks at the third level. The floor area is 163 sq. meters.

- **Generator Room**

A 20 KVa generator will be housed to provide emergency electric power for this evacuation center.

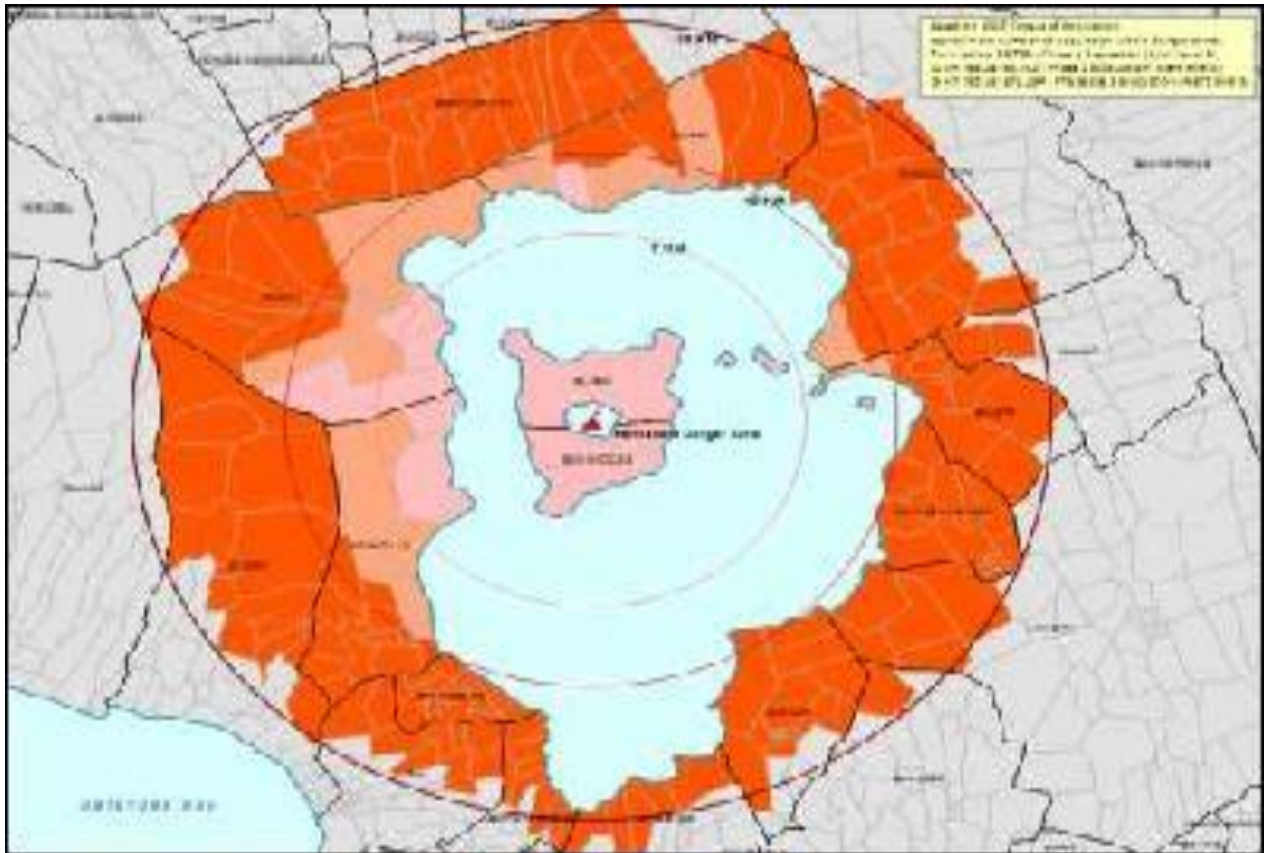
- **Water Pump Room**

This will house the main water pump to fill the overhead tanks and supply the water taps of each buildings.



Proposed Tanauan City Evacuation Center

Figure 2.1. Taal Volcano Permanent Danger Zone



Taal Volcano Permanent Danger Zone

(Photo: PAGASA, 2013)

The plan embraces all conceivable counter disaster activities in making use of all available resources, both government and private sectors. Included in the plan are the Taal Volcano Early Warning System and Taal Volcano Eruption Evacuation System.

Table 2.21 Taal Hazard Warnings Based on Alert Signals

Alert	Criteria	Interpretation	Activities
0	Background quiet	No eruption in foreseeable future.	
1	Low level seismicity, fumarolic, other activity	Magmatic, tectonic or hydrothermal disturbance; no eruption imminent	Main crater is off limits to the public because sudden explosion may occur or toxic gases may accumulate. Volcano residents and visitors must be aware and vigilant of the volcano's
2	Low to moderate level of seismicity, persistence of local but unfelt earthquakes. Ground deformation measurements above baseline levels. Increased water and / or ground probe hole temperatures. Increased bubbling at Crater lake.	a.) probable magmatic intrusion; could eventually lead to an eruption; b.) if trend shows further decline, volcano soon go to level 1	Main Crater, Daang Kastila and 1965-1977 Mt. Tabaro Eruption Site are off limits to the public. Selective evacuation- women, children and elderly at the Volcano island are advised to transfer to their relatives at the mainland.
3	Relatively high unrest manifested by seismic swarms including increased occurrence of low frequency earthquakes and / or harmonic tremors (some events felt). Sudden or increasing changes in temperature or bubbling activity or radon gas emission or crater lake pH. Bulging of the edifice and fissuring may accompany seismicity.	a.) if trend is one of increasing unrest, eruption is possible within days to weeks, b.) if trend is one of decreasing unrest, volcano may soon go to level 2	Total evacuation of the Volcano island.
4	Intense unrest, continuing seismic swarms, including harmonic tremor and / or low frequency earthquakes which are	Hazardous explosive eruption is possible within days	Flank eruption- lakeshore barangays facing eruption site. Eruption Site: main Crater-lakeshore

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	usually felt. Profuse teaming along existing and perhaps new vents and fissures.		Barangays of Talisay, Tanauan, Agoncillo, Balete, San Nicolas, and Laurel. Additional Areas to be evacuated shall be determined based on the development of escalating activity and possible location of eruption site.
5	Base surges accompanied by eruption columns or lava fountaining or lava flows	Hazardous eruption in progress. Extreme hazards to communities west of the volcano and ash falls on downwind sectors	Expansion of risk areas depending on the magnitude of eruption.

Source: DOST / Phivolcs (Batangas PDRRMO – Taal Volcano ConPlan 2013-2016)

2.15 Base Surge

In case of volcanic eruption, only Napayong Island and Sitio Mahabang Buhangin are susceptible to base surge. Therefore, evacuation of all inhabitants in these areas is recommended when there is a threat of volcanic eruption.

Table 2.22 indicates that in case of eruption and base surge occurrence, only small part of the city is in danger. Napayong Island and Sitio Mahabang Buhangin are susceptible to base surge and evacuation of all inhabitants in the area is recommended when there is a threat of volcanic eruption. Map shows areas that are prone to seiches/tsunami/flooding and fissuring that may occur in case Taal Volcano erupts. Barangays in danger are all lakeshore barangays and lower portion of barangay Bagbag. Middle part of the city is most likely to experience ground subsidence and these barangays are Wawa, Gonzales, Bañadero, Ambulong, Maria Paz, Boot, Janopol, San Jose, Maugat, Montaña San Jose, Talaga, Luyos, Santor, Bilog-bilog, Cale, Sala, Pagaspas, Altura Matanda, Altura Bata, Altura South, Pagaspas, Pantay Bata, Pantay Matanda, Ulango and Laurel.

Table 2.22. Barangays under the low, moderate and high risk of base surge

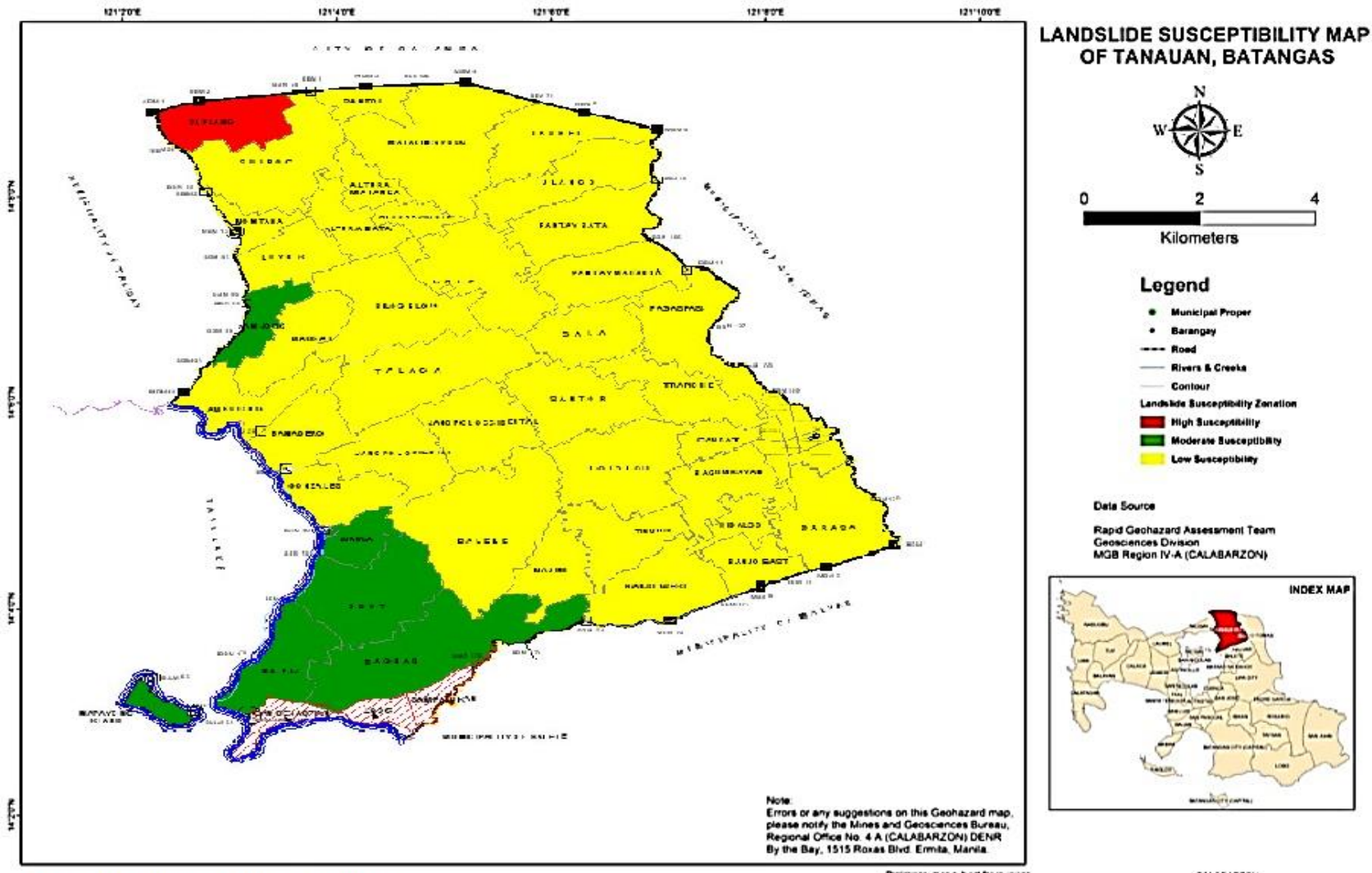
Barangay	Low Risk	Moderate Risk	High Risk	Remarks
Ambulong				
Bañadero				
Gonzales				
Wawa				
Boot				Half only
Maria Paz				Sloping areas towards Lake
M. Buhangin				Whole sitio
Napayong Is.				Whole island

Majority of the areas in Tanauan City belongs to 0 to 15 percent slope that are undulating to rolling. Most of the areas with steep slope of more that 65 percent are located in Barangays Sulpoc, Montana, San Jose, Maugat, Ambulong, Bañadero, Talaga, Banjo West, potions of Darasa and Poblacion 3 (refer to Hazard Map 2.9).

Steep hills and mountains with slope of 30 to 65 percent are located in Suplang, Suploc, Balele, Wawa, Boot and Maria Paz. Barangays which belong to 0 to 3

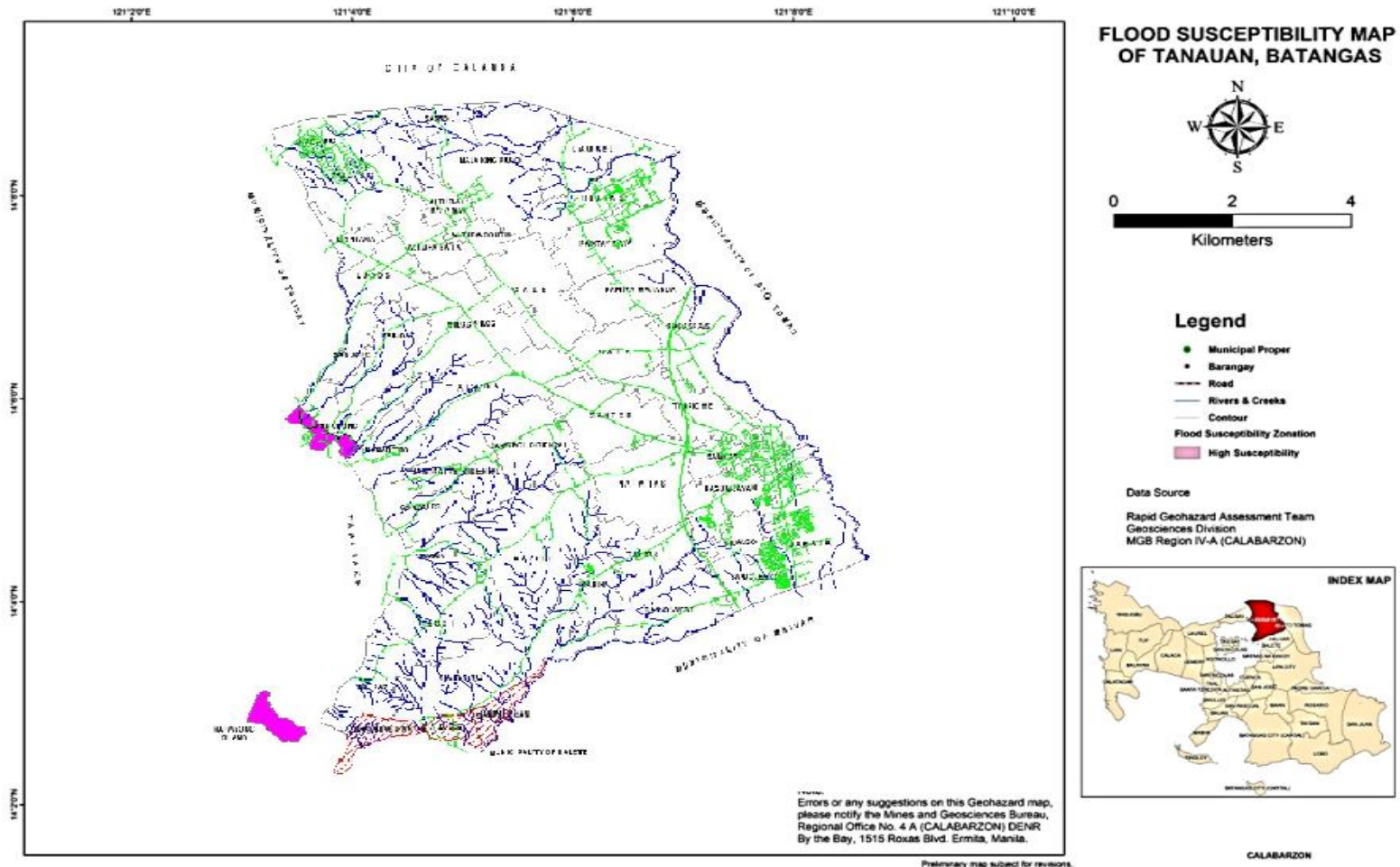
percent slope are portions of Laurel, Malaking Pulo, Altura Matanda, Altura Bata, Altura South, Montana, Luyos, Cale, Bilog-bilog, Pantay Bata, Pantay Matanda, Sala, Pagaspas, Trapiche, Poblacion Area, Natatas, Bagumbayan, Hidalgo, Sambat and Darasa. The slope in these barangays is gently sloping to undulating. The rest of the barangays have 8 to 15 percent slope that are undulating to rolling. Mt. Makiling, with a spot elevation of 1090 m, is approximately within four (4) to five (5) kilometers from the city.

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Map 2.9 Landslide Susceptibility Map

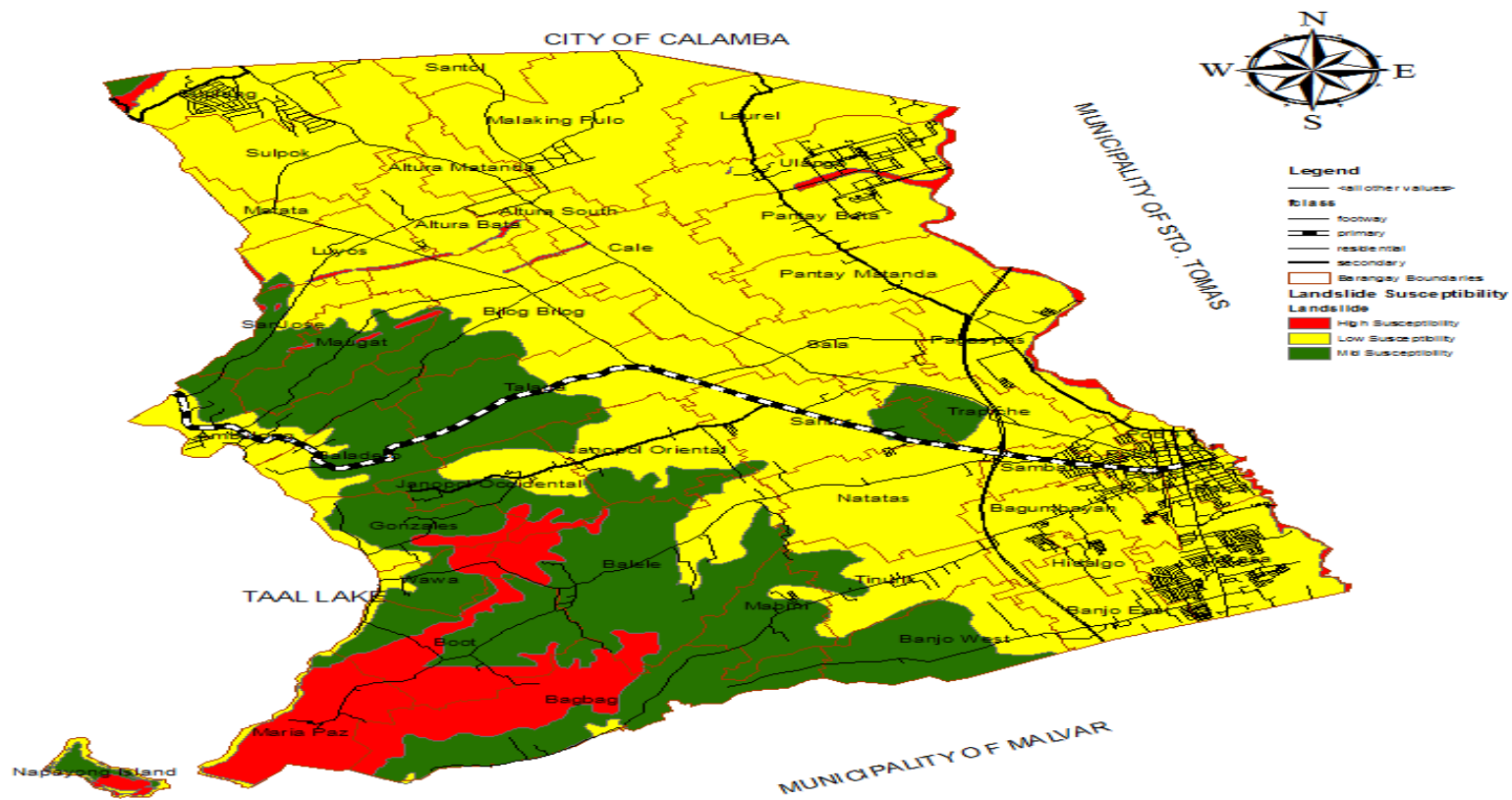
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Map 2.10 Flood Susceptibility Map

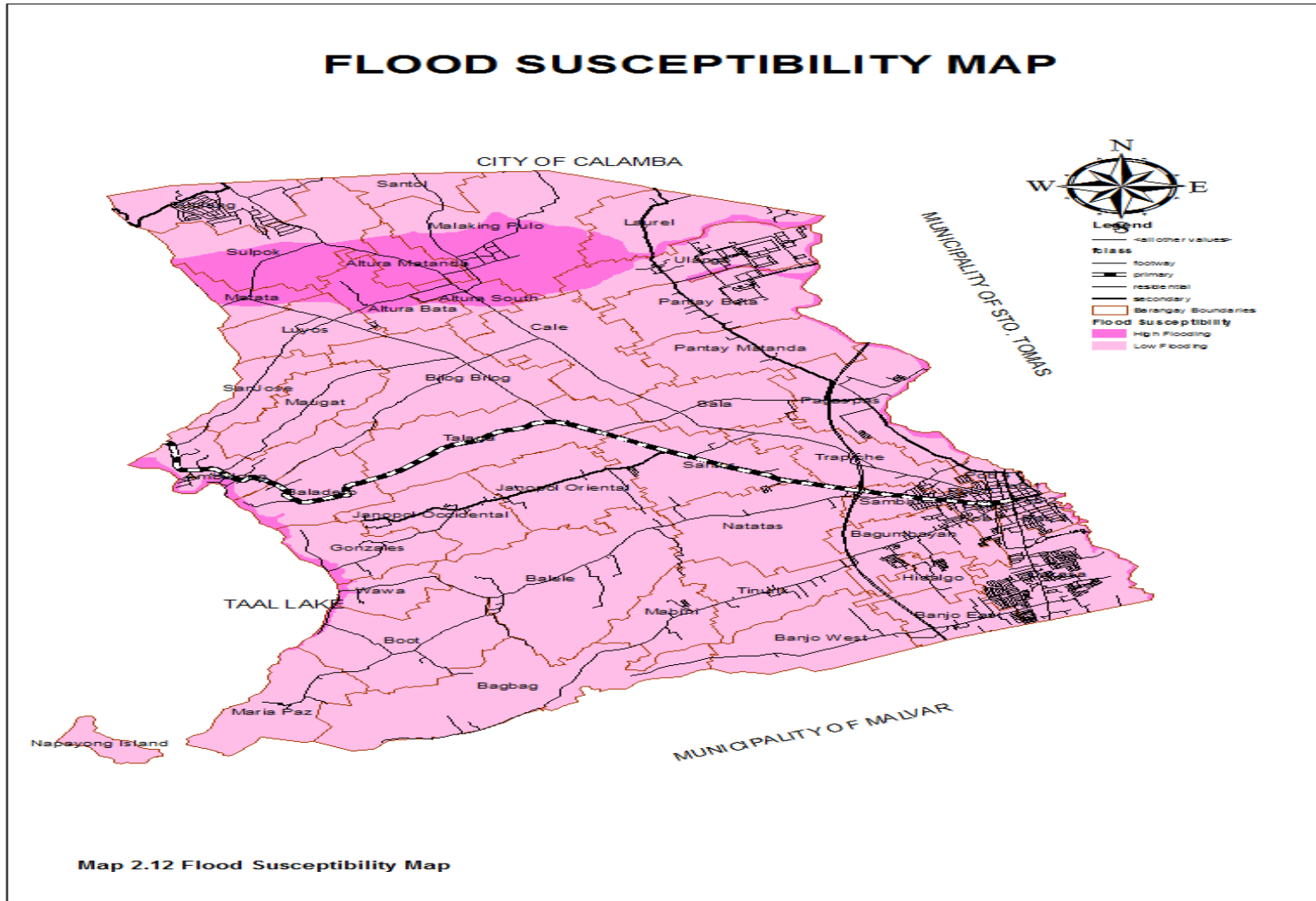
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RAIN-INDUCED SUSCEPTIBILITY MAP

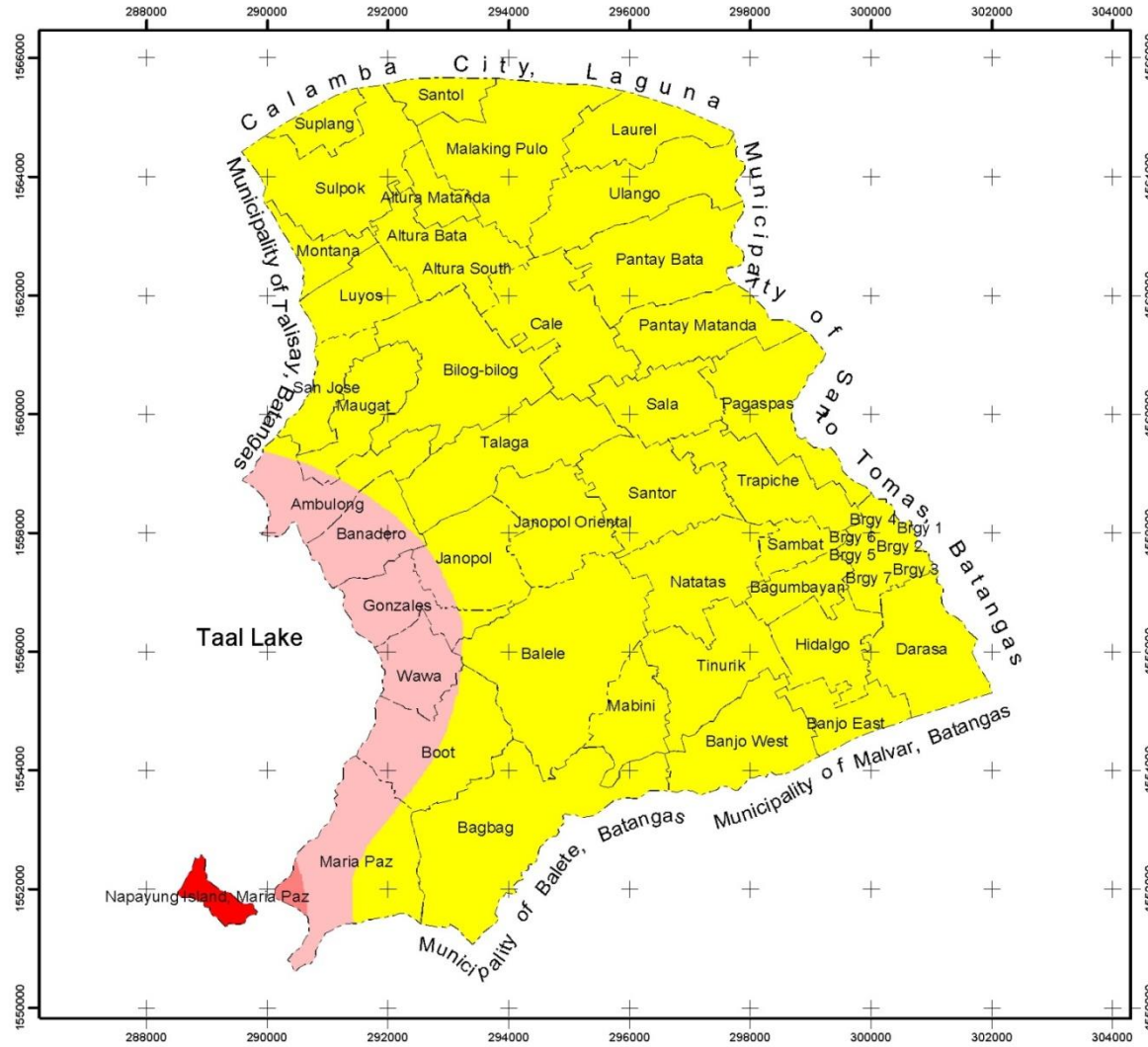


Map 2.11 Rain-induced Susceptibility Map

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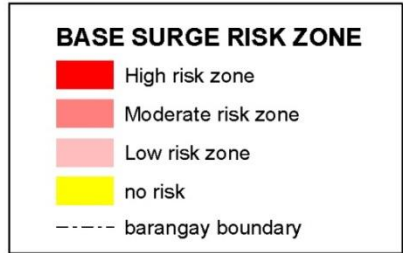
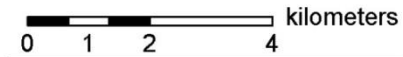


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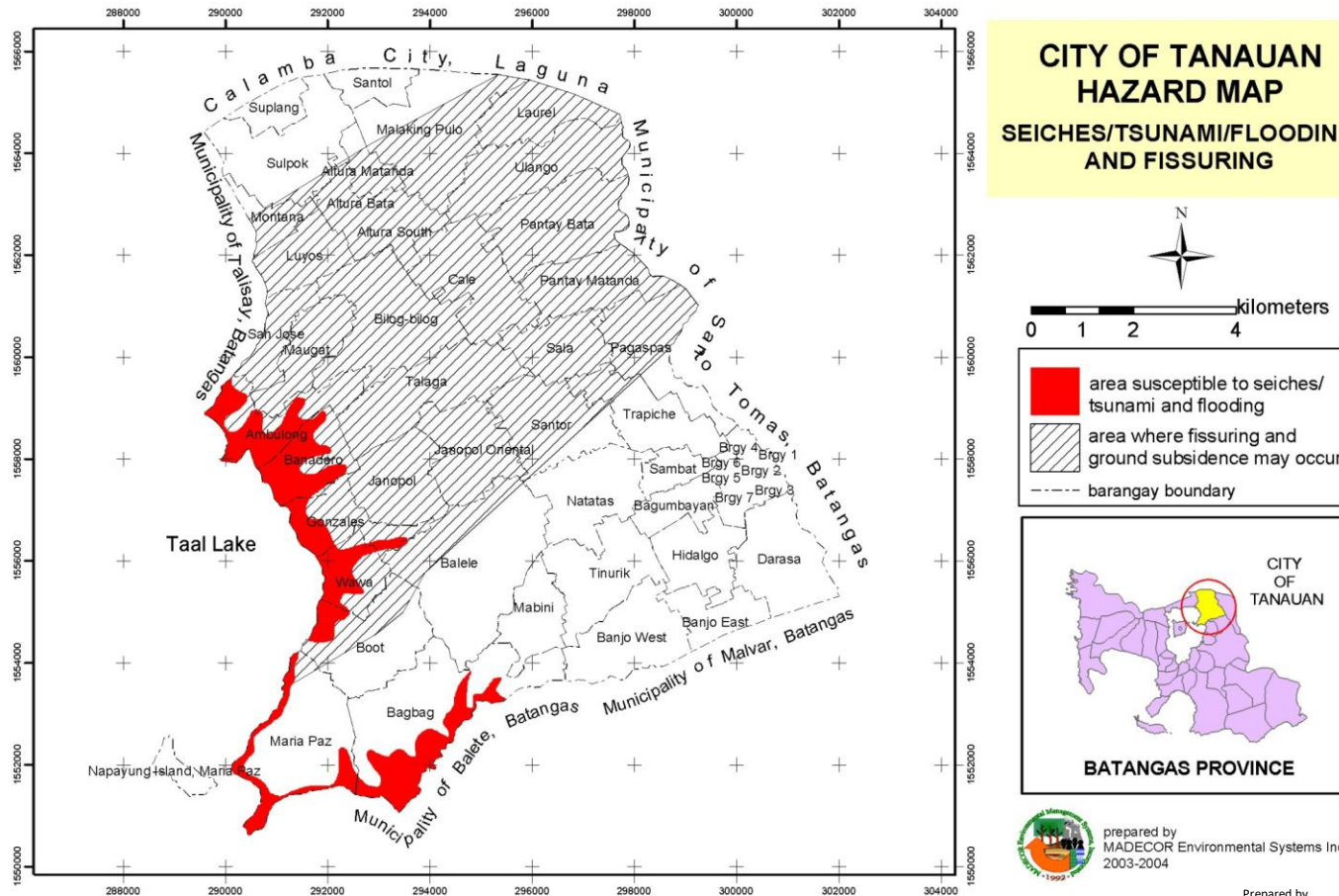
Map 2.13 Base Surge Map

**CITY OF TANAUAN
 HAZARD MAP
 (BASE SURGE)**



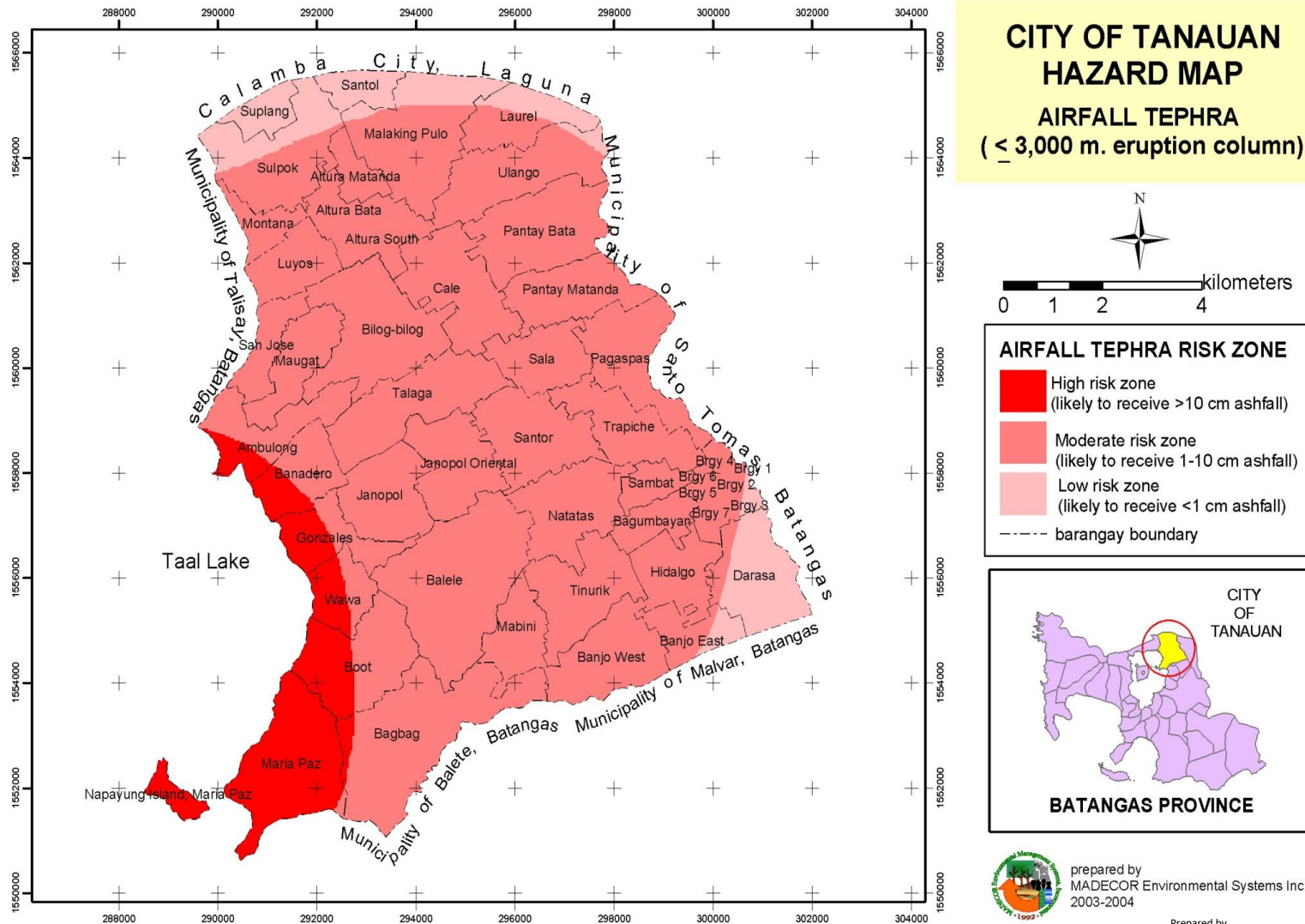
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Map 2.14 Seiches/Tsunami/Flooding and Fissuring Map

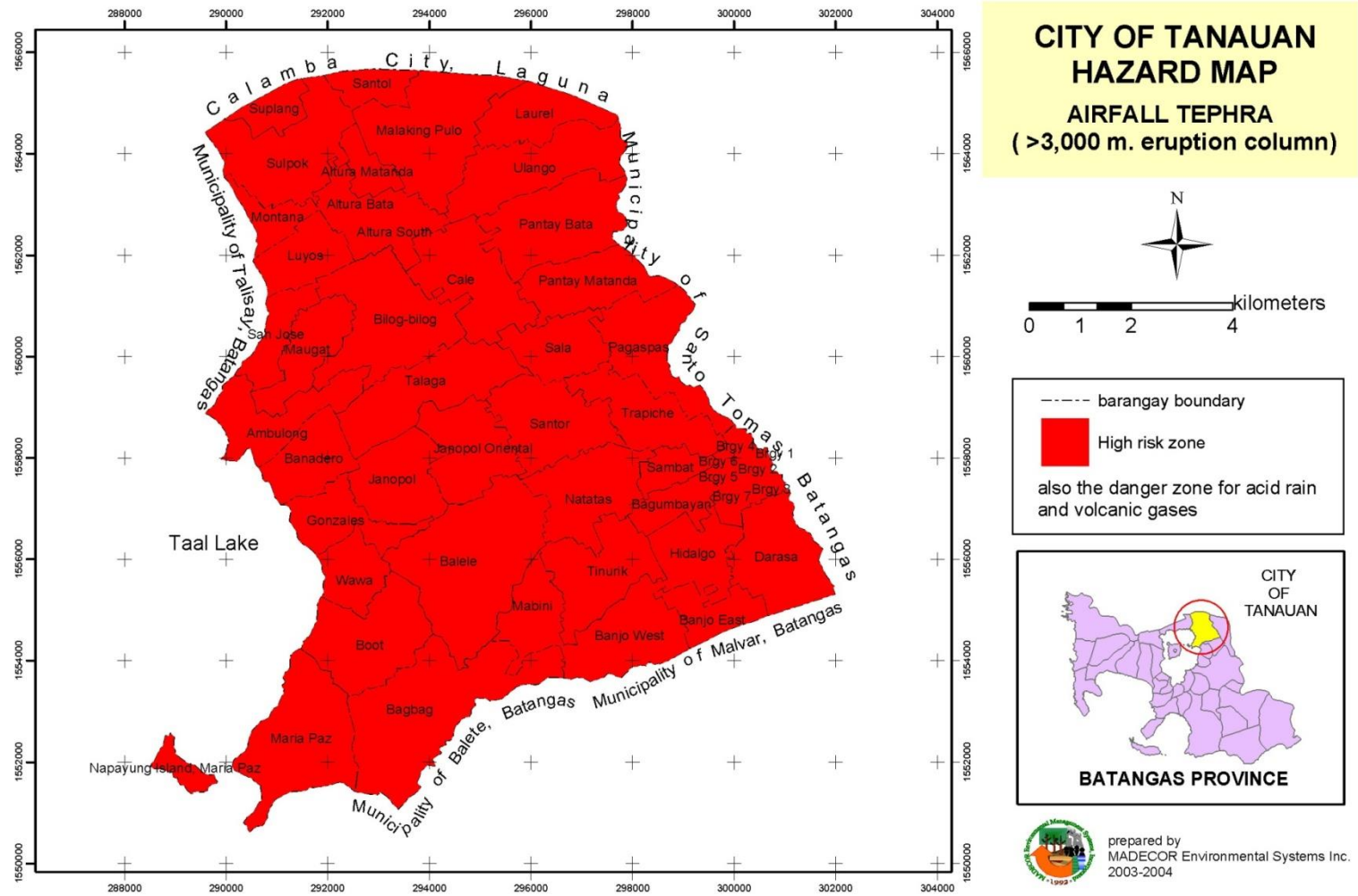
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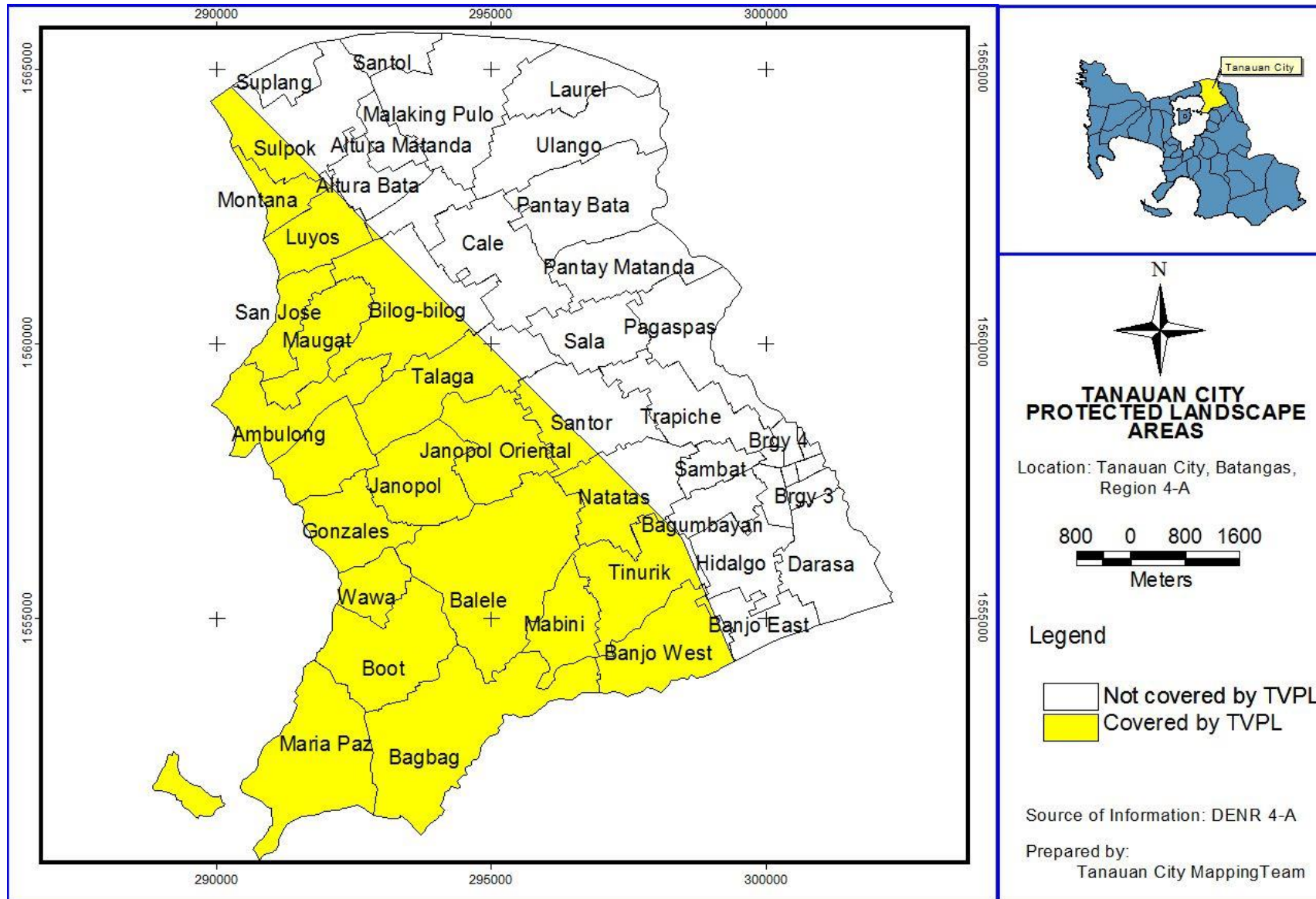
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Map 2.16 Air fall Tephra (>3,000m. eruption column)

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Map 2.17 Tanauan City Protected Landscape Areas

2.16 RISK IDENTIFICATION AND ANALYSIS

2.16.1 HAZARD ANALYSIS

Systematic Risk Identification and Assessment has been conducted and already in the city level. In the barangay level, all barangays have already conducted the process. The following table shows the result of hazard analysis conducted by 48 barangays together with MGB and CDRRMO. The types of hazard, causes and effects to the lives of the people, properties and their economic well-being are being presented below.

Table 2.23 HAZARD IDENTIFICATION, CAUSE and EFFECT

HAZARDS	BARANGAY	DIRECT CAUSE/ORIGIN	DIRECT EFFECTS/IMPACTS
Scale Insect	All barangays except Poblacion 1-7	Unknown	Direct effect on coconut harvest and other crop harvests
Flood	All barangays except Luyos, Bagbag, Santol, Talaga, Ma. Paz, Mabini, Maugat, Banjo East, Janopol Oriental, Banjo West, San Jose, Tinurik	Typhoon, LPA	Damage to property, loss of life
Flash Flood	Boot, Suplang, Ambulong, Malaking Pulo, Pob 7, Ma. Paz, Pantay Matanda, Bilog bilog, Sulpoc, Montaña, Jan. Occ., Santol, Altura South, Pantay Bata	Typhoon, LPA	Damage to property, loss of life
Landslide	Luyos, Suplang, Boot, SANJose, Talaga, Ma. Paz, Maugat, Pob 1-3, Bañadero, Ambulong, Santol, Bagbag, Cale, Tinurik, Santor, Altura South, Janopol Or., Wawa, Banjo West	Natural soil erosion due to heavy rains brought by typhoon,	Damage to property, loss of life
Volcanic Eruption	All Barangays	Natural Causes	Damage to property, loss of life
Vehicular Accident	Bañadero, Ambulong, Talaga, Santor, Bilogbilog, Bagbag, Bagumbayan, Darasa, Sambat, Janopol Oriental, Boot, San jose, Natatas, Balele, Pob 3, Wawa, Pantay Matanda, Ma. Paz, Gonzales, Mabini, Trapiche,	Drivers recklessness, poor infrastructure	Loss of life, some cases: damage to property

	Hidalgo		
Dengue	All Barangays	Stagnant waters	Dengue outbreak
Earthquake	All Barangays	Volcanic and tectonic plate	Loss of life and damage to property
Fire	All Barangays	Recklessness, inadequate wiring, flammable liquids	Loss of life and damage to property
Grass fire	Boot, Sambat, Ma. Paz, Pagaspas, Hildalgo, Pantay Bata, Pantay Manada, Alutra Matanda, South Bata, Cale, Luyos, Banjo East, Mabini, Balele, Pob. 3, Natatas, Sala	Hot weather, recklessness	Loss of life and damage to property
Hazardous Materials	Rail Road Alley, Pagaspas, Hidalgo, Santor, Trapiche	Pipeline, Production of Helium, Liquid NO ₂ , LGP Refilling Station, Cement Production	Loss of life and damage to property
Typhoon	All barangays	Several atmospheric ingredients must come together for a typhoon to form	Loss of life and damage to property

Familiarization with the hazards is important as basis in the formulation of effective preparedness and contingency plan. The following table shows a study on the characteristics of identified hazards. These includes the forces which trigger hazards, early warning signs and signals, speed, frequency, period of occurrence duration.

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Table 2.24 Hazard Characterization

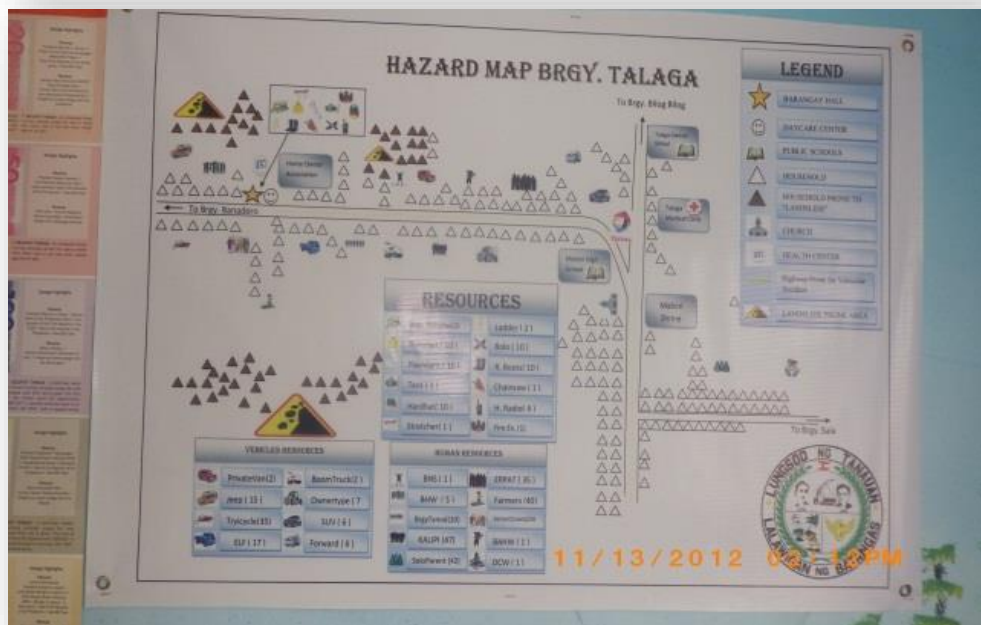
TYPE OF HAZARD	CHARACTERISTICS		FORE WARNING	SPEED ON-SET	FREQUENCY	PERIOD OF OCCURRENCE	DURATION
	FORCE (level ft/s)	WARNING SIGNS					
Flood	4-11 ft/s	Water level marker	Barangay Early Warning Systems	35 min.	3-7 flood/year	June-November (Rainy Season)	1-3 days/typhoon
Flash Flood	11-25 ft/s	Water level marker	Barangay Early Warning Systems	35 min.	3-7 flash flood/year	June-November (Rainy Season)	Several hours-a day
Land slide	2 tons/m ³ And 14m/sec	Signage	Warning signs to landslide prone areas		1-3/year	June-November (Rainy Season)	1-5 mins.
Earthquake	I-X	Seismograph – installed at GSO	Seismograph - GSO		Uncommon 1-3/year	June-December	1-15mins
Vehicular accidents		Speed limit signs on a blind corner	Accident Prone Area Signages		3-15 accidents/year	June-December	5 mins/accident
Volcanic Eruption	3 km/day -45 km/hr	Danger Zones (Lava flow, Pyroclastic Surge, Ballistic)	PHIVOLCS		uncommonly	uncommonly	Less than a day to a thousand of years

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		Projectiles)					
Fire	525°F – 1500°F	Flyers on Home Safety (Fire)	Fire Prevention Month Fire Safety Public Awareness		uncommonly	April	5mins-3hrs
Typhoon	≤61km/hr- ≥118km/hr	Public Weather Forecast, Project NOAH, Weather Station	PAGASA weather forecast, Project NOAH		28 typhoons/year	June-November	3 days – 1 week
Scale Insect	Infected coconut trees				80% affected	January-December	Can last a lifetime if not prevented
Dengue		Anti-Dengue Flyers	Dengue Awareness Seminars		10,258 cases	January-December	1-2 weeks/individual
Hazardous Materials		Warning Signs			uncommon		
Grass fire							Depends upon the area

2.16.2 VULNERABILITY ASSESSMENT

During the risk analysis and assessment, the barangays identified “elements at risk” of the different hazards identified. This is equally important in the preparation of preparedness and contingency plan in order to determine the kind and amount of intervention to be undertaken and prioritized. The following table presents data of the “elements at risk” of disaster (people, housing public/private infrastructure and livelihood activity) in the barangays.



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Table 2.25 Vulnerability Assessment Table (By Hazard)

HAZARDS	VULNERABLE BARANGAYS/S (Elements at Risks)	HH/Population Affected		Major Infrastructures	Livelihood	Degree of Vulnerability (high, medium, low)
		HH	P			
Flood	All barangays except Luyos, Bagbag, Santol, Talaga, Ma. Paz, Mabini, Maugat, Banjo East, Janopol Oriental, Banjo West, San Jose, Tinurik	2,341 House-holds	110,761	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist Parish church, Daniel Mercado Medical Center, CP Reyes Hospital	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Medium

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Landslide	Luyos,		1349	First Philippine	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Low
	Suplang,		1254	Industrial Park,		
	Boot,		5528			
	San Jose,		1029	Apolinario		
	Talaga,		4021	Mabini Shrine,		
	Ma. Paz,		2448			
	Maugat,		1851	St. John		
	Pob 1,		1844	Evangelist		
	Pob 2,		1067	Parish church,		
	Pob 3,		4337			
	Bañadero,		3893	Daniel Mercado		
Ambulong,		6268	Medical Center,			
Santol,		427				
Bagbag,		2905	CP Reyes			
Cale,		3312	Hospital			
Tinurik,		4917				
Santor,		4008				
Altura South,		682				
Janopol Or.,		2968				
Wawa,		1457				
Banjo West		2393				
	Total		57,958			
Earthquake	All Barangays	56,737	170,210	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist Parish church, Daniel Mercado Medical Center, CP Reyes Hospital	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	High

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Volcanic Eruption	All Barangays	56,737	170,210	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist Parish church, Daniel Mercado Medical Center, CP Reyes Hospital	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	High
Typhoon	All Barangays	56,737	170,210	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist Parish church, Daniel Mercado Medical Center, CP Reyes Hospital	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Medium
Fire	All Barangays	56,737	170,210	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Low

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				Parish church, Daniel Mercado Medical Center, CP Reyes Hospital		
Vehicular Accident	All Barangays	56,737	170,210	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist Parish church, Daniel Mercado Medical Center, CP Reyes Hospital	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Low
Grassfire	Boot, Sambat, Ma. Paz, Pagaspas, Hidalgo, Pantay Bata, Pantay Manada, Alutra Matanda, South Bata, Cale, Luyos, Banjo East,	10,485	52,425	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist Parish church, Daniel Mercado Medical Center, CP Reyes Hospital	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Low

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	Mabini, balele, Pob. 3, Natatas, Sala					
Hazardous Materials	Rail Road Alley, Pagaspas, Hidalgo, Santor, Trapiche	2880	3041 993 4008 6361 14,403		Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Low
Dengue	All barangays	56,737	170,210	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist Parish church, Daniel Mercado Medical Center, CP Reyes Hospital	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Medium

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Flash Flood	All barangays except Poblacion 1-7	56,737	170,210	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist Parish church, Daniel Mercado Medical Center, CP Reyes Hospital	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Low
Scale Insect	Boot, Suplang, Ambulong, Malaking pulo, Pob 7, Ma. Paz, Pantay Matanda, Bilog bilog, Sulpoc, Montaña, Jan. Occ., Santol, Altura South, Pantay Bata	9977	49,887	First Philippine Industrial Park, Apolinario Mabini Shrine, St. John Evangelist Parish church, Daniel Mercado Medical Center, CP Reyes Hospital	Ecotourism, Fishing, Harvesting Crops, Vegetables, and Fruits	Low

Table 2.26 RISK IDENTIFICATION AND GAP ANALYSIS

HAZARDS	VULNERABILITIES	EARLY WARNING SYSTEMS	GAPS
Flood	Poverty, poor waste management, poor infrastructure, lakeshore & riverbanks barangays exposed	Traditional Early Warning System (Heavy and continuous rains)	Lack of knowledge/concept of DRR in some barangays and equipment applicable to such event
Flash flood	Poverty, poor waste management, poor infrastructure, lakeshore & riverbanks barangays exposed	Traditional Early Warning System (Heavy and continuous rains)	Lack of knowledge/concept of DRR in some barangays and equipment applicable to such event
Landslide	Poverty		Lack of tree planting projects and knowledge about the risks of landslides
Earthquake	Poor infrastructure	Church bells	Lack of implementation of early warning systems, lack of assessment of critical infrastructures
Volcanic Eruption	Inability to enforce regulations that mitigates disaster (zoning, building codes, etc)	Church bells	Lack of Public Awareness Programs/Seminar against the damages of volcanic eruption
Vehicular Accident			Lack of Road Signages
Fire	Poverty, poor infrastructure	Fire alarms, Church bells, Siren	Inadequate wiring, lack of assessment of infrastructures for fire safety
Typhoon	Poverty, poor		Lack of Rain-

	Infrastructure		gauges per barangay, poor communication, Re-training of basic first aid and lifesaving course should be implemented for the sake of new officials in the barangay, lack of equipment in barangay level
Hazardous Materials	Poor Infrastructures	Sirens, Megaphone	Lack of knowledge and training to handle HazMat
Scale Insect			Inadequate awareness of its origin
Grassfires			Inadequate awareness of its origin and how to prevent it

2.17 KNOWLEDGE BUILDING AND PUBLIC AWARENESS RAISING

In the City of Tanauan there is significant activity concerning knowledge management and education. All of the barangays have received training in DRR and public awareness which has been conducted on each of their vicinities on a regular basis. Public awareness programs are in place (utilizing 70% of the Local DRRM Fund (LDRRMF). Tarpaulin and posters are common modes of public awareness addressing issues (such as prevention of dengue/malaria, HIV and AIDS, flooding, environment). Trainings have been undertaken by the Special Rescue Unit of Laguna, on limited basis, under Fire National Training Institute structures and programs. Some local government officials have received training through consultation processes or meetings with the Regional DRRM offices. Some projects and activities were completed already with sufficient fund.

On July 16, 2012, the OCD Region IV-A in collaboration with the Provincial Government conducted a “Flood Disaster Awareness Workshop” supported by a

broad range of agencies. The workshop was for raising awareness of the danger of floods for all people living in coastal barangays which were attended by representative from the City.

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Table 2.27 CAPABILITY DEVELOPMENT PROGRAMS

OBJECTIVES and EXPECTED OUTPUTS	PROGRAM/ PROJECT/ ACTIVITY (Trainings/ Seminar/ Workshops Study /Tour Programs, etc)	EXPECTED OUTPUTS	DURATION	PERSON OFFICE RESPONSIBLE	BUDGET	STATUS OF IMPLEMENTATION (%of Completion)	REMARKS
Trainings & Seminars	Vigilance against Emergency and Disaster Training	48 brgys	March-October 2012	CDRRMC	1,200,000.00	48 brgys Completed	Refresher course needed
Trainings & Seminars	Water Safety Search and Rescue and Rubberboat operation/maintenance training	Flood affected brgys, NGOs LGUs	July-October 2013	CDRRMC	620,000.00	48 brgys Completed	Refresher course needed
Drills & Exercises	Fire and Earthquake drill	FAITH, La Consolacion College Tanauan	2 hrs	CDRRMC	15,000.00	2 schools	Continue implementing drills to other schools
Drills & Exercises	Flood, Fire and Evacuation Drill	Brgy. Poblacion 1 & 3	3hrs/brgy	CDRRMC	8,000.00	2 brgys	Continue implementing drills to flood & fire prone brgys.

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Trainings & Seminars	Basic First Aid & Ropes and knots tying	DMMCIHS, TBC, Bernardo Lirio HS, Dell Good Import & Export Inc.	3hrs/training	CDRRMC	none	3 schools, 1 private company	
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Table 2.28 PUBLIC AWARENESS PROGRAM (IEC)

OBJEC-TIVES and EXPECTED OUTPUTS	PROGRAM/ PROJECT/ ACTIVITY (Publication, IEC Materials Distribution, Signages/ Posters, Seminars/ workshops, contests, etc)	EXPECTED OUTPUTS	DURATION	PERSON/OFFICE RESPONSIBLE	BUDGET	STATUS OF IMPLEMENTATION (% of Completion)	REMARKS
Public Awareness	RA10121 Orientation on barangays	48 brgys oriented	March-September 2011	CDRRMC	none	100%	Re-orientation needed
Public Awareness	Information Dissemination about CDRRM Center, Creating BDRRM Committee and Barangay Responders and importance of availability of Hazard Maps	48 brgys.	March-May 2012	CDRRMC	none	100%	
Public Awareness	Re-RA10121 Orientation on barangays		Feb-Dec., 2014	CDRRMC	none	Ongoing (20% completed)	Continuation needed

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Seminar	Climate change seminar	48 brgys	May-Dec. 2014	CDRRMC	98,000.00	100% completed	Re-orientation needed
Seminar	Stress Debriefing Seminar	48 brgys, Council	October 2013	CSWD, CDRRMC	250,000.00	100% completed	Re-orientation needed
Seminar	Barangay Contingency Planning Seminar	48 brgys, Council	Jan.-Feb. 2013	CDRRMC	none	100% completed	Re-orientation needed
Seminar	Barangay Disaster Risk Reduction and Management Plan Seminar	48 brgys, Council	2013	CDRRMC	none	100% completed	Re-orientation needed
Seminar	Incident Command System Seminar	48 brgys, Council	May-Dec. 2014	PACD, CDRRMC		0% completed	Re-orientation needed

Important data and information and materials needed for DRRM preparedness and contingency planning are available in the (designated) DRRMO. These include hazard maps, vulnerability assessment or risk analysis reports, inventory and/or consolidated data of resources both human and material, inventory and/or consolidated data of critical infrastructures, demographics and damage and loss assessment data and information, and other relevant data for planning purposes.

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Table 2.29 Inventory of Critical Infrastructure/Facilities, Year 2014

KIND OF INFRA. /FACILITY (bridges, seawall, canal, riprap, etc)	LOCATION	Date		FUNDING AGENCY OFFICE	BUDGET	STATUS/CONDITION	RE-MARKS/ ISSUES AND CONCERNS
		Constructed	Rehabilitated				
Riprap, Seawall, Bridges	Ambulong				5,000,000.00	Critical (may collapse in a huge earth quake)	Needs rehabilitation
Bridge	Bagbag				3,000.00	Critical (may collapse in a huge earth quake)	Needs rehabilitation

2.18 DISASTER RISK MANAGEMENT APPLICATIONS/IMPLEMENTATION

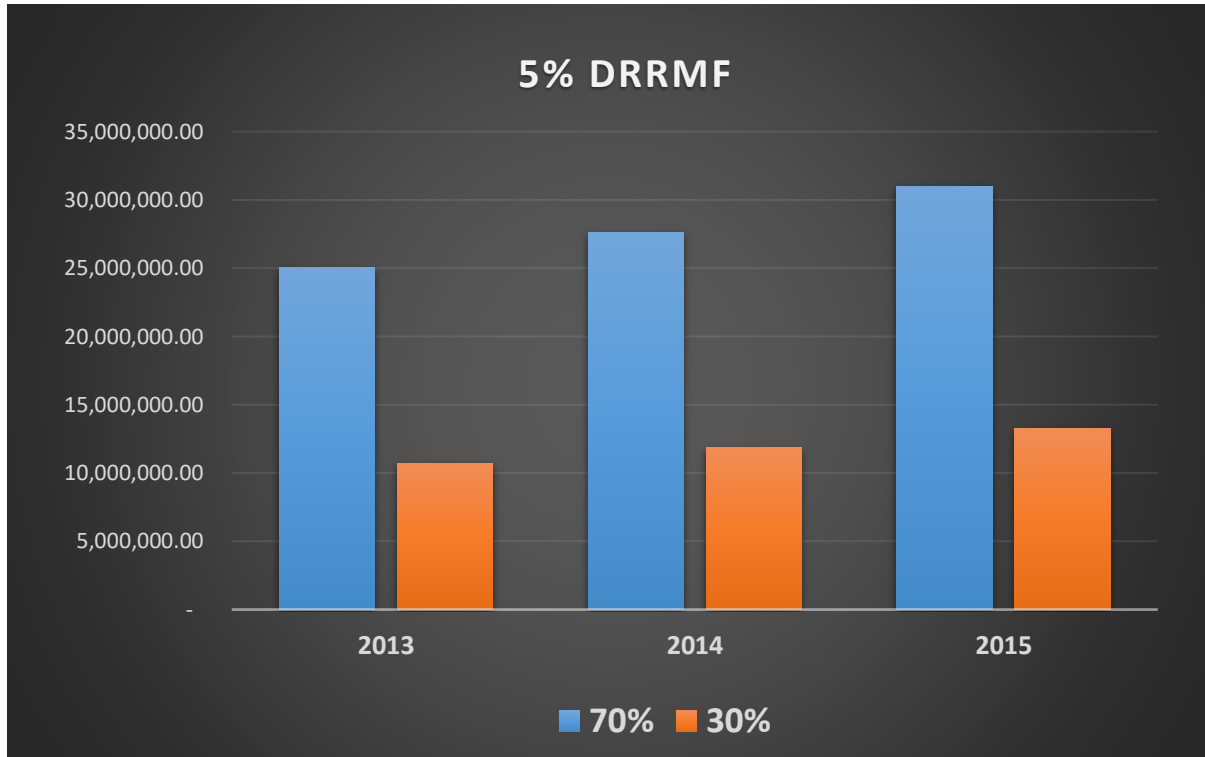
There are existing hazard prevention and mitigation measures which address various hazards in the city. Disaster risk reduction is integrated into Local Development Plans and PPAs or any policies and strategies at local levels. For the year 2014, the city has a Local Disaster Risk Reduction and Management Fund (LDRRMF) amounting to P39,443,332.00 (AIP P143,945,000.00). The total amount of P27,610,332.40 which is 70% of the total LDRRMF was utilized in implementing prevention/mitigation and preparedness programs and activities (see Table 1.3). The remaining P11,832,999.20 (30%) were programmed for response and recovery/rehabilitation activities which was not fully utilized for the year.

Table 2.30 Local Disaster Risk Reduction and Management Fund (LDRRMF), Year 2013-2014

	2013	2014	2015
70%	25,034,635.50	27,610,332.40	31,002,300.00
30%	10,729,129.50	11,832,999.60	13,286,700.00
5% DRRMF	35,763,765.00	39,443,332.00	44,289,000.00

Source: City Budget Office (CBO)

Figure 2.1 Comparative Local Disaster Risk Reduction and Management Fund (LDRRMF), Year 2013-2015



Source: CBO

The city with various sectors and organizations are implementing projects such as food security, agriculture, health, water and sanitation, infrastructure development, education. While many of these projects may contribute towards improving livelihoods and building the capacity of communities, and thus reducing vulnerability to disaster, there is also need to consciously target disaster risk issues or under lying factors. Discussion with stakeholders and results of the mini survey has indicated limited knowledge and understanding of disaster risk reduction.

However, there are efforts and initiatives to tackle the challenges of climate change and poverty. The city has identified programs and projects which will enhance the adaptive capacity (like improvement of whether monitoring systems (AWS); vulnerability reduction through effective implementation of policies which may include but not limited

to prohibition of cutting of trees, fuel burning and laws, ordinances such as zoning, building regulations, waste management and relocation.

Enabling Policy of the City Government of Tanauan on DRRM and CCA

The City Government of Tanauan approved and adopt Tanauan City Environmental Code that provides policies on Disaster Risk Reduction Management and Climate Change Adaptation (Article XVI), (a) the purposes, (b) operative principle, (c) the scope of power of the City Disaster Management Office, (d) disaster risk reduction management strategies (e) mainstreaming of DRRM and CCA and (f) prohibited acts are clearly provided.

A. Purposes

- a) To mainstream strategies for climate change adaptation (CCA) and disaster risk reduction and management (DRRM) in the development plans and decision-making processes in Tanauan City;
- b) To improve disaster preparedness and disaster response at all levels;
- c) To promote awareness and educate the community on disaster risk reduction and climate change adaptation; and
- d) To instill a culture of safety by integrating and incorporating public welfare and protection in infrastructure designs, development planning, school curricula, and livelihood as resilience is in people's way of life.

B. Operative Principle

- a) Tanauan City adopts RA 9729 (Climate Change Act of 2009) and RA 10121 (the Disaster Risk Reduction and Management Act of 2010) and the amendments thereto contained in the Republic Act 10174 (People's Survival Fund Act of 2011), using holistic, comprehensive, integrated, and proactive approach for a safer, adaptive, and disaster-resilient community;
- b) The City Government of Tanauan is mandated by RA 7160, the Local Government Code, through its City Disaster Risk Reduction and Management Council and operationalized by its City Disaster Risk Reduction and Management Office to lead in the City's DRRM; and
- c) That raising public awareness about the hazards, the risks, the potential impacts, early warning signs, and the counter-measures can reduce vulnerability of an area, thus, the city allocates from its annual appropriations adequate funds for the formulation, development and implementation, including training, capacity building, and direct intervention of its climate change programs and plans (Sec. 18, RA 9729).

C. The City Disaster Risk Reduction and Management Office (CDRRMO) shall:

- a) take the lead in the formulation, planning, and implementation of all climate change adaptation and disaster risk reduction initiatives of the City;
- b) enjoin all non-government organizations (NGOs), civic organizations, people's organizations, the private and corporate sectors, the academe, and other concerned stakeholders in the formulation, planning, and implementation of the CDRRMP,

- c) coordinate with all concerned national government agencies in the operationalization of the City Disaster Risk Reduction and Management Plan (CDRRMP) that must be consistent with the Philippine Disaster Risk Reduction and Management Plan;
- d) in coordination with the City Budget Office, make sure that the 5% calamity fund is being utilized properly;
- e) in coordination with the City Engineering Office, inspect all electrical, telephone, and cable wire installations in the City. It shall be ensured that these are positioned properly and of appropriate vertical clearance such that they do not cause any obstructions and fire disasters.

D. Disaster Risk Reduction and Management Strategies

- a) Institutionalize the City Disaster Risk Reduction and Management Office (CDRRMO);
- b) Establish the City Disaster Risk Reduction and Management Council (CDRRMC) composed of, but not limited to the:
 - i) City Mayor;
 - ii) City Planning and Development Officer;
 - iii) CDRRM Officer;
 - iv) City Social Welfare and Development Office Head;
 - v) City Health Office Head;
 - vi) City Agriculture Office Head;
 - vii) Gender and Development Office Head;
 - viii) City Engineering Office Head;

- ix) City Veterinary Office Head;
 - x) City Budget Office Head;
 - xi) City Environment and Natural Resources Office Head;
 - xii) President of the Association of Barangay Captains; and
 - xiii) All other personnel mentioned in Section 11 of RA 10121.
-
- c) Prepare and implement the City Contingency Plan in accordance with the National Disaster Risk Reduction and Management Council standards and guidelines and the City Disaster Risk Reduction and Management Plan (CDRRMP). The City Contingency Plan is a unified version of all the Barangay Contingency Plans that must be created with proper consultation to all stakeholders;
 - d) Conduct regular hazard assessment and continuous disaster monitoring in order to manage unprecedented risks and for the constant improvement of the CDRRMP;
 - e) Focus on mitigation activities such as stabilization of river and lake embankment through rehabilitation or by applying engineering measures such as riprap, establishing a buffer zone in communities adjacent to rivers and lakes, declaring no-build zones to flood-prone areas, improving roads and drainage systems to accommodate the projected increase in rainfall, and adapting disaster-proof infrastructure designs in consideration of extreme weather and earthquakes;
 - f) Organize and conduct training to capacitate people in disaster preparedness and response including, but not limited to, basic life support system and first aid, water search and rescue, and incident command system;

- g) Generate updated hazard maps for barangays that are prone to floods, landslides, storm surges, earthquakes, seiches, tsunamis, and volcanic eruptions, considering that the City is situated between two volcanoes- Mt. Makiling and Taal Volcano. Particular attention shall be given to:
 - i) flood-prone barangays due to undulating to very steep slopes, such as Sulpoc, Montaña, Luyos, Suplang; others, such as San Jose, and Bilog-Bilog, whose lower areas are usually flooded due to high surface run-off during heavy rains; the areas along river systems especially during heavy rains that result to river channel swelling; and low-lying areas that are flooded due to waters from the upper barangays of Sulpoc and Montaña;
 - ii) lakeshore barangays Bañadero, Wawa, Ambulong, Boot, Gonzales, and Maria Paz since these are susceptible to seiches, tsunamis, and flooding during tectonic movements or volcanic eruptions.
- h) Create a communication protocol for a systematic evacuation for such calamities, including fire incidents. Drills shall be conducted regularly throughout the City; and
- a) Set up appropriate early warning systems and construct a well-equipped evacuation center at the most suitable location.

E. Mainstreaming CCA and DRRM

Climate models forecast significant changes in precipitation levels by 2020 and 2050. To prepare for these changes, the following adaptation and mitigation measures shall be considered by the City:

- a) Building/infrastructure locations and designs
 - i) Construction of new buildings within flood-prone zones, particularly along lakeshore areas, must be limited, if not totally discouraged;
 - ii) Concrete steps must be taken to declare perennially flooded areas as no-build zones; these areas must be considered for other purposes, such as agriculture or recreational activities only;
 - iii) Building designs for structures to be located within or close to flood-prone areas must take into consideration changes in precipitation as modeled by the PAGASA for the years 2020 and 2050; These designs may include the use of ramps, stilts that should be able to withstand torrential waters, *etc.*;
 - iv) Steps must be taken to climate-proof community nerve centers, such as Municipal/Barangay Halls, schools, health centers, fire department, *etc.*; this may include relocation or redesigning of these structures;
 - v) Infrastructural projects, particularly road and canal designs must take into account the projected increases in precipitation due to changing climatic conditions; runoff values calculated from the climate models of PAGASA should be utilized in the design considerations;

- vi) The City shall assist lakeshore communities in identifying and establishing evacuation centers, preferably at elevated areas that will function as the Disaster Management Operations Center; This center must be strategically located so as to be able to efficiently service affected residents during flood events;
 - vii) Communities located in flood and landslide-prone areas must be equipped with sufficient early warning systems (EWS) or they must be linked with agencies that can provide the community early warnings.
- b) Human Resource Development
- i) The City shall create enabling environments for the development of barangay-level DRRM plans through the regular conduct of trainings and seminars;
 - ii) The City, through the CDRRMO must conduct yearly information-education campaigns and trainings to ensure that communities, particularly those in hazard-prone areas, are kept aware and frequently reminded of the attendant hazards in their localities and how they can best deal with their situations;
 - iii) The City must ensure that geohazard maps generated by the DENR-MGB are distributed to the respective Barangays, whether a request for its acquisition had been submitted or not and an information campaign must be conducted during its turn over to ensure that the recipients are able to understand and appreciate its contents;

- iv) Within six (6) months from the enactment of this Environment Code, the City Government shall require every barangay to submit a barangay DRRM plan, including the structure and names of the respective officials and their functions.

- v) Work/industry-related hazards:
- 1) Concrete rules must be put in place by individual companies/industries to reduce chemical toxicity, as related to both the extent of exposure and inherent toxicity of a substance. The use of PPE, fume hoods, proper ventilation, and appropriate engineering designs must be required for industries dealing with toxic materials. Implementation of chemical compatibility guidelines must be strictly followed to avoid occurrences of fires and poisoning. Laboratory chemical storage must be designed using the guidelines set by the National Research Council, 2011;
 - 2) In case of spillage of chemicals, quick response by the responsible entity/company must be done. Toxins must be contained through the use of appropriate methods and materials within the shortest time possible and with the least amount of spatial disruption;
 - 3) The City ENRO shall be given access to all information and areas for inspection pertaining to the rehabilitation efforts related to such work/industry-related disasters for its proper evaluation, monitoring, and levying of penalties, where applicable.

F. Prohibited Acts

Prohibited acts stipulated in Section 19 of RA 10121:

- a) Dereliction of duties which lead to destruction, loss of lives, critical damage of facilities, and misuse of funds;
- b) Preventing the entry and distribution of relief goods in disaster-stricken areas, including appropriate technology, tools, equipment, accessories, disaster teams/experts;
- c) Buying, for consumption or resale, from disaster relief agencies any relief goods, equipment, or other aid commodities which are intended for distribution to disaster affected communities;
- d) Buying, for consumption or resale, from the recipient disaster affected persons any relief goods, equipment, or other aid commodities received by them;
- e) Selling of relief goods, equipment, or other aid commodities which are intended for distribution to disaster victims;
- f) Forcibly seizing relief goods, equipment, or other aid commodities intended for or consigned to a specific group of victims or relief agency;
- g) Diverting or misdelivery of relief goods, equipment or other aid commodities to persons other than the rightful recipient or consignee;

- h) Accepting, possessing, using, or disposing relief goods, equipment or other aid commodities not intended for nor consigned to him/her;
- i) Misrepresenting the source of relief goods, equipment, or other aid commodities by:
 - i) Either covering, replacing, or defacing the labels of the containers to make it appear that the goods, equipment, or other aid commodities came from another agency or persons;
 - ii) Repacking the goods, equipment, or other aid commodities into containers with different markings to make it appear that the goods came from another agency or persons or was released upon the instance of a particular agency or persons;
 - iii) Making false verbal claim that the goods, equipment, or other aid commodity in its untampered original containers actually came from another agency or persons or was released upon the instance of a particular agency or persons;
- j) Substituting or replacing relief goods, equipment, or other aid commodities with the same items of inferior/cheaper quality;
- k) Illegal solicitations by persons or organizations representing others as defined in the standards and guidelines set by the NDRRMC;
- l) Deliberate use of false at inflated data in support of the request for funding, relief goods, equipment or other aid commodities for emergency assistance or livelihood projects; and

- m) Tampering with or stealing hazard monitoring and disaster preparedness equipment and paraphernalia.

Local Disaster Risk Reduction and Management Plan

A. Risk Profile

Hazard Analysis

Systematic Risk Identification and Assessment has been conducted and already in the city level. In the barangay level, 48 out of 48 barangays has already conducted the process. The following table shows the result of hazard analysis conducted by 48 barangays together with MGB and CDRRMO the types of hazard, causes and effects to the lives of the people, properties and their economic well-being.

Table 2.31 Hazard Identification

Hazard	Probability		Impact		Average $\frac{p+i}{2}$	Rank
	Rate	Remarks	Rate	Remarks		
Typhoon/Rain						
Flood	3	Likely may occur during Habagat, and when occasionally moderate to heavy rain	1	Minor damages to proper on river bank areas	2.00	3
Landslide	2	Unlikely may occur only during prolonged duration of moderate to heavy rain	2	Minor damages to properties on barangay existing roads and landslide risk areas	2.00	3
Flashflood	1	Unlikely may occur only	1	Minor damages to properties	1.00	2

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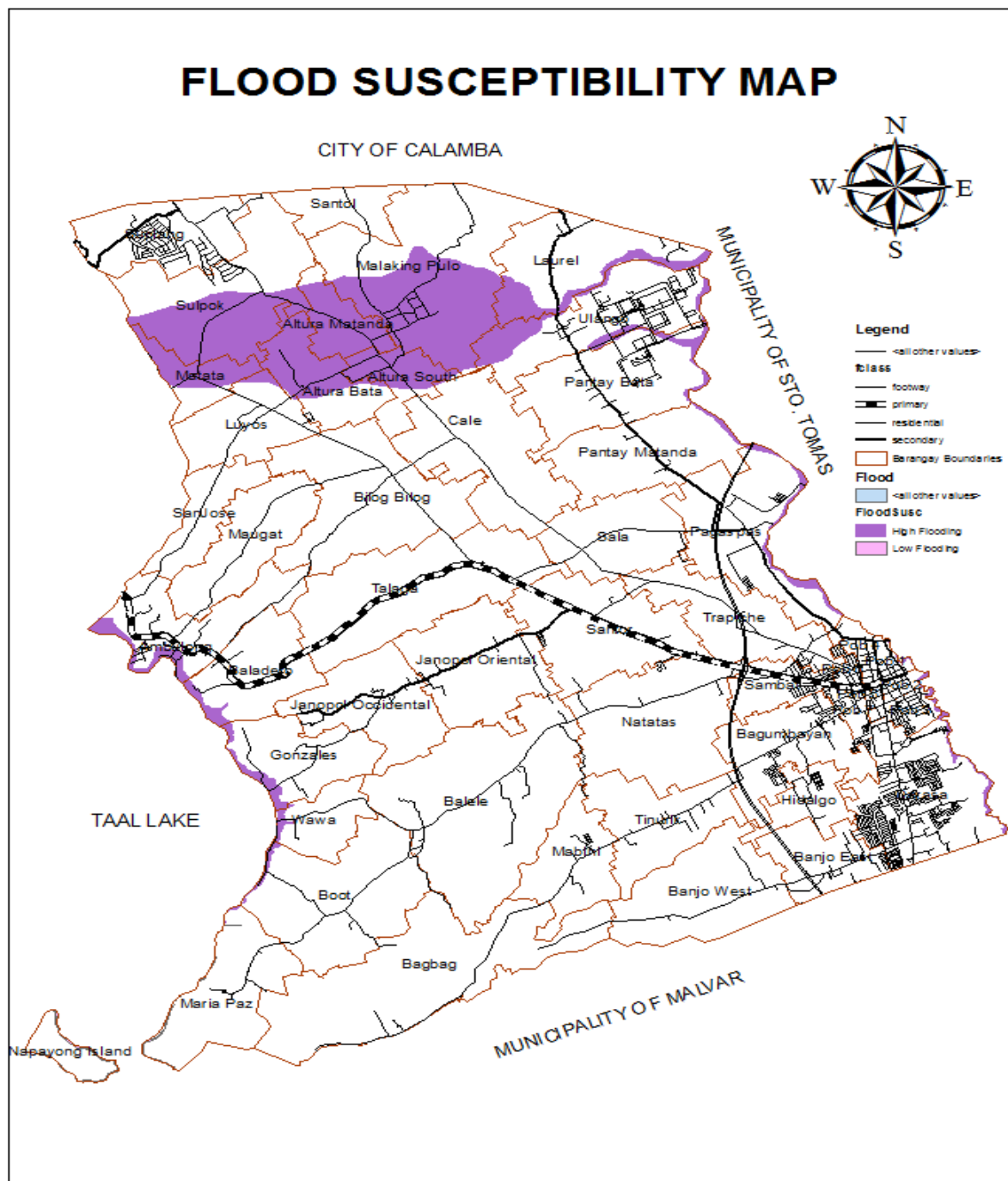
		during prolonged duration of moderate to heavy rain				
Volcanic Eruption	3		3	Major damages to lakeshore areas and minor to different barangays	3.00	3
Earthquake						
Tsunami	1	Most unlikely only when the epicenter of earthquake falls on Manila Trench and Lubang Island Faultline	5	It will be devastating and will cause 3m high Tsunami and will damage the whole area of Poblacion where the Municipal Hall, Central School are located	3.00	1
Ground Shaking	1	Unlikely to occur	1	Almost negligible	1.00	5
Earthquake Induced Landslide	1	Most unlikely may occur, only when 7.2 magnitude hits (near Lubang Island Fault)	4	It may cause to damage to properties and may cause to delay in operations due to unpassable roads.	2.50	2
Fire						
Grass Fire	2	Unlikely to occur only during El Niño	1	Almost negligible because there are no reported cases of damage to properties	1.50	4
Residential Fire	3	Most unlikely, only in exceptional hazard like	3	Minor and major damages to properties.	3	4

		negligence and human error, and electrical faulty wiring)				
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B. Risk Analysis

Windstorm/Typhoon

The City of Tanauan was recently hit by a calamity, with the onslaught of Tropical Storm “Glenda”. The storm caused a vast damage to the city, destroying the livelihood and properties of its residents. A considerable amount of damage to agriculture, industries and other livelihood sources has also been caused by the tropical storm. This was the reason why Tanauan City was declared under the state of calamity, with **Resolution No. 14-204** dated July 17, 2013.



Map 2.18 Flood Susceptibility Map

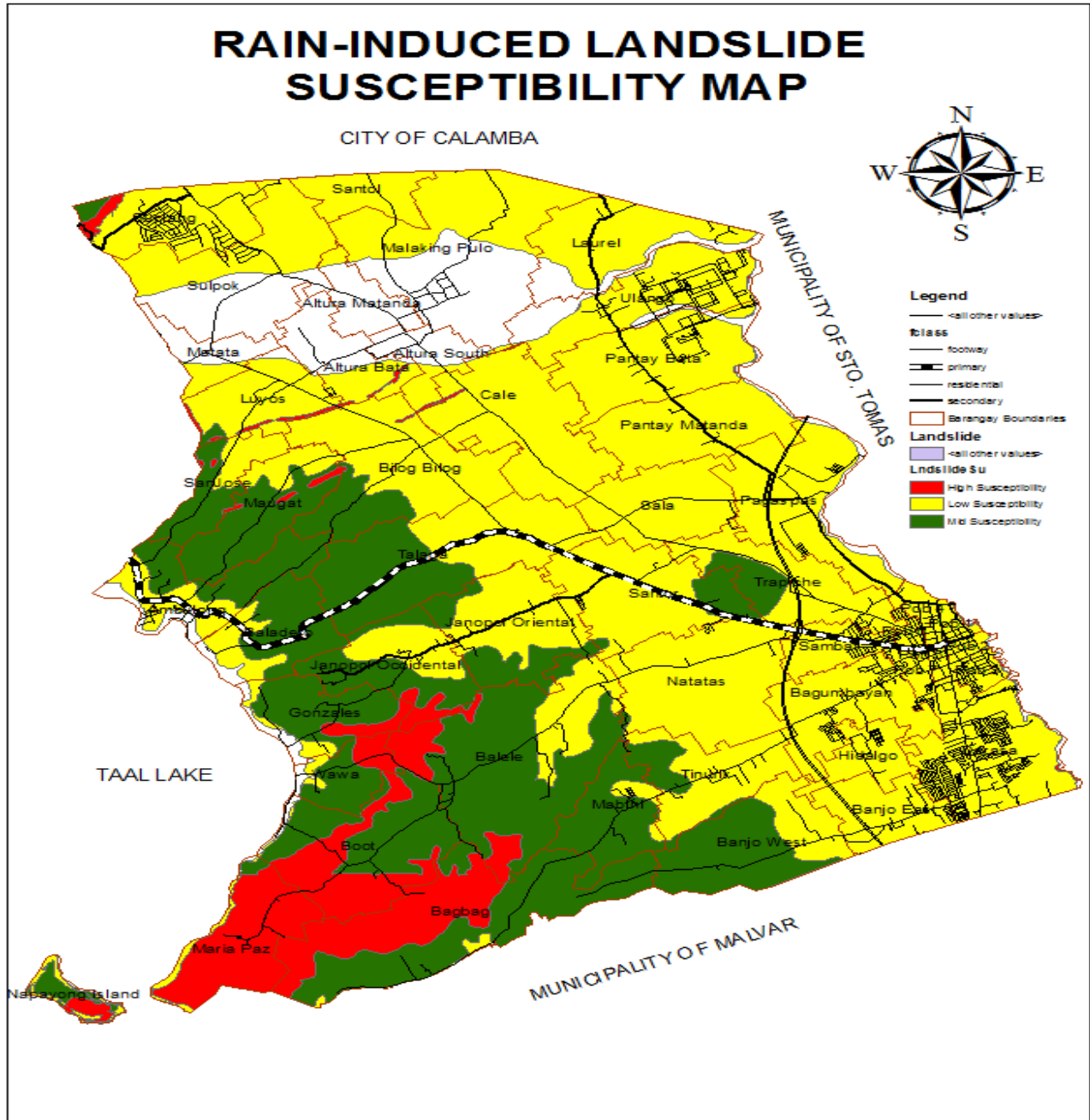
Hazard (flood map)

Table 2.32 Flood Vulnerable Barangays

Hazard	Vulnerable Barangay/s (Elements at Risks)	Population Affected / Families Affected	Major Infrastructures	Livelihood	Degree of Vulnerability (High, Medium, Low)
Flood	Altura Bata	1363		Harvesting crops, vegetables and fruits	Medium
	Altura Matanda	597		Harvesting crops, vegetables and fruits	Medium
	Altura South	713		Harvesting crops, vegetables and fruits	Medium
	Ambulong	7278		Ecotourism, Fishing, Harvesting crops, vegetables and fruits	Medium
	Bañadero	4183		Ecotourism, Fishing, Harvesting crops, vegetables and fruits	Medium
	Bagbag	2978		Ecotourism, Fishing, Harvesting crops, vegetables and fruits	Medium
	Gonzales	1832		Ecotourism, Fishing, Harvesting crops,	Medium

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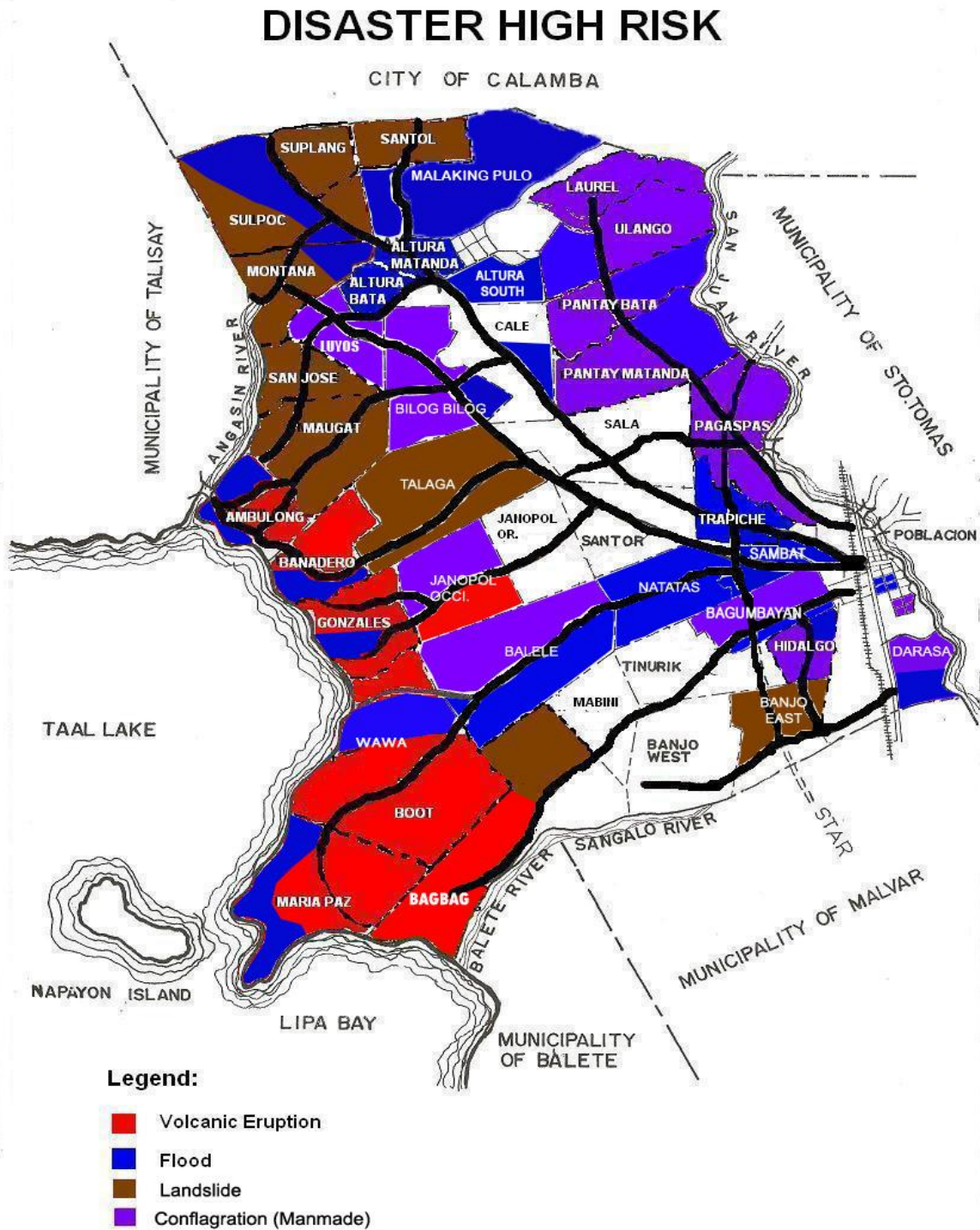
				vegetables and fruits	
	Malaking Pulo	3692		Harvesting crops, vegetables and fruits	Medium
	Montana	1769		Harvesting crops, vegetables and fruits	Medium
	Poblacion Barangay 1	1842	St. John Evangelist Church, Gov. Modesto Castillo Function Hall,	Ecotourism	Medium
	Poblacion Barangay 2	1226	Old Mabini Municipal Hall, Tanauan Gymnasium I	Ecotourism	Medium
	Poblacion Barangay 3	3783	Tanauan City Hall, Daniel O. Mercado Medical Center	N/A	Medium



Map 2.19 Hazard (Landslide Map)

TABLE 2.33 Landslide Vulnerable Barangays

Hazard	Vulnerable BARANGAY/S (Elements at Risks)	Population affected / families affected	Major Infrastructures	Livelihood	Degree of Vulnerability (High, Medium, Low)
Landslide	Bagbag	2978		Fishing, Harvesting crops, vegetables and fruits	High
	Maria Paz	2388		Ecotourism, Fishing, Harvesting crops, vegetables and fruits	High
	Napayong Island			Ecotourism, Fishing, Harvesting crops, vegetables and fruits	High
	TOTAL	148, 981			



Map 2.19 HAZARD (VOLCANIC ERUPTION MAP)

Table 2.34. Volcanic Eruption Vulnerable Barangays (10km rd.)

Hazard	Vulnerable Barangay/s (Elements at Risks)	Population Affected / Families Affected	Major Infrastructures	Livelihood	Degree of Vulnerability (High, Medium, Low)
Volcanic Eruption	Ambulong	7278		Ecotourism, Fishing, Harvesting crops, vegetables and fruits	High
	Bañadero	4183			
	Bagbag	2978			
	Boot	5412			
	Gonzales	1832			
	Maria Paz	2388			
	Wawa	1462			
	TOTAL	25533			

D. Vulnerable Sectors

Vulnerability of hazards in the City of Tanauan is fueled by the following factors:

1. poverty
2. lack of awareness of risks
3. health risks
4. destruction of infrastructure
5. lack of institutional capacity including the inability to enforce regulations.

Many of these factors increase vulnerability and risk to disasters which the city faces and need to address.

Barangay in low lying areas such as Poblacion Barangay 1 – 3 are the most vulnerable part of Tanauan City.

E. Capacity

The Local Disaster Risk Reduction and Management Council as well as the Barangay Disaster Risk Reduction Management Committee was revived, strengthened and reinforced.

Basic training courses had been conducted to those barangays who experienced more the drastic effect of disaster. Vigilance, BLS and Fire Fighting. Disaster Emergency Operation Center is established equipped for disaster operations.

DRRM office has been institutionalized with permanent plantilla position for the DRRM officer I. BDRRMC as well as the organized Incident Command System.

The Local Chief Executive leads the implementation of the Local Disaster Management Plan to be assisted by the Chief of Police and the LDRRMC.

The (CDRRMC) and the (BDRRMCs)

a. The City Disaster Risk Reduction and Management Council (CDRRMC)

The existing Local Disaster Coordinating Council shall henceforth be known as City Disaster Risk Reduction and Management Council.

The Barangay Disaster Coordinating Council shall cease to exist and its powers and functions shall henceforth be assumed by the existing Barangay Disaster Risk Reduction and Management Committee.

The City Disaster Risk Reduction and Management Council had been organized with the composition provided in Tanauan City Environmental Code (see Annex) and functions of the Council:

DUTIES AND RESPONSIBILITIES OF CITY DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL CDRRMCS

1. Approve, monitor and evaluate the implementation of the CDRRMPs and annually review, test develops the plan consistent with other national and local planning programs.
2. Ensure the integration of disaster risk reduction and climate change adaptation into city development plans, programs and budgets as a strategy in sustainable developments and poverty reduction;
3. Recommend the implementation of forced or preemptive evacuation of city residents, if necessary, and
4. Convene the local council as provided by the Act and these Rules.

Teams organized and grouped in stages of disaster

A. Disaster Prevention and Mitigation

Conduct of risk assessment, vulnerability analysis, and other science-based technology and methodologies to enhance LGU socio-ecological profile, sectoral studies and mainstream disaster risk reduction and management activities/Climate Change Adaptation (CCA) in Comprehensive Land Use Program (CLUP) and Comprehensive Development Program (CDP);

1. Implement Community-Based Monitoring System (CBMS) with disaster risk reduction and management/CCA indicators;
2. Capability building (train, equip, organize, provide funding, sustain) on mainstreaming disaster risk reduction and management/CCA in development planning, investment programming/financing, and project evaluation and development;
3. Conduct of activities to review and integrate disaster risk reduction and management/CCA into various environmental policies, plans, programs and projects;
4. Conduct vulnerability analysis and risk assessment for critical facilities and infrastructure;
5. Development of tools on risk assessment;
6. Construction of dams or embankments that will reduce/ mitigate flood risk; and
7. Other programs or projects of similar nature and considered necessary.

B. Disaster Preparedness

The knowledge and capabilities developed by governments, professional response and recovery organization, communities and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent or current hazard events or conditions. Preparedness action is carried out within the context of

needed to efficiently manage all types of emergencies and achieve orderly transitions from response to sustained recovery.

1. Conduct of training on disaster preparedness and response search, rescue and retrieval operations;
2. Conduct of simulation exercises at various levels to test plans and skills;
3. Development of information, education and communication (IEC) campaign and information sharing between LGUs/communities and the national government;
4. Development of standard operation manual for Disaster Operation Centers;
5. Development and implementation of standard operating procedures (SOPs) for deployment, evacuation and coordination with rapid assessment teams, etc.
6. Development of institutionalization of early warning system (EWS), information sharing among LGUs/communities and national government;
7. Conduct of disaster risk reduction and management researches;
8. Conduct of Multi-stakeholders' dialogue;
9. Development and conduct of regular review of contingency plans;
10. Development of information and data base generation;
11. Stockpiling of basic emergency supplies; and
12. Other programs or projects of similar nature and considered necessary.

1. Agricultural & Resources Team:

1. Undertakes a survey of agricultural items needed in helping the victims of disaster and calamities as well as gathers the necessary statistics on resources such as:

- Food- rice, corn, canned goods, vegetables, fish, meat water, and other grocery items
- Other rehabilitation items- seeds, planting materials, pesticides, fertilizers, livestock and fingerlings

2. Undertakes survey and assessment on all damaged livestock.

Survey includes the names and address of dealers, agencies or persons who may donate, contribute or make available resources which may be needed to ameliorate disaster or calamity victims and to release such data for immediate reference to those who are called upon to render assistance and relief to the victims. It shall have the continuing task of updating its data to furnish same to all concerned, for ready reference and guidance.

2. Evacuation Team:

1. Plans residents' movement routes and establishes movement procedures to give effect to the provision of the plan
2. Assigns block or "purok" leaders in the barangay
3. Supervises and directs movement to residents during evacuation activities
4. Prepares and ready the evacuation centers.

C. Disaster Response

The provision of emergency services and public assistance during or immediately after disaster in order to save lives; reduce negative health impacts, ensure public safety and meet the basic subsistence needs of the people affected. Disaster response is predominantly focused on immediate and short-term needs and is sometimes called "disaster relief".

1. Provision of alternative livelihood relief or assistance to victims of disasters;

2. Provisions of tents and other temporary shelter facilities;
3. Provision of food subsistence or relief goods to disaster victims; and
4. Other programs or projects similar nature and considered necessary.

1. Operating Team:

a. Supply Team:

- Determines the supply requirements of all action team
- Identifies the sources of such supplies
- Receives such supplies and channel the same to the team leader
- Prepare food for all action team and for evacuation centers

b. Transportation Team:

- Identifies local available transport facilities in the community for use during emergency
- Supports the transport needs of the community during operation activities
- Coordinates with local authorities and other barangays

c. Communication and Warning Team:

- Receives warning information from the barangay chairman
- Insures that all residents should be educated on the meaning of different warning signals or alarms
- Maintains appropriate communications link with the barangay
- Organizes equipage and couriers, warning team for specific blocks in the barangay
- Keeps records of all warnings and communication messages

- Maintains appropriate devices like sirens, bells gongs, horns, lights and others
- Coordinates with the next higher DCC for communication requirements and needs
- Maintains constant with barangay chairman for proper dissemination of warning drills as necessary
- Undertakes warning drills as necessary

d. Search and Rescue Team: (Responders)

- Locates injured/trapped and stranded persons in the area
- Organizes and trains the rescue team members
- Insures that members of the rescue team are proficient on-the-spot aid techniques

e. Evacuation Team:

- Plans residents' movement routes and establishes movement procedures to give effect to the provisions of the plan
- Assigns block or "purok" leaders in the barangay
- Supervises and directs movements to residents during evacuation activities

f. Medical Team:

- Attends the medical needs of the community especially in the evacuation centers
- Arranges with the government health agencies, Red Cross and other sources for first-aid and medical self-help training
- Supervises the selection of first-aid or medical treatment areas in shelters and elsewhere

- Directs first aid or medical self-help operations and controls access to medical supplies
- Maintains adequate sanitation and hygienic standard and matters relating to emergency health
- Inspects storage and handling of food and drinking water in shelter areas

g. Security Team:

- Secures vacated house/building areas of evacuation and disaster operation
- Implements and enforces personnel identification in the cordoned areas
- Responds to alarm signals or other suspicious activities and report to authorities concerned
- Performs escort duties in the local PNP for security of the areas

h. Fire Brigade Team:

- Organizes fire-fighting teams/brigades for initial fire-fighting instructions
- Provides fire-fighting instruction through available sources
- Assures that the fire-fighters know their stations/locations of fire-fighting equipment in the areas
- Work closely with the residents on matters of fire prevention and protection

D. Disaster Rehabilitation and Recovery Rehabilitation

- are measures that ensure the ability of affected communities and/or areas to restore their normal level of functioning by rebuilding/rehabilitating damaged infrastructures.

Post Disaster Recovery – the restoration and improvement where appropriate, of facilities, livelihood, and living conditions of disaster-affected communities, including efforts to reduce disaster risk factor, in accordance with the principles of “build back better”.

1. Formulation and designs for the reconstruction of disaster-resilient houses;
 2. Construction/Rehabilitation of damaged infrastructure facilities and evacuation centers;
 3. Conduct of training for social preparation of host communities and those that will be relocated;
 4. Implementation of building code and promotion of green technology;
 5. Conduct of post conflict analysis; and
 6. Other programs or projects of similar nature and considered necessary.
- Clears roadways and streets of fallen trees and other debris
 - Obtain an emergency rescue equipment like hand tools, ropes and other for emergency use
 - Maintain physical facilities of evacuation centers and access damages in the area
 - Marks open manhole, unrepaired dangerous structure/facilities pending the arrival of technician
 - Develop an emergency plan for the community
 - Maintain contact with Barangay Chairman

Assessment Team:

- Conduct Disaster Assessment and Needs Analysis (DANA)
- Receive and verify reports of all affected families and damaged properties
- Submit immediately all received and verified reports of all affected families and damaged properties.

With the disaster risk reduction and management framework, disaster risk reduction becomes everyone's business. In this context, all agencies and institutions operating at local level should be considered part of the local institutional capacity.

Many institutions and agencies including Non-Governmental Organizations and private sector institutions operate in the city. There is lack of coordination mechanism so it is not possible to obtain a comprehensive list of all stakeholders. Their part in DRRM was not made clear because there is no trainings and awareness programs implemented for that purpose. However, some of them participated in response activities, during the occurrence of events or disaster like in providing food commodities for families in the evacuation center.

Organization and Manpower and Equipments

The office of City Disaster Risk Reduction Management Office identifies active and accredited organization in the City of Tanauan and coordinate with those organization relative different phases of Disaster Risk.

F. Situational Analysis

IDENTIFYING STRENGTHS, WEAKNESSES, OPPORTUNITIES AND CHALLENGES

Prevention and Mitigation		
	Strength	Weakness
Internal	Institutionalized LDRRM Office (4 mandatory plantilla positions for 2nd class city created)	Functional DRRM Officer (1 position filled-up)
	Established DRRM Council and Office and enhanced CSOs participation in LDRRM	Early warning system (EWS) developed and institutionalized in the communities
	DRRMP, Programs and Activities included in the LDP and PPAs and 100% of 70% of LDRRMP utilization	Environmental policies with DRRM and CCA component
	Building codes and regulations strictly implemented for newly-constructed buildings	Building codes and regulations strictly implemented for existing buildings
	Critical public infrastructure conducted	Critical public infrastructure not yet saturated
External	Opportunity	Challenges

FOR THE FOUR (4) DRRM THEMATIC AREAS

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Preparedness		
Internal (Within the City)	Strength	Weakness
	<p>Preparation, planning and implementation of 5% LDRRM Fund</p> <p>Information, education, communication campaign and advocacy plans and activities developed and implemented</p> <p>Training modules formulated and Trainings and simulation exercises on disaster preparedness conducted</p> <p>Capacity building activities and trainings for disaster risk managers and key decision makers conducted</p> <p>Risk assessments, contingency planning, knowledge management and training activities developed</p> <p>Search, Rescue and Response Equipment purchased</p>	<p>Lack of Weather Monitoring Station</p> <p>Lack of Rain Gauge (Computerization)</p> <p>Stock piling not practiced</p> <p>Few Personnel were undergone Disaster preparedness seminars and trainings</p> <p>Insufficient capacities of Mobilization Group for evacuating vulnerable sectors in some areas.</p> <p>Lack of DRRM Preparedness City Ordinances</p>

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	<p>Establishment of Office/Operation Center</p> <p>Executive/Administrative Issuances:</p> <ul style="list-style-type: none"> a. Administrative Order- Pre-emptive and Force Evacuation b. Administrative Order- Mandating the use of Incident Command System as an On-scene disaster response and Management <p>Preparation of Inventories:</p> <ul style="list-style-type: none"> a. Manpower b. DRRM Equipment c. Directories d. Hazard Maps e. Evacuation Centers 	
External (Outside the City)	Opportunities	Challenges
	<p>Establishment of Memorandum of Agreement/Understanding:</p> <ul style="list-style-type: none"> a. Supermarket b. Drug Store c. Luiza Funeraria d. J&R Talyer 	<p>There is no existing primary evacuation centers.</p> <p>Duration/Length/expiration of Agreements on different stakeholders</p>

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	<p>e. Tanauan PNP</p> <p>Sponsored Seminars and Trainings from different Stakeholders/CSOs/NGOs/National Agencies</p> <ul style="list-style-type: none"> a. Mine and Geosciences Bureau b. PHIVOLCS c. Bureau of Fire Protection d. Philippine Coast Guard e. Philippine Air Force f. Philippine National Police g. Philippine Red Cross 	<p>Transition on Administrative Trust/Direction</p>
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Response		
Internal (Within the City)	Strength	Weakness
	Incident Management Team organized Disaster Search Rescue and Response Equipment, PPEs Establishment of Disaster Operation Center Trained Disaster Responders and Front Liners Availability of Various Supplies needed by response team.	Lack of trainings on emergency response and emergency response teams not organized Incident Command System not yet implemented Lack of Disaster Volunteers Insurances Lack of Management of the DRRM Council Member Insufficient Disaster Response Supplies (PPEs, Equipment)
External (Outside the City)	Opportunities	Challenges
	Cooperating Agencies a. Philippine Red Cross b. Bureau of Fire Protection c. Philippine Air Force d. Philippine Coast Guard e. Department of Public Work and Highways f. Department of Education g. Provincial Disaster Risk Reduction and Management	There is no existing Written Memorandum of Agreement/Understanding in lending Heavy Equipment during disaster. Availability of Cooperating Agencies Limitations of Augmented Strike Teams

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	<p style="text-align: center;">Office</p> <p>Augmentation of Strike Team from:</p> <ul style="list-style-type: none"> a. Kabalikat b. Bantay Lawa c. 727 Riders <p>Assistance of Heavy Equipment from other Contractors.</p>	
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Recovery and Rehabilitation		
Internal (Within the City)	Strength	Weakness
	Continuous rehabilitation / construction of critical infrastructures.	Conduct of Post Disaster Needs Assessment
External (Outside the City)	Opportunity	Challenges
	Outsourcing Funds from Provincial to National Government From Donation from Private entities	Political intervention Indigenous People Laws and Beliefs

**THE LOCAL DISASTER RISK REDUCTION AND MANAGEMENT PLAN (LDRRMP)
2017-2019**

Vision Statement

A City with the highest state of knowledge and preparedness on any disaster and emergencies where all constituents are assured of immediate and effective disaster and emergency response in times of any calamities and events.

Mission Statement

To be the primary government agency in the country in the upholding and implementing skilled, equipped and well prepared disaster resilient community that observes ecological and technological dependence and management.

I. Disaster Prevention And Mitigation

GOAL: Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities

Objectives and Outcomes	PPA	Key Output	Responsible Person	Percentage of Accomplishment			Source of Funds
				2017	2018	2019	
I. To reduce vulnerability and exposure of communities to hazard A. Institutionalize LDRRMC a. Develop mechanism	Facilitate requirements (EO, Resolution, others)	1. Established and functional DRRMC Councils and Offices 2. Institutionalized DRRM office with permanent plantilla position for the DRRM	LDRRMC, Sangguniang Panlungsod, HRMDO and City Budget	100%			General Fund

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for selection, and participation of CSOs/NGOs in the LDRRMC		officer					
	MOA with Private/NGO and CSO	CSOs/ NGOs participation in LDRRM	LDRRMC	100			
b. Facilitate the DRRM and CCA integration in the LDP/PPAs:	Tree Planting/Mangrove Reforestation MRF Ordinance on tree cutting Solid Waste Management Programs implementation	DRRMP, Programs and Activities included in the LDP and PPAs and 100% of 70% of LDRRMP utilization	LDRRMC, NGOs, CSOs, Schools and Barangays	50%	80%	100%	70% LDRRMF
c. Construction of Slope Protection and retaining walls	Construction/Rehabilitation of Protection and retaining wall for landslide Prone Areas	Retaining Wall constructed	CEO, CPDO and CDRRMC	50%	80%	100%	70% LDRRMF/ Trust Fund
d. Construction/Rehabilitation of Drainage Canal	Construction/Rehabilitation of Drainage Canal for flood prone	Drainage system constructed	CEO, CPDO and CDRRMC	50%	80%	100%	70% LDRRMF/ Trust Fund

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	areas						
Poverty Reduction e. Livelihood programs for affected families from calamities/disasters	Provision of Livelihood Program for those at risk in time of Disaster and Relocation	Livelihood Program Provided Affected population relocated to safer area	CSWD, CPDO and CDRRMC	50%	80%	100%	Trust Fund/General Fund/20% Development Fund
f. Increased disaster resilience of infrastructure systems	Development and passage of local issuances / ordinances for strict implementation of building codes	Strict Implementation	CEO, CDRRMC, and Sangguniang Panlungsod	50%	100%		
g. Forecasting and Early Warning Systems established	Installation of EWS	EWS Installed	CDRRMC	50%	100%		70% LDRRMF

II. Disaster Preparedness

GOAL: Establish and strengthen capacity to anticipate, cope, and recover from the negative impacts of disasters

OBJECTIVES AND OUTCOMES	PPA	Key Output	Responsible Person	Percentage of Accomplishment			Source of Funds
				2017	2018	2019	
I. To Increase level of awareness of communities to the threats and impacts of all hazards, risk and vulnerabilities							
A. Increased level of awareness and enhanced capacity of the community to the threats and impacts of all hazards	IEC programs and projects developed and implemented And, Local authorities and	IEC Program Developed and Implemented	CDRRMC, CENRO, CSWD and CPDO	60%	100%		70% LDRRMF

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	the public participated in IEC for DRRM CCA						
2. Equip communities with skills to cope with the negative impacts of disaster A. Communities are equipped with necessary skills and capability to cope with the impacts of disasters	Increased understanding and application of risk reduction measures and prepared communities	Capacity and Capability building done and Implemented	CSWD and CDRRMC	60%	100%		70% LDRRMF
3. To increase institutional capacity of LGU on DRRM/CCA A. Increased capacity of Local DRRM Council/Committees, Offices and Operations Centers on DRRM/CCA	a. Conduct risk assessments, contingency planning, knowledge management and training activities b. Inventory of resources	Fully-functioning, adequately staffed and financially capable local DRRM Office	CDRRMC, CSO, NGO and CSWD	60%	100%		70% LDRRMF

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	<p>c. Stockpiling and repositioning of resources</p> <p>d. Establish the DRRM Operations Center</p> <ol style="list-style-type: none"> 1. City level 2. Barangay Level 						
<p>4. To be prepared for the impact of disaster and climate change in the AOR</p>	<p>IEC Campaign</p> <p>Training for the seasonal livelihood programming.</p> <p>Adaptation of the seasonal livelihood program with the council member and SB Member.</p>	<p>Adopted Seasonal Livelihood Program within the AOR</p>	<p>CDRRMC, CSO, NGO, CSWD, CAO and CENRO</p>	<p>60%</p>	<p>100%</p>		<p>70% LDRRMF</p>

III. Disaster Response

GOAL: Provide life preservation and meet the basic subsistence needs of affected population during or immediately after disaster

OBJECTIVES AND OUTCOMES	PPA	Key Output	Responsible Person	Percentage of Accomplishment			Source of Funds
				2017	2018	2019	
1. To decrease the number of preventable deaths and injuries A. Well-established disaster response operations	ICS training Activation of the ICS on site	ICS Activated, CDRRMC Trained, Council member trained and recognized	CDRRMC, Department Concern and Strike Teams	60%	100%		LDRRM Fund
b. Established and functioning system for coordinated and efficient relief operations	Activation of relief distribution points/ centers	Distribution Center Activated and well manned	CDRRMC, CSWD, DILG and CPDO	60%	100%		LDRRM Fund
c. Integrated and	Conduct SRR and proper	SAR Team	CDRRMC, BFP,	60%	100%		LDRRM

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coordinated Search, Rescue and Retrieval (SRR) capacity	disposal with concerned agencies	Organized and Trained	PNP, Volunteers and Civil Society Organizations		%		Fund
d. Affected communities are evacuated safely and on time	Coordination with appropriate agencies Activate evacuation system and/or set of procedures	Evacuation System coordinated and Implemented	CDRRMC, DepEd, CSWD, CHO, PNP and Barangay Police	60%	100%		LDRRM Fund
e. Equipped and well manned evacuation center	Evacuation center prepared and ready for accepting evacuees. Provision of equipment for Evacuation center Provision of purchase for evacuation building	Safe, resilient, complete and well managed evacuation center and its procedures	CDRRMC, DepEd, CSWD, CHO, PNP, BFP and Barangay Police	60%	100%		LDRRM Fund
f. Equipped responder	Training for response team. Provision of PPE, PPG, Hazard pays and	Trained and Equipped Responders	CDRMC, Local Volunteers and responders	60%	100%		LDRRM Fund

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	insurances for the responder on the ground								
	Continuous refreshing and updating their knowledge and skills on being a good responder.								
g. Provide foods, medicines and WASH for the evacuees.	<p>Stock piling of food and Medicines.</p> <p>Update of MOA with supermarket and suppliers.</p> <p>Provision of hygiene kits for the evacuees and responders.</p> <p>Provision of food packs and medicine for the evacuees</p>	<p>Enough food, supplies and medicines and hygiene kits for the evacuees and responders.</p> <p>Updated MOA.</p> <p>Food, supplies and Medicines stockpiled.</p>	<p>CDRRMC, Local Volunteers and responders and</p>	<p>evacuees</p>	<p>80%</p>	<p>100%</p>	<p>100%</p>	<p>LDRRM Fund</p>	

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<p>h. Provide Fire Safety and Fire Truck Equipment</p> <p>i. Provide equipment truck</p>	<p>Procurement of Fire Safety Equipment and Fire Truck equipment including PPG's for fire.</p> <p>Provide proper maintenance for the Fire Trucks and Extinguishers. (Includes batteries, tires and change oils and other parts of fire truck)</p>	<p>To have equipped responders that will help to suppress fire during incidents.</p>	<p>CDRRMC, BFP, Local Volunteers and responders</p>	<p>50%</p>	<p>80%</p>	<p>100%</p>	<p>LDRRM Fund</p>
<p>j. To have fast, accurate and reliable communication equipment, tools and gadgets for the responders on the ground and in the operation center</p>	<p>Procurement of communication, tools, equipment and gadget.</p> <p>Provide communication tools for the responders.</p> <p>Provide training, refresher course, capacity/capability building on the</p>	<p>To have equipped immediate, effective, and clear communication from the ground/site and the operation center.</p>	<p>Local Volunteers and responders, CDRRMC</p>	<p>50%</p>	<p>80%</p>	<p>100%</p>	<p>LDRRM Fund</p>

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	<p>communication groups in the council and within the AOR.</p> <p>Provide Risk Communication Training for the council member and local volunteers</p>					
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IV. Rehabilitation and Recovery

GOAL: To restore and improve facilities and living condition of affected communities and reduce disaster risk in accordance with the “build back better” principle

Objectives and Outcomes	PPA	Key Output	Responsible Person	Percentage of Accomplishment			Source of Funds
				2017	2018	2019	
1. To restore the people means of livelihood and continuity of economic activities and business	Strategic Action Plan Implementation of Seasonal Livelihood	Team trained	CDRRMC, CAO, CSWD and CEO			100%	LDRRM Fund

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Damages, Losses and Needs Assessed and Economic activities restored	Program.						
	Livelihood programs and projects	Programs Implemented	CDRRMC and CSWD	50%	80%	100%	LDRRM Fund
	Credit facilities for affected sectors		CDRRMC and CSWD	30%	60%	100%	
2. To restore shelter and other buildings/installation A. Houses rebuilt or repaired to be more resilient to hazard events; safer sites for housing	Provision of Shelter which is Disaster Resilient Provision of Relocation Site	Relocation and Shelter Provided	CDRRMC, CSWD, CPDO and CEO		80%	100%	20% Dev't Fund, LDRRMF
3. To reconstruct/rehabilitate infrastructure and other public utilities Disaster and climate change-resilient and infrastructure	1. Construction/Rehabilitation of Disaster resilient, CC Resilient infrastructure	Infrastructure constructed / rehabilitated and monitored	CPDO, CDRRMC and CEO		80%	100%	

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reconstructed	<p>2. Undertake the necessary rehabilitation or repair of damaged infrastructures</p> <p>3. Implement building code and promotion of green technology</p> <p>4. Close monitoring and/ or tracking of approval of infrastructure projects and permits</p>						
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Monitoring and Evaluation

I. Disaster Prevention and Mitigation

GOAL: Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities

	Baseline	Target Output			Agencies	Resources	Assumption
		2017	2018	2019			
To reduce vulnerability and exposure of communities to hazard	A. DRRM mainstreamed and integrated in Local Development Plans (LDPs) policies and budgets.	DRRMP, Programs and Activities included in the LDP and PPAs and 100% of 70% of LDRRMP utilization			Responsible Partner Agency:	Personnel Secondment:	
					CENRO, BFAR, DENR, CAO and CPDO	Equipment:	
		Target	Target	Target	Cooperating Agency:		
		50%	100%	100%		Budget:	
		Indicators	Indicators	Indicators	Stakeholder:		
		Continuous tree planting and mangrove reforestation, and	Continuous tree planting and mangrove reforestation,			Source:	
					Bantay Lawa and Fisherfolks	5% LDRRMF	

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		enforcement of PD 705 Forestry Reform Code of the Philippines and RA 9003	and enforcement of PD 705 Forestry Reform Code of the Philippines and RA 9004				
Facilitate the DRRM and CCA integration in the LDP/PPAs:		Activities	Activities	Activities		In-kind Counterpart:	
		Environment					
		Tree Planting	Tree Planting	Maintenance of the Tree Planting Activities			
		MRF Ordinance on tree cutting	MRF Ordinance on tree cutting			Complementing Projects:	
		Solid Waste Management Programs implementation	Solid Waste Management Programs implementation			Mangrove Program of CAO and CENRO	

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	Baseline	Target Output			Agencies	Resources	Assumption
		2017	2018	2019			
To reduce vulnerability and exposure of communities to hazard	A. DRRM mainstreamed and integrated in Local Development Plans (LDPs) policies and budgets.	DRRMP, Programs and Activities included in the LDP and PPAs and 100% of 70% of LDRRMP utilization			Responsible Partner Agency:	Personnel Secondment:	
		Target	Target	Target	CEO, DPWH, and CDRRMO	Equipment:	
		30%	60%	100%	Cooperating Agency:		
		Indicators	Indicators	Indicators		Budget:	
		Construction of Drainage System, breakwater, seawalls, shorelines	Provision of Shelter for the affected community		Stakeholder:		
					Coastal Community and community in Landslide and river bank area	Source:	
	Facilitate the DRRM and CCA integration in the	Activities	Activities	Activities		In-kind Counterpart:	
		Public Infrastructure and Housing					

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	LDP/PPAs:	Construction of Drainage System, breakwater, seawalls, shorelines, stone masonry and rip rapping	Construction of Drainage System, breakwater, seawalls, shorelines, stone masonry and rip rapping	Construction of Drainage System, breakwater, seawalls, shorelines, stone masonry and rip rapping			
		Relocation or provision of shelter programs	Relocation or provision of shelter programs	Relocation or provision of shelter programs			

	Baseline	Target Output			Agencies	Resources	Assumption
		2017	2018	2019			
To reduce vulnerability and exposure of communities	Forecasting and Early Warning Systems established	Early warning system (EWS) developed and institutionalized in the communities			Responsible Partner Agency:	Personnel	
					CDRRMC, PIO and Barangays	Secondment:	
		Target	Target	Target		Equipment:	
		50%	100%		Cooperating		

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es to hazard					Agency:	
						Budget:
		Indicators	Indicators	Indicators	Stakeholder:	
		Construction of Drainage System, breakwater, seawalls, shorelines, stone masonry and rip rapping	Provision of Shelter for the affected community			Source:
						5% LDRRMF, Provincial Gov't. National Agencies, WFP
		Activities	Activities	Activities		In-kind Counterpart:
		Development and establishment of community based EWS	Development and establishment of community based EWS			
		Disseminate early warning information to vulnerable communities	Disseminate early warning information to vulnerable communities			

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		Installation of EWS equipment				
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II. Disaster Preparedness

GOAL: Establish and strengthen capacity to anticipate, cope, and recover from the negative impacts of disasters

	Baseline	Target Output			Agencies	Resources	Assumption
		2017	2018	2019			
I. To Increase level of awareness of communities to the threats and impacts of all hazards, risk and vulnerabilities	Enhanced capacity of the community to the threats and impacts of all hazards	IEC programs and projects developed and implemented, and Local authorities and the public participated in IEC for DRRM CCA			Responsible Partner Agency:	Personnel Secondment:	
		Target	Target	Target	CAO, CDRRMC, CSWD	Equipment:	
		50%	100%		Cooperating Agency:		
						Budget:	
		Indicators	Indicators	Indicators	Stakeholder:		
		Information Campaign materials printed, provided and distributed to all	Provision of Shelter for the affected community		All barangays	Source:	
						5% LDRRMF, Provincial Gov't. National Agency	

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	barangay.					
	Activities	Activities	Activities		In-kind Counterpart:	
	Information, education, communication campaign and advocacy plans and activities developed and implemented	Information, education, communication campaign and advocacy plans and activities developed and implemented				
	Conduct of activities like: >Posting signage's/ boards in hazard prone areas >Poster Making	Conduct of activities like: >Posting signage's/ boards in hazard prone areas >Poster Making	Conduct of activities like: >Posting signage's/ boards in hazard prone areas			

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		Contest (DRR)	Contest (DRR)	>Poster Making Contest (DRR)			
		Installation of EWS equipment					
		Target Output					Assumption
	Baseline	2017	2018	2019	Agencies	Resources	
2. Equip communities with skills to cope with the negative impacts of disaster	Enhanced capacity of the community to the threats and impacts of all hazards	Increased understanding and application of risk reduction measures and prepared communities			Responsible Partner Agency:	Personnel Secondment:	Communities are equipped with necessary skills and capability to cope with the impacts of disasters
					CAO, CDRRMO, CSWD, CSO, BFP, PNP		
		Target	Target	Target		Equipment:	
		50%	100%		Cooperating Agency:		
						Budget:	
		Indicators	Indicators	Indicators	Stakeholder:		
		Conduct of	Continuous	Construction of	All barangays	Source:	

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	Simulation Exercises, Drills and other Preparedness activities in the whole city	training on Disaster Preparedness:	Evacuation areas with complete facilities.		5% LDRRMF, Provincial Gov't. National Agencies, WFP
	Activities	Activities	Activities		In-kind Counterpart:
	Formulation of training modules and conduct of trainings and simulation exercises on disaster preparedness and response	Formulation of training modules and conduct of trainings and simulation exercises on disaster preparedness and response	Formulation of training modules and conduct of trainings and simulation exercises on disaster preparedness and response		
	Provision of Proper evacuation	Provision of Proper evacuation	Provision of Proper evacuation areas for the Coastal		

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		areas for the Coastal communities who are prone to hazards.	areas for the Coastal communities who are prone to hazards.	communities who are prone to hazards.			
		a. Search / Emergency Rescue Training b. Basic Life Support, First Aid trainings c. RDANA d. Earthquake, Fire, Volcanic, etc. Drills and Exercises e. Seminar on Evacuation Plan f. Seminar on	a. Search / Emergency Rescue Training b. Basic Life Support, First Aid trainings c. RDANA d. Earthquake, Fire, Volcanic, etc. Drills and Exercises e. Seminar on Evacuation Plan f. Seminar on	a. Search / Emergency Rescue Training b. Basic Life Support, First Aid trainings c. RDANA d. Earthquake, Fire, Volcanic, etc. Drills and Exercises e. Seminar on Evacuation Plan f. Seminar on Family Disaster Preparedness			

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		<p>Family Disaster Preparedness</p> <p>g. Communication equipment Operation</p> <p>h. EWS installation and operation</p> <p>i. ICS, others.</p>	<p>Family Disaster Preparedness</p> <p>g. Communication equipment Operation</p> <p>h. EWS installation and operation</p> <p>i. ICS, others.</p>	<p>g. Communication equipment Operation</p> <p>h. EWS installation and operation</p> <p>i. ICS, others.</p>			
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	Baseline	Target Output			Agencies	Resources	Assumption
		2017	2018	2019			
3. 3. To increase institutional capacity of LGU on DRRM/CCA	Increased capacity of Local DRRM Council/Committees, Offices and Operations Centers on DRRM/CCA	Fully -functioning, adequately staffed and financially capable local DRRM Office			Responsible Partner Agency:	Personnel Secondment :	
					CDRRMO, CSWD		
		Target	Target	Target		Equipment:	
		100%	100%	100%			
		Indicators	Indicators	Indicators	Stake Cooperating Agency:holder:	Budget:	
		Continuous Update of CP as needed. Institutionalization of ICS.	Update MOA with Supermarket and etc., and provide stockpile of supplies to be used on times	Stockpiling of hygiene kits.			
					All barangays		

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			of rainy season or as needed by the volunteers and rescuers on duty.			
		Continuous Update of CP as needed. Institutionalization of ICS. Activities	Update MOA with Supermarket and etc., and provide stockpile of supplies to be used on times of rainy season or as needed by the volunteers and rescuers on	Stockpiling of hygiene kits. Activities	Volunteers and rescuers. LDRRMC	Source:
						5% LDRRMF, Provincial Gov't. National Agencies

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		duty. Activities			
	Conduct risk assessments, contingency planning, knowledge management and training activities	Conduct risk assessments, contingency planning, knowledge management and training activities	Conduct risk assessments, contingency planning, knowledge management and training activities		In-kind Counterpart:
	Stockpiling and prepositioning of resources	Stockpiling and prepositioning of resources	Stockpiling and prepositioning of resources		

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		Provision/Purchase of equipment for the Data Base and provide system of monitoring					
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III. Disaster Response

GOAL : Provide life preservation and meet the basic subsistence needs of affected population during or immediately after disaster.

	Baseline	Target Output			Agencies	Resources	Assumption
		2017	2018	2019			
1. To decrease the number of preventable deaths and injuries	Well-established disaster response operations	1. Activated functional ICS 2. Implementation of established system of an information gathering, reporting and dissemination. 3. Established and functioning system for coordinated and efficient relief operations			Responsible Partner Agency:	Personnel Secondment:	
					cdrrmc, cso, ngo, volunteers	Equipment:	
		Target	Target	Target	Cooperating Agency:		
		100%	100%	100%			
		Indicators	Indicators	Indicators	Stakeholder:	Budget:	
		ICS activated	Provision of Shelter for the affected		All barangays	Source:	
						5% LDRRMF,	

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			community		Provincial Gov't. National Agencies
		Activities	Activities	Activities	In-kind Counterpart:
		Activation of the ICS on site	Activation of the ICS on site	Activation of the ICS on site	
		Activation of relief distribution points/ centers	Activation of relief distribution points/ centers	Activation of relief distribution points/ centers	

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		Target Output			Agencies	Resources	Assumption
Baseline	2017	2018	2019				
Adequate and prompt assessment of needs and damages at all levels	Timely and appropriate and consolidated needs assessment reports			Responsible Partner Agency:	Personnel		
					CDRRMC, CSO, NGO, VOLUNTEERS		Secondment:
	Target	Target	Target	Cooperating Agency:			Equipment:
	100%	100%	100%		Stakeholder :		Budget:
	Indicators	Indicators	Indicators	All barangays			Source:
	Assessment team activated	Provision of Shelter for the affected community			5% LDRRMF		In-kind Counterpart:
	Activities	Activities	Activities				

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		Activation of assessment teams	Activation of the ICS on site	Activation of the ICS on site			
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Chapter 3

DEMOGRAPHY

3.1 Demographic Profile

It should be understood that population is the most important set of information for planning. It is the basis for determining the level of needs for public services like schools, health center, recreational facilities, power, water, protective services, etc. Population creates local demand for goods and services affecting the level of economic activities in sustaining their viable existence in an area.

The present and projected size of the population is an equally important input in assessing housing and other basic needs adequacy as well as calculating future demand. It also serves as a guide for allocating land for various uses.

Demography is concerned with the collection and analysis of data relating to population indicators and the interpretation of these data against social, biological, economic, political, geographical, ecological and historical background.

This Chapter presents the demographic profile of the City of Tanauan. Some of the data sources are the Community-Based Monitoring System (CBMS), National Statistics Office (NSO), which is now known as the Philippine Statistics Authority (PSA), Provincial Planning and Development Office and City Planning and Development Office (CPDO).

The table below demonstrates the population of all municipalities/cities in the entire Province of Batangas. Among the three (3) cities and thirty-one (31) municipalities comprising the province, Tanauan City ranks third in terms of total population (152,393) Batangas City was the most populous (305,607) followed by Lipa City (283,468).

Out of the 2,377,395 total population of the Batangas Province, the city's percentage share is 6.41%. This is the highest share of the city to the population of the province since 1995 as reflected in Table 3.2.

3.1.1 Provincial Population by Cities/Municipalities

Table 3.1. Provincial Population by Cities/Municipalities

City/Municipality	Population, May 2010	Rank	City/Municipality	Population, May 2010	Rank
Agoncillo	35,794	24	Mataas Na Kahoy	27,177	29
Alitagtag	23,649	30	Nasugbu	122,483	5
Balayan	81,805	9	Padre Garcia	44,877	19
Balete	20,214	32	Rosario	105,561	6
Batangas City (Capital)	305,607	1	San Jose	68,517	12
Bauan	81,351	10	San Juan	94,291	7
Calaca	70,521	11	San Luis	30,701	28
Calatagan	51,997	14	San Nicolas	20,599	31
Cuenca	31,236	27	San Pascual	59,598	13
Ibaan	48,482	16	Santa Teresita	17,415	33
Aurel	35,674	25	Santo Tomas	124,740	4
Lemery	81,825	8	Taal	51,503	15
Lian	45,943	18	Talisay	39,600	22
Lipa City	283,468	2	City of Tanauan	152,393	3
Lobo	37,070	23	Taysan	35,357	26
Mabini	44,391	20	Tingloy	16,870	34
Malvar	45,952	17	Tuy	40,734	21
			TOTAL	2,377,395	

Source: 2010 Census of Population and Housing (CPH)

3.1.2 Population of the Province and the City of Tanauan

Table 3.2 Total Population of the Province of Batangas and City of Tanauan from 1995 up to 2010

Year	Total Population		% Share of City to Provincial Population
	Batangas Province	City of Tanauan	
1995	1,658,567	103,868	6.26
2000	1,905,348	117,539	6.17
2007	2,245,869	142,537	6.35
2010	2,377,395	152,393	6.41

3.2 Population Composition

3.2.1 Population by Age Group and Sex

The table below indicates that the younger the age groups the higher the population. The record also shows that both in 2008 and 2011 CBMS surveys, there are more males than females in age group 0 – 19. However, the census also reveals that female population is higher than male from age 20 and above. This could lead to conclusion that females have longer life span as compared to males in Tanauan City.

Figure 1, as shown below, showcases the Sex and Age Classification in Tanauan City in year 2008 and 2011. The figure below reveals that as population ages, the number of population also decreases. This could be attributed to the increase percentage of mortality rate which could also mean that the life span of people in the city decreases. Also, the greater number of Overseas Filipino Workers (OFWs) and immigrants could be considered some factors affecting the numbers. Likewise, the figure reveals that the age group with highest number of population is 0 – 4 years old both in years 2008 and 2011 which denotes rapid increase in birth rate.

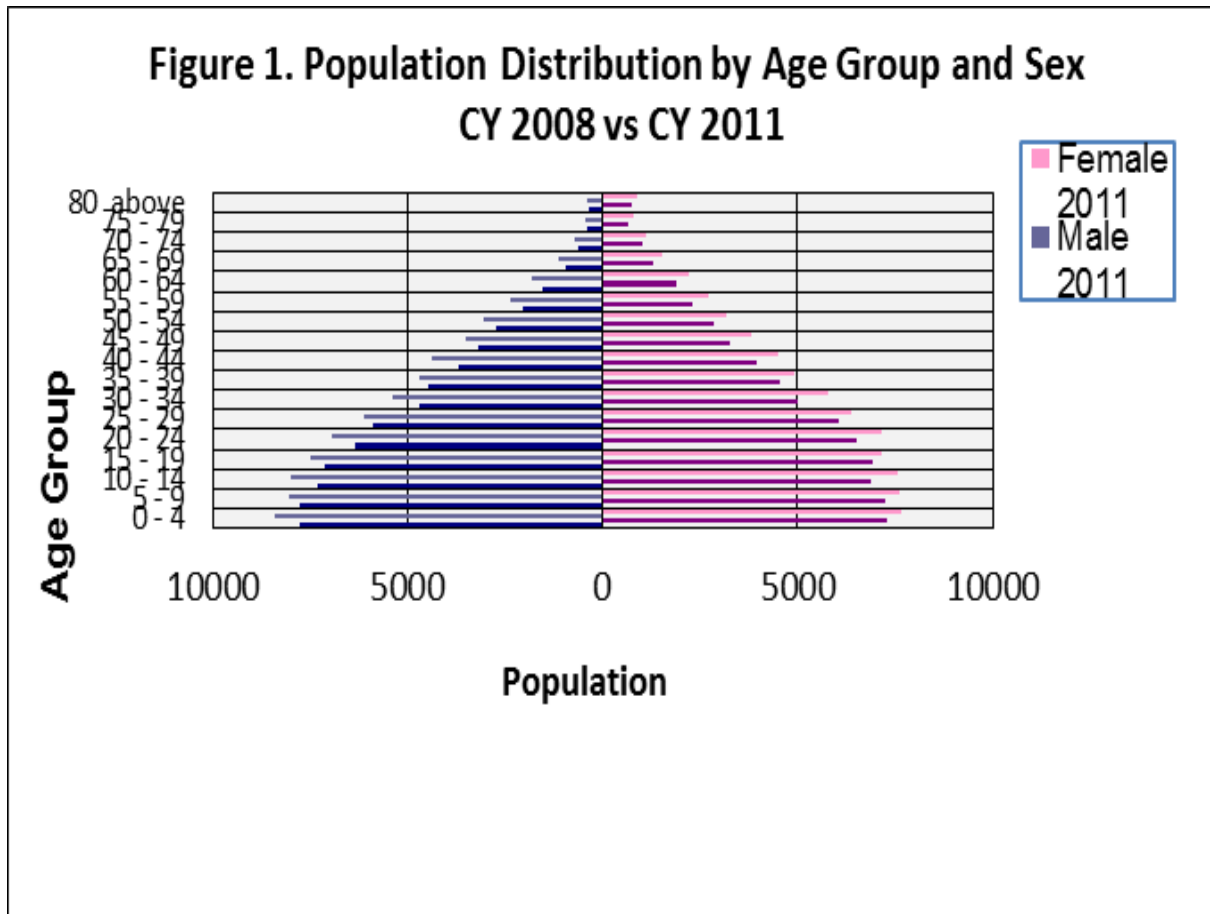


Table 3.3. Population distribution by age group and gender CY 2008 vs. 2011

Age Group	2008			2011		
	Male	Female	Total	Male	Female	Total
0 – 4	7,779	7,278	15,057	8,383	7,667	16,050
5 – 9	7,747	7,250	14,997	8,015	7,603	15,618
10 – 14	7,281	6,872	14,153	7,977	7,551	15,528
15 – 19	7,101	6,927	14,028	7,486	7,150	14,636
20 – 24	6,343	6,518	12,861	6,957	7,158	14,115
25 – 29	5,885	6,067	11,952	6,120	6,389	12,509
30 – 34	4,691	4,999	9,690	5,394	5,779	11,173
35 – 39	4,486	4,529	9,015	4,703	4,922	9,625
40 – 44	3,674	3,968	7,642	4,360	4,482	8,842
45 – 49	3,174	3,288	6,462	3,500	3,801	7,301
50 – 54	2,713	2,859	5,572	3,042	3,160	6,202
55 – 59	2,035	2,313	4,348	2,381	2,730	5,111
60 – 64	1,518	1,897	3,415	1,800	2,236	4,036
65 – 69	942	1,287	2,229	1,106	1,517	2,623
70 – 74	630	1,041	1,671	728	1,113	1,841
75 – 79	388	682	1,070	438	802	1,240
80 above	337	738	1,075	376	870	1,246
TOTAL	66,724	68,513	135,237	72,766	74,930	147,696

Source: Tanauan City CBMS 2008 & 2011

3.2.2 Age Dependency Ratio

Table 3.4. Young and Adult dependency ratio CY 2008 and 2011

	Percentage
Young Dependency Ratio	52.02%
Adult Dependency Ratio	7.11%
Total Dependency Ratio	59.13%

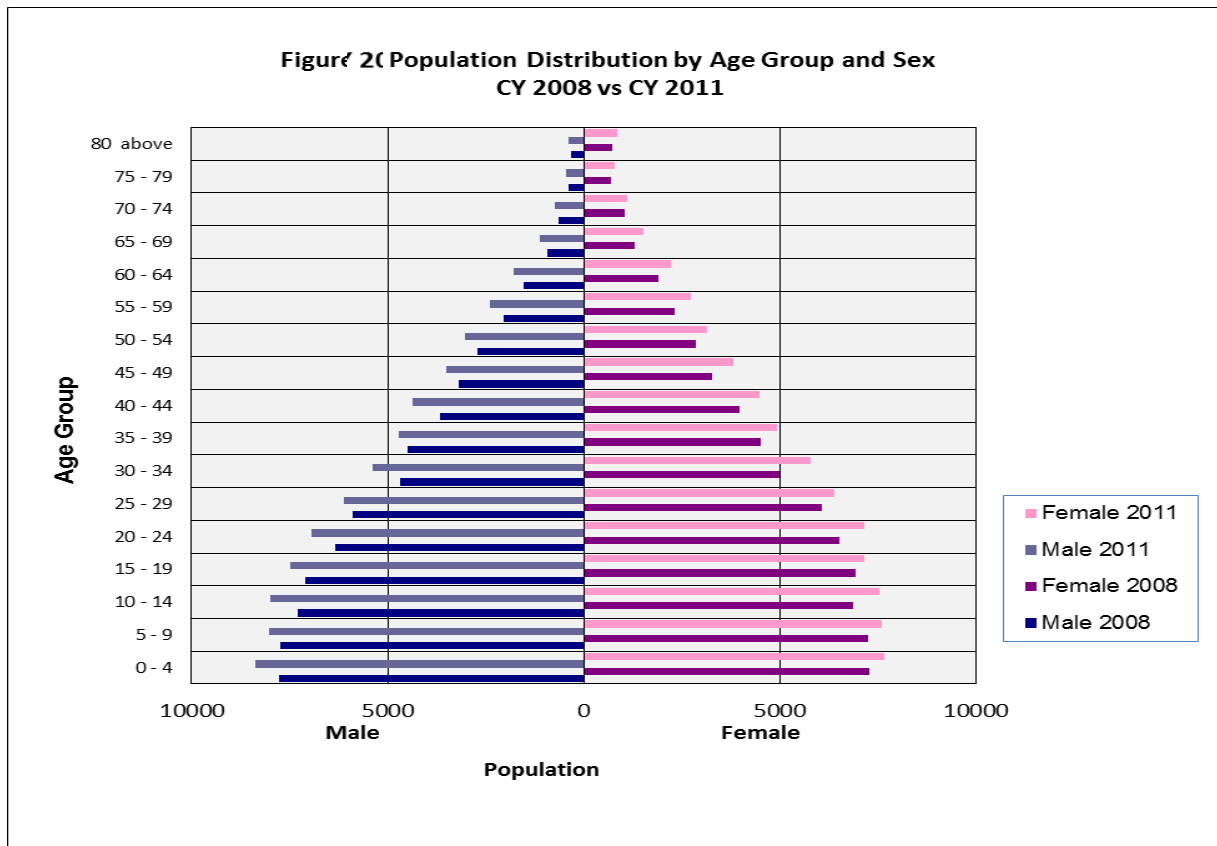
Source: CBMS Survey: 2008

	Percentage
Young Dependency Ratio	50.45%
Adult Dependency Ratio	7.43%
Total Dependency Ratio	57.88%

Source: CBMS Survey: 2011

Table 3.4 illustrates the 2008 and 2011 dependency ratios in Tanauan City. Dependency ratio is a measure of the portion of a population which is composed of dependents (aged 0-14 and over the age of 65). Based on the above figures, there is not much difference in the dependency ratios in young and adult in 2008 and 2011. A slight decrease in the percentage of the total dependency ratio from 59.13% in year 2008 to 57.88% in year 2011 was recorded. Still the total percentage denotes higher dependency ratio particularly on the part of the young population. This could mean that there are many people in the city who are too young or too old to work and dependent to those who earn for their living.

3.2.3 Labor Force and Employment



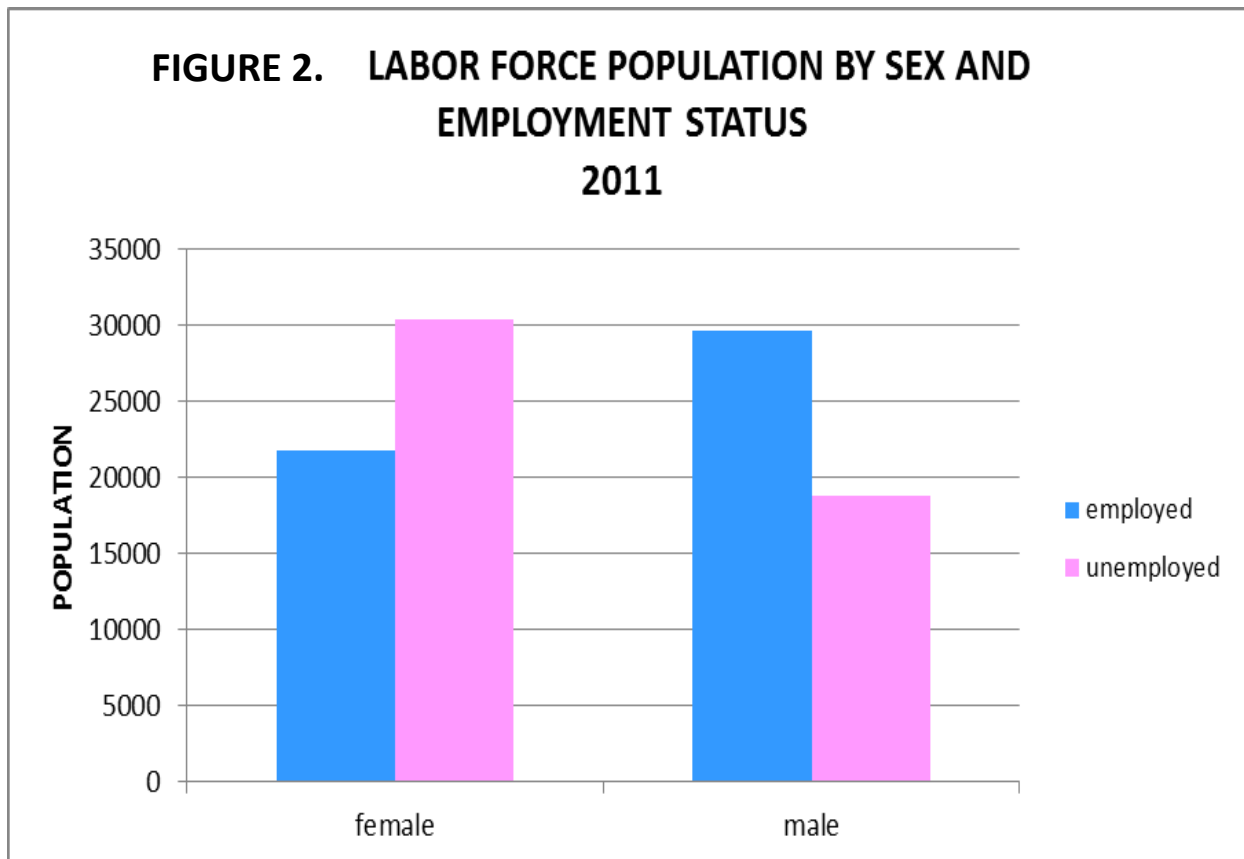
The total labor force or the economically active population (15 yrs. old and over) in the city was computed at 100,500 in 2011 or 68.05% of the total population. Table 3.5 shows that there are more employed males (29,634) than females (21,728) in 2011

CBMS survey. Subsequently, the number reveals that there are more unemployed females (30,381 or 58.3%) than males (18,757 or 38.8%).

Table 3.5. Labor Force Population by Sex and Employment Status, 2011

Sex	Tanauan City				
	Population	Employed	%	Unemployed	%
Female	52109	21728	41.7	30381	58.3
Male	48391	29634	61.2	18757	38.8
Both Sexes	100500	51362	51.1	49138	48.9

Table 3.5 and Figure 2 present the comparative data of employed and unemployed by sex in the city during 2011 CBMS survey. It shows that there are more employed (51,362 or 51.1%) than unemployed (49,138 or 48.9%).



Source: CBMS, 2011

Table 3.6. Unemployed 15 yrs and over by age group and highest education

								BOTH SEXES							
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80 and above	Total
Total	12,664	6,878	4,400	3,741	2,967	2,691	2,603	2,547	2,486	2,511	1,914	1,461	1,097	1,170	49,130
No Grade	101	64	43	25	31	29	42	31	35	45	54	40	56	95	691
Day Care	4	2	1	2	1	0	0	0	0	3	0	3	1	5	22
Nurser/Kind er /Prep	14	7	4	3	2	1	1	0	0	2	2	0	0	1	37
Grade 1	48	24	16	8	11	14	8	12	14	28	40	29	53	86	391
Grade 2	77	18	19	18	14	7	15	23	34	54	55	68	87	135	624
Grade 3	77	32	20	18	20	17	24	25	44	78	92	120	122	136	825
Grade 4	133	43	33	20	21	25	41	55	88	181	184	181	126	189	1320
Grade 5	224	69	34	43	26	29	38	54	69	101	109	83	74	78	1031
Grade 6/7	129	72	51	59	47	51	94	109	139	170	157	135	81	71	1365
Elementary Graduate	529	212	160	171	186	233	286	438	504	611	471	386	236	191	4614
1st Year HS	895	172	74	64	50	48	54	57	39	27	25	18	14	7	1544
2nd Year	1,894	248	128	114	85	82	73	71	69	54	44	19	19	18	2918
3rd Year HS	2,242	256	132	90	82	89	55	66	51	36	28	14	9	4	3154
4th/5th Year HS	268	90	81	56	43	37	26	23	24	20	10	6	6	1	691
HS graduate	3,271	2,526	2,119	1,867	1,502	1,285	1,063	918	790	549	272	159	101	75	16497
1st year PS	151	92	40	25	22	16	19	20	10	10	5	2	1	0	413

2nd year PS	115	165	111	102	82	57	62	50	40	20	4	8	4	2	822
3rd year PS	28	34	21	19	15	12	14	11	7	6	5	3	0	3	178
PS graduate	56	137	96	98	75	59	45	33	40	19	9	3	8	3	681
1st year College	1,244	398	169	98	63	65	53	45	47	27	21	5	2	4	2241
2nd year College	787	578	274	203	148	123	142	139	97	77	41	12	8	3	2632
3rd year College	290	635	144	83	66	77	96	69	73	37	19	11	7	5	1612
4th year College or higher	20	134	69	75	58	56	59	50	33	43	23	17	9	7	653
College graduate	66	866	551	471	311	273	287	244	234	301	233	135	70	48	4090
With units Masters	1	4	3	4	4	1	3	0	3	3	1	1	2	1	31
Doctors/Master's degree	0	0	7	5	2	5	3	4	2	9	10	3	1	2	53

Source: CBMS, 2011

Based on the above table, the highest number of unemployed (15 years and over) belongs to age group 15 – 19 with a total of 12,664 followed by age group belonging to 20-24 with a total of 6,878. Whereas, age group 75 – 79 has the lowest number of unemployed members with 1,097. It could also be seen from the table that there are 53 doctor's/master's degree holders who are unemployed.

3.2.4 School Age Population

Table 3.7. Population by Composition by School-Age, Working-Age, Dependent-Age Group and Sex, Year 2011

Age-Group	Both Sexes (2011)	Male		Female		Sex Ratio
		No.	Percentage	No.	Percentage	
Pre-School (3-6)	12,707	6,567	51.68	6,140	48.32	106.95
Elementary (7-12)	18,791	9,602	51.10	9,189	48.90	104.49
Secondary (13-16)	11,776	6,048	51.36	5,728	48.64	105.59
Tertiary (17-21)	14,823	7,479	50.46	7,344	49.54	101.84
Working Age (15-64)	93,550	45,743	48.90	47,807	51.10	95.68
Labor Force (15 years and over)	100,500	48,391	48.15	52,109	51.85	92.86
Young dependent (0-14)	47,196	24,375	51.65	22,821	48.35	106.81
Old Dependent (65 and over)	6,950	2,648	38.10	4,302	61.90	61.55

The population by composition, by school-age, working age, and dependent-age group, by sex is presented on Table 3.9. The School going population aged 3 – 21 years old, comprising of Pre-School (3-6), Elementary (7-12), Secondary (13-16) and tertiary (17-21), has a total of 58,097. Pre-School population constitutes 12,707 or 21.87% of the total school-age population. Elementary level pupils are about 18,791 or 32.34% of the total school-age population and Secondary level or high school students are 11,776 or 20.27% of the total. Tertiary level or college students constitute 14,823 or 25.51% of the total school-age population.

Productive or working age population aged 15 – 64 years old is 93,550 or 63.34% of the total population. Males account for 48.90% while females account for 51.10%. As to Labor Force with ages 15 years old and over constitute about 100,500 or 68% of the total population with 48.15% males and 51.85% females.

3.3 Population Distribution

The total resident population of Tanauan based on Community-Based Monitoring System (CBMS) Survey in 2011 is 147,696. This is distributed to the 9 urban barangays and 39 rural barangays. The urban area has a total population of 38,312 while the rural barangays has 109,384

3.3.1 Total Population by Barangay

Of the total resident population, 38,312 reside in the urban barangays while 109,384 are residents of the rural barangays. Aside from the Poblacion barangays, among the thickly populated barangays are Darasa, Balele and Trapiche because of their proximity to the central business district and the presence of existing residential subdivisions. The least populated barangay is Santol with a total population of 457 only.

There are 32,472 total households in Tanauan City. Of this figure, 8,316 are urban households and 24,156 are rural households. The average household size in urban is 4.66 and 4.56 in rural.

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Table 3.8. Total Population and Households by Barangay, 2011

Barangay	Total Resident Population	Rank	Number of Households	Rank
CITY OF TANAUAN	147,696		32,472	
Altura Bata	1298	41	262	42
Altura Matanda	526	47	118	47
Altura-South	1022	46	160	46
Ambulong	5984	4	1323	4
Banadero	3023	20	676	20
Bagbag	2843	23	663	21
Bagumbayan	4899	7		7
Balele	7185	2	1556	2
Banjo East	2321	26	517	29
Banjo West	2280	28	541	26
Bilog-bilog	4247	11	931	11
Boot	4968	5	1046	6
Cale	3386	17	731	18
Darasa	14810	1	3272	1
Pagaspas	2988	21	598	25
Gonzales	1701	35	380	32
Hidalgo	1014	45	191	45
Janopol Occidental	2155	30	452	30
Janopol Oriental	2908	22	638	22
Laurel	1332	40	288	40
Luyos	1416	38	296	38
Mabini	2308	27	518	27
Malaking Pulo	3561	16	824	16
Maria Paz	2415	25	520	25
Maugat	1863	32	368	35
Montaña	1661	36	364	36
Natatas	4258	10	1014	8
Pantay Matanda	4151	12	870	13
Pantay Bata	2460	24	601	24
Poblacion 1	2017	31	426	31
Poblacion 2	1375	39	282	40
Poblacion 3	4104	13	937	10
Poblacion 4	4425	8	832	14
Poblacion 5	1291	42	273	41
Poblacion 6	3344	18	803	16
Poblacion 7	3728	15	762	17
Sala	1828	34	416	32
Sambat	3218	19	729	19
San Jose	1055	44	236	44
Santol	457	48	100	48
Santor	3857	14	881	12

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Sulpoc	1850	33	414	33
Suplang	1216	43	249	43
Talaga	4361	9	981	9
Tinurik	4934	6	1075	5
Trapiche	6296	3	1410	3
Ulango	2215	29	614	23
Wawa	1435	37	312	37

Source: CBMS 2011

Table 3.9 below displays the total number of households, population by sex by barangay. Barangay Darasa has the highest number of households with 3,272 followed by Balele (1,556) and Trapiche (1,410). Of the 147, 696 total population, Barangay Darasa has the highest population which is 14,810 while Barangay Santol has the lowest population which is 457.

Table 3.9 Total Number of Households, Population by Sex

Barangays	Total Numbers of Household	Population	Male	Female
Altura Matanda	262	1298	614	
Altura-South	118	526	260	684
Ambulong	160	729	358	266
Banadero	1323	5984	2934	371
Bagbag	676	3023	1503	3050
Bagumbayan	663	2843	1385	1520
Balele	1022	4899	2430	1458
Banjo East	1556	7185	3600	2469
Banjo West	517	2321	1157	3585
Bilog-bilog	541	2280	1172	1164
Boot	931	4247	2056	1108
Cale	1046	4968	2500	2191
Darasa	731	3386	1695	2468
Pagaspas	3272	14810	7244	1691
Gonzales	598	2988	1472	7566
Hidalgo	380	1701	850	1516
Janopol Occidental	191	1014	531	851
Janopol Oriental	452	2155	1039	483
Laurel	638	2908	1439	1116
Luyos	288	1332	657	1469
Mabini	296	1416	695	675
Malaking Pulo	518	2308	1159	721

Maria Paz	520	2415	1206	1149
Montaña	364	1661	782	1209
Natatas	1014	4258	2027	879
Pantay Matanda	870	4151	2113	2231
Pantay Bata	601	2460	1267	2038
Poblacion 1	426	2017	1006	1193
Poblacion 2	282	1375	620	1011
Poblacion 3	937	4104	2003	755
Poblacion 4	832	4425	2232	2101
Poblacion 5	273	1291	617	2193
Poblacion 6	803	3344	1641	674
Poblacion 7	762	3728	1794	1703
Sala	416	1828	914	1934
Sambat	729	3218	1585	914
San Jose	236	1055	535	1633
Santol	100	457	219	520
Santor	881	3857	1826	238
Sulpoc	414	1850	901	2031
Suplang	249	1216	608	949
Talaga	981	4361	2165	608
Tinurik	1075	4934	2372	2196
Trapiche	1410	6296	3116	2562
Ulango	614	2215	1113	3180
Wawa	312	1435	721	1102
Total	32,472	147,696	72,766	74,930

Source: CBMS 2011

3.4 Urban-Rural Household Population by Barangay

Table 3.10. Urban and Rural Total Population

3.4.1 Households and Average Household Size, 2011

Barangay	Population	No. of Household	Average Household Size
Urban			
Darasa	14,810	3274	5.00
Poblacion 1	2,017	427	5.00
Poblacion 2	1,375	282	5.00
Poblacion 3	4,104	937	4.00
Poblacion 4	4,425	832	5.00
Poblacion 5	1,291	276	5.00
Poblacion 6	3,344	803	4.00

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Poblacion 7	3,728	762	5.00
Sambat	3,218	729	4.00
Sub-Total	38,312	8,316	4.66
Rural			
Altura Bata	1,298	262	5.00
Altura Matanda	526	118	4.00
Altura South	729	160	5.00
Ambulong	5,984	1331	5.00
Bagbag	2,843	665	4.00
Bagumbayan	4,899	1022	5.00
Balele	7,185	1557	5.00
Bañadero	3,023	676	4.00
Banjo East	2,321	517	4.00
Banjo West	2,280	541	4.00
Bilog-bilog	4,247	934	5.00
Boot	4,968	1048	5.00
Cale	3,386	734	5.00
Gonzales	1,701	381	4.00
Hidalgo	1,014	191	5.00
Janopol Occidental	2,155	456	5.00
Janopol Oriental	2,908	638	5.00
Laurel	1,332	288	5.00
Luyos	1,416	296	5.00
Mabini	2,308	518	4.00
Malaking Pulo	3,561	824	4.00
Maria Paz	2,415	520	5.00
Maugat	1,863	369	5.00
Montaña	1,661	365	5.00
Natatas	4,258	1014	4.00
Pagaspas	2,988	598	5.00
Pantay Bata	2,460	602	4.00
Pantay Matanda	4,151	870	5.00
Sala	1,828	416	4.00
San Jose	1,055	238	4.00
Santol	457	100	5.00
Santor	3,857	881	4.00
Sulpoc	1,850	416	4.00

Suplang	1,216	249	5.00
Talaga	4,361	981	4.00
Tinurik	4,934	1075	5.00
Trapiche	6,296	1411	4.00
Ulango	2,215	614	4.00
Wawa	1,435	315	5.00
Sub-Total	109,384	24,156	4.56
Total	147,696	32,472	4.61

Source: CBMS, 2011

3.5 Urbanization Level

Table 3.11 Urbanization Level

YEAR	City Population			Averaged Yearly Population Growth Rate (%)		Level of Urbanization (%)		AVERAGED YEARLY TEMPO OF URBANIZATION (%)	
	URBAN	RURAL	TOTAL	URBAN	RURAL	CITY	PROVINCIAL	CITY	PROVINCIAL
2005									
2008	72,382	62,855	135,237						
2011	38,312	109,384	147,696	3.84	2.69	25.94	47	0.84	1.33

Source: CPDO, Tanauan City

Based on 2011 CBMS Survey, the city's urban population reached to 38,312 which is 25.94% of the city's total population. Considering that there is a 48.12% margin between the percentage of urban and rural population, this could mean that Tanauan continuously becomes urbanized. The tempo of urbanization in the city which refers to speed of urbanization on the other hand is 0.84%.

3.6 Population Density/Residential Density

Table 3.14 demonstrates the population density by barangay in Tanauan City for year 2011. The Gross Population Density or the number of persons per unit of land area in 2008 which is 1230.882 grows to 1344.28 in 2011. As expected, Poblacion Barangays have higher population densities as compared to rural barangays. Approximately 14% of the total population lives in Poblacion 1 - 7.

In 2011, Barangay Poblacion 6 as shown in the table below, is considered to be the most densely populated with a population density of of 16,424. On the contrary, Barangay Santol had the lowest population density which is 439.

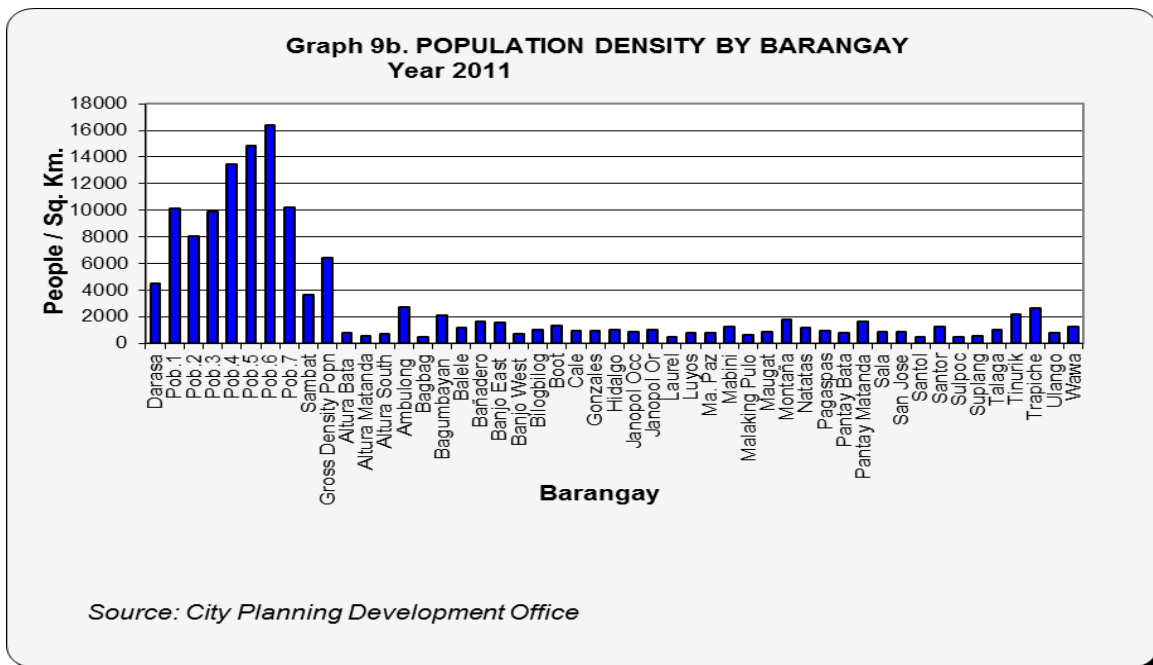
Table 3.12. Population Density by Barangay, Year: 2011

BARANGAY	POPULATION	AREA (Sq.km.)	POPULATION DENSITY
Urban			
Darasa	14,810	3.27	4,525
Pob.1	2,017	0.20	10,095
Pob.2	1,375	0.17	8,069
Pob.3	4,104	0.41	9,918
Pob.4	4,425	0.33	13,462
Pob.5	1,291	0.09	14,822
Pob.6	3,344	0.20	16,424
Pob.7	3,728	0.37	10,205
Sambat	3,218	0.89	3,623
Total	38,312	5.93	6,461
Rural			
Altura Bata	1,298	1.65	788
Altura Matanda	526	1.01	521
Altura South	729	1.02	713
Ambulong	5,984	2.18	2,740
Bagbag	2,843	5.70	499
Bagumbayan	4,899	2.36	2,072
Balele	7,185	6.20	1,158
Bañadero	3,023	1.89	1,597
Banjo East	2,321	1.46	1,591
Banjo West	2,280	3.08	739
Bilogbilog	4,247	4.06	1,045
Boot	4,968	3.85	1,289
Cale	3,386	3.66	925
Gonzales	1,701	1.88	903
Hidalgo	1,014	0.97	1,042
Janopol Oriental	2,908	2.45	879
Janopol Occidental	2,155	2.90	1,003
Laurel	1,332	2.69	495
Luyos	1,416	1.83	773
Mabini	2,308	2.96	817
Malaking Pulo	3,561	1.83	1,260
Ma. Paz	2,415	5.44	655
Maugat	1,863	2.23	837
Montaña	1,661	0.94	1,765
Natatas	4,258	3.75	1,136

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Pagaspas	2,988	3.12	959
Pantay Bata	2,460	3.11	792
PantayMatanda	4,151	2.58	1,612
Sala	1,828	2.17	843
San Jose	1,055	1.27	829
Santol	457	1.04	439
Santor	3,857	3.19	1,210
Sulpoc	1,850	4.00	462
Suplang	1,216	2.30	530
Talaga	4,361	4.43	985
Trapiche	6,296	2.30	2,147
Tinurik	4,934	2.41	2,610
Ulango	2,215	2.90	764
Wawa	1,435	1.13	1,271
TOTAL	109,384	103.94	1,052

Source: CPDO, Tanauan City



3.7 Population Changes

3.7.1 Historical Population Growth

Table 3.13. Historical Growth of the Population, Tanauan City, 1903-2010

Year	Population	Increase/ Decrease	GROWTH RATE (%)			
			Municipal	Provincial	Regional	National
1903	18,263					2.87
1918	22,473	4,210	1.39	1.87*	No data	2.03
1939	26,186	3,713	0.73	1.76*	No data	2.11
1948	30,203	4,017	1.60	1.61*	No data	2.07
1960	44,975	14,772	3.37	2.44*	3.99*	2.89
1970	61,910	16,935	3.25	3.12*	2.92*	3.08
1975	66,703	4,793	1.50	2.18*	3.19*	2.78
1980	74,020	7,317	2.10	2.4	3.22	2.71
1990	92,754	18,734	2.28	2.32	2.32	2.35
1995	103,868	11,114	2.29	2.2	2.36	2.32
2000	117,539	24,785	2.50	2.58 ^a	3.91 ^a	2.34 ^a
2007	142,537	38,669	2.79	2.29 ^c	3.21 ^c	2.04 ^b
2010	152,393	9,856	2.25	2.24 ^b	3.07 ^b	1.9 ^b

Source: National Statistics Office publications and results

Note:

a – 1990 – 2000 growth rate

c – 2000 – 2007 growth rate

b – 2000 – 2010 growth rate

d – 1995 – 2000 growth rate

*as computed

The initial census in 1903 recorded a total population of 18,263. Over the years, there is an increasing trend. The highest growth rate of 3.37% was in censal year 1960 with a population of 44,975; while the lowest growth rate was in 1939 which is only 0.73% Population continued to increase and in 2010, the total population is already 152,393.

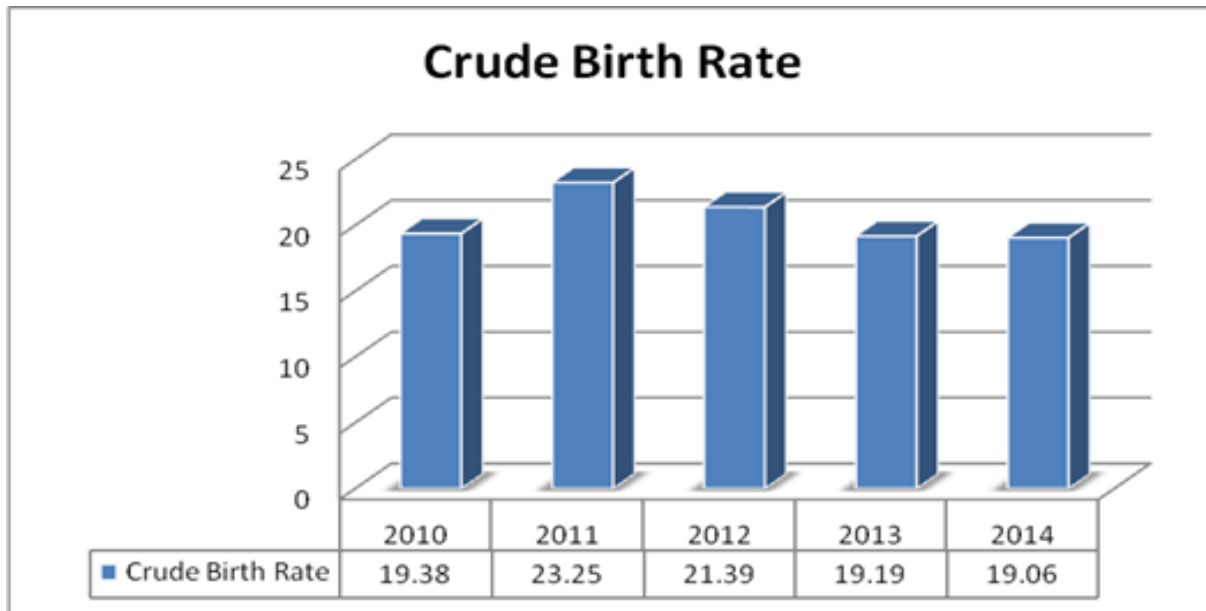
Table 3.15 shows the historical growth of the population of Tanauan City from 1903 up to 2010. The census population for the City of Tanauan in year 2010 was 152,393, reflecting a 6.47% increase from the 2007 census and an annual growth rate of 2.25 percent. This population of Tanauan constitutes 6.41 percent of the total population of Batangas Province. Table 3.15 also shows the population increases and the

corresponding increases/decreases for the various inter-censal censuses from 1903 to 2010

3.8 Fertility and Mortality

3.8.1 Crude Birth Rate

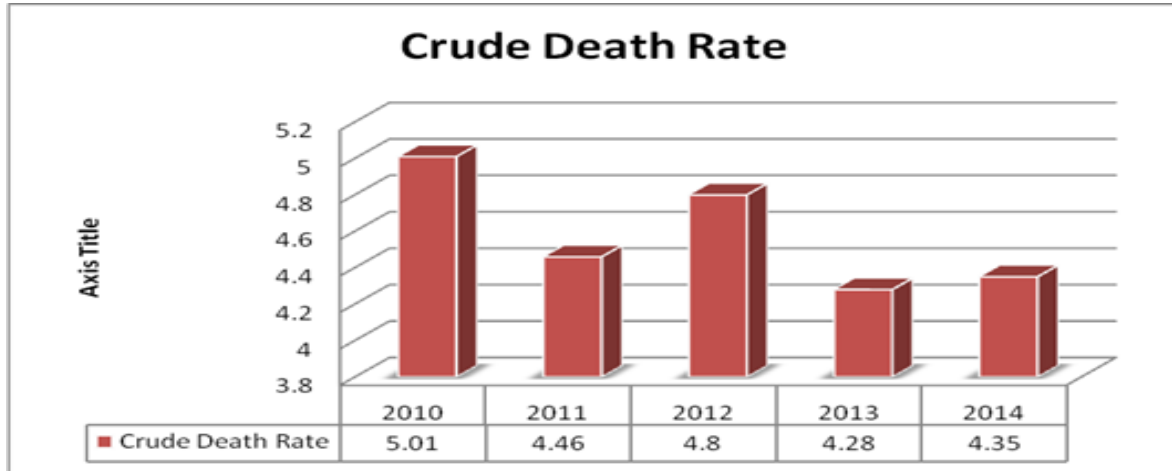
Figure 4. Crude Birth Rate



In 2014, the crude birth rate (CBR) was 19.06 births per 1,000 populations. This is slightly lower than the CBR in 2013. The total live births in 2013 were 5,410 of which 2,778 or 51.35 percent were males and 2,632 or 48.65 percent were females. As in previous years, there are a higher proportion of males born in 2014 compared to females, resulting in a birth sex ratio of 102 baby boys born for every 100 baby girls born.

3.8.2 Crude Death Rate

Figure 5. Crude Death Rate



The city has slightly increased its mortality from 2013 to 2014. A growth in the crude death rate (CDR) was noted from 1,101 deaths recorded in 2013 and 1,208 deaths in 2014.

In 2013, 626 or 56.85 percent were males and 475 or 43.14 percent were females. In 2014, 691 or 52.20 percent and 517 or 47.80 percent were females.

3.9 OTHER POPULATION CHARACTERISTICS

3.9.1 Marital Status

Table 3.14. Marital Status by Age Group

Age-Group	Total	Single	Married	Widower	Divorced / Separated	Common Law / Live-in	Unknown
10-14	15,528	15,528	0	0	0	0	0
15-19	14,636	13,833	320	11	27	441	4
20-24	14,115	9,990	2,506	22	147	1,441	9
25-29	12,509	4,945	5,820	54	203	1,479	8
30-34	11,173	2,222	7,470	82	289	1,104	6
35-39	9,625	12,34	7,209	139	254	783	6
40-44	8,842	879	6,877	223	281	576	6
45-49	7,301	661	5,619	363	246	405	7
50-54	6,202	460	4,700	532	249	258	3
55-59	5,111	444	3,625	701	161	178	2

60-64	4,036	369	2,619	839	104	99	6
65-69	2,623	227	1,542	756	46	52	0
70-74	1,841	163	943	684	25	25	1
75-79	1,240	133	484	600	11	10	2
80 and above	1,246	147	290	792	8	7	2
Total	116,028	51,235	50,024	5,798	2,051	6,858	62

Source: CBMS, 2011

Table above illustrates the marital status by age group in Tanauan City. The total household population 10 years old and over are 116,028; of which, 51,235 or 44.16% are single, 50,024 or 43.11% are married, 5,798 or 5.00% are widowed, 2,051 or 1.77% are separated/divorced, and 6,858 or 5.91% are common law/live-in. The remaining percentage is of unknown marital status.

Most singles are aged ranging 24 and below, married are aged 25 and over while most of the widowed group are aged 55 and over.

3.10 Mother Tongue/Ethnicity

Table 3.15. Members of Indigenous Tribe by sex, by Barangay

Barangay	Number of members			Members of indigenous tribe*					
				Magnitude*			Proportion**		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
CITY OF TANAUAN	147,696	72766	74930	128	64	64	0.09	0.09	0.09
Altura Bata	1298	614	684	0	0	0	0	0	0
Altura Matanda	526	260	266	0	0	0	0	0	0
Altura-South	729	358	371	0	0	0	0	0	0
Ambulong	5984	2934	3050	0	0	0	0	0	0
Banadero	3023	1503	1520	0	0	0	0	0	0
Bagbag	2843	1385	1458	0	0	0	0	0	0
Bagumbayan	4899	2430	2469	0	0	0	0	0	0
Balele	7185	3600	3585	0	0	0	0	0	0
Banjo East	2321	1157	1164	0	0	0	0	0	0
Banjo Laurel (Banjo West)	2280	1172	1108	2	2	0	0.09	0.17	0

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Bilog-bilog	4247	2056	2191	0	0	0	0	0	0
Boot	4968	2500	2468	3	2	1	0.06	0.08	0.04
Cale	3386	1695	1691	0	0	0	0	0	0
Darasa	14810	7244	7566	4	1	3	0.03	0.01	0.04
Pagaspas	2988	1472	1516	0	0	0	0	0	0
Gonzales	1701	850	851	0	0	0	0	0	0
Hidalgo	1014	531	483	0	0	0	0	0	0
Janopol	2155	1039	1116	0	0	0	0	0	0
Janopol Oriental	2908	1439	1469	0	0	0	0	0	0
Laurel	1332	657	675	0	0	0	0	0	0
Luyos	1416	695	721	3	2	1	0.21	0.29	0.14
Mabini	2308	1159	1149	0	0	0	0	0	0
Malaking Pulo	3561	1771	1790	0	0	0	0	0	0
Maria Paz	2415	1206	1209	0	0	0	0	0	0
Maugat	1863	862	1001	0	0	0	0	0	0
Montaña (Ik-ik)	1661	782	879	0	0	0	0	0	0
Natatas	4258	2027	2231	0	0	0	0	0	0
Pantay Matanda	4151	2113	2038	0	0	0	0	0	0
Pantay Bata	2460	1267	1193	0	0	0	0	0	0
Poblacion Barangay 1	2017	1006	1011	0	0	0	0	0	0
Poblacion Barangay 2	1375	620	755	0	0	0	0	0	0
Poblacion Barangay 3	4104	2003	2101	0	0	0	0	0	0
Poblacion Barangay 4	4425	2232	2193	0	0	0	0	0	0
Poblacion Barangay 5	1291	617	674	0	0	0	0	0	0
Poblacion Barangay 6	3344	1641	1703	4	3	1	0.12	0.18	0.06
Poblacion Barangay 7	3728	1794	1934	0	0	0	0	0	0
Sala	1828	914	914	1	0	1	0.05	0	0.11
Sambat	3218	1585	1633	103	50	53	3.2	3.15	3.25
San Jose	1055	535	520	0	0	0	0	0	0
Santol (Doña Jacoba Garcia)	457	219	238	0	0	0	0	0	0
Santor	3857	1826	2031	7	3	4	0.18	0.1	0.2
Sulpoc	1850	901	949	0	0	0	0	0	0
Suplang	1216	608	608	0	0	0	0	0	0
Talaga	4361	2165	2196	0	0	0	0	0	0
Tinurik	4934	2372	2562	1	1	0	0.02	0.04	0

Trapiche	6296	3116	3180	0	0	0	0	0	0
Ulango	2215	1113	1102	0	0	0	0	0	0
Wawa	1435	721	714	0	0	0	0	0	0

Source: CBMS, 2011

As shown from the table above, Barangay Sambat has the highest number of indigenous people (IP) with a total of 103. Barangay Santor ranked second with seven (7) IPs recorded. On the other hand, Barangays Darasa and Poblacion 6 both have four (4) while Boot and Luyos have three (3), Banjo West has two (2) and Sala and Tinurik have one (1). The rest has no indigenous tribes recorded in their respective barangays.

3.11 Religious Affiliation

Majority of the population, about 92.47% are Roman Catholics. Other religious affiliations of the residents are Born Again, Iglesia ni Cristo, Protestant, Aglipay, among others. The data can be gleaned on Table 3.16

Table 3.16. Religious Affiliation

RELIGIOUS AFFILIATION	NO OF PEOPLE	% OF TOTAL POPULATION
Roman Catholic	136,578	92.47%
Protestant	572	0.39%
Iglesia ni Cristo	2,004	1.36%
Aglipay	449	0.30%
Islam	807	0.55%
Born-again	4,261	2.88%
Mormons	287	0.19%
Jehova's witness	138	0.09%
7th-day Adventists	222	0.15%
Others (specify)	2,209	1.50%
None	169	0.11%
Total	147,696	100%

Source: CBMS 2011

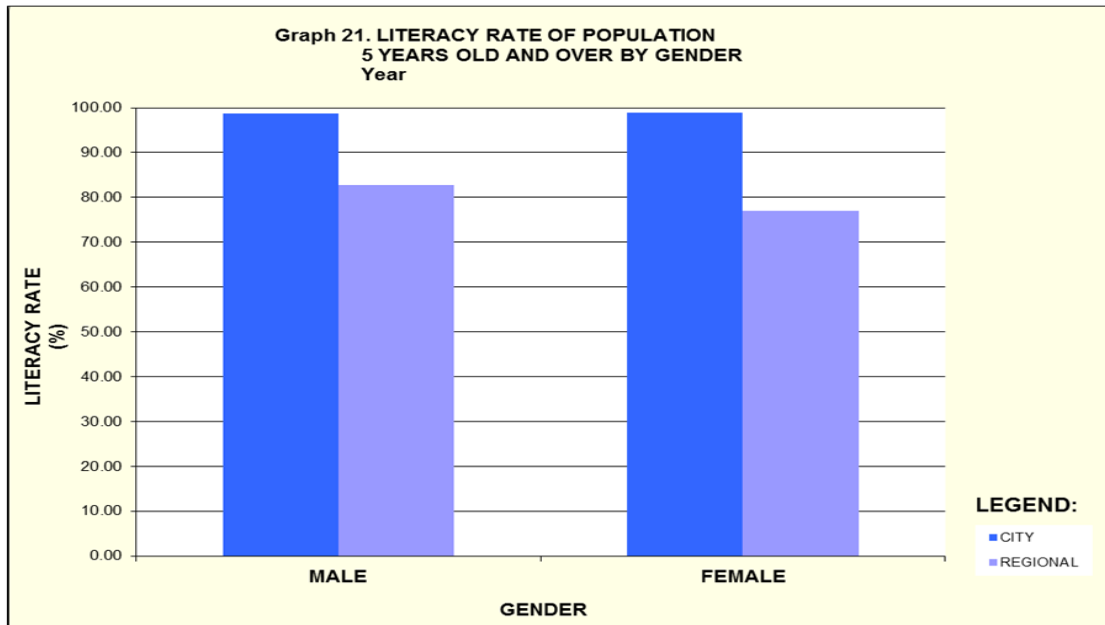
Literacy Rate

Literacy refers to the population who are able to read and write. Of the population 10 years old and over which is 116,028; 114,667 or 98.83% are literate and 1,361 or 1.17%

are illiterate. The literacy rate of male and female is almost the same as shown in the table below.

Table 3.17. Literacy Rate of Population 10 years old and above by Gender

INDICATOR	CITY						REGIONAL					
	MALE		FEMALE		BOTH SEX		MALE		FEMALE		BOTH SEX	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
Literate	55,676	98.77	58,991	98.88	114,667	98.83	123,004	83	118,342	77	241,346	80
Illiterate	692	1.23	669	1.12	1361	1.17	25,493	17	35,403	23	60,896	20
Total (Population > 10 yrs)	56,368	100	59,660	100	116,028	100	148,497	100	153,745	100	302,242	100



3.13 Other Relevant Information

Table 3.18 Overseas Workers 2008 and 2011

YEAR	TOTAL NO. OF OVERSEAS WORKERS	INCREASE / DECREASE IN NO.	INCREASE / DECREASE IN PERCENT
2008	3,491		
2011	4,519	1028	29%

Source: CBMS 2011

Based on the above table, there is 1,028 or 29 percent increase in the total number of Tanauenos who are Overseas Filipino Workers (OFWs).

Table 3.19. Overseas Filipino Workers in Tanauan City and their Top Destinations, 2011

DESTINATIONS	OFWs
Saudi Arabia	227
UAE	128
Quatar	100
Taiwan	151
Italy	39
Hongkong	29
New Caledonia	5
Kuwait	24
Algeria	6
Papua New Guinea	8
Singapore	25
Others	96
TOTAL	838

Source: SEPP of PPDO, 2012

The table above shows the top destinations of Overseas Filipino Workers (OFWs) in Tanauan City. Saudi Arabia ranked first with a total of 227 OFWs while New Caledonia got the lowest rank with only five (5) OFWs.

3.14 Population Projections and Estimates

3.14.1 Projected Population and Household

Table 3.20. Projected Population and Household per Year

YEAR	POPULATION	HOUSEHOLD*
2011	147,696	32,472
2012	152,097	33,891
2013	156,630	35,372
2014	161,297	36,918
2015	166,104	38,531
2016	171,054	40,215
2017	176,151	41,972
2018	181,401	43,807
2019	186,806	45,721
2020	192,373	47,719
2021	198,106	49,804
2022	204,010	51,981
2023	210,089	54,252
2024	216,350	56,623
2025	222,797	59,097

*Projected by the City Planning and Development Office
 Based on CBMS Data*

Table 3.20 illustrates the projected households from 2011 until 2025. It is estimated that the total population will increase from 147,696 in 2011 to 222,797 in 2025. Likewise, the households would increase from 32,472 in 2011 to 59,097 in 2025.

3.14.2 Population Projection by Barangay

Table 3.21 Projected Population by Barangay

BARANGAY	POPULATION										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2025
	(Base Year)										
Urban											
Darasa	14,810	15251	15706	16174	16656	17,152	17,663	18190	18732	19290	22,341
Pob.1	2,017	2077	2139	2203	2268	2,336	2,406	2477	2551	2627	3,043
Pob.2	1,375	1416	1458	1502	1546	1,592	1,640	1689	1739	1791	2,074
Pob.3	4,104	4226	4352	4482	4615	4,753	4,895	5041	5191	5345	6,191
Pob.4	4,425	4557	4693	4832	4977	5,125	5,278	5435	5597	5764	6,675
Pob.5	1,291	1329	1369	1410	1452	1,495	1,540	1586	1633	1682	1,947
Pob.6	3,344	3444	3546	3652	3761	3,873	3,988	4107	4229	4356	5,044
Pob.7	3,728	3839	3954	4071	4193	4,318	4,446	4579	4715	4856	5,624
Sambat	3,218	3314	3413	3514	3619	3,727	3,838	3952	4070	4191	4,854
Sub-Total	38,312	39454	40629	41840	43087	44371	45,693	47055	48457	49901	57793
BARANGAY	POPULATION										
Rural	2011 (Base Year)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2025
Altura Bata	1298	1337	1377	1418	1460	1503	1548	1594	1642	1691	1958
Altura Matanda	526	542	558	574	592	609	627	646	665	685	793
Altura South	729	751	773	796	820	844	869	895	922	950	1100
Ambulong	5984	6162	6346	6535	6730	6930	7137	7350	7569	7794	9027
Bagbag	2843	2928	3015	3105	3197	3293	3391	3492	3596	3703	4289
Bagumbayan	4899	5045	5195	5350	5510	5674	5843	6017	6196	6381	7390
Balele	7185	7399	7620	7847	8080	8321	8569	8825	9088	9358	10838
Bañadero	3023	3113	3206	3301	3400	3501	3605	3713	3823	3937	4560
Banjo East	2321	2390	2461	2535	2610	2688	2768	2851	2936	3023	3501
Banjo West	2280	2348	2418	2490	2564	2641	2719	2800	2884	2970	3439
Bilogbilog	4247	4374	4504	4638	4776	4919	5065	5216	5372	5532	6407
Boot	4968	5116	5269	5425	5587	5754	5925	6102	6284	6471	7494
Cale	3386	3487	3591	3698	3808	3921	4038	4159	4283	4410	5108
Gonzales	1701	1752	1804	1858	1913	1970	2029	2089	2151	2216	2566

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Hidalgo	1014	1044	1075	1107	1140	1174	1209	1245	1283	1321	1530
Janopol Occidental	2155	2219	2285	2353	2424	2496	2570	2647	2726	2807	3251
Janopol Oriental	2908	2995	3084	3176	3270	3368	3468	3572	3678	3788	4387
Laurel	1332	1372	1413	1455	1498	1543	1589	1636	1685	1735	2009
Luyos	1416	1458	1502	1546	1592	1640	1689	1739	1791	1844	2136
Ma. Paz	2415	2487	2561	2637	2716	2797	2880	2966	3054	3146	3643
Mabini	2308	2377	2448	2521	2596	2673	2753	2835	2919	3006	3482
Malaking Pulo	3561	3667	3776	3889	4005	4124	4247	4374	4504	4638	5372
Maugat	1863	1919	1976	2035	2095	2158	2222	2288	2356	2427	2810
Montaña	1661	1710	1761	1814	1868	1924	1981	2040	2101	2163	2506
Natatas	4258	4385	4516	4650	4789	4931	5078	5230	5386	5546	6423
Pagaspas	2988	3077	3169	3263	3360	3461	3564	3670	3779	3892	4507
Pantay Bata	2460	2533	2609	2687	2767	2849	2934	3021	3111	3204	3711
Pantay Matanda	4151	4275	4402	4533	4668	4807	4951	5098	5250	5407	6262
Sala	1828	1882	1939	1996	2056	2117	2180	2245	2312	2381	2758
San Jose	1055	1086	1119	1152	1186	1222	1258	1296	1334	1374	1591
Santol	457	471	485	499	514	529	545	561	578	595	689
Santor	3857	3972	4090	4212	4338	4467	4600	4737	4878	5024	5818
Sulpoc	1850	1905	1962	2020	2081	2143	2206	2272	2340	2410	2791
Suplang	1216	1252	1290	1328	1368	1408	1450	1493	1538	1584	1834
Talaga	4361	4491	4625	4763	4905	5051	5201	5356	5516	5680	6578
Tinurik	4934	5081	5232	5388	5549	5714	5885	6060	6241	6427	7443
Trapiche	6296	6484	6677	6876	7081	7292	7509	7733	7963	8200	9497
Ulango	2215	2281	2349	2419	2491	2565	2642	2720	2802	2885	3341
Wawa	1435	1478	1522	1567	1614	1662	1711	1762	1815	1869	2165
Sub-Total	109,384	112,643	116,001	119,457	123,017	126,683	130,458	134,346	138,349	142,472	165,004
Total	147,696	152,097	156,630	161,297	166,104	171,054	176,151	181,401	186,806	192,373	222,797

Projected by the City Planning and Development Office

Based on CBMS Data

The above table describes the projected population by barangay. By 2025, the total population is expected to increase to 222,797 from 147,696 in 2011. From 38,312 population in 2011, the urban population is projected to increase to 57,793 by year 2025. The rural population on the other hand, is expected to rise to 165,004 in 2025 from 109,384 in 2011.

3.15.3 Projected School-Age, Labor Force, and Dependent Population

Table 3.22. Projected School-Age Population, Labor Force, and Dependent Population

Grouping	2011	Participation Rate	2014	2017	2020	2023	2026
Population	147,696		161,297	176,151	192,373	210,089	235,544
School going population	16,761	0.11	18,304	19,990	21,831	23,842	26,730
Pre-school	12,667	0.09	13,833	15,107	16,499	18,018	20,201
Elementary	18,688	0.13	20,409	22,288	24,341	26,583	29,803
Secondary	12,065	0.08	13,176	14,389	15,715	17,162	19,241
Tertiary	14,428	0.10	15,757	17,208	18,792	20,523	23,010
Labor Force	100,500	0.68	109,755	119,862	130,901	142,955	160,276
Dependent	22,448	0.15	24,515	26,773	29,238	31,931	35,800
Young	47,196	0.32	51,542	56,289	61,472	67,134	75,268
Old (65 and over)	6,950	0.05	7,590	8,289	9,052	9,886	11,084

Source: Computed based on CMBS Data

Notes:

PR = Population of grouping / Total population

Projection per year = PR x projected total population

Table 3.22 presents the projected school-age population, labor force and dependent population. School going population is expected to increase by more or less 10,000 from 16,761 populations in 2011 to 26,730 by 2026. While the labor force is expected to reach a total of 160,276 populations in 2026 from 100,500 in 2011. Moreover, dependent population is estimated to have a total of 35,800 populations by 2026 from 22,448 in 2011.

3.15.4 Projected Population by Age Group

Table 3.23. Projected Population by Age Group

BARANGAY	Projected Population						
	2011	Participation Rate (PR)	2014	2017	2020	2023	2026
TOTAL	147,696	1	161,297	176,151	192,373	210,089	235,544
Urban							
0 – 4	16,050	0.11	17,528	19,142	20,905	22,830	25,596
5 – 9	15,618	0.11	17,056	18,627	20,342		24,907
10 – 14	15,528	0.11	16,958	18,520	20,225	22,088	24,764
15 – 19	14,636	0.10	15,984	17,456	19,063	20,819	23,341
20 – 24	14,1xx15	0.10	15,415	16,834	18,385	20,078	22,510
25 – 29	12,509	0.08	13,661	14,919	16,293	17,793	19,949
30 – 34	11,173	0.08	12,202	13,326	14,553	15,893	17,819

35 – 39	9,625	0.07	10,511	11,479	12,536	13,691	15,350
40 – 44	8,842	0.06	9,656	10,545	11,517	12,577	14,101
45 – 49	7,301	0.05	7,973	8,708	9,510	10,385	11,644
50 – 54	6,202	0.04	6,773	7,397	8,078	8,822	9,891
55 – 59	5,111	0.03	5,582	6,096	6,657	7,270	8,151
60 – 64	4,036	0.03	4,408	4,814	5,257	5,741	6,437
65 – 69	2,623	0.02	2,865	3,128	3,416	3,731	4,183
70 – 74	1,841	0.01	2,011	2,196	2,398	2,619	2,936
75 – 79	1,240	0.01	1,354	1,479	1,615	1,764	1,978
80 and above	1,246	0.01	1,361	1,486	1,623	1,772	1,987

Projected by the City Planning and Development Office Based on CBMS Data

Based on the above table, the age group belonging to 0 – 4 has the highest projected population from 16,050 in 2011 to 25,596 in year 2026. Whereas, the age group belonging to 75 – 79 has the lowest projected population of 1,978 in 2026 from 1,240 in 2011

3.16 ANALYSIS MATRIX

Technical Findings, Issues and Concerns	Implications / Effects	Policy Intervention
<p>Increasing population specifically in Poblacion Areas</p> <p>Increasing population density in Poblacion Barangays</p>	<p>Crowded Poblacion and city proper areas</p> <p>Traffic congestion</p> <p>Pollution</p> <p>Health and sanitation problems</p>	<p>Decongest the Poblacion Barangays and City Proper by developing Central Business Districts in rural areas in order to encourage the populace to transfer to rural areas.</p> <p>Monitor the influx of migrants in the city</p> <p>Develop low-cost housing projects in rural areas</p>
<p>Large number of unemployed females (58.3%)</p>	<p>Low household income which resulted to increased poverty incidence</p>	<p>Create employment opportunities for women</p> <p>Implement GAD programs and projects</p>
<p>Large number of unemployed (49,138)</p>	<p>Increased number of households with income below poverty and food thresholds</p> <p>High dependency to government</p> <p>Increased crime incidence</p>	<p>Create partnership/tie-up with Tanauan City College and locators of First Philippine Industrial Park (FPIP) for the appropriate courses/skills required by the companies</p> <p>Conduct of job fairs</p> <p>Provide livelihood trainings/seminars</p>

<p>High percentage of dependency ratio of young and adult population</p>	<p>High dependency to government</p> <p>Increased numbers of households with income below poverty and food thresholds</p>	<p>Conduct of job fairs</p> <p>Provide livelihood trainings/seminars</p>
<p>Increasing number of Overseas Filipinos and migrants</p>	<p>Reduced in population</p> <p>Increased OFs related problems (broken families, human and drug trafficking, children in conflict with law, etc.)</p>	<p>Establishment of Migration Resource Center</p>

Chapter 4

SOCIAL SECTOR

4.1 Education

4.1.1 Education Sector – Elementary and Secondary

The Division of Tanauan is a newly created city division in Region IV-A CALABARZON by virtue of Article 8 Sec.49 of Republic Act 9005 which states the establishment and maintenance of a school division of the City of Tanauan with Dr. Elenita B. Bathan as the first designated Officer-in-Charge. On March 5, 2003, DepEd Tanauan City became an interim city division of Batangas Province composed of 40 complete elementary schools, 4 primary schools and 12 secondary schools in the public sector whereas there are 34 accounted private elementary levels and thirteen (13) schools that caters the secondary level.

Since then, Tanauan City just like other school divisions has been working for improvement both in physical and personnel development, much more on its academic performance which is still far from the desired level of the national standards. Presently, the Deped of the Tanauan Division is under the supervision of Ms. Edna F. Agustin.

Various initiatives are drawn to attain its goals and objectives.

Its well-defined goal

and objective statements, programs for enhancement of managerial, supervisory and



Figure 4.1 Division of Tanauan Ciity Building, 2016

Source: CPDO

teaching skills, improvement of school facilities, provision of textbooks and instructional materials are given focus. Strategies and action personnel are identified to address these urgent needs and all efforts are put up pursuing quality education and aspiring for achieving a culture of excellence by the year 2016. Below are some of the primary focuses of the division in pursuing the long cherished vision of excellence, with the view of producing globally competitive graduates through accessible quality basic education and alternative learning systems, adequate and relevant educational services with the collaborative efforts of a transformational and inspiring Schools Division Superintendent and her equally dedicated and committed staff, pro-active school managers, competent teachers and highly supportive stakeholders.

4.1.2 Enrolment in The Elementary and Secondary

Table 4.1 Historical Data of enrolment in the Preparatory Elementary and Secondary Level

Level	2010	2011	2012	2013	2014
Preparatory	4,374	4,084	3,722	3,963	4,108
Elementary	23,357	22,555	24,176	26,532	28,081
Secondary	13,296	13,703	13,724	14,104	14,008

Source: Master list of Private Elementary and Secondary Schools

Enrolment History in the Preparatory Level

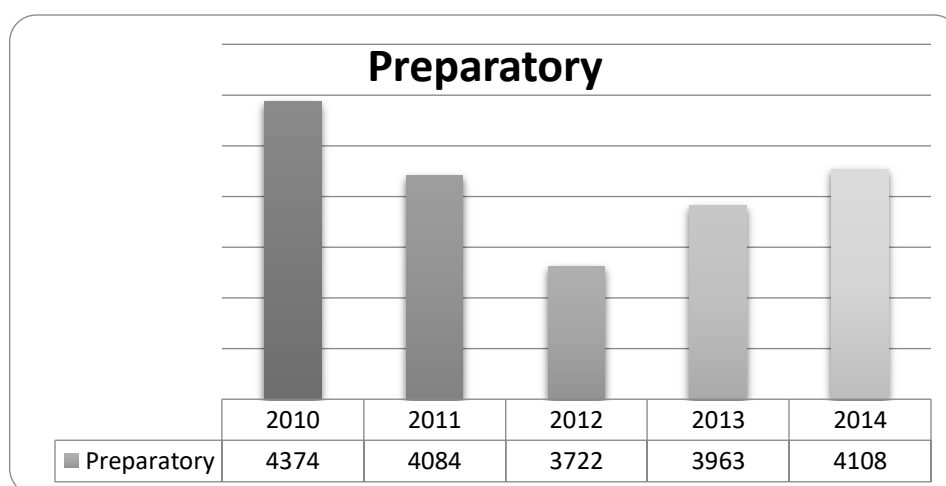


Figure 4.2 Enrollment History, Preparatory Level, Year 2010 to 2014

Source: Planning Division, DepEd Tanauan

Enrolment History in the Elementary Level

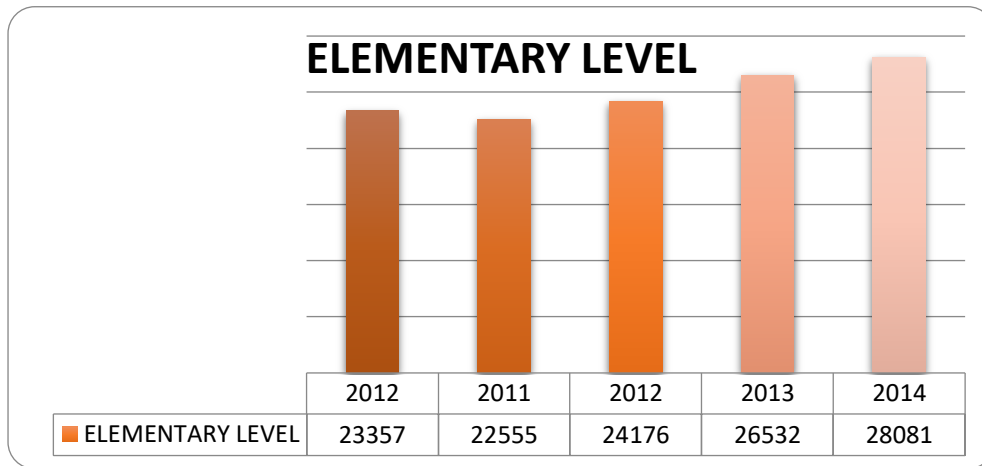


Figure 4.3 Enrollment History Elementary Level, Year 2012 to 2014

Source: Planning Division, DepEd Tanauan

Enrolment History in the Secondary Level

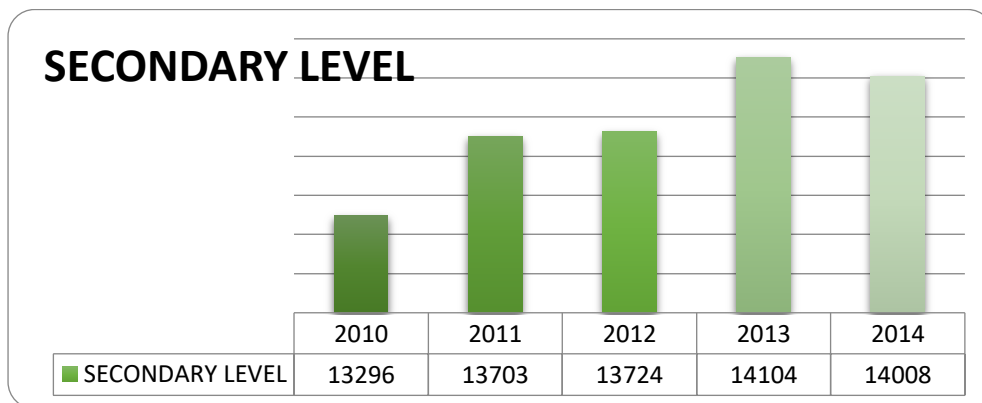


Figure 4.4 Enrollment History in the Secondary Level, Year 2010 to 2014

Source: Planning Division, DepEd Tanauan

The graphs above illustrate an increasing pattern of students' enrolment which will serve as physical basis to determine the need for more teachers, classrooms, facilities and other educational resources.

4.1.3 NATIONAL ACHIEVEMENT TEST (NAT) is a Philippine made standardized test designed to determine the student's achievement level, strengths and weaknesses. Evidently, the students in Tanauan are very much in the proper perspective of what is being taught to them in school.

Table 4.2 Historical data on National Achievement Test Results of Tanauan Students

Indicator	SY 2011-2012	SY 2012-2013	SY 2013-2014
NAT – Elem.	73.71	81.61	78.14
Indicator	SY 2011-2012	SY 2012-2013	SY 2013-2014
NAT – Sec.	50.42	60.18	59.29

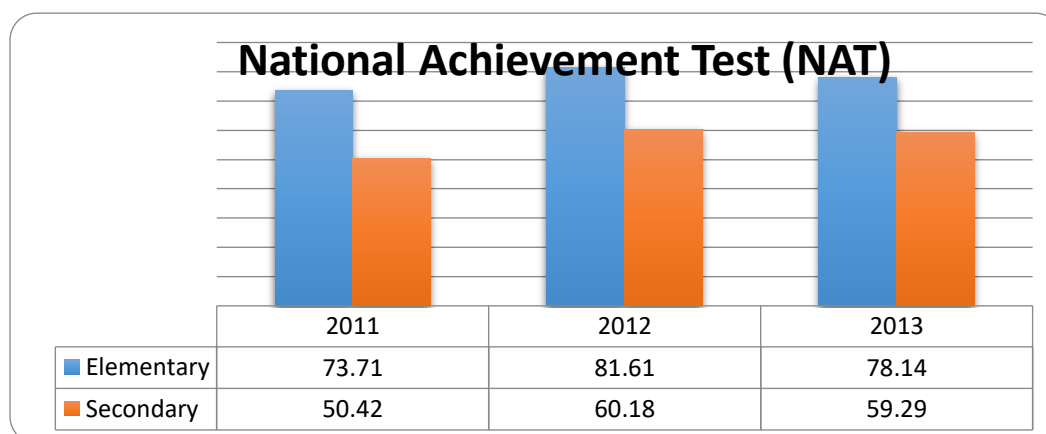


Figure 4.5 Passing Percentage in the National Achievement Test of the students in Tanauan

Source: National Education Testing and Research Center (NETRC)

4.1.4 Student to Classroom ratio

Elementary

2010-2011	2011-2012	2012-2013	2013-2014
1:33	1:35	1:31	1:31

Secondary

2010-2011	2011-2012	2012-2013	2013-2014
1:46	1:51	1:51	1:43

The above data reveals a pattern of increasing student: classroom ratio, thus, there is a need for more additional classrooms to lessen big class size particularly in the secondary level which is deemed important.

4.1.5 Teacher to Student Ratio

The teacher to student ratio is 1:43 in the elementary and 1:37 in the secondary.

4.1.6 Enrolment Percentage

The enrolment percentage of school-going population is the total enrolment in a specific level of education, regardless of age, expressed as a percentage of the eligible official school-age population corresponding to the same level of education in a given school year.

In the elementary the enrolment percentage is 90.80 while 83.68 in the secondary. The Net Enrolment Ratio (NER) in primary education is the ratio of the number of children of official primary school age who are enrolled in primary education to the total population of children of official primary school age, expressed as a percentage. Figures are based on the Basic Education Information System of the DepEd. The Net Enrolment Ratio is still low especially in the high school.

Elementary

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
80.25	82.64%	85.46%	105.19%	102.04%

Secondary

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
52.97	60.58%	61.10%	88%	91.56%

4.1.7 Drop Out Rate

Elementary

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
0.10	0.00	0.01	.35	0.00

Secondary

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
2.81	0.93	1.02	1.25	1.33

Data shows that there are still considerable number of dropouts especially in the high school level and need to be addressed further in order to achieve the Education for All (EFA) goals and objectives.

School Leaver Rate is the EFA measure for dropout rate. It covers both pupils/students who do not finish a particular grade/year level as well as those who finish but fail to enroll in the next grade/year level the following school year. It is theoretically more comprehensive than Simple Dropout Rate but becomes unreliable in areas with substantial migration. Care should be exercised in using this indicator at the level of the Division, Municipal and Legislative Districts. The system does not allow use of School Leaver Rate at the school level where it is very likely to result in a misleading measure of dropout rate.

Elementary

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
7.37	8.22	4.06	4.30	.02

Secondary

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
9.14	8.43	21.85	5.90	6.59

The school leaver percentage decreased both in the elementary and high school which is a clear proof that the education in city is effectively being given emphasis and importance.

4.1.8 Highest Educational Attainment

Table 4.3 Highest Educational Attainment in Tanauan

Highest Educational Attainment	Both Sexes		Male		Female	
	No.	%	No.	%	No.	%
No grade completed	7929	8.10	4205	4.29	3724	3.80
Pre-school	187	0.19	98	0.10	89	0.09
Elementary						
1st to 4th grade	5207	5.32	2572	2.63	2635	2.69
5th to 7th grade	4098	4.18	2010	2.05	2088	2.13
Graduate	8375	8.55	3870	3.95	4505	4.60
High School						
Undergraduate	7849	8.02	4292	4.38	3557	3.63
Graduate	35983	36.74	17253	17.62	18730	19.13
Post-secondary						
Undergraduate	3236	3.30	1894	1.93	1342	1.37
Graduate	2090	2.13	1163	1.19	927	0.95
College Undergraduate	9274	9.47	4642	4.74	4632	4.73
Academic Degree Holder	13699	13.99	5450	5.57	8249	8.42

Of the total 97, 927 respondents who were asked about their level of attainment in terms of education, it is surprising to know that 8.10% or 7,929 were not able to enter school. It is presumed that they most probably belong to the old generation whose culture did not give much importance to the value of education. Another reason could be associated to the migrants who are usually forced to work at an early age and did not have the opportunity to study. Eight Thousand Three Hundred Seventy-Five (8,375) or 8.6% of the total respondents, graduated elementary and still had the opportunity to go to high school. A total of 35, 983 or 36.7% were able to graduate high school. Most of these graduates did not have the means to enter college so they seek jobs immediately to earn money and augment in the daily needs. There is a

noticeable difference between the figure of College graduate which is 13, 699 as compared to the High School Graduates.

4.1.9 TERTIARY EDUCATION

4.1.9.1 Historical Enrollment for The Last Three School Years

Table 4.4 Enrollment in Academic Institutions for the Year 2011 to 2013

Institution Name	Enrollments		
	2011-2012	2012-2013	2013-2014
Mabini Junior College	50	50	50
Tanauan Institute	415	1,664	2,116
First Asia Institute of Technology and Humanities	2,418	2,393	2,466
La Consolacion College Tanauan	299	371	380
DMMC Institute of Health Sciences	125	134	95
Christian College of Tanauan	388	397	296
STI College – Tanauan	245	329	436
Grand Total	3,940	5,338	5,839

Data compiled by Michael Jason A. Magbuhat

(CHED REGION IVA) - Based on the submission of Higher Education Institutions as of Dec. 1, 2013

The data shows that a high percentage of incoming college students preferred to enroll at the First Asia Institute of Technology and Humanities which is within the vicinity of the commercial area in the town proper and very accessible to a lot of establishments. Tanauan Institute that is considered an institution of the city where most of the prominent people comes from this institution and encompasses several generations got the second highest in having enrollees for the past three years.

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Table 4.5 Courses/Programs Offered in Institution Academic in Batangas Year 2013-2014

Institution Name	Program Name
Mabini Junior College	English
Tanauan Institute	Accountancy
	Business Administration
	Computer Science
	Computer Secretarial
	Criminology
	Education
	Elementary Education
	Secondary Education with no specialization
First Asia Institute of Technology and Humanities	Accountancy
	Business Administration
	Communication
	Computer Engineering
	Computer Science
	Computer Technology
	Criminology
	Electronics and Communications Engineering
	Elementary Education
	General Mathematics
	Hotel and Restaurant Management
	Industrial Engineering
	Information Technology
	Nursing
	Psychology
	Secondary Education with no specialization
Tourism	
La Consolacion College Tanauan	Accountancy
	Business Administration
	Elementary Education
	Hotel and Restaurant Management
	Information Technology
	Secondary Education with no specialization
	Tourism and Travel Management
DMMC Institute of Health Sciences	Business Administration
	Elementary Education
	Medical Technology
	Midwifery
	Nursing
	Physical Therapy
	Psychology
Radiologic Technology	

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Christian College of Tanauan	Secondary Education with no specialization
	Accountancy
	Business Administration
	Commerce
	Computer Science
	Criminology
	Customs Administration
	Elementary Education
	Industrial Engineering
	Information Technology
	Nursing
	Secondary Education with no specialization
STI College – Tanauan	Accountancy
	Business Management
	Computer Science
	Computer Technology
	Hotel and Restaurant Management
	Information Technology
	Tourism and Travel Management

- Data compiled by Michael Jason A. Magbuhat
 - Based on the submission of Higher Education
 Institutions as of December 1, 2013

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CHRISTIAN COLLEGE OF TANAUAN



STI COLLEGE-TANAUAN



TANAUAN INSTITUTE



LA CONSOLACION COLLEGE OF TANAUAN



DANIEL MERCADO MEDICAL CENTER-INSTITUTE OF



FIRST ASIA INSTITUTE OF TECHNOLOGY & HUMANITIES



4.1.10 K-12 School

The K to 12 Basic Education Program was launched on April 24, 2012. The K to 12 Program covers 13 years of basic education with the key stages named as Kindergarten to Grade 3, Grades 4 to 6, Grades 7 to 10 (Junior High School), Grades 11 and 12 (Senior High School). With the curriculum of Grades 11 and 12, formalized and finalized in the year 2014, the Department of Education was ready for the implementation of Senior High School (SHS) in SY 2016-2017.

There are sixteen (16) private schools and sixteen (16) public schools in Tanauan, registered with the Division Office, which are ready for the K-12 program of the government. The table below shows the enrollment history of the Junior and Senior High School in various academic institutions within the city. Please note that there are schools that have not submitted enrollment report to date, as per the DepEd Tanauan Division Office. Thus, table shows some missing data.

Still, the data on enrollment for the Grade 11, despite the non-submission of other schools, has already exceeded the expected number. According to Planning Division of DepEd Tanauan, this could be associated to the influx of students from neighboring towns of the city particularly Malvar, Talisay, Laurel and Sto. Tomas.

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Table 4.6 Junior High School Enrollment Data Year 2015

School Name	City	District	JUNIOR HIGH SCHOOL											
			Grade 7		Total I	Grade 8		Total	Grade 9		Total	Grade 10		Total I
			M	F		M	F		M	F		M	F	
Balele National High School	Tanauan City	3 rd	55	61	116	48	45	93	82	72	154	30	24	54
Banjo Laurel NHS	Tanauan City	3 rd	26	26	52	31	25	56	25	30	55	26	22	48
Bernardo Lirio Memorial NHS	Tanauan City	3 rd	300	283	583	286	268	554	244	248	492	205	255	460
Boot NHS	Tanauan City	3 rd	93	88	181	90	93	183	94	85	179	71	65	136
Dr. Alcantara NHS	Tanauan City	3 rd	38	32	70	41	32	73	28	40	68	0	0	0
Janopol Oriental NHS	Tanauan City	3 rd	60	68	128	57	41	98	39	40	79	34	17	51
Luyos NHS	Tanauan City	3 rd	92	68	160	96	94	190	76	106	182	88	81	169
Malaking Pulo NHS	Tanauan City	3 rd	39	36	75	48	51	99	38	29	67	43	38	81
Natatas NHS	Tanauan City	3 rd	90	85	175	55	73	128	56	59	115	75	69	144
Pantay NHS	Tanauan City	3 rd	69	59	128	51	51	102	61	57	118	74	46	120
Pres. Jose P. Laurel NHS	Tanauan City	3 rd	44	48	92	42	49	91	43	37	80	31	35	66
Tanauan City NHS	Tanauan City	3 rd	371	376	747	359	394	753	334	351	685	331	339	670
Tanauan School of Fisheries (TSF)	Tanauan City	3 rd	183	157	340	161	112	273	124	151	275	142	144	286
Tinurik NHS	Tanauan City	3 rd	134	139	273	132	130	262	127	140	267	149	153	302
Ulango Integrated School	Tanauan City	3 rd	20	21	41	20	26	46	21	14	35	0	0	0
Wawa NHS	Tanauan City	3 rd	23	19	42	14	24	38	20	21	41	33	17	50
TOTAL			1637	1566	3203	1531	1508	3039	1412	1480	2892	1332	1305	2637

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Table 4.7 Enrollment Data of Senior High School Year 2015

School Name	YEAR LEVEL																									
	SENIOR HIGH SCHOOL																									
	GRADE 11																									
	ACADEMIC TRACK												TOTAL TVL	ARTS AND DESIGN			SPORTS			TOTAL GRADE 11						
	STEM			ABM			HUMSS			GAS				M	F	T	M	F	T	M	F	T	M	F	T	
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Balele NHS	0	0	0	0	0	0	2	7	9	0	0	0	2	0	2	0	0	0	0	0	0	4	7	11		
Banjo Laurel NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Bernardo Lirio Memorial NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Boot NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Dr. Alcantara NHS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Janopol Oriental NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Luyos NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Malaking Pulo NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Natatas NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pantay NHS	0	0	0	3	8	11	0	0	0	0	0	0	34	14	48	0	0	0	0	0	0	37	22	59		
Pres. JP. Laurel NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Tanauan City NHS	12	4	16	8	16	24	8	18	26	0	0	0	0	0	0	0	0	0	0	0	28	38	66			
TSF	0	0	0	12	20	32	0	0	0	0	0	0	99	70	169	0	0	0	0	0	0	111	90	201		
Tinurik NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ulango Integrated School	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Wawa NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	12	4	16	23	44	67	10	25	35	0	0	0	135	84	219	0	0	0	0	0	180	150	337			

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School Name	YEAR LEVEL																									
	SENIOR HIGH SCHOOL																									
	GRADE 12																									
	ACADEMIC TRACK												TOTAL TVL	ARTS AND DESIGN			SPORTS			TOTAL GRADE 12						
	STEM			ABM			HUMSS			GAS				M	F	T	M	F	T	M	F	T	M	F	T	
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Balele NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Banjo Laurel NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Bernardo Lirio Memorial NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Boot NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Dr. Alcantara NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Janopol Oriental NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Luyos NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Malaking Pulo NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Natatas NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pantay NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pres. JP Laurel NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Tanauan City NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TSF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Tinurik NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ulango Integrated School	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Wawa NHS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

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Table 4.8 Overall total enrollment in Junior and Senior High School Year 2015

School Name	TOTAL GRADES 7 TO 10			SHS TOTAL (GRADES 11 TO 12)			OVERALL TOTAL (GRADES 7 TO 12)		
	M	F	T	M	F	T	M	F	T
Balele National High School	215	202	417	4	7	11	219	209	428
Banjo Laurel NHS	108	103	211	0	0	0	108	103	211
Bernardo Lirio Memorial NHS	1035	1054	2089	0	0	0	1035	1054	2089
Boot NHS	348	331	679	0	0	0	348	331	679
Dr. Alcantara NHS	107	104	211	0	0	0	107	104	211
Janopol Oriental NHS	190	166	356	0	0	0	190	166	356
Luyos NHS	352	349	701	0	0	0	352	349	701
Malaking Pulo NHS	168	154	322	0	0	0	168	154	322
Natatas NHS	276	286	562	0	0	0	276	286	562

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Pantay NHS	255	213	468	37	22	59	292	235	527
Pres. Jose P. Laurel NHS	160	169	329	0	0	0	160	169	329
Tanauan City NHS	1395	1460	2855	28	38	55	1432	1498	2921
Tanauan School of Fisheries	610	564	1174	111	90	201	721	654	1375
Tinurik NHS	542	562	1104	0	0	0	542	562	1104
Ulango Integrated School	61	61	122	0	0	0	61	61	122
Wawa NHS	90	81	171	0	0	0	90	81	171
TOTAL	5912	5859	11771	180	157	337	6092	6016	12108

Analysis Matrix – Education Sector

Technical Findings, Issues and Concerns	Implications / Effects	Policy Intervention
<p>Increase in yearly enrolment</p>	<p>Classroom shortage Need for more school personnel and facilities.</p>	<p>Acquisition of lot & construction of additional school buildings for Tanauan City College Strengthen PPP for more support Allocate funds for additional classrooms from the Special Education Fund (SEF) Allocate more funds for classroom facilities Prioritize construction of new classrooms in schools belonging to red and black spectrum in the BEIS</p>
<p>Limited space for expansion in schools with small lot areas</p>	<p>Unavailable areas for new additional buildings, congested school campuses, low academic/non-academic performance Failure to comply with Section 803 of the National Building Code of the Philippines which provides provision for</p>	<p>Replacement of old and dilapidated Marcos Type buildings with at least 2-4 storey buildings Provide assistance for schools in acquiring</p>

	<p>the requirement of open spaces for sports & recreational activities</p> <p>Failure to comply with the requirement of Education Facilities 2007 Handbook Revised Edition Integrating Disaster Risk Reduction in School Construction wherein item 2 under Hazard Specific Reduction Measures states: “in case of emergencies that will require students to immediately evacuate from their classrooms (such as in case of fire or earthquake), there should be a provision for an open space within the school compound which will be designated as temporary evacuation area. The open space should be big enough to hold the total population of the school. The available open space must be at a safe distance from buildings, electric poles, and hanging objects that might fall and injure people.</p> <p><i>Source:</i> http://www.deped.gov.ph/sites/default/files/2010%20Educational%20Facilities%20Manual.pdf</p>	<p>available adjacent sites</p>
<p>Shortage of teachers in the</p>	<p>Bigger class size of locally-funded teachers</p>	<p>Division office to request additional</p>

<p>secondary level (1:37)</p>		<p>national-item position for additional teachers</p> <p>Coordinate with colleges and universities for on-the-job training teachers</p> <p>Assign excess teachers from other schools in schools with shortage</p>
<p>The student: classroom ratio is 1:35 in the elementary and 1:51 in the secondary on the average.</p>	<p>Big class size</p> <p>Problems on effective classroom management</p>	<p>Strengthen PPP for more support</p> <p>Allocate funds for additional classrooms constructions and repairs from the SEF</p> <p>Prioritize construction of new classrooms in schools</p>
<p>The enrolment percentage of school-going population in the elementary level is 90.80 while the secondary level is 83.68</p>	<p>High percentage of Out of School Youth (OSY) Low participation rate</p>	<p>Fast-track learners in the community and create SPED classes</p> <p>Strengthen early enrolment scheme</p>
<p>Increase in Drop Out Rate</p>	<p>High percentage of OSY</p>	<p>Fast-track learners in the community</p>

	<p>Low participation rate</p> <p>Illiteracy rate increases</p> <p>Lack of opportunity for employment</p> <p>Increasing juvenile and delinquency cases</p>	<p>Strengthen early enrolment scheme</p> <p>Strengthen the 4 P's program</p> <p>Adopt the Alternative Delivery Mode (ADM) of instruction</p> <p>Enhance the Drop Out Reduction Program</p> <p>Encourage learners in the Alternative Learning System Program</p> <p>Provide training to OSY and more facilities for sports and recreations</p>
<p>Inadequate school buildings and overcrowded classroom</p>	<p>Poor quality education and not conducive to learning</p>	<p>Construction of new multi-storey school buildings/ classrooms</p> <p>Rehabilitation/ major repair</p>
<p>Untitled school campuses</p>	<p>No access to funding, support from national government for schools</p>	<p>Titling of school sites in favour of DepEd in LGU</p>
<p>Insufficient number of school facilities</p>	<p>Low academic and non-academic performance of students</p>	<p>Organization of fund raising projects for</p>

(e.g. laboratory library, clinic)	Unmet student's immediate needs	building new school facilities Acquiring sponsorship from concerned agencies
Insufficient number of teachers and classrooms	Below standard teacher to student ratio Room condition not conducive to learning	Hiring of new qualified teachers and construction of multi-storey buildings in congested school sites
Inadequate instructional materials such as textbooks and computer	Decreased opportunity for learning	Coordination with textbook companies for new materials and procurement of computers
Limited area for new school buildings and untitled school sites	Not all incoming students are accommodated	Finding of alternative venue for school activities Grant of tax credits and other incentives to landowners who are willing to donate land for school site
Increasing cost of education	Increase number of Out-of School youth (OSY) Susceptibility of the OSY to leisure and vices and use of illegal drugs	Coordination with agencies and foundations that can grant scholarship and loan for students

	Increase number of bystanders and juvenile delinquency cases	<p>whose parents are proven to have an income below the poverty threshold</p> <p>ALS (Alternative Learning System)</p> <p>Passing-on of ordinance which will require drug-testing activities in the communities with provision for rehabilitation programs</p>
Absence of nearest tertiary school	Migration of college students to other provinces and cities	In coordination with DepED, political leaders in the area should prioritize building of tertiary school

4.2 Health and Sanitation

4.2.1 Defining the Social Sub-Sector: Health

Under a devolved setting, the LGUs serve as stewards of the local health system and therefore they are required to formulate and enforce local policies and ordinances related to health, nutrition, sanitation and other health-related matters in accordance with national policies and standards. They are also in charge of creating the environment conducive for establishing partnerships with all sectors at the local level.

The primary responsibility of the LGUs and its constituent local partners however is on the direct provision of health services. Service provision entails the efficient generation and utilization of three principal resource inputs: human resources, physical capital, and consumables (WHO, 2000).

Human resource input relates to necessary knowledge and skills transfer to and among health workers complemented by effective personnel motivation tools. Physical capital in health provision pertains to infrastructure necessary in order to deliver the service, be it facilities, equipment and devices. Consumables, on the other hand, pertain to commodities that are vital components of health-related interventions, such as drugs, medicines and syringes. Nonetheless, resources can also include expenditure items that have no direct correlation with clinical care. These may be in the form of buildings, vehicles, information materials and other items that are incidental in delivering health and health-related services. Essentially, LGUs are concerned with the following:

1. Provision of promotive, preventive, curative and rehabilitative health programs and services;
2. Operation and maintenance of health facilities; and
3. Establishment of management support systems that will enhance the provision of services.

In the provision of these services, LGUs must ensure that funds are available to undertake all essential health activities. All of the abovementioned inputs have corresponding money values, which are borne by both public and private sources. The sources may be the national government, the LGUs themselves through their Internal Revenue Allotment and other sources. In general, these sources answer for the annual spending for health of the LGUs.

4.2.2 Health Status of the Tanaueños

4.2.2.1 Life Expectancy at Birth

According to the World Health Organization (WHO) data published in 2015, life expectancy in the Philippines is 65.3 for male, 72.0 for female which gives a total life expectancy of 68.5. The Philippines is at 121 in the World Life Expectancy Ranking. The leading cause of death in the Philippines remains as the Coronary Heart Disease that reached to a total death of 87,881 or 16.86% of the total deaths.

In Tanauan City the life expectancy Leading Cause of death.

4.2.2.1.1 Crude Birth Rate

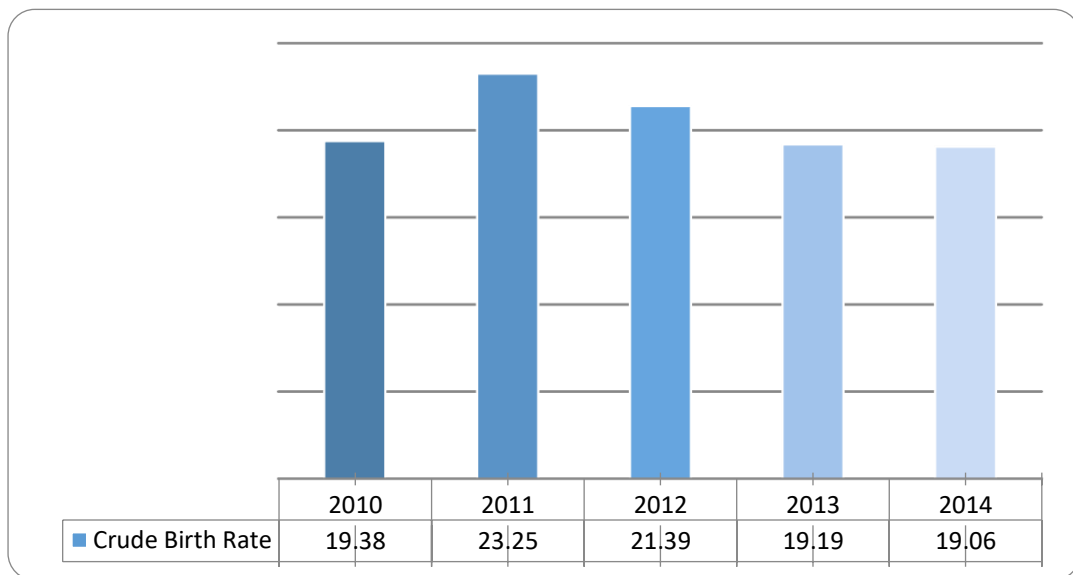


Figure 4.6 Crude Death Rate, Year 2010 to 2014

Source: CHO, Tanauan

In 2014, the crude birth rate (CBR) in Tanauan City was 19.06 births per 1,000 populations. This is slightly lower than the CBR in 2013. The total live births in 2013 were 5,410 of which 2,778 or 51.35 percent were males and 2,632 or 48.65 percent were females. As in previous years, there are a higher proportion of males born in 2014 compared to females, resulting in a birth sex ratio of 102 baby boys born for every 100 baby girls born.

4.2.2.2 Crude Death Rate

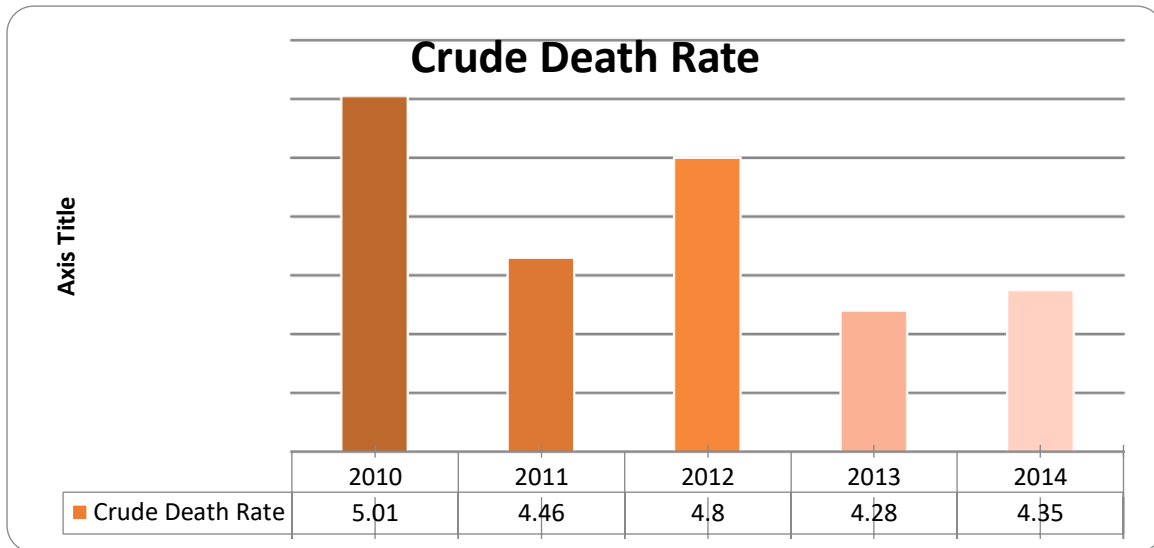


Figure 4.7 Crude Death Rate, Year 2010 to 2014

Source: CHO, Tanauan

The city has slightly increased its mortality from 2013 to 2014. A growth in the crude death rate (CDR) was noted from 1,101 deaths recorded in 2013 and 1,208 deaths in 2014. 2013, 626 or 56.85% were males and 475 or 43.14% are females. Whereas in 2014, 691 or 52.20% and 517 or 47.80% are females.

4.2.2.3 Infant and Child Mortality Rate

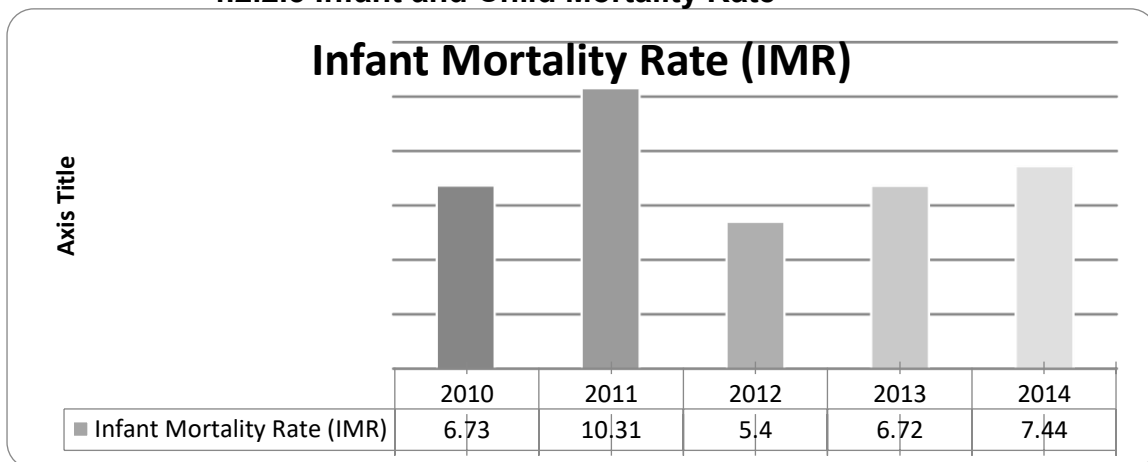


Figure 4.8 Infant Mortality Rate, Year 2010 to 2014

Source: CHO, Tanauan

The infant mortality rate (IMR) and child mortality rate (CMR) per 1,000 live births in Tanauan have been changing from years. In 2013, IMR was 6.72 then increased to 7.44 in 2014 which showed another increase of 1.11. Infant mortality varies with

socioeconomic and demographic factors. High IMR is noted among infants of mothers with no education, no antenatal and delivery care, and mothers aged below 20 and above 40 years. The most common causes of infant deaths are pneumonia, diarrhea and congenital anomalies. The factors associated with high infant and child mortality point to several areas that needed to be addressed. These include not just improving the maternal and child health care programs but uplifting socio-economic conditions as well.

4.2.2.4 Maternal Mortality Ratio

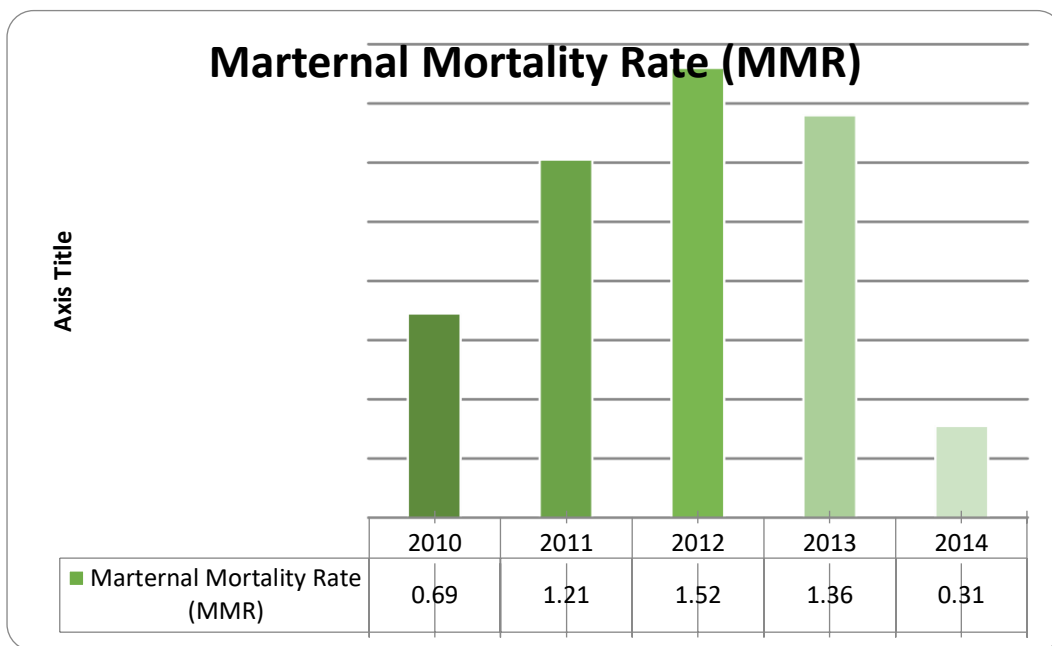


Figure 4.9 Maternal Mortality Rate

Source: CHO, Tanauan

Maternal mortality or deaths of women during pregnancy, at childbirth or in the period after childbirth is another important indicator of the nation’s health. Maternal deaths are mainly due to hypertension at around 20 maternal deaths per 100,000 live births, postpartum hemorrhage also at around 20 per 100,000 live births and complications from abortions at 10 per 100,000 live births (PHS 2000). Some of the distinct factors that contribute to maternal deaths are delay in deciding to seek medical care, delay in identifying and reaching the appropriate facility and delay in receiving appropriate and adequate care at the facility. Most of these can be prevented through quality maternal care.

The MMR in Tanauan is low compared with other neighboring cities and municipalities in the region. In 2014, maternal mortality rate was .31 per 1000 livebirths which is .23 lower than 2013. Achieving the goals of reducing maternal and child mortality is slowly being realized through the political will of the government, both national and local, commitment of the health workers and concerted action of the people. Thus, it is no longer an ambiguity to describe Tanauan as a city having communities of healthy mothers and children.

4.2.2.5 TOTAL FERTILITY RATE

4.2.2.5.1 Total Fertility Rate (TFR) refers to the average number of births that a woman would have at the end of her reproductive life. The change of the pattern of total fertility rate has important consequences for the health sector. In the short run, greater spacing between births improves the health of mother and child. A reduction in the actual number of births reduces the need for obstetrical care, immunization and

other maternal and child health interventions. In the long run, declining fertility redistributes the age distribution of the population away from younger ones and toward the middle and older ages.

Births per 1000 women, categorized according to a specific composition of mothers in the population: (1) Crude birth rate: number of live births per 1000 of population; (2) General fertility rate: number of live births per 1000 women between the ages of 15 and 44 years; (3) Age-specific fertility rate: number of births to women of a particular age (called cohorts). (4) Total fertility rate: Average number of children a woman would bear during her lifetime, assuming her childbearing conforms to her age-specific fertility rate every year of her childbearing years (typically, age 15 to 44); and (5) Completed fertility rate: number of children actually born per woman in a cohort of women up to the end of their childbearing years (typically, age 44).

4.2.2.5.2 TOTAL NUMBER OF WOMEN OF REPRODUCTIVE AGE

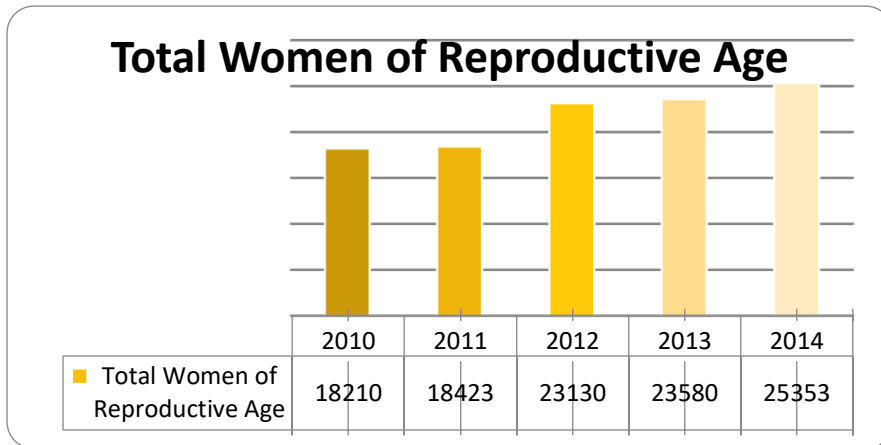


Figure 4.10 Total Number of Women in Reproductive Age

Total Fertility Rate (TFR)

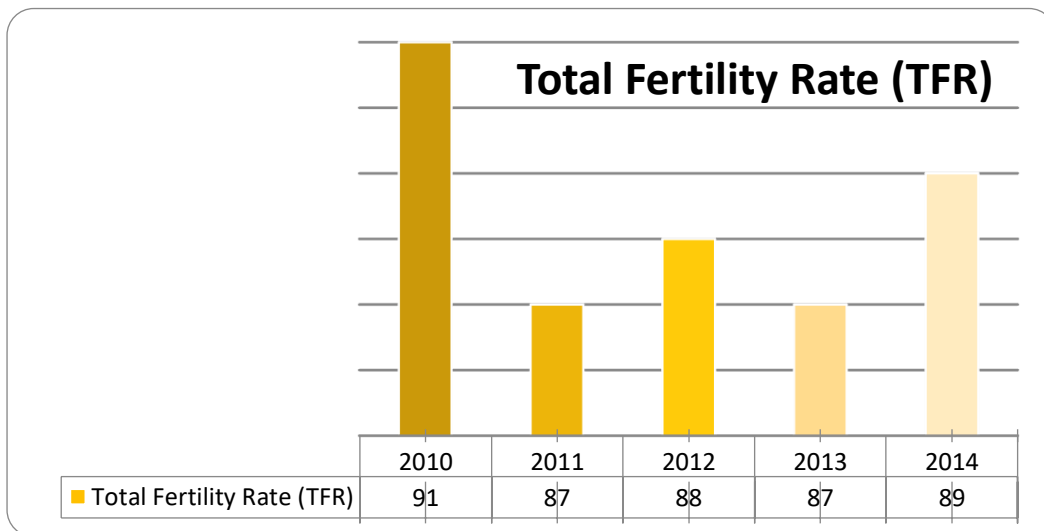


Figure 4.11 Total Fertility Rate, Year 2010 to 2014

4.2.2.5.3 Contraceptive Prevalence Rate

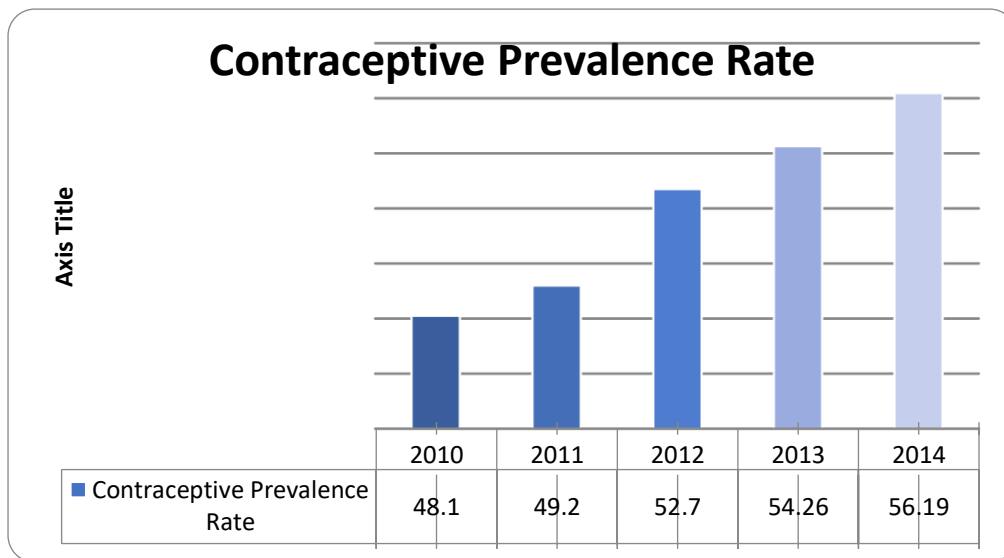


Figure 4.12 Contraceptive Prevalence Rate, Year 2010 to 2014

The use of contraceptive method is almost always reported in women rather than men, of reproductive age, married or in sexual union.

Generally, the measure includes all contraceptive methods (modern and traditional), but it may include modern methods only. The CPR provides a measure of population coverage of contraceptive use, taking into account all sources of supply and all contraceptive methods; it is the most widely reported measure of outcome for family planning programs at the population level.

Technically speaking, CPR is a ratio, not a rate. (Prevalence is measured by a ratio and incidence by a rate.) For a given year, contraceptive prevalence measures the percentage of women of childbearing age in union who use a form of contraception. To obtain a true contraceptive use rate, the denominator should reflect the population at risk (of pregnancy), i.e., sexually active women who are not in fecund, pregnant, or amenorrhic. The numerator should reflect the number of contraceptive users from that population the graph shows that through the continuous programs of the city government, couples or intimate partners were made aware on the advantages of the usage of the natural and artificial family planning.

4.2.3 Health Resources for Health

4.2.3.1 Health Personnel-Population ratio

Human resources for health are central to managing and delivering health services. They are crucial in improving health systems and health services and in meeting the desired health outcome targets. The number of physician required per 10,000 population remained unchanged at 2 wherein 3 is the requirement. Nurses increased its number from 5 in 2011 to 8 in 2014 for every 20, 000 population. The number of dentists per 50,000 population almost remained unchanged at 2 dentists per 72,840 people. The number of midwives per 5,000 population is 33 in 2014, and 1 midwife for every 7,668 population. Sanitary Inspectors slightly improved from 2 sanitary inspectors in 2007 to 3 in 2014 but still needing 4. The number of barangay health workers should have a ratio of 1: 20 households while the Barangay Nutrition's ratio per barangay should be 1:1.

Table 4.9 Health Worker Requirement versus Actual Number

Manpower	REQUIREMENT (No.)	ACTUAL NUMBER	GAP
Physicians (1:50, 000)	3	3	4
Nurses (1: 20, 000)	8	35	+ 27
Midwives (1:5, 000)	33	27	6
Sanitary Inspectors	No reference	4	
Medical Technologists	No reference	3	
Dentist (1:50, 000)	3	2	1
Barangay Health Workers	8, 391	238	3,853
Barangay Nutrition Scholars	48	48	-

Note: Based on Population 2014 using % distribution

4.2.3.2 Health Care Facilities

Various health facilities serve the health needs of the people. There are six (6) hospitals in the city, one is a government hospital located at Santor and the rest are

all private hospitals located in the Poblacion. The total bed capacity of hospitals, both government and private, increased from 285 in 2011 to 319 in 2014. Of the six hospitals, two are tertiary hospitals.

There are two (2) rural health units operating under the city government. The Rural Unit I focus its services to 22 barangays while the Rural Unit II serves 26 barangays which are mostly rural. Forty-four barangays have its own health centers manned by a midwife with the assistance of barangay health workers and nutrition scholars. Among the forty-eight (48) barangays, Poblacion 1, Poblacion II, Poblacion III and Poblacion VII have no respective health centers due to their proximity to the City Health Center or RHU I. In addition to this, completion of three birthing homes located in barangays Pagaspas, Malaking Pulo and Sambat are already fully operational and now serving pregnant women in the city.

Table 4.10 Capacity and Condition of Health Facilities and Personnel

NAME OF HEALTH FACILITY	NO. OF BEDS	NO. OF PHYSICIANS	NO. OF NURSE	NO. OF MIDWIFVES	NO. OF DENTISTS	NO. OF SANITARY INSPECTORS	NO. OF OTHER HEALTH WORKERS	PHYSICAL CONDITION OF FACILITY:
Corachea Hospital	27	27	6	2	0	0	0	Fair
C.P. Reyes General Hospital	97	65	10	3	0	0	0	Fair
Daniel Mercado Medical Center	134	215	103	0	1	0	0	Fair
Gonzales Medical Hospital	26	22	20	2	0	0	0	Fair
Laurel Memorial District Hospital	25	6	8	5	1	0	0	Fair
Silva's Hospital	10	5	5	2	0	0	0	Fair
RHU 1 / RHU 2	N/A	2	19	14	2	4	BNS – 48 BHW - 238	Fair

Tanauan City Birthing Homes	6	1	16	13	0	0	0	Fair
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Table 4.11 Health Facilities as to type

NAME OF HEALTH FACILITY	TYPE OF FACILITY	OWNERSHIP OF FACILITY	NAME OF MEDICAL HEALTH FACILITY	CONTACT NUMBER
RHU 1	Main Health Center	Public	Adel S. Bautista	778-1001
RHU 2	Main Health Center	Public	Imelda Rosa Bautista	778-1274
Corachea Hospital	Hospital	Private	Dr, Hermogenes Corachea	778-1298
C.P. Reyes General Hospital	Hospital	Private	Dr. Raul Decepeda	778-1364/784-5401/784-8055
Daniel Mercado Medical Center	Hospital	Private	Dr. Luis Buño Jr.	778-1810
Gonzales Medical Hospital	Hospital	Private	Dr. Damian Gonzales	778-1218
Laurel Memorial District Hospital	District Hospital	Private		778-1328/405-0695
Silva's Hospital	Hospital	Private	Dr. Gloria S. Velando	778-1072
Barangay Health Station on all Barangays except in Brgy. 1,2 and 3	Barangay Health Station	Public	none	None
Birthing Homes		Public		

4.2.3.3 Services Provided by Health Facilities

Preventive health services, including immunization, health and nutrition education, family planning, basic laboratory services, oral health, and routine check-up, are the mainstays of the City Health Office.

4.2.4 Social Health Insurance

4.2.4.1 Phil Health Insurance

Social health insurance (SHI) is one form of financing health care. It is considered as 'prospective' financing where funds are pooled or collected in advance, mainly in the form of regular contributions from insurance fund members, employers; and the government (Whitaker 2004). It addresses inequities in health financing where the 'healthy pays for the sick' and 'those who can afford medical care subsidizes those who cannot'. The country's SHI is embodied under the NHIP being implemented by the PhilHealth. PhilHealth is mandated to provide health insurance coverage and ensure affordable, acceptable, available and accessible health care services for all. PhilHealth's implementation of the NHIP is guided by the following principles:

1. Allocation of national resources for health - underscores the importance for government to give priority to health for faster economic development and the attainment of improved quality of life;
2. Universality- provides financial access to health services and aims to cover the entire population and provide a basic minimum benefit package;
3. Social solidarity - entails risk sharing among income groups, age groups, health status differences; and geographic distribution.
4. Equity - provides uniform basic benefits and where access to care is considered a function of a person's health needs rather than the ability to pay; and
5. Responsiveness and quality of care -adequately meets the personal health care needs of a person at various stages of a member's life and institutionalize quality assurance programs at all levels of health service delivery.

4.2.4.2 Sustainability of the Sponsored Program

A major consideration is sustaining the sponsored or indigent program. Maintaining the current enrollment of 11,945 families from different sponsor program would require fund infusion of about more than 14 million pesos in one year alone which is a huge resource requirement in an era of budget deficit and cuts. The city government’s Philhealth sponsor program needs more than nine million pesos a year to maintain the 7,783 families.

4.2.4.3 Inability to Identify and Select 'True' Indigents

As political officials sponsor the indigents to the program, it cannot be avoided that they would enlist their constituents who are not necessarily poor. There is thus a need to have a more “balanced” and “neutral” screening process where political accommodation is minimized. It is imperative for PhilHealth to develop a tool that would allow identification of the true poor.

Table 4.12 Distribution of Philhealth Cards to Tanaueños

2011	2012	2013	2014	2015
4695	7300	7300	7698	9000

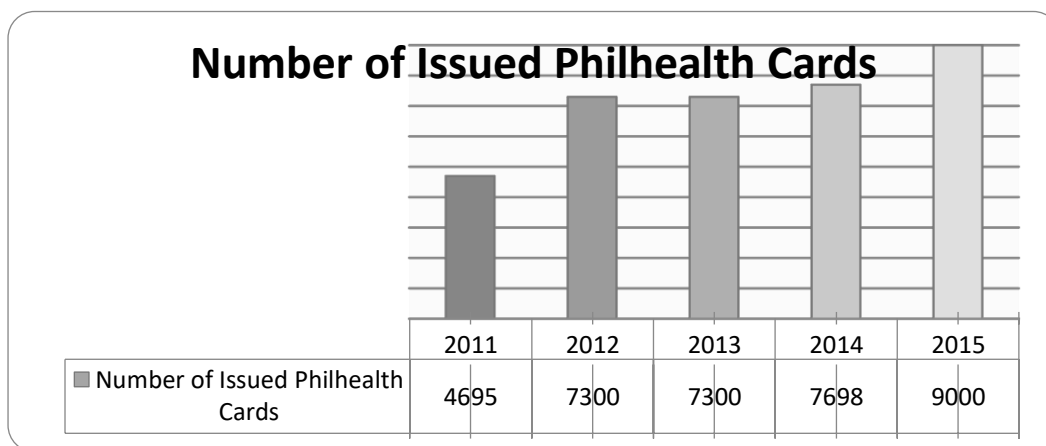


Figure 4.13 Philhealth Cards Issued, Year 2011 to 2015

4.2.5 Leading causes of Morbidity and Mortality

4.2.5.1 Prevention and Control of Communicable Diseases

The top ten (10) communicable diseases in the Philippines, based on World Health Organization (WHO) data include tuberculosis, dengue fever, pneumonia, malaria, diarrhea, bronchitis, influenza, acute febrile illness, HIV and lower respiratory tract infections.

Tanauan City has various programs to combat and control the spread of these communicable diseases. All these are in harmony with the Department of Health's (DOH) programs.

For Dengue, the City Health Office (CHO) observes and promulgates the "4S drive Laban sa dengue". This 4s drive means Search and destroy, Self-protecting measures, seek early consultations and Say no to indiscriminate fogging. They also do larvaciding, misting and health teaching. The regular routine of the team 4S every Wednesday of the week is to visit one of the 48 barangays in Tanauan to conduct the drive. Likewise, misting is regularly done among the schools in the city before the start of the school year. Thru the CHO, treated mosquito screens are also being distributed among selected schools, while treated mosquito nets on selected households has been given, particularly to those who have previous cases of malaria.

To date, the City Health Office's record shows that the city is "malaria free" for almost 10 years.

Both Rural Health Unit I (RHU I) and RHU II of the city, are into tuberculosis control strategy or TB-DOTS (TB directly-observed treatment short-course). The two health units are equipped with the facility for tuberculosis control which are certified by the DOH and duly accredited by PHILHEALTH. With this program, suspected patients can avail of sputum test and necessary medication at no cost.

To sustain tuberculosis control, health teaching and contact tracing activities are also being conducted by the local health office.

The approval of City Ordinance No. 2015-29 or “Ordinance Creating an Animal Bite Treatment Package Fund” is on December 07, 2015. Apart from the primary objective to protect and promote the right to health of the people, this ordinance aims to implement a system for the control, prevention for the spread and eventual eradication of human and animal rabies. Moreover, this ordinance aims to gain established customs on responsible pet ownership, towards the end.

4.2.5.2 Leading Cause of Morbidity

As in the past, most of the top 10 leading causes of morbidity are communicable diseases. From 2013 to 2014, these included acute respiratory infection, influenza, diarrhea, bronchitis, TB respiratory, pneumonia, and dengue fever. Leading non-communicable causes of morbidity are hypertension and diseases of the heart. A few communicable diseases like pneumonia and tuberculosis continue to cause a significant number of deaths in the city and persist to be among the 10 leading causes of mortality. Unlike the 10 leading causes of morbidity, deaths are mainly due to non-communicable diseases. Hypertensive vascular disease is the most common cause of deaths. These made up 34.20 percent of the deaths attributed to the 10 leading deaths due to communicable diseases, however, lessened from 165 deaths per 1000 population in 2010 to 131 per 1000 in 2011. Deaths due to accidents and injuries increased from 35 per 1000 population in 2010 to 58 per 1000 in 2011. In the past years, diabetes mellitus has emerged as one of the leading causes of death. Meanwhile, deaths due to diarrhea, measles, and other nutritional disorders are no longer in the top ten leading causes of death although these are still of serious concern. Although progress has been made in the past years to control communicable diseases as leading causes of death in the city, their burden as a cause of morbidity is still high. On the other hand, non-communicable and chronic diseases have emerged as the major causes of death.

Table 4.13 Top Causes of Mortality as of year 2014

TYPE OF ILLNESS	2010	2011	2012	2013	2014
Acute Upper Respiratory Infection	12229	12840	13730	12383	15960
Influenza Like Illnesses	9420	10323	9357	7661	7243
Arthritis, Joint Muscular Pain	7273	-	3040	-	2719
Bronchitis/Bronchiolitis	5693	-	-	750	-
Tuberculosis (All Forms)	1286	1764	-	-	-
TB Respiratory (TB Symptomatic)		-	1228	-	-
Hypertension	1140	842	460	528	274
Acute Lower Infection	857	-	-	-	-
Scabies/Skin Lesion	764	160	315	-	-
Diarrhea	572	-	140	145	-
Metabolic Disorder	396	753	850	536	622
Chronic Obstructive Pulmonary Disease and other Allied Condition	-	681	-	-	-
Musculoskeletal Disorder	-	5736		2423	-
Acute Lower Infection	-	276	260	-	-
Vitaminosis & Other Nutritional Disorder	-	98	-	-	-
Zoonotic Bacterial Infection	-	-	652	-	-
Acute Lower Urinary Tract Infection	-	-	-	1556	560
Chronic Obstructive Lung Disorder	-	-	-	340	-
Skin Lesion & other Allergic Reaction	-	-	-	220	340
Influenza	-	-	-	-	420
Chronic Bacterial Infection	-	-	-	-	388
Aritaminosis and other Nutritional disorder	-	-	-	-	266
LEADING CAUSES OF MORTALITY					
TYPE OF ILLNESS	2010	2011	2012	2013	2014
Myocardial Infarction	88 114.6	86 111.1	80 115.6	90 125.3	-
Chronic Obstructive Pulmonary Disease	84 104.9	75 96.9	83 119.9	88 122.6	78 105.1

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Chronic Renal Failure	79 102.9	-	26 37.6	-	62 84.2
Multiple Organ Failure	66 85.9	72 93.0	45 65.0	-	74 100.5
Malignant Neoplasm	58 75.5	58 74.9	52 75.1	63 87.7	57 77.4
Pneumonia	45 58.6	45 58.1	30 43.4	56 77.10	58 78.8
Coronary Artery Disease	40 52.1	-	-	-	-
Sepsis	35 45.6	36 46.5	17 24.6	46 64.1	-
Pancreatitis	23 29.9	-	-	-	-
Senility	20 26.0	23 29.7	12 17.3	37 51.5	19 25.8
Cerebro Vascular Acc.	-	83 107.2	72 104.0	87 121.2	66 89.7
Liver Cirrhosis	-	62 80.1	-	-	-
Status Asthmaticus	-	12 15.5	-	-	-
Congestive Heart Failure	-	-	65 93.9	-	-
Cardio Pumonary Arrest (Cardiac Arrest)	-	-	-	70 97.5	-
Diabetes Mellitus	-	-	-	53 73.8	-
Hypertension/Thrombosis (Myocardial Infarction)	-	-	-	21 29.2	89 120.9
Cardio Respiratory Arrest (Status Asthmaticus)	-	-	-	-	49 66.6
Pulmonary Tuberculosis	-	-	-	-	26 35.3

Note: computation of rate: Number of death/total deathx1000

Source: CHO

4.2.6 Responsiveness of the Health System

4.2.6.1 Medical Attendance at Births

The number of birth deliveries attended by trained health professionals (doctors, nurses, and licensed midwives) was 2,580 or 76.2 percent of total births in 2011. On the other hand, 808 or 23.8 percent were delivered by *hilots* or unlicensed midwives and other untrained attendants. The barangays with very low medical attendance during birth delivery were Bañadero, Suplang, Hidalgo, Bagbag, and Poblacion III.

Table 4.14 Number of Birth Deliveries as to type

INDICATOR	2010	2011	2012	2013	2014
Percentage of Births Deliveries attended by skilled health attendant	73.22	76.15	80.06	85.27	87.02
Percentage of facility based deliveries	41.02	45.30	68.33	75.27	87.02
Percentage of birth deliveries by “hilot” or no licensed midwives	14.9	13.4	9.9	6.9	4.8

Source: City Health Office

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Table 4.15 Nutritional Status: Summary Report on Operation Timbang for the last Three Years

Classification by weight status	2010		2011		2012		2013		2014	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Normal	10370	9628	9698	9139	10059	9410	10063	9267	10026	9189
Underweight	257	245	262	198	248	199	214	208	207	178
Severely Underweight	77	55	60	50	56	51	56	44	184	56
Overweight	195	121	138	104	142	116	116	87	229	185
TOTAL	10899	10049	10158	9491	10505	9776	10449	9606	10646	9608
GRAND TOTAL	20948		19649		20281		20055		20254	

4.2.6.2 Nutritional Status

Operation Timbang is an annual activity done by the City Health Office. It requires weighing of children from 0-71 months within the 48 barangays of the city to monitor whether they are within the level of their optimal body weight. Actual numbers of children weighed for the last three years were as follows:

- 2010 – 20, 948
- 2011 – 19, 649
- 2012 – 20, 281
- 2013 – 20, 055
- 2014 – 20, 254

As seen in the data, a large percentage of children for the last five (5) years was in the normal level indicating that children are considered fit and healthy. Underweight children were also recorded and one of the causes of such is low food intake that results in malnourishment. A small percentage of severely underweight were recorded for the last three years. This is often associated with an insufficient intake of vitamins and minerals required to maintain health and are being monitored by the City Health office so as to provide ways and means to improve weight of children in the city. Overweight children were also recorded. These are individuals weighing 10% or more of what is considered his or her recommended healthy weight.

Nutritional Status of Children

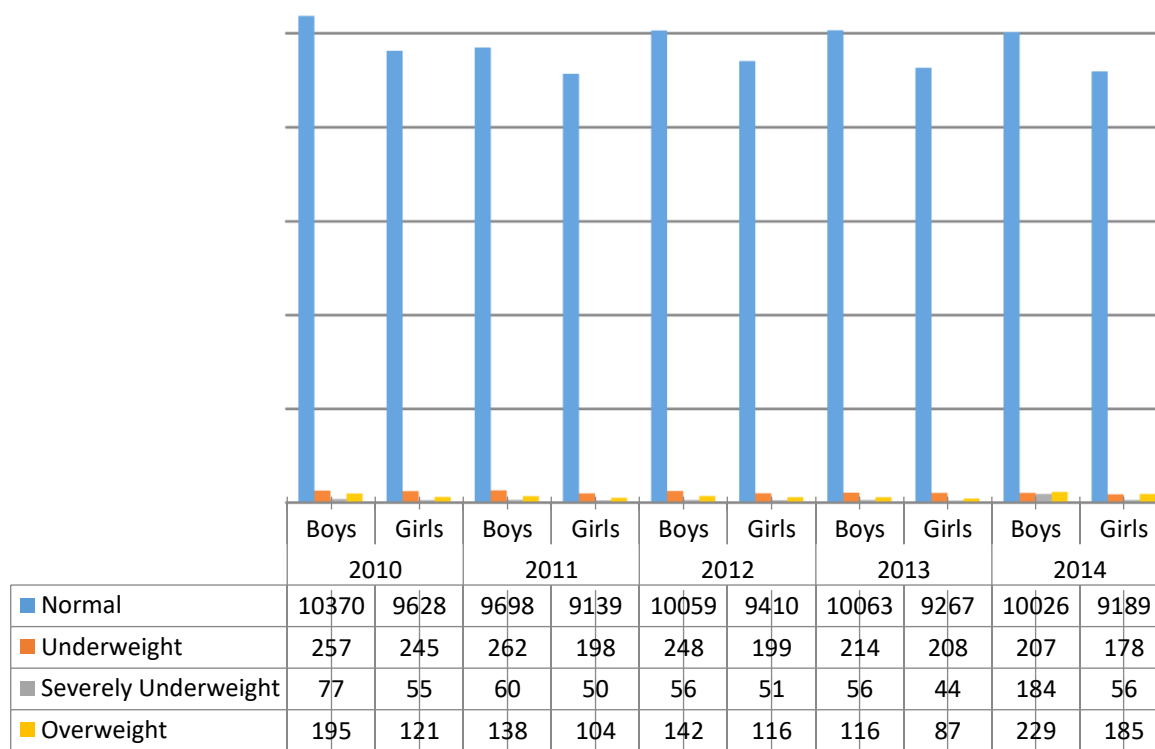


Figure 4.14 Nutritional Status of Children: Year 2010 to 2014

Source: CHO

ANALYSIS MATRIX – HEALTH SECTOR

Technical Findings/Issues & Concerns	Implications/Effects	Policy/Interventions
High infant deaths	<p>Low child survival rate</p> <p>Failure to meet one of the sustainable development goals (good health)</p> <p>An indicator of poor community's general</p>	<p>Hiring of skilled attendant during pregnancy, delivery, and immediate post-partum of the mother.</p> <p>Immediate and proper care of the newborn thru the following:</p> <p>1. Breastfeeding and</p>

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	<p>health condition and socio-economic well-being.</p> <p>Disparities by socio-economic status</p>	<p>complementary feeding</p> <p>2.Micronutrient supplementation.</p> <p>3.Immunization of infants and mother.</p> <p>4. Integrated management of sick infants and children.</p> <p>5. Promote birth spacing (IEC)</p>
<p>High maternal mortality rate</p>	<p>Direct implication for their children includes increased mortality risk, malnutrition and education deprivation</p> <p>Severe impact on the family</p> <p>Failure to meet Sustainable Development Goals (SDG)</p> <p>An indicator of poor community’s general health condition and socio-economic well-being.</p>	<p>Readily available maternal and child health services in the context of primary health care, bringing it closer to the home of the mother.</p> <p>Establish or strengthen referral systems.</p> <p>Community education and mobilization for a common understanding of the issues on maternal and child health.</p>
<p>Insufficient number of health</p>	<p>Immediate needs</p>	<p>Conversion of the present</p>

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facilities and personnel	can't be addressed	City Hall into a Community Hospital Construction of additional health facilities per barangay
Insufficient number of midwives/physician/medical practitioners	Some patients can't be accommodated	Hiring of additional permanent midwives/physicians/medical practitioners
Lack of medicines and medical equipment and laboratory	Patients need to go to other health stations for appropriate tests	Allocation of additional fund for medicines and medical equipment such as x-ray
Presence of households without sanitary toilets	Occurrence of diseases is more probable	Installation of sanitary toilets per household in all barangay
Poor solid waste management	High incidence of water borne diseases due to non-segregation of wastes Increased in morbidity rate	Strict implementation re: waste segregation Finding of alternative ways to lessen waste generation (e.g. recycling, decomposing, reusing)
Congested public cemetery	High risk of burial spilling on adjoining properties	Provision of cemetery expansion and regular maintenance of public cemetery
Prevalence of lifestyle diseases	Increased in mortality rate	Coordinate with concerned agencies to pursue programs which can decrease occurrence of lifestyle diseases

4.3 Sanitation

4.3.1 Water Supply and Sanitation

The proportion of households with access to safe water supply decreased from 99.2% in 2014 to 98.1% in 2013. Water facility in thirty-four (34) barangays is under the management of Tanauan Water District (TWD) while fourteen (14) are being managed by the Barangay Waterworks Association. Water testing is done regularly by the TWD while those barangays operated water facilities are tested by their laboratory of choice and at their expense to ensure safe drinking water in all households. On the other hand, the proportion of households with access to sanitary toilet facilities is 97.6% in 2010 while 96.4% in 2011.

4.3.2 Household Distribution by Type of Toilet

Table 4.16 Household distribution by type of toilet

Barangay	Number of HH	Water-sealed flush to sewerage/septic tank-own	Water-sealed flush to sewerage/septic tank-shared	Closed pit	Open pit	No toilet	Others
Altura Bata	262	235	10	0	0	17	0
Altura Matanda	118	116	0	2	0	0	0
Altura-South	160	146	12	2	0	0	0
Ambulong	1323	1161	37	5	2	125	1
Banadero	676	64	581	8	4	19	0
Bagbag	663	525	14	44	7	65	8
Bagumbayan	1022	938	57	14	1	0	12
Balele	1556	1235	162	87	34	39	0
Banjo East	517	251	255	9	2	0	0
Banjo Laurel	541	423	99	10	3	6	0
(Banjo West)							
Bilog-bilog	931	785	129	15	4	1	0
Boot	1046	715	142	76	75	35	3
Cale	731	608	107	5	3	10	1
Darasa	3272	2682	126	419	5	40	0
Pagaspas	598	484	85	2	9	11	7
Gonzales	380	341	4	4	13	10	9
Hidalgo	191	158	5	2	0	22	1
Janopol	452	408	17	4	9	17	1
Janopol Oriental	638	611	11	4	8	4	0
Laurel	288	185	92	2	0	9	0
Luyos	296	276	20	0	0	0	0

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Mabini	518	203	277	8	6	24	0
Malaking Pulo	824	699	92	13	1	17	2
Maria Paz	520	358	37	25	27	68	5
Maugat	368	288	41	10	1	29	0
Montaña (Ik-ik)	364	322	14	13	1	15	0
Natatas	1014	751	237	3	2	6	13
Pantay Matanda	870	710	105	8	1	43	2
Pantay Bata	601	461	136	3	0	2	0
Poblacion Barangay 1	426	332	68	0	1	21	4
Poblacion Barangay 2	282	251	23	1	0	7	0
Poblacion Barangay 3	937	809	89	0	0	37	1
Poblacion Barangay 4	832	711	94	8	2	12	5
Poblacion Barangay 5	273	261	12	0	0	3	0
Poblacion Barangay 6	803	736	50	15	0	1	0
Poblacion Barangay 7	762	663	]	12	0	19	0
Sala	416	351	52	5	5	3	0
Sambat	729	693	24	8	1	3	0
San Jose	236	220	4	0	1	13	0
Santol (Doña Jacoba Garcia)	1100	81	8	2	0	7	1
Santor	881	792	73	4	2	9	1
Sulpoc	414	147	251	1	3	14	0
Suplang	249	226	16	0	0	7	0
Talaga	981	864	82	11	18	4	0
Tinurik	1075	981	65	9	4	15	1
Trapiche	1410	1217	160	8	3	22	1
Ulango	614	612	1	1	0	0	0
Wawa	312	293	10	8	3	0	1
TOTAL	32472	26379	3986	890	261	831	80

Source: CBMS, 2011

4.4 Burial Grounds

4.4.1 Status and Inventory of Private and Public Cemetery

Tanauan City has eight (8) cemeteries that are mostly near Poblacion area. Two (2) of them are public cemeteries and the rest are all private cemeteries. The table below shows the list of cemeteries and their locations.

Table 4.17 List of cemeteries & location

Name	Location	Ownership
Rose Valley Memorial Park	Trapiche	Private
Tanauan Heritage Garden	Luyos	Private
Himlayan ng Tanauan	Sambat	Private
Loyola Gardens of Tanauan	Santor	Private
Old Municipal Cemetery	Sambat	Public
Malaking Pulo Cemetery	Malaking Pulo	Public
St. Thomas Memorial Garden	Malaking Pulo	Private
Tanauan Catholic Cemetery	Trapiche	Semi-Private

Municipal Cemetery



Himlayan sa Tanauan



4.5 Solid Waste and Waste Water Facilities

To address the perennial waste problem in the City of Tanauan and for the efficient and effective management and disposal of solid wastes in compliance with RA 9003 otherwise known as “Ecological Solid Waste Management Act of 2000”, the 10-Year Solid Waste Management Plan (SWMP) for the city was formulated. On 13 December 2016, thru National Solid Waste Management Commission, NSWMC Resolution No. 831 series of 2016, the 10-year Solid Waste Management Plan (2016-2026) of Tanauan City was approved. This SWMP encompasses goals, key issues facing the community, strategies and approach for the solid waste management system, including the monitoring of its implementation.

Continuous review and revision of the City Solid Waste Management Plan to consider changes in technology, management objectives and policy updates was discussed in page 69 of the 10-year Solid Waste Management Plan for Tanauan.

This 10-year Solid Waste Management Plan for Tanauan City is hereto attached as Annex 4.1.

In addition, there are local ordinances adopted to regulate waste disposal. One of the key source reduction initiatives of the LGU is the on-going implementation of waste segregation at source or at the household’s level. It is anchored on the City Ordinance No. 06-08 and was tagged as “No Segregation, No Collection” policy. Recycling and backyard composting is also being encouraged by the program. Collected bio-degradable wastes are being processed at the City MRF at Barangay Bilog-bilog, this city. The aforesaid MRF was issued an Environmental Compliance Certificate (ECC-4A-2003-256-120) by Environmental Management Bureau, Region IV-A.

Another program for source reduction is the on-going implementation of City Ordinance No. 2012-05 or the ordinance prohibiting the use of plastic bags on dry goods, regulating its utilization on wet goods and prohibiting the use of Styrofoam/styrophor in the city of Tanauan and prescribing penalties for violations thereof. Market goers are encouraged to bring their own bag or eco-bags as alternative for plastic bags and containers whenever they will buy cooked foods.

The LGU plans to continue and strengthen the implementation of these source reduction techniques within the next ten (10) years. Whenever there is a need for additional ordinances to promote source reduction, appropriate legislation can be proposed to the Sangguniang Panlungsod. Massive IEC will be conducted and funds will be allocated for the implementation of the source reduction program.

4.5.1 Volume of waste Generation/Facilities

As of 2013, the annual total gross of collected garbage fee reached to 17, 031 tons or pesos which came from all sources. In 2014, the city declared it a no waste city since garbage were collected at source and directly forwarded to the Materials Recovery Facility. Household wastes contribute almost forty (40%) percent of the total garbage volume.

Table 4.18 Volume of Solid Waste collection, CENRO,2013.

Sources	Average volume per day (tons)
Residential	9.6
Market	6
Institutional	2.4
Commercial	3.6
Hospitals	2.4
TOTAL	24

Table 4.19 Summary of payment in million to S.B. Hain Enterprises

Year	Amount In Peso (Million)	Total. Of Truckloads
2011	20,688	3,448
2012	17,683	2,694
2013	17,031	2,433

Source: CENRO, 2011

4.5.2 Methods of Solid Waste Disposal/Treatment

Presently, the LGU has two (2) dump trucks intended for collection of bio-degradable wastes. Bio-degradable wastes are being brought directly to the city MRF at Barangay Bilog-bilog. The private hauler has three (3) garbage compactors, three (3) dump trucks and one (1) min-truck. These are being used in the collection of all kinds of waste from all sources. Upon establishment of Barangay MRFs, the barangays may

outsource or procure their own dump truck or any vehicle which could be used for the garbage collection.

The LGU owned dump trucks and the private hauler use plastic drums in the collection of bio-degradable wastes from households and other sources. Barangays are also encouraged to use the same methods to prevent from spillage. Recyclable garbage is either sold to local junkshops or dispose through the private haulers.

The City has an existing Ordinance (City Ordinance No. 06-08) pertaining to the solid waste management. Section 6 of this ordinance provides for the proper segregation and disposal of household wastes.

Furthermore, the LGU have commissioned the NLC Garbage Services for the collection and disposal of the garbage since 2014 which covers collection for thirteen (13) barangays. Said private hauler disposes their collected residual wastes at the sanitary landfill owned by Severino Hain located at Barangay Bubuyan, Calamba City, Laguna with ECC NO. ECC – LLDA-2008-001-9200.

In addition, agro-industrial wastes are being managed through the installation of waste water treatment facilities which includes biogas utilization.

4.5.3 Waste Generation by Source and Treatment Disposal

All barangay MRFs have provisions for vermin-composting beds for their compostable waste or can be brought to the city MRF. Composted products that are considered an organic fertilizer can be distributed to the local farmers. Generated vermicast was tested and has passed the range to be considered as organic fertilizer. Presently, the LGU owns and operates an MRF. Such facility has granulator which shreds biodegradable wastes to be processed into vermicast.

Hazardous wastes from hospitals are being hauled by their own private hauler. The city's owned private hauler ensures that said hazardous wastes from hospitals are not mixed with the general wastes.

4.6 HOUSING

4.6.1 Inventory of dwelling by type of construction materials

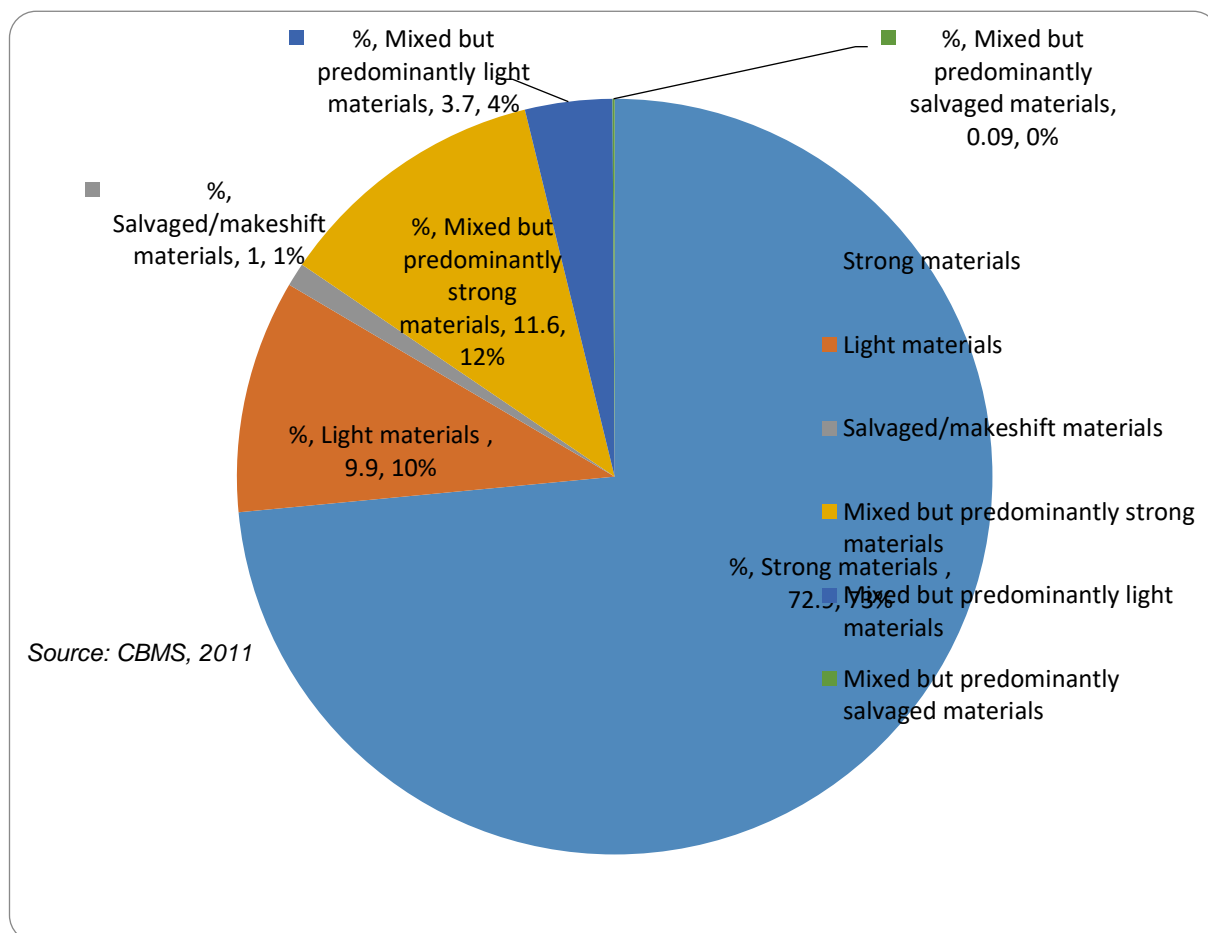


Figure 4.15 Dwelling Type by materials

Source: CBMS 2011

Around 73% of the respondents use strong materials (concrete, brick, stone, wood) for the outer walls of their houses as shown above. Twelve percent (12%) uses mixed but predominantly strong materials. These materials can be considered as half concrete/brick/stone and half wood/ galvanized iron/aluminum. Ten (10%) percent uses light materials which include bamboo, sawali, cogon, and nipa. Only a small percentage of the respondents use predominantly light materials and salvaged makeshift materials for their outer walls.

4.6.2 Inventory of Residential Subdivisions

Table 4.20 Inventory of Residential Subdivision

NAME OF SUBDIVISION	TYPE	BARANGAY	AREA (Has.)
Roman Ville Subdivision	R-2	Darasa	5.58
Ramonita Country Homes	R-3	Darasa	6.20
St. Joseph Subdivision 1 & 2	R-2	Darasa	7.9 / 2.4
Colbella Homes	R-3	Darasa	15.30
San Bernardo Village	R-2	Darasa	4.00
San Sebastian Village	R-2	Poblacion III	5.30
Darasa Compound	R-3	Darasa	3.10
Soledad Park	R-2	Darasa	6.57
Spring Homes Subdivision	R-3	Darasa	
Pilar Ville Subdivision	R-3	Darasa	7.70
Primavera Homes	R-2	Darasa	6.70
Blue Isle Subdivision	R-3	Darasa	3.00
Cambridge Place	R-2	Darasa	30.80
Kriscel Subdivision	R-3	Poblacion III	1.40
Mt. View Subdivision	R-2	Poblacion III	24.60
Celeste Subdivision	R-3	Poblacion III	1.00
Yatco Subdivision	R-2	Poblacion VII	0.92
Tapia Subdivision	R-2	Poblacion VI	5.20
Oltap Subdivision	R-2	Poblacion VI	2.90
Gloria Compound Subdivision	R-2	Poblacion VI	4.90
Teresa Subdivision	R-2	Poblacion VI	3.00
Laros Subdivision	R-2	Poblacion VII	0.92
Maligaya Subdivision	R-2	Sambat	7.90
Reaville Subdivision	R-3	Poblacion VII	6.90
Kaisahan Village	R-3	Bagumbayan	8.00
Bagumbayan Subdivision	R-2	Bagumbayan	9.30
Maryville Subdivision	R-3	Bagumbayan	3.50
Munting Paraiso	R-3	Mabini	1.10
Josefa Subdivision	R-2	Sambat	6.60
Saratoga Hills	R-1	Suplang	149.90
Plantacion Hills	R-1	Suplang	
Gentle Green Subdivision	R-1	Trapiche	12.40
Plantacion del Sol	R-1	Pagaspas	23.30
Villa Corazon	R-3	Santor	2.00
Sandia Homes	R-3	Cale	8.7953
Dona Narcisa Subdivision	R-2	Hidalgo	3.90
Amare Homes	R-2	Darasa	1.1655
Ciudad Victoria	R-2	Darasa	3.1789
Citta Maria	R-2	Darasa	4.40
St. Matthews	R-2	Darasa	3.4752
Hillsboro Subdivision	R-1	Santor	4.8778
Primavera Subd. Phase II	R-2	Darasa	7.2971
Deca Homes Subdivision	R-3	Balele	15.8187

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South Savana Courtyard	R-3	Janopol Oriental	3.1051
MCDC Ecoverde Homes	R-2	Banjo East	6.312
Bakers Home	R-3	Darasa	0.2027
Grand View Heights	R-2	Sambat	3.4195
Mabini Hills	R-3	Talaga	3.1051
TOTAL			436.203

4.6.3 Inventory of Households & Housing Units Living in Danger Areas

Table 4.21 Inventory of households and housing units living in danger areas

Name of the informal settlement	Number of households	Settlers origin	Year the area was occupied	Ownership: government, private landowner	Zoning:	Type of assistance received: CMP; GK; other	Entities providing assistance: barangay fund; development fund; local fund.
Sampalucan	125	Brgy. Poblacion III	1979	government and private	near riverbank	barangay and LGU assistance	barangay and LGU assistance
Bukluran I	350	Darasa	1980	government	railroad area	barangay and LGU assistance	barangay and LGU assistance
Bukluran II		Darasa					
Pag-asa I		Darasa					
Pag-asa II		Darasa					

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Table 4.22 Tanauan Hazard Statistics

Barangay Hazard	Brgy Purok/Sitio/ Subdivision	# of Families likely to be affected	Total Population	Gender		Ages: 0-12 months	Ages: 16 yrs and down	Ages: 17 yrs and up	Person w/ disability		Early Warning System
				Male	Female				Male	Female	
Poblacion 1											
Flood	1	426	2017	1006	1011	1614 children		87		22	Bells, Landline, Mobile Phone
Volcanic Eruption	1	426	2017	1006	1011	1615 children		87		22	
Landslide		0	0	0	0	0		0		0	
Fire	1	62	122	70	52	58 children		72		0	
Poblacion 3											
Dengue		937									
Flood		50									
Volcanic Eruption		937									
Poblacion 4											
Flood		8	54	26	28	12 children		5		0	Bells, Landline, Mobile Phone
Dengue		832	4424	2231	2193	660 children		60		3	
Fire		832	4424	2231	2193	660 children		60		3	
Vehicular Accident											
Ambulong											
Flood		200	805	398	407	369 children		415		7	
Dengue		10	10	2	8	10 children					
Scale Insect		28 farmers	1415 trees								
Volcanic Eruption		1197	6229	2979	3050	243 children		4941		30	
Altura Bata											

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Flood		17	93	398	407	369 children	415		7	
Scale Insect		10 farmers	0							
Dengue		0	0	2	8	10 children				
Altura Matanda										
Flood		50	120							
Dengue		132								
Fire		132								
Altura South										
Flood		17	93	30	30	30 children	13			

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Tanauan Hazard Statistics

Barangay Hazard	Brgy Purok/Sitio/Subdivision	No. of Families likely to be affected	Total Population	Gender		Ages: 0-12 months	Ages: 16 yrs and down	Ages: 17 yrs and up	Person w/ disability		Early Warning System
				Male	Female				Male	Female	
Boot											
	Insect Scale	14 farmers	775 trees								
	Dengue	1300	6500	3968	2523	102 children		336	72 adult		
	Fire	2,3,4,6	345	2534	1311	1223	38 children	249	51 adult		
Cale											
	Flood	6	39	300							
	Dengue				8	9	17 children				
	Scale Insect	5 farmers	58 trees								Bell, Landline, Mobile phone
Darasa											
	Dengue	Ramonita, 1,2, St. Joseph	1562	4902	1950	2082	249 children	600	21		
	Fire	1, 2, Pagasa	800	4000	800	800	1985 children	350	15		
	Vehicular Accident		900	4500	900	950	2240 children	400	10		Bell, Landline, Mobile phone

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Gonzales										
	Flood	5,6,7	30	65	39	21	92 children	58	0	Bell, Megapho ne
	Dengue		26	54	46	39	29 children	16	0	
	Volcanic Eruption	1 to 7	392	104	51	79	38 children	69	8	
	Scale Insect		41 farmers	4308 trees						
Janopol Occidental										
	Flood	1	2	563	231	102	129 children	32	2	
	Dengue		560	2734	1346	1002	102 children	336	10	
	Fire	3,5,6	347	1534	511	323	38 children	149	109	
	Scale Insect		200 farmers							
Natatas										
	Flood		114	50 families						Bell,L,Ph one
Sambat										
	Flood		12							Bell, Landline, Megapho ne
	Dengue			805						

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Tanauan Hazard Statistics

Barangay Hazard	Brgy Purok/Siti o/Subdivision	No. of Families likely to be affected	Total Population	Gender		Ages: 0-12 months	Ages: 16 yrs and down	Ages: 17 yrs and up	Person w/ disability		Early Warning System
				Male	Female				Male	Female	
Santol											
Typhoon		7	36	16	20	22	13	1			Bell, Landline, Megaphone
Dengue		104	457	219	238	315	138	4			
Landslide		3	3 families	7	9	4	11	0			
Scale Insect		25 farmers									
Sulpoc											
Flood	344 household										Bell, Landline, Mobile phone
Fire		1 family									
Dengue		5 families				5					
Scale Insect	200 farmers	90 families									
Suplang											
Flood			25								Bells, Megaphone
Fire		0									
Dengue			150								
Scale Insect		120 farmers									

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Talaga										
Vehicular Accident	1,2,3	989	4320	2165	2195	977	3336	47	Bell, Landline, Mobile phone	
Dengue	1,2,3	989	4360	2165	2195	977	245	42		
Landslide	2,3	40	1453	721	731	369	1090	15		
Scale Insect		47 farmers								
Tinurik										
Flood	Zone 2	14	68	30	38	12	5	Bell, Landline, Mobile phone		
Dengue		1075	4933		2561	102	300			
Fire	Zone 3,4,7		40%							
Scale Insect		40 farmers								
Luyos										
Typhoon	Purok 1	60	166	90	76	5106	21	5		
Flu	Purok 2	58	276	141	135	585	35	1		

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Tanauan Hazard Statistics

Barangay Hazard	Brgy Purok/Sitio/Subdivision	# of Families likely to be affected	Total Population	Gender		Ages: 0-12 months	Ages: 16 yrs and down	Ages: 17 yrs and up	Person w/ disability		Early Warning System
				Male	Female				Male	Female	
Luyos											
Dengue		196	1109	453	915	13	242	3 adult	3		Bell, Landline, Megaphone
Scale Insect		23 farmers	122 trees								
Pagaspas											
Flood	zone 2	14	68	30	38		14	5			Bell, Landline, Mobile phone
Dengue	Zone 3	1075	4933	2376	2561	102	300		33		
Sunog	Zone 3,4,7		40%								
Scale Insect		1 farmers	300 trees								
Laurel											
Dengue			10			10					Bell, Landline, Mobile phone
Sunog	zone 3	1									
Sala		426	1828	914	914	373	541				
Sala											

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	Dengue		27	428	386	91	723		5		Bell, Megaphone
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Tanauan Hazard Statistics

Barangay Hazard	Brgy Purok/Sitio/Subdivision	# of Families likely to be affected	Total Population	Gender		Ages: 0-12 months	Ages: 16 yrs and down	Ages: 17 yrs and up	Person w/ disability		Early Warning System
				Male	Female				Male	Female	
Ulango											
Flood	purok 1,2,3	409	127	428	386	992		58	23		Bell, Megaphone
Dengue		1100	3230	1608	622	102	336		72		
Sunog		347	2534%	1311	1223	38	249		51		
Scale Insect											

Analysis Matrix

Technical Findings, Issues and Concerns	Implications / Effects	Policy Intervention
Increasing population specifically in Poblacion areas	Crowded Poblacion and City Proper areas Traffic congestion Pollution Health & Sanitation Problems	Decongest the Poblacion Barangays and City Proper by developing Central Business Districts in rural areas in order to encourage the populace to transfer to rural areas. Monitor the influx of migrants in the city Develop low – cost/socialized housing project in Barangay Ambulong, Balele, Cale, Hidalgo
Increasing number of informal settlers	Increased number of unemployed members Water Pollution (San Juan River) Increased crime incidence Increased no. of population locating in hazard prone areas	Implement Low-Cost Housing Projects Resettlement Projects Provide employment assistance Monitor the migrants through establishment of Migration Information Center (MIC)

Discontinuation of housing projects of the government or private developers	Housing shortage, unemployment of construction workers of the project and illegal squatting	Addressing it primarily through the project developer and other concerned agencies Creation of LGU Housing Board Division or Office
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4.7 SOCIAL WELFARE SERVICES

4.7.1 Facilities and Manpower

4.7.1.1 Adequacy

The table below is the list of social welfare facilities and manpower available per barangay. It includes the number of staff and indicates the physical condition of the facility. Social welfare facilities include health centers, day care centers, rehabilitation center, senior citizens' center and women center. It includes the number of staff and indicates the physical condition of the facilities.

Table 4.23 Type of Social Welfare Facilities

Name of the social welfare facility	Type of social welfare facility	Type of Clientele	No. of clientele serviced	Services: Family life education & counseling; family assistance; day care services; supplemental
Poblacion I Day Care Center	day care center	children	66	day care services
Poblacion I Senior Citizen Office	senior citizen center	senior citizen	281	medical care services; family assistance
Poblacion II Day Care Center	day care center	children	50	day care services
Poblacion II Health Center	health center	children, youth, women, parents		medical care; check-up; immunization vit a; operation timbang
Poblacion II Senior Citizen Office	senior citizen center	senior citizen	173	medical care services; family assistance

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Poblacion III Day Care Center	day care center	children	34	day care services; supplemental feeding
Tanauan Muna Day Care Center	day care center	children	30	day care services; supplemental feeding
Poblacion III Senior Citizen Office	senior citizen center	senior citizen	241	medical care services; family assistance
Poblacion IV Day Care Center	day care center	children	78	day care services; supplemental feeding
Bahay Kanlungan, Pob.IV	rehabilitation center	women, youth, children, disadvantaged families		family assistance; family education and counselling
Gawad Kalinga, Pob.IV	rehabilitaiton center	disadvantaged families		family assistance; family education and counselling
Poblacion IV Senior Citizen Office	senior citizen center	senior citizen	272	medical care services; family assistance
Poblacion IV Health Center	health center	children, youth, women, parents	3,410	medical care services; supplemental feeding
Poblacion V Day Care Center	day care center	children	52	day-care services
Poblacion V Health Center	health center	children, youth, women, parents		medical care services; supplemental feeding
Poblacion V Senior Citizen Office	senior citizen center	senior citizen	139	medical care services; family assistance
Poblacion VI Day Care Center	day care center	children	51	day-care services; supplemental feeding
Bahay Bulilit Day Care Center	day care center	children	75	day-care services
Poblacion VI Health Center	health center	parents, women, children	2,000	medical care services; supplemental feeding
Poblacion VI Senior Citizen Center	senior citizen center	senior citizen	203	senior citizen services; family assistance
Poblacion VII Senior Citizen Center	senior citizen center	senior citizen	234	medical care services; family assistance
Maligaya Compound Poblacion VII Day Care Center	day care center	children	63	day-care services
Altura Bata Health Center	health center	children, youth, women, parents	221	check-up; immunization vit a; operation timbang
Altura Bata Day Care Center	day care center	children	33	day-care services

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Altura Bata Senior Citizen Hall	senior citizen center	senior citizen	122	medical service
Altura Matanda Health Cente	health center	children, youth, women, parents		health care services; supplemental feeding
Altura Matanda Day Care Center	day care center	children	31	day care service; supplemental feeding
Altura Matanda Senior Citizen Hall	senior citizen center	senior citizen	54	medical service
Altura South Day Care Center	day care center	children	27	day care service; supplemental feeding
Altura South Health Center	health center	children, youth, women, parents		health care services; supplemental feeding
Altura South Senior Citizen Hall	senior citizen center	senior citizen	95	medical service
Ambulong Health Center	health care center	children, youth, women, parents		health care services; supplemental feeding
Ambulong Day Care Center	day care center	children	84	day care service; supplemental feeding
Honorato Laurel Day Care Center (Ambulong)	day care center	children	34	day care service; supplemental feeding
Ambulong Senior Citizen Hall	senior citizen center	senior citizen	492	medical service
Bagbag Day Care Center	day care center	children	30	day care service; supplemental feeding
Bagbag Health Center	health center	children, youth, women, parents	10	medical care
Bagbag Senior Citizen Hall	senior citizen center	senior citizen	233	medical service
Bagumbayan Day Care Center	day care center	children	52	day care service; supplemental feeding
Bagumbayan Senior Citizen Center	senior citizen center	senior citizen	446	medical care
Bagumbayan Health Center	health center	children, youth, women, parents	38	Midwives
Bagumbayan Solo Parent Center	rehabilitation center women center	solo parents, children	25	family assistance; family education and counselling
Balele Senior Citizen Center	senior citizen center	senior citizen	679	medical care
Balele Health Center	health center	children, youth,		medical care

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		women, parents		
Balele West Day Care Center	day care center	children, youth, women, parents	81	medical care
Sitio Subic Balele Day Care Center (Balele)	day care center	children	47	day care service; supplemental feeding
Banjo East Day Care Center	day care center	children, youth, women, parents	18	medical care
Banjo East Health Center	day care center	children, youth, women, parents		medical care
Banjo East Senior Citizen Hall	senior citizen center	senior citizen	208	medical service
Banjo West Day Care Center	day care center	children, youth, women, parents	42	day care services; supplemental feeding

Banjo West Health Center	health center	children, youth, women, parents		medical care
Banjo West Senior Citizen Hall	senior citizen center	senior citizen	204	medical service
Banadero Day Care Center	day care center	children	77	day care service; supplemental feeding
Banadero Health Center	health center	children, youth, women, parents		medical care
Banadero KALIPI Center	women center	women	60	family assistance; family education and counselling
Bañadero Senior Citizen Hall	senior citizen center	senior citizen	270	medical service
Bilogbilog Day Care Center	day care center	children	61	day care service; supplemental feeding
Bilog-bilog Health Center	health center	children, youth, women, parents	1050	medical care
Bilog bilog Senior Citizen Hall	senior citizen center	senior citizen	429	medical service
Boot Day Care Center	day care center	children	41	day care service; supplemental feeding

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Sitio Bulalacao Day Center (Boot)	day care center	children	16	day care service; supplemental feeding
Boot West Day Care	day care center	children	30	day care service; supplemental feeding
Boot Senior Citizen center	health center	senior citizen	560	medical care
Cale Health Center	health center	children, youth, women, parents	55	supplemental feeding program
Cale Day Care Center	day care center	children	68	day care service
Cale Senior Citizen Hall	senior citizen center	senior citizen	355	medical service
Ramonita Country Homes DCC (Darasa)	day care center	children	54	day care service; supplemental feeding
Darasa Day Care Center	day care center	children	127	day care service; supplemental feeding
Darasa Women Center	women center	adult/women	77	medical care/ family life education
Darasa Health Center	health center	children, youth, women, parents	327	pre-natal checkup, weighing/monitoring, supplemental, feeding, family planning,
Darasa Senior Citizen Hall	senior citizen center	senior citizen	623	medical service
Gonzales Health Center	health center	children, youth, women, parents		medical service
Gonzales Day Care Center	day care center	children	27	day care service; supplemental feeding
Gonzales Senior Citizen Hall	senior citizen center	senior citizen	159	medical service
Hidalgo Day Care Center	day care center	children	23	day care service; supplemental feeding
Hidalgo Health Center	health center	children, youth, women, parents	112	medical service
Hidalgo Senior Citizen Hall	senior citizen center	senior citizen	68	medical service
Janopol Occidental Senior Citizen Center	senior citizen center	senior citizen	229	medical service

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Janopol Occidental Day Care Center	day care center	children	40	day care service; supplemental feeding
Janopol Oriental Day Care Center	day care center	children	55	day care service; supplemental feeding
Janopol Orr. Senior Citizen Hall	senior citizen center	senior citizen	270	medical service
Laurel Day Care Center	day care center	children	30	day care service; supplemental feeding
Laurel Health Center	health center	children; youth; women		medical service
Laurel Senior Citizen Hall	senior citizen center	senior citizen	177	medical service
Luyos Day Care Center	day care center	children	30	day care service; supplemental feeding
Luyos Senior Citizen Hall	senior citizen center	senior citizen	170	medical service
Mabini Day Care Center	day care center	children	54	day care service; supplemental feeding
Mabini Health Center	health center	children; youth; women		medical service
Mabini Senior Citizen Hall	senior citizen center	senior citizen	171	medical service
Malaking Pulo Day Care Center	day care center	children	50	day care service; supplemental feeding
Malaking Pulo Senior Citizen Center	senior citizen center	senior citizen	359	medical service
Maria Paz Day Care Center	day care center	children	30	day care service; supplemental feeding
Maria Paz Senior Citizen Hall	senior citizen center	senior citizen	196	medical service
Sitio Mahabang Buhangin Day Care Center	day care center	children	31	day care service; supplemental feeding
Maugat Health Center	health center	children; youth; women		medical care/ animal medical care
Maugat Day Care Center	day care center	children	31	day care service; supplemental feeding
Maugat Senior Citizen Hall	senior citizen center	senior citizen	189	medical service
Montana Health Center	health center	children; youth		medical service
Montana Senior Citizen Center	senior citizen center	senior citizen	162	medical service
Montana Day Care Center	day care center	children	31	supplemental feeding program
Natatas Health Center	health center	children	274	pre-natal, family planning, TB program
Natatas Day Care Center	day care center	children	75	day care services

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Natatas Senior Citizen Hall	senior citizen center	senior citizen	247	medical service
Pagaspas Day Care Center	day care center	children	65	day care services
Pagaspas Senior Citizen Hall	senior citizen center	senior citizen	211	medical service
Pantay Bata Day Care Center	day care center	children	44	day care services
Pantay Bata Health Care Center	health center	children; youth	42	medical service
Pantay Bata Senior Citizen Center	senior citizen center	senior citizen	178	medical service
Pantay Matanda Day Care Center	day care center	children	58	day care services
Pantay Matanda Senior Citizen Center	senior citizen center	senior citizen	265	medical service
Sala Day Care Center	day care center	children	26	day care services
Sala Health Center	health center	children; youth		medical service
Sala Senior Citizen Hall	senior citizen center	senior citizen	154	medical service
Sambat Day Care Center	day care center	children	45	day care services
Sambat Senior Citizen Center	senior citizen center	senior citizen	358	medical services
Santol Day Care Center	day care center	children	18	day care services
Santol Senior Citizen's Center	senior citizen center	senior citizen	53	medical service
Santol Health Center	health center	children; youth	66	check-up/immunization; vit a; deworming; operation timbang
San Jose Health Center	health center	children; youth	45	check-up/immunization; vit a; deworming; operation timbang
San Jose Day Care Center	day care center	children	31	day care service
San Jose Senior Citizen Center	senior citizen center	senior citizen	92	medical service
Santor Day Care Center	day care center	children	37	day care service
Santor Health Center	health center	children; youth		medical service
Santo Senior Citizen Hall	senior citizen center	senior citizen	412	medical service
Sulpoc Health Center	health center	children; youth	58	medical service
Sulpoc Senior Citizen Center	senior citizen center	senior citizen	297	medical service
Sulpoc Day Care Center	day care center	children	35	day care service; supplemental feeding

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Suplang Day Care Center	day care center	children	33	day care service; supplemental feeding
Suplang Health Center	health center	children; youth; women	250	health care services; supplemental feeding
Suplang Senior Citizen Hall	senior citizen center	senior citizen	127	medical service
Talaga Day Care Center	day care center	children	44	day care service
Talaga Health Center	health center	children; youth; women	969	health care services; supplemental feeding, oplan patak vit.a; immunization program
Talaga Senior Citizen Hall	senior citizen center	senior citizen	420	medical service
Tinurik Health Center	day care center	children	38	day care service
Tinurik Day Care Center	health center	children; youth; women	32	health care services; supplemental feeding, oplan patak vit. a; immunization program
Tinurik Senior Citizen Hall	senior citizen center	senior citizen	421	medical service
Trapiche 3 Day Care Center	day care center	children	58	day care service
Trapiche 4 Day Care Center	day care center	children	28	day care service
Trapiche Health Center	health care center	children		health care service
Trapiche Senior Citizen Center	senior citizen center	senior citizen	457	medical service
Ulango Day Care Center	health center	children	44	check-up/immunization; vit a; deworming; operation timbang
Ulango Health Center	day care center	children	47	day care service
Ulango Senior Citizen Hall	senior citizen center	senior citizen	189	medical service

Wawa Day Care Center	health center	children	17	medical service; check-up/immunization; vit a; deworming; operation timbang
Wawa Health Center	day care center	children	27	day care service
Wawa Senior Citizen Hall	senior citizen center	senior citizen	138	medical service

4.7.2 Services Rendered

Table 4.24 Historical Number of Population Served by Type of Clientele System

	2010	2011	2012	2013	2014
AICS	477	742	421	957	1027
GRANTS & AIDS	2047	1153	389	1461	191
Balik Probinsya	97	22	2	9	31
Tulong Hatid	400	110	58	117	151
Disaster victims	61	213	1	-	8847
Children In Conflict with the Law (CICL)	17	49	3	36	42
Special cases of children	90	15	8	132	22
Men & Women In Difficult Circumstances	45	67	14	56	53
Emergency Shelter Assistance	13	18	1	13	18
Kalipunan ng Liping Pilipina (KALIPI)	2195	2350	2338	2440	2350
Daycare Parents Association	58	58	58	58	58
Daycare Workers Association	57	57	57	58	58
Empowerment and Reaffirmation of Paternal Abilities (ERPAT)	935	623	639	1040	1200
Lingap sa Bata	120			70	52
Lingap sa Bata Parents	108			54	47
Pag-asa Youth Association	474	356	273		280
AKAPIN BATANGAS INC. -(Samahan ng mga magulang na may anak na may kapansanan)	184	198	198	40	65
Senior Citizen	7089	7568			
Solo Parents	1029	1054	1054	1065	1095
Persons with Disability (PWD)	678	710	721		1058
Self Employment Assistance Recipients	371	353	404	55	68
Day care Children	1942	2192	3015	2781	2655
Tanauan Kanlungan Center Clients	24	23		35	41
Pantawid Pamilya Program (locally funded)		20	20	20	20

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Pantawid Pamilya Program (National)		2523		2960	3250
Farmers & Fisherfolks		213			672
Philhealth Members	6196	8165	9800	8427	8498
Social Pensioners		41	51	66	172

Analysis Matrix – Social Services

Technical Findings Issues and Concerns	Implications/Effects	Policy/Intervention
Absence of support programs and facility particularly for battered /abused women	<p>Abused and battered women will be forced to just accept her faith and face her reality of humiliation</p> <p>Victims of rape and other forms of sexual abuse suffer humiliation and emotional discomfort as they tell their stories from one agency to another during interview</p> <p>Abused women who eventually gets impregnated are most likely to suffer the same fate</p>	<p>Provide psychological support that would uplift the morale of these victims so that they could be independently productive</p> <p>Provide drop-in facility specifically appropriated for battered/abused women wherein all concerned agencies could gather and hear the victim’s story told once</p>
Absence of livelihood programs for clients	Clients especially rape victims and other cases of abuse who are not advised to go out even to our training center do not have options to pass their time and forget their dilemma, in a more productive manner	<p>Provide clients with training for livelihood programs</p> <p>Provide equipment such as sewing machines and the likes to sustain the program</p>
Insufficient support to abused victims – psychological	Most likely to suffer psychological imbalance	Provide professional support to victims

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<p>Inadequate facility for Persons with disability</p>	<p>PWD don't have access to destinations.</p>	<p>Strict implementation of laws related to the welfare of persons with disability</p> <p>Acquisition of a PWD-friendly vehicle for ease of their travel</p>
<p>Absence of rehabilitation center facilities for drug users</p>	<p>Improper and delayed rehabilitation of drug dependents</p>	<p>Establishment of drug dependents rehabilitation center</p>

4.8 Protective Services

4.8.1 Peace and Order

Peace and Order is vital in every community. The stakeholder’s support of the PNP indicates that “The people seek protection from the police that seek support from the people”. Every accomplishment achieved by the police organization is through the existence of partnership with the community and the local government unit.

For the City of Tanauan, there is an active presence of the Philippine National Police, the Bureau of Jail Management and Penology, and the Bureau of Fire Protection which are all being supported by the city government.

4.8.1.1 Tanauan City PNP

4.8.1.1.1 Police Protective Services

Table 4.25 Police Station Manpower and Condition, Year 2014

Name Of Police Station	Type Of Police Station	Location	Area (Sq. M.)	No. Of Staff	No Of Vehicles Types** (NO OF UNITS)	Physical Condition
Tanauan PNP Station	Headquarters	Pob.3	162	115	HILUX, DMAX, TOYOTA ALTIS, TOYOTA CROSSWIND, BACK TO BACK, HUMMER TYPE JEEP	fair
	Traffic Outpost	– Crossing Tanauan	4.5x3m		Motorcycle	poor

Source: PNP TANAUAN

The Tanauan City main PNP headquarter is located at #142 Mt. View Subdivision, F Platon St., Barangay Poblacion 3 within the premises of the City Hall and with a total land area of 162 square meters. It has a substation located at the intersection of JP Laurel highway and A. Mabini Ave.

The policeman to population ratio is an indicator which measures the adequacy of the police force in its task of promoting peace and order and providing security to the population and property. It is computed by dividing the total number of policemen to the total population. Ideally, the police-population ratio is 1: 1000. However, for the last

three years the police to population ratio in Tanauan is at 1: 1,370. Thus, in order to augment the standard ratio, the city needs to hire additional police force.

4.8.1.1.2 Police Population for the Past Five Years

Table 4.26 Police Population for the Past Five Years

	2010	2011	2012	2013	2014
No. OF POLICE FORCE	75	77	90	98	104
POPULATION	142537	142537	142537	142537	142537
RATIO	1:1900	1:1851	1:1,583	1:1,454	1:1,370

* NSO 2007 Census Source: *Philippine National Police*

In its effort to help in maintaining peace and order, the city government involves the participation of the Barangay Safety Officers (Barangay Tanod) and the Lupong Tagapamayapa. The barangay tanod patrols the barangay against lawless individuals while the Lupong Tagapamayapa settles the cases which can be decided within the barangay level. Furthermore, barangays are equipped with barangay vehicles to carry out services. This is also done to prevent jail congestion for petty crimes/offenses.

4.8.1.1.3 Capacity, condition and number of Peacekeepers per Barangay

The table below shows the number of barangay Tanod and Lupong Tagapamayapa for every barangay within the city.

Table 4.27 Capacity, condition and number of Peacekeepers per barangay

Name of Barangay	Type of Service	Number of Volunteers	Facilities and Equipments	Physical Condition
Altura Bata	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Radio, gun, boots, raincoats, flashlights, emergency lights. shovel	good
Altura Matanda	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	36	barangay service vehicle, shot gun	poor

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Altura South	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	31	whistle, batuta, radio, rain coats, generator	fair
Ambulong	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	two-way radio, vest for traffic	fair
Bagbag	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Whistle, shot gun, rope, bolo, helmet, bota, raincoats, flashlight.	good
Bagumbayan	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	28	Flashlight, rubber boots, radio, patrol car, raincoat, batuta, shotgun, whistle, bike, office of the bpso, brgy. Patrol service, heavy generator, rope, axes, 2 fire extinguishers, megaphone, rubber boots, rain coats, fogging sprayer, heavy ladder, radio, heavy flashlight.	critical to fair
Balele	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Flashlight, radio	poor
Bañadero	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	31	radio, shotgun, batuta, flashlight, whistle, baton, raincoat, boots, handheld radio, flashlight, mat, mosquito net, generator, power saw, bolo, hard hats, rain coats, life vest, boots and others,	fair
Banjo East	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	23	Barangay outpost, brgy. Patrol (Service Vehicle), shot gun, two-way radio, flashlights, rain coats/ rubber boots, batuta	fair

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Banjo West	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Barangay outpost, patrol, shot gun, two-way radio, flashlights, rain coats, rubber boots, batuta	fair
Bilog-Bilog	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	29	hand radio, whistle, batuta, shot gun, rope, bolo, megaphone, helmet, raincoat, flashlight	fair
Boot	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Batuta, shot gun, flashlight, boots, rain coats, shovel, rake, hard hat/helmet	fair
Cale	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Brgy. Outpost, batuta, pito, two- way radio, rain coat, vest uniform	fair
Darasa	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Motorcycle, raincoats, boots, tricycle, batuta, handheld radios, whistle, flashlight	fair
Gonzales	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30		
Hidalgo	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	hand radio probaton, whistle, shot gun, rope, bolo, microphone, helmet, bota, rain coats, flashlight	good
Janopol Occidental	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	whistle, raincoats, megaphone, CCTV, handhled radio, baton, flashlights, emergency lights, rubber boats	good
Janopol Oriental	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	uniforms, boots, rain coats, whistle, batuta, flashlight, megaphone patrol jeeps	good

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Laurel	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	batuta, shot gun	fair
Luyos	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	flashlight, rubber boots, radio, patrol car, raincoat, batuta, shot gun, whistle, bike	good
Mabini	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30		fair
Malaking Pulo	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	whistle, radio, shot gun, flashlight, batuta, rope, boots, flashlights, rain coats, bolo, hard hat	fair
Maria Paz	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30		
Maugat	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	31	outpost, firearms, batuta, whistle	fair
Montaña	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	boots, flashlights, bolo, rain coats, blanket, shot gun, bgry. patrol	fair
Natatas	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	radio base, patrol, owner tyep jeep, garbage truck, ambulance	critical to fair
Pagaspas	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	hand radio, whistle, baton, shot gun, rope, bolo, microphone, helmet, boots, raincoats, flashlight	good

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Pantay Bata	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Base Radio, whistle, shot gun, handheld radio, CCTV	good
Pantay Matanda	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	29	barangay service vehicle, shot gun	poor
Poblacion 1	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Megaphone, Whistle, Medical Kit, Posas, batuta	fair
Poblacion 2	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	26	fire extinguisher, hard hats, life jackets, rain coats, mega phone, jungle bolo, rubber boots, axe, flashlights, generator	fair
Poblacion 3	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Radio, shot gun, flashlight, motor patrol, batuta, emergency light, emergency kit.	fair
Poblacion 4	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	31	Barangay Tanod Office; Barangay Tanod Outpost; Service Vehicle; Barangay Jail;	poor
Poblacion 5	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30		
Poblacion 6	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	2-unit shotguns; 6 pcs. Hand radio; 10 pcs. Night stick; 3-unit patrol cars; 10 pcs. Traffic vest; 20 pcs tanod vest; 10 pairs rain boots; 10 pcs. Rain coats; 50 m rope; 10 pcs hard hats; 15 pcs. Flashlights; 2 pcs. Ax	good
Poblacion 7	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	rubber boots, whistle, mega phone, arnis, radio, vest, brgy. Patrol, rain coats, hard hats, flashlights	fair

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Sala	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	shotgun, flashlight, raincoats, boots, hard hats, handheld radio, service vehicle, traffic vest, rope, bolo,	fair
Sambat	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	29	whistle, raincoats, policemen's club, boots, policemen's club, whistle, gun, raincoats, vest, rope, ax/bolo, powersaw, ladder, boots	good
San Jose	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	Radio, shot gun, flashlight, motor patrol, batuta, emergency light, emergency kit.	fair
Santol	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	radio, gun, flashlight, bicycle	fair
Santor	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30		
Sulpoc	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30		
Suplang	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	shotgun, rope, hard hat, heavy duty flashlight, First Aid Kit, Boots, Coleman, Megaphone, patrol, batuta/patrol	fair
Talaga	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	31	Brgy. Detention cell, brgy. Outpost, handheld radio, barangay vehicle, whistle, safety shoes, batuta, flashlight, megaphone, hard hat, rain coat, fogging machine, stretches, fire extinguisher, power saw, rope, medical kil, ax	good

Trapiche	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	29	brgy. Outpost, brgy. Patrol service, shotgun, wo-way radio, flashlights, rain coats, rubber boots, batuta, bicycles, chain saw, ropes, hard hats, megaphone, rubber boots, shovels, flashlights	fair
Ulango	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	hand radio, whistle, baton, shot gun, rope, bolo, microphone, helmet, boots, raincoats, flashlight	good
Wawa	Traffic, Peace & Order, Disaster Lupong Tagapamayapa	30	barangay patrol, flashlights, plastic whistle, handheld radio	fair

4.8.2 Crime Incidence

4.8.2.1 Crime Incidence for the last five (5) years

Crime incidence is defined as the number of crimes that are in violation of penal law reported for a specific period of time. It has two categories namely: Index crime and non-index crime. Index crime refers to crimes which are sufficiently significant and which occur with sufficient regularity to be meaningful. Included in this category are the following: murder, physical injury, robbery, theft and rape, while non-index crimes are crimes not included in the index crimes.

Table 4.28 Crime Statistics (Blotter Base) For the Past Five Years

Types of Crime	2010	2011	2012	2013	2014
Total Crime Volume	308	280	263	392	248
Index Crime	141	147	102	232	248
Crime Against Person	67	92	61	93	121
Murder	36	48	36	31	65

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Homicide	1	0	5	3	3
Physical Injury	23	36	25	49	42
Rape	7	8	12	10	11
Crime Against Property	74	55	41	139	127
Robbery	25	11	14	58	46
Theft	28	31	25	48	60
Carnapping	21	13	14	30	20
Cattle Rustling	1	0	1	3	1
Non-Index Crime	167	133	161	160	170
Total Index Crime Solved	53	57	55	61	75
Total Index Crime Cleared	79	79	73	99	108
Total Index Crime Unsolved	62	68	29	133	140
Non-Index Solved				107	117
Non-Index Cleared				121	147
Non-Index Uncleared				39	23
Total Crime Solved	220	182	202	168	192
Total Crime Cleared	246	210	232	220	254
Total Crime Uncleared	62	70	31	172	164
Index Crime Solution Efficiency Rating (ICSER)	37.58%	38.77%	53.92%	28.63%	30.24%
Index Crime Cleared Efficiency Rating (ICCER)	79.80%	53.74%	71.56%	44.05%	43.55%
Crime Volume CSER	71.42%	65%	76.80%	49.03%	45.82%
Crime Volume CCER	79.87%	75%	88.21%	61.05%	60.86%
AMICR	8.24	8.59	7.43	11.73	12.82
AMCR	18	16.37	19.17	21.49	21.65

Source: Tanauan City PNP

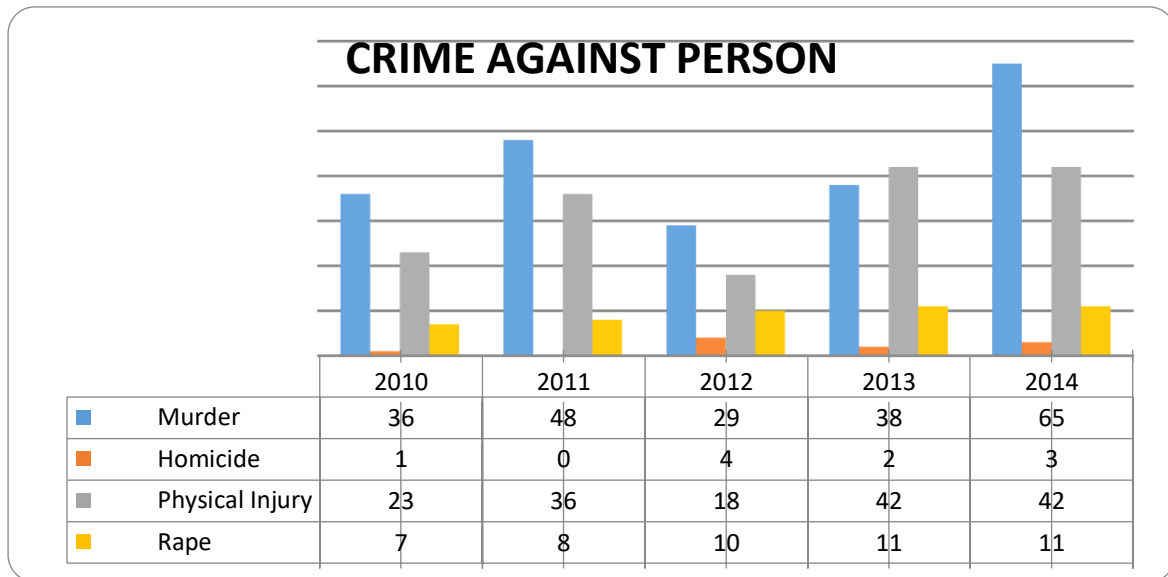


Figure 4.16 Crime Rate by Type, Year 2010 to 2014

Source: PNP, Tanauan

The table shows that murder is the particularly the main cause of crime against persons in the city.

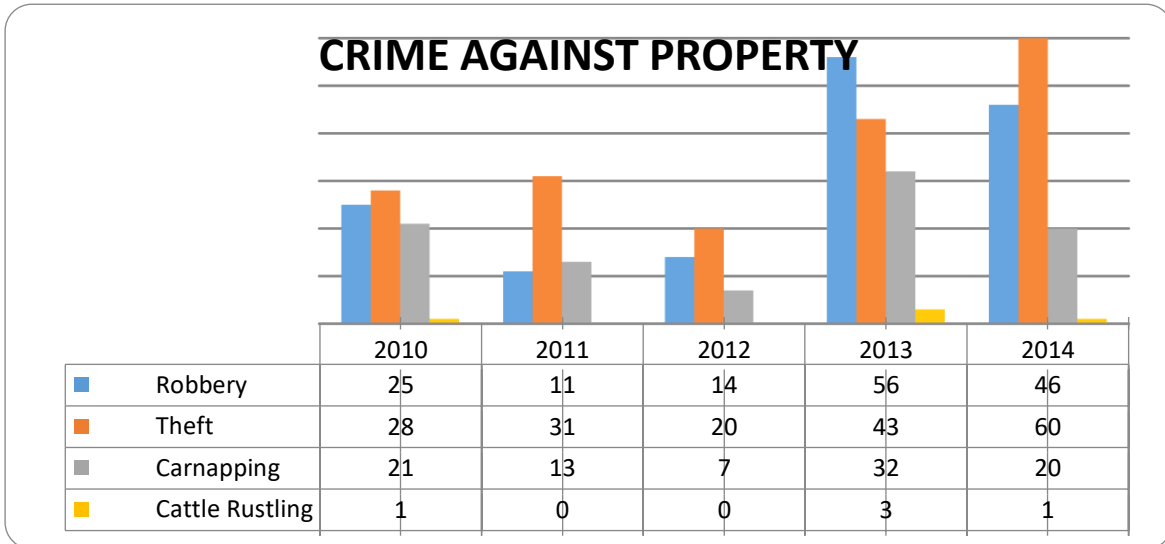


Figure 4.17 Crime Against Property, Year 2010 to 2014
 Source : PNP, Tanauan

The figure above clearly manifests that theft is prominent in crime against property in the city.

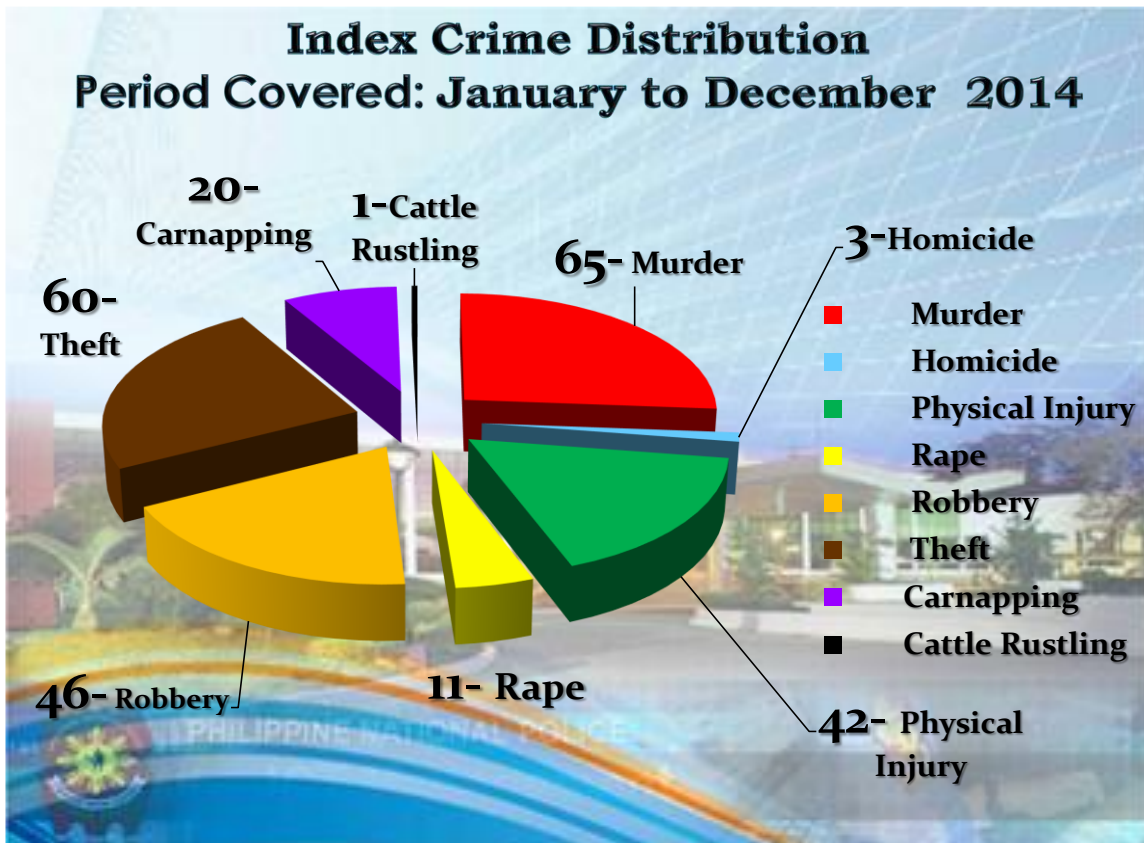


Figure 4.18 Index Crime Distribution, Year 2014
 Source : PNP Tanauan

Analysis Matrix – Protective Services

Technical Findings Issues and Concerns	Implications/Effects	Policy/Intervention
Lack of personnel/insufficient police force Police-population ratio does not meet the standard ratio that would support the city's population	Increased in number of crimes Negative image of the city Reduced in number of existing and potential investors Lessen job opportunities Increased mortality rate	Hire additional personnel Strengthen partnership with Barangay Peace Action Teams (BPATs), Civilian Volunteer Organizations (CVOs) and LGU peace keeping forces (CSU, MAC G, SWAT, etc)
The police outpost is mainly situated within the poblacion	Crimes outside the Poblacion is not properly monitored	Extend police outpost to the barangays especially where crimes are prevalent Establishment of PNP substations
No appropriate program for the minor offenders		Establish a facility intended for minor offenders
Insufficient number of PNP personnel	Inefficient response to emergencies and crime prevention	Hiring of additional PNP personnel
Poor performance and misbehavior of police personnel	Lack of trust and reliance of people to police force	Training of police personnel on ARTA and Civil Service rules and regulations
Increasing incidence of petty crimes (e.g. theft, robbery)	Uneasy living within the neighborhood	Increase police visibility Enforce curfew for minors
Occurrence of drug related cases	Feeling of unsafe/unsecured by the people in the community due to threat of crimes by persons under the influence of drugs	Provision of leisure and recreational/sports activities for the youth

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		Police visibility 24/7 to maintain peace and order
The city is unprepared for manmade and natural calamities/disasters	Confused and unprepared residents that will lead to chaos Increased in no. of mortality Increased damage to life and properties	Coordination with concerned agencies for a proper disaster preparation, response and recovery training and seminar Prepare DRRM Plan, Contingency Plan and other related plans

4.8.3 Fire Protective Services

Table 4. 29 Fire Station Capacity and Condition, Year 2014

Name of Fire Station	Type	Number of Firemen	Physical Condition	Physical Condition of Equipments		Name of Administrator	Contact Number
Tanauan City Fire Station	Main Station	21	Fair	Fair		SRINSP Marilyn C. Calapati	778- 2018 / 729- 5741

The Bureau of Fire Protection, along with its mission, vision and objectives in order to attain a fire free community together with its existing resources coming from both the national and local government has continued to exert its collective efforts to maximize its accomplishment in all fields of fire-related works.

At present, Tanauan City Fire Station is housed at Gonzales St., Brgy 1 Tanauan City beside the office of Tanauan Water District with total manpower strength of 21 active fire personnel. The said office is currently equipped with three (3) fire trucks ready to respond in all types of fire emergencies within the area of Tanauan and its adjacent municipalities. Statistically speaking, the ideal ratio of fireman to population is 1: 2000 inhabitants. Given that the CBMS population for 2011 which is 147,696, it is deemed that we should increase the number of firefighter by 54 in order to keep up with the standard ratio. Our population for the year 2011 (CBMS) accounted firetruck to population ratio is 1:28,000 and it still needs two more fire trucks to serve its constituents in times of dire needs

4.8.3.1 On Fire Suppression

Fire incidence refers to the volume of incidents caused by fire and the deaths, injuries and total value of property loss due to this incident. Total value lost offers more relevance to planners than average value lost, as the latter can be misleading since a single commercial establishment in urban areas can be of greater value than thousands of incidents put together.

Based on records, Tanauan City Fire Station has responded to numerous fire incidents within our area of responsibility and other nearby city/municipalities.

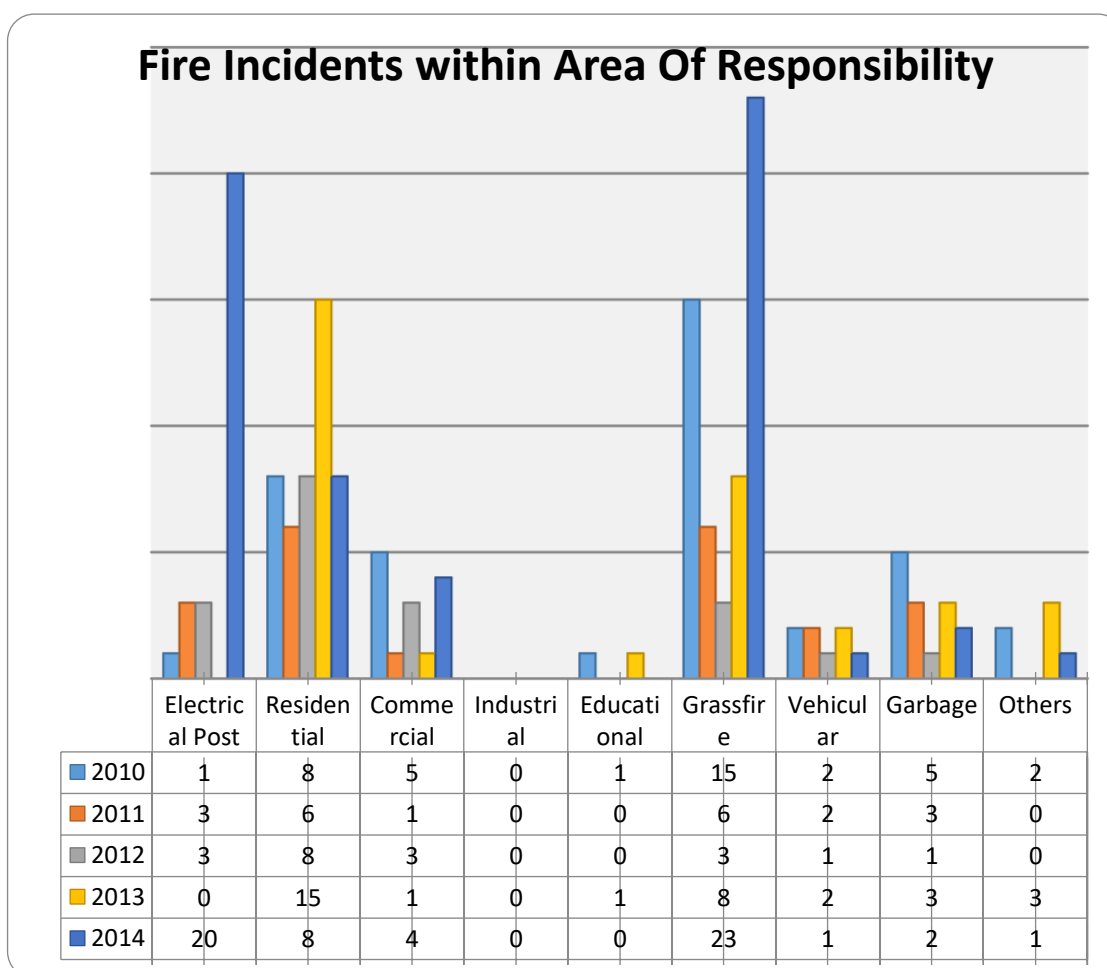


Figure 4.19 Fire Incidence Year 2010 to 2014

Source : BFP Tanauan

Based on the figure presented coupled with the compiled reports on fire incidents from 2010 up to present. 2014 has most number of fire incidents with a total of 59 cases compared to the previous year which is 33.

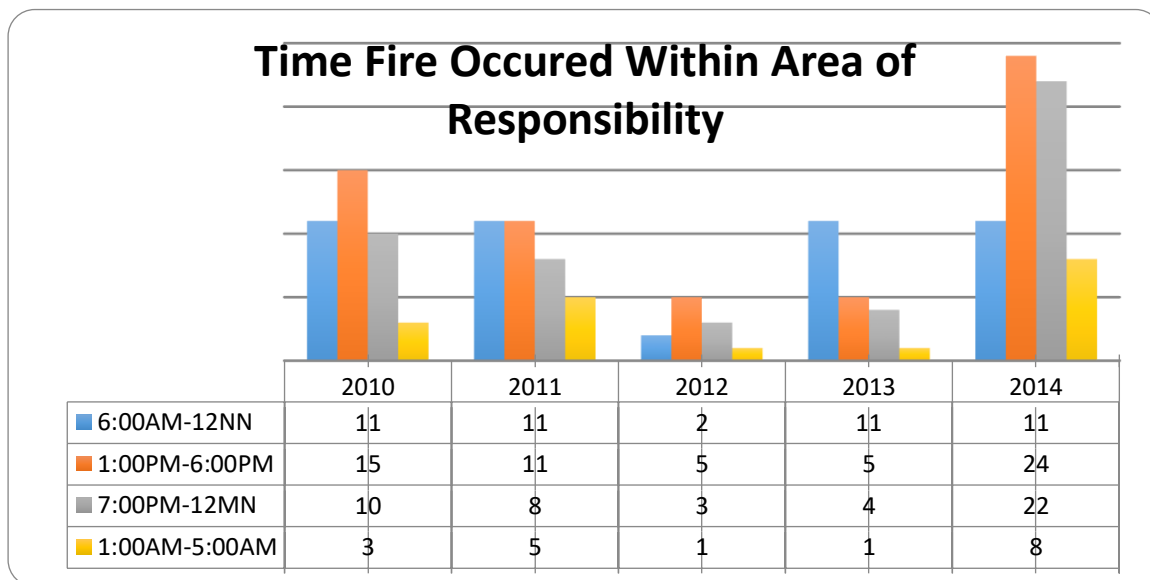


Figure 4.20 Time of Fire Occurrence, Year 2010 to 2014

Source: BFP Tanauan

The table clearly shows that during the year 2014, twenty occurred between 1:00 in the afternoon until 6:00 in the evening.

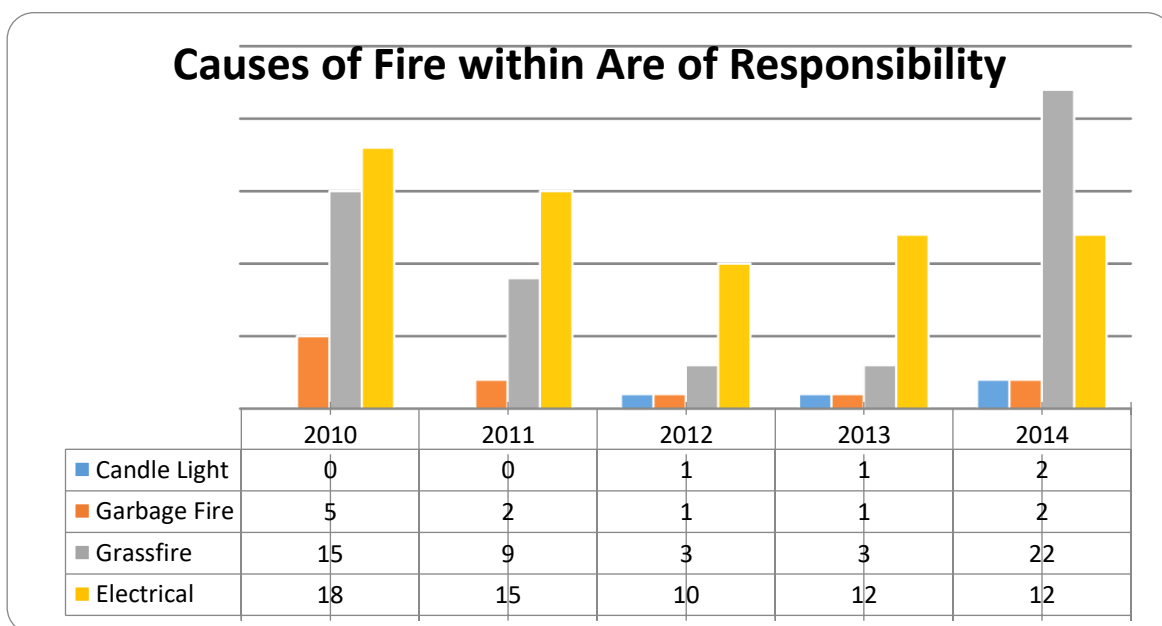


Figure 4.21 Causes of Fire, Year 2010 to 2014

Source: BFP, Tanauan

The leading cause of fire incident during the past five years varies from electrical post to grassfire. It can also be presumed that wirings are damaged due to time or chewed by rats. Grassfire was registered as the second cause of fire most especially during the dry or summer season.

Analysis Matrix – Fire Protection		
Technical Findings Issues and Concerns	Implication/effects	Policy/ Intervention
<p>Deficit number of fire personnel based on the ideal ratio and proportion between firemen to a certain population.</p> <p>Fireman= 2000 Population 147,696= current population of Tanauan City - 73 ideal no. of fireman - 19 currently available personnel at the station as of 2014 - 54 lacking uniformed personnel</p>	<p>Difficulty in responding to multiple emergency calls within the area of responsibility.</p> <p>Performing multiple tasking in the office could hamper and cause delay delivery of basic services to the clientele.</p>	<p>Creation of Force Multiplier (barangay Fire Brigade) from Barangay level which include private companies and major institutions.</p> <p>Request of additional uniformed personnel from the Regional Headquarters.</p> <p>Solicit active participation from the Local Government Unit in the provision of manpower on special cases of fire emergency.</p>
<p>Inadequate number of firefighting apparatus, vehicle and Personal Protective Equipment (PPE) to respond to fire emergencies, rescue operations and medical assistance/services</p>	<p>Less efficient in responding to fire emergency calls.</p> <p>Less efficient in performing firefighting operations.</p>	<p>Propose acquisition of additional vehicle and fire fighting equipment both from the local and national levels</p>

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<p>a.) Firetruck – Lacking 2 b.) Equipments; ex. Ladders, breathing apparatus(SCBA), ropes, rescue tools c.) Personnel Protective Equipment (PPE)</p>		
<p>Inadequate source of water supply for the firefighting operation to including fire hydrant.</p>	<p>Prolong conduct of firefighting operations Possible aggravation of emergency situation.</p>	<p>Installation of additional fire hydrants at identified thickly populated barangays to include subdivisions particularly at Poblacion area for immediate access to water source in case of fire emergency.</p>
<p>Inadequate number of communication equipments, ex. Handheld radios, base radios</p>	<p>Delayed transfer of communication Lack of communication link between personnel performing operational activities such as: firefighting, rescue assistance.</p>	<p>Acquisition of additional communication equipments both from Local and National levels</p>
<p>Absence of created sub-station or additional fire post within Tanauan City</p>	<p>Delayed in meeting minimum response time on matters of emergency response due to distance travel factor</p>	<p>Recommend provision of sub- station along Barangay Talaga for monitoring assistance, immediate response and delivery of service to the public</p>

4.9 Jail Management

4.9.1 Jail History

The former Tanauan City Jail (TCJ) was previously under the control of the Philippine National Police. In 1994, the administration of Tanauan City Jail was turned-over to the supervision and direct control of the BJMP. From CY 1994 to February 2012, about 15 wardens have been assigned to Tanauan City Jail. Presently, **C/INSP GERONIMO S. SALLE** assumed the position as Tanauan City Jail Warden. The current location of BJMP is a newly constructed, 3-storey plus rooftop structures specifically situated at the right side of Legislative Building of the existing City Hall.

Name of Jail	Lot Area	Floor Area	Ideal Capacity	Actual Capacity
Tanauan City Jail	648 sq. m	648 sq m.	56	311

Name of Jail	Type of Jail	Number of Staff	Number of Prisoners	Physical Condition
Tanauan City Jail	City Jail	18	311	Fair

As of this writing, year 2016, the total jail population is 311 residents, in which Two Hundred Sixty-Two (262) are male adult detainees and forty-nine (49) are female adult detainees, the minimum standard of jail guard to inmate population ratio is 1: 7. Considering the present population, the ratio of jail guard to jail inmate is 1: 18.

The Tanauan City Jail has six cells. Of which, four cells for male adult detainees, one cell for female adult detainees, and one infirmary. Each cell has its respective comfort room and bathing facility.

Number of Jail Personnel

The Tanauan City Jail has a total of Eighteen (18) BJMP Personnel, one (1) BJMP Commissioned Jail Officer and Seventeen (17) Non-Commissioned Jail Officers.

An average of fifteen (15) inmates is being escorted for hearings at the three (3) different branches of court at Tanauan City Hall of Justice which is close proximity to jail. TCJ has one (1) prisoner's van issued by the LGU. It is being utilized in

transporting inmates during court hearing outside the city, inmate’s medical checkup, and other inmates’ activities as permitted by the court concerned. This jail has the following equipment that are serviceable:

Handcuffs	-	22
Short Fire Arms	-	18
Long Fire Arms	-	2
Probaton	-	13
Metal Detector	-	1
Stethoscope	-	1
BP Apparatus	-	1 set
Nebulizer Compressor	-	1
Oxygen Tank	-	1
Weighing Scale	-	1
Computer set	-	1
4 in 1 Colored Printer	-	2

Analysis Matrix

Technical Findings and Issues	Implications/ Effects	Policy/ Interventions
1. Congested Jail Dormitories Tanauan City Jail should only accommodate 21 inmates since that is presently the ideal capacity for every cell. An average of 35 inmates are being accommodated per cell	- Rapid spread of communicable diseases among inmates. Promotes discomfort on their sleeping condition resulting to sleep deprivation.	Request for relocation/ transfer of jail facility from both national and local government.

<p>Current Jail Population: 311</p>		
<p>2. Deficit number of Jail personnel based on the ideal ratio and proportion of jail Custodians to inmates. Ideal Ratio- 1 Jail Officer: 7 inmates for custodial Current ration for custodial- 1 Jail Officer:16 inmates Ideal- 19 Jail Officers Current- 8 Jail Officers 9 lacking uniformed personnel performing custodial duties Ideal Ratio of Escorts to inmates 1 Jail Officer: 1 inmate + 1 Jail Officer (high risk inmate) Current Ratio: 1 Jail Officer: 7 inmates Note: minimum escorted number of inmates per</p>	<p>- Difficulty in performing duties. Personnel performing multiple tasks in the office and during tour of duty</p>	<p>Request for additional uniformed personnel from the Regional Office.</p>

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<p>7. Insufficient number of Long Firearm</p>	<p>Presence of additional firearm will increase the firepower capability and security competence of the City Jail that will be often used during escorting of inmates.</p>	<p>- Request for additional long firearm.</p>
<p>8. Lack of proper ventilation per dormitory</p>	<p>- Rapid spread of communicable diseases among inmates. Promotes discomfort on their sleeping condition resulting to sleep deprivation.</p>	<p>Installation of exhaust fan per dormitory</p>
<p>9. Insufficient Water Supply</p>	<p>Unclean area which may cause hygiene-related illnesses</p>	<p>Installation/mounting of water tank</p>
<p>10. Lack of classroom for Alternative Learning System Students (ALS)</p>	<p>Discouragement for inmates to pursue studies</p>	<p>Provision for additional room with facilities, furniture and fixtures appropriate for studies/learning</p>

4.10 Sports and Recreation

Table 4.30 Existing Sports and Recreational Facilities by Barangay

Barangay	Type of Facilities	Lot Area (M2)	Ownership	Physical Condition of Facility
Poblacion I	Swimming pool	36	Private	Fair
	Resort	2,070	Private	Fair
Poblacion II	Gymnasium		Public	Fair
Poblacion III	Gymnasium		Public	Fair
	Basketball court	200	Public	Critical
	Basketball court		Private	Fair
	Mini-park	50	Public	Fair
Poblacion IV	Basketball court		Private	Good
	Gymnasium		Private	Good
Poblacion V	Basketball court		Public	Fair
Poblacion VI	Basketball court	500	Public	Fair
	Swimming pool	300	Private	Fair
	Swimming pool	600	Private	Fair
	Swimming pool	280	Private	Fair
	Swimming pool	120	Private	Fair
Poblacion VII	Basketball court	800	Public	Poor
	Resort	2,000	Private	Fair
Altura Bata	Basketball court/		Public	Fair
	Gymnasium			
	Baseball field		Private	Fair
Altura Matanda	Basketball court		Public	Fair
Altura South	Basketball court	510	Public	Fair
Ambulong	Basketball court	500	Public	Fair
Bagbag	Basketball court		Public	Fair
Bagumbayan	Basketball court	800	Private	Poor
	Basketball court	800	Private	Critical

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	Swimming pool		Private	Fair
	Library	20	Public	Poor
	Clubhouse		Private	Fair
	Park		Private	Fair
	Park	1,000	Public	Poor
Balele	Gymnasium	900	Public	Good
	Tennis court	500	Public	Fair
	Public library	150	Public	Poor
	Softball/track and field	10,000	Public	Poor
Banjo East	Basketball court	670	Public	Fair
	Basketball court	540	Private	Fair
Banjo West	Basketball court	670	Public	Fair
Banadero	Basketball court	700	Public	Fair
Bilogbilog	Basketball court		Public	Fair
Boot	Basketball court	200	Public	Fair
Cale	Gymnasium	748	Public	Fair
	Recreational park	160	Public	Fair
Darasa	Basketball court	1000	Public	Fair
	Basketball court	1200	Private	Fair
	Basketball court	1000	Private	Poor
	Basketball court	1000	Private	Fair
	Basketball court	1000	Private	Fair
	Basketball court	1000	Private	Fair
Gonzales	Tennis court		Private	Fair
Hidalgo	Basketball court		Public	Fair
	Gymnasium		Public	Fair
Janopol Occidental	Basketball court	500	Public	Fair
Janopol Oriental	Basketball court	800	Public	Fair

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Laurel	Basketball court		Public	Fair
Luyos	Basketball court	3,146	Public	Fair
Mabini	Basketball court		Public	Fair
	Park and Playground		Public	Fair
Malaking Pulo	Basketball court		Public	Fair
Maria Paz	Basketball court		Public	Fair
Maugat	Park and Playground	160	Public	Fair
	Basketball court	450	Public	Fair
Montana	Basketball court	1,090	Public	Fair
Natatas	Basketball court	250	Public	Fair
Pagaspas	Basketball court	800	Public	Fair
Pantay Bata	Basketball court		Public	Good
Pantay Bata	Mini-park		Public	Good
Pantay Matanda	Gymnasium	200	Public	Fair
	Basketball court	120	Public	Fair
Sala	Basketball court		Public	Fair
Sambat	Basketball court		Public	Good
Santol	Basketball court	288	Public	Fair
San Jose	Basketball court	128	Public	Fair
Santor	Basketball court	777	Public	Fair
Sulpoc	Basketball court		Public	Fair
Suplang	Gymnasium		Public	Fair
	Golfcourse		Private	Fair
Talaga	Basketball court		Public	Fair
	Swimming pool		Private	Fair
	Minipark and playground		Public	Fair
Tinurik	Basketball court		Public	Fair
Trapiche	Basketball court		Public	Fair

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Ulango	Basketball court	1,013	Public	Fair
Wawa	Basketball court		Public	Fair

Analysis Matrix – Sports and Recreation

Technical Findings	Implications/Effects	Policy/Intervention
Issues and Concerns		
Lack of recreational facilities	Less opportunity for people who want to engage in sports and other related activities	Provision of recreational facilities and activities
Lack of facilities in Sports Complex such as track & field oval, fitness center, playground, sufficient housing/rooms for the city's athletes, basketball court	Athletes still go out of the sports complex in order to find suited facilities for their sports	Acquisition of bigger lot suited for a standard sports complex

ANNEXES

Annex 4.1 Solid Waste Management Plan (SWMP)	.....	4-116
Annex 4.2 ECC 4A-2003-120	.....	4-198
Annex 4.3 City Ordinance No. 2006-08	.....	4-200

SOLID WASTE MANAGEMENT PLAN



1. INTRODUCTION

The main objective of this plan is to address the perennial waste problem in the City of Tanauan for the efficient and effective management and disposal of solid waste in compliance with R.A. 9003 otherwise known as “Ecological Solid Waste Management Act of 2000”, the 10-Year Solid Waste Management Plan for the city was formulated.

1.1 PURPOSE

The LGU does not have a vision specifically for solid waste management but for the management of the environment and natural resources as a whole which is:

We envision “a city enjoying and sustaining its natural resources, and clean and healthy environment”

GOALS

1. To strengthen the implementation of the existing local ordinances pertaining to Solid Waste Management within the City of Tanauan.
2. To train every Barangay Solid Waste Management Committees regarding the establishment of MRF
3. To improve on the aspect of composting of biodegradable wastes and carry out in the barangay level
4. To institutionalize waste segregation starting from households, commercial and institutional establishments.
5. To focus on waste reduction and waste diversion especially on the household level.
6. To establish database on the manner of handling special waste of healthcare providers.

Key Issues facing the community

1. There is an existing SWM System but not enough to address the present garbage situation.
2. Large amount of city fund allocated for the collection, hauling and disposal of solid wastes.
3. Urban Barangays are dependent on the city government in their garbage collection.
4. Rural Barangays have not established any facility for waste management.
5. City Government needs additional equipments and infrastructures in the City Material Recovery Facility. MRF for barangays or cluster of barangays have yet to be established.
6. The community does not have that much information on waste segregation.
7. Local ordinances are not strictly implemented.
8. Barangay SWM Committees are not pro-active.

INTENT OF RA 9003

RA 9003 intends to adopt a systematic, comprehensive and ecological solid waste management program which shall:

- a. Ensure the protection of public health and environment;
- b. Utilize environmentally-sound methods that maximize the utilization of valuable and encourage resources conservation and recovery;
- c. Set guidelines and targets for solid waste avoidance and volume reduction through source reduction and waste minimization measures, including composing, recycling, re-use, recovery, green charcoal process and others, before collection, treatment and disposal in appropriate and environmentally-sound solid waste management facilities in accordance with ecologically sustainable development principles;
- d. Ensure the proper segregation, collection, transport, storage, treatment and disposal of solid waste through the formulation and

- adoption of the best environmental practices in ecological waste management excluding incinerations;
- e. Promote national research and development programs for improved solid waste management and resource conservation techniques, more effective institutional arrangement and indigenous and improved methods of waste reduction, collection, separation and recovery;
 - f. Encourage greater private sector participation in solid waste management;
 - g. Retain primary enforcement and responsibility of solid waste management with local government units while establishing a cooperative effort among the national government, other local government units, non-government organizations and private sector;
 - h. Encourage cooperation and self-regulation among waste generators through the application of market-based instruments;
 - i. Institutionalize public participation in the development and implementation of national and local integrated, comprehensive and ecological waste management programs; and
 - j. Strengthen the integration of ecological solid waste management and resource conservation and recovery topics into the academic curricula of formal and non-formal education in order to promote environmental awareness and action among the citizenry.

1.2 APPROACH

The following approach was used in preparing the plan:

1. Compilation of existing information.
2. Interviews from persons involved in Solid Waste Management (GSO, Budget, Accounting, Treasury and Private Hauler)
3. Conduct of Waste Analysis and Characterization Survey (WACS)

DATA SOURCES

1. General Services Office
2. City Budget Office
3. City Accounting Office
4. City Treasurer's Office
5. City Engineering Office
6. City Planning and Development Office
7. Private Hauler
8. Sangguniang Panlungsod
9. DILG
10. CityENRO

1.3. ACKNOWLEDGEMENTS

The LGU would like to express its deepest gratitude to all the individuals from the City Government of Tanauan for providing basic information which was used as baseline for the development of this plan. CENR Officer would also like to thank the Provincial Government ENRO for the technical assistance in the conduct of WACS and training for SWM Plan Preparation/Updating. Barangay Officials were also very helpful during the three (3) day waste collection during the conduct of WACS. CENR Officer would also like to thank the MENR Officer of Malvar for reliable inputs.

2. CITY PROFILE

2.1 LOCATION

Tanauan City is located within 121°02'30"-121° 09'30" latitude and 14°01'30"-14°09'30" longitude at the North-Eastern part of Batangas. It is bounded by Talisay, Batangas in the West, Malvar and Balete in the South, Sto. Tomas in the East and Calamba City, Laguna in the North.

Because of its proximity to major growth centers like Metro Manila and Batangas City, the city is a recipient of urbanization. The City is also strategically surrounded by important life support eco-systems, Taal Lake, Mount Makiling and Laguna Lake eco-system.

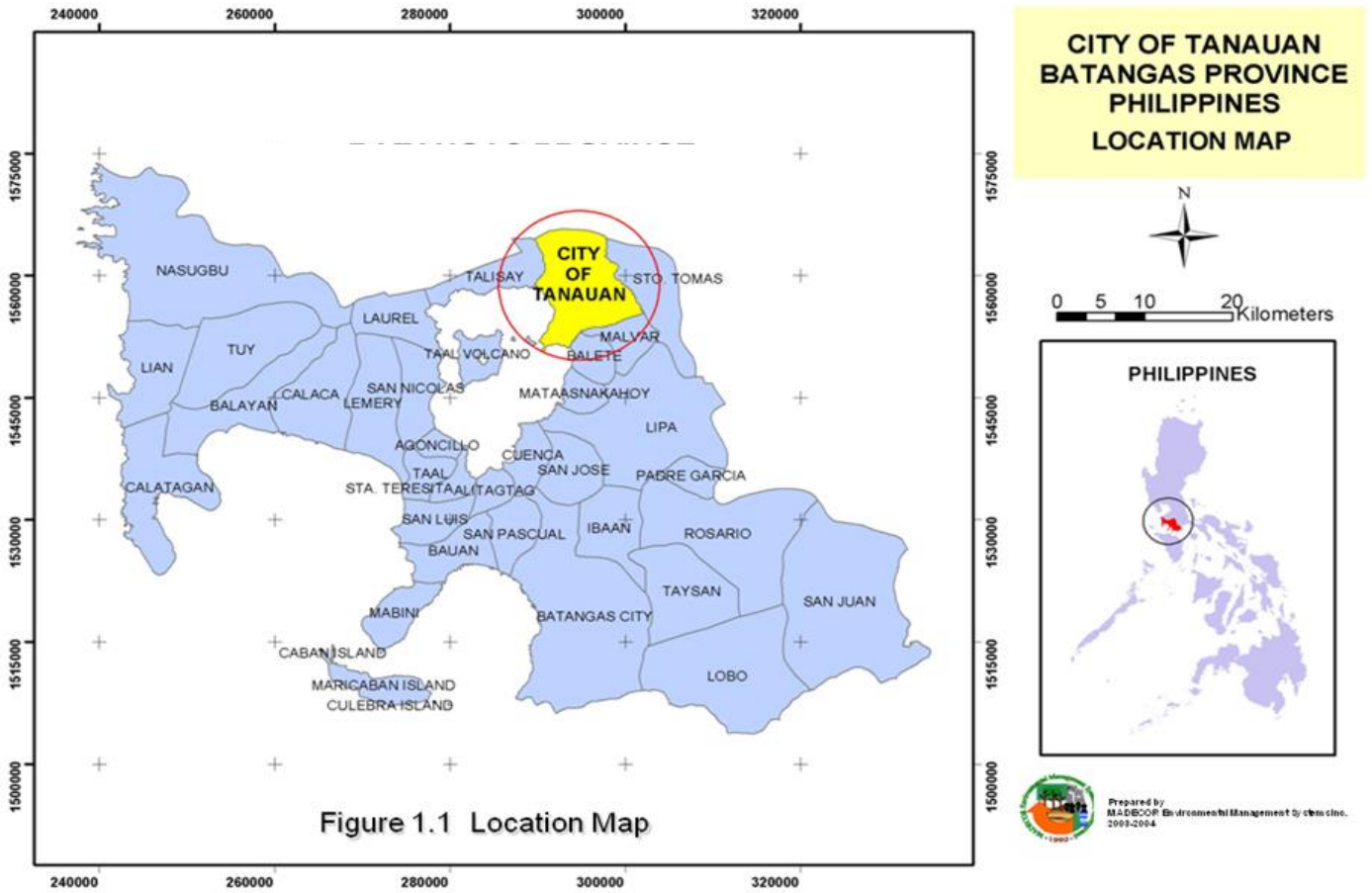
The City of Tanauan covers a total land area of 10,716 hectares which represents 3.38% of the total land area of the province (316,581 ha). It is comprised of 48 barangays. Nineteen (19) of which are considered urban while 29 are rural. The most thickly populated barangay is Darasa while the least populated barangay is Santol.

Table 2.1 shows the land area of every barangay in Tanauan City as well as the corresponding percentage share of each barangay in the total land area of the city. Barangay Boot has the largest land area out of the 48 barangays which is 511 and equivalent to 4.69% share in the total land area of the entire city.

Table 4.1.1 Total Land Area of Barangays

Barangays	Land Area (has.)	Percent Distribution
Altura Bata	160	1.47
Altura Matanda	51	0.47
Altura South	160	1.47
Ambulong	211	1.94
Bañadero	205	1.88
Bagbag	475	4.36
Bagumbayan	180	1.65
Balele	472	4.34
Banjo East	210	1.93
Banjo West	220	2.02
Bilog-bilog	330	3.03
Boot	511	4.69
Cale	260	2.39
Darasa	390	3.58
Pagaspas	301	2.76
Gonzales	180	1.65
Hidalgo	80	0.73
Janopol Occidental	330	3.03
Janopol Oriental	220	2.02
Laurel	301	2.76
Luyos	130	1.19
Mabini	190	1.75
Malaking Pulo	439	4.03
Maria Paz	439	4.03
Maugat	310	2.85
Montaña	245	2.25
Natatas	245	2.25
Pantay Matanda	340	3.12
Pantay Bata	220	2.02
Poblacion 1 - 7	125.71	1.15
Sala	335	3.08
Sambat	100	0.92
San Jose	124	1.14
Santol	142	1.30
Santor	290	2.66
Sulpoc	310	2.85
Suplang	151	1.39
Talaga	415	3.81
Tinurik	310	2.85
Trapiche	190	1.75
Ulango	330	3.03
Wawa	260	2.39

Comprehensive Land Use Plan of Tanauan City: 2016-2025
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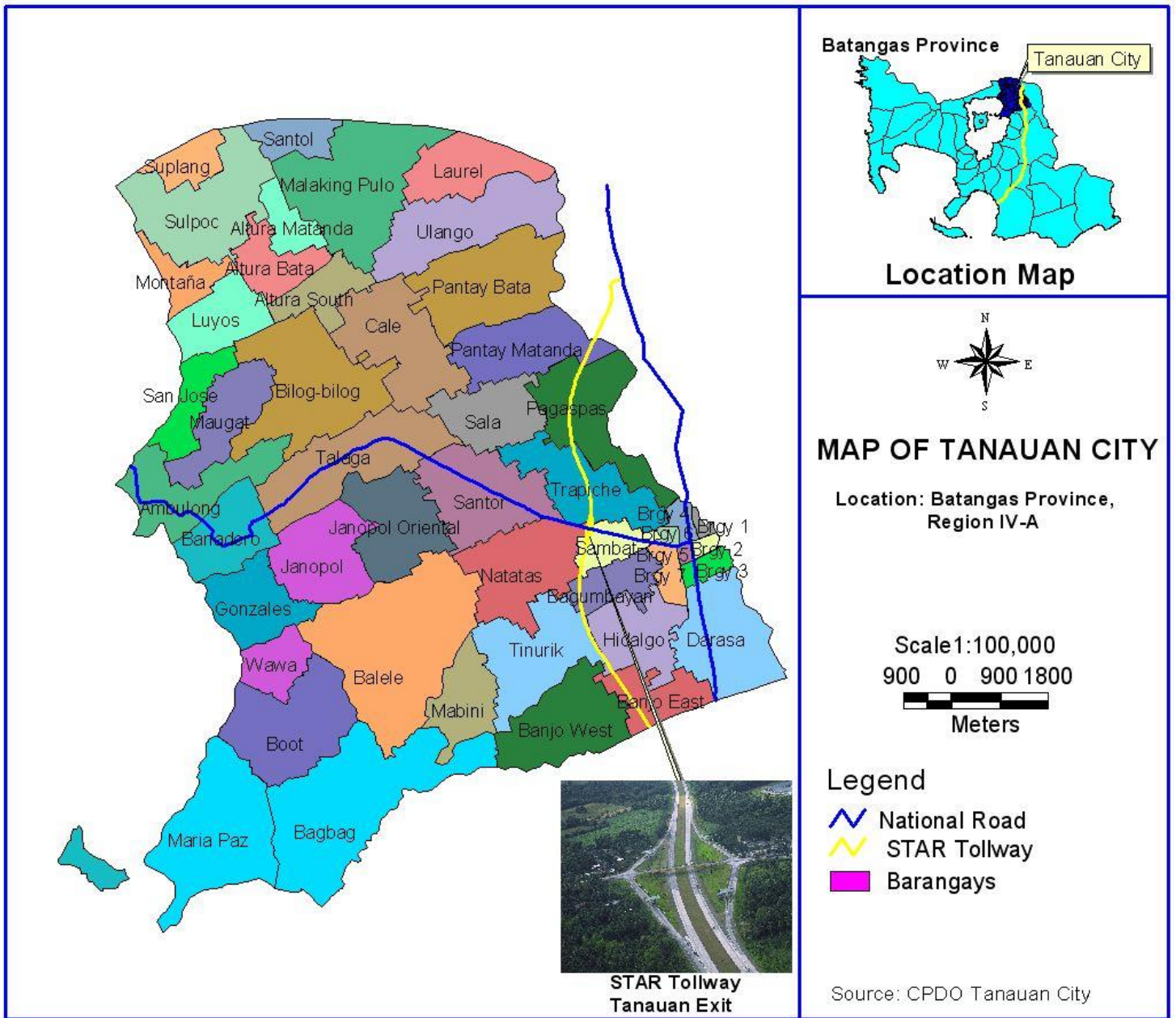


Figure 4.1.2 Barangay Map

2.2 HISTORY

The town of Tanauan was founded on its present location in 1754, having been transferred from the fringe of Taal Lake where it was originally situated. It is generally believed that Tanauan, together with Sala, was originally founded in 1572 by the Augustinian missionaries who built their mission at the shore of the lake known as Bonbon (now Taal). The town however, was totally destroyed during the most impressive and catastrophic historically recorded eruption of Taal Volcano in 1754. Together with the community of Sala, the residents of Tanauan were relocated to safer places. Tanauan moved to Bañadero, then to its present location. Sala, on the other hand, transferred from its original site to where it is now located. Sala subsequently became a barangay of Tanauan.

Accordingly, there were two versions of how Tanauan got its name. In the first version, some people believed that Tanauan derived its name from the Tagalog term “Tanaw” meaning to look after through the window. This was based on the fortress which had a watchtower built by the Augustinian friars and natives. The watch tower enabled them to watch incoming “champan” or boat entering through the Pansipit River, which might be made up of either traders or more pirates. From this tower, one can have a clear view (tanaw) of the lake and of the vast plains and rolling hills.

The other version supported by research sturdy of the National Historical Commission was that the town was named after a shrub called “Tanawa” which grew abundantly in the area and on the shores of Lake Bonbon during the town’s early history.

Tanaueños have displayed characteristics of personal independence and nationalism since early history, when the people fought the first Spaniards who entered the insurrections. The town also contributed in the Revolutionary movements of the Sublime Paralytic Apolinario Mabini, also known as the “Brain of the Katipunan”; Don Sotero Laurel I, a statesman who distinguished himself in public service and served as Emilio Aguinaldo’s Secretary of Interior and a delegate to the 1898 Malolos Constitution; and the late President Jose P. Laurel served as Justice of the Supreme Court and President of the Philippines during the Japanese occupation. During the dark days of the Japanese occupation, Pres. Laurel held the country together. Three

Tanaueños served as governors of Batangas namely: Jose P. Laurel V, Modesto Castillo and Nicolas Gonzales.

The seat of the municipal government of Tanauan was established in the present site in March 1960. Prior to this time, the municipal offices occupied a concrete building in the eastern end of Mabini Avenue at the poblacion, fronted by the present Catholic Church and the Modesto Castillo Memorial Cultural Center. The old municipal building which was destroyed during the World War II was reconstructed and now housed the city library, social hall and city museum.

In 1966, Tanauan became a first-class municipality, and after five years became a city. By virtue of Republic Act 9005, otherwise known as “An Act Converting the Municipality of Tanauan into a Component City to be Known as the City of Tanauan”, which was signed into law by President Gloria Macapagal-Arroyo last February 2, 2001 and through a plebiscite on March 10, 2001, the proposed cityhood was duly ratified and approved.

2.3 POPULATION

The population of Tanauan City based on the 2010 National Statistics Office Census of Population is 152,393. It is projected to be 178,088 at the end of the year 2016. By the year 2026, it is projected that the Tanauan City’s population will reach 230,897. The city’s annual growth rate is 2.63. Please see Table 2.2 and Table 2.3

Table 4.1.2 Population per Barangay, 2015

Barangays	Population	Classification
Altura Bata	1408	rural
Altura Matanda	599	rural
Altura South	757	rural
Ambulong	6954	urban
Bañadero	4319	rural
Bagbag	3223	rural
Bagumbayan	6243	rural
Balele	7726	urban
Banjo East	3243	rural
Banjo West	2655	rural
Bilog-bilog	5120	rural
Boot	6133	rural
Cale	3675	rural

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Darasa	17319	urban
Pagaspas	3374	urban
Gonzales	1887	rural
Hidalgo	1102	rural
Janopol Occidental	2825	rural
Janopol Oriental	3293	urban
Laurel	1437	rural
Luyos	1497	rural
Mabini	2644	rural
Malaking Pulo	4013	rural
Maria Paz	2716	rural
Maugat	2054	rural
Montaña	1517	rural
Natatas	5214	rural
Pantay Matanda	4800	rural
Pantay Bata	2518	urban
Poblacion 1	2046	urban
Poblacion 2	1184	urban
Poblacion 3	4812	urban
Poblacion 4	5221	urban
Poblacion 5	1318	urban
Poblacion 6	3527	urban
Poblacion 7	4155	urban
Sala	2034	rural
Sambat	3913	urban
San Jose	1142	rural
Santol	474	urban
Santor	4447	rural
Sulpoc	2178	rural
Suplang	1391	rural
Talaga	4461	urban
Tinurik	5455	rural
Trapiche	7057	urban
Ulango	2381	urban
Wawa	1616	rural
Total	169,075	

Table 4.1.3 Population Projection 2016-2026

Year	Projected Population
2016	178,088
2017	182,773
2018	187,582
2019	192,517
2020	197,582
2021	202,781

2022	208,116
2023	213,591
2024	219,210
2025	224,978
2026	230,897

ECONOMIC PROFILE/LAND USE**Table 4.1.4 LIST OF INDUSTRIES WITHIN THE CITY**

NAME OF INDUSTRY (AS OF JANUARY 2015)	CLASSIFICATION	LOCATION
1. Sayaman Garments	garments industry	Banjo West
2. Solid-One Mills, Phil. Inc.	feedmill, poultry, swine foods industry	Darasa
3. ASD Garments	garments business	Janopol Occidental
4. EMJ Apparel	garments business	Poblacion 2
5. DDT Konstract, Inc.	pre-cast manufacturing	Santor
6. Corsini Glass Works, Industries Phil.	glassworks, industries, trophies, etc.	Darasa
7. UAM Phils., Inc.	tire manufacturing industry	FPIP, Ulango
8. Nestle Phils, Inc.	coffee, milk, chocolate food industry	FPIP, Ulango
9. Honda Philippines, Inc.	motorcycle manufacturing industry	FPIP, Ulango
10. San Miguel Foods, Inc.	feedmill, poultry, swine foods industry	Darasa
11. First Philec Inc. (First Ekectro Dynamic)	transformer manufacturing	FPIP, Ulango
12. Uni-President Phils, Corp.	noodles factory	Philtown, Pagaspas
13. Bioform & Natural Health Ingredients, Co.	herbal products processing plant e.g. (Laguna)	
14. Tanauan Gas Consolidated Corp.	Oxygen - gas Refilling Station	Santor
15. Nissin Brake Phils. Corp	Cars and Motorcycle's Brakes and Brake Pads Manufacturing	FPIP, Ulango
16. Taiyo Nippon Sonso, Iwatani, Phils., Inc.	Industrial Gas Manufacturing	FPIP, Pantay Bata
17. Red Torch Iron Works & Glass Supply	Metal Fabrication	Santor
18. Goldstar Multisresources, Inc.	Ice Plant / Importer	Darasa

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19. Twin Peak Brassieres Manufacturing	Undergarments manufacturing	Poblacion 4
20. Demsol Plastic Manufacturing	Rope, plastic manufacturing	Tinurik
21. Beneheim Ventures Corporation	Soap manufacturing	Boot
22. Meg's Garments	garments	Janopol Oriental
23. Vine Dresser Inc.	garments industry	Natatas
24. Premier Farms Agro-Processing Corporation	chicken dressing plant	Pagaspas
25. Amcor Flexibles, Philippines, Corporation	contractor	FPIP, Pantay Matanda
26. Fabriline Industries Corporation	contractor	Santor
27. FSE Concrete Ventures Co. Inc.	contractor	FPIP, Ulango
28. J Four S Garments	garments	Pagaspas
29. Sun Power Philippines Manufacturing	solar panels manufactures	FPIP, Ulango
30. PCR garments	garments sub-contractor	Poblacion 4
31. Amestry Garments	garments	Darasa
32. SMACO Feedmill	feed milling industry	Luyos
33. CSJ Juliana's Apparel	garments	Janopol Oriental
34. Layba's Garments	garments	Darasa
35. UPI - UAM Philippines Inc.	tire manufacturer	FPIP, Ulango
36. El-Sol Electronics Device Phils. Inc	electronics manufactur	FPIP, Ulango
37. I-Steel Inc.	steel roofing / partitions manufacturing	FPIP, Ulango
38. B/E Aerospace	Airplane seats, upholstery, plane cabin manufacturer	FPIP, Ulango

LAND USE

Land Use Classification	Area (ha.)	% to Total
Residential Areas	1, 587, 285	14.81
Commercial Areas	73.392	0.68
Agricultural Areas	8,435.221	78.72
Agro-industrial Areas	44.344	0.41
Eco-tourism Areas	39.281	0.37
Forest Areas	57.782	0.54
Industrial Areas	376.135	3.51
Institutional Sites	67.493	0.63
Special Use	30.583	0.29
Recreational Use	4.487	0.04
TOTAL	10, 716.00	100.00

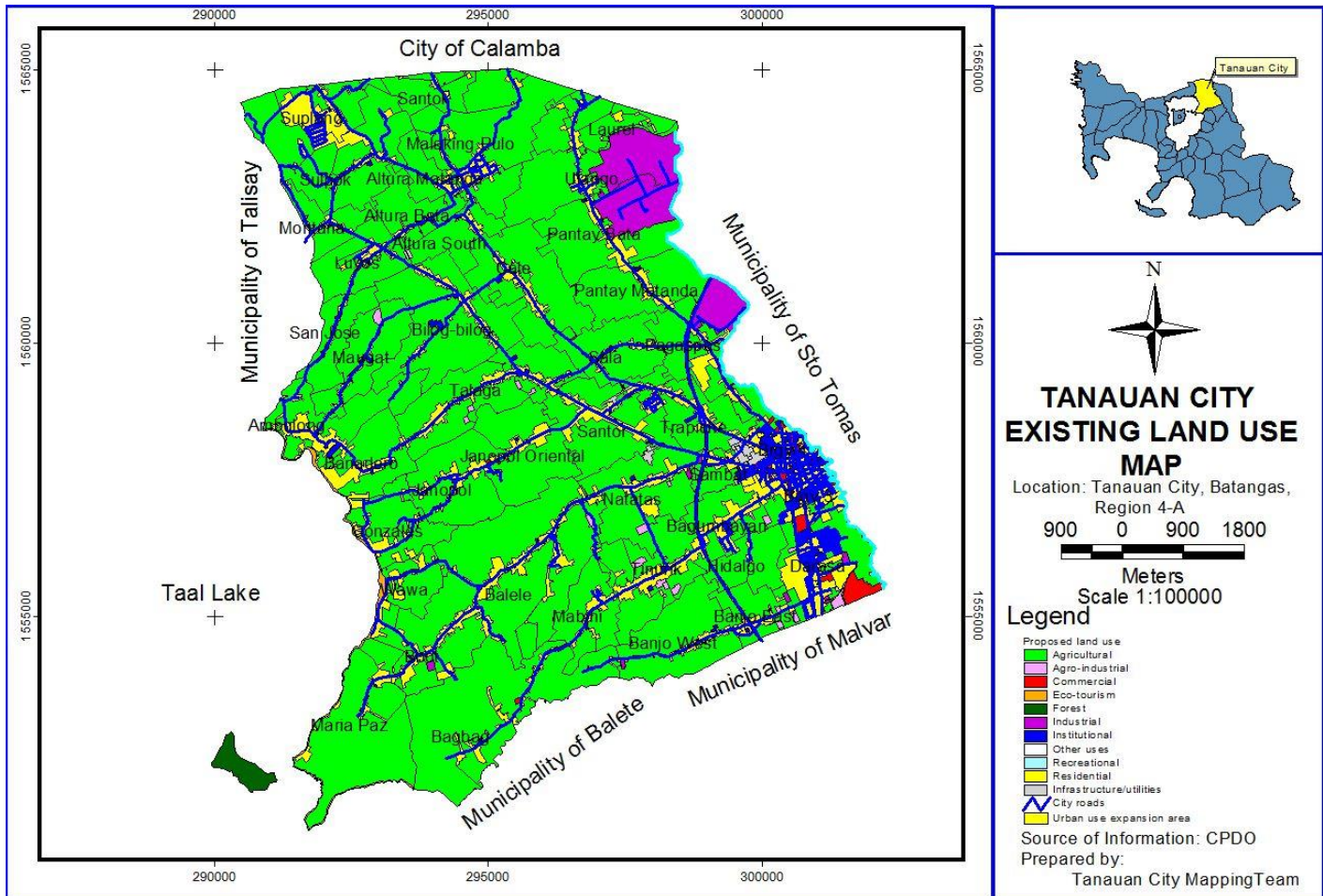


Figure 4.2.3 Land Use Map

MAJOR TRANSPORTATION ROUTES AND TRAFFIC CONDITON

Tanauan City can be reached through the Manila-Batangas Road and the Southern Tagalog Access Road (STAR). The STAR makes the city more accessible without going through the busy streets of the neighboring towns and cities.

Local residents use jeepneys and tricycles as the basic mode of transpostation to reach the barangays of the city as well as the neighboring towns and cities. Busses are used to travel from the city to Manila and Batabgas City.

Traffic conditions are basically light throughout the city except in the busy hours of the day especially during the morning and afternoon before and after the office hours. There is a traffic light installed at the Crossing of J. P. Laurel Highway and A. Mabini Avenue making it easier to manage the traffic condition. There are also visible pedestrian lanes and pedestrian overpass for public safety.

2.4 PHYSICAL CHARACTERISTICS

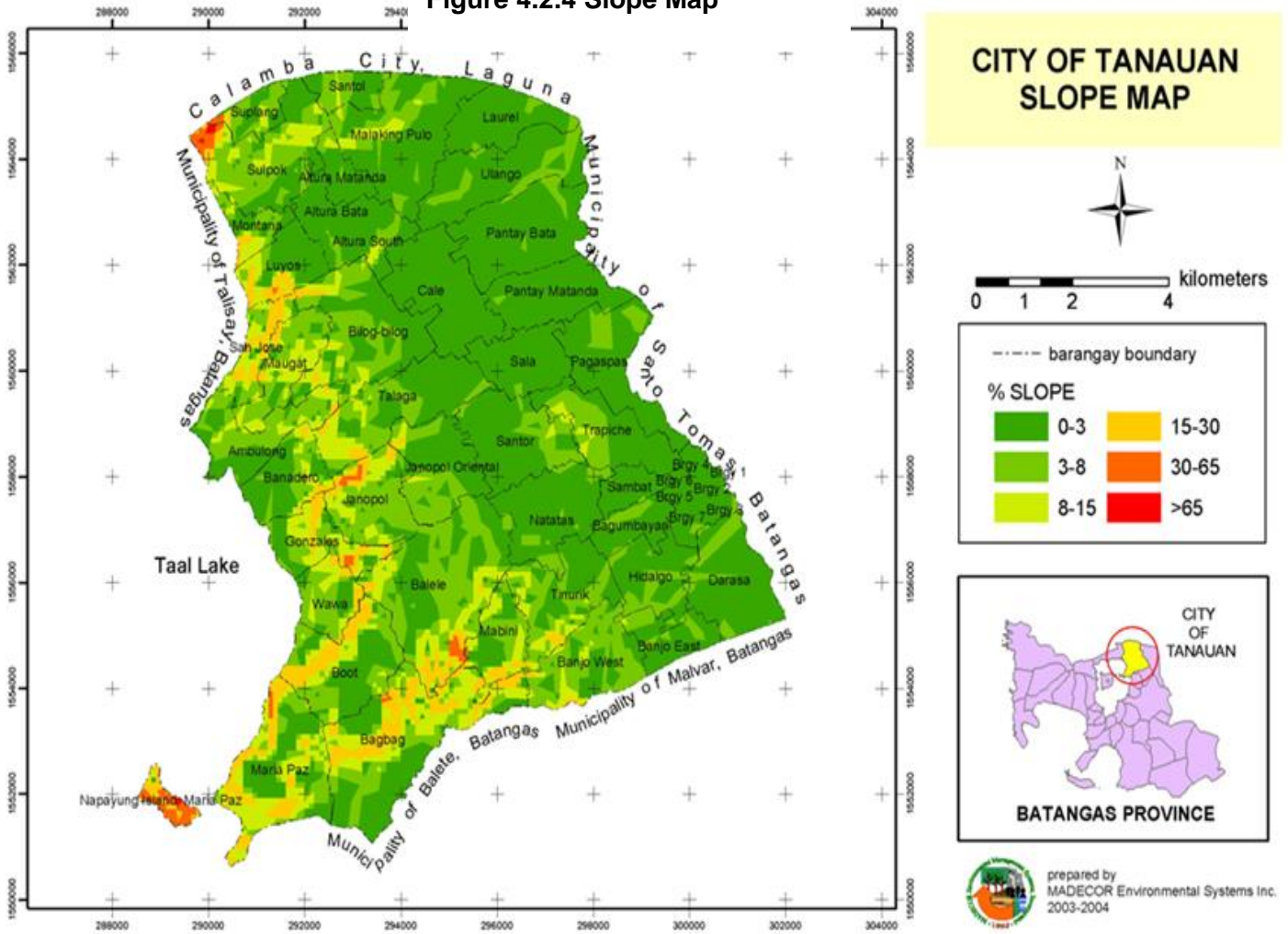
GEOGRAPHY

The City of Tanauan covers a total land area of 10, 987.43 hectares which represents 3.38% of the total land area of the Province (316, 581 has.)

Majority of the areas in Tanauan City belong to 0 to 15 percent slope that are undulating to rolling. Most of the areas with steep slope of more than 65 percent are located in Barangays Sulpoc, Montana, San Jose, Maugat, Ambulong, Bañadero, Talaga, Banjo West, potions of Darasa and Poblacion 3 (refer to Figure 2.4).

Steep hills and mountains with slope of 30 to 65 percent are located in Suplang, Suploc, Balele, Wawa, Boot and Maria Paz. Barangays which belong to 0 to 3 percent slope are portions of Laurel, Malaking Pulo, Altura Matanda, Altura Bata, Altura South, Montana, Luyos, Cale, Bilog-bilog, Pantay Bata, Pantay Matanda, Sala, Pagaspas, Trapiche, Poblacion Area, Natatas, Bagumbayan, Hidalgo, Sambat and Darasa. The slope in these barangays is gently sloping to undulating. The rest of the barangays have 8 to 15 percent slope that are undulating to rolling. Mt. Makiling, with a spot elevation of 1090 m, is approximately within four (4) to five (5) kilometers from the city (refer to Figure 4.2.5).

Figure 4.2.4 Slope Map



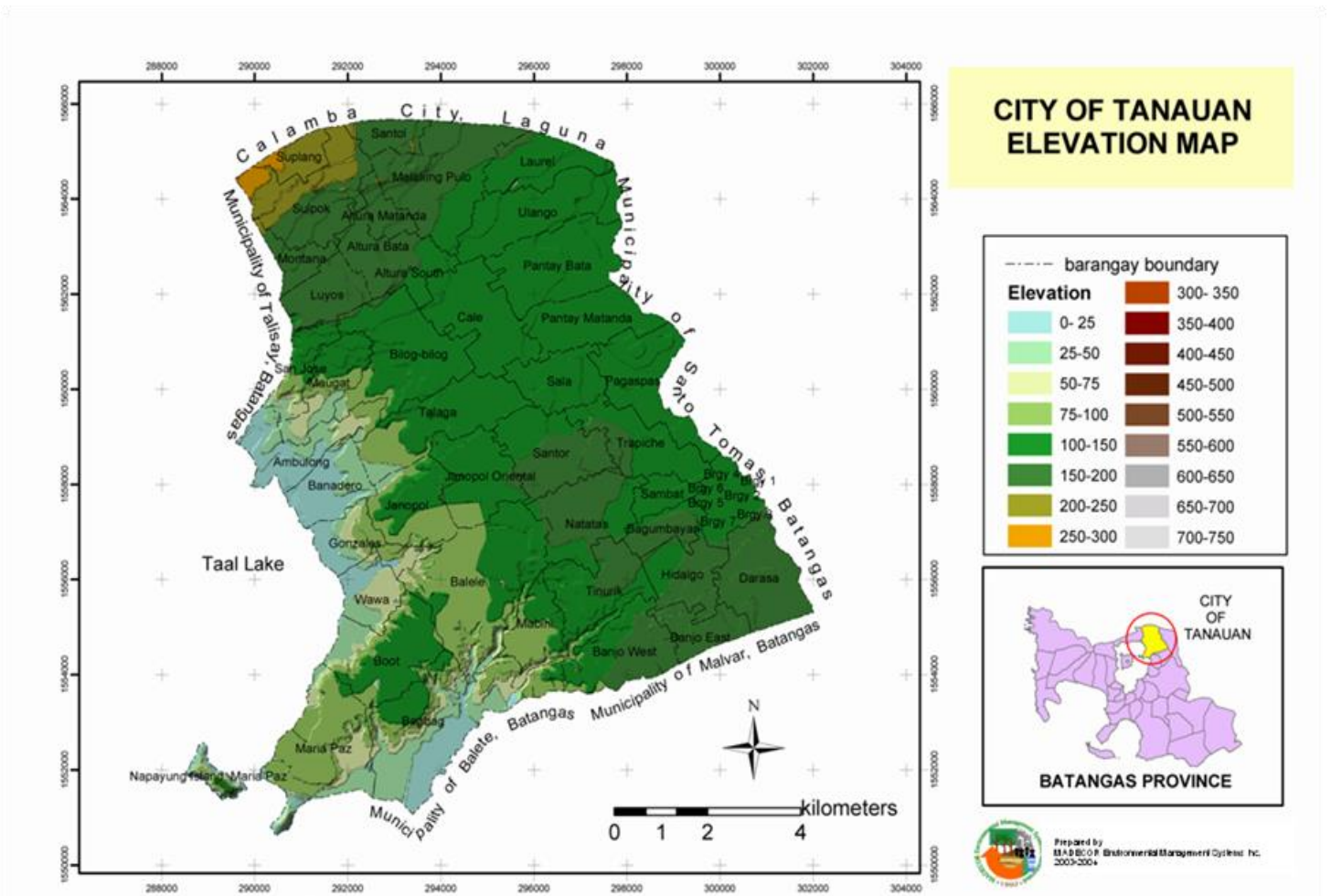


Figure 4.2.5 Elevation Map

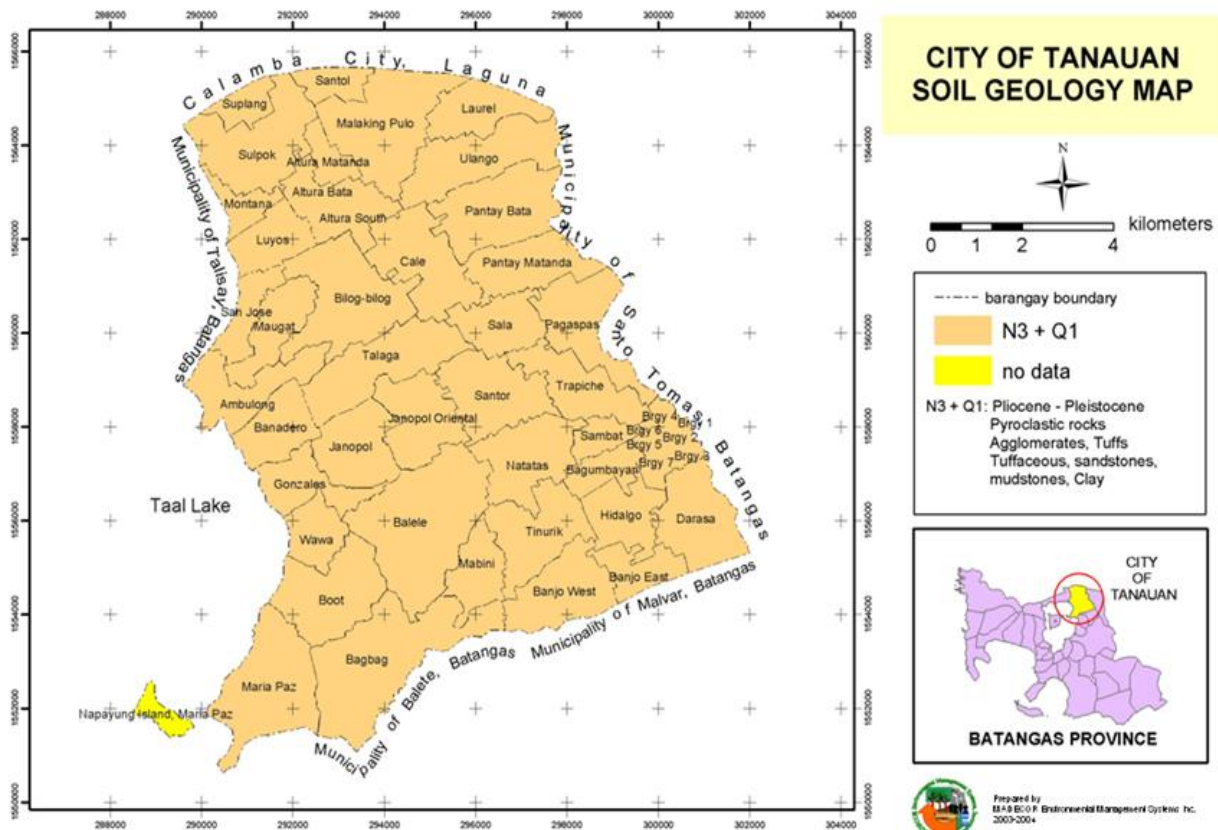
GEOLOGY

Soil Characteristics

As Tanauan is situated between two volcanoes, Mt. Makiling and Taal Volcano, its geologic structure makes it prone to volcanic activities. The City is mostly composed of Pliocene to Quaternary volcanic rocks of agglomerate, tuffs, cinders, andesite, dacite and pyroclastic layers. Thus, the City geographical composition mostly came from igneous materials (refer to Figure 2.6).

Quaternary volcanic or Pliocene recent igneous rocks are composed of active and non-active cones and lava flows consists mainly of dark gray to black andeside, basalt and aphanemitic. Pyroclastic materials on the other hand, are ejecta consisting of unconsolidated materials of different sizes that are explosively or aerielly deposited from volcanic vents. Volcanic tuff was formed mainly due to ashfall and continued lava flow

Figure 4.2.6 Soil Geology Map



Soil Type

There are four soil types that can be found in Tanauan City. Majority of the soil are Taal fine sandy Loam followed by Lipa Loam (deep phase), Lipa Loam and Tagaytay Sandy Loam (refer to Figure 4.2.7).

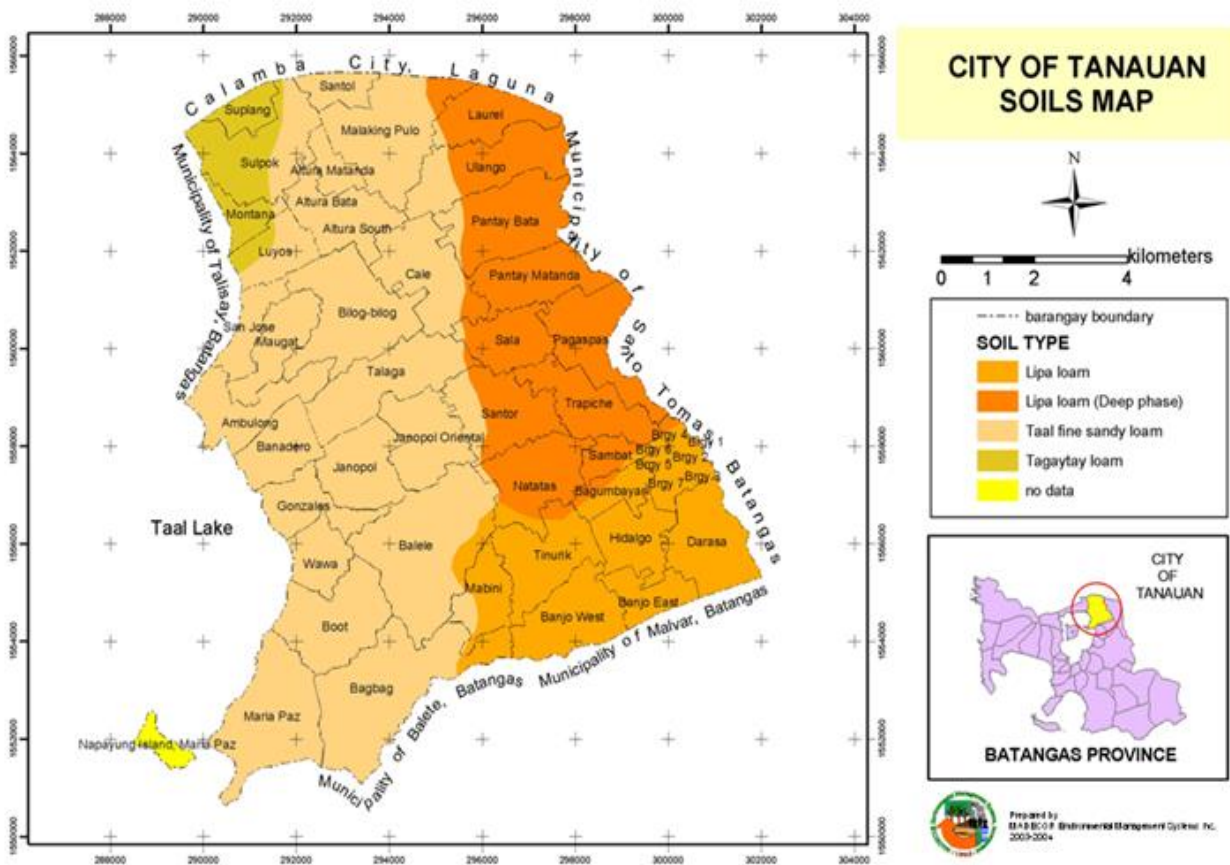


Figure 4.2.7 Soil Map

HYDROLOGY

Taal Lake is located in the southwest portion of Tanauan City. The Lake has an area of 127 sq. km. and 200 meters deep. There are six (6) barangays located along the shores of Taal Lake namely Ambulong, Bañadero, Gonzales, Wawa, Boot and Maria Paz.

Water Quality

Under the criteria set by DAO 34 of the Department of Environment and Natural Resources (DENR) Taal Lake is classified as Class B based on water quality criteria for surface waters meaning the lake can be used for recreational purposes (i.e. bathing, swimming, skin diving, etc.) which are very beneficial for tourism.

San Juan River

San Juan River is a 33.5 km river system that traverses the towns of Malvar and Sto. Tomas and the City of Tanauan, Calamba and Lipa. The depth of the river ranges from 0.04 m to about 20 m deep. The San Juan River is one of the 24 sub-watersheds of Laguna de Bay (SJRRP, 2000).

Table 6 shows San Juan River System exceeded almost all water quality parameter for Class C standard. These parameters include Dissolved Oxygen (DO), Biological Oxygen Demand (BOD), Oil and grease, total Coliform and Phosphorous. These means that the water of San Juan River is polluted with mostly organic pollutants which most likely to come from household/domestic wastes as well as animal wastes that are directly being discharged into the river or thrown into the creeks which flows into the river when heavy rains occur.

Other water bodies surrounding the City and serving as natural boundaries are Sangalo River (Malvar), Balete River (Balete) and Lipa Bay in the southern portion. Located in the West is the Angasin River, serving as a boundary between the municipalities of Talisay and Tanauan City.

Springs

Many springs and seepages are known to exist along the slopes and flanks of Mt. Makiling. From such, there are only four springs that can be considered potential source of city's water supply. One of these is located within the territorial boundary of Tanauan and known as the Tanauan Spring.

The Tanauan Spring occurs in and moves through open fractures and leached mantles of lava flows. This spring is presently tapped not only by the Tanauan Water District but as well as the Sto. Tomas Water District. The Tanauan Spring, including a cluster of seven springs located with a radius of less than 17 meters, serve as one of the water sources of Tanauan Water District. The springs are located approximately 5.7 kilometers east-northeast of the Poblacion at an average elevation of 291 meters mean sea level. Each of the springs is provided with a spring box and the discharges are conveyed to a common transmission pipe. Volumetric measurement conducted last July 17, 1990, showed an aggregate discharge of 8.8 liters per second. Its expected minimum flow is 5 liters per second.

Mineral water spring found in Banjo West is being tapped by La Tondeña Mineral Water Plant. The water that is used to produce the bottled water is obtained from the 5 springs found within the 6-hectare plant with Sirang Tobok as the primary source. The springs are within the Makiling Watershed and drains into the Taal Lake. A total of 700 to 1,000 gallons per minute of water is pumped from the springs on a staggered basis (LLDA, 2000).

Ground Water

Ground water is a very important resource. This resource is about 0.6% of the hydrosphere. This very important resource is one of the sources of drinking water supply in Tanauan City. Ground water is a part of the subsurface water that fully saturates the pore spaces of bedrock zone and it is held in the unsaturated zone by capillary zone in tiny films adding to the mineral surfaces. The water level in Tanauan City is 38 meters below ground (relative to mean sea level). Based on the water level contour Map of Batangas, Tanauan's flow pattern of ground water is towards Taal Lake.

Based on Potential Area Ground Water Development, Tanauan City is considered a Low Yielding Area. Its Aquifer is considered under category expectable Aquifer meaning high yielding wells may not be expected because of their small amount of recharge.

Based on the Study conducted by TANWD, Tanauan and Sto. Tomas areas are rich in ground water resources and the amount of discharge during the conduct of the study is greater than aggregate of natural and artificial discharge in these areas.

CLIMATE

Tanauan City falls under the first type of climate with two distinct seasons: dry from December to April and wet for the rest of the year. Its climate can be described as generally mild. Because of its proximity to Mt. Makiling, Tanauan City is shielded from the North-East monsoon and part of the trade winds but is prone to the South-East monsoon.

3. CURRENT SOLID WASTE MANAGEMENT CONDITIONS

3.1 INSTITUTIONAL ARRANGEMENTS

List of agencies of the City Government of Tanauan that handle SWM and its services and the roles and responsibilities of the agencies

Table 4.1.4 City Government Agencies that handle SWM Services, Roles and Responsibilities

Department under the City Government	Solid Waste Management Services Handled/SWM Roles and Responsibilities
1. City Environment and Natural Resources Office	<ul style="list-style-type: none"> • Collection of bio-degradable waste from the Public Market and Subdivisions • Street sweeping activities in the A. Mabini Avenue, J. P. Laurel Highway and Public Market • Shredding of bio-degradable waste at the City Material Recovery Facility • Vermi-composting activities • Enforcement of local ordinances related to SWM • Information and Education Campaign
2. City General Services Office and City Engineering Office	Maintenance of the LGU-owned garbage trucks and granulator
3. City Accounting Office, City Budget Office and City Treasurer's Office	Payment of all the expenses related to SWM
4. City Mayor's Office and City Administrator's Office	Oversee the SWM condition of the city

3.2 INVENTORY EQUIPMENT AND STAFF**Table 4.1.5 Inventory of SWM Equipment**

Equipment and Quantity	Capacity	Present condition	Make/ Specifications	Model	Location for repairs
Dumptruck	4000 kgs.	Serviceable	Isuzu 1995	DT #10	Local Auto Shop
Mini Dumptruck	3500 kgs.	Serviceable	Isuzu 2003	SJV 594	Local Auto Shop
Granulator Machine	1.8 tons/hr	Serviceable	Fuso 4D30		
Compactors (3) - NLC	5000 kgs.	Serviceable	Isuzu 1994 1996 1995	RNJ 527 RNW 185 WQV 632	Local Auto Shop
Dumptrucks (3) - NLC	7500 kgs.	Serviceable	Isuzu 2003 1990 1995	XKA 843 XFZ 403 PEC 639	Local Auto Shop
Mini-truck (1) - NLC	3500 kgs.	Serviceable	Mitsubishi – Fuso 1988	WFZ 745	Local Auto Shop



**Granulator
Machine**



**Granulator's
Diesel
Engine 4D30**



LGU-owned Dump Trucks





Compactor and Dumptuck of NLC Garbage Services



Number of Personnel

The City Environment and Natural Resources Office was created through City Ordinance 2010-05 last October 27, 2010. Presently, the office has thirty eight (38) regular employees, fifty two (52) job order and three (3) detailed employees. It is headed by the City Environment and Natural Resources Officer and an Assistant City Environment and Natural Resources Officer.

The Environmental Sanitation Division is the unit directly involved in SWM with fifty-nine (59) personnel. The division works in three (3) shifts daily. Listed below are the number of personnel and their work assignments.

1. One (1) Department Head
2. One (1) Assistant Department Head
3. Seventeen (16) Office Staff
4. Six (6) Field Supervisors
5. Three (3) Truck Drivers
6. Four (4) Truck Helpers
7. One (1) Garbage Checker
8. Six (6) MRF Personnel
9. Fifty-five (55) Street Sweepers

Type of Staff Training Available

The trainings attended by the personnel are all sponsored by the City Government with no relation to Solid Waste Management. Two seminars with relation to SWM were attended by the Department Head and Division Chief which are the WACS Training and Updating the SWM Plan.

3.3 SOURCE REDUCTION

In the areas where the garbage is being collected, source reduction is mandatory through the implementation of City Ordinance No. 2006-08. Households are ordered to segregate their garbage before giving them to the garbage hauler. Garbage will not be hauled unless they are segregated. There are different trucks for biodegradable and non-biodegradable wastes. Households are also encouraged to separate the recyclables and bring them to the nearest junkshop.

The LGU is also strictly implementing the City Ordinance No. 2012-02 also known as the No to Plastic Ordinance wherein the use of styrophor and plastic bags are prohibited and the use of thin film plastic is regulated.

3.4 COLLECTION

The LGU has a private garbage hauler which is NLC Garbage Services with business address at Barangay Poblacion 1, Tanauan City. They have been hauling the city's garbage since the start of year 2014. As mentioned in the previous section, the private hauler only collects segregated waste. Non-biodegradable wastes are being brought directly to the Sanitary Landfill at Calamba City (Suri Waste Management and Disposal Services). Biodegradable wastes are being brought to the City's Material Recovery Facility at Barangay Bilog-bilog for shredding. The LGU-owned trucks haul the biodegradable wastes from the Public Market and subdivisions.

The contract of NLC Garbage Services only covers thirteen (13) barangays, namely, Poblacion 1-7, Sambat, Darasa, Trapiche, Pagaspas and Natatas. Listed below is the present garbage hauling schedule of the private hauler.

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GARBAGE TRUCK AREAS OF ASSIGNMENT

COLLECTION DAY	TIME OF COLLECTION	AREAS OF COLLECTION
Monday	7:00 am, 1:00 pm, 11:00 pm	Market, RS-2, Putuhan Area - Putuhan
	11:00 pm to 6:00 am	Darasa, JP Laurel, Mabini Ave., Sambat - Transfer Station
	8:00 am to 5:00 pm	Brgy 2 & Brgy 3
		Brgy 1 & Brgy 4
	City Hall	
		Mt. View Subd. - Brgy 3
		Celeste Vill. - Brgy 3
		San Sebastian Vill. - Brgy 3
		CP Reyes Hospital, Gonzales Hospital
Tuesday	7:00 am, 1:00 pm, 11:00 pm	Market, RS-2, Putuhan Area - Putuhan
	11:00 pm to 6:00 am	Darasa, JP Laurel, Mabini Ave., Sambat - Transfer Station
	8:00 am to 5:00 pm	FAITH School , La Consolacion, Tanauan City High, CCT
		Victoria Homes, /Ciudad Victoria
	Pamayanan	
	Sambat-Putol	
	Primavera Homes	
	Citta Maria	
	Pillar Ville	
	St. Joseph 1 & 2	
	Darasa Compound	
Wednesday	7:00 am, 1:00 pm, 11:00 pm	Market, RS-2, Putuhan Area - Putuhan
	11:00 pm to 6:00 am	Darasa, JP Laurel, Mabini Ave., Sambat - Transfer Station
	8:00 am to 5:00 pm	City Hall
		Brgy 5, 6, 7
	Teresa Compound - Brgy 6	
	Gloria Compound - Brgy 6	
	Natatas	
	Oltap Subd. - Sambat	
	Josefa Vill. - Sambat	
	Maligaya Compound	
Thursday	7:00 am, 1:00 pm, 11:00 pm	Market, RS-2, Putuhan Area - Putuhan
	11:00 pm to 6:00 am	Darasa, JP Laurel, Mabini Ave., Sambat - Transfer Station
	8:00 am to 5:00 pm	City Hall
		Brgy 2 & Brgy 3
	Brgy 1 & 4	
	St. Joseph 1 & 2	
	San Sebastian Vill. - Brgy 3	
	Mt. View Subd. - Brgy 3	
	Celeste Vill. - Brgy 3	
	Victoria Homes, /Ciudad Victoria	
	Romanville - Brgy. Darasa	
	Ramonita - Brgy Darasa	
	Pillar Ville	
	Darasa Compound	
	CP Reyes Hospital, Gonzales Hospital	

Friday	7:00 am, 1:00 pm, 11:00 pm	Market, RS-2, Putuhan Area - Putuhan
	11:00 pm to 6:00 am	Darasa, JP Laurel, Mabini Ave., Sambat - Transfer Station
	8:00 am to 5:00 pm	FAITH School , La Consolacion, Tanauan City High, CCT City Hall
Saturday	7:00 am, 1:00 pm, 11:00 pm	Market, RS-2, Putuhan Area - Putuhan
	11:00 pm to 6:00 am	Darasa, JP Laurel, Mabini Ave., Sambat - Transfer Station
	8:00 am to 5:00 pm	City Hall
		Brgy 5, 6, 7
		Laurel Hospital
		Teresa Compound - Brgy 6
		Gloria Compound - Brgy 6
		Oltap Subd. - Sambat
		Josefa Vill. - Sambat
		Mercado Hospital
		Natatas
	Brgy Pagaspas	
	Half of Brgy Trapiche	
	Brgy. Bagumbayan	
	Reaville Subd.	
	Bukluran	
Sunday	7:00 am, 1:00 pm, 11:00 pm	Darasa, JP Laurel, Mabini Ave., Sambat - Transfer Station
	11:00 pm to 6:00 am	Market, RS-2, Putuhan Area - Putuhan
		City Hall

3.5 TRANSFER

The LGU does not operate any transfer station as of the moment. The transfer station at Barangay Sambat had been closed since January 2015.

3.6 PROCESSING FACILITIES

At present, there is no operational Barangay Material Recovery Facility. The only operational facility is the City MRF located at Sitio Dayapan, Barangay Bilog-bilog. The said facility receives about 800 kilos of biodegradable waste from the Public Market every day and another 200 kilos from the subdivision households.

The City MRF is located inside the City's Demo Farm. From a total area of 2.2 hectares, about 500 square meters are being utilized for the MRF. The activities that are being conducted in the City MRF include:

1. Shredding of compostable waste



2. Vermi-composting



The City MRF is being run by one (1) regular employee and seven (6) job order employees. Their main tasks are shredding of biodegradables, loading of pre-composted wastes at the vermin-beds, harvesting, sieving and storing vermin-cast. About one (1) ton of vermin-cast being produced every month are being turned-over to the City Agriculture Office for distribution to farmers.

3.7 FINAL DISPOSAL

The final disposal site of NLC Garbage Services is at Barangay Bubuyan, Calamba City, Laguna at the Sanitary Landfill owned by Severino Hain (Suri Waste Management and Disposal Services). Please see Annex.

3.8 SPECIAL AND HEALTHCARE WASTES

At present, the LGU has not accounted the quantity of these wastes since it is being handled by the hospital administrations as it is a mandatory for them to have their own collector of hospital wastes. LGU operated Health Centers dispose their special wastes at the Municipal Cemetery wherein there are tombs designated for the disposal of such wastes.

3.9 MARKETS FOR RECYCLABLES

Table 4.1.6 List of Junkshops in the City

Name of Junkshop	Location
1. 3-A Junk Shop	Poblacion 3
2. 3D & J Junk Shop	Banadero
3. 3G Junk Shop	Ambulong
4. 7 Star Junk Shop	Pagaspas
5. Abe Junk Shop	Poblacion 1
6. AJL Junk Shop	Trapiche
7. AL&RIC TRADING	Trapiche
8. Alvin & Bryan Junk Shop	Darasa
9.A. O. Junk Shop	Darasa
10. Ashely Junk Shop	Poblacion 3
11.Aux Junk Shop	Darasa
12. Bodum Scrap Shop	Poblacion 1
13.Christopher and Victoria Junk Shop	Poblacion 7
14. De Vera's Junk Shop	Poblacion 6
15. Don Junk Shop	Poblacion 4
16. DRCJ Junk Shop	Darasa
17. Eduarrdo R. Ocampo Junk Shop	Hidalgo

18. Ellie Boy Junk Shop	Talaga
19. Galilea Scrap Trading	Poblacion 7
20. GM Junk shop	Talaga
21. Green Scrap Recycling Shop	Poblacion 3
22. Green Siam Resources Corporation	Darasa
23. Jen & Janette Junk Shop	Sambat
24. Jen & Janette Junk Shop Branch II	Tinurik
25. JJB Junk Shop	Poblacion 5
26. J O M Junk Shop	Darasa
27. JSP Emerald Junk Shop	Darasa
28. Lereo Junk Shop	Poblacion 3
29. Marvil Scrap Dealer Company	Pantay Bata
30. MPT 777 Scrap Trading & Mrf.	Sala
31. M.S. Junk Shop	Banjo East
32. Nora's Junk Shop	Trapiche
33. Rosewil Junkshop	Darasa
34. S.D. Junk Shop	Poblacion 4
35. Sta. Ana Junk Shop	Poblacion 7
36. Tikoy Junk Shop	Ambulong
37. Turing Junk Shop	Poblacion 4
38. 55 Junkshop	Poblacion 1
39. Four C and L Junk Shop	Tinurik

3.10 IEC

The LGU, through the initiative of he CityENRO designed and prepared the strategies for the Information Education Campaign (IEC) for the implementation of RA 9003, to wit:

1. Conduct massive and continuous information education thru the use of multimedia such as billboards, leaflets/flyers, and social media.
2. Inform Barangay Officials that under RA 9003, the collection, disposal and management of solid waste generated in their areas are their responsibilities;
3. Issue an Administrative Order creating the Task Force Kalinisan by the City Mayor

3.11 COSTS AND REVENUES

A total of P 39,000,000.00 was allotted for Solid Waste Management Program for the year 2015. About P 33.7 million was paid to the private hauler for the year for the year 2014 and 2015. A total of 43.6M was allotted for garbage hauling for the year

2016 and 2017. For the establishment of MRF and purchase of granulator, P 7.2 million was consumed.

From the year 2012, the City ENRO had been collecting Environmental Sanitation Fee from business establishments.

Table 4.1.7 Environmental Sanitation Fee collection 2012-2015

Year	Environmental Sanitation Fee
2012	P 2,554,942.00
2013	P 2,656,080.00
2014	P 2,664,490.00
2015	P 3,196,750.00

For the year 2014, one hundred twenty-six (126) were apprehended for violation of City Ordinance No. 2012-05, City Ordinance No. 2006-08 and Municipal Ordinance No. 96-01, thus, a total fine of PHP 70,700.00 was collected.

For the year 2015, sixty-nine (69) were apprehended and a total of PHP47,800.00 was collected.

3.12 KEY ISSUES

The key issue being faced by the city is the establishment of MRF for every barangay or cluster of barangays as mandated by RA 9003. Only thirteen (13) barangays are covered by garbage collection and the remaining barangays are doing nothing to manage their generated solid waste.

4. WASTE CHARACTERISTICS

The three (3) day WACS for households was conducted in Tanauan last March 13-15, 2015. Household wastes for three (3) days were collected, sorted and weighed on March 16-18, 2015. WACS for the commercial and institutional sector was then

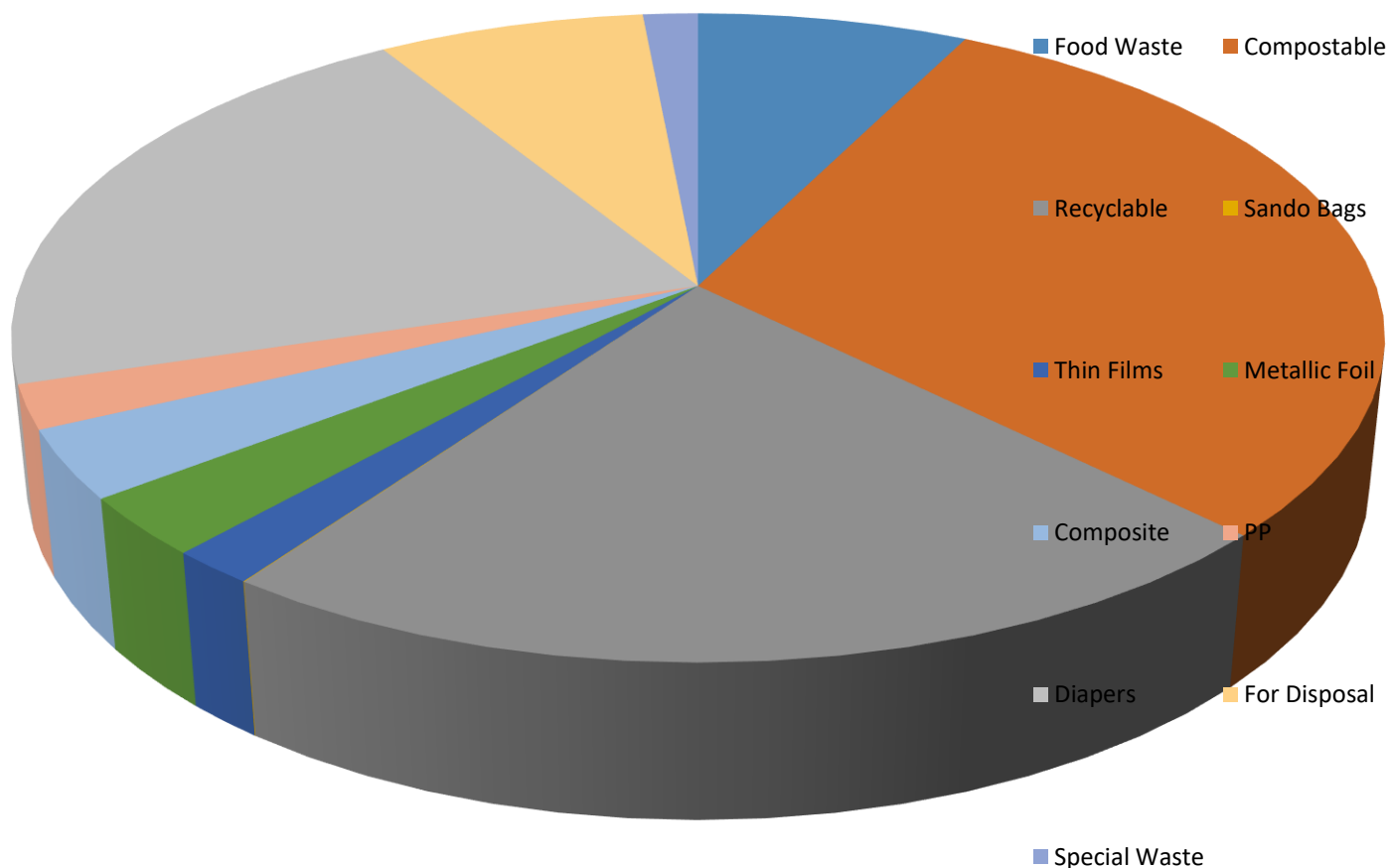


conducted last March 23-25, 2015. It was sorted and weighed every day after collection.

Photos showing actual WACS done at City MRF, Barangay Bilog-bilog

Table 4.1.8 Percentage Composition by weight (All Sources)

Type of Waste	% Composition by weight			
	Household	Commercial	Institutional	Average
Food Waste	7.45	10.58	12.10	9.36
Compostable	29.9	38.02	11.94	27.97
Recyclable	22.53	38.44	43.03	31.52
Sando Bags	0.02	0.10	0.00	0.04
Thin Films	1.75	8.27	0.99	3.34
Metallic Foil	2.96	1.09	6.89	3.35
Composite	3.42	0.00	5.54	2.98
PP	2.18	0.01	6.26	2.53
Diapers	20.94	0.00	0.14	10.50
For Disposal	7.34	3.28	13.11	7.56
Special Waste	1.51	0.21	0.00	0.81



The result shows that almost 28% of the city’s wastes are compostables and 31.52% are recyclable waste. It was evident that the households can do something with their compostables and recyclables, instead of mixing them up with the other solid wastes being collected by the private hauler. About 7.56% of residual waste is for disposal from a total of 30.30%. Diapers and napkins totaled for 10.50% and special waste is only 0.81%. In spite of the total ban for sando bags, still there is 0.04% which is a considerable percentage. Those must have come from other towns and cities which does not have an ordinance on the use of plastic bags.

Based on the WACS result, the per capita generation is 0.227 kg per day and the average waste generation per day is 76 tons per day based on the 2104 projected population.

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The details of the WACS result from all sources is presented in the table below.

Table 4.1.9 Table Showing the Quantity and Composition of Waste Disposed from Households

Municipality	Population (2014)	Number of Households (2014)	Sample Households	Sample Population	Average Income Generator (₱/day)	Total Weight (kg)	Total Volume (l)	Density (kg/cu m)	Per capita generation (kg/day)	Total Population		Biodegradable		Residual		Metallic		Hazardous		Total Residual	Special		
										Average Waste Generator (kg/day)	Total	Food Waste	Compostable	For Biodegradable	Styrofoam	Thin film	Plastic	Concrete	PF			Others	Soil Total	For Special
BARANGAY	6591	15	15	63	238	77350	120	6513	0.364	211483	830	60100	135000	125000	63600	0.00	14000	63000	60000	30000	49000	130000	39000
	778	15	15	63	237	71350	120	6513	0.364	190080	757	53000	64000	78000	95500	0.00	14000	62500	60000	30000	49000	130000	39000
	1735	40	40	201	615	189460	390	3654	0.361	33835	2044	120000	49000	170000	120000	0.00	30000	40000	150000	150000	20000	20000	17000
	339	15	15	63	448	13500	15	2938	0.361	9329	130	4000	4000	4000	0.00	2000	1500	1500	2000	2000	2000	2000	2000
	529	12	12	51	425	37345	136	3268	0.365	12342	502	11000	30000	40000	24000	0.00	2000	30000	40000	40000	60000	60000	60000
	3324	7	7	31	154	28330	61	4817	0.276	9334	315	78000	78000	78000	3000	3000	28000	28000	40000	40000	140000	140000	
	238	7	7	27	123	25300	61	4632	0.328	6233	134	10200	40000	40000	28000	0.00	10000	30000	30000	40000	40000	110000	110000
	708	5	5	21	121	41700	61	18043	0.385	13000	157	9000	9000	9000	12000	0.00	10000	10000	10000	10000	10000	10000	10000
	139	3	3	14	428	12380	37	3672	0.364	3813	142	20000	15000	130000	45000	0.00	3000	3000	3000	3000	3000	3000	3000
	482	11	11	41	1021	30000	91	3238	0.364	7884	310	12000	11000	23000	0.00	2000	6000	6000	2000	2000	2000	2000	2000
	3221	10	10	51	633	23335	90	2845	0.367	8729	343	11000	11000	11000	15000	0.00	10000	10000	10000	10000	10000	10000	10000
	138	3	3	17	441	25335	61	4148	0.365	6133	755	4000	4000	4000	0.00	1000	1000	1000	1000	1000	1000	1000	1000
	3327	10	10	51	1631	30000	127	3920	0.360	11427	455	2000	78000	78000	30000	0.00	2000	4000	4000	4000	4000	4000	4000
	435	9	9	41	634	30000	81	2904	0.361	8840	338	30000	30000	30000	17000	0.00	2000	2000	2000	2000	2000	2000	2000
	1361	5	5	23	1114	33400	154	36840	0.244	8847	139	19000	27000	40000	17000	0.00	15000	15000	15000	15000	15000	15000	15000
	447	11	11	40	454	13000	114	36840	0.115	5130	707	7800	7800	9000	0.00	6000	6000	6000	6000	6000	6000	6000	6000
	461	12	12	48	233	7600	189	9000	0.377	14627	640	30000	30000	30000	0.00	3000	3000	3000	3000	3000	3000	3000	3000
	767	17	17	67	1413	57315	207	1140	0.397	13143	545	12000	91500	91500	8000	0.00	8000	8000	8000	8000	8000	8000	8000
	230	7	7	48	1038	32300	51	3523	0.227	5813	222	22000	22000	43000	1000	1000	1000	1000	1000	1000	1000	1000	1000
	9480	218	218	1393	2738	80100	2407	5133	0.332	226103	89	413000	789000	1010000	603000	5000	3000	3000	3000	3000	3000	3000	3000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
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										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
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										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
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										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400	1000	1000	1000	1000	1000	1000	1000	1000
										480000		7000	30000	36500	2400								

Table 4.1.10 Percent Composition of waste per sector

Sector	Percent Composition by Weight per sector				Total
	Biodegradable	Recyclable	Residual	Special	
Residential	37.36	22.53	38.6	1.51	100
Commercial	48.6	38.44	12.75	0.21	100
Institutional	24.04	43.03	32.93	0	100
Average	36.67	34.67	28.09	0.57	100

Table 4.1.11 Average Percent Composition per Waste Classification

Sector	Percent Composition
Biodegradable	37.37
Recyclable	31.52
Residual	30.30
Special	0.81
Total	100

4.1 DISPOSED WASTE

Based on the data that is currently available in the CENRO, the disposed waste from year 2009 to 2013 by the private hauler is shown in the table below.

Table 4.1.12 Disposed Wastes from 2009 to 2013 by Private Hauler

Year	Truckloads per day	Amount of Disposed Waste (cu. m)	Weight of Disposed Waste (tons)	Weight of Disposed Waste (kgs/day)
2009	10.35	68,000	27,200	60,822
2010	9.41	61,824	24,729	67,751
2011	9.45	62,086	24,835	68,041
2012	7.38	48,487	19,395	53,137
2013	6.65	43,690	17,476	47,879

If fully realized, the disposal target for the year 2016 is more or less 38 tons per day.

Table 4.1.13 Table Showing the Diversion and Disposal Targets

Year	PCG per day	Population	Daily Waste Gen based on Population (Kg/Day)	Waste Diversion Target (%)	Weight to be Diverted	Waste Disposal Target (%)	Weight to be Disposed (Kg/Day)	Biodegradable	Recyclable	Residual
2016	0.227	178,088	76,234.14	50	38117.07	50	38117.07	28488.70	24029.00	23098.94
2017	0.227	182,773	78,188.02	53	41439.65	47	36748.37	29218.86	24644.86	23690.97
2018	0.227	187,582	80,191.98	56	44907.51	44	35284.47	29967.74	25276.51	24298.17
2019	0.227	192,517	82,247.30	59	48525.91	41	33721.39	30735.82	25924.35	24920.93
2020	0.227	197,582	84,355.30	62	52300.29	38	32055.01	31523.58	26588.79	25559.66
2021	0.227	202,781	86,517.33	65	56236.26	35	30281.07	32331.53	27270.26	26214.75
2022	0.227	208,116	88,734.76	68	60339.64	32	28395.12	33160.18	27969.20	26886.63
2023	0.227	213,591	91,009.04	71	64616.42	29	26392.62	34010.08	28686.05	27575.74
2024	0.227	219,210	93,341.60	74	69072.78	26	24268.82	34881.76	29421.27	28282.50
2025	0.227	224,978	95,733.94	77	73715.13	23	22018.81	35775.77	30175.34	29007.38
2026	0.227	230,897	98,187.60	81	79531.96	19	18655.64	36692.71	30948.73	29750.84

4.2 DIVERTED WASTE

About one (1) ton of biodegradable wastes are being composted in the City MRF everyday using the vermi-composting technology. Biodegradable waste from the Public Market and households are being shredded and undergo biological composition before being fed to African night crawlers.

Presently, the city has no data regarding the amount of waste being diverted to the local junkshops.

Based on the table above, daily waste diversion accounted as 81.13% or 38,117.07 kgs/day. The current waste diversion was computed by adding the quantity of food waste and biodegradable waste that can be composted, the recyclable materials and the residuals with potential for diversion.

4.3 GENERATED WASTE

Table 4.1.14 Ten year solid waste generation projection

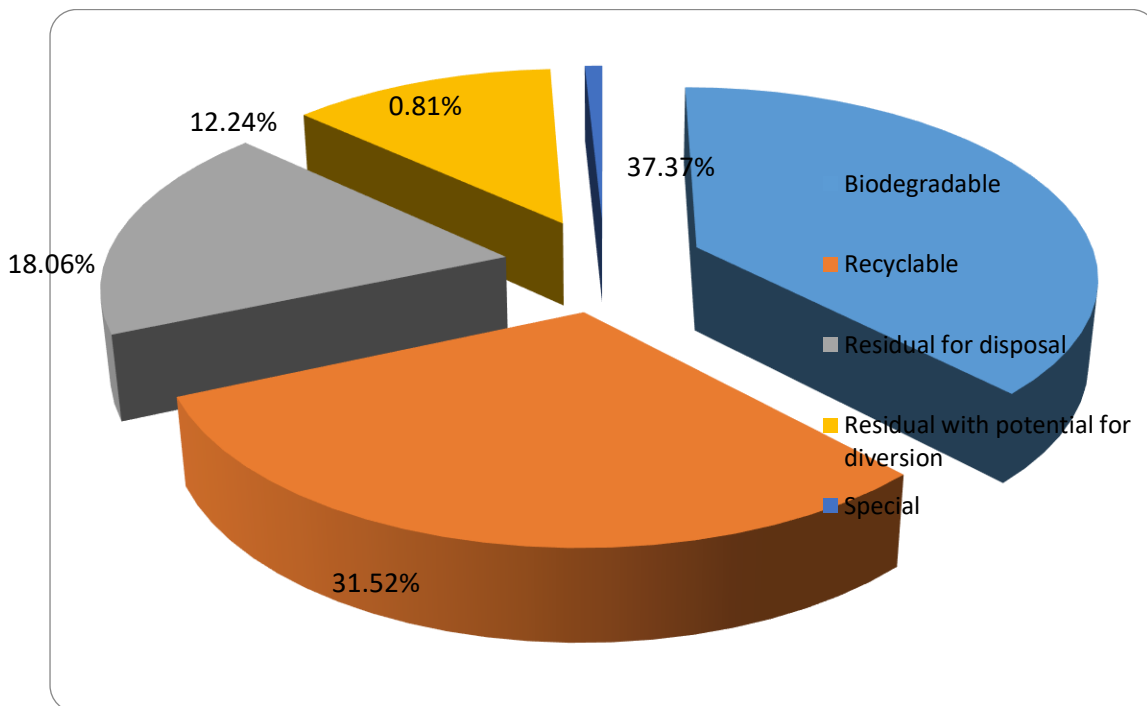
Year	Population	Waste Volume Projections (kg/day)
2016	178,088	76,234.14
2017	182,773	78,188.02
2018	187,582	80,191.98
2019	192,517	82,247.30
2020	197,582	84,355.30
2021	202,781	86,517.33
2022	208,116	88,734.76
2023	213,591	91,009.04
2024	219,210	93,341.60
2025	224,978	95,733.94
2026	230,897	98,187.60

On the table above showing the percentage of waste generation from all sources, the residential sources have the greatest percentage with 50.03% followed by commercial sources with 27.05% and the least is from institutional sources with

22.92%. For waste composition, biodegradable wastes has the highest percentage with 37.37%, followed by recyclable waste with 31.52%, residual waste with 30.30% and the least is special waste with 0.81%.

The daily waste generation is 76,234.14 kgs/day which corresponds to 27,825.46 tons for the year 2015.

The projected solid waste generation is enumerated at the table above.



5. LEGAL/INSTITUTIONAL FRAMEWORK**5.1 LOCAL LAWS AND REGULATIONS****Table 4.1.15 List of Sangguniang Panlungsod Resolutions and Ordinances on SWM of the City of Tanauan**

Sangguniang Panlungsod Resolutions/Ordinances	Title/Brief Description
1. City Ordinance No. 2014-38	An ordinance granting cash reward of twenty-five percent (25%) to Tanauan City Task Force Kalinisan of the imposed penalty for violation of all ordinances pertaining to cleanliness, sanitation, and orderliness of the surrounding streets, sidewalks, yards, canals, rivers and creeks, improper disposal of solid waste and liquid waste, illegal dumping of garbage, unsegregated garbage and using plastic bags on dry goods.
2. City Ordinance No. 2012-05	An ordinance prohibiting the use of plastic bags on dry goods, regulating its utilization on wet goods and prohibiting the use of styrofoam/styrophor in the City of Tanauan and prescribing penalties for violations thereof
3. City Ordinance No. 11-1	Tax Ordinance for the City of Tanauan
4. City Ordinance No. 06-8	Ordinansa para sa makakalikasang pamamahala ng basura sa lahat ng mga barangay, mga bahay kalakal, mga institusyon, mga establisimentong industriyal at mga lugar na pang-agrikultura sa Lungsod ng Tanauan na naaayon sa itinakda ng Batas Republika Blg. 9003
5. Municipal Ordinance No. 96-1	An ordinance prohibiting spitting, urinating, defacating, and/or littering of paper and other rubbish in public buildings, streets, plazas, and other public places in Tanauan, Batangas and providing penalties for violation thereof
6. Municipal Ordinance No 94-2	An ordinance prescribing and penalizing certain acts omissions inimical to cleanliness and sanitation

Please see Annex for the copy of the above-mentioned ordinances related to SWM.

5.2 ROLES

The roles of every sector of the City Government depend on the people they handle and the scope of their authority.

The duties and responsibilities of the City Solid Waste Management Board are as follows:

1. Develop the City Solid Waste Management Plan to ensure long term solid waste management, as well as, integrate the various solid waste management plans and strategies of component barangays;
2. Adopt measures to promote and ensure the viability and effective implementation of solid waste management programs in all component barangays;
3. Monitor the implementation of the City Solid Waste Plan through the component barangays in cooperation with concerned Non-Government Organization;
4. Adopt specific revenue-generating measures to promote the viability of the Solid Waste Management Plan;
5. Convene regular meetings for purposes of planning and coordinating the implementation of the Solid Waste Plans of component barangays;
6. Oversee the implementation of the City Solid Waste Plan;
7. Review every two (2) years, or as the need arises, the City Solid Waste Management Plan for purposes of ensuring its sustainability, viability, effectiveness and relevance in relation to local and international developments in the field of solid waste management;
8. Develop specific mechanics and guidelines to implement the City Solid Waste Management Plan;
9. Recommend to appropriate local government authorities specific measures or proposals for franchise or build-operate-transfer agreements with duly recognized institutions to provide either exclusive or non-exclusive authority

for the collection, transfer, storage, processing, recycling or disposal of the city's solid waste;

10. Provide the necessary logistical and operational support to component barangays;
11. Recommend measures and safeguards against pollution and the preservation of the natural ecosystem;
12. Coordinate the efforts of component barangays in the implementation of the City Solid Waste Management Plan; and
13. Call on any concerned agency or sector, as it may deem necessary, for support or other appropriate action.

5.3 CITY SOLID WASTE MANAGEMENT BOARD

The Solid Waste Management Board is composed of the following:

Chairman	:	Hon. Antonio C. Halili City Mayor
Vice Chairman	:	Atty. Herminigildo G. Trinidad City Administrator
Members	:	Hon. Joseph M. Castillo Chairman, Committee on Environmental Protection, Sangguniang Panlungsod
	:	Hon. Marissa M. Tabinog Chairman, Committee on Environmental Protection, Sangguniang Panlungsod

- : Hon. Polmark L. Fajardo
President, Liga ng mga Barangay

- : Mr. Ariel Bathan
Assistant City ENRO

- : Dr. Adel S. Bautista
City Health Officer

- : Mrs. Taciana S. Songco
City Budget Officer

- : Mrs. Lorna O. Cabrera
City Social Welfare and Dev't Officer

- : Mrs. Marissa C. Marasigan
City Local Government Operations Officer

- : Mrs. Virginia Lopez
City Treasurer

- : Mr. Jorge G. Valenzuela
City General Services Officer

5.4 BARANGAY SOLID WASTE MANAGEMENT COMMITTEE

In accordance to RA 9003 and its IRR, the following are identified as the functions and responsibilities of the Barangay SWM Committees in Tanauan City.

1. Formulate Solid Waste Management Program consistent with the City Solid Waste Management Plan;
2. Segregate and collect biodegradable, compostable, reusable wastes;
3. Establish a Materials Recovery Facility;
4. Allocate barangay funds; look for other sources of funds;
5. Organize core coordinators;
6. Submit SWM Monthly Reports

The Barangay Solid Waste Management Committees are chaired by the Barangay Captain and composed of the following members: One (1) Kagawad; President of the Home Owners Association; Public/Private School Principal or Representative; One (1) Parents and Teachers Association President or Representative; One (1) Religious Organization Representative; One (1) Business Sector Representative; One (1) Environmental NGO Representative; President of Market Vendors Association; One (1) Representative from Junkshop Owners' Association

To date, all Barangays have created their respective BESWM.

Altura Bata

Chairperson: Hon. Ramil V. Mercado

Members: Hon. Gloria S. Castillo

Elsa G. Gonzales

Rosalina P. Natanauan

Myrna M. Tolentino

Altura Matanda

Chairperson: Hon. Agaton V. Panganiban

Members: Hon. Rolando C. Panganiban

Nicolas O. Ravelo

Lilia O. Tuiza

Elsie Amar

Jeanette S. de Leon

Wilfredo de Leon

Altura South

Chairperson: Hon. Dario M. Noprada

Members: Hon. Hilaria R. Noprada

Gregorio C. Noprada

Fernando Peneyra

Marites O. Legaspi

Ambulong

Chairperson: Hon. Herman R. de Sagun

Members: Hon. Ruel P. Baroro

Rowena G. Batuhan

Elena R. de Sagun

Marilyn Adajar

Apolinario Magnaye

Bagbag

Chairperson: Hon. Edwin C. Ocampo

Members: Hon. Librado M. Javier

Marisa Blasco

Nicanor C. Balba

Juvy C. Prado

Bagumbayan

Chairperson: Hon. Cesario S. Magpantay

Members: Hon. Isaac P. Moncayo

Edna Ladrangan

Marialinda P. Opulencia

Danilo P. Rimas

Francisca Sales P. Pedraja

Apolo H. Platon

Virginia Lopez

Joel de Vera

Balele

Chairperson: Hon. Aurelio P. Llanto

Members: Hon. Gonzalo Andal

Marita Castillo

Avelina dela Cruz

Renato Menguito

Banadero

Chairperson: Hon. Bernardo A. Tapia, Sr.

Members: Hon. Fidel A. Malabanan

Hon. Rodel M. Mendoza

Ludy Terrones

Mario Maala

Marites Mendoza

Delia A. Terrones

Banjo East

Chairperson: Hon. Cesar S. Libang

Members: Hon. Gloria S. del Mundo

Edna Ladrangan

Esebelia Hidalgo

Donna Briones

Mario Saludo

Rosie Leus

Leopoldo Saludo

Marciano Abesamis, Jr.

Banjo West

Chairperson: Hon. Mario L. Gonzales

Members: Hon. Eufemia B. Atienza

Elsa Liadoc

Annalyn Lorenzo

Andresito Lat

Maximo Sayaman

Danilo Austria

Alex Gonzales

Bilogbilog

Chairperson: Hon. Francisco L. Matundan

Members: Hon. Edwin V. Matundan

Ronnel S. Manaig

Miriam M. Pia

Ben M. Manaig

Nicetas Quinzon

Clarita M. Lumbres

Boot

Chairperson: Hon. Henry P. Carandang

Members: Hon. Gilberto P. Terrenal

Melvin Rimas

Aquilino M. Carandang

Alma Carandang

Lhen Vergara

Igmedio Nolasco

Cale

Chairperson: Hon. Guillermo A. Endrinal, Jr.

Members: Hon. Kristine Erika A. Torres

Editha M. Rodriguez

Analyn M. Manimtim

Rhodora M. Padilla

Noel M. Macaraig

Darasa

Chairperson: Hon. Wilfredo P. Ablao

Members: Hon. Benjamin O. Valencia

Camille Platon

Eleuterio C. Magsino

Adelio Balbin

Irene Cabiling

Marlon Lorenzana

Rosario V. Platon

Rebecca Magno

James Panday

Gonzales

Chairperson: Hon. Rico O. Alcazar

Members: Hon. Elmerito M. Pamplona

Edralin Micua

Restita L. Javier

Leonila M. Malabanan

Juana Suarez

Flordelia D. Siman

Hidalgo

Chairperson: Hon. Marvin E. de Vera

Members: Hon. Joel M. Magnaye

Naty Natividad

Vina Galisim

Romulo Abarra

Janopol Occidental

Chairperson: Hon. Alberto G. Dalisay

Members: Hon. Simeona T. Ladra

Neil John Terrible

Sophia Abril

Rowena de Vera

Norie Cantos

Josephine Chavez

Janopol Oriental

Chairperson: Hon. Froilan M. Montemayor

Members: Hon. Thomas O. Banzuela

Alan D. Carvajal

Liwayway Roxas

Danilo M. Pamplona

Adelaida P. Reyes

Laurel

Chairperson: Hon. Angel T. Tercero

Members: Hon. Louie G. Marqueses

Rolando A. Relato

Mila Q. Paz

Imelda M. Peria

Marcelina T. Rivera

Nestor Torres

Cristina G. Micoso

Marilyn Zara

Luyos

Chairperson: Hon. Patricio M. Arcega

Members: Hon. Fernan M. Landicho

Irene Macalintal

Rachelle Matanguihan

Pacencia Arcega

Valerio L. Landicho

Virginia Lopez

Mabini

Chairperson: Hon. Rene P. Alcantara

Members: Hon. Myrna R. Espiritu

Rowena V. Solomon

Sofronio Unico

Veronica Mailom

Eugenio R. Lndicho

Malaking Pulo

Chairperson: Hon. Fortunato C. Garcia

Members: Hon. German R. Mangilin

Cesar Natanauan

Jimmy C. Noblefranca

Carmen Sumague

Teresita Lugo

Maria Paz

Chairperson: Hon. Napoleon O. Ramos

Members: Hon. Joel D. Penaranda

Pricila Q. Regimen

Marco Catacutan

Aryeta Sarmiento

Soraya Olorvida

Ricardo Huelgas

Aurea G. Marasigan

Maugat

Chairperson: Hon. Rhonnie C. Tolentino

Members: Hon. Pepito C. Ariola

Pablo A. Tenorio

Juan C. Alvarez

Ciriaco G. Aala

Felicisimo M. Marqueses

Vivencio D. Miranda

Montana

Chairperson: Hon. Rodrigo L. Natividad

Members: Hon. Teotimo E. Dimapilis

Royda Q. Lmbres

Juancho Moya

Avelina Aala

Natatas

Chairperson: Hon. Jaime M. Nones

Members: Hon. Eduardo V. Lalap

Julian Nunez

Feming Velasco

Reynold Perez

Merry Canasa

Juan Nones

Emma Ortiz

Julian Nunez

Pagaspas

Chairperson: Hon. Anselmo H. Malabanan

Members: Hon. Sonia R. dela Cruz

Amelia G. Refran

Alberto Austria

Rosa Maala

Pantay Bata

Chairperson: Hon. Ramon T. Panganiban

Members: Hon. Angelito G. Villa

Regie Garcia

Marissa P. Gatdula

Ruben Sanchez

Rosales M. Robles

Edelisa B. Mueco

Maria T. Luzaran

Pantay Matanda

Chairperson: Hon. Macario M. Galicia

Members: Hon. Teresita L. Ramilo

Marites Miranda

Loreta Relleve

Lea Villasanta

Poblacion 1

Chairperson: Hon. Richelieu P. Respicio

Members: Hon. Benedicto G. Petrasanta

Amado/Amelita Dimapilis

Robert Marina

Emelita Vitug

Fernando Vitug

Rowena C. Reano

Eulalia Grospe

Daniel Guinto

Poblacion 2

Chairperson: Hon. Lourdes R. Rivero

Members: Hon. Casimera L. Santiago

Agapita A. Nery

Liezel P. Velasco

Lourdes C. Carandang

Ronald R. Narvacan

Leonila M. Castillo

Poblacion 3

Chairperson: Hon. Nestor V. Carandang

Members: Hon. Renee S. Ramilo

Mario Gregorio

Ricky J. dela Cueva

Rebecca Capanay

Edgar P. Perez

Ruben Pelecio

Poblacion 4

Chairperson: Hon. Edilberto B. Catala

Members: Hon. Victoriano C. Opulencia

Nilo M. Lillo

Noemie Nerbal

Marilou A. Llanto

Salome B. Dalde

Antonio Quilao

Lalaine J. Martinez

Apollo G. Carpio

Poblacion 5

Chairperson: Hon. Isidro M. Fruelda

Members: Hon. Bernardo B. Avelino

Christina A. Castillo

Catalina C. Enriquez

Mateo C. Ganelo

Lourdes Lagunsad

Junior Biscocho

Poblacion 6

Chairperson: Hon. Rodolfo L. Navarro

Members: Hon. Gregorio A. Magnaye

Jordan A. Terrenal

Teodora A. Aguila

Patricia M. Perez

Efepania L. Silva

Conching Cabana

Manolo Chua

Rene E. Porio

Nelson D. Goguanco

Poblacion 7

Chairperson: Hon. Michael N. Biscocho

Members: Hon. Jocelyn C. Tercero

Janica D. Biscocho

Janet Medrana

Edna A. Ladrangan

Jean Marie Obias

Alice P. Valvieja

Rodney Perilla

Alden Razo

Sala

Chairperson: Hon. Candido M. Terrones

Members: Hon. Orlando M. Mueco

Vivian Petrasanta

Marinel Labing

Manny Medrana

Thomas Onate

Benita Padua

Sambat

Chairperson: Hon. Cesar P. de Villa

Members: Hon. Fernando D. Buenaobra

Atty. Ferdinand Perez

Zharra T. Parinas

Arnold Consorte

Remedios Molinyawe

Nick Chavez

Maylyn Diomampo

Francisco Reyes

May-ann Borlain

Renato dela Rosa

Lucy Maiquiz

San Jose

Chairperson: Hon. Dorie T. Cruz

Members: Hon. Gener B. Magnaye

Melodesa Verola

Aileen Duran

Betty Padua

Dorie A. Mendoza

Yolanda P. Portez

Santol

Chairperson: Hon. Leon P. Opena

Members: Hon. Modesto L. Caguicla

Teresita de Castro

Mark O. Parducho

Marcosa M. Gomez

Santor

Chairperson: Hon. Celerino G. Mercado

Members: Hon. Milo N. Andaya
Hazell Faye G. Narvacan
Crispina L. Tolentino
Imelda T. Marqueses
James M. Saniano
Mario P. Perez

Sulpoc

Chairperson: Hon. Orlando D. Natividad
Members: Hon. Virginia L. Redondo
Merlita M. Trinidad
Marites Lucido
Florencia Lumbres
Gen. Segundo Dimapilis
Felicizima Garcia

Suplang

Chairperson: Hon. Polmark L. Fajardo
Members: Hon. Eduardo P. Llarena
Ramon Jude Serrano
Cerila C. Makahiya
Remedios N. Cabrera
Rexan Fulleros

Talaga

Chairperson: Hon. Rico M. Talagsad

Members: Hon. Policarpio M. Malabanan

Dr. Heromina F. Gonzales

Cerila V. Jordan

Ronnielito D. Mabini

Engr. Alfredo C. Hernandez

Rosario H. Cervantes

Michael Dy Opena

Tinurik

Chairperson: Hon. Wilfredo M. Balahadia

Members: Hon. Honrubia D. Lopez

Hon. Nicolas U. Malabanan

Nazaria D. Victoria

Helen M. Balahadia

Nestor R. Malabanan

Marilen B. Magpantay

Juanito L. Balahadia

Agrifino T. Katigbak

Eladio L. Ofrin

Trapiche

Chairperson: Hon. Diego A. Motilla

Members: Hon. Mario O. Tolentino

German Lumban

Aurelio Mendoza

Elsa de Leon Perea

Nilo Decano

Ferdinand Natividad

Eugenia Balmeo

Flores de Leon

Ulango

Chairperson: Hon. Tirso M. Oruga

Members: Hon. Godofredo V. Quibal

Ramon Briones

Maricel Malabanan

Sofrinio Macayanan

Marlyn Navarro

Rene Alvarado

Marco Amurao

Wawa

Chairperson: Hon. Jiennch S. Nones

Members:	Hon. Jovito C. Garcia
	Norma L. Sumague
	Luzminda L. Villa
	Ponciano B. Gardiola
	Joel M. dela Cruz
	Eduardo C. Maala
	Margarito Q. Atienza
	Guillerma L. Burgos

5.5 STAKEHOLDERS PARTICIPATION

Tanauan City stakeholders have always been informed whenever there are programs pertaining to solid waste management. Stakeholders are also encouraged to give their feedbacks regarding the implementation of the projects. They can also use the social media to communicate their opinions regarding the situation of the city with regards to cleanliness and sanitation.

6. PLAN STRATEGY

6.1 VISION

We envision “a city enjoying and sustaining its natural resources, and clean and healthy environment”

MISSION

CENRO shall be the driving force in the pursuit of sustainable development, enabling stakeholder’s participation in the protection, conservation and management of the environment and natural resources for the present and future generation.

In line with the vision and mission of CENRO, the LGU had come up with the following goals on Solid Waste Management:

GOALS

1. To strengthen the implementation of the existing local ordinances pertaining to Solid Waste Management within the City of Tanauan.
2. To train every Barangay Solid Waste Management Committees regarding the establishment of MRF
3. To improve on the aspect of composting of biodegradable wastes and carry out in the barangay level
4. To institutionalize waste segregation starting from households, commercial and institutional establishments.
5. To focus on waste reduction and waste diversion especially on the household level.
6. To establish database on the manner of handling special waste of healthcare providers.

6.2 DIVERSION AND DISPOSAL TARGETS

Based on the WACS result of 0.227 kg/day waste generation rate, about 38 tons of garbage should be collected per day in all the forty-eight (48) barangays of the city. However, the coverage of garbage collection is only thirteen (13) barangays.

Based on the 2013 record of garbage collection, about forty-eight (48) tons of garbage is being collected daily. Fifty (50) percent diversion is expected to be achieved for the year 2016 since waste segregation is strictly being implemented in the areas where the garbage are being collected by the City Government.

Table 6.1 Diversion and Disposal Targets CY 2015-2025

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Waste diversion target	50%	53%	56%	59%	62%	65%	68%	71%	74%	77%	81%
Waste disposal target	50%	47%	44%	41%	38%	35%	32%	29%	26%	23%	19%

6.3 STRATEGIES

In line with the goals of the city on Solid Waste Management, the LGU plans to adopt the applicable strategies from the National Solid Waste Management Strategy in the implementation of the 10-Year SWM Plan. These are:

1. Harmonize the local swm ordinances with the national issuances.
2. Require schools and industries within the city to implement in-house SWM programs;
3. Capacitate information channels, advocates, practitioners, policy makers and SWM focal persons in the city;
4. Establish partnership with the Sanggunian and engage the support of local policy and decision makers in prioritizing SWM in their agenda;
5. Establish the local SWM Fund;
6. Enhance cost recovery mechanism, through imposition of garbage fees and fines from violations;
7. Promote recyclables and recycled products and establish linkages among the various players in the market;

8. Encourage participation of current and potential investors;
9. Enhance the capability of the city in the review and selection of appropriate verified SWM technologies;
10. Capacitate and ensure the sustainability of the CENRO and City SWM Board;
11. Establish city SWM database system;
12. Form, mobilize and empower city monitoring and enforcement teams;
13. Encourage and recognize barangay level SWM best practices and utilization of technologies;
14. Improve governance of the CENRO and SWM Board;
15. Ensure transparent processes and procedures in SWM initiatives;
16. Improve access of stakeholders to information and updates on SWM plans, evaluation process and results and other concerns;
17. Adopt the National Framework Plan for IWS in SWM;
18. Recognize the rights of the vulnerable groups and ensure that commitments of the SWM proponents are fully implemented;
19. Reduce greenhouse gas from city solid waste;
20. Increase the awareness of the city on effective disaster risk management and response in SWM facilities and communities;
21. Ensure logistics support (that includes trucks and vehicles, etc.)and;
22. Ensure garbage free waterways in the city.

7. SOLID WASTE MANAGEMENT SYSTEM

7.1 SOURCE REDUCTION

One of the key source reduction initiatives of the LGU is the on-going implementation of segregation at source or at the households. It is anchored on the City Ordinance No. 06-08 and was tagged as “No Segregation, No Collection” policy. The LGU plans to strengthen the implementation of such and impose penalties to those who are not cooperating in the program. Recycling and backyard composting is also being encouraged by the program. Collected bio-degradable wastes are being processed at the City MRF at Barangay Bilogbilog.

Another program for source reduction is the on-going implementation of City Ordinance No. 2012-05 or the ordinance prohibiting the use of plastic bags on dry goods, regulating its utilization on wet goods and prohibiting the use of styrofoam/styrophor in the City of Tanauan and prescribing penalties for violations thereof. Market goers are encouraged to bring their own bag or eco-bags as alternative for plastic bags and containers whenever they will buy cooked foods.

The LGU plans to continue and strengthen the implementation of these source reduction techniques within the ten (10) year period. Whenever there is a need for additional ordinances to promote source reduction, the will be proposed to the Sangguniang Panlungsod for appropriate legislation. Massive IEC will be conducted and funds will be allocated for the implementation of the source reduction programs.

7.2 COLLECTION

7.2.1 OVERVIEW

The LGU has an existing strategy for the collection of segregated waste from the barangays covered by the garbage collection. City-owned trucks are responsible for the collection of bio-degradable wastes from the City Public Market every night and every morning. The private hauler is responsible in hauling non-biodgradable wastes, recyclable wastes and biodegradable wastes from all souces. The private hauler is being aided by the city-owned trucks in the collection of biodegradable wastes in the pilot areas at Barangay Darasa.

When the Barangay MRFs are already established, the city will assign a hauler to pick up the residuals as specified in RA 9003. The LGU will come up with a scheme on the collection of such waste from the barangays.

7.2.2 COLLECTION EQUIPMENT AND ROUTES

Presently, the LGU have two (2) dump trucks intended for collection of bio-degradable wastes. Bio-degradable wastes are being brought directly to the City MRF at Barangay Bilogbilog.

The private hauler has three (3) garbage compactors, tree (3) dump trucks and one (1) mini-truck. These are being used in the collection of all kinds of waste from all sources of the barangays covered by the garbage collection.

The collection route, collection schedule and current number of vehicles was discussed in the previous chapter.

Upon establishment of Barangay MRFs, the barangays may outsource or procure their own dump truck or any vehicle which could be used for the garbage collection.

7.2.3 PRIVATE COLLECTION SERVICE

Presently, the LGU have commissioned NLC Garbage Services for the collection and disposal of the garbage of the city since 2014. Only thirteen (13) barangay are covered by the garbage collection service. The collection route as well as the collection schedule was discussed in the previous chapter. Said private hauler disposes their collected non-biodegradable at the Sanitary Landfill owned by Severino Hain located at Barangay Bubuyan, Calamba City, Laguna.

Even before 2014, a private hauler collects and disposes the garbage of the city. The LGU might have opted to tap the services of a private hauler to lessen the burden in the management of such.

Before the planning period ends, the City Government's goal is 100% collection of residual wastes and special waste in all the barangays.

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Target no. of brgys. to be covered by garbage collection	13	16	19	22	25	28	32	36	40	44	48

7.2.4 STORAGE AND SETOUT

The LGU-owned dump trucks and the private hauler use plastic drums in the collection of bio-degradable wastes from households and other sources. Barangays will be encouraged to do the same to prevent spillage.

7.2.5 SEGRAGATED RECYCLABLES

The households, commercial and institutional establishment may opt to trade their recyclable waste to the local junkshops or they can give it to the garbage trucks of the private hauler.

Upon establishment of Barangay MRFs, they may develop a scheme on how they will collect their segregated recyclables preferably once a week. Barangays may opt to partner with a junkshop facility in the trading of their recyclables.

7.2.6 SEGRAGATED COMPOSTABLES

All barangay MRFs shall have provisions for vermi-composting beds for their compostable waste. They will also have an option of bringing their compostable wastes at the City MRF.

7.2.7 MIXED SOLID WASTE/RESIDUALS

Collection of residual waste shall always be responsibility of the City Government including those collected by the barangays. It will be collected and disposed by the private hauler.

7.3 SEGREGATION, RECYCLING AND COMPOSTING

7.3.1 SEGREGATION

Segregation will start from all waste generators in every barangay (households, commercial and institutions). The “No Segregation, No Collection” policy will be strictly implemented in all areas covered by garbage collection. The City Government will be providing technical assistance in the management of Barangay MRFs especially in waste segregation. Barangays can adopt the “No Segregation, No Collection” policy since the ordinance covers the whole of Tanauan City.

7.3.2 RECYCLING

There will be provisions for storage of recyclable materials in each Barangay MRF. Each barangay will collect the recyclable items within their area of jurisdiction.

The City Government will facilitate the agreement between each barangay and junkshops for selling of recyclable materials. The funds that will be raised from selling the recyclable materials will serve as solid waste management fund for the sustainability of Barangay MRFs.

7.3.3 COMPOSTING/MANAGEMENT OF BIODEGRADABLE WASTE

All barangay MRFs or clustered MRFs shall have provisions for vermi-composting beds for their compostable waste. They will also have an option of bringing their compostable wastes at the City MRF. The compost that will be produced can be distributed to their local farmers or sell them to private entities. The City Government will provide technical and financial assistance in the establishment of vermi-composting beds.

There will be ten (10) barangay clusters for the establishment of clustered MRFs. The proposed clustering is discussed in the Annex.

7.3.4 MARKETING AND MARKET DEVELOPMENT

The LGU have no plan of marketing the vermicast that will be produced in the City MRF. It will be distributed to qualified organic farmers. Barangays can also distribute the fertilizer that they will be producing.

Upon the establishment of Barangay MRF, the barangay will be responsible in the handling of recyclable waste. . Barangays may opt to partner with a junkshop facility in the trading of their recyclables.

7.4 TRANSFER

The LGU have no plan of putting up a transfer facility for the next ten (10) years.

Residual wastes are being hauled and transported directly to the Sanitary Landfill owned by Severino Hain located at Barangay Bubuyan, Calamba City, Laguna (Suri Waste Management and Disposal Services).

7.5 ALTERNATIVE TECHNOLOGIES FOR RESIDUAL WASTES

The LGU have a plan of adopting alternative technology for residual wastes. City officials are looking into adopting an effective Waste to Energy Technology. There is a plan to visit effective Waste to Energy facilities on the nearby provinces.

All aspects will be given consideration. The technology should be approved by the Department of Environment and Natural Resources (DENR) Department of Energy (DOE) and the Department of Science and Technology (DOST). Upon establishment of such facility, all measures will be done to sustain its purpose which is to aid the city in proper solid waste management.

7.6 DISPOSAL

The LGU will continue to render services from a private hauler to dispose non-biodegradable wastes as well as residual wastes. The present private hauler disposes their collected non-biodegradable and residual wastes at the Sanitary Landfill owned by Severino Hain located at Barangay Bubuyan, Calamba City, Laguna (Suri Waste Management and Disposal Services). There is a Memorandum of Agreement between the private hauler which is NLC Garbage Services and Suri Waste Management and Disposal Services. Please see Annex.

7.6.1 SOLID WASTE DISPOSAL CAPACITY

The LGU does not own nor operate any solid waste disposal facility. Residual wastes are being dumped directly at the Sanitary Landfill owned by Severino Hain located at Barangay Bubuyan, Calamba City, Laguna (Suri Waste Management and Disposal Services). The present facility can last for five (5) more years and there is an extension of their facility just beside the present location. It has an approximate area of ten (10) hectares and has a depth of twenty (20) meters. The facility can be utilized for the next fifteen (15) years depending on the volume of garbage they will be accommodating.

7.6.2 EXISTING FACILITIES

The LGU own and operate a Material Recovery Facility located at Sitio Dayapan, Baranagay Bilogbilog. Housed at the MRF is a granulator which shreds biodegradable wastes to be processed into vermicast.

7.7 SPECIAL WASTES

Special wastes inventory shall be conducted by the CENRO as part of the WACS. Based on the result, the capacity of the storage facility and schedule for the collection and treatment of such wastes shall be identified. Accredited treaters will be selected and contracted for the treatment and disposal of these wastes.

At present, the hospital administrations handle their own health care wastes as it is a mandatory for them to have their own collector of hospital wastes. LGU operated Health Centers will continue to dispose their generated health care wastes at the Municipal Cemetery wherein there are tombs designated for the disposal of such wastes.

7.8 INFORMATION, EDUCATION AND COMMUNICATION (IEC)

Every sector will be targetted by the IEC which will focus on ecological solid waste management. This strategy will not only aim at informing the general public but will also instill appreciation of ecological solid waste management.

All the IEC materials will contain target audience, specific program and theme that the program will be addressing. IEC materials for schools will contain awareness on the present situation and the desired situation.

8. IMPLEMENTATION STRATEGY

8.1 FRAMEWORK

The Barangay Solid Waste Management Committee will be responsible in preparation and implementation of the programs for collection and management of biodegradable and recyclable wastes.

The City Solid Waste Management Board will be activated and strengthened to perform its functions. The ten year SWM Plan shall be the roadmap in implementing solid waste management. The plan will be assessed regularly to determine whether the plan is executed well or there is a need for further revision. The City Government and the barangays will be coordinating regularly to carry out the SWM plan.

As expected from them, members of the CSWM Board is required to perform the functions as specified in RA 9003.

8.2 DIVERSION PROJECTIONS**Table 4.1.16 10- Year Waste Diversion Targets**

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Waste diversion target	50%	53%	56%	59%	62%	65%	68%	71%	74%	77%	81%
Waste disposal target	50%	47%	44%	41%	38%	35%	32%	29%	26%	23%	19%

The waste diversion target is summarized in the above matrix. Materials to be targetted to achieve the waste diversion will include all the recyclable materials, biodegradable materials and some residuals which can be shredded and turned into something useful.

The LGU plans to divert 50% of the waste generated for the year 2016. All strategies shall be implemented to achieve not less than the target waste diversion. By 2020, the LGU shall achieve the target 62% waste diversion.

Table 4.1.17 Distribution of Diversion Targets

Year	PCG per day	Population	Daily Waste Gen based on Population (Kg/Day)	Waste Diversion Target (%)	Weight to be Diverted	Waste Disposal Target (%)	Weight to be Disposed (Kg/Day)	Biodegradable	Recyclable	Residual
2016	0.227	178,088	76,234.14	50	38117.07	50	38117.07	28488.70	24029.00	23098.94
2017	0.227	182,773	78,188.02	53	41439.65	47	36748.37	29218.86	24644.86	23690.97
2018	0.227	187,582	80,191.98	56	44907.51	44	35284.47	29967.74	25276.51	24298.17
2019	0.227	192,517	82,247.30	59	48525.91	41	33721.39	30735.82	25924.35	24920.93
2020	0.227	197,582	84,355.30	62	52300.29	38	32055.01	31523.58	26588.79	25559.66
2021	0.227	202,781	86,517.33	65	56236.26	35	30281.07	32331.53	27270.26	26214.75
2022	0.227	208,116	88,734.76	68	60339.64	32	28395.12	33160.18	27969.20	26886.63
2023	0.227	213,591	91,009.04	71	64616.42	29	26392.62	34010.08	28686.05	27575.74
2024	0.227	219,210	93,341.60	74	69072.78	26	24268.82	34881.76	29421.27	28282.50
2025	0.227	224,978	95,733.94	77	73715.13	23	22018.81	35775.77	30175.34	29007.38
2026	0.227	230,897	98,187.60	81	79531.96	19	18655.64	36692.71	30948.73	29750.84

8.3 MONITORING PROGRAM

The LGU and Barangay SWM Committees will conduct quarterly monitoring of the compliance with the plan. CENR Officer will develop a form to be used in the assessment.

The LGU will give incentives to performing barangays regarding the establishment of their own Material Recovery Facility. The facility should be properly maintained and disinfected to prevent proliferation of harmful pest which could cause diseases. The incentive will be in the form of cash which should be used in the improvement of their MRF or in the cleanliness of their respective barangay.

Non-performing barangays will be given notices on what they should be doing in their respective barangays with regards to proper solid waste management. A dialogue will be periodically scheduled to know the difficulties they are experiencing in their areas.

9. INSTITUTIONAL ASPECTS

9.1 ROLES

The City Government shall be responsible for the implementation of this Ten-Year SWM Plan.

The SWM Board of Tanauan shall continue to oversee the implementation of the plan. The specific functions provided in Section 12 of Republic Act No. 9003 and its IRRs shall be carried out by the Board.

In order for the Board to deliver all its functions, it shall be assisted by a Technical Working Group composed of members from selected Departments of the

City Government as well as members of the SWM Board. The CENRO shall serve as the Secretariat of the Board and its TWG.

The City Government will seek for other entities or organizations which could help in the implementation of the plan. It would be a good thing is they will offer technical and financial assistance to the Barangay MRFs.

9.2 LEGAL

Table 4.1.18 SP Resolutions and Ordinances on Solid Waste Management

Sangguniang Panlungsod Resolutions/Ordinances	Title/Brief Description
1. City Ordinance No. 2014-38	An ordinance granting cash reward of twenty-five percent (25%) to Tanauan City Task Force Kalinisan of the imposed penalty for violation of all ordinances pertaining to cleanliness, sanitation, and orderliness of the surrounding streets, sidewalks, yards, canals, rivers and creeks, improper disposal of solid waste and liquid waste, illegal dumping of garbage, unsegregated garbage and using plastic bags on dry goods.
2. City Ordinance No. 2012-05	An ordinance prohibiting the use of plastic bags on dry goods, regulating its utilization on wet goods and prohibiting the use of styrofoam/styrophor in the City of Tanauan and prescribing penalties for violations thereof
3. City Ordinance No. 11-1	Tax Ordinance for the City of Tanauan
4. City Ordinance No. 06-8	Ordinansa para sa makakalikasang pamamahala ng basura sa lahat ng mga barangay, mga bahay kalakal, mga institusyon, mga establisimentong idustriyal at mga lugar na pang-agrikultura sa Lungsod ng Tanauan na naaayon sa itinakda ng Batas Republika Blg. 9003
5. Municipal Ordinance No. 96-1	An ordinance prohibiting spitting, urinating, defacating, and/or littering of paper and other rubbish in public buildings, streets, plazas, and other public places in Tanauan, Batangas and providing penalties for violation therof
6. Municipal Ordinance No 94-2	An ordinance prescribing and penalizing certain acts omissions inimical to cleanliness and sanitation

10. SOCIAL AND ENVIRONMENTAL ASPECTS

Since the City Government of Tanauan have no plans of establishing any disposal facility, there are no matters to be discussed in this chapter.

11. COST ESTIMATES/FINANCIAL ASPECTS

11.1 INVESTMENT COST

Investment Cost shall be addressing the components of Solid Waste System including collection, Materials Recovery Facility (MRF), composting facilities, processing facilities and lot acquisition. Please see Table 11.1

Additional mini-dumptrucks will be purchased to aid the barangays which does not have their own dumptrucks yet. This could be used in hauling biodegradable and residual waste. Heavy equipments will be used in the possible operation of an effective Waste to Energy facility. All aspects will be given attention to avoid any problems during operation stage. All government issued permits and clearances will be secured before the facility will be established.

A new service vehicle will also be procured for better mobilization of CENRO personnel.

11.2 ANNUAL COST

Annual Cost shall be covering the Personnel Services and Other Maintenance and Operating Expenses. Please see Table 11.2

An additional eleven (11) regular employees will be hired up to the end of the planning period (2026) which includes five (5) technical staff, three (3) office staff and three (3) field supervisors.

Before the planning period ends, the City Government's goal is 100% collection of residual wastes and special waste in all the barangays. Every year, there will be an additional three (3) or four (4) barangays where the residual waste will be hauled as reflected in the proposed budget.

11.3 FUNDING OPTIONS

The LGU plans to utilize all the available funding sources aside from the local budget to support the LGU initiatives on SWM such as the Provincial Government, National Government Agencies, Financial Institutions and private companies or corporations operating within the jurisdiction of the city.

12. PLAN IMPLEMENTATION

12.1 PHASES AND RESPONSIBILITIES

The table below summarizes the phases in SWM implementation and responsible offices and entities involved.

Table 12.1 SWM Implementation and Responsible Offices

Phases	Responsible Office
Conduct of WACS	CENRO; Barangay SWM Committee
Research on SWM Issues Facing the Community	CENRO
Preparation/Writing of the SWM Profile	CENRO
Writing the Current SWM Conditions of the LGU and Existing Institutional Arrangements	SWM Board; CENRO
Formulation of the Ten Year SWM Plan	SWM Board; CENRO
Implementation of the SWM Plan	LGU; Barangay SWM Committee
Oversee the Implementation of the Plan	SWM Board; TWG
Review and Update the SWM Plan	SWM Board; TWG

12.2 MILESTONES

One of the major accomplishments of the LGU in SWM is the establishment and operation of the City MRF located at Sitio Dayapan, Barangay Bilogbilog. Ever since, no administration succeeded in putting up such facility because of social acceptability. The construction of the facility took place in September 2014 and the Granulator Machine was installed on November 2014. The facility started its actual operation on November 27, 2014.

The facility also houses sixteen (16) vermi-composting beds. The first batch of African night crawlers was placed in the beds on December 16, 2014.

Another significant happening in the solid waste management of the city is the strict implementation of City Ordinance No. 2012-05, City Ordinance No. 2006-08 and Municipal Ordinance No. 96-01. For the year 2014 alone, one hundred twenty-six (126) were apprehended for violation of the three (3) ordinances and total fine of P 70,700.00 was collected.

The “No Segregation, No Collection” policy was implemented on the 2nd quarter of 2015

Enumerated in the table below are the milestones in the SWM implementation of Tanauan City.

Table 4.1.19 Milestones in the SWM Implementation

Activity	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Construction and Operation of City MRF											
Reactivation of the SWM Board											
Conduct of WACS											
Formulating the Ten Year SWM Plan											
Approval of the 10-Year Plan by the NSWMC											
Drafting of the Environment Code											
Approval of the Environment Code											
50% waste diversion											

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65% waste diversion												
81% waste diversion												
Start production of vermicompost												
Start of ESWM in schools, commercial establishments, industries and institutions established												
Start of 100% segregated collection in 13 barangays												

12.3 IMPLEMENTATION SCHEDULE

The following activities shall be implemented within the 10-year planning period and shall be subject to revision and updating as deemed necessary.

Table 4.1.20 Implementation Schedule

Activity	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Mobilization of the SWM Board and its TWG											
Establishment of ESWM system in schools, commercial establishments, industries and institutions											
Segregated Collection											
Continuous City MRF Operation (including enhancements)											
Establishment and Operation of Barangay MRFs or Cluster MRF											
Capacity building and social marketing activities											

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Inventory of recovered wastes (including junkshops)											
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Breakdown of SWM implementation into short term, medium term and long term.

Immediate Action Plan

Activities	Target	2016		2017		Remarks
		1 st S	2 nd S	1 st S	2 nd S	
Mobilization of SWM Board and its TWG	Quarterly Meeting		2	2	2	
Capacity building and social marketing activities	All Barangays	All BS WM	All BSW M	All BS WM	All BSW M	Waste Diversio n 2016:
Establishment of ESWM System in commercial establishments, institutions and industries outside industrial estates	Agreements established/Act ion plan formulated & implemented in all sectors	All Insti tution s	All Instit ution s	All com mer cial	All Indus tries	50% 2017: 53%
Segregated Collection	13 barangays	13	13	19	25	
Continuous City MRF Operation (including enhancements	13 Barangays served	13	13	13	13	
Establishment and Operation of Barangay MRFs or Cluster MRF	12 Barangays served	0	0	6	6	
Inventory of recovered wastes (including junkshops)	48 barangays	0	12	18	18	

Medium Term

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Activities	Target	2018	2019	2020	2021	Remarks
Mobilization of SWM Board and its TWG	Quarterly Meeting	4	4	4	4	Waste
Capacity building and social marketing activities	48 Barangays	All BS WM	All BS WM	All BS WM	All BS WM	Diversi on 2018: 56%
Establishment of ESWM System in commercial establishments, institutions and industries outside industrial estates	Action plan formulated & implemented in all sectors	All sectors	All sectors	All sectors	All sectors	2019: 59% 2020: 62% 2021: 65%
Segregated Collection	48 Barangays	48	48	48	48	
Continuous Central MRF Operation (including enhancements)	13 Barangays served	13	13	13	13	
Establishment and Operation of Barangay MRFs or Cluster MRF	23 Barangays served	6	6	6	7	
Inventory of recovered wastes (data updating)	48 barangays	48	48	48	48	

Activities	Target	2022	2023	2024	2025	Remarks
Mobilization of SWM Board and its TWG	Monthly Meeting	4	4	4	4	Waste
Capacity building and social marketing activities	15 Barangays	All BS WM	All BS WM	All BS WM	All BS WM	Diversi on 2022: 68%

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						2023:7 1%
Establishment of ESWM System in commercial establishments, institutions and industries outside industrial estates	Action plan implemented in all sectors	All sectors	All sectors	All sectors	All sectors	2024:7 4% 2025:7 7% 2026:8 1%
Segregated Collection	48 Barangays	48	48	48	48	
Continuous Central MRF Operation (including enhancements)	13 Barangays served	13	13	13	13	
Establishment and Operation of Barangay MRFs or Cluster MRF	35 Barangay served	35	35	35	35	
Inventory of recovered wastes (data updating)	48 barangays	48	48	48	48	

Annex 4.2

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Chapter V

ECONOMIC SECTOR

5.1 AGRICULTURE

5.1.1 Agriculture Production

With the total land area of 10,987.43 hectares (has.), the total number of hectares devoted to agriculture is 8,700.67 has. or 83.71% of the city's total land area in 2015. The city's agricultural land is predominantly planted with sugarcane, corn, fruits, and vegetables.

5.1.1.1 Crop Production and Land Utilization by Type

Several annual and perennial crops are planted in the City of Tanauan. The table below shows the total area planted (in Has.) of different crops and fruit-bearing trees in the city. The total productions in metric tons (mT) are also shown below. Official data from Office of the City Agriculture showed that white corn, rambutan (fruit tree), sitaw, and ampalaya (fruit vegetables) are among the top crops produced last 2014. Moreover, sugarcane and coconut are also among the top crops based from data from the 2012 Socio-Economic and Physical Profile of the Provincial Government of Batangas.

Table 5.1. Comparative yearly production and number of areas planted with different crops/fruit-bearing trees (2012 - 2014)

CROPS / FRUIT BEARING TREE	YEAR 2012		YEAR 2013		YEAR 2014	
	Volume (MT)	Hectares	Volume (MT)	Hectares	Volume (MT)	Hectares
Rice	285.07	63.35	276.97	61.550	92	23
Corn	1,220.599	305.15	1,085.46	271.36	2,800.6	423.8
Sugarcane	82,051.39	1,043	22.84	283.13		
Root Crops	828.488	104.05	836.33	105.03	232.66	42.32
Vegetables	14,708.68	1,762.15	14,541.49	1,742.12	5872.07	635.04
Citrus	2,196.54	122.03	2,102.92	116.82	381.06	21.17
Banana	3,527.1	235.14	3,350.02	223.335	438.38	87.88
Coconut	10,249	2,053	1,740.85	348.17		

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Fruit Trees	8,634.21	527.13	7,481.57	456.76	3946.93	264.15
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Source: Office of the City Agriculture, 2014

It can be noticed that the volume of coconut production significantly decreased from 2012 to 2014 as shown on Table 5.1. The decrease in production of coconut is mainly due to coconut pest infestations caused by the pest known as *Aspidiotus destructor* Signoret or the coconut scale insect. This pest is one of the most destructive armored scale insects that infest coconut and said to grow quickly and spread in colonies, decreasing crop yields and eventually killing the plants that it infests. The infestations affected the coconut production on Barangays Gonzales, Bilog-bilog, Natatas, Balele, Boot, Bagumbayan, Tinurik, Bagbag, Wawa, Bañadero, Janopol Occidental, Janopol Oriental, Talaga, Maugat, Santor, Maria Paz, Sambat, Trapiche, Montaña, San Jose, Ambulong, Mabini, and Darasa.

Table 5.2 Total area planted and total production of different crops and fruit-bearing trees, 2014

CROPS/FRUIT BEARING TREE	CLASSIFICATION/ TYPE	TOTAL NUMBER OF HECTARES (HAS.) PLANTED	TOTAL PRODUCTION IN METRICTONS (MT.)
Rice		23	92
Corn	White	382.3	2,676.10
	Yellow	41.50	124.50
Cassava		20.55	534.30
Fruit Trees	Rambutan	122.41	1,468.92
	Lanzones	100	1500
	Mango	8.94	160.94
	Papaya	8.78	456.77
	Camias	24.02	360.30
Fruit Vegetables	Sili	0.50	
	Sitaw	99.40	1,093.38
	Okra	31.25	312.50
	Eggplant	19.74	217.14
	Patola	36.09	288.72
	Tomato	39.61	475.32
	Paayap	3.34	26.72
	Sigarilyas	87.49	437.35
	Upo	66.08	660.80
	Ampalaya	91.23	912.30
	Bataw	1.78	8.90
	Beans	3.9	31.20
	Squash	73.90	736.00

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Leafy Vegetables	Pipino	3.93	58.95
	Mustasa	22.27	133.62
	Malunggay	16.88	253.27
Industrial Crops	Pechay	37.65	225.90
	Banana	87.88	439.38
Citrus	Calamansi	21.17	381.06
Bulb	Garlic	2.00	16.00
Root Crops	Ginger	35.11	175.54
	Camote	7.19	43.14
	Ube	0.02	0.12
*Sugarcane		1,043	82,051.39
* Coconut		2053	10,249

**Sugarcane and Coconut data were lifted from SEPP, Provincial Government of Batangas, 2012
Source: Office of the City Agriculture, 2014*

Table 5.3. Total area planted with rice, corn, cassava, and different fruit trees per barangay, 2014

BARANGAY		Rice	Corn (in Has.)		Cassava	Fruit Trees (in Has.)				
			White	Yellow		Rambutan	Lanzones	Mango	Papaya	Camias
1	Altura Bata		8.00						0.03	
2	Altura Matanda		4.00						0.02	
3	Altura South		4.00						0.07	
4	Ambulong		3.00						0.10	0.00
5	Bagbag						4.00		0.50	
6	Bagumbayan		5.00			0.30		0.92	0.04	
7	Balele					15.00	17.00	0.25	0.03	
8	Banjo East					50.00	30.00		0.20	
9	Banjo West					40.00	20.00	0.20	0.03	
10	Bañadero	23.00						0.05	0.10	
11	Bilog-Bilog		27.00	2.00		0.50		3.45	0.03	0.20
12	Boot						12.00	1.00	0.20	21.78
13	Cale		8.30						0.40	
14	Darasa		3.00					1.07	0.06	
15	Gonzales		2.00						0.01	0.84
16	Hidalgo								0.50	
17	Janopol Occidental								0.40	
18	Janopol Oriental		16.00	1.50					0.40	

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19	Laurel		30.00	5.00				0.10		
20	Luyos		30.00	6.00	3.00			0.35		
21	Mabini				0.75		6.00	0.23		
22	Malaking Pulo		33.00		3.00			0.50		
23	Maria Paz		10.00		0.50	3.00		0.25	0.30	
24	Maugat		7.00			3.00		0.02		
25	Montaña		20.00	5.00	1.00			0.40		
26	Natatas		8.00			5.00	5.00	0.90		
27	Pagaspas		8.00		2.00			0.30		
28	Pantay Bata		33.00		0.50	0.10		0.40		
29	Pantay Matanda		42.00		1.00			0.09		
30	Sala		6.00		2.00	0.50		0.40		
31	San Jose		16.00			0.01		0.20		
32	Sambat							0.30		
33	Santol		18.00	2.00				0.20		
34	Santor		10.00		2.00			0.04		
35	Sulpoc		7.00	5.00				0.05	0.09	
36	Suplang		10.00	15.0	2.00					
37	Talaga				0.30			0.50	0.01	
38	Tinurik		2.00		2.00	5.00	6.00	1.20	0.40	
39	Trapiche		12.00		0.50			0.04		
40	Ulango							0.30		
41	Wawa							0.10	0.96	
	TOTAL	23.00	382.3	41.5	20.55	122.41	100.00	8.94	8.78	24.02

Source: Office of the City Agriculture, 2014

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Table 5.4. Total area planted with different fruit vegetables per barangay, 2014.

BARANGAY		Fruit Vegetables (in Has.)													
		Sili	Sitaw	Okra	Eggplant	Patola	Tomato	Paayap	Sigarilyas	Upo	Ampalaya	Bataw	Beans	Squash	Pipino
1	Altura Bata		0.68	1.42	0.18	0.23	0.15	0.15	0.02	0.21					
2	Altura Matanda		0.24	0.54	0.02	0.01		0.06	0.11	0.04					0.57
3	Altura South		1.78	0.22	1.00	1.65	0.03	0.35	1.67	2.46	0.80			0.68	1.00
4	Ambulong		0.25								0.25			3.50	
5	Bagbag		3.90	1.45	1.00	0.10			5.80	8.00	12.30			7.00	
6	Bagumbayan		1.62	0.50	0.15	0.53			0.96	1.01	0.08			1.24	
7	Balele		8.30	1.30	2.10	3.60	0.10		3.00	5.50	7.60			5.20	0.02
8	Banjo East						1.25								
9	Banjo West						1.00								
10	Bañadero		2.70		0.52					1.50				0.66	
11	Bilog-Bilog		12.00	1.64		13.50	3.91	0.50	0.60	15.80	25.00			12.00	1.00
12	Boot		5.00		0.48	0.25			5.00		12.50		0.50	7.00	
13	Cale			8.00	3.00		2.00	2.25	9.50	3.50	2.50	1.55		1.50	
14	Darasa		2.52	0.12	1.08	0.43								0.80	
15	Gonzales			0.10	0.04							0.05			
16	Hidalgo														
17	Janopol Occidental	0.50									0.29				
18	Janopol Oriental		7.00	5.00					1.60	3.10	4.50		1.00	1.90	0.50
19	Laurel		0.90							3.10	0.10			3.00	
20	Luyos		8.00	1.96	1.00	1.00	13.13		0.65	1.72	0.88			3.03	
21	Mabini														
22	Malaking Pulo			0.25	1.20	0.10	1.50		0.10	2.30	2.40				
23	Maria Paz		4.26	0.20	0.20						2.00			2.50	

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24	Maugat		2.03	0.92					0.03	5.50	1.08			4.00	0.01
25	Montaña		5.00	0.90	0.75		0.90		2.40	1.50	0.65			0.80	0.60
26	Natatas		1.66	0.62	0.03				0.30		0.20			0.07	0.20
27	Pagaspas		0.20		0.20							0.18			
28	Pantay Bata		0.02											1.02	
29	Pantay Matanda				0.01									0.80	
30	Sala	0.00	1.41	0.36	0.53	0.20			7.64		0.60			0.64	
31	San Jose		1.04	0.32	0.43		0.02	0.03	0.03	0.22	0.15			0.28	
32	Sambat														
33	Santol		1.00	1.80	1.18	0.09	1.30				4.55				
34	Santor		3.00	1.95	0.53		0.25		10.45		3.00		2.40	4.60	
35	Sulpoc		4.60		0.50	0.20	8.50		23.38		1.25			0.20	
36	Suplang		1.55	0.10	1.53		5.57		0.70	0.62	5.91			0.76	
37	Talaga		2.80	0.25	0.70	5.20			3.00		2.50			3.00	
38	Tinurik		1.30	0.10	0.30				0.05	3.00				3.00	
39	Trapiche		5.40	0.25		9.00			10.50	7.00				1.44	
40	Ulango		1.65		0.08						0.14			0.98	0.03
41	Wawa		7.60	1.00	1.00									2.00	
	TOTAL	0.50	99.40	31.25	19.74	36.09	39.61	3.34	87.49	66.08	91.23	1.78	3.90	73.60	3.93

Source: Office of the City Agriculture, 2014

Referring to Table 5.4. Total area planted with different fruit vegetables per barangay, 2014, it can be noticed that sitaw and sigarilyas accumulated the largest land area in 2014. While the table below, showed that banana, as industrial crop, had accumulated the largest land area of the total area planted for 2014, followed by pechay, which is under the leafy vegetable

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Table 5.5 Total area planted with different leafy vegetables, industrial crops, citrus bulb, and root crops per barangay, 2014

BARANGAY		Leafy Vegetables (in Has.)			Industrial Crops (in Has.)	Citrus (in Has.)	Bulb (in Has.)	Root Crops (in Ha.)		
		Mustasa (ha)	Malunggay (ha)	Pechay (ha)	Banana (ha)	Calamansi (ha)	Garlic (ha)	Ginger (ha)	Camote (ha)	Ube (ha)
1	Altura Bata							0.12		
2	Altura Matanda				0.10					
3	Altura South			0.15				0.05		
4	Ambulong			0.01	12.14	0.32				
5	Bagbag	0.70			3.00	10.00		1.00	0.45	
6	Bagumbayan			1.03		0.14		0.14		
7	Balele	2.00		1.05	1.00	0.70		0.30		
8	Banjo East							1.50		
9	Banjo West			0.25	0.25					
10	Bañadero	1.98	1.98	0.50	5.71	0.85			0.10	
11	Bilog-Bilog				0.91			0.07		
12	Boot	1.50	3.89					0.05	0.30	
13	Cale	0.40	0.40	6.00			2.00	0.10		
14	Darasa					0.25		0.10		
15	Gonzales	2.25	6.21		1.88	1.00		0.10	0.03	
16	Hidalgo			2.40	0.10			0.10	2.00	
17	Janopol Occidental							0.05		
18	Janopol Oriental	1.70	2.90	0.50	10.03			2.30		
19	Laurel									
20	Luyos			1.00						
21	Mabini	0.01	0.01	0.50	0.50	0.50		1.50		
22	Malaking Pulo	1.50	1.50	5.20				1.50		
23	Maria Paz	1.20		0.05	24.31	1.00		1.00	3.00	
24	Maugat			1.00		0.81		0.50		
25	Montaña	0.70						1.00		
26	Natatas									
27	Pagaspas	0.21		1.70	1.99			1.00		
28	Pantay Bata				0.42	2.50		0.02		
29	Pantay Matanda									
30	Sala	1.00		0.51				0.42		
31	San Jose							0.05	0.01	
32	Sambat									
33	Santol	0.70		5.00						

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34	Santor	0.55		0.50	0.84	0.10		2.50		
35	Sulpoc	1.10		3.00				0.50		
36	Suplang	0.22		4.00	0.35			0.30		
37	Talaga			2.70				3.00		
38	Tinurik	0.10		0.20		1.00		7.00	0.30	0.02
39	Trapiche	0.05		0.40	2.47			0.60		
40	Ulango							0.04		
41	Wawa	4.40			21.88	2.00		8.20	1.00	
	TOTAL	22.27	16.88	37.65	87.88	21.17	2.00	35.11	7.19	0.02

Source: Office of the City Agriculture, 2014

As with the total production, Table 5.6. Total production of different crops and fruit-bearing trees per barangay, 2014, data shows that corn specifically white corn and lanzones and rambutan on fruit trees had the highest production last 2014.

Table 5.6 Total production of different crops and fruit-bearing trees planted per barangay, 2014

BARANGAY		Rice (mt)	Corn (mt)		Cassava (mt)	Fruit Trees (mt)				
			White	Yellow		Rambutan (mt)	Lanzones (mt)	Mango (mt)	Papaya (mt)	Camias (mt)
1	Altura Bata		56.00						1.56	
2	Altura Matanda		28.00						1.04	
3	Altura South		28.00						3.64	
4	Ambulong		21.00						5.20	
5	Bagbag						60.00		26.00	
6	Bagumbayan		35.00			3.60		16.57	2.08	
7	Balele					180.00	255.00	4.50	1.56	
8	Banjo East					600.00	450.00		10.40	
9	Banjo West					480.00	300.00	3.60	1.56	
10	Bañadero	92.00						0.90	5.20	
11	Bilog-Bilog		189.00	6.00		6.00		62.10	1.56	3.00
12	Boot						180.00	18.00	10.40	326.70
13	Cale		58.10						20.80	
14	Darasa		21.00					19.27	3.12	
15	Gonzales		14.00						0.31	12.53
16	Hidalgo								26.00	
17	Janopol Occidental								20.80	
18	Janopol Oriental		112.00	4.50					20.80	
19	Laurel		210.00	15.00					5.20	

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20	Luyos		210.00	18.00	78.00			18.20		
21	Mabini				19.50		90.00	11.96		
22	Malaking Pulo		231.00		78.00			26.00		
23	Maria Paz		70.00		13.00	36.00		4.50	15.60	
24	Maugat		49.00			36.00			1.04	
25	Montaña		140.00	15.00	26.00				20.80	
26	Natatas		56.00			60.00	75.00		46.80	
27	Pagaspas		56.00		52.00				15.60	
28	Pantay Bata		231.00		13.00	1.20			20.80	
29	Pantay Matanda		294.00		26.00	0.00			4.68	
30	Sala		42.00		52.00	6.00			20.80	
31	San Jose		112.00			0.12			10.40	
32	Sambat								15.60	
33	Santol		126.00	6.00					10.40	
34	Santor		70.00		52.00				2.08	
35	Sulpoc		49.00	15.00				0.90	4.68	
36	Suplang		70.00	45.00	52.00				0.00	
37	Talaga				7.80			9.00	0.42	
38	Tinurik		14.00		52.00	60.00	90.00	21.60	20.80	
39	Trapiche		84.00		13.00				2.08	
40	Ulango								15.60	
41	Wawa								5.20	
TOTAL (MT)		92.00	2,676.10	124.50	534.30	1,468.92	1,500.00	160.94	456.77	360.30

Source: City Agriculture Office, 2014

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Table 5.7 Total production of fruit vegetables planted per barangay, 2014

BARANGAY		Fruit Vegetables (in mt)											
		Sitaw	Okra	Eggplant	Patola	Tomato	Paayap	Sigarilyas	Upo	Ampalaya	Bataw	Beans	Squash	Pipino
1	Altura Bata	7.48	14.15	1.98	1.84	1.80	1.20		2.10				
2	Altura Matanda	2.64	5.37	0.22	0.08		0.48	0.55	0.40				8.55
3	Altura South	19.53	2.20	11.00	13.20	0.36	2.80	8.35	24.60	8.00		6.80	15.00
4	Ambulong	2.75		0.00						2.50		35.00	
5	Bagbag	42.90	14.50	11.00	0.80			29.00	80.00	123.00		70.00	
6	Bagumbayan	17.81	5.00	1.65	4.24			4.80	10.10	0.80		12.40	
7	Balele	91.30	13.00	23.10	28.80	1.20		15.00	55.00	76.00		52.00	0.30
8	Banjo East					15.00							
9	Banjo West					12.00							
10	Bañadero	29.70		5.72					15.00			6.60	
11	Bilog-Bilog	132.00	16.40		108.00	46.92	4.00	3.00	158.00	250.00		120.00	15.00
12	Boot	55.00		5.28	2.00			25.00		125.00	4.00	70.00	
13	Cale		80.00	33.00		24.00	18.00	47.50	35.00	25.00	7.75	15.00	
14	Darasa	27.72	1.18	11.88	3.44							8.00	
15	Gonzales		1.00	0.44							0.25		
16	Hidalgo												
17	Janopol Occidental									2.90			0.00
18	Janopol Oriental	77.00	50.00					8.00	31.00	45.00	8.00	19.00	7.50
19	Laurel	9.90						0.00	31.00	1.00		30.00	
20	Luyos	88.00	19.60	11.00	8.00	157.56		3.25	17.20	8.80		30.30	
21	Mabini												
22	Malaking Pulo		2.50	13.20	0.80	18.00		0.50	23.00	24.00			
23	Maria Paz	46.86	2.00	2.20						20.00		25.00	
24	Maugat	22.33	9.15	0.00				0.15	55.00	10.80		40.00	0.15
25	Montaña	55.00	9.00	8.25		10.80		12.00	15.00	6.50		8.00	9.00

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26	Natatas	18.26	6.15	0.33				1.50		2.00		0.70	3.00	
27	Pagaspas	2.20		2.20						0.90				
28	Pantay Bata	0.17	0.00									10.20		
29	Pantay Matanda			0.11								8.00		
30	Sala	15.52	3.60	5.83	1.60			38.20		6.00		6.40		
31	San Jose	11.42	3.20	4.73		0.24	0.24	0.15	2.20	1.50		2.80		
32	Sambat													
33	Santol	11.01	18.00	12.98	0.72	15.60				45.50				
34	Santor	33.00	19.50	5.83		3.00		52.25		30.00	19.20	46.00		
35	Sulpoc	50.60		5.50	1.60	102.00		116.90		12.50		2.00		
36	Suplang	17.05	1.00	16.83		66.84		3.50	6.20	59.10		7.60		
37	Talaga	30.80	2.50	7.70	41.60			15.00		25.00		30.00		
38	Tinurik	14.30	1.00	3.30				0.25	30.00			30.00		
39	Trapiche	59.40	2.50		72.00			52.50	70.00			14.40		
40	Ulango	18.15		0.88						1.40		9.80	0.45	
41	Wawa	83.60	10.00	11.00								20.00		
TOTAL (MT)		1093.38	312.50	217.14	288.72	475.32	26.72	437.35	660.80	912.30	8.90	31.20	736.00	58.95

Source: City Agriculture Office, 2014

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Table 5.8 Total production of leafy vegetables, industrial crops, citrus, bulbs and root crops planted per barangay, 2014

BARANGAY		Leafy Vegetables(mt)			Industrial Crops(mt)		Citrus (mt)	Bulb (mt)	Root Crops(mt)		
		Mustasa	Malunggay	Pechay	Coffee	Banana	Calamansi	Garlic	Ginger	Camote	Ube
1	Altura Bata								0.60		
2	Altura Matanda					0.50					
3	Altura South			0.90					0.25		
4	Ambulong			0.06		60.71	5.76				
5	Bagbag	4.20				15.00	180.00		5.00	2.70	
6	Bagumbayan			6.18			2.52		0.70		
7	Balele	12.0		6.30		5.00	12.60		1.50		
8	Banjo East								7.50		
9	Banjo West			1.50		1.25					
10	Bañadero	11.8	29.76	3.00		28.55	15.30			0.60	
11	Bilog-Bilog					4.55			0.35		
12	Boot	9.00	58.28						0.25	1.80	
13	Cale	2.40	6.00	36.00				16.00	0.50		
14	Darasa						4.50		0.50		
15	Gonzales	13.5	93.12			9.41	18.00		0.50	0.18	
16	Hidalgo			14.40		0.51			0.50	12.00	
17	Janopol Occidental								0.25		
18	Janopol Oriental	10.2	43.50	3.00		50.15			11.50		
19	Laurel										
20	Luyos			6.00							
21	Mabini	0.06	0.11	3.00		2.50	9.00		7.50		
22	Malaking Pulo	9.00	22.50	31.20					7.50		
23	Maria Paz	7.20		0.30		121.5	18.00		5.00	18.00	
24	Maugat			6.00			14.58		2.50		
25	Montaña	4.20							5.00		
26	Natatas										
27	Pagaspas	1.26		10.20		9.95			5.00		
28	Pantay Bata					2.09	45.00		0.09		
29	Pantay Matanda										
30	Sala	6.00		3.06					2.10		
31	San Jose								0.25	0.06	
32	Sambat										

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33	Santol	4.20		30.00							
34	Santor	3.30		3.00		4.20	1.80		12.50		
35	Sulpoc	6.60		18.00					2.50		
36	Suplang	1.32		24.00		1.75			1.50		
37	Talaga			16.20					15.00		
38	Tinurik	0.60		1.20			18.00		35.00	1.80	
39	Trapiche	0.30		2.40		12.33			3.00		
40	Ulango								0.20		
41	Wawa	26.4				109.3	36.00		41.00	6.00	
TOTAL (MT)		133.62	253.27	225.9	0	439.3	381.06	16.00	175.54	43.14	0.12

Source: City Agriculture Office, 2014

Table 5.9 Inventory of Livestock and Poultry Farms, 2014.

NAME of FARM /OWNER	BARANGAY	CAPACITY/VOLUME	Approximate Land Area (has.)
Rene Dela Cruz	Bañadero	500 game fowl	6.5 hectares
Miguel Dimapilis	Sulpoc	160 game fowl	0.5 hectares
Eufernio Cillo	Sulpoc	50 sows, 100 fatteners	1 hectare
Eddie Malasaya	Sulpoc	500 game fowl	1.2 hectares
Dallas Breedes	Maugat	31,000-layer breeders	5 hectares
Nestor Medina	Balele	8,000-layer breeders	0.7 hectare
Bulaklak Cantor	San Jose	72 fatteners	0.15 hectare
Rico Carandang	Mabini	23 cattles	0.27 hectare
Romy Platon	Bagumbayan	25 cattles	0.8 hectare
Rogelio Andaya	Trapiche	650 ducks; 50 cocks	1 hectare
Crispulo Oruga	Trapiche	80 goats	0.25 hectare
Lito Pamplona	Janopol Oriental	9 cattle	0.4 hectare
Nilo Pamplona	Janopol Oriental	13 sows;12 fatteners	0.17 hectare
Luisa Agojo	Sala	25 cattle	0.13 hectare
Eric Landicho	Gonzales	140 game fowl	0.012 hectare
Ryan Ching	Gonzales	1,800 quails	0.25 hectare
Raymond Rosales	Banjo West	10 sows; 50 fatteners	0.3 hectare
Guillermo Carandang	Banjo West	1,500 fatteners	1.5 hectares
Angelino Panghulan	Banjo West	50 fatteners	0.2 hectare
Uno Dela Cueva	Banjo West	30 goats	0.2 hectare
Enrico Macandili	Banjo West	2,000 layers	0.5 hectare
Ernest Panghulan	Banjo West	32 goats	2 hectares

Source: Office of City Veterinarian 2014

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Table 5.10 Livestock and Poultry survey per barangay, 2014

BARANGAY	CATTLE		CARABAO		SWINE		GOAT		HORSE		DOGS	CATS	CHICKEN				DUCKS
	M	F	M	F	SOW LEVEL	FATTENER	M	F	M	F			BROILER	LAYER	NATIVE	F. COCKS	
Altura Bata	5	8			6	12	2	23			223	23	70		522	208	57
Altura Matanda	8	17			25	91	20	29			137	48		71	379	236	47
Altura South	4	3	1	1	1	4	6	30			187	21	81		363	182	4
Ambulong	63	108			14	69	35	51	1		786	138	46	51	253	242	133
Bagbag	41	16		1	11		12	11	5	5	197	31			465	110	
Bagumbayan	78	53	8	3	3	10	53	67			598	2		3	177	236	
Balele	58	124		2	4	77	29	53	7	26	279	330	10	8,000	602	432	26
Bañadero	35	89		2	12	9	14	45			467	10			29	501	2,518
Banjo East	10	2					10	4			400	9	9,000	24,000	98	202	
Banjo West	21	3				267	27	29		9	352	52	1,000	1,500	165	322	6
Bilog-bilog	122	55	6	4	38	9	30	54	3	1	739	36	36	9,000	567	264	110
Boot	37	24			21	84	66	55		16	1177	281	43	243	461	960	55
Cale	81	1			2	39	18	34			524	99	26		843	1,239	52
Darasa	30	34	3	6	121	390	17	43	1	1	1,084	44		114		626	28
Gonzales	35	65			35	149	18	56		2	303	35	29		267	416	4,289
Hidalgo	36	5	2				2	4			113	7			47	58	
Janopol Occidental	52	108		1	63	82	17	48	2	18	422	22			613	521	1
Janopol Oriental	68	77	3		38	249	30	46	2	4	318	43		1,900	251	532	15
Laurel	61	106	4	3	2	45	24	5			319	33			573	94	
Luyos	22	17		1	28	54	23	14			316	22		20	516	108	11
Mabini	12	40	1	4	28	143	41	65	3	4	236	32			725	200	40
Malaking Pulo	140	183	14	2	63	91	54	138			686	27	132	32	166	276	
Maria Paz	31	59		1	35	310	90	217	2	4	454	211	905	936	787	719	86
Maugat	35	86		8	41	129	24	29	1	4	294	55		31,589	172	102	1

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Montaña	36	4		1	25	88	25	44			383	41			932	153	15
Natatas	54	25		1	53	95	27	12			637	44	112	621	338	1,065	71
Pagaspas	23	10			41	144	21	40			507	216	3		996	604	26
Pantay Bata	23	8	9	3	16	39	14	6			371	51	96		299	348	46
Pantay Matanda	52	1	1		15	76	9	30			605	39	40	5	285	300	7
Sala	19	31			3	29	33	4			396	95			241	439	6
Sambat	19	4			6	20	41	9			451	39			120	390	15
San Jose	37	50		20	12	130	8	10	1		212	20			480	76	24
Santol	32	28	1		12	9	7	21			118	19			319	83	16
Santor	30	15		2	17	121	28	36			617	78	142	5	674	847	83
Sulpoc	87	11	2	2	84	176	50	77			388	59			641	410	
Suplang	84	15	1	1	17	36	2	8		1	209	66			283	1,528	24
Talaga	41	51	4	7	61	209	10	22		1	745	89	21,000	269	202	1,019	32
Tinurik	115	836	6	9	5	18	19	56			557	2			575	725	59
Trapiche	77	81		1	21	50	47	119			611	90			331	950	615
Ulango	56	63	2	2	18	84	13	13			434	74	51	50	243	267	13
Wawa	6	29				21	9	79			250	49	64		482	105	24

Source: Office of the City Veterinarian, 2014

Table 5.10. Livestock and poultry survey per barangay reveals that the most number of cattles are found in Barangays Bagumbayan, Balele, Bilog-Bilog, Janopol Occidental, Janopol Oriental, Laurel, Malaking Pulo, Sulpoc, Tinurik, and Trapiche. For chicken, the most number of broilers, layers, native chicken, and ducks are found in Barangays Balele, Bagumbayan, Bilog-Bilog, Boot, Cale, Darasa, Janopol Oriental, Maugat, and Talaga.

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Table 5. 11 Comparative Yearly Livestock Production (2011-2014)

YEAR	CATTLE		CARABAO		SWINE		GOAT		HORSE		DOGS	CATS	CHICKEN				DUCKS
	M	F	M	F	SOW LEVEL	FATTENER	M	F	M	F			BROILER	LAYER	NATIVE	F. COCKS	
2011	1867	1281	80	167	1,338	8,391	1188	1,640	87	159	15,845	2,431	51,893	57,109	19,490	15,375	167
2012	1864	1600	89	111	1,449	4,281	953	1,772	78	221	16,698	2,332	1,524	87,997	19,071	17,197	1,131
2013	1809	1638	77	115	795	10628	719	1,426	56	108	18,004	2,155	62,505	51,254	16,612	16,003	4,316
2014	1885	1798	68	89	1028	3663	1028	1755	28	96	20,068	2,484	32,964	78,424	16,889	19,022	8,673

Source: Office of the City Veterinarian, 2014

5.1.1.2 Fisheries and Aquaculture

There are six (6) coastal barangays in Tanauan namely: Bañadero, Ambulong, Wawa, Boot, Gonzales, and Maria Paz which are near the shores of Taal Lake. Among the kinds of predominant fishery production in these barangays are the following: *Sardinella tawilis* (tawilis), *Chanos chanos* (bangus), *Oreochromis niloticus* (tilapia), *Caranx ignobilis* (maliputo), and *Mogalops cyprinoides* (Buan buan).

There are 26 fishponds, with an area of 1.46 hectares, located at BFAR-IFRS TRF Compound, Barangay Ambulong as of 2014 among the commodities cultured in the said fishponds are tilapia, ulang, and ornamental fish.

Table 5.12 Fishery Production, 2014

TYPE OF FISH	PRODUCTION (MT)
<i>Sardinella tawilis</i> (tawilis)	145.90
<i>Chanos chanos</i> (bangus)	36.90
<i>Oreochromis niloticus</i> (tilapia)	7.40
<i>Parrchromis managuensis</i>	3.60
<i>Caranx ignobilis</i> (maliputo)	1.00
<i>Mogalops cyprinoides</i> (Buan buan)	0.07

Source: City Agriculture Office, 2014

5.1.2 Support Systems

5.1.2.1 Physical Infrastructure

Tanauan City Public Market

The current Tanauan City Public Market, one of the biggest market in Batangas, is situated in the heart of Poblacion. It is surrounded by residential areas situated at Barangay Poblacion VII, fronting national highway, and adjacent to the old Philippine National Railroad (PNR).



Tanauan City Public Market

The market has a land area of 26,604 square meters and is open 24 hours a day, 7 days a week. It currently operates a “bagsakan” or trading post with an area of 875 sq.m, specifically used for fruits and vegetables. “Bodegas” were also provided for the unsold goods. Since then, the “bagsakan area” has been known as the “Vegetables and Fruits Trading Center” because it caters vegetable and fruit dealers from the whole CALABARZON Region and even from as far as Northern Luzon and MIMAROPA areas.



Tanauan City Trading Post

The Operational Trading Post (New Bagsakan Area) is situated at Barangay Sambat. This trading post caters traders and wholesalers from nearby cities and municipalities. The Trading Post Project is one of the 2015 BUB Approved Projects in which the city was granted P6.5M from the Department of Agriculture (DA) and P6M counterpart of the city.

5.1.2.2 Credit and Finance

The City Cooperatives and Livelihood Development Office (CCLDO) under their Credit Support Program is offering loan for registered associations, specifically cooperatives and private individuals with existing business, but still need financial assistance to expand the operation of their existing business. The office is in-charge of screening the applicants and requiring them to submit documents (registration and resolution from board of directors for cooperatives) to qualify and assess their capability to avail the loan. Background checking and monitoring if the associations/private individuals are complying with their dues are also done by the CCLDO.

Table 5.13 Loan releases for the Credit Support Program for Micro Small and Medium Enterprises (MSME), Associations and Cooperatives, 2015

Year 2011	Year 2012	Year 2013	Year 2014
Three (3) MSMEs	Three (3) MSMEs	Five (5) MSMEs	Seventeen (17) MSMEs
		Malaking Pulo Cooperative	Barangay Gonzales Cooperative
		Bigasan ng Bayan	Janopol Water Service Cooperative
		Tanauan City Employees Cooperative	Tanauan City Employees Cooperative Tanauan City Labor Services

Source: CCLDO, 2015

Likewise, the City Social Welfare and Development Office (CSWDO) is also offering a Self-Employment Assistance (SEA) Program. This is a provision for a starting capital assistance to members of people’s organization (i.e. KALIPI, Solo Parent Association, ERPAT, Pag-asa Youth Association of the Philippines (PYAP), OFW, Lingap sa Bata, Person with Disabilities, Day Care Parents’ Day Care Workers Association, and members of 4Ps) who are determined to start an income generating project but lacks financial capability. The loan provided is interest-free but beneficiaries need to return back the principal amount for a specific period to be used as revolving fund.

To support the SEA program, the CSWDO provides various trainings conducted at the Livelihood and Training Center. The table below shows the number of beneficiaries of the SEA program for 2014.

Table 5.14. Comparative Yearly Number of Beneficiaries of SEA Program (2011-2014)

PROGRAMS/ACTIVITIES	NUMBER OF BENEFICIARIES			
	2011	2012	2013	2014
Orientation on Basic Business Management (BBM)	328	725	462	560
SEA Organization/Reorganization	164	362	262	445
Technical Assistance/ Project Proposal Preparation	327	161	70	105
Self-Employed loan released	49	54	28	68
Project Monitoring on barangays	249	310	120	85

Source: CSWD, 2014

Table 5.15. List of Banks, 2014

NAME OF BANK	LOCATION
1. Banco De Oro-EPCI Inc.	A. Mabini Ave., Brgy. V
2. Banco De Oro Uni-Bank Inc.	PNG Building Pob. Brgy. II
3. Banco Unibank, Inc.	A. Mabini Ave.,
4. Bangko Kabayan (A Rural Bank), Inc.	Pres. Laurel Highway Pob. Brgy. II
5. Bank of Commerce-Tanauan	JPL Highway, Brgy. III
6. BPI Family Bank	A. Mabini Ave., Brgy. V
7. BPI-Island/FEBTC	Platon St. JPLaurel Highway, Brgy. II
8. Card SME Bank, A Thrift Bank	B6, L2, Pob., Brgy. III
9. Card SME Bank, A Thrift Bank	Gloria Compound, Brgy. VI
10. China Bank Savings, Inc.	Brgy. Suplang
11. China banking Corporation	Pres. Laurel Hway Pob. I
12. First Allied Bank (FASB)	Mabini Ave., Brgy. VI
13. Land Bank of the Philippines	Brgy. II

14.Luzon Development Bank	A. Mabini Ave., Brgy. VI
15.Metropolitan Bank & Trust Company	A.Mabini Ave. Brgy VII
16.Metropolitan Bank & Trust Company	Pres. Laurel Highway, Brgy. V
17.Mount Carmel Rural Bank. Inc.	A. Mabini Ave., Brgy. VI
18.Mount Makiling Rural Bank, Inc.	Brgy. Darasa
19.Philippine Business Bank	Brgy. V
20.Philippine Savings Bank	G/F Waltermart, J.P.Laurel Highway, Brgy. Darasa
21.Philippine Savings Bank	Pres. Laurel Highway, Brgy. I
22.PNB- Tanauan Branch	J.P.Laurel Highway, Brgy. Darasa
23.Premiere Bank	Unit 119 A Commercial Bldg., Brgy. VII
24.Pres. Jose P. Laurel Rural Bank, Inc.	A. Mabini Ave., Brgy IV
25.Pres. Jose P. Laurel Rural Bank, Inc.	J.P. Laurel Highway, Brgy. IV
26.RCBC Savings Bank, Inc.	# 45 A. Mabini Ave., Brgy. II
27.Rural of Mabitac (Laguna) Inc.	Poblacion Brgy. VI
28. Rural Bank of Talisay	Commercial Bldg, Tanauan Public Market
29. UCPB- Tanauan	G/F P&G Com'l Complex JPL Highway, Brgy. II
30. World Partners Bank Inc.	A. Mabini Cor. JV Pagaspas, Brgy. IV

As of 2014, a total of thirty (30) banks are located in the city. Twenty-nine (29) out of thirty (30) banks are located in the heart of poblacion, while the remaining one bank is located at Barangay Suplang, which is near the entrance of Tagaytay Highlands.

5.1.2.3 Agricultural Support Program and Technical Assistance

Relative to the agricultural support facilities and services, the table below shows the list of those available in the city.

Table 5.16. Existing Agricultural Support and Facilities and Services, 2014.

Post-harvest facilities and support services	Location	Agency	Remarks (operational, needs repair, etc.)
Tanauan City Wholesale Market or Trading Post	Barangay Sambat	LGU	Operational
Drip Irrigation Facilities	Barangay Bañadero, Santor, Bilog-Bilog	LGU	Construction on-going
Technical Institution - Tanauan School of Fisheries - Bureau of Fisheries and Aquatic Resources	Barangay Ambulong	LGU BFAR	Operational
Extension Services - Technical Assistance	Barangay Poblacion III	City Agriculture's Office	Operational
Farm Machineries such as two (2) tractors, four (4) unit's shredders, one rice thresher, two (2) units shallow tube well, 11 corn sheller, one (1) warehouse and one feedmill	Various barangays in the city	LGU	Operational

Source: Office of the City Agriculture, 2014

Previously, the wholesale market or “Bagsakan Area”, an 875 sq. m open space, located at the back of the City Public Market (Poblacion V area) serves as the trading area for vegetable and fruit dealers from the whole CALABARZON Region and even from as far as Northern Luzon and MIMAROPA area.

But this trading post is only rented by the City Government of Tanauan from the Philippine National Railroad (PNR). Traffic congestion, poor infrastructure facilities, poor drainage, and poor waste management are among the dilemmas of the current one, thus relocating the trading post.

The existing, operational trading post is strategically located at Barangay Sambat where it has an access to STAR Tollway. The project directly benefits farmers since it helps provide them livelihood opportunities. The project was being funded by the City Government, worth 6M, with counterpart from the Department of Agriculture (DA) which is worth P6.5M.

Moreover, among the existing agricultural facilities are the communal irrigation rehabilitated by the City Government of Tanauan thru the City Agriculture Office located at Barangay Bañadero and the existence of technical institutions like Tanauan School of Fisheries and Bureau of Fisheries and Aquatic Resources, both located at Barangay Ambulong.

Support Program and Technical Assistance

As part of the technical assistance and support programs offered by the Office of the City Agriculture, below are the lists of their programs for the year 2014 which aim for sustainability towards agricultural development.

Techno-demo Projects

One of the technical assistance offered by the Office of the City Agriculture is the Techno-Demo Project for Papaya. There were 35 barangay beneficiaries, namely: Altura Bata, Altura Matanda, Altura South, Bagbag, Bagumbayan, Balele, Banjo East, Banjo West, Bilog-bilog, Boot, Cale, Darasa, Gonzales, Hidalgo, Janopol Oriental, Laurel, Luyos, Mabini, Malaking Pulo, Maria Paz, Montaña, Natatas, Pantay Bata, Pantay Matanda, Sala, San Jose, Sambat, Santol, Santor, Sulpoc, Suplang, Talaga, Tinurik, Trapiche, and Ulango. Also, there is the Techno-Demo Farm for Ubi and has eight barangay

beneficiaries, namely: Suplang, Tinurik, Bilog-bilog, Natatas, Luyos, Bañadero, Balele, and Altura South.

Demonstration plots, usually 500 sq. meters, were established in the said barangays to show farmers new technologies in crop production which they can adopt. Seedlings and technical assistance are provided by the City Agriculture Office. Land preparation, planting, harvesting, and marketing were the counterparts of the cooperators under the supervision of agricultural technologist assigned in the area.

Gulayan sa Paaralan Project

The City Agriculture Office supports schools from different barangays thru the Gulayan sa Paaralan Project. The office provides seeds, seedlings, organic fertilizer, and technical assistance. In 2014, the office has conducted the said project in eight (8) schools; two (2) schools in Barangay Trapiche and one (1) school each in Barangay Darasa, Wawa, Bagumbayan, Boot, Santor, and Pagaspas.

Fruit Trees Dispersal Project/Seed Distribution Project/Fertilizer Distribution Project/Free Tractor Services

Fruit trees dispersal and seeds distribution were requested by the farmers thru their barangay captains. A total of 21, 467 fruit seedlings were dispersed to 1,112 beneficiaries, while a total of about 825 kilograms of assorted vegetable seeds were provided to 1,390 recipients. A total of 900 bags of chemical fertilizer were given to lanzones farmers to strengthen the trees and counter the possible bad effect of the then newly discovered species of scale insect attacking lanzones trees. There were also 900 bags of organic fertilizer provided to farmers practicing natural farming. A total of 540 recipients received chemical and organic fertilizer. Free tractor services covering an area of about 141 hectares were provided to 102 clients.

Fisheries and Aquatic Resource Project

Fishing boats were given to Barangay Wawa benefitting 49 registered fisherfolks. Five hundred twenty-two (522) fishing nets were served to 281 registered fisherfolks in Barangay Ambulong, Wawa, Boot, and Gonzales.

Organic Farming

A model organic farm is operational in Sitio Dayapan, Barangay Bilog-Bilog. This serves as a demonstration and learning area for farmers who want to try organic farming. A number of trainings and seminars are held in the training area. Trainings are conducted by Tanauan Organic and Natural Farmers Association (TONFA) members facilitated by the City Agriculture Office. Last 2014, eight seminars about organic production of crops and livestock were conducted. Those were attended by a total of 258 participants.



Organic Farm in Sitio Dayapan, Barangay Bilogbilog, Tanauan City

5.1.2.4 Employment and Income Activity

In the agricultural related sector, only 2,819 residents are engaged in agriculture, forestry, and fishing, which is 5% of the total employment last 2011. It is noticeable from the given figure that only a small percentage of Tanaueños are engaged to agricultural activities though the city is mainly an agricultural land.

Table 5.17 below shows the comparison of three years (data from CBMS 2005, 2008, 2011) regarding the number of persons engaged in agriculture. It can be seen on the table that there was a decrease in the number of persons engaged in agriculture and fisheries from 2008 to 2011. It can be concluded that some of them opt to shift to other forms of livelihood because of the very low return of investment on farming. Also, there is an intense market competition which in effect drives the price of agricultural and fishery products. Secondly, the decline in the number of farmers can also be contributed to the conversion of agricultural lands to non-agricultural uses.

Table 5.17. Number of persons engaged in Agriculture/Fishery (2005, 2008, and 2011)

BARANGAY	2005 No. of Farmers, Forestry workers, Fisherman	2008 No. of Farmers, Forestry workers, Fisherman	2011 No. of Farmers, Forestry workers, Fisherman
Altura Bata	20	30	18
Altura Matanda	1	17	5
Altura South	27	41	22
Ambulong	189	213	180
Banadero	70	74	51
Bagbag	158	190	180
Bagumbayan	23	44	25
Balele	330	282	249
Banjo East	2	15	8
Banjo West	21	28	55
Bilog-bilog	141	155	104
Boot	90	225	164
Cale	273	289	245
Darasa	49	28	35
Pagaspas	23	46	13
Gonzales	44	71	57
Hidalgo	0	6	10
Janopol	39	78	43
Janopol Oriental	91	93	60
Laurel	160	73	55
Luyos	72	72	57
Mabini	19	19	15
Malaking Pulo	21	165	117
Maria Paz	188	283	92
Maugat	89	67	80

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Montana	77	78	58
Natatas	33	50	32
Pantay Matanda	120	169	75
Pantay Bata	41	47	33
Poblacion Barangay 1	0	0	6
Poblacion Barangay 2	1	2	2
Poblacion Barangay 3	2	3	7
Poblacion Barangay 4	5	5	29
Poblacion Barangay 5	1	2	4
Poblacion Barangay 6	5	5	3
Poblacion Barangay 7	9	7	9
Sala	81	62	30
Sambat	7	8	12
San Jose	86	85	16
Santol	43	48	51
Santor	105	97	41
Sulpoc	120	211	123
Suplang	105	126	88
Talaga	65	53	90
Tinurik	11	60	53
Trapiche	119	88	100
Ulango	30	22	4
Wawa	77	33	13
TOTAL	2515	3865	2819

Source: Community Based Monitoring System (CBMS) 2005, 2008, and 2011

5.1.3 Areas Covered by National/ Local Policies

5.1.3.1 Strategic Agriculture and Fishery Development Zones (SAFDZs)

Table 5.18. Strategic Agriculture and Fishery Development Zones of Tanauan City

Description/SAFDZ Areas	Total Hectares	Area (%)
Strategic Crop Sub-Development Zone	5,297	49.13
Strategic Fishery Sub-Development Zone	648	6.01
Strategic Integrated Crop/Livestock Sub-Development Zone	459	59.40
SUB-TOTAL	6404	59.40
Description/Non-SAFDZ Areas	Total Hectares	Area (%)
Watershed/Forestry Zone	3,391	31.45
Built-up Areas	986	9.15
SUB-TOTAL	4,377	40.60
GRAND TOTAL	10,781	100

Source: Bureau of Soil Management, 1970

5.1.3.2 Cartable Areas/Land

The Comprehensive Agrarian Reform Program or CARP, is the redistribution of public and private agricultural lands to farmers and farmworkers who are landless, irrespective of tenurial arrangement. CARP’s vision is to have an equitable land ownership with manpowered agrarian reform beneficiaries who can effectively manage their economic and social development to have a better quality of life.

One of the major programs of CARP is the Land Tenure Improvement which seeks to hasten distribution of lands to landless farmers. Similarly, the department offers Support Services to the beneficiaries such as infrastructure facilities, marketing assistance program, credit assistance program, and technical support programs. Furthermore, the department seeks to facilitate, resolve cases, and deliver agrarian justice.

The legal basis for CARP is the Republic Act No. 6657, otherwise known as Comprehensive Agrarian Reform Law (CARL), signed by President Corazon C. Aquino on June 10, 1988. It is an act which aims to promote social justice and industrialization, providing the mechanism for its implementation, and for other purposes.

As of 2012, Table 5.19 shows the total capable area (in hectares) covered, to be covered, and capable area of agrarian reform community with corresponding farmer beneficiaries.

Table 5.19. Capable Area in Hectares and Number of Beneficiaries, 2012

	CARPABLE AREA (HAS.)	NO. OF FARMER BENEFECIARIES
COVERED	609.1913	867
TO BE COVERED	115.6543	47
AGRARIAN REFORM COMMUNITY (ARC)	28.0038	62
TOTAL	724.8456	976

Source: Department of Agrarian Reform, 2012

**AGRICULTURE, CROP AND POULTRY PRODUCTION AND FISHERIES
 ANALYSIS MATRIX**

Technical Findings and Issues and Concerns	Implications/Effects	Policy/Intervention
Low production of crops (vegetables, rice, corn): Upland/lowland	Low income for farmers	Fertilizer distribution (organic fertilizer); Technical assistance for high value commercial and adoption of modern technology
Improper schedule of planting of crops/trees leading to oversupply of commodity	Low price of commodity; Low income for the farmers	Convince farmers per barangay to plant on agreed schedule of planting
Non-integration of organic agriculture with conventional farming	Contribution of hazard effects to health and environment; High price of organic produced	Conduct of IEC/farmers' meetings for high quality of product Preparation of organic compost
No food security in times of disaster	Starvation; nutrition-related illnesses; hoarding of commodities	Promote self-sufficiency in terms of food production
Unpracticed backyard gardening by most of the households	Lessened daily expenses by using their produced	Seed dispersal project for backyard gardening
Existence of idle lands/ hilly land	Presence of soil erosion	Promotion and implementation of Conservation Farming Technologies
Improper cultivation (too much expenses/capitalization)	Right time of cultivation; Low income	Provision of Tractor Machinery services
Deteriorating and changing weather condition/temperature of water in Taal Lake	Increased occurrence of fish kill; Decreased volume of fish catch by fisherfolks	Maintenance of the free-cage zone in Tanauan

Insufficient water supply	No production during dry season	Provision of water impounding facilities to trap and contain flood during monsoon months Provision of irrigation facilities
Illegal fishing	Decreased volume of fish catch	Deputization of Bantay Lawa under Mayor's Office
Insufficient financial support and fishing materials for fisherfolks	Low volume of fish catches; low income	Provision of additional financial support and fishing materials by LGU
Insufficient technical assistance/support, training and seminar for fisherfolks	Low volume of fish catches; low income	Provision of additional technical assistance/support by LGU
Increased number of piggeries/poulties in the city	Increased number of flies and other insects	Pest Control Program
Existence of piggeries and other businesses without necessary environmental clearance	Environmental pollution	Strict monitoring of BPLIO and CENRO/ Dialogue with business establishments not complying Requiring of CNC and ECC for business establishments
Illegal squatting on 20-meter easement	Narrowed fishing ground area for fisherfolks activities	Dismantling of illegal structures along 20-meter easement.

5.2 Commerce and Trade

It is noticeable that from 2010 to 2014, there is a significant increase in the collection of business tax by the Business Permits Licensing and Investment Office (BPLIO) as showed in Figure 5.1. There is an increase of P88 Million from 2010 to 2014, which is a 49% increase in the collection of business tax.

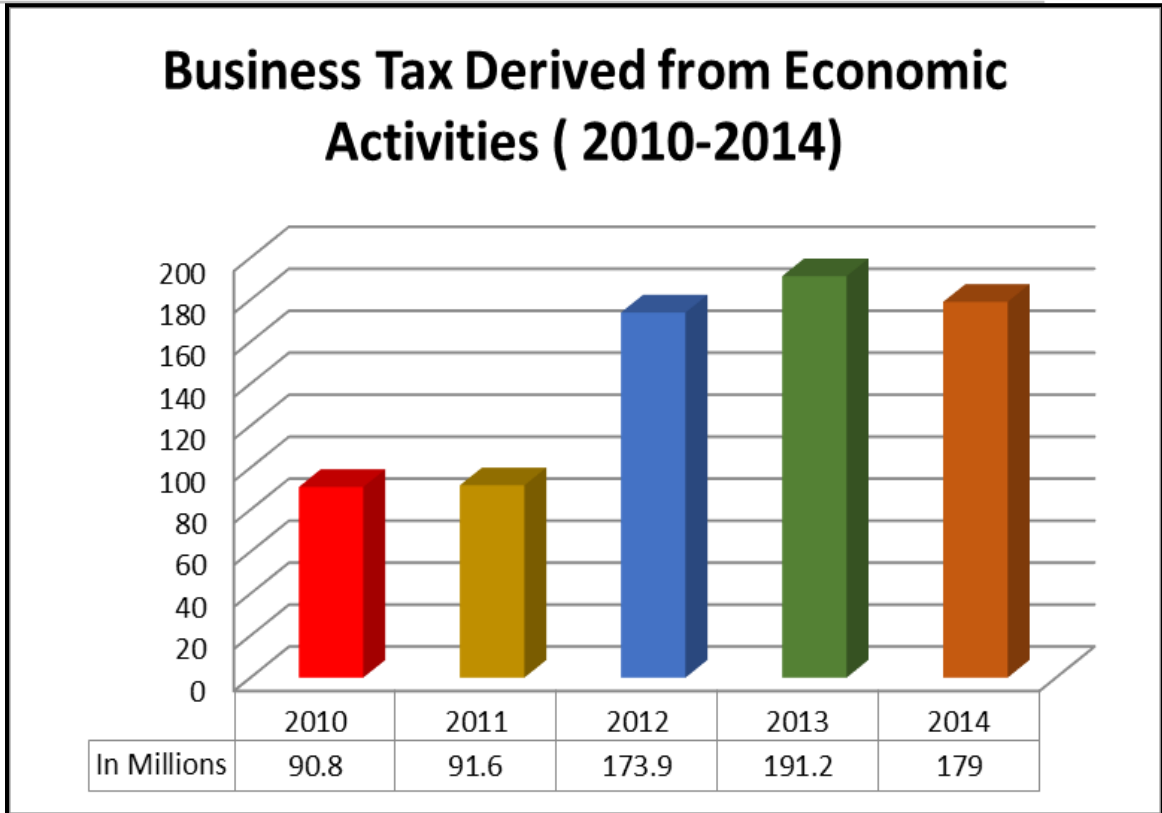


Figure 5.1. Business Tax Derived from Economic Activities, 2010 to 2014.
 Source: BPLIO, 2014

5.2.1 Inventory and Distribution of Commercial Establishments by Type

Records from the Business Permit Licensing and Investment Office, year 2014 shows the distribution of commercial establishments with business permits. Table 5.20 shows the distribution of business establishments by type where wholesale, retail, and trade showed the biggest percentage. This can be attributed to the stalls inside the Tanauan Public Market mainly engaged on retail and wholesale trade.

Table 5.20. Yearly Inventory of Commercial Establishment by Economic Activities (2012-2014)

Economic Activities	2012		2013		2014	
	No. of Establishments	No. of Employment	No. of Establishments	No. of Employment	No. of Establishments	No. of Employment
Wholesale & Retail Trade	962	1,000	1,174	1,142	1133	1022
Hotel & Restaurants, Transport & Storage	186	654	182	566	221	574
Communication	19	43	14	21	12	24
Financial Intermediation	83	276	102	355	125	540
Real Estate, Renting and Business Activities	150	287	134	152	192	208
Public Administration and Defense	15	174	13	210	10	218
Education	37	330	45	222	41	272
Health & Social Work	70	697	89	413	91	690
Other Community, Social and Personal Service Activities	433	379	498	518	405	406
Private Household with Employed Persons	28	393	28	166	22	31
Extra Territorial Organizations and Bodies	8	20	9	22	10	19
TOTAL	1,991	4,253	2,288	3,787	2,262	4,004

Source: BPLIO, 2014

5.2.2 Historical Data on Commercial Areas

Over the period of five years, 2010 to 2014, it can be seen on Figure 5.2, the trend of the number of business establishments registered in the city. From 1,985 business establishments in 2010, there are already 2,550 registered business establishments in 2014 which is about a 22% increase.

5.2.3. Number of Business Permits Issued

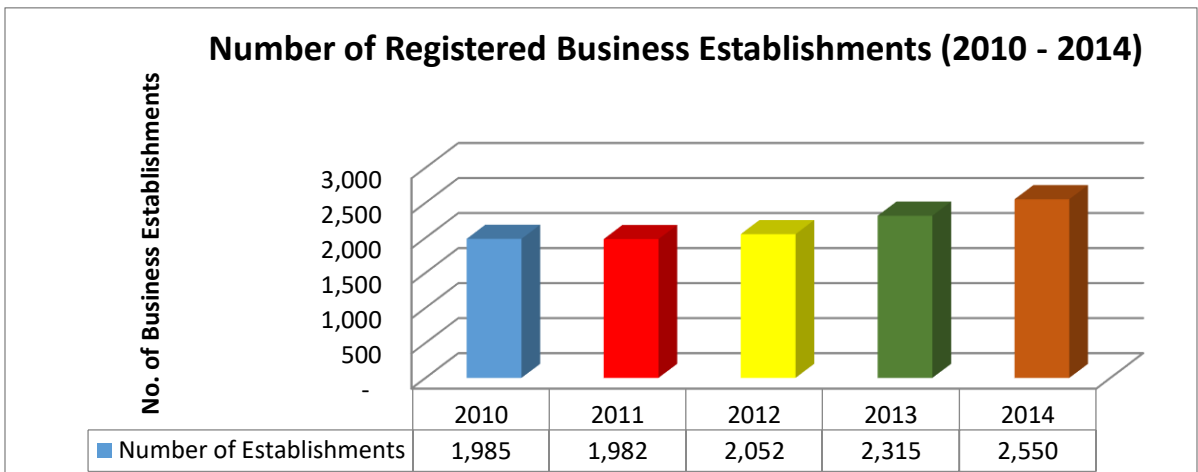


Figure 5.2. Business Permits Granted for the Past Five Years (2010-2014)

Source: Business Permit and Licensing Office (BPLIO), 2014

Moreover, as with number of retired business establishments, Figure 5.3 shows an increase of 60% in the total number of retired business establishments from 2010 to 2014. Business retirement or closure of business may be associated as a result of financial losses, poor market demand, mismanagement, and other factors.

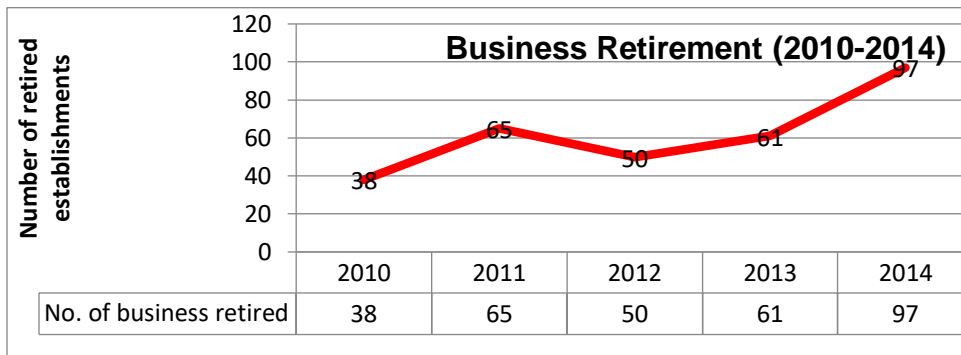


Figure 5.3. Yearly Number of Retired Business Establishments (2010 to 2014)

Source: BPLIO, 2014

Table 5.21. List of Registered Cooperatives, 2014

NO.	NAME OF COOPERATIVES/ ASSOCIATION	NATURE OF BUSINESS	ADDRESS
1	Balele MPC	Credit Business	Brgy. Balele
2	Dayapan MPC	Tractor rental/credit	Brgy. Dayapan
3	Samahan ng Kababaihan ng Darasa MPC	Credit /sewing	Brgy. Darasa
4	Our Lady of Fatima (OLFA) MPC	Credit	Brgy. 1
5	Yakap at Halik MPC	Consumer store/credit/pasalubong center	Brgy. 1
6	Honda Credit Cooperative	Credit	FPIP
7	Laurel Memorial District Hospital MPC	Medical supplies/credit	Brgy Santor
8	Laurel Bayanihan MPC	Sewing	Brgy Laurel
9	Ulango MPC	Sewing	Brgy. Ulango
10	EI Buenas Consumer Coop.	Water refilling	Brgy.Pantay Bata
11	Pagaspas MPC	Water refilling	Brgy. Pagaspas
12	3k MPC	Barangay Water Service/Water Refiling	Brgy Ambulong
13	Malaking Pulo MPC	Barangay Water Service	Brgy. Malaking Pulo
14	Talaga Water Service Cooperative	Barangay Water Service	Brgy. Talaga
15	Janopol Water Service Coopetative	Barangay Water Service	Brgy. Janopol Occidental
16	SMACO MPC	Feedmill	Brgy. Luyos
17	SAMA-SAMA NATCO	Credit/Loan Business	Brgy. 2
18	Nutriwealth MPC	Manufacturing/Marketing/Herbal products	Brgy 7
19	SAMABACO Cooperative	Dairy Business	Brgy. Tinurik
20	Tanauan Labor Service Coop.	Manpower coop.	Brgy. 2
21	Janopol Credit Association	Credit	Brgy. Janopol Oriental
22	Silver Consumer Ass.	Spare parts/ vermicomposting	Brgy. Janopol Oriental
23	Cale Association	Credit	Brgy Cale

Source: Cooperatives and Livelihood Development Office, as of April 2015

5.2.4 Existing Programs and Plans for Commerce and Trade

One of the major problems affecting the commerce and trade in the city is the condition of the public market. Currently, streets in and outside the market cannot accommodate

the volume of traffic, thus viability of the market diminishes. Consumers tend to patronize other markets nearby offering good facilities such as a spacious parking space. For the year 2015, the city had already approved its PPP-project which is the Redevelopment of the Tanauan City Public Market. The project is worth P400M and will start its construction on 2016 based on the timeline.

Likewise, problem on garbage or waste in the city also affects commerce and trade, specifically inside the public market. The public market being one of the greatest contributors of waste in the city currently depends on the service of a private hauler.

Another factor that affects commerce and trade is the frequent power interruption which affects economic productivity. The occurrence of light rains and winds tends to interrupt electric services. Peace and order situation also affects commerce and trade.

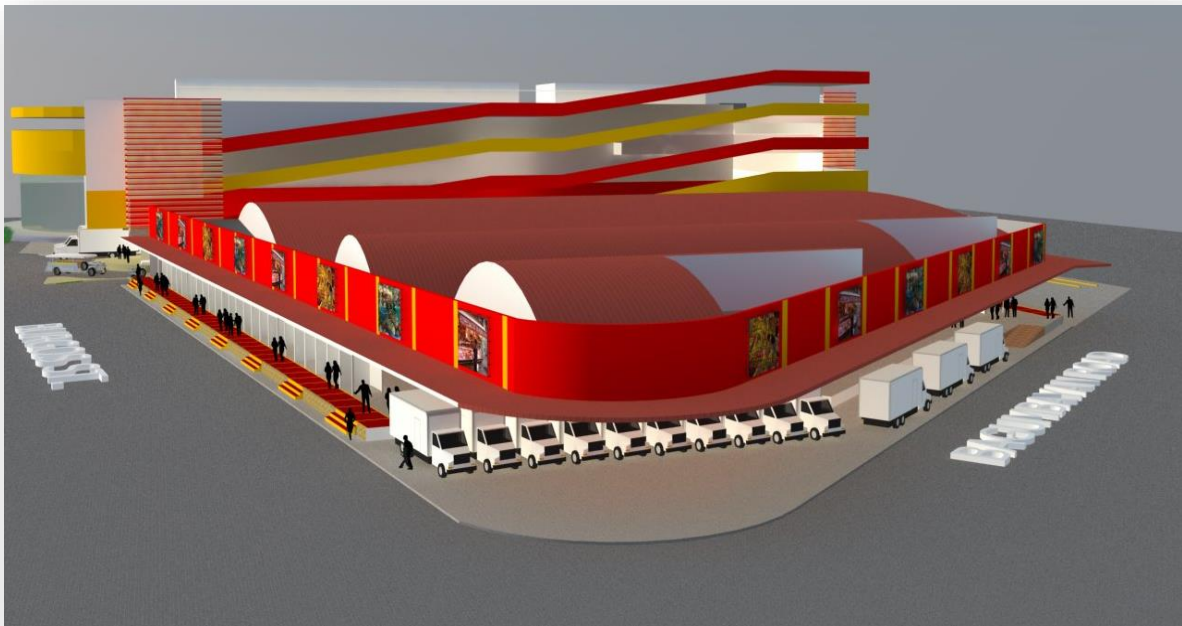
Redevelopment of Tanauan City Public Market

The City Government of Tanauan is on pre-bidding process stage (April 2015) for the redevelopment and modernization of the Tanauan Public Market, a Public Private Partnership (PPP) Project worth P400M. This will address the inadequate structures and facilities offered by the existing public market. The proposed redevelopment/modernization will not only improve the physical edifice and its facilities, but will also provide a more viable and consumer-friendly public center for trade and commerce, thus generating more income and livelihood opportunities for Tanaueños and additional revenues for the city as well.

The project will have two components: a commercial mall building and a separate wet and dry public market. The proposed redevelopment of the Tanauan City Public Market into a commercial mall with a separate wet and dry market component will be located on the same location of the existing public market which is the 2.6-hectare city-owned market property located along Mabini Avenue.



Four-Storey Commercial Mall Perspective



Proposed Separate Wet and Dry Market and Delivery Area

Tanauan City AAA Slaughterhouse and Auction Market

Currently, the city is operating AA slaughterhouse and Auction Market located at Barangay Poblacion 4. In addition, a P150M, “AAA” Slaughterhouse, Processing, and Trading Center funded by Department of Agriculture will be built at Barangay Sambat. The said facility is complete with cold storage, waste water treatment, and with line capacity of 500 heads, with two-shift and operating on a 24-hour. The AAA slaughterhouse will have the capacity to export higher quality of meat products.



Perspective of the AAA Slaughterhouse

Establishment of Trading Post for Organic and Non-Organic Products

The primary objective of the project is to have a strategically located trading area for agricultural and agri-based products in order to generate income for Tanaueños. This will help provide livelihood opportunities, especially to our local farmers, since it will present an effective and profitable marketing outlet for their produced. The location for the new trading post will be at Barangay Sambat which is very strategic because of its easy access to STAR Tollway connecting motorists coming from Laguna, Cavite, Batangas, Rizal, and even Quezon.

The funding of the project will be sourced out from the Department of Agriculture (DA) amounting to P6.5M and the P6M counterpart charged to the 20% development fund of the city. The trading post will be a gymnasium-like structure where traders and consumers will conduct their businesses.



Perspective of the Trading Post which will be built at Brgy. Sambat near STAR Tollway

COMMERCE AND TRADE
ANALYSIS MATRIX

Technical Findings and Issues and Concerns	Implications/Effects	Policy/Intervention
Poor condition of public market drainage system, electrical wiring, and building roofing.	Uncontrolled flooding, hazardous electrical wiring.	Redevelopment of Tanauan City Public Market
Inadequate parking within the premise of public market	Loss of revenues for both stall owners, market administration; Decreased in number of consumers.	Redevelopment of Tanauan City Public Market and inclusion of parking space for consumers and traders
Increased volume of uncollected market wastes. Implementation of ordinances regarding Waste Management Program	Danger to health	Reorganization of Solid Waste Board Strict implementation of R.A. 9003 Establishment of Materials Recovery Facility (MRF)
Peace and order situation	Decreased trust and confidence of investors and businessmen	Joint forces of PNP, Barangay Police, CSU and Citizen Watch, MAC Group
Illegal operations of some business establishments (without business permits)	Decreased revenue	Revenue Collection Enhancement Program Streamlining of process in securing business permits for business establishments Strict monitoring of business Establishments- Joint Inspection Team (JIT)
Congested commercial business district (CBD)	Traffic congestion Investors/locators tend to choose nearby	Expansion of Central Business District for Commercial purposes

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Insufficient facilities/open spaces and road networks in Central Business Districts	cities/municipalities to conduct business	
Increased traffic volume in the existing CBD (specifically in Poblacion areas). Mobility needs in the expansion of Central Business District (CBD)	Loss of revenue for most establishments	Designing an efficient traffic circulation plan to ensure smooth, safe and environment-friendly vehicular and pedestrian flow Formulation and Implementation of a Traffic Management Plan
Slow issuance of business permits and licenses	Discourages local businesses, particularly small & medium enterprises to secure business permits Limited increase in revenue Constrains many businesses from flourishing and formalizing their establishment, pushing them to remain in the informal economy	Implementation of fully automated, with limited human interaction system, in the issuance of permits
Lack of support for locally made products	Local producers tend to look for other market outside the city Loss of revenue	Create programs that will support and promote local produce
Lack of Local Economic Development (LED) Plan to include Business continuity and Disaster Preparedness Plan	limited attribute to attract investors loss of revenue	Prepare a comprehensive Local Economic Development (LED) Plan for the city

5.3 INDUSTRY

5.3.1 Inventory of Industries by type

The industrial sector of Tanauan City is composed of four subsectors, namely: the agri-based, manufacturing, food processing, and garments industry.

Small Industries are classified into five types as based on the definition of “Small and Medium Enterprises” on Republic Act 6977 or Magna Carta for Small Enterprise which stated that all small and medium enterprise shall be defined as any business activity or enterprise whether single proprietorship, cooperative, partnership or corporation must have the value falling into these categories: (1) micro: less than P50,000; (2) cottage: P50,001 to P500,000; (3) small: P500,001 to P5,000,000 and (4) medium: P5,000,001 to P20,000,000.

Figure 5.4 shows that 5% and 54% of the industries in the city belongs to micro and cottage industry respectively, based on their capitalization assets, while 33% were classified under small and 6% under medium enterprise.

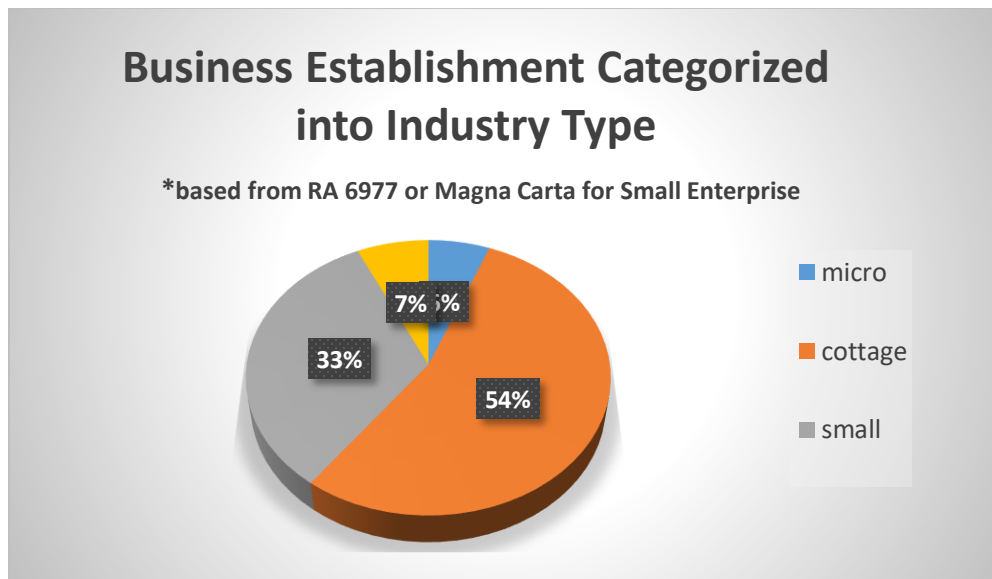


Figure 5.4. Business Establishments Categorized into Industry Type, 2014.

Source: BPLIO, 2014

5.3.2 Inventory of Existing Industrial Establishments by Capitalization and Employment

Table 5.22. Inventory of Existing Industrial Establishments located at FPIP/Philtown, 2014.

BUSINESS NAME		BUSINESS ADDRESS	NATURE OF BUSINESS /ACTIVITY (INDUSTRY CLASSIFICATION)	CONTACT NUMBER
1	Honda Philippines, Inc.	FPIP, Brgy. Ulango	Motorcycle Manufacturer	405-5132
2	Nestle Philippines, Inc.	FPIP, Brgy. Ulango	Food Manufacturer	(02)898-0001
3	PMFTC, Inc.	Lot 3 Phase 1B, FPIP, Brgy. Pantay Bata	Cigarette Manufacturer/Exporter	(02)858-4920
4	Union Autoparts Manufacturing Philippines, Inc. (UAM)	L33, 2nd St. cor.Road Lot 8 FPIP, Brgy. Ulango	Auto Parts Manufacturer	405-5480
5	WCL Ventures Development, Inc.	FPIP, Brgy. Pantay Bata	Warehouse	405-5345
6	Nissin Brake	Bldg. L-2, L30 B, FPIP, Brgy. Ulango	Assembly	541-1335
7	Isteel Inc.	Lot 22, C FPIP, Brgy. Ulango	Manufacturer	661-4022
8	NEC/TOKIN	FPIP, Brgy. Ulango		
9	First Electro Dynamics Manufacturing	FPIP, Brgy. Ulango	Transformer Manufacturing	09277520333
PEZA Registered Firm				
1	B/E Aerospace	FPIP, Brgy. Ulango	Plane Parts & Accessories Manufacturer	(02)810-0281
2	Batangas Brothers, Inc.	FPIP, Brgy. Ulango	Digital Cameras, Parts & Accessories Manufacturer	(02)817-6791
3	Canon Business Machine	FPIP, Brgy. Pantay Bata	Digital Cameras, Parts & Accessories Manufacturer	
4	El Sol Electronics Device Philippines	FPIP, Brgy. Ulango		
5	First Philec Solar Corporation	FPIP, Brgy. Ulango	Solar devices Manufacturer	
6	Hoya Glass Disk Philippines, Inc.	FPIP, Brgy. Ulango		(049) 541-2730
7	Maxim Philippines Operating Corporation	FPIP, Brgy. Ulango	Semi-conductor Manufacturer	
8	Miyano Philippines, Inc.	FPIP, Brgy. Ulango		405-6147
9	Murata	FPIP, Brgy. Pantay Bata	Semi-conductor Manufacturer	455-2092
10	Pilipinas Green Solitech, Inc.	FPIP, Brgy. Ulango	PV Holder/Non-Ferrous	405-6270
11	POSCO	FPIP, Brgy. Ulango	Steel Sheets Manufacturer	405-6195
12	Sunpower Philippine Manufacturing Ltd.	FPIP, Brgy. Ulango	Solar devices Manufacturer	405-5286

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13	Sonion Manufacturing Plant	FPIP, Brgy. Ulango	430-8814
14	Taiyo Nippon	Philtown, Brgy. Pagaspas	631-0830

Source: BPLIO, 2014

Also, the Data Land Inc., a 6.5 hectares' precast plant, is also an industrial establishment situated at Barangay Santor. Aside from the industrial establishments located at FPIP and PhilTown, there is also an agro-industrial establishment which is the B-MEG Feed Mill located at Barangay Darasa. Moreover, there are also industries categorized as garment industries namely Vine Dresser and S.J. Gem located at Barangay Natatas and Barangay Janopol Oriental respectively.

Table 5.23. Inventory of existing Industrial Establishment by Intensity, 2014

BARANGAY	NAME OF INDUSTRIAL ESTABLISHMENT	LAND AREA (approx. in Has)	INTENSITY CLASSIFICATION*
Ulango	Honda Philippines, Inc.	20	I ₂
Ulango	Nestle Philippines, Inc.	27	I ₃
Pantay Bata	PMFTC, Inc.	25	I ₂
Ulango	Union Autoparts Manufacturing Philippines, Inc. (UAM)	2	I ₂
Pantay Bata	WCL Ventures Development, Inc.	10	I ₁
Ulango	Nissin Brake		I ₂
Ulango	Isteel Inc.	3	I ₂
Ulango	NEC/TOKIN	2	I ₂
.Ulango	First Electro Dynamics Manufacturing	2	I ₃
PEZA REGISTERED			
Ulango	B/E Aerospace	15	I ₂
Ulango	Batangas Brothers, Inc.	14	I ₂
Pantay Bata	Canon Business Machine	29	I ₂
Ulango	EI Sol Electronics Device Philippines		I ₂

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Ulango	First Philec Solar Corporation	7	l ₂
Ulango	Hoya Glass Disk Philippines, Inc.	7	l ₂
Ulango	Maxim Philippines Operating Corporation	3	l ₂
Ulango	Miyano Philippines, Inc.	5	l ₂
Pantay Bata	Murata	23	l ₂
Ulango	Pilipinas Green Solitech, Inc.		l ₂
Ulango	POSCO	3	l ₂
Ulango	Sunpower Philippine Manufacturing Ltd.	9	l ₂
Ulango	Sonion Manufacturing Plant	4	l ₂
Pagaspas	Taiyo Nippon	4	l ₃

Source: Assessor's Office, CPDO and BPLIO, 2014

- * Intensity Classification: I₁ – Non-Pollutive/ Non-Hazardous
I₂ – Pollutive/Hazardous
I₃ – Highly Pollutive/ Highly Hazardous

5.3.3 Local Revenues and Industrial Establishments

Table 5.24. Comparative Total Yearly Revenue from Industrial Establishments, 2012-2014

YEAR	TOTAL REVENUE
2013	238,728,710.26
2014	359,390,718.67
2015	337, 699,625.96

Source: City Treasurer's Office, 2014

5.3.4. Business Permit Issued based from Economic Activity

The trend of business permit granted by economic activities categorized as primary, secondary and tertiary is shown in Figure 5.5. Primary activities include those involved in agriculture and fishing; secondary activities include those involved in manufacturing, processing, and construction, and lastly, tertiary are those business activities involved in service industry.

Based from the Figure 5.5, it is evident that few are only engaged in agriculture (3%) or primary activities, and a significant number (86%) is from the service industry which belongs to the tertiary.

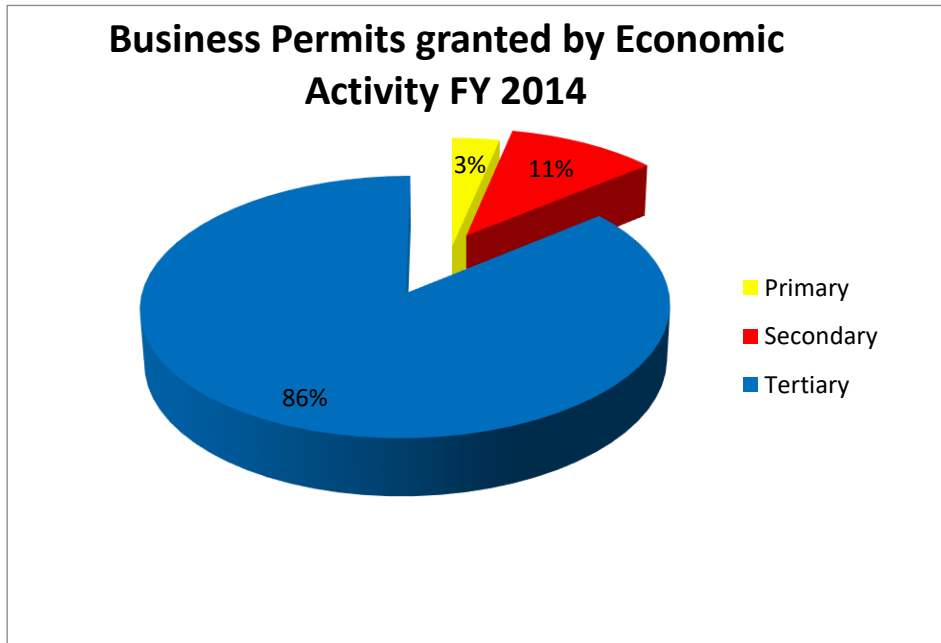


Figure 5.5. Business Permits granted by Economic Activity (Primary, Secondary and Tertiary), 2014
Source: BPLIO, 2014

5.3.5 Current and Projected Industrial Area Requirement (2015 - 2025)

Computing for the required industrial land requirement (for light industries only) against the projected population with the assumption of four (4) hectares per 1,000 population, Table 5.25 shows the projected industrial area requirement.

Table 5.25. Projected Industrial Area Requirement, (2015 - 2025)

YEAR	PROJECTED POPULATION	AREA REQUIREMENT (in hectares)
2014	161,297	645
2015	166,104	664
2016	171,054	684
2017	176,151	705
2018	181,401	726
2019	186,806	747
2020	192,373	769
2021	198,106	792
2022	204,010	816
2023	210,089	840
2024	216,350	865
2025	222,797	891

Source: CPDO, 2015

As of 2014, the city had a total of 286 hectares (has.) classified as industrial land. Almost all of these industrial lands were located at FPIP (Barangay Ulango and Pantay Bata) and some in Philtown Industrial Park (Barangay Pagaspas).

Based from Table 5.25, it is noticeable that the industrial land requirement for 2014 does not comply with the industrial area requirement based from the population, with the assumption of four (4) hectares per 1,000 population. With this, the proposed industrial expansion of industrial land for the next ten (10) years (2015-2025) will be approximately 1,500 hectares.

Considering the rapid economic growth experienced by the city and the benefits such as increase in local revenues and job opportunities the industrial establishments had generated, it is imperative to expand the industrial area including agro-industrial requirements of the city.

Moreover, with the proposed expansion of the industrial area, there will be great possibility of attracting investors/locators intended to build their industrial zones in nearby municipalities (Balete, Agoncillo, Talisay and Laurel) since they have limited capacities to

build their industrial parks due to physical and geographical characteristics (not suitable for industrial use) and presence of protected areas.

INDUSTRY

ANALYSIS MATRIX

Technical Findings and Issues and Concerns	Implications/Effects	Policy/Intervention
Inefficient service of power provider	Frequent power interruption which affects economic productivity	Dialogue with BATELEC
Insufficient industrial land area for establishments of new industries	Locators/investors will not be accommodated	Expansion of industrial area for inclusion in the preparation/update of CLUP
Lack of waste control facilities	Environmental Pollution	Establishment of Waste Management Program in the city Establishment of Waste Control Facilities such as Waste Water Treatment Facility and Septage Treatment Facility

5.4 TOURISM

Tanauan City with its six lakeshore barangays, namely: Barangay Ma. Paz, Wawa, Bañadero, Gonzales, and Ambulong has a great potential to be developed as a tourist destination.

Six lakeshore barangays namely: Barangay Ma. Paz, Wawa, Bañadero, Gonzales and Ambulong, Tanauan City.

For the past years, the Office of the Community Affairs has the responsibility in carrying out measures to ensure the promotion of tourism in the city. However, last 2015 a proposal was done for the creation of Tourism Office under the Office of the city Mayor. The said office will focus on the development and promotion of the Tanauan City's Tourism Industry. To start, the plantilla position Tourism Operations Officer I previously

under the Community Affairs Office was reassigned to the Office of the City Mayor as initial action towards the proposed creation of the said office.

As of 2016, the creation of Tourism Office under the Office of the City Mayor was forwarded already to the Office of the Human Resources Management and Development for the review and creation of the plantilla positions. The possibility of the creation of the said office is pursuant to the mandate of Tourism Act of 2009 also known as Republic Act 9593. Said office will focus mainly on handling tourism activities, projects, events as well as the promotional program of the city. Initially, the proposed plantilla positions under the proposed office were: Tourism Operations Officer II, Tourism Assistant and Messenger.

To fully implement the tourism development and tourism promotional programs/projects of the city as well as provide management on the advancement of the tourism industry in the city, a Tourism Code was created as Ordinance No. 2012-09 and adopted last 2012. Mainly, the ordinance governs the tourism development and promotion programs of the city. It includes the creation and establishment of Tourism Office to handle tourism activities likewise, provide for the licensing, registration, regulation and supervision of the operations of tourism oriented/establishment.

Currently, the Tourism Operations Officer I and the Officer-in-charge for Tourism Program, handle all the tourism activities and promotions of the city's tourism industry.

Implementation and Management of 20-meter Easement Zone in line with the Lakeshore Development Program

Looking back, the Office of the Community Affairs, as the main office implementing the Tourism plans and programs, pioneered the implementation of 20-meter easement zone of about 10-km length in the six lakeshore barangays (see picture above), which is considered the first and foremost by authorities (Protected Area Management Board and Department of Environment and Natural Resources).

Pursuant to the Water Code of the Philippines; “The banks of rivers and streams and the shores of the seas and lakes through their entire length and within a zone of three (3) meters in urban areas, twenty (20) meters in agricultural areas, and forty (40) meters in forest areas, along their margins are subject to the easement of public use in the interest of recreation, navigation, floatage, fishing, and salvage. No person shall be allowed to stay in this zone longer what is necessary for recreation, floatage, fishing or salvage or to build structure of any kind.





Thus, the City Government of Tanauan implemented this law through SP Resolution No. 5 S, 2005 Declaring an Easement of Twenty (20) Meters Along Its Margin For the Proposed Tanauan City Lakeside Resort Development Project. There are five lakeshore barangays covered by this easement, namely: Brgy. Maria Paz, Brgy. Wawa, Brgy. Boot, Brgy. Gonzales, and Brgy. Bañadero with an approximate length of 7,114 meters. Primarily, this was undertaken for tourism development as those barangays were declared ecotourism zone under the city's CLUP.

The DENR – PENRO Batangas provided the survey and actual delineation thru the mojon. This actual delineation or identification of boundaries of 20-meter easement zone has provided much benefit in terms of the following:

- a) minimize/prevent illegal structure within the salvage zone
- b) provide important baseline data for an increase of the city's area leading to an increase of IRA
- c) provide a tourism zone

- d) provide a buffer zone area
- e) provide a zone to mitigate/prevent disaster

In 2005, the legal basis of the project is secured thru the issuance of Sangguniang Panlungsod Resolution No.35 declaring 20-meter easement.



In the same year, the Protected Area Management Board (PAMB) Resolution is obtained granting clearance to this project since it conforms to the management plan of Taal Volcano Protected Landscape. The PAMB under the Department of Environment and Natural Resources (DENR) has a specific jurisdiction over the project site since they are within the protected areas. In 2006, baseline data was completed through inventory of owners and occupants along the lake. Related documents like land titles, cadastral

survey, and Transfer Certificate of Titles (TCT) of lots are obtained from Land Registration Commission for the confirmation of data. In 2007, the DENR-CENRO, Batangas agreed to provide technical assistance for the actual delineation of the 20-meter easement zone along the shore, the said service was rendered only in 2009.

Headed by the Office of the Community Affairs, City Government Task Force was created to assist the team from DENR in conducting the land survey and technical job of delineation. Moreover, Lakeshore Barangay Tourism Council were formed to ensure the people's participation. Information dissemination and production of IEC materials were also done. Consultation and barangay dialogues were also undertaken to clarify issues.

Moreover, among the strategic activities from 2008 to 2014 headed by the Office of the Community Affairs, in line with the Lakeshore Development Program are the following: (1) creating tourism awareness and appreciation; (2) actual delineation of 20-meter easement zone; (3) 20-meter identification of easement zone boundaries; (4) installation of signages in strategic areas to disseminate laws about the projects; (5) formalization of pledge of commitment and partnership; (6) establishment of network and linkages established; (7) posting of utility workers; (8) mainstreaming in the LGU's standard procedure in coordination with the Engineering Office and City Planning and Development Office); (9) continuous tree planting activities; (10) Lakbay-aral sa Lawa; (11) Biking Lane construction (constructed last 2013 and another lane in Barangay Bañadero last 2014); (12) Tourism Adventure games such as Fun Run, Bangkarera, Pedalan

Napayong Island

Napayong Island, located in Taal Lake, has always been a beautiful island and yet to be discovered as one of the most beautiful attractions and centre of Tanauan City's booming Eco-Tourism. It is also a bird sanctuary and a developing paradise.

Dragon Boat Festival

To promote water sports tourism and making the city an alternative gateway to the picturesque Taal Volcano, the world's smallest volcano and one of the country's top tourist attractions, the Dragon Boat Festival was launched last 2013. Spearheaded by the Sports Development Office under the Office of the City Mayor, the said dragon race which was held annually at the tranquil and clean waters of Taal Lake along lakeshore barangays of Wawa and Boot. Highlights of the said festival were free concert, Balsa Race and Dragon Boat Race.

Moreover, the Sagwan Tanauan Dragon Boat was organized in 2013 after the success of the 1st Tanauan City Dragon Boat Race Festival. The team was initially composed of local youth with ages ranging from 12 to 18. Sagwan Tanauan is entirely managed and supported by volunteers from the private sector. Its advocacy remains to promote environmentally friendly water sports in Taal Lake, as well as a healthy and wholesome lifestyle for the youth of Tanauan City.

Parade of Lights

The Parade of Lights was pioneered in 2014 as the city's culminating activity for its weeklong cityhood celebration. In line with the tagline of the city as the "City of Colors!", this event being part of the city's eco-tourism thrust, had been tagged as the first and only of its kind festival in the Philippines and recognized as the most anticipated and best attended single event in the province of Batangas. Deemed as the highlight of the city's cityhood celebration, this spectacle has been inspired by the greatest Tanaueño and national hero Gat. Apolinario Mabini, whose intellectual prowess served as the beacon during the republic's darkest hours.

Initiated by the City Government of Tanauan, various themed-LED-adorned floats glowing majestically, ushered by similarly colorful LED-clad street dancers showcased by

participating establishments, locators, schools, LGUs, private individuals and NGOs on the much-awaited events that expect to draw a crowd.

Agri-Tourism

The city as it is predominantly devoted to agriculture is strengthening its agri-tourism through the coordination with the Office of the City Agriculture and Office of the City Cooperatives and Livelihood Development.

Last 2013, Tanauan City Demo Farm under the Office of the City Agriculture started its operation. It is a 2.5 hectare farm situated in Sitio Dayapan, Barangay Bilog Bilog. Its primary mandate is to provide Tanauan City farmers with technologies on producing safe foods through natural and organic farming. The farm serves as venue for seminars, trainings and actual demonstration of different technologies regarding environment friendly and human safe farm practices. Currently, the said farm attracts farmers, researchers and organizations who want to conduct trainings and researches related in improving the quality of crops and testing the efficacy of organic farm inputs.

Moreover, the city has also its Shared Service Facility with the aim of promoting the city's products specifically farmer's produce and processed products. This project entails the provision of needed machines and equipment managed by the City Cooperative and Livelihood and development Office and co-managed by the organized groups of farmers, micro-scale food processors: Entrep Tanauaño Marketing Cooperative and bamboo craft workers. Currently, there are three existing outlets of Tanauan Products which was enhanced by the provision of the shared service machineries.

Another is the the Tanauan Packaging and Service Center which is the first and only LGU-owned and operated packaging facility in CALABARZON. Established with the assistance of the Tanauan Economic Council, DOST, Senator Ramon Magsaysay, Jr., and DTI, the Tanauan City Government proceeded to put up the facilities and start its implementation in 2007-2009. With the aim of making Tanauan products globally

competitive through appropriate packaging, it has been serving Tanauan MSMEs in their packaging requirements. As a result, local products such as pickled ubod, pickled papaya, peanut butter, buko juice, coco jam, sumang yakap, bibingka, cassava cake, among others have gained entry into and following in the market. Some of these products are now being sold in Luvel's, TSM, Linda Pe, Faith, Mercado Hospital, while others are being sold exclusively in the entrepreneur's outlet and through direct selling. Nevertheless, continuous enhancement is being applied on the products by TPSC, with the assistance of DOST-Calabarzon.

Other potential agri-tourism industry in the city is the production of vinegar of most of the households at Barangay Santor and production of Malunggay capsules at Barangay Gonzales.

Proposed Project of Tourism Office

1. Tanauan City "Landscape city in 2020
2. Tanauan City Lakeshore Park
 - a. Sabang River Eco- Park
 - b. Ambulong Lakeshore Park
 - c. Ambulong Boulevard
3. Tanauan Historical and Botanical Garden (5 hectares)
4. Water Reserve and Recreation Park (Belle Corp in Brgy Sulpoc)
5. Sports and Recreational Eco Friendly Complex (Brgy. Darasa)
6. Mini Park of Old Ruins Of Tanauan
7. Preservation Of Heritage Site of Tanauan "The Avenue"
8. City's Lagoon
9. Provincial Eco Park or Asian Village
10. Musical and Colorful Mabini Plaza
11. Recreational Park in every Barangay
12. Zip line at Napayong Island

5.4.1 Inventory of Tourism Establishments

There are a number of existing tourist spots in Tanauan. Below is the inventory of tourism facilities in the city.

Mabini Shrine. The Mabini Shrine is one of the famous historic places in Tanauan. It is located in Barangay Talaga and occupies a total land area of 11,432 sq.m. Mabini Shrine is a consecrated and hallowed place built in 1956 in memory of the late hero. The building, a brainchild of Jose P. Laurel, was built as an expression of his respect and adoration for Mabini. The structure was renovated in 1997. A replica hut standing at left side of the main building replicates the old hut where Mabini was born and spent his childhood days. At the middle portion of the main building lies a striking head statue resembling the heroes' face.



Mabini Shrine

Tanauan City Museum. The present museum building used to be the Old Municipal Building and was constructed during the term of Mayor Antonio Jose L. Dimayuga. It was

designed by Architect Oscar Arellano. Last 2004, the central portion of the Old Municipal Building was declared as “Tanauan City Museum” through the Resolution No. P005 and was inaugurated as a museum during the term of Mayor Alfredo C. Corona. In 2009, the museum was upgraded in collaboration with the National Museum to promote culture and arts. The museum preserves the past, educates new generations, develops relationships, and creates partnerships, and shares resources for the preservation and well-being of the entire community. The first floor of the museum is the Tanauan’s History Gallery featuring its geographical and historical development since 1754 up to its ratification into a city in March 10, 2001. Other galleries exhibit various artifacts of the greatness of Gat. Apolinario Mabini and highlights prominent Tanaueño leaders who led in building our city. There are also city coins, documents of the past, collections depicting the people’s social and economic lifestyles. The second floor displays awards, medals, memorabilias of Tanaueños’ winning moments in various fields of competition, locally and internationally. Foremost among them is the Tanauan Baseball Team which is formed not just a sport for the youth, but also to provide opportunities for players to continue their education as varsity scholars in various colleges and universities. The museum is open every Tuesday to Saturday, from 8AM to 5PM.



Barradas Airstrip. Located at Barangay Santor, Barradas Airstrip is a 30,026-hectares private mini airfield owned by Mr. Manny Barradas. A fraction of the land is a grass area, while most is planted with sugar cane, coconut, and other fruit trees. The activities that are normally held in the place are shooting, skydiving, toy-plane flying, and airplane flying. It is not open too public. Visitors are limited only to close relatives and friends of the owners.

Don Modesto Castillo Memorial Cultural Center



The cultural center was constructed in memory of Don Modesto Castillo by his descendants. Don Modesto Castillo y Aquino was appointed as Governor by President Roxas from June 1946 to December 1947. He was elected as Governor of Batangas Province from 1922-1930.

The cultural center which occupies 403 sq.m. of land along A. Mabini Avenue, Poblacion II was once owned by the Castillo Family. It was later donated to the city government. It

is said that the area once served as the location of the old South Elementary School but was reconstructed and became what it is today.

Saint John Evangelist Parish Church and the Station of the Cross.

Saint John Parish Church which occupies 50,000 sq. meters is adjacent to Don Modesto Cultural Center. The church was rebuilt in 18th century in honor of St. John Evangelist, patron of Tanauan. It was reconstructed in 1948. The outer structure of the church and the grills at both sides is just a replica of the old one. The windows and the ceilings are still intact. The 12 station of the cross, each station built with large statues depicting how Jesus suffered from his nailing to the cross up to his burial, are found beside the main office at the back of the church. During Tanauan's town fiesta on December 27, the statue of the patron saint is paraded around the city. Many visitors come to witness the fun-filled event



St John Evangelist Church

Old Municipal Building. The Old Municipal Building which is located parallel to the Don Modesto Cultural Center in A. Mabini Avenue, Poblacion II, occupies a land area of 1,035.25 sq.m. The entire structure was built during World War II. Today, its left wing is presently occupied by an LGU office, while the right wing presently serves as the City Library



Jose P. Laurel Ancestral House. The Jose P. Laurel Ancestral house where our late President grew up was built in the 18th century. It occupies an area of 5,000 sq.m. along A. Mabini Avenue in Poblacion I. Around 6,500 persons visit the house every year especially pupils and students from the private and public institutions who participate in the Lakbay Aral Program, spearheaded by the office of the Community Affairs in coordination with DepEd Tanauan. During the celebration of Jose P. Laurel’s birth anniversary every March 5 and during his death anniversary on November 6, students also tons this place.



Jose P. Laurel Ancestral House

Tourism Development Zone

The City Government of Tanauan had created a Tourism Development Zone establishing the area located along Apolinario Mabini Avenue from St. John Evangelist Church to President Jose P. Laurel Highway including the Almeda Mansion and Almeda Bakery. The City Ordinance No. 03-5 stipulated that the said area since it is considered to be historical should be preserved, developed and administered for the perpetration of the Filipino heritage. Moreover, the ordinance stated that all planning and development of government and private sectors in the said area shall be in line with the tourism, cultural and restoration objectives envisioned in the Tanauan City Master Plan.

Table 5.26. Inventory of Tourism Facilities, 2013.

Barangay	NAME OF TOURISM ESTABLISHMENT	TYPE OF ATTRACTION	OWNERSHIP
Talaga	Mabini Shrine	historical; cultural manmade	Public
Poblacion I	Almeda House	historical; cultural manmade	Private
Poblacion I	St. John The Evangelist Parish Church	historical; cultural manmade	Public
Poblacion I	Station of the Cross	historical; cultural manmade	Public
Poblacion I	Jose P. Laurel Ancestral House	historical; cultural manmade	Private
Poblacion II	Old Municipal Building	historical; cultural manmade	Public
Poblacion II	Ruins of Old Tanauan	historical; cultural manmade	Public
Poblacion II	Gonzales Ancestral House (White House)	historical; cultural manmade	Private
	Ben Vispo House	historical; cultural manmade	Private
Ambulong, Banadero, Boot, Gonzales, Maria Paz, Wawa	Lakeshore barangays along Taal Lake	Nature	Public
Maria Paz	Napayong Island	Nature	Public
Darasa, Pob.I, II,III and IV, PAgaspas, Pantay	San Juan River	Nature	Public

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Matanda, Pantay Bata, Ulango			
Maria Paz	Mt. Maria Paz	Nature	Public
Suplang	Tagaytay Midland Golf Course	Sports and recreational activities	Private
Bañadero	Firing Range (Dennis Hernandez)	Sports and recreational activities	Private
Pantay Bata, Ulango, Laurel	First Philippine Industrial Park	Industrial Tourism	Private
Pagaspas	Philtown Industrial Estate	Tourism	Private
Santor	Santor Nursery	Industrial Tourism	Public
Balele	Tibanglan River	Nature	Public
Balele	Sabang River	Nature	Public
Banjo West	Ilog Balete	Nature	Public
Bañadero	Ilog Baño	Nature	Public
Ambulong	Tikob River	Nature	Public
Pantay Matanda	Aja River	Nature	Public
Poblacion II	Thiro River	Nature	Public
Bañadero	Prinso Water Reservoir	Nature	Public
Cale	Tore sa Cale	historical; cultural manmade	Public
Banadero	Biking Lane	manmade	Public

Source: Community Affairs Office, 2013

Table 5.27. Inventory of Registered Private Resorts, 2014

RESORT	OWNER	LOCATION
Alon Garden Resort	Nora O. Alon	Brgy. Natatas
Awilihan Resort	Renato S. Angeles	#0978 Brgy. Ambulong
Averosa Farm & River Run Resort	Frederico L. Bulseco Jr.	#155 Brgy. Bagbag
Bahay Kubo ni Capt. Resort	Jaime Ricohermoso	Brgy. Gonzales
Hacienda Darasa	Alfredo Malabanan	Brgy. Darasa
Jardin De Antonio	Antonio Veses	Brgy. Talaga
La D' Este Resort	Dennis Angeles	Gloria Comp. Pob. Brgy. VI
Lola Naty's Garden & Cafe	Chona Gonzales	Brgy. Talaga
M.A.E.S Private Pool	Felicitas T. Paet	#117 Brgy. Bilog-Bilog
Me-Sing Garden Resort	Wilson Piamonte	#13 JPL Highway, Brgy. I
Mount Lour-Des Resort and Hotel	Wilson V. Piamonte	Brgy. Trapiche

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Resort De Padilla	MecIhor C. Padilla	Teresa Cmpd. Pob., Brgy. VI
Sucasa Garden Resort	Hernani R. Medina	Lauan St. cor Yakal, Mt. View Subd., Pob III
Tierra Salva Lakeview Resort	Juanito G. Salvatierra Jr.	Brgy. Gonzales
Uncle Vince's Place	Avelina Castillo	Teresa Subd. Pob. Brgy. VI
Villa Glover's Private Pool and Function Hall	Severo M. Ilagan	Brgy. Janopol Occidental
Villa Rosal Resort	Marivic Sanciangco/Maria Flora Lopez	Mt. View Pob. Brgy. III
Armigero Resort	Maxima Mulingtapang	Purok II, Brgy. Talaga
Tropical Breeze Hotel & Resort	Renz German M. Agojo	Brgy. Sambat

Source: BPLIO, 2014

5.4.1 Accessibility of Existing Tourism Establishments

Table 5.28. Accessibility of Existing Establishments and Tourist Attractions, 2011

NAME OF TOURISM ESTABLISHMENT	MEANS OF AVAILABLE TRANSPORTATION	DISTANCE FROM NEAREST AIRPORT (KM)	DISTANCE FROM NEAREST SEAPORT (KM)	DISTANCE FROM NATIONAL HIGHWAY (KM)	ACCESS ROAD		ACCESSIBILITY
					PAVEMENT	CONDITION	
St. John the Evangelist Parish	Tric., jeep, bus	58	44	0.5	cement	fair	1
Museo ng Tanauan (Old Municipal Building)	Tric., jeep, bus	58	44	0.5	cement	fair	4
Jose P. Laurel Highway	Tric., jeep, bus	58	44	0.5	asphalt	fair	4
Apolinario Mabini Avenue	Tric., jeep, bus	58	49.2	5.2	cement	fair	4
Ruins of Old Tanauan	Tric., jeep	66.6	52.6	8.6	asphalt	fair	6
Mabini Shrine	Tric., jeep, bus	65	51	7	asphalt	fair	6
Laurel Ancestral House	Tric., jeep, bus	58	44	0.5	asphalt, cement	fair	4
Gonzales Ancestral House	Tric., jeep, bus	58	44	0.5	cement	fair	6
Almeda House	Tric., jeep, bus	58	44.5	0.5	asphalt, cement	fair	6
Ben Vispo House	Tric., jeep, bus	66.9	52.9	8.9	cement	fair	6
Firing Ranch (Dennis Hernandez)	Tric., jeep, bus	66.6	52.6	8.6	asphalt	good	6
Tara Woods	Tric., jeep, bus	60.2	46.2	2.2	cement	fair	1
Hacienda Darasa	Tric., jeep, bus	58.8	58.8	0.8	cement	fair	6
Ilog Balete Banjo West Ecopark	Tric., jeep, bus	62.8	48.8	4.8	asphalt, cement	fair	5
Baseball Field (Altura Bata)	Tric., jeep, bus	66.9	52.9	8.9	asphalt, cement	fair	6
Brgy. Mabini Playground	Tric., jeep, bus	62.2	48.2	4.2	asphalt, cement	fair	6

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Awilihan Resort	Tric., jeep, bus	67.9	53.9	9.9	asphalt, cement	fair	6
Forest Grove Resort	Tric., jeep, bus	66.6	52.6	8.6	asphalt, cement	fair	6
MAE's Private Pool	Tric., jeep, bus	64.6	50.6	6.6	asphalt, cement	fair	6
Bahay Kubo ni Kapt.	Tric., jeep, bus	65.4	51.4	7.4	asphalt, cement	fair	6
Tierra Salva Lakeview Resort	Tric., jeep, bus	65.4	51.4	7.4	asphalt, cement	fair	6
Villa Glover's Private Pool and Function Hall	Tric., jeep, bus	64.1	50.1	6.1	asphalt, cement	fair	6
Me-sing Garden Resort	Tric., jeep, bus	58.5	44.5	0.5	asphalt	fair	6
Uncle Vince's Place	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	6
Resort de Padilla	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	1
La Deste Resort	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	1
D' Linor	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	1
Su Casa Resort	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	6
Villa Rosal Resort/catering Services	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	1
White House	Tric., jeep, bus	63.2	49.2	5.2	cement	fair	1
Lola Naty's Garden and Café	Tric., jeep	63.2	49.2	5.2	asphalt, cement	fair	1
Jardin de Antonio	Tric., jeep, bus	63.2	49.2	5.2	asphalt, cement	fair	1
Barradas Airstrip	Tric., jeep, bus	60.5	46.5	2.5	asphalt, cement	fair	1
Marcela Arcade	Tric., jeep, bus	58.5	44.5	0.5	asphalt, cement	fair	1
Walter Mart	Tric., jeep, bus	59	45	1	asphalt	fair	1
Tanauan City Public Market	Tric., jeep, bus	58.5	44.5	0.5	asphalt	fair	1
Nanay Pia's Sumang Magkayakap	Tric., jeep, bus				cement	fair	1
Tita's Delight	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	1
Aylene's Bibingka	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	1
Segundina's Bibingka	Tric., jeep, bus	59	45	1	cement	fair	1
Kambingan sa Brgy. Pagaspas	Tric., jeep, bus	61.1	47.1	3.1	cement	fair	1
Linda Pe Restaurant	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	1
Ped and Caring's	Tric., jeep, bus	58.5	44.5	0.5	cement	fair	1
Bangkarera	Tric., jeep, bus	67.5	53.5	9.5	asphalt, cement, ,water	fair	1
Fluvial Parade	Tric., jeep, bus	67.5	53.5	9.5	asphalt, cement, water	fair	1
Altura Bata Baseball Field	Tric., jeep, bus	66.9	52.9	8.9	cement	fair	1
Tikob River	Tric., jeep, bus	67.9	53.9	9.9	asphalt, cement	fair	1
Ambulong Recreational Ground	Tric., jeep, bus	67.9	53.9	9.9	asphalt, cement	fair	1

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Weather Bureau River (Ambulong)	Tric., jeep, bus	67.9	53.9	9.9	asphalt, cement	fair	1
PAGASA Office	Tric., jeep, bus	67.9	53.9	9.9	asphalt, cement	fair	1
Bagumbayan Mini Park	Tric., jeep	59.5	45.5	1.5	asphalt, cement	fair	1
Tibanglan River	Tric., jeep	62.1	48.1	4.1	asphalt, cement	fair	1
Sabang River	Tric., jeep	62.1	48.1	4.1	asphalt, cement	fair	1
Ilog Balete	Tric.	62.8	48.8	4.8	asphalt, cement	fair	1
Ilog Baño	Tric.	66.6	52.6	8.6	asphalt, cement	fair	1
Lakeshore Barangay (Ambulong)	Tric., jeep	111.9	53.9	9.9	asphalt, cement	fair	1
Lakeshore Barangay (Bañadero)	Tric., jeep	66.6	52.6	8.6	asphalt, cement	fair	1
Lakeshore Barangay (Gonzales)	Tric., jeep	65.4	51.4	7.4	asphalt, cement	fair	1
Lakeshore Barangay (Wawa)	Tric., jeep	65.7	51.7	7.7	asphalt, cement	fair	1
Lakeshore Barangay (Boot)	Tric., jeep	64.7	50.7	6.7	asphalt, cement	fair	1
Lakeshore Barangay (Maria Paz)	Tric., jeep	67.5	53.5	9.5	asphalt, cement	fair	1
Prinso Water Reservoir (Bañadero)	Tric., jeep	66.6	52.6	8.6	cement	fair	1
Napayong Island (Maria Paz)	Tric., jeep, boat	67.5	53.5	9.5	asphalt, cement, water	fair	1
Pagasas Ranch	Tric., jeep	61.1	47.1	3.1	asphalt, cement	fair	1
Aja River (Pantay Matanda)	Tric.,	62.2	48.2	4.2	asphalt, cement	fair	1
Santor Nursery	Tric., jeep	60.5	46.5	2.5	asphalt, cement	fair	1
Tagaytay Midland (Suplang)	Tric., jeep	68.8	54.8	10.8	asphalt, cement	fair	1
Tagaytay Midland Golf Course	Tric., jeep	68.8	54.8	10.8	asphalt, cement	fair	1
Rope Making (Tinurik)	Tric., jeep	60.5	46.5	2.5	asphalt, cement	fair	1
Aquaphonic Technology(Wawa)	Tric., jeep	65.7	51.7	7.7	cement	fair	1
San Juan River (Darasa)	Tric.	59	45	1	asphalt, cement	fair	1
Tore sa Cale	Tric., jeep	63.4	49.4	5.4	Asphalt	fair	1
Habanglayon (Darasa)	Tric.	59	45	1	asphalt, cement	fair	1
Bagumbayan Mini Forest	Tric., jeep	59.5	45.5	1.5	asphalt, cement	fair	1
Trapiche Butterfly Farm	Tric., jeep	59.5	45.5	1.5	asphalt, cement	fair	1
Thiro River (Poblacion III)	Tric., jeep	58.5	44.5	0.5	asphalt, cement	fair	1

Source: Community Affairs Office, 2011

5.4.2 Cultural and Tourism Activities

Traditional cultural celebrations/events are also celebrated in the city. Among these are listed below:

Table 5.29. Annual Special Events and Historical /Cultural Activities in Tanauan City

Date	Event
March 9	Birth Anniversary of Jose P. Laurel
March 10	Cityhood Anniversary/ Parade of Lights
Holy week	Good Friday Procession
April – May	Bangkarera
May 13	Death Anniversary of Apolinario Mabini
July 23	Birth Anniversary of Apolinario Mabini
November	Dragon Boat Festival
November 6	Death Anniversary of Jose P. Laurel
December 1	Christmas Tree Lighting
December 27	Tanauan Town Fiesta

Source: Community Affairs Office, 2014

Table 5.30. Local Revenue and Employment by Tourism Activities, 2014.

No.	Business Name	Address	Gross Sales/Capitalization			No. of Employees		
			2012	2013	2014	2012	2013	2014
1	Alon Garden Resort	Brgy. Natatas	1,000,000.00	1,000,000.00	150,000.00	3	3	3
2	Awilihan Resort	#0978 Brgy. Ambulong	250,000.00	300,000.00	400,000.00	7	8	8
3	Averosa Farm & River run Resort	#155 Brgy. Bagbag	400,000.00	500,000.00	750,000.00	2	3	4
4	Bahay Kubo ni Capt. Resort	Brgy. Gonzales	400,000.00	500,000.00	750,000.00	2	3	4
5	Hacienda Darasa	Brgy. Darasa	5,364,000.68	5,436,400.68	1,500,000.00	8	8	5
6	Jardin De Antonio	Brgy. Talaga	1,260,000.00	1,260,000.00	1,260,000.00	0	2	2
7	La D' Este Resort *	Gloria Comp. Pob. Brgy. VI	200,000.00	250,000.00	-	1	1	-
8	Lola Naty's Garden & Café*	Brgy. Talaga	40,000.00	-	-	1	-	-
9	M.A.E.S Private Pool	#117 Brgy. Bilog-Bilog	200,000.00	300,000.00	300,000.00	1	1	1
10	Me-Sing Garden Resort	#13 JPL Highway, Brgy. I	800,000.00	1,254,545.00	1,200,000.00	2	2	2
11	Montecillo De Leonard Resort	Brgy. Gonzales	-	100,000.00	86,363.00	-	0	1
12	Mount Lour-Des Resort and Hotel	Brgy. Trapiche	-	1,030,000.00	1,000,000.00	-	0	0
13	Resort De Padilla	Teresa Cmpd. Pob., Brgy. VI	250,000.00	350,000.00	350,000.00	0	0	0

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14	Sucasa Garden Resort	Lauan St. cor Yakal, Mt. View Subd., Pob III	500,000.00	845,454.56	1,500,000.00	1	1	1
15	Sunshine Garden Resort	Pag-asa Rd., Brgy. Darasa	-	-	2,000,000.00	-	-	1
16	Tierra Salva Lakeview Resort	Brgy. Gonzales	301,800.00	432,000.00	1,000,000.00	1	1	0
17	Uncle Vince's Place	Teresa Subd. Pob. Brgy. VI	1,000,000.00	1,000,000.00	1,000,000.00	1	1	1
18	Villa Glover's Private Pool & Function Hall	Brgy. Janopol Occidental	300,000.00	50,000.00	75,000.00	0	0	0
19	Villa Rosal Resort	Mt. View Pob. Brgy. III	1,000,000.00	1,669,095.00	1,867,549.20	2	2	0
20	Armigero Resort	Purok II, Brgy. Talaga	-	-	1,000,000.00	-	-	1
21	Tropical Breeze Hotel & Resort	Brgy. Sambat	-	5,000,000.00	5,000,000.00	-	5	4
22	Casa Poncial Lodging House	Brgy. Santor	-	-	300,000.00	-	-	2
23	Sambat Inn Lodge	Brgy. Sambat	407,219.00	407,219.00	393,500.00	5	3	3
24	Nicayeren Resort	Brgy. Gonzales						
25	Jasmine Drive Inn Hotel and Resort	Brgy. Pagaspas						
TOTAL			13,673,019.68	21,684,714.24	21,882,412.20	37	44	43

Source: BPLIO, 2015

There are twenty-five (25) business establishments (such as resorts/hotels, lodging house, inns) registered based from records of the BPLIO as of 2014. Table 5.30 shows that there is an increase in the gross sales/capitalization of the establishments related to tourism activities as declared in the BPLIO from 2012-2014.

5.4.3 Potential Tourist Attractions in Locality

Table 5.31. Potential Tourist Attractions at Tanauan City, 2014

Barangay	Potential Attraction	Area in hectares (approx. only)
Barangay Maria Paz	View Deck/ Bird Sanctuary	50
Barangay Balele Barangay Janopol Occidental	Sabang River Arboretum	9
Barangay Boot Barangay Gonzales Barangay Wawa	La Playa	40
Six Lakeshore Barangays	Biking Lane	5

Source: Office of the City Mayor, 2014

TOURISM

ANALYSIS MATRIX

Technical Findings and Issues and Concerns	Implications/Effects	Policy/Intervention
Underdeveloped potential ecotourism sites Absence of Tourism Master Plan	Limited promotion; Unmaterialized income	Encouraging investors to develop tourism sites Tourism Master Plan
Unorganized stakeholders like resort owners	Marketing focuses only on respective resorts	Organization of stakeholders in the form of association
Limited and underdeveloped tourism spots Lack of accommodations for tourist during events/occasions	Low turnout of tourists, mostly are students	Development of new tourism zones and introduce new tourism activities Lakeshore Development Program Development of lodging, resorts and hotels to accommodate tourists
Insufficient advertisement and promotion of local goods and services	Unawareness of the public about the local services and goods	Marketing of local products through the City Cooperatives and Livelihood Development Office Organization of local producers Promotion of the city through media/newsletter/newspapers

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		<p>Continuous development of local talents that will perform for the different cultural activities of the city.</p> <p>Creation of website that will be an avenue for advertising its tourist spots, tourism facilities and travel packages, travel information, and even accept travel bookings.</p> <p>Production and distribution of tourism promotion materials such as brochures, travel maps for walking tours and postcards.</p>
Tourism industry not yet fully developed	Limited increase in tourism revenue	Encourage investors for the development of tourism sites as designated in the Z.O

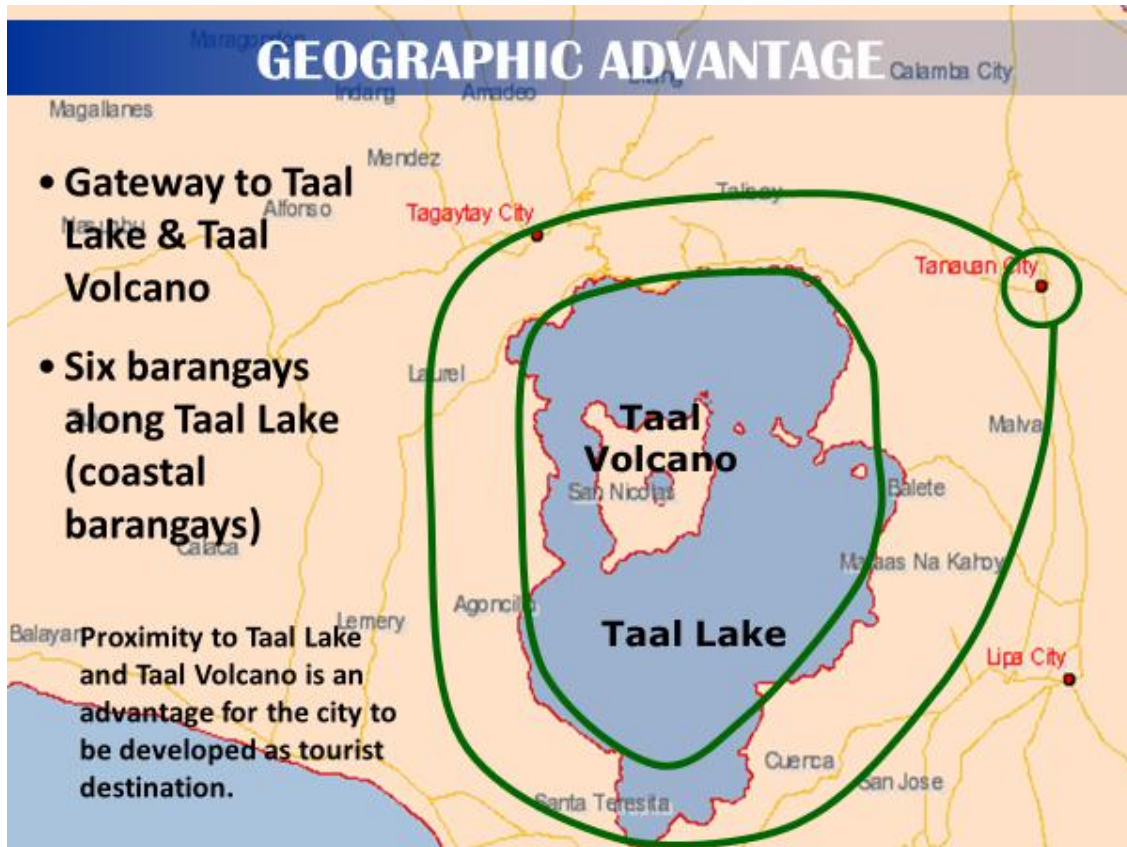
Chapter 6

INFRASTRUCTURE

6.1 Transportation

The City of Tanauan is a gateway to Batangas City and other southern towns, cities and provinces. As such, the quality and condition of roads, drainage system and other transportation facilities play a very important role. Moreover, those infrastructures are very good indicator of economic development and progress. In highly urbanized areas, skyways, flyovers and footbridges are built because of increase in vehicular and non-vehicular traffic, while in rural areas the demand for widened and paved roads also increases due mainly to the same reason. Motorists always clamor for paved roads to shorten travel time and to increase safety and travel comfort.





6.1.1 Modes of Public Transport and Facilities

The city's main mode of public transport are jeepneys and tricycles. Tricycles are used for short trips within the city proper and adjacent barangays, while jeepneys shuttle passengers to different barangays and other neighboring cities and municipalities. Buses traverse through Tanauan but there are no bus terminals in the city. For rural Barangays, horses and cattle are used for transporting goods from the farm to the roads. Those farm goods are then picked up by jeepneys and other vehicles and transported to the public market. Vegetable dealers use cargo trucks and even jeepneys for transporting good and other farm products within the city and nearby areas or Metro Manila.

The buses which pass through Tanauan City are Manila-Batangas City/Lemery and vice versa. These are the means of commuters to travel towards Metro Manila. There are jeepneys which lead to the nearby Cities of Calamba, San Pablo, and Lipa. To get to the rural barangays of the city, jeepneys and tricycles are available. There are 16 jeepney terminals and 60 tricycle terminals distributed around the

Poblacion area in Tanauan City. To reach the lakeshore part, the mode of transportation is by boat. It is used to reach Mahabang Buhangin, a small portion of Barangay Maria Paz. This is also the mode of transportation by the coastal communities to other coastal municipalities, and island hopping in Taal Lake.

It is worthy to note that acquiring and owning private cars is becoming a trend and popular among the City populace. Couple of decades ago having a car is a status symbol, now owning a car is becoming a basic need especially to businessmen and employees. Because of this reason, private vehicles are the major contributor to the increase of traffic volume.

Industrial and manufacturing companies operating in industrial parks in the city as well as in nearby areas offered shuttle bus services to their employees and staff. There are designated pick up points and waiting area at prescribe time.

Moreover, Tanauan City is not too distant from the country’s main seaport and airport. It is 57.2 kms distant from the Ninoy Aquino International Airport and 44.6 kms. away from the Batangas seaport.

6.1.2 Inventory of Public Land Transportation Vehicles by Type and Service Roads

Table 6.1 Number of Authorized Units Passing Through Tanauan City

Route	No. of Authorized Units
Lipa City – Tanauan City	456
Tanauan City – Talisay	13
San Pablo City – Tanauan City	269
Calamba City – Tanauan City	563
Calamba City – Lipa city via Tanauan City	573
Balibago (STA.ROSA) – Tanauan City (Batangas)	25
Balibago (STA.ROSA) – Tanauan City (Batangas)via SLEX	18
San Pablo City – Tanauan City	259
San Pablo City – Tanauan City via Alaminos	160
TOTAL	2,336

Source: Land Transportation Franchising and Regulatory Board Regional Franchising and Regulatory Office No. IV

Tricycle terminals are categorized into two groups, Metro Toda and Bukid Toda. Color assignment for each Toda is being proposed to make them more organized, yellow for Metro Toda and red for Bukid Toda.

Table 6.2 Inventory of Tricycle Terminals “Bukid Toda”

Name of Toda	No. of Members	Route/Franchise area	Assigned Color
Altura	50	Barangay Altura to Terminal Poblacion and Vice Versa	Red
Bagbag	140	Barangay Bagbag to Terminal Poblacion and Vice Versa	Red
Balele	160	Baragay Balele to Terminal Poblacion and Vice Versa	Red
Banjo – Pilar	133	Barangay Banjo East and West to Terminal Poblacion and Vice Versa	Red
Bilog-Bilog	100	Barangay Bilog-Bilog to Terminal Poblacion and Vice Versa	Red
BKV	200	Barangay Bagbag to Terminal Poblacion and Vice Versa	Red
Boot	147	Barangay Boot to Terminal Poblacion and Vice Versa	Red
Cale	102	Barangay Cale to Terminal Poblacion and Vice Versa	Red
Darasa - Ramonita	430	Barangay Darasa to terminal Poblacion and Vice Versa	Red
Hidalgo	50	Barangay Hidalgo to Terminal Poblacion and Vice Versa	Red
Janopol Oriental/Occidental	200	Barangay Janopol Oriental/Occidental to Terminal Poblacion and Vice Versa	Red
Laurel	50	Barangay Laurel to Terminal Poblacion and Vice Versa	Red
Luyos	38	Barangay Luyos to terminal Poblacion and Vice Versa	Red
Mabini	118	Barangay Mabini to Terminal Poblacion and Vice Versa	Red
Malaking Pulo	70	Barangay Malaking Pulo to Terminal Poblacion and Vice Versa	Red

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Maria Paz	20	Barangay Maria Paz to Terminal Poblacion and Vice Versa	Red
Montaña	60	Barangay Montaña Poblacion and Vice Versa	Red
Natatas	165	Barangay Natatas to Terminal Poblacion and Vice Versa	Red
Pagaspas	117	Barangay Pagaspas to Terminal Poblacion and vice Versa	Red
Pantay Bata/Pantay Matanda	265	Pantay Bata/Matanda to Terminal Poblacion and Vice Versa	Red
Sala	79	Barangay Sala to Terminal Poblacion and Vice Versa	Red
Sambat	195	Barangay Sambat to Terminal Poblacion and Vice Versa	Red
Santor	117	Barangay Santor to Terminal Poblacion and Vice Versa	Red
Sulpoc	54	Barangay Sulpoc to Terminal Poblacion and Vice Versa	Red
Talaga	64	Barangay Talaga to Terminal Poblacion and Vice Versa	Red
Tinurik	165	Barangay Tinurik to Terminal Poblacion and vice Versa	Red
Trapiche 1,2,3 and 4	236	Barangay Trapiche to Terminal Poblacion and Vice Versa	Red
Ulango	81	Barangay Ulango to Terminal Poblacion and Vice Versa	Red
Wawa	40	Barangay Wawa to Terminal Poblacion and Vice Versa	Red

Source: Tricycle Franchising and Regulatory Board, 2014

Tricycle terminals included in Metro Toda are: 7-Eleven, Batangan, Barangay 1 and 6, Bus Stop, Christian College of Tanauan (CCT), Citimart, Crossing, Daniel Mercado and Medical Center (DMMC), Jollibee, KFC, Knight Rider, La Consolacion College of Tanauan, Luvels/Neil, Mcdonalds, Mercury, Mt. View Subdivision, Pantoja, Metro Poblacion, Puregold, Reaville, Tanauan Institute, TCR, Tejero, TMO,

TSM and Tanauan Water District. The said toda are plying route to various locations within the Poblacion area.

6.2 Inventory of Roads and Bridges (External/Internal linkages)

6.2.1 Southern Tagalog Arterial Road

The Southern Tagalog Arterial Road (also known as the STAR Tollway or CALABARZON Expressway) is a four-lane road from Sto. Tomas to Lipa and is a two-lane from Lipa to Balagtas 42 km (26 mi) expressway in the Philippines. It is operated by STAR Infrastructure Development Corporation (STAR – IDC), constructed in late 1990s and become operational in early 2000.

The construction of the STAR Toll way becomes a reality because of the enactment of R.A. 7718, otherwise known as “An Act Authorizing the Financing, Construction, Operation and Maintenance of Infrastructure Projects by the Private Sector, and for Other Purposes.” The intention is to recognize the indispensable role of the private sector as the main engine for national growth and development and provide the most appropriate incentives to mobilize private resources for the purpose of financing the construction, operation and maintenance of infrastructure development projects normally financed and undertaken by the Government. Such incentive, aside from financial incentives as provided by law, shall include providing a climate of minimum government regulation and procedures and specific government undertaking in support of the private sector.



The expressway starts at the intersection with the Pan-Philippine Highway (also known as the Maharlika Highway) and the South Luzon Expressway in Sto. Tomas, Batangas and runs southbound, near diversion road, to Batangas City. It

passes through Malvar, Batangas, Tanauan City, Lipa City, Ibaan, Batangas and Batangas City.

Barangays traversed by the said highway at Tanauan section are Barangays Pantay Matanda, Pagaspas, Trapiche, Sala, Sambat, Natatas, Bagumbayan, Tinurik, Hidalgo and Banjo East. Five (5) flyovers cross the said highway, namely, Sala, Trapiche, Sambat, Bagumbayan, and the Banjo East Flyover.

The STAR toll way is a limited access highway law, thus there is only one toll gate allowed for every municipality. The reason is to maintain the full control of traffic flow and minimize traffic built – up so as not to affect travel time of its users. In the City of Tanauan, the toll gate is located in Sambat Flyover that connects to Tanauan-Talisay-Tagaytay Highway.

Concrete open ditches were constructed on both sides of the highway and there are two double barrel culvert constructed within Tanauan section located at Barangay Pagaspas that discharge the flood to San Juan River and at Barangay Hidalgo that drains the flood to Tinurik Creek and discharge to Taal Lake.

The private concessionaire collects toll fees to all users to fund the operation, maintenance of the highway and recover their investment with corresponding Internal Rate of Return (IRR) in financing the project. Their operation and charges of fees are being regulated by the Toll Regulatory Board.

The operation of the STAR Toll leads to the realization of urbanization and industrialization of the region including the City. Travel time from Tanauan Toll Plaza to Makati and Manila, the center of trade and commerce, takes only 45 minutes to one hour.

6.2.2 National Highway

There are two national roads that traverse the City. These are the Manila-Batangas Road also known as Pres. J.P. Laurel Highway that passes through Barangays Poblacions 1, 2, 3, 4, 5 and Darasa. Another is the Tanauan-Talisay-Tagaytay Road also known as A. Mabini Avenue that passes through Barangays Poblacion 4, 6, 7, Sambat, Talaga, Santor, Bañadero and Ambulong. The total road length of these national roads is 16,234 meters.

Both highways are formerly provincial roads but were converted into national highways under the administrative supervision and management of the Department of Public Works and Highway, Batangas 3rd District Engineering Office. Under this setting, the DPWH is in charge of planning, construction, improving and maintaining of the said highways.

The width of Pres. J.P. Laurel highway before it was converted into a national road was 15 meters wide. As reflected in tax map and titles of the adjoining property owners, a 2.5-meter strip on both side of the road was acquired by the national government. With 20 meters Road Right of Way (ROW), Manila – Batangas Road or the Pres. J.P. Laurel highway's classification was upgraded as a primary highway.

The highway has a four (4)-carriage lanes with a standard carriage width of 3.05 meters, asphalt overlay, sidewalks and drainage system, using reinforce concrete pipes on both sides. Pavement marking is always in place and concrete barriers are provided on the proper section of the highway

On the other hand, Tanauan-Talisay-Tagaytay road does not have a uniform width of Road Right of Way (RROW). From J.P. Laurel junction, up to A. Burgos Street where the Tanauan City public market is located, the width is 20 meters. From A. Burgos up to STAR Tollway flyover the RROW is 15 meters. These sections of the highway are the commercial, institutional and residential areas of the Poblacion, as such, traffic problem is being felt. From STAR Tollway fly over up to Talisay Boundary, the

RROW is irregular, there are sections where the width is 20 meters however there are sections with less than 10 meters RROW. Considering that the seat of the center of government will be transferred in Barangay Natatas, commercial and institutional establishments will follow on that area, thus, the said road is expected to become very busy in the near future. Under this situation, widening of the said national road is a must to address the projected traffic problem. Should this will not be possible, other solutions must be planned and provided, such as rerouting or opening of new roads that will connect to the Tanauan-Talisay –Tagaytay road.

The DPWH conducts Road Inventory and Road Condition Survey on a yearly basis. They assess the condition of roads which becomes the reference for project identification and funding for implementation. Though the national high way has improved, the road quality has not met the desired standard set forth by the department.

For minor repairs, the agency has the equipment needed, provides the materials and trained personnel that could do job by administration. This is very important because in case of emergency, the risk can be reduced when access road is in good condition. The District Engineering Office complies with the Department Administrative Order requiring them to maintain the roads with zero potholes and keeping the roads with no obstruction at all times.

Utility providers such as the electric power and water distributors, telecommunication and Cable Television providers use the sidewalks and shoulders of the highways. It is to be noted that most of the posts erected encroached with the carriage way and the widening of roads cannot be immediately utilized to the maximum purpose until Batangas II Electric Cooperative, Inc. (BATELEC II) transferred their post on the proper space allotted for them.

The DPWH's vision is that by 2030 the DPWH is an effective and efficient government agency improving the life of every Filipino through quality infrastructure. Its mission is to provide and manage quality infrastructure facilities and services

responsive to the needs of the Filipino people in the pursuit of the nation development objectives. In view of this, we can expect that in the years to come, there will be better quality of roads, constructed based on proper design, regularly maintained and monitored by trained personnel.

6.2.3 Local Roads (Provincial, City and Barangay Roads)

The locally-managed roads are the provincial, city/municipal roads and barangay roads. There is ambiguity in the determination of the road classification of locally-managed roads. Except for those declared provincial, city/municipal roads reflected on the cadastral map, there is question of clarity over the jurisdiction of different existing roads. Unlike the national roads, every section has kilometer post with common reference. Because of the regular inventory, every road section has corresponding data and information.

Funding for road construction and improvement came from different sources. The local government be it City or Barangays can request from national government budget allocation for that purpose and the implementation could be either by the DPWH or by the local government. Guidelines for the preparation of annual budget of the local government units required that 20% of its fund be allocated for development fund. Road construction and improvement always have a share out of this budget allocation. Barangay with less budget and Internal Revenue Allotment (IRA) share can request funding allocation from the City and Provincial government for road improvement.

Upon the enactment of the Local Government Code, different functions of the national government were devolved to local government units including the planning, construction, maintenance and management of local roads. Because of the limited resources and capacity of personnel, the LGUs prioritized the actual construction by concreting the road pavements. Preliminary studies were often neglected, such as route survey, to determine the Road Right of Way (RROW), determination of the

actual position of the road relative to the adjoining private property, and checking whether there is encroachment with the same.

Most of the roads on urban area were designed and constructed with curb and gutter and sidewalk where the drainage system is lay on both sides, while in rural areas the desired road design has not been completely implemented, only the pavement of carriage has been constructed, in effect the remaining parts of Road Right of Way function as shoulder of the road.

The quality of local roads should conform with the standard of the DPWH, including the road management and maintenance. In connection with this efficiency and skills of personnel involved in infrastructure should be enhanced.

The remaining declared provincial road after the turn-over is the section from Talaga up to Bañadero of the Tanauan- Talisay-Tagaytay Road measuring 668.67 meters in length and 10 meters in width. It was the only one left after all provincial roads in the area were converted into national road.

The city roads are roads that connect one barangay to another. There are 21 identified City Roads enumerated in Table 6.4. It has a total length of 108.7 kilometers, 103.18 Kilometer of which is concrete while the remaining 5.52 kilometers are unpaved. The Poblacion areas have road network with a total of 10.35 kilometers. Aside from this, there are residential subdivision developers that turn-over their roads and open spaces to the City Government. As per record, a total of 5.37 had been turned-over.

It is worthy to note that the length of the national road in the City of Tanauan is only 16.234 kilometers under the jurisdiction of the Batangas 3rd District Engineering Office of the DPWH, compared to the 124.42 kilometers City, Poblacion and turned-over roads that the City Government manage, maintain and construct.

On the other hand, due attention must be given by the City Government to cope with the proper management, maintenance and provision of quality roads responsive to the needs of the projected developments of the City.

Under the Provincial Physical Framework, Tanauan City is designated as industrial area and the city government is heading toward this direction. Private sectors and real estate developers understand the potential of the city and manifest interest to invest for industrial development. With this set up and projection, construction of more access roads is needed.

With sufficient financial resources from the national government, necessary equipment and trained personnel, it is expected that the DPWH, being the agency primary in-charge of road management and maintenance, the quality of the national highways can be properly upgraded at the prescribed time.

Table 6.3 Inventory of National Roads, 2014

Road	Length (m)	RRW	Classification	Condition
Manila-Batangas Road (J.P. Laurel Highway)	3,656	20 mtrs	National Secondary Road	Good
Tanauan-Talisay-Tagaytay Road (A. Mabini Highway)	12,578	15 mtrs Average	National Secondary Road	Good
TOTAL	16,234			

Source: DPWH 3rd DEO Batangas

Table 6.4 Inventory of City Roads, 2014

Name of Road/Street	Length (km)	Concrete (km)	Gravel/Earth (km)
Darasa-Banjo East-Banjo West-Bagbag Road	6.10	6.08	.02
Bagumbayan-Tinurik-Mabini-Bagbag Road	9.10	8.5	0.6
Bagumbayan-Hidalgo Road	1.50	1.50	
Natatas-Balele-Boot-Maria Paz Road	15.85	14	1.85
Balele-Wawa-Boot Road	2.10	2.10	
Santor-Janopo I Oriental-Janopol Occidental Road- Banadero/Gonzales	5.25	4.60	0.65

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Janopol Occidental-Gonzales Road	1.40	1.4	
Ambulong-Maugat-Bilog-Bilog Road	4.43	4.43	
Ambulong-San Jose-Luyos-Altura Bata Road	4.73	4.73	
Talaga-Bilog-Bilog-Luyos-Montaña Road	5.46	5.46	
Montaña-Sulpoc-Suplang Road	3.70	3.70	
Talaga-Sala-Pagaspas Road	6.00	6.0	
Santor-Trapiche Road	1.03	1.03	
Sambat-Trapiche-Pagaspas Road	1.09	1.09	
Trapiche-Sala-Cale-Altura South-MalakingPulo-Santol Road	9.68	9.68	
Altura South-Altura Bata-Altura Matanda-Malaking Pulo Road	3.75	3.75	
Cale-Bilog-Bilog-Dayapan Road	5.39	2.99	2.40
Trapiche-Sala-Pagaspas Road	3.80	3.80	
Barangay IV-Pagaspas-Sala-Talaga Road	9.25	9.25	
Pagaspas-Pantay Matanda-Pantay Bata-Ulango-Laurel Road	6.10	6.10	
Malaking Pulo-Malipa-Santol-Bunggo Road	2.99	2.99	
TOTAL	108.7	103.18	5.52

Source: CPDO

Table 6.5 Inventory of Poblacion Roads, 2014

Road Name	Length (km)	Condition
C. Garcia St.	0.25	Good
P. Dimayuga St.	0.30	Good
P. Gonzales St.	0.35	Good
E. Rivera St.	0.09	Good
Sixto Castillo St.	1.10	Good
Fulgencio Platon St.	0.70	Good
P. Carandang St.	0.96	Good
Guevarra St.	0.36	Good
Gregorio Collantes St.	0.72	Good
F. Laurena St.	0.62	Good
F. Oñate St.	0.90	Good
Jose M. Corona St.	0.20	Good
S. Avelino St.	0.38	Good
Nicanor Garcia St.	0.22	Good
J. Panganiban St.	0.13	Good

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V. Dimayuga St.	0.23	Good
J. Gonzales	0.62	Good
J.V. Pagaspas	0.75	Good
Rail Road Alley to Pagaspas St.	0.27	Good
'A. Burgos St.	0.27	Good
Kalaw St.	0.16	Good
Charing St.	0.18	Good
Nene St.	0.44	Good
Simo St.	0.15	Good
TOTAL	10.35	

Source: Office of the City Engineer

6.2.4 Turned-Over Roads

Road Name	Length (km)	Condition
Mount view Subdivision		
Lauan St.	0.4	Good
Bagtican St.	0.17	Good
Tanguele St.	0.16	Good
Apitong St.	0.2	Good
Acacia St.	0.16	Good
Akle St.	0.20	Good
Tindalo St.	0.90	Good
TOTAL	2.19	
Reaville Subdivision		
Reavillesubd. To J.P. Laurel Highway	0.39	Good
Reaville subdivision	0.73	Good
TOTAL	1.12	
Yatco Subdivision		
Yatco Village Roads	0.35	Good
Yatco Village to A. Burgos St	0.33	Good
TOTAL	0.68	
Other subdivisions		
Oltap Subdivisions Roads	0.92	Good
Bagumbayan Road to Maligaya Compound	0.35	Good
Gloria Compound Roads	1.1	Good
Teresa Compound Roads	0.94	Good
San Sebastian Village	1.46	Good
Kriscel Subdivision Roads	0.6	Good
TOTAL	5.37	

Source: Office of the City Engineer

6.2.5 Inventory of Ancillary Road Facilities

Ancillary road facilities such as traffic lights, waiting sheds, road markings, directional and warning signages, railings, islands, guard rails and other protective road structures are essential in road safety. Monitoring and maintaining those facilities should be the mandate of the Local Government Unit concern. However, up to this date, most LGU, including the City of Tanauan does not have the capacity to perform this mandate. This is mainly because of the limited budget allocation for that purpose and limited capacity of the human resource to perform the said function.

The base line for the effective improvement and maintenance of ancillary road facilities is an updated data bank with detailed description. This will be the reference and basis for a better prioritization of project to be implemented by the City Government.

Traffic light had been installed at the crossing of J. P. Laurel Highway and A. Mabini Avenue, the busiest intersection of the city. Directional and warning signs had been installed at the conspicuous places that guide motorists and travelers. Center islands on both sides are regularly maintained by the City General Services Office to retain their aesthetic value.

Table 6.6 Inventory of Pedestrian Service Facilities

Type of Service Facility	Location	No.
Waiting Sheds	J.P.L. Highway corner G. Garcia St. going to Manila and Batangas	2
	J.P.L Highway between Platon and Carandang St (going Batangas)	2
	J.P.L Highway between Platon and Carandangst (going Manila)	2
	J.P.L. Highway corner J. Gonzales St. (front of Tanauan North Central School)	1
	J.P.L. Highway near Darasa High School	1
Pedestrian Crossing	A. Mabini Avenue in front of TSM	1
	J.P. Laurel in front of Walter Mart	1

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	J.P. Laurel in front of DMMC Hospital	1
	A. Mabini Avenue in front of Pantoja	1
	J.P. Laurel along A. Mabini Avenue	5
	J.P. Laurel in front of South Central School	1
	A. Mabini Avenue in front of C.P.Reyes Hospital	2
	J.P. Laurel in front of First Asia Institute of Technology and Humaties (FAITH)	1
	A. Mabini near Traffic Management Office	1
Over Pass (Foot Bridge)	J.P. Laurel Hiway in front of Tanauan North Central School	1
	J.P. Laurel Hiway near Bernardo Lirio Memorial High School	1
Traffic Light	Crossing Tanauan	1
No U-Turn	A. Mabini Burgos St.	2
	A. Mabini Pagaspas St.	1
	J.P.L. – A. Mabini Ave.	1
	J.P.L. – Castillo St.	1
	J.P.L. – Mercado St.	1
No Left Turn	J.P.L. Highway – Castillo St.	1
Loading/Unloading Zone	J.P.L. – Dimayuga St. (For bus stop)	1
	Between J.P.L. Platon St. and Carandang St. (both sides)	1
No Parking	Crossing to STI	1
	Burgos to Kalaw	1
	J.P.L. Highway/A. Mabini Avenue	1
	STI to J.P.L. Highway	1
	J.P.L. Highway	1
Unloading Zone	Mabini Avenue	1
No Entry	Lawan Avenue	1
	Guevarra St.	1

6.3 Inventory of Bridges by Location, Type, Capacity and Condition

The central business district of Tanauan is located on the easternmost part of the city, and the Manila-Batangas national highway traversed also the eastern part of the city. The Southern Tagalog Arterial Road (STAR), a limited access highway was

constructed parallel to the national highway. Because of this, five (5) flyovers were constructed. There are thirteen (13) existing bridges in the city, with an approximate total length of 471.8 linear meters and an average width of 10 meters. Some of which are located at the city boundary with the neighboring town of Sto. Tomas built to cross the San Juan River.

Table 6.7 Inventory of Bridges, 2014

Location	Bridge Name	Classification	Length	Width	Type of Construction	General Condition
Pob.1 /San Roque	San Juan Bridge	Provincial	54 m	7.4 m	Concrete	Passable
Pob.1 /Sto. Tomas	San Juan Bridge	National	48 m	16 m	Concrete	Passable
Malaking Pulo	Malaking Pulo-Santol Bridge	Provincial	36.5 m	7.4 m	Concrete	Passable
Ulango/Laurel	Ulango-Laurel Bridge	Provincial	4 m	6 m	Concrete	Passable
Altura South/Malaking Pulo	Altura South/Malaking Pulo	Provincial	6.7 m	4.5 m	Concrete	Passable
Pagaspas	Pagaspas Bridge	Provincial	16.3 m	6.8 m	Concrete	Passable
Pagaspas/Sto. Tomas	Pagaspas/Sto. Tomas	Provincial	44 m	7.3 m	Concrete	Passable
Ambulong TSF	Ambulong Bridge 1	Provincial	20.3 m	6.7 m	Concrete	Passable
Ambulong near Lodlod	Ambulong Bridge 2	Provincial	16.7 m	6.8 m	Concrete	Passable
Ambulong Talisay Boundary	Ambulong Bridge 3	Provincial	16.2 m	7.1 m	Concrete	Passable
Sto. Tomas	Philtown Bridge	Inside Ecozone	46.7 m	17.6 m	Concrete	Passable
Sto. Tomas	F.P.I.P Bridge	Inside Ecozone	70.8 m	23.2 m	Concrete	Passable
Sto. Tomas	Star Tollway Bridge	National	91.6 m	24 m	Concrete	Passable
TOTAL			471.80			

Source: Office of the City Engineer

6.3.1 Land transportation Terminals, Public Parking and Pick-up Points

Terminals affect traffic flow and ease of circulation. Investors and consumers prepared a commercial area with sufficient and safe space where they can leave their vehicles. Terminals with limited capacity and improper design affect the condition of the traffic flows. Ideal terminals, under the present condition of the city and the projected development require separate public utility vehicle, private cars, and delivery vans.

There are nine (9) existing jeepney terminals in the city proper. The central terminal is located within the Philippine National Railways (PNR) property beside the Public Market. Jeepneys parking on the said terminal are plying the route of Tanauan to various locations such as Calamba, San Pablo, Sampaloc, Malaking Pulo, and Luyos. Another terminal is located in Barangay Sambat along STAR Tollway which caters the jeepneys plying route of Talisay and Laurel. Other terminal is located beside the public market and railroad alley.

The present condition of the terminal is not in harmony with the development plan of the commercial business district. There are no permanent lots and structures allotted for that purpose. The City government even uses the roads and property of the PNR. It is to be noted that all the terminals and parking area surround the public market, the present center of commercial activities of the city.

The Public Market Redevelopment project, under the Design Build-Transfer-Operate (DBTO) scheme compressing more than two (2) hectares of land, which will be implemented by 2016, the conceptual and detail design of which devoted the entire third floor of the building for parking space and terminal. When it becomes operational, traffic flow on the area will improve, thus, the commercial area will be more attractive and competitive.

The transfer of the new City Hall in Barangay Natatas, the incoming development plans like the Tanauan City Zentrum, and the expansion of residential, commercial, and industrial development in the area require a state-of-the-art terminal, should the plans become reality.

Table 6.8 Location and Destination of Jeepney Terminal

Destination	Location	Condition
Calamba/San Pablo/Sampaloc/Malaking Pulo/Luyos	Beside Public Market	Good
Lipa/Talida	S. Castillo St.	Good
Calamba/San Pablo/Balibago	Beside Greenwich	Good
San Pablo	S. Castillo St.	Good
San Pablo/Calamba	P. Dimayuga St.	Good
Bagbag	In front of Barangay Hall of Brgy. 7	Good
Gonzales	In front of JHW	Good
Montaña	Beside Tanauan Shoppers Mart	Good
Talisay/Laurel	Sambat	Good

Table 6.8 shows the number of authorized units passing through Tanauan City which are registered in the Land Transportation Franchising and Regulatory Board (LTFRB), Regulatory Office No. IV, it shows that the highest number of jeepneys that pass through Tanauan is the Calamba City to Lipa City via Tanauan City. It is almost 25% of the totality or 573 jeepneys.

6.3.2 Bus Terminal/Pick-up Point

There are two (2) bus stops located at President J.P. Laurel Highway in between Platon and Carandang Streets and between P. Dimayuga and C. Garcia Streets. Both going to Manila and Batangas. There are loading and unloading points along President Jose P. Laurel National Highway where the bus stops to pick up passengers to and from Manila or to Batangas City and Lemery.

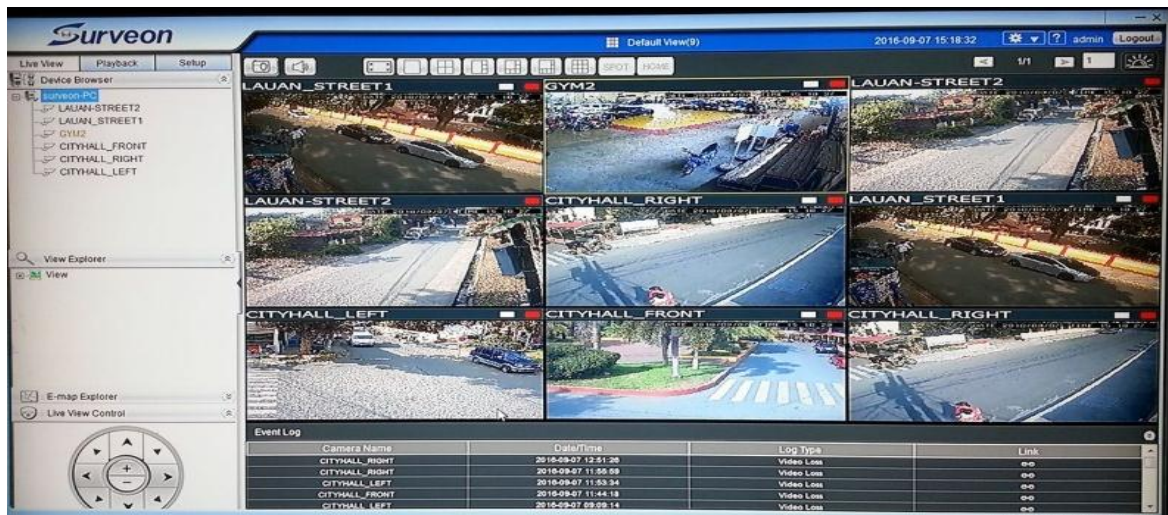
Bus companies which routes to and from Tanauan are as follows: Alps, De La Rosa Transit, RRCG, Batangas Star Express, JAC Liner, JAM Liner, KL CNG Transport Corp. (uses natural gas), First Charter, Ceres Transport Corp., and M. Transit. Also, there are private vans for hire that provide service to commuters at designated drop-off points.

The loading and unloading points should be upscale; it must be designed in such a way that buses will not cause traffic in loading and unloading commuters. The time elapse of waiting for buses should be regulated. Sufficient area for drop off should be provided in major roads in order that the carriage shall not be used as waiting area for buses and other public utility vehicles.

TRAFFIC

The city government closely monitors the traffic situations within the city proper especially during peak hours. In special cases like holidays, rerouting schemes are being done to address traffic congestions. Road rehabilitations are also being done to ease the traffic flow in and out of the city proper.

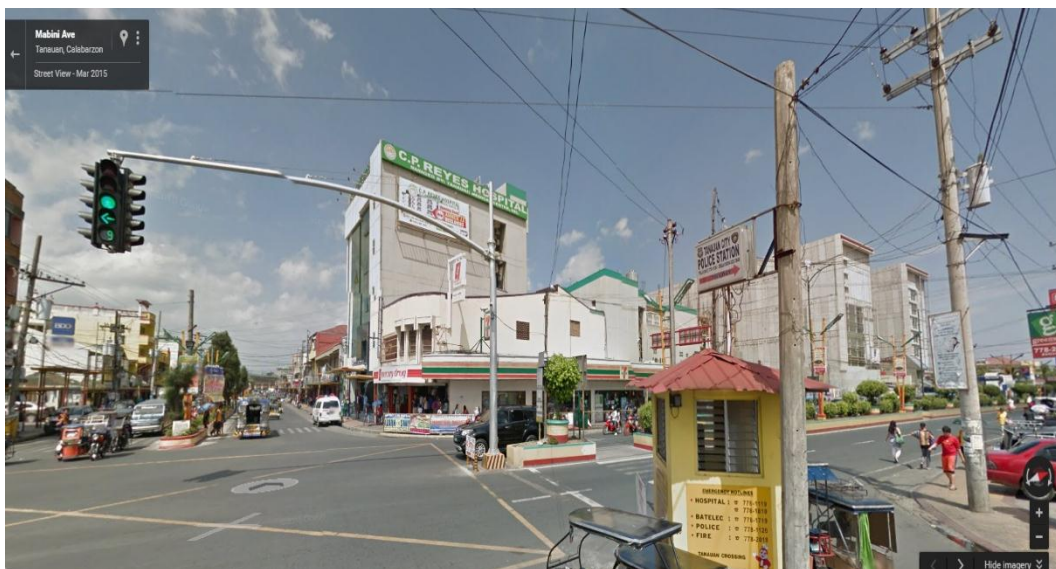
The streets around the city's public market is one of the perennial traffic problems in the area because of the vegetable dealers, and other delivery service vehicles that park along the streets. As part of the city's aim to decongest the traffic condition, one of the major infrastructure projects prioritized by the City Government is the redevelopment of the existing public market that will provide an additional parking facility. All other problems brought about by traffic congestion will also be solved.



With the opening of trade at the newly constructed “Bagsakan” in Brgy. Sambat and the on-going construction of the new City Hall Building at the Laurel Hill, traffic congestion is experienced along Tanauan-Talisay-Tagaytay Road from the site of the construction to the extent of Sambat Road going to and from Poblacion area. In

addition, there is an existing construction of tunnel under the Sambat Bridge, a project of the DPWH. This tunnel however, upon completion aims to decongest traffic in the area. Additional traffic scheme and Traffic scheme and need for additional infrastructures shall be specifically determined and determined when all the on-going infra structures in the site are completed.

In 2012, 375 vehicular accidents were recorded by the Tanauan City Police Station, 424 in 2013 and 463 in 2014. There is an increase in the number of accidents over the years due to an increase of individuals who come in and out of Tanauan.



PARKING ZONES

There are parking zones situated in privately-owned lands. One of the pay parking zones is located near the Tanauan Shopper's Mart and another near Public Market, but still these pay parking areas cannot accommodate the large number of vehicles in Tanauan City.

It is to be noted that locational clearance and building permit were issued in the past without considering parking requirement. Nowadays, in conformance with the provisions stipulated in the building code and zoning ordinance of the city, parking requirement is strictly imposed prior the issuance of locational clearance and building permit.

6.3.3 Problems and Issues in the Transport Sector

Assessing the quality and condition of roads, drainage system and other transportation facilities is important because such are very good indicators of the level of economic development.

The communities have identified in the public consultation a number of problems and issues related to the condition of the transportation facilities in Tanauan. One of these is the inadequacy of roads especially in the rural areas. Many of the roads that have been constructed were not able to meet the minimum 3.05-meter carriage width requirement, the standard width set by the Department of Public Works and Highways (DPWH). As of this writing, the Manila-Batangas Road is the only four (4) lane road with a 20 meters RROW traversing in the City which met the minimum standard. Tanauan-Talisay-Tagaytay Road has not been completed the road widening and there are still road sections with two (2) lane carriage way. The four – lane section is only from the intersection of J.P. Laurel Highway up to the New City Hall up to Barangay Talaga.

Provincial, City and Barangay Roads are two lanes. In Poblacion area where traffic is a perennial problem, some of the streets are designated as one-way traffic by virtue of the City's Omnibus Traffic Code.

This may be due to the high cost of private land acquisition, making road expansion projects difficult to pursue. Moreover, owners of these lands are hesitant to give, donate or even sell portions of these properties for this purpose. Another related issue is the lack of farm to market roads. This condition makes it a bit difficult and expensive to transport goods and provide services to the Poblacion areas and other neighboring towns. This impacts the city's economy because the agriculture sector provides the major livelihood for the population.

There are varied indicators for the conditions of the farm-to-market roads based on the actual assessed conditions. Based on the computation of the existing rural road-

arable land ratio, the roads in the rural areas are adequate with computed ratio of 1.71 km per 100 hectares. On the other hand, the assessment of the urban roads of the city shows that these are not adequate to meet the requirements of the City. The assessment shows that there is only 0.72 kilometer of road per 1000 population compared to the ideal 2.4 km of urban road per 1000 population.

The major reason for the inadequacy is that the transport infrastructures are unable to keep up with requirements of the rapid population growth because of uncontrolled immigration and the natural population increase. Poor planning of building construction aggravates this problem. As a consequence, the congestion of the roads has led to more road accidents especially during evening.

Adding to these problems is the inadequate drainage system. The roads are flooded during the rainy months due to the clogged drainage systems resulting further to the slowing down of traffic.

6.4 Power

Electric power supply in the City of Tanauan is generally being provided by Batangas II Electric Cooperative (BATELEC II) since 1980. They outsource their power supply from the National Grid Corporation of the Philippines (NGCP). The total number of households and commercial establishments being served by Batelec is 36,684 as of 2014 in the 48 barangays of Tanauan. It has four (4) substations located at Poblacion and Barangay Talaga in Tanauan City, one in Municipality of Malvar and another in Municipality of Laurel.

In the late 1970's only the Poblacion and nearby areas were served by electricity. Rural electrification was the clamor of rural folks during those times. To realize this, BATELEC II organized the Barangay Power Association or BAPA in remote Barangays. Common meter was installed in every transformer and devolved to the sets of officers the management of meter reading, billing and collection of power consumption of every member. They were also tasked to minimize electric foliage, which are common to rural areas, resulting to increase in losses and high cost of

electricity. As a matter of policy, and for effective collection of BAPA officers, disconnection of service wire from the mother meter were being imposed by BATELEC II when BAPA fails to settle their monthly bill on time. There are 72 Barangay Power Associations (BAPA) all over the city that had been organized as of 2015.

6.4.1 MERALCO

The industrial area of the City located in Barangay Pantay Bata, Pantay Matanda, Ulango and Laurel, managed and developed by First Philippine Industrial Park, where multinational companies are situated, are being served by MERALCO. The presence of dependable and sufficient electric power providers is a factor and influences the selection of industrial area, where big power supply requirements are needed. The efficiency of the operation of locators and industries are basically hampered by power shortage and interruption.

Those Industrial Barangays, aside from possessing favorable characteristic for industrial development, adjoins the Municipality of San Tomas and the City of Calamba, where the electric power provider is MERALCO. The proximity of that area makes it easier for MERALCO to provide and serve electricity to FPIP, and even to small portion of Barangay Laurel.

6.4.2 Batangas II Electric Cooperative(BATELEC)

The City of Tanauan is generally being supplied of electric power by the Batangas II Electric Cooperative, Inc. (BATELEC II). It is one of the two electric cooperatives that distribute electricity in the Province of Batangas with its head office located at Antipolo del Norte, Lipa City.

With an initial capital of Php 28M obtained as loan from the National Electrification Administration (NEA) with its purpose to provide electricity both in rural and urban areas, the cooperative started its operation in the year 1978, however Tanauan was covered only during the year 1980.

As of 2014, the total number of households and commercial establishments being served in the 48 barangays of Tanauan is 36, 684.

6.4.3 Household Served, Year 2014

Table 6.9 Household Served with Electricity, Year 2014

BARANGAY	POTENTIAL H.H. per DOE data	ACTUAL HH SERVED	PERCENTAGE of HOUSEHOLD SERVED as COMPARED TO DOE DATA
Altura Bata	280	218	81
Altura Matanda	125	196	162
Altura South	167	225	141
Ambulong	1,423	991	73
Bañadero	849	644	81
Bagbag	681	540	85
Bagumbayan	1,255	1,132	96
Balele	1,519	1,181	83
Banjo East	770	641	89
Banjo West	521	392	80
Bilog-Bilog	997	854	92
Boot	1,227	1,019	89
Cale	752	641	91
Darasa	3,772	4,446	126
Pagaspas	575	629	100
Gonzales	389	500	159
Hidalgo	205	190	99
Janopol Occidental	590	545	98
Janopol Oriental	685	656	102
Laurel	324	212	70
Luyos	316	324	110
Mabini	544	457	90
Malaking Pulo	788	516	70
Maria Paz	530	307	62
Maugat	366	303	89
Montaña	289	381	141
Natatas	1,104	885	86
Pantay Matanda	943	662	75
Pantay Bata	509	484	102
Poblacion I	409	1,289	337

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Poblacion II	248	1,289	334
Poblacion IV	961	1611	179
Poblacion V	1,017	1,423	150
Poblacion VI	256	861	280
Poblacion VII	744	1,430	205
Sala	799	1,367	183
Sambat	449	406	97
San Jose	787	921	125
Santol	232	795	367
Santor	101	112	119
Sulpoc	944	877	99
Suplang	460	399	93
Talaga	282	230	106
Tinurik	954	900	101
Trapiche	1,132	919	87
Ulango	1,488	1,097	79
Wawa	499	393	84
	304	319	110
TOTAL	34,561	36,884	129

Source: BATELEC II

The table above shows the actual number of households being served by BATELEC II as of 2014 compared to the number of potential households provided by the Department of Energy (DOE). Data above shows that households within Poblacion barangays which are located within the town proper are fully energized, considering that the actual connections in Poblacion 1 to 7 even exceeded the number of potential household connections. Electrification rate is also very high in Brgy. San Jose. Lowest rate of electrification is at Barangay. Maria Paz at only 62%. However, it is considered that Tanauan City is 100% energized in view of the availability of power facilities in every barangay.

6.4.4 Rate Elements

A. Rate Components

1. Generation Charge (Pass-Through) - this is for the cost of power generated and sold to BATELEC II by Power Suppliers- GMCP and Whole Sale Electricity Spot Market (WESM).
2. Transmission Charge (Pass-Through) - refers to the regulated cost or charges for the use of transmission system of National Grid Corporation of the Philippines (NGCP)
3. System Loss Charge (Pass-Through) - this represents recovery of the cost of power loss due to technical and non-technical losses.
4. Distribution Charge distribution system commercial / industrial
5. Metering Charge – is metering facilities is the regulated cost for operation and maintenance of the which brings power from high voltage transmission grids, to establishments and to residential end-users the cost of metering, its reading, operation and maintenance of power
6. Supply Charge - includes the cost of rendering service to customers, such as, billing, collection, customer assistance and related services.
7. Lifeline Discount Rate - refers to discount given to marginalized low-income captive market end-users who cannot afford to pay full cost. "Marginalized end users" refer to low income captive, household electricity consumers who cannot afford to pay at full cost and have levels of electricity consumption below threshold 1 level as determined by the Commission. In the case of BATELEC II, residential consumers with consumption below 45 kwh are the marginalized end-users.
8. Lifeline Subsidy Rate (Pass – Through) -refers to the rate charged to subsidizing end-users (non-lifeline consumers) to cover the lifeline discount provided to marginalized end-users.
Subsidizing end-users refer to consumers with consumption of 46 kwh above in the case of BATELEC II.
9. Universal Charge - refers to the charge imposed for the recovery of stranded debts, stranded contract costs of NPC, and other mandated purposes. It is a non-by passable charge which shall be passed on and collected from all end-users on

a monthly basis by the distribution utilities. At present, this consists of Missionary Electrification and Environmental Charges. Missionary Electrification Charge refers to the cost associated with the provision of basic electricity service in unviable areas with the ultimate aim of bringing the operations in these areas to viability levels.

10. Environmental Charge - is a charge to be used for the rehabilitation and management of watershed areas.
11. Reinvestment Fund for Sustainable Capital Expenditure Projects (RFSCP)- this is for debt service to finance CAPEX Projects subject to application and approval of Energy Regulatory Commission (ERC) prior to implementation.
12. Senior citizen Discount / Subsidy Rate - Granting of Senior's Citizen Discount / Subsidy Charge pursuant to ERC Resolution No. 23 Series of 20 10 and R.A. 9994
13. Feed-In-Tariff Allowance (FIT ALL) - this refers to the additional charge to consumers governed by ERC Resolution No. 10 Series of 2012 in compliance to Section 7 of Republic Act No. 9153 also known as Renewable Energy Act of 2008 (RE Law). This has the objective of building new energy infrastructures using natural resources such as wind, biomass, solar and water.

B. Rates computation of electric consumption

BATELEC II rates as reflected in power bill are unbundled with the aim of identifying and separating the individual cost for providing electric service to consumers. The services identified are the Generation, Transmission, Distribution and Supply. In simple terms, it is the itemization or breaking down of the specific components of electricity bill to make the pricing of electricity more transparent and understandable to electricity consumers. Electricity rates are computed based on Energy Regulatory Commission (ERC) Resolution No. 16 Series of. 2009 "A Resolution adopting the Rules governing the Automatic Cost Adjustment and True-Up Mechanisms and Corresponding Confirmation Process for Distribution Utilities", thus, BATELEC II as one (1) DU is hereby allowed to recover or refund the pass-through costs in an efficient manner. Likewise, this act was placed to show fair and transparency for the

confirmation of the automatic cost adjustment implemented and the true-up of other pass through charges as approved by ERC.

The rules are applied and governed by ERC to recover the following pass through costs:

- a.) Generation
- b.) Transmission
- c.) System Loss
- d.) Lifeline Subsidy
- e.) Local Franchise Tax and Business Taxes

On the other hand, distribution, metering and supply (DSM) rates are the ERC approved rates based on the operations and maintenance costs of the distribution utility. Application for DSM rate is being submitted to ERC for approval prior to its implementation.

C. Average Consumption per Customer Classification per Day in

Customer Classification	Total No. of Customers as of December 31, 2015	Total kWh Consumption for Year 2015	Average kWh Consumption/Customer Classification/Day
	A	B	C
			$C = (B / A / 365 \text{ days})$
Residential			
a. Communal	26,874	45,412,972	5
b. BAPA Mother Meter	90	4,770,224	145
SUB-TOTAL	26,964	50,183,196	5
Low Voltage			
a. Public Building	230	1,829,934	22
b. Streetlights	104	1,224,688	32
c. Commercial	1,175	12,578,317	29
d. Small Industrial	1	5,697	16
e. CWS - (Irrigation)	176	7,715,753	120
SUB-TOTAL	1,686	23,354,389	38
Higher Voltage			
a. Commercial	26	11,458,497	1,207
b. Small Industrial	1	823,210	2,255
c. Public Building	2	1,120,750	1,535
d. Large Industrial	3	8,271,996	7,554
SUB-TOTAL	32	21,674,453	1,856
GRAND TOTAL	28,682	95,212,038	9

D. Rehab Revamp Upgrading Projects for 2016 in Tanauan Area

No.	TAPPING POINT		Location	Kilometers of Line					
	From	To		DC	3-Ph	2-Ph	1-Ph	OS	UB
1	A. Mabini Ave.	Poblacion	Tanauan				0.160		0.160
2	From Bagumbayan	To Mabini	Tanauan		4.651				4.651
3	From Pagaspas	To Pantay Ulango	Tanauan		4.316				3.607
Total				0.000	8.967	0.000	0.160	0.000	8.418

Table 6.10 Number of Connections by Type of Users and Average Consumption (KWH/mo.)

TYPE OF CONNECTION	NUMBER OF CONNECTIONS	AVERAGE CONSUMPTION (KWH/mo.)
Residential		
Residential-Communal	25,568	3,295,348
Residential-BAPA	85	333,798
SUB-TOTAL	25,653	3,629,146
Low Voltage Type		
Public building	222	132,381
Streetlights	97	101,003
Commercial	1,168	989,097
Small Industrial	1	397
CWS – Irrigation	173	572,975
SUB-TOTAL	1,661	1,795,853
High Voltage Type		
Commercial	24	796,752
Small Industrial	1	67,081
Public Building	2	88,556
Industrial Large	3	745,665
SUB-TOTAL	30	1,698,054
GRAND TOTAL	27,344	7,123,053

Source: BATELEC I

6.4.5 Projected Power Requirements by Type of Connections (KwH)

The power requirement by connection type as projected by BATELEC II is shown at table 6.11. The rate of power requirement as projected by BATELEC II is on par with the projected requirement of the City as based on 2014 survey result with population growth rate at 2.7%. It is presumed that households will increase at the same rate, considering that the city will be the catch basin of the over spill of residential, commercial and industrial development from Metro Manila and other nearby cities.

In 2014, average hour per day of available electricity is 23.9415 hours in Tanauan City.

Table 6.11 Projected Requirements by Type of Connections (KWH)

TYPE OF CONNECTION	PROJECTED POWER REQUIREMENT				
	2015	2016	2017	2018	2019
Residential					
Residential-Communal	41,820,444	43,197,409	44,603,007	46,049,276	47,545,106
Residential-BAPA	4,236,148	4,375,626	4,518,004	4,664,502	4,816,020
SUB-TOTAL	46,056,592	47,573,035	49,121,011	50,713,778	52,361,126
Low Voltage Type					
Public building	1,680,009	1,735,325	1,791,790	1,849,890	1,909,980
Streetlights	1,281,808	1,324,013	1,367,095	1,411,423	1,457,271
Commercial	12,552,383	12,965,678	13,387,568	13,821,665	14,270,537
Small Industrial	5,040	5,206	5,376	5,550	5,730
CWS – Irrigation	7,271,485	7,510,903	7,755,300	8,006,769	8,266,855
SUB-TOTAL	22,790,725	23,541,125	24,307,129	25,095,297	25,910,373
High Voltage Type					
Commercial	10,111,385	10,444,308	10,784,155	11,133,836	11,495,499

Source: BATELEC II

6.4.6 Number of Connections by Types of Users and Average Consumption (kwH/Mo.)

There are 27,344 connections as to types of users. Residential connections total to 25,553, of which 25,568 are residential communal while 85 are residential-BAPA. Low Voltage type and these are public buildings, streetlights, commercial, small

industrial and CWS-Irrigation total to 1,661 connections. High Voltage type include large industrial users and total to 30 connections. Refer to Table 6.12

Table 6.12 Number of Connections by Type of Users and Average Consumption (KWH/mo.)

TYPE OF CONNECTION	NUMBER OF CONNECTIONS	AVERAGE CONSUMPTION (KWH/mo.)
Residential		
Residential-Communal	25,568	3,295,348
Residential-BAPA	85	333,798
SUB-TOTAL	25,653	3,629,146
Low Voltage Type		
Public building	222	132,381
Streetlights	97	101,003
Commercial	1,168	989,097
Small Industrial	1	397
CWS – Irrigation	173	572,975
SUB-TOTAL	1,661	1,795,853
High Voltage Type		
Commercial	24	796,752
Small Industrial	1	67,081
Public Building	2	88,556
Industrial Large	3	745,665
SUB-TOTAL	30	1,698,054
GRAND TOTAL	27,344	7,123,053

Source: BATELEC II

6.5 Water

The source of water supply of Tanauan City comes dominantly from underground water. Surface water such as rivers and falls has not been tapped as water supply source for distribution to the public. Storage of rain water that used to be the practice of rural folks when water distribution was not yet connected to the household lost its popularity and is now rarely seen in the rural areas.

Underground water requires less treatment processes, only chlorination is being conducted by the Water Utility Distributors before water is supplied to the public. Storage of rain water requires land and infrastructure facilities that suit its purpose. It also requires additional water treatment. However, over-drowning of underground

water possess danger to the environment. As of now, there is no study conducted to measure underground water, and rate of recharge relative to the present development and situation. Hence, water utility providers should plan alternative source of water, to compensate water shortage in the near future.

The water supply for domestic, commercial and small industries within the jurisdiction of Tanauan City are provided by different water service providers, the biggest of which is the Tanauan Water District (TWD) that serves Poblacion 1-7 area and different rural barangays of the city. There are 21 Waterworks as provided in table below which operates and supply potable water to the household in different barangays.

6.5.1 Tanauan Water District

Tanauan Water District (TWD) is the major organized water utility company in the city of Tanauan, Batangas. TWD was created by virtue of Sangguniang Bayan Resolution No.52 of Tanauan in 1987 and in accordance with the provisions of Presidential Decree(PD) 198 or “The Provincial Water Utilities Act of 1973”. Upon obtaining the Conditional Certificate of Conformance (CCC) No.333 from the Local Water Utilities Administration (LWUA) on March 8,1988, TWD was established and started operations on May 1,1988.

Starting in 1991, by virtue of a Supreme Court Decision, all water district, including TWD, were recognized as government-owned and –controlled corporations or GOCCs. TWD is a self-sustaining and service-oriented entity which provides treated water in compliance with Philippine National Standards for Drinking Water of the Department of Health to 41 out of 48 barangays in Tanauan City as well as parts of Barangay San Roque of the adjacent town of Sto.Tomas. It is subject to regulation by LWUA.

As of December 31,2015, TWD has 15,650 active service connections, 79 motorized pumping stations and employs 78 regular and casual employees. Its management team, all of whom are career service professionals, is composed of the General

Manager and four (4) managers handling the Commercial, Engineering, Administrative and Finance divisions. TWD`s policy-making body, its Board of Directors (BOD), is composed of five (5) members, each of whom represents the Business, Civic, Professional, Education and Women`s sectors, and meets at least twice a month.

Tanauan Water District is the sole provider of sustainable potable water and waste water treatment services in the City of Tanauan.

Tanauan Water District remains an active partner with the City of Tanauan in driving inclusive growth by realizing its vision through its dedicated board of directors, competent management team, and motivated and skilled workforce which adopts continuous improvement in sustaining operation that enjoins stakeholders.

Service Profile

The table below shows the number of pumping stations and total production supplied by these wells, as well as the service connections billed with the corresponding water usage for the year 2015.

Table 6.13 Number of Pumping Stations and Total Production Supplied by Wells

No.	Barangay Served	No. of Pumping Stations	Service Connections Billed	Total Water Production (in cu.m.)	Actual Water Usage (in cu.m.)
1-9	Poblacions 1 to 7, Sambat and Darasa	11	5,112	1,850,776	1,486,348
10	Altura Bata	2	238	59,909	50,891
11	Altura Matanda	1	117	28,574	25,204
12	Altura South	2	146	34,888	30,435
13	Ambulong	2	334	91,253	67,484
14	Bagbag	3	390	101,854	81,088
15	Bagumbayan	3	371	84,152	73,817
16	Balele	4	378	106,849	84,775
17	Bañadero	2	341	85,185	71,726
18	Bilog-Bilog	3	863	200,808	182,366
19	Boot	6	951	254,175	195,652
20	Cale	2	601	128,953	112,765
21	Gonzales	3	191	43,261	35,899

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22	Hidalgo	1	71	5,811	4,810
23	Janopol West	1	306	72,294	60,306
24	Laurel	2	282	65,954	52,458
25	Malaking Pulo	2	55	11,372	9,731
26	Maria Paz	2	269	58,876	51,770
27	Maugat	2	310	75,671	64,155
28	Montaña	2	221	45,648	39,106
29	Natatas	2	373	105,926	96,482
30	Pagaspas	1	109	9,382	8,114
31	Pantay Bata	2	462	101,402	89,622
32	Pantay Matanda	2	750	186,986	150,232
33	Sala	2	383	90,355	79,758
34	San Jose	1	198	43,009	37,235
35	Santol	1	96	25,692	18,931
36	Santor	1	279	81,087	71,542
37	Sulpoc	5	394	98,087	81,150
38	Suplang	2	245	69,070	54,815
39	Tinurik	1	166	36,405	33,822
40	Ulango	1	431	116,188	92,120
41	Wawa	2	217	54,884	44,739
	TOTALS	79	15,650	4,424,736	3,639,348

6.5.2 Population and Demand Projections

It is estimated that as of December 31,2015, a total of 78,250 of the population of Tanauan City had been served by TWD. In order to ensure adequacy of water supply, population and demand projections are done annually using TWD`s historical data as well as information from the Philippine Statistics Authority(PSA), formerly the National Statistics Office(NSO), and the Office of the City Planning and Development of Tanauan City.

6.5.3 Water Supply and Treatment Facilities

Tanauan Water District (TWD) is operating seventy-nine (79) deep wells and producing an average of 450,000 cubic meters a month to supply its customers in the 41 barangays of Tanauan City.

Currently, there are ten (10) elevated steel serviceable water tanks with the following capacities and locations:

1. TWD Compound, Barangay Poblacion 1 (400 cu.m.)
2. Barangay Maugat (38 cu.m.)
3. Kaisahan Village- Phase 1, Barangay Bagumbayan (38 cu.m.)
4. Kaisahan Village- Phase 2, Barangay Bagumbayan (38 cu.m.)
5. Barangay Pantay Bata (30 cu.m.)
6. Barangay Montaña (5 cu.m.)
7. Barangay Ambulong (5 cu.m.)
8. Sitio Malipa, Barangay MalakingPulo (5 cu.m.)
9. Plantacion del Sol, Barangay Pagaspas (113 cu.m.)
10. Purok 7, Barangay Tinurik (3 cu.m.)

TWD is currently maintaining 79 dosing pumps (chlorinator machines) for water disinfection to ensure water potability with a minimum chlorine residual of 0.3 parts per million (ppm) to a maximum of 1.5ppm pursuant to the Department of Health`s (DOH) Administrative Order no. 2007-0012, also known as the Philippine National Standards for Drinking Water (PNSDW) of 2007.

Key Performance Indicators

The following are TWD`s Major Final Outputs and Performance Indicators (PI`s), as mandated by LWUA.

A. Water Facilities Service Management	
PI 1 (Quantity): Access to Potable Water	Percentage of Barangay with access to potable water against the total number of barangays within the coverage of TWD
PI 2 (Quality): Reliability of Service	Percentage of household connections receiving 24/7 supply of water
PI 3 (Timeliness): Adequacy	Source Capacity of LWD to meet demands for 24/7 Supply of water
B. Water Distribution Service Management	
PI 1 (Quantity): Non-Revenue Water	Percentage of unbilled water to water production

PI 2 (Quality): Potability	Average deviation from PNSDW (Chlorine residual requirements) from January 1 to December 31
PI 3 (Timeless) Adequacy /Reliability of Service	Average response time to restore service when there are interruptions based on the Citizen's Charter of TWD approved by the Civil Service Commission (CSC)
C. Support to Operation (STO)	
PI 1: Staff Productivity Index	The Staff Productivity Index of one (1) position for every one hundred twenty (120) service connections for category B
PI 2: Affordability of Water Rates	Water rate for the 1 st 10 cu.m. must not exceed 5% of the average income of the lower income group (LIG)
PI 3: Customer Satisfaction	Percentage of Customer Complaints acted upon against received complaints
D. General Administration and Support Services (GASS)	
PI 1: Financial Viability and Sustainability of TWD Operations	A. Collection Ratio B. Operating Ratio C. Current Ratio
PI 2: Compliance with COA and LWUA reporting requirements	A. Compliance with COA reporting requirements in accordance with content and period of submission (Balance Sheet, Income Statement, Cash Flow Statement, Statement of Government Equity, Notes to Financial Statements and Report of Ageing of Cash Advances) B. Compliance with LWUA reporting requirements in accordance to content and period of submission (Monthly Data Sheet, Balance Sheet, Income Statement, Cash Flow Statement, Microbiological/ Physical/ Chemical/ Chlorine Residual Reports, Approved Budget, Annual Report)

Objectives and Strategies

Maintain favorable financial performance in terms of cash flow, collection efficiency and net income through close monitoring of budgets and targets. For the medium term (2016 to 2021), TWD has established the following objectives and formulated corresponding strategies:

A. Increase revenues by

1. Increasing the number of service connections through

- a. market penetration and
 - b. Improved marketing programs
 2. Expanding service area/ coverage through market development
 3. Closer monitoring of water meters through inspection and ageing
- B. Achieve operational efficiency by
1. Decreasing non-revenue water through
 - a. rehabilitation of pipelines and
 - b. repair of leaks
 2. Improving water source on low pressure areas by
 - a. tapping additional sources,
 - b. construction of steel bolted tank
- C. Attain efficiency in office administration by
1. Ensuring proper manpower requirement
 2. Continuing personnel development
 3. Proper maintenance of facilities and vehicles
 4. Improving procurement process of supplies and equipment
- E. Other Plans and Strategic Activities
1. Construction of new office building and warehouse
 2. Improve community relations
 3. Continue Gender and Development (GAD) Enhancement activities
 4. Uplift the morale of employees
 5. Create employee awareness on calamities
 6. Participate in environmental activities such as World Water Day and Earth Day
 7. Provide community service as part of our Corporate Social Responsibility

Long-Term Plans

In the long-term, TWD plans to establish its own septage collection system and to construct a septage treatment plant, in line with its mandate as outlined in PD 198.

Darasa Waterworks and Sanitation Association (DRWSA)

Barangay Darasa is located at the southeast portion of Tanauan City and bordering the Town of Malvar, an industrial town. It is classified as an urban Barangay.

Service Area

Darasa Waterworks and Sanitation Association (DRWSA) presently provides water to more than 2,829 connections over an area of about 5 sq. km. in Barangay Darasa. The area is divided into the following zones:

Zone	No. of Connection	Population
East Side (Ilaya)	460	2,300
East Side (going to Tanauan)	298	1,490
West Side	625	3,125
Pamayanan	124	620
Railroad Alley(ilaya)	99	495
Railroad Alley (Pag-Asa North)	116	580
Bukluran	288	1,440
Hi-Way East Side	819	4,095
Total	2,829	14,145

Beneficiaries

The proposed project will benefit zones that are currently experiencing low water pressure- these are in Bukluran and Railroad Alley. DRWSA have already assumed the operations of Ramonita Subdivision. They took over the operations and

management of the water supply systems within Cambridge Place Subdivisions currently operated by the real estate developers or home owners` association. Expecting to improve water service to current customers and provide water to an additional 1,350 connections, the total beneficiaries will be up to 3,952 connections or more than 19,700 persons. This will raise service coverage to 85% by 2014.

Darasa Waterworks and Sanitation Association (DRWSA) continues to make arrangements for the turn-over of water systems operated by the developers and homeowners` associations, including the on-going development of San Bernardo and Colbella Homes Subdivision, a residential subdivision with 800 lots, and the commercial establishment Walter Mart.

Water Utility Structure

Legal Status and Franchise

DRWSA is rural water and sanitation association created in 1982 and registered with the Rural Waterworks Development Corporation (whose functions have now been assumed by the Local Water Utilities Administration). DRWSA holds a CPC from the National Water Resources Board which allows it to operate within its service area of Barangay Darasa. It is a non-stock, non-profit organization. Any income earned is retained and reinvested in the association. As a RWSA, DRWSA can secure financing either through loans and grants, and is encouraged to provide and operate viable water supply services.

The Tanauan City Water District provides water for the rest of the city. DRWSA has entered into a Memorandum of Agreement (MOA) with the water district wherein Darasa RWSA is allowed to serve customers within Barangay Darasa only. And should there be customers along their boundary that would want to connect to the other utility; a waiver will be obtained from the utility where the customer`s agreed service area falls. The MOA is silent about the duration of this agreement.

The Present System and Facilities

DRWSA`s existing water system and facilities include 6 deep wells, 4 elevated water tanks, and 75-150mm dia pipelines with an estimated total length of 7,500 m. The

wells are equipped with submersible pumps with power ratings of 10-25 Hp. The deep wells have an estimated total capacity of 52 lps and are provided with production flow meters.

With increased consumers in the service area, low to zero water pressures are common at the far ends of the distribution mains, particularly during the early morning peak hours. Replacement of these mains with larger pipes and looping the network needs to be done.

With the aging of the pipelines, frequent leaks and pipe bursts are occurring. Tools and equipment such as a concrete cutter for the Utility’s repair crew are needed.

Motor drives of the deep good pumps are old and in need of replacements. In one well, sand pumping occasionally occurs, which indicates some problems on the gravel pack or shroud.

Chlorinators are provided at the discharge side of the deep good pumps. Gates valves are installed at main pipelines and interconnections to enable appropriate flow stoppage during pipeline repair and replacement or installation of service connections.

Customer Satisfaction Relations

DRWSA current and potential customers have little variability in the number of water resources used by households for drinking, cooking, washing and cleaning. At most, households get water from two water sources at any one time (bottled water and piped water). Expansion customer`s access piped water through a shared connection. Darasa Customers also spend the highest compared to the other SWIF utilities on water supply, almost 5% of their monthly household income

Table 6.14 Level 3 -Barangays with Waterworks System, 2014

Name of Service Provider	Management Type	Level of Service	HH Served
1. Kabuhayan Kaagapay sa Kaunlaran	Cooperative	Level 3	289
2. Zone 3 Waterworks Assoc., Balete	RWSA	Level 3	158

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3. Banjo East Waterworks System (P4)	RWSA	Level 3	181
4. Banjo East Waterworks System (P2)	BWSA	Level 3	186
5. Banjo West Waterworks and Sanitation Association	RWSA	Level 3	490
6. Darasa Rural Waterworks & Sanitation Association	LWUA	Level 3	3,804
7. Janopol Oriental Waterworks Association	BWSA	Level 3	515
8. Luyos BWP Rural Waterworks and Sanitation	RWSA	Level 3	296
9. Mabini-Tanauan Rural Waterworks Assoc., Inc.	RWSA	Level 3	377
10. Malaking Pulo Multi-Purpose Cooperative	Cooperative	Level 3	539
11. Brgy. Natatas Zone II-III Water Assoc., Inc.	BWSA	Level 3	200
12. Pagaspas Waterworks II	RWSA	Mix of Level 2 and 3	250
13. Pagaspas Rural Waterworks and Sanitation Assoc., Inc.	RWSA	Level 3	172
14. Talaga Barangay Waterworks Service Cooperative	Cooperative	Level 3	1,055
15. Samahan ng Patubig Purok 1, 2, 3	Unnamed WSP	Level 3	410
16. Patubigsa Gitnang Tinurik	Unnamed WSP	Level 3	294
17. Tinurik 3, Water Service	Unnamed WSP	Level 3	117
18. Trapiche 3, Waterworks	Unnamed WSP	Level 3	261
19. Trapiche 4, Waterworks	Unnamed WSP	Level 3	350
20. Trapiche 4, Silangan Waterworks	Cooperative	Level 3	96
21. Barangay Hidalgo Waterworks Assoc.	BWSA	Level 3	110

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Source: CPDO

Table 6.14 shows that in 2014, 58.39% or 17,449 of households are served by Tanauan Water District within the city proper and other nearby barangays.

Table 6.15 Percentage of Households with Water Service

YEAR	No. of Service Connection	Percentage
2011	15,449	47.28%
2012	13,835	50.79%
2013	14,264	50.65%
2014	17,449	53.89%

Source: Tanauan Water District

Table 6.16 Households Served by Tanauan Water District (TWD), 2012 and 2013

LGU (Serviced Area)	WATER SOURCE (Pumping Station)	TOTAL NO. OF HH	TOTAL NO. OF URBAN HH	TOTAL NO. OF HH SERVED 2012 (No. of Service Connection)	TOTAL NO. OF HH SERVED 2013 (No. of Service Connection)
Poblacion which includes Barangays 1 to 7 (Tanauan City Proper) and partial at Barangay San Roque, Sto. Tomas Batangas	Well #3	4315	4315	4325	4370
	Well #2				
	Gloria Compd.				
	Tapia Subd.				
	TPM				
	Celeste Village				
Darasa (St. Joseph Subdivision)	St. Joseph #2	3272	3272	88	91
	St. Joseph #1				
Sambat	Sambat	729		502	513
Santor					278
Bagumbayan (Kaisahan Village)	Kaisahan #1	1022		293	302
	Kaisahan #3				
Tinurik (Purok &7)	Tinurik	1075		154	155
Bagbag	Bagbag #1	663		359	371
	Bagbag #3				
	Bagbag #2				
Natatas -	Natatas #1	1014			363

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Zone 1				333	
Zone 5	Natatas #2				
Balele	Balele #3	1556		352	368
	Balele #2				
	Sitio Gaong				
	Sitio Tibanglan				
Wawa	Wawa #1	312		208	208
	Wawa #2				
Boot	Boot #1	1046		913	906
	Boot #2				
	Boot #6				
	Boot #7				
	Boot #8				
	Boot #9				
Maria Paz	Ma. Paz #1	520		244	254
	Ma. Paz #2				
Cale	Cale #4	731		575	587
	Cale #5				
Sala	Sala	416		362	375
Bilog-Bilog	Bilog-bilog #1	931		808	832
	Bilog-bilog #4				
	Dayapan				
San Jose	San Jose	236		185	193
Altura South	Altura South	160		145	149
Altura Bata	Altura Bata #1	262		233	235
	Altura Bata #2				
Altura Matanda	Altura Matanda	118		116	117
Santol	Santol	100		96	97
Sulpoc	Sulpoc Nayon #5	414		371	385
	Sulpoc Nayon #3				
	Sulpoc Nayon #2				
	Sulpoc Sulok				

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	Sulpoc Timbain				
Suplang	Suplang Mistica	249		218	227
	Suplang Nayon #2				
Pantay Matanda	Pantay Matanda #1	870		701	720
	Pantay Matanda #3				
Pantay Bata	Pantay Bata #5	601		427	443
	Pantay Bata #4				
Ulango	Ulango #3	614		389	398
	Ulango #4				
Laurel	Laurel #2	288		276	280
	Laurel #4				
Janopol Occidental	Janopol West #2	452		255	269
Gonzales	Gonzales #1	380		156	179
	Gonzales #2				
Bañadero	Bañadero #1	676		324	341
	Bañadero #2				
Maugat	Maugat #3	368		296	305
Ambulong	Ambulong Mistica	1323		296	322
Malaking Pulo (Sitio Malipa)	Malipa #1	824		59	57
	Malipa #2				
Montaña	Montaña #1	364		205	213
	Montaña #2				
TOTAL		25,901	7,587	14,264	14,903

Source: Tanauan Water District

Unique ID for the barangay	Name of the barangay	Current barangay population (replace 00 with current year, two digits)	Current domestic water need of the barangay (cubic meter/day)	Current domestic water supply of the barangay (cubic meter/day)	Current deficit (-) or surplus (+) today (cubic meter/day)	Deficit (-) or surplus (+) 10 years from now (cubic meter/day)
Well #3	Poblacion	20,284.00	3,976	5,071	1,094	963
Well #2						
Gloria Compound						
Tapia Subd						
TPM						
Celeste Village						
Sambat						
Reaville Subd #1						
St. Joseph #1						
St. Joseph #2						
Kaisahan #1						
Kaisahan #3	Purok 7, Brgy. Tinurik	4,934.00	86	90	4	1
Tinurik	Brgy. Bagbag	2,843.00	207	251	44	37
Bagbag #1						
Bagbag #2						
Bagbag #3	Zone 1, Brgy. Natatas	4,258.00	191	243	52	45
Natatas Zone 1	Zone 5, Brgy. Natatas						54	62	8	6
Natatas Zone 5	Brgy. Balele		175	221	46	40
Balele #3						
Balele #2	Sitio Gaong, Brgy. Balele	7,185.00	26	28	2	1
Sitio Gaong	Sitio Tibanglan, Brgy. Balele						20	23	3	3
Sitio Tibanglan	Brgy. Wawa	1,435.00	122	162	39	35
Wawa #1						
Wawa #2	Brgy. Boot	4,968.00	552	646	94	76
Boot #1						
Boot #2						
Boot #6						
Boot #7						
Boot #8						
Boot #9	Brgy. Maria Paz	2,415.00	125	138	13	9
Ma. Paz #1						
Ma. Paz #2	Brgy. Cale	3,386.00	309	406	97	87
Cale #4						

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Cale #5						
Sala	Bgy. Sala	1,828.00	190	235	45	39
Bilog-Bilog #1	Brgy. Bilog-Bilog	4,247.00	428	472	44	30
Bilog-Bilog #4						
Dayapan	Sitio Dayapan, Brgy. Bilog-Bilog		80	96	16	14
San Jose	Brgy. San Jose	1,055.00	85	110	25	22
Altura South	Brgy. Altura South	729.00	79	95	16	14
Altura Bata #1	Brgy. Altura Bata	1,298.00	131	188	57	53
Altura Bata #2						
Altura Matanda	Brgy. Altura Matanda	526.00	62	145	83	81
Santol	Brgy. Santol	457.00	49	88	39	37
Sulpoc Nayon #5	Brgy. Sulpoc		144	244	100	95
Sulpoc Nayon #3						
Sulpoc Nayon #2						
SulpocSulok	Sitio Sulok, Brgy. Sulpoc		40	42	2	1
Sulpoc Timbain	Sitio Timbain, Brgy. Sulpoc	1,850.00	41	51	10	9
Suplang Mistica	Sitio Mistica, Brgy. Suplang		46	64	18	17
Suplang Nayon #2	Brgy. Suplang	1,216.00	117	191	74	70
Pantay Matanda #1	Brgy. PantayMatanda	4,151.00	436	553	117	103
Pantay Matanda #3						
Pantay Bata #5	Brgy. Pantay Bata	2,460.00	233	296	63	55
Pantay Bata #4						
Ulango #3	Brgy. Ulango	2,215.00	221	322	102	95
Ulango #4						
Laurel #2	Brgy. Laurel	1,332.00	152	264	112	107
Laurel #4						

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Janopol West #2	Brgy. Janopol Occidental	2,155.00	163	184	21	16
Gonzales #1	Brgy. Gonzales	1,701.00	73	83	10	7
Gonzales #2						
Bañadero #1	Brgy. Bañadero	3,023.00	196	237	41	35
Bañadero #3						
Maugat #3	Brgy. Maugat	1,863.00	160	217	57	52
Ambulong Mistica	Sitio Mistica, Brgy. Ambulong	5,984.00	149	227	78	73
Malipa #1	Sitio Malipa, Brgy. MalakingPulo	3,561.00	33	37	4	3
Malipa #2						
Montaña #1	Brgy. Montaña	1,661.00	106	142	36	33
Montaña #2						

Table 6.17 Water Rates

Classification	Minimum		Commodity Charge			
	Size	Charge	11-20	21-30	31-40	Over 40
Residential	½"	239.80	25.85	28.90	33.50	40.30
	¾"	383.68	25.85	28.90	33.50	40.30
	1"	767.36	25.85	28.90	33.50	40.30
Commercial A	½"	479.60	51.70	57.80	67.00	80.60
	¾"	767.36	51.70	57.80	67.00	80.60
	1"	1,534.72	51.70	57.80	67.00	80.60
Commercial B	½"	359.70	38.75	43.35	50.25	60.45
	¾"	575.52	38.75	43.35	50.25	60.45
	1"	1,151.04	38.75	43.35	50.25	60.45

Source: Tanauan Water District

Level 1 Water Supply System by Type and Number of Population Served, Year 2014

6.5.4 Water Demand and Projected Water Requirement

6.6 Information and Communication Technology (ICT)

6.6.1 Postal Service: Postal Service Personnel and Equipment

Philippine Postal Corporation serves as the main letter carrier of the city which is located at the second floor of the Commercial Building of Tanauan Public Market.

Aside from postal services, Tanauan City has several courier service stations which include RCPI, JRS Express Padala, LBC Express Inc, Western Union, Universal Storefront Services Corp, Rodex Courier, Mail and More Business Services, Cebuana Lhuillier and M Lhuillier. Majority of them also offer money transfer services.

6.6.2 Telecommunication: Inventory of Communication Tower (Cell site)

With the increasing number of cellular phones in the city as well as in the whole country, Tanauan City has become a hub for the installation of cell site towers which are enumerated in Table 6.18.

In case of landline communication services, PLDT and Globe are the only existing facilities which offer the service. PLDT maintains only one account for Sto. Tomas, Malvar and Tanauan having 5,512 of working lines, 80% of this belongs to Tanauan subscribers. PLDT serves 21 out of 48 barangays in Tanauan City

Table 6.18 Inventory of Communication Tower (Cell Site)

Company	Location
Phil. Tel.Corp	Mt. View Subd. Poblacion, Barangay 3
Extelcom	Mt. View Subd. Poblacion, Barangay 3
PLDT	S. Castillo St. Poblacion 5
Pilipino Telephone Corp. (Piltel)	Tinurik
Incofom Communication Network Corp.	PantayMatanda
Globe Telecom Phil. Inc. (cellsite tower)	Hidalgo
Globe Telecom Phil. Inc. (cellsite tower)	Talaga
Globe Telecom Phil. Inc. (cellsite tower)	Pagaspas
Globe Telecom Phil. Inc. (cellsite tower)	Bañadero
Globe Telecom Phil. Inc. (cellsite tower)	Balele
Globe Telecom Phil. Inc. (cellsite tower)	DMMC Bldg. JPL Hi-way Poblacion 3
Globe Telecom Phil. Inc. (cellsitetower) (2)	Maria Paz
Globe Telecom Phil. Inc. (cellsite tower)	Natatas
Globe Telecom Phil. Inc. (cellsite tower)	JPL Hi-way
Globe Telecom Phil. Inc. (cellsite tower)	Janopol Oriental
Smart Communication Inc. (cellsitetower) (2)	Bilogbilog
Smart Communication Inc. (cellsite tower)	Sambat
Smart Communication Inc. (cellsite tower)	Balele
Smart Communication Inc. (cellsitetower) (2)	Darasa
Smart Communication Inc. (cellsite tower)	Tinurik
Smart Communication Inc. (cellsite tower)	Banjo West
Smart Communication Inc. (cellsite tower)	Bañadero
Smart Communication Inc. (cellsite tower)	Trapiche
Smart Communication Inc. (cellsite tower)	Narra St. Mt.ViewSubd. Poblacion 3

Digitel Telecom Phil. Inc (cellsite tower)	Poblacion 5
Digitel Telecom Phil. Inc (cellsite tower)	Ambulong
Digitel Telecom Phil. Inc (cellsite tower)	Balele
Digitel Telecom Phil. Inc (cellsite tower)	Bilogbilog
Digitel Telecom Phil. Inc (cellsite tower)	Santor
Digitel Telecom Phil. Inc (cellsite tower)	Tinurik
Digitel Telecom Phil. Inc (cellsite tower)	Darasa
Digitel Telecom Phil. Inc (cellsite tower) (2)	Banjo West
Digitel Telecom Phil. Inc (cellsite tower) (2)	PantayMatanda
Digitel Telecom Phil. Inc (cellsite tower)	Montaña
Digitel Telecom Phil. Inc (cellsite tower)	MalakingPulo
Digitel Telecom Phil. Inc (cellsite tower)	Natatas
INNOVE Communication Inc. (telecom cabinet)	Ambulong
INNOVE Communication Inc. (telecom cabinet)	Bilogbilog
INNOVE Communication Inc. (telecom cabinet)	Banjo West
INNOVE Communication Inc. (telecom cabinet)	Tinurik

Source: CPDO

Telegraphic transfer is also available at Tanauan City as one of its communication facilities. The DOTC-TELOF is a government owned facility that offers services such as delivery of telegrams, local and international telegraphic transfer (money transfer) and social telegram. Its office is located at the 2nd floor of the Public Market Commercial Building.

Table 6.19 Cable TV Service Provider, 2014

NAME OF COMPANY	OFFICE ADDRESS
Sky Cable	Celeste Subd., Brgy. 3, Tanauan City, Batangas
Easy Cable	Celeste Subd., Brgy. 3, Tanauan City, Batangas
Signal Digital TV Cable	Ground Flr. Commercial Building, Tanauan City Public Market

Source: CPDO

With the passing of City Ordinance no. 2013-13, otherwise known as “An Ordinance Regulating the Installation and Maintenance of Distribution Lines of Various Utilities in the City of Tanauan, an immediate implementation was next in line.

The preparation of Tanauan City’s Pole Location Plan will support the strict implementation of City Ordinance no. 2013-13. Its objective is to have a concrete detailed plan designed to regulate erection and maintenance of poles and distribution lines of various utility companies, electrical distribution lines, community antenna, television companies and private individual. This will be the basis of the permitting and enforcing departments of Tanauan City Government for the supervision, regulation of the utility/service provider and control of all users and the general public.

The conduct in the preparation of the Approved Pole Location Plan shall strictly comply with the provisions of the City Ordinance no. 2013-13. It shall be based on the design standards and specifications of the Revised Philippine Electrical Code of the Philippines, rules and regulations provided by the National Electrification Administration (NEA) and the National Telecommunication Commission (NTC).

6.7 Major Infrastructure Projects: 2015 onwards

To boost the livability, competitiveness and economic vitality of the city, the infrastructure projects as listed below were prioritized by the city. These infrastructure projects were designed with waste water treatment facilities, sufficient parking areas and open spaces.

6.7.1 New City Hall Building with Public Park

The City Government of Tanauan has identified a land located at the “Laurel Hills” of Barangay Natatas, with an estimated area of about four (4) hectares. The proposed site of the New Administration Building is about 100 meters from the Tanauan Exit of the Southern Tagalog Arterial Road (STAR Tollway), three (3) kilometers from the present location of the City Hall and is very accessible to the City’s constituents via the Tanauan-Talisay-Tagaytay Road.

The proposed New Administration Building is a three (3)-storey structure with roof deck and an approximate floor area of 9,500 square meters. The building will accommodate the 30 different departments of the City or an office space for the current 1,484 city employees.

Complementing the New City Hall will be a Public Park that will be developed within the 4-hectare land. The park shall be designed to incorporate the natural topography of the area with minimal effects on the existing plants and wildlife. It will also feature an activity area, paved trails, sheds, sufficient lighting and other wellness facilities.

The New City Hall is envisioned to be a modern, people-friendly and high-tech building while the public parks will be a well-groomed aesthetically designed amusement area.

The estimated project cost for the Construction of New City Hall inclusive of the Public Park is PhP 500M through a Bank Loan with the Land Bank of the Philippines.

6.7.2 Tanauan City Public Market Redevelopment Project

The Tanauan City Public Market Redevelopment Project (TCPMRP) under a Public-Private-Partnership (PPP) modality is one of the priority projects of Tanauan City. The redevelopment and modernization of the Tanauan Public Market will address the inadequate structures and facilities offered by the existing public market.

The Project aims to modernize and improve the structures and facilities of the Tanauan City Public Market and its surrounding areas. It will envision to redevelop the Tanauan City Public Market into a state of the art commercial facility with a wet and dry market component, transport terminal through Design – Build – Transfer – Operate (DBTO) Scheme.

The TCPMRP will address the traffic congestion in the city because of the inclusion of a multi-level parking facility which will provide ample parking spaces for consumers and market vendors. The project also aims to provide amenities lacking in the existing Tanauan Market such as wastewater treatment plant, solid waste processing facilities, cold storage facilities, delivery area and others.

6.7.3 “AAA” Slaughterhouse

The proposed location of the AAA Slaughterhouse is at Barangay Sambat, approximately 1.3 kilometers away from banking facilities which are mainly situated in the Poblacion Area or Urban Core of the city.

There is no existing Halal Slaughter House in Luzon and Visayas despite the high demand for Halal meat and meat products among our Muslim brothers and sisters. The Local Government Unit (LGU) is supportive of the establishment of a Halal Slaughter House to address this situation. To start with, the Office of the City Mayor created the Tanauan Muslim Consultative Council. This council is expected to monitor the project.

The objectives for the establishment of Halal Certified Slaughter House are the following:

1. To realize the objectives of the standing MOU between the National Commission on Muslim Filipinos (NCMF) and the City Government of Tanauan on the establishment of such slaughterhouse,
2. To posit Tanauan City as a major source of HALAL meat and meat products,
3. To fill the gap in the demand for credible HALAL meat and meat products (especially from un-stunned animals,)
4. To provide access to HALAL Slaughterhouse thereby discouraging the prevailing practice of backyard slaughtering,
5. To generate additional revenues for the LGU,
6. To generate employment for Muslim constituents in Tanauan City,

6.7.4 Road Opening of Santor – Natatas – Balele Municipal Road

The proposed 8-meter wide, approximately 2.15 km long road connecting the National Highway (Tanauan – Talisay – Tagaytay Road) from Barangay Santor at station near laurel District Hospital to the City Road (Natatas – Balele Road) at station 150 meters away from the Boundary of Natatas and Balele as reflected in the Cadastral map of Tanauan (Cad 168), approved in 1920, has not yet been opened.

Aside from providing a convenient, safe, fast and economical travel to all users, opening of the said road will likewise ease traffic congestion in major city roads in the Poblacion. The completion of Sitio Balon Road in Barangay Natatas and Barangays in the South-Western portion (Bagbag, Mabini, Tinurik and Bagumbayan) makes the South-East portion (Maria Paz, Wawa, Boot, Balele and Natatas) more accessible without passing the city proper roads. The proposed opening of the Santor – Natatas – Balele Road will connect the said Barangays of the City, situated on the western portion of the South Luzon Expressway (SLEX), without passing thru the Poblacion roads, and to the Municipality of Talisay, Sto. Tomas and City of Calamba.

6.7.5 Construction of Service Road parallel to Southern Tagalog Arterial Road (STAR Tollway)

The Southern Tagalog Arterial Road also known as the Star Tollway or the CALABARZON Expressway is a 42- km. expressway. It starts at the intersection with Maharlika Highway and the South Luzon Expressway in Sto. Tomas and runs southward passing through Malvar, Tanauan City, Lipa City, Ibaan and Batangas City.

Since its opening in 2001, it has played a major role in the decongestion of Tanauan City's traffic condition particularly beneficial to the commuters coming from barangays in the northwestern part of the city, wherein they no longer have to pass through the city proper when going to the north (Calamba) or the east and south.

Thus, the opening/expansion of both sides of the Star Tollway is recommended for the following reasons:

- To offer an advanced measure to avoid traffic congestion particularly taking into consideration the construction of the central business district.
- To pose an alternative avenue in order to maintain if not surpass the existing efficiency of the traffic management scheme.
- To increase mobility of people, products and services in general aspects of daily life.
- To encourage investors and generate more employment opportunities
- To exercise dynamism in terms of capital investment
- To encourage tourism

The Proposed Comprehensive Transportation and Traffic Management Plan for Tanauan City

With the rapidly growing economic development due to presence of industrial parks and its proximity to Metro Manila and accessibility via Star Tollway, traffic congestion is among the challenges brought by urban growth which compromise the city's productivity and efficiency.

The preparation of a Comprehensive Transportation and Traffic Management Plan for Tanauan City will address the following concerns:

1. Transporting people and goods/services within and outside the city and rationalize public transport services addressing the increasing demands versus supplies.
2. Mobility needs in the proposed new Central Business District (CBD).
3. Medium-term and Long-term infrastructure development programs of the city that will have significant effect or impact on traffic:
 - a) Relocation of New City Hall to the west of STAR Tollway (New Central Business District)
 - b) Modernization and Redevelopment of the Tanauan City Public Market
 - c) Construction of AAA Slaughterhouse at Barangay Sambat (near STAR Tollway Exit)
 - d) Proposed Central Parking Transport Terminal
 - e) Establishment of new trading post at barangay Sambat.
 - f) Sports Complex
 - g) Halal Compliant Slaughterhouse
 - h) Ambulong Proposed Road (Circumferential Road, 10 m.)
 - i) Service Road from Pantay Matanda to Tinurik
 - j) Sambat to Bagumbayan Road (10m)
 - k) Road Widening

Therefore, a need to formulate a comprehensive transportation and traffic management plan to alleviate the impacts of development, mitigate congestion in the city and rationalize the city's public transport system is a must.

Objectives are the following:

1. Assess the existing traffic conditions in the study area through compilation of primary and secondary data.
2. Design an efficient traffic circulation plan to ensure smooth, safe and environment-friendly vehicular and pedestrian flow.
3. Identify traffic management measures and alternatives appropriate for the city to alleviate traffic congestion.
4. Evaluate the traffic and transport impacts of the proposed relocation of City Hall in order to address issues pertaining to accessibility, traffic circulation and other concerns pertaining to the plan.
5. Develop a road network and transport development that will ensure the connectivity of the new Central Business District with the rest of the city
6. Recommend policy directions to sustain programs for the short, medium and long-term plans in consideration to the relevant plans of the nearby cities/regions.
7. Identify the needed institutional structures and mechanisms that will ensure effective traffic management and enforcement through a review of national best practices and customizing these to suit local needs.
8. Draft recommendations for revising the current traffic code incorporating the policies and measures identified.

Scope of Work

Three Distinct Phase:

1. Phase I and Phase II shall cover Traffic Data Collection and Analysis, and Formulation and Evaluation of Transport and Traffic Management Options.
2. Phase 3 covers the Finalization of the Transport and Traffic Management Plan.

PHASE 1: TRAFFIC DATA COLLECTION AND ANALYSIS

Compilation of Existing Data and Assessment of Existing Traffic Condition

1. Traffic Volumes
2. Passenger Volumes
3. Public Transport Terminals
4. Public Transport Routes
5. Road Network Inventory
6. Parking Facilities
7. Pedestrian Facilities
8. Accident Incidence
9. Environmental Characteristics

Phase 1 will also involve the conduct of traffic and transport surveys including:

1. Classified Traffic Volume Survey
2. Travel Time and Delay Survey
3. Public Transport Boarding and Alighting Survey
4. Public Transport Terminal Survey
5. Pedestrian Volume Survey
6. Walkability Survey
7. Parking Survey
8. Transportation Facilities Survey

9. Road Network Inventory

2. Preparation of Traffic Transport Database and Survey Results

- using the results of the surveys and data collection, the existing traffic conditions and the state of the public transport system will be assessed.

3. Conduct of consultations to discuss Local Transportation Issue and Concerns

- consultation activities shall be conducted after the processing and analysis of the survey results.

PHASE 2: Formulation and Evaluation of Transport and Traffic Management Options

1. Preparation of Preliminary Plan

- Preliminary identification of traffic management schemes; road network and transport plan

2. Conduct of Consultation for Social Acceptability of the Plan

- Preliminary plan shall be presented to representatives of various sector

PHASE 3: Finalization of the Transport and Traffic Management Plan

1. Fine tuning of the plan and preparation of the final draft

Expected Output

1. A plan of the hierarchy of road network for the wider urban/suburban area of the city;
2. Traffic circulation plan for the city including the new site for City Hall;
3. Specific design proposals to improve certain intersections in the CBD area;
4. A parking strategy for the CBD area;
5. A public transport strategy for the CBD area rationalizing bus, jeepney and tricycle operations;
6. Traffic Management Plan
7. Revision of Traffic Code.

CHAPTER 6 - ANALYSIS MATRIX

ANALYSIS MATRIX – ROADS / TRANSPORTATION

Technical Findings, Issues and Concerns	Implications / Effects	Policy Intervention
Insufficient farm-to-market roads	<p>Difficulty in the delivery of goods and services to and from urban area and vice versa</p> <p>Inefficient mobility and circulation</p> <p>Increased expenses and hardship experienced by farmers in transporting their produce to the market</p>	<p>Accelerate the farm-to-market road projects thru PRDP and DA</p> <p>Allocate funds for land acquisition for road openings</p>
<p>Inadequacy of roads in urban areas</p> <p>existing - 0.72 km per 1000 population</p> <p>ideal - 2.4 km per 1000 population</p>	<p>Traffic congestion in the city proper</p> <p>Increased in number of road accidents</p>	<p>Strict implementation of easement requirement, for all establishments being constructed to relieve congestion on roads</p> <p>Periodic enhancement of traffic scheme especially at the growth areas where populace frequent themselves like the public market, school zones etc.</p> <p>Strict implementation of the regulation on the parking, loading & unloading zones on PUV's and strict monitoring of those which operates without the necessary permit</p>

Comprehensive Land Use Plan of Tanauan City: 2016- 2025
PART I – SOCIO-ECONOMIC AND PHYSICALPROFILE

Flood	Discomfort to pedestrians Traffic congestion	Construction of additional and unclogging of drainage systems
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ANALYSIS MATRIX - POWER

Technical Findings, Issues and Concerns	Implications / Effects	Policy Intervention
Insufficient power supply for commercial and industrial	Frequent power interruption Discourages investors	Full coordination with the power provider to determine the root cause of the frequent power interruption and provide information for the functional role of the city: designated commercial and industrial area Periodic consultation with the power provider to address related issues and concerns
Unregulated, disorderly installation of poles and distribution lines	Creates messy environment/outlook For the city Dangling wires and poles erected within the road-widened areas posts danger and accidents	Strict implementation of City Ordinance No. 2013-30 otherwise known as Public Distribution Lines Ordinance of the City of Tanauan

ANALYSIS MATRIX – WATER

Technical Findings, Issues and Concerns	Implications / Effects	Policy Intervention
Dependent on underground water	Difficult to determine quantity of water available for projected water requirement (commercial & industrial	In-depth underground water study and analysis Promote rain water harvesting facilities Utilization of surface water

ANALYSIS MATRIX – INFORMATION, COMMUNICATION AND TECHNOLOGY (ICT)

Technical Findings, Issues and Concerns	Implications / Effects	Policy Intervention
Intermittent connections	Discourages investors Slows down communications, coordination and transactions	Coordinate with service providers and appeal for the upgrade of their facilities to improve connections/signals

Chapter 7

HERITAGE

Culture can be a curious thing. To the outsider, a locality's unique features and characteristics may seem obvious, but such an outsider would be clueless about the complex interplay of values, beliefs, traditions-all shaped by that area's topography, climate, natural resources, seasonal cycles, economic activities, political structures and its particular history that- as a whole makeup the gestalt of the daily lives of local residents. Then again, Tanauan's residents themselves might have taken for granted. Busy as they are with routine, domestic struggles and challenges, that same complex whole that continues to shape their lives and will continue to do so for generations to come.

Hence, this portion on Tanauan Culture and History which seeks to give the outsider a glimpse of Tanaueño culture in general, and some of the history that shaped that same culture as it exists and evolves in the present. As for our Tanaueño readers, may these words and images allow them to look at old, everyday things with new eyes, giving them a fresher perspective on what was previously taken for granted, and begin to take pride in and treasure their unique cultural and historical heritage.

7.1 Tanauan Culture

Tanauan is a space of growth, of movement and of resonance, where the passing of time is measured in seasons both full and well spent. It is a living city in the complete sense of the phrase. And its citizenry is the lifeblood coursing through its veins. Tanaueños exhibit characteristics at once unique to and microcosmic of the entire province. They are an industrious and resilient folk. Surviving a volcanic eruption that forced them from their original location, and a war that practically eviscerated the city from the rest of the province, Tanaueños now thrive in one of the busiest agro-industrial zones south of Manila.

7.1.1 Beliefs and Superstitions

What the so-called modern world—with all its complex gadgetry, technology and reliance on machines and scientific knowledge—would call superstitious beliefs ought not to be dismissed so easily as remnants of less enlightened age. As both sociologists and anthropologists point out, so-called superstitions ought to be viewed not as magical or supernatural facts, but as insights into a people's collective psyche, expression of psychological states that are the by-products of their interaction with one another, as well as their application of dearly held social values toward an external event or situation. That's why all races the world over has beliefs and ritualistic behavior in the face of major life events like the birth of a child, courtship, matrimony, parenthood, old age and death. These are meaningful expressions of values vis-à-vis the milestones in individual and social life. Tanauueños, in this respect, are no different.

To say that Tanauueños like to keep close family ties is perhaps an understatement, especially true in the early to mid-20th century. That's why an occasion like marriage is a serious and important one. Marriage adds a new member to the groom's family but takes away from the bride's family. This is why Tanauan's beliefs on marriage, before and after the wedding, are related to easing the transition for both parties. For example, the new bride is instructed by elders not to look back at her home after the wedding, because it will cause a serious case of homesickness. And not only that, once she moves into her new home with her husbands, she is forbidden from going back to her house for four days, again in order to avoid homesickness.

In a more celebratory as well as charitable gesture, some communities in Tanauan pass the hat at wedding receptions, so that money given to the couple becomes a gesture of wishing them a happy, prosperous future as they begin their own family.

7.1.2 Courtship

If marriage in Tanauan is serious business, the courtship period that may lead marriage, is especially grueling for the prospective groom. It was no unusual for suitors of old to court a prospective wife for five whole years.

This might even be followed by a four-year engagement such a long period of testing for a prospective groom was no unusual in previous generations, in the early 20th century or even earlier.

Family life in Tanauan is a very serious thing. That's why the man has to prove himself worthy of his future wife. He must perform whatever labors are expected from a future husband for his bride-to-be's family. He must prove that he will be able to support his future wife and children, and give them a good life. If the woman's family owned a farm, then the man would be expected to do farm work. From fetching water to feeding the animals, to helping clean up the surroundings as well as various errands as may be requested of him.

And courtship during the elder generation—without the easy, instant communication though today's cellular phones—was not allowed outside the girl's home. Courtship was an open, straightforward, formal affair, with the man presenting himself to the woman's household and engaging her in conversation under the watchful eyes of parents and other relatives. Back then, courting a girl on the streets was no-no. Even more serious would be for a suitor to hold a young woman's hand in public. Kissing her was the height of blasphemy.

For a suitor to kiss a young woman in public—with or without her consent—would be enough for this girl's enraged father to demand marriage from the uncouth suitor. Sometimes, even hand-holding in public could be grounds for a swift, parentally-compelled marriage.

Such strictness and delicacy over the courtship stage may seem alien today, but such practices, back in previous generations or today, only reflect how valuable the wholeness and unity of the family is for Tanauueños. To marry off one's daughter is to break apart one's family, in order to literally give her away to another family. The psychic stresses produced by such a separation is therefore eased by such beliefs, rituals and customs.

7.1.3 Burial

Burial customs and other practices relating to a death in the family are society's way of coping with the great loss of loved one. In Tanauan where family bonds are very strong, death—the ultimate physical separation between family members— is a truly unwelcome event. During wakes, elders advise the next of kin not to say “Thank You” to those who paid their respects to the deceased. This is because it would seem as though the family was actually happy that a close family member died.

There's also a custom regarding the abuloy (money given as a gesture of sympathy and compassion towards the surviving kin) that's perhaps unique to Tanauan. Elders believe that all the money collected as abuloy to the next of kin should be spent on the deceased. Spending it for the needs of surviving kin or others concerns is believed to bring misfortune.

7.1.4 Mourning

The period of mourning for Tanaueños lasts for at least one year. Back in the pre- to post- World War II era, the immediate family of the deceased would only wear black for the entire year, as an expression of *luksa* or mourning. But even mourning is a cycle, and when the year of grief is over, Tanaeños participate in their practice of *laglag-luksa* literally translated as “dropping-mourning”. Mourning is shed off along with the black clothing, and family and friends gather together for Holy Mass Followed by a feast. There's still a warning from the elders, however: visitors are told not supposed to give any leftover food away to visitors. Mourning and grief are, but it seems that the shadow of death remains in the food from the feast.

7.1.5 Worship

Tanaueños are some of the most religious people in the world. Back in the 1940s when 99 percent of its residents were Roman Catholics, celebrating the Holy Eucharist in church on Sunday was a formal, family event. Families dressed their best for the occasion because they were keenly aware that they would be communing with their God and Creator. Family members would dress in formal wear when they went to

church. For a time, wearing the *amerikana*. American-style suits, was in fashion, and you would see all these men in suits attending mass.

Until today, Tanaueños are very religious. Even when many turned from Roman Catholicism to other religious groups within the Christian faith, the same religiosity is observed in all of these group

7.1.6 I Do Club Foundation

“I DO” club was founded by Modesto Valencia and other well-meaning individuals in Tanauan City, Batangas in 1948, a few years after World War II. The members coming from prominent families, successful residents, and accomplished individuals whose roots came from Tanauan, the club spouses, from then on, civic and community, youth, women, and family.

The “I DO” Club has envisioned “a more progressive Tanauan where both the public and the private sectors commit themselves to work together towards promoting the well-being of the people by giving them opportunities to make their lives better and happier”

Now on its 57th year, the “I DO” club has been holding Annual Reception Ball. A much-awaited event, fittingly highlighting its renewal of the ties that bind them.

To further its firm commitment to active involvement and contribution to the cause of humanity, it has given, through the years, public honor to deserving tertiary graduates and accomplished individuals from Tanauan City.

In 1996 the members of “I DO” Club incorporated the I DO Club Foundation, Inc. Stood as a source of humanitarian endeavors and civic cooperation.

7.2 PROMINENT TANAUEÑOS

7.2.1 Jose P. Laurel

Born in Tanauan on March 9, 1891, Jose Laurel was Senate President before the Second World War and became President of the Philippines during the Japanese

Occupation. Laurel was among the Commonwealth officials instructed by the invading Japanese Imperial Army, to establish a provisional government under Japanese rule.

Laurel tried his best to look after the best interests of Filipinos during the harsh Japanese wartime rule. His role during a time of great crisis was not always understood. He was twice shot by Filipino guerrilla forces but recovered. He was also ordered arrested by Gen. Douglas MacArthur for collaborating with the Japanese after the end of the war. In 1948, Laurel was granted an amnesty by President Manuel Roxas.

Jose P. Laurel was elected in the Philippine Senate and helped broker the Laurel-Langley trade agreement with the United States, under the administration of President Ramon Magsaysay. He died on November 5, 1959

7.2.2 Salvador H. Laurel

Salvador H. Laurel was born on November 18, 1928 and served as Assemblyman, Prime Minister, Senator and finally Vice-President of the Philippines in 1986. A recipient of a Masters of Laws from Yale University, Laurel left a set of five justices for the Poor Laws more popularly known as LAUREL LAWS. He died on January 27, 2004.

7.2.3 Oscar P. Yatco

Recognized as one of the foremost musical artists of the Philippines, Yatco was born on November 23, 1930. A winner of many international prizes, he was concertmaster for the Stross chamber orchestra in Munich, Germany from 1954-1964. He was also a member of the Stross String Quartet in Munich, Germany from 1960-1964. In 1980, he became a conductor and consultant for the CCP. Philharmonic Orchestra. Now Based in Germany. Yatco's efforts to develop the country's orchestras remain his greatest legacy to the Philippines.

7.2.4 Jose Villa Panganiban

One of the country's most prolific and prominent men of letters, he was a lexicographer, professor, linguist, poet, play-wright, author and lyricist with more than

1,000 works to his name. He was director of the Institute of National Languages from administration of President Ramon Magsaysay to the time of President Ferdinand Marcos. A recipient of many national and international awards and citations for literature and journalism, supporters all him “Hero of the National Language” for his staunch efforts to develop Pilipino as the national language of the country. He died on October 13, 1972.

7.2.5 Teodoro F. Valencia

Known as the “Dean of Philippine Journalism”. Valencia is known as one of the greatest figures in journalism in the Philippines, and a great fiscalizer through the press, radio and television. He was also known for his fund-raising activities for charities and other worthy projects. He is also credited with helping to rehabilitate the Manila Zoo, and the improvement of Fort Santiago and Rizal Park. He died on May 4, 1987.

7.2.6 Jose L. Guevarra

A lawyer and active journalist for 56 years, Guevarra is one of the pillars of Philippine Journalism. His reports and columns were widely read when they appeared in The Manila Post, The Manila Times, People`s Journal and Manila Bulletin. He received a Catholic Mass Media Award during the Martial Law period and many others awards to journalism from the National Press Club, Lions Club, Jaycees and other organizations. He also received a Cultural Award from the City of Manila. Both the province of Batangas and the municipality of Tanauan have named him as Outstanding Citizen. He passed away on December 2, 2002.

7.3 Sports

A part from traditions, Tanauueños, also gamely tackle pursuits more modern in nature, such as sports. Makeshift basketball half-courts can be found in almost every street. Summer leagues are organized by barangay officials, and these become major draws for the City`s youth. Volleyball tournaments are also common, and are held in the various sports venues that can be found in the city. Even skateboarding has caught

on in the City. The plaza in front of the City Library and Museum is used as a skatepark every weekend by those hooked on to this sport.

However, the Tanaueños team that has garnered the most renown is the Tanauan City Little League Baseball Players. The players clinched the Big League Division of the Asia Pacific Baseball Tournament, Beating teams from countries with long established baseball training clubs. The team eventually moved on to represent not only the Philippines by the entire Asia Pacific Region in the World Series Baseball Tournament Held on August 3-10, 2002. In Easley South Carolina, USA.

7.4 Customs and Traditions

Tanaueños are innately joyful, but are quick to defend their rights. Proudly retained in the memory of Tanaueños are the city's contributions to the region's, and indeed, the country's heritage. As such, Tanaueños value tradition highly. Tanaueños hold nightly Marian Novenas throughout the city in May. Simply Called Paalay, these are events at once religious in function and social in practice. It is held in both the major churches and makeshift chapels throughout the city. Paalay begins with the recitation of the rosary, followed by a novena offered to the Virgin Mary.

Attendees of the Paalay then take turns in offering flowers to the Marian image, while songs of praise are sung in the background. Hermano take turns sponsoring each night of the Paalay, supplying food and drinks to the attendees after each novena. These 31 nights of May, all offered to the Mother of God, allow the residents to strengthen both communal bonds and the religious foundation held so highly through the years. The tradition of the Pangangaluluwa is also alive in Tanauan. The Tagalog counterpart of Trick-or-Treat, it is practiced by kids during the days leading up to the Feasts of Souls and Saints. Small groups of residents move from house to house, singing a song possessed of a serpentine, otherworldly melody, meant to stir the 7.

Roughly translated, the song is about a group of souls who are roaming the material world, observing the living and seeking alms that will help them reach the gates of Heaven before the night expires. One proof of the harmonious merger of institutional religion and folk belief in Tanauan is the prevalence of hilot. A form of therapeutic

massage, the hilot emphasizes spiritualism in the diagnosis and treatment of ailments. The process also commonly employs prayers and indigenous medicaments.

7.5 Heritage Conservation

Tanauan City is one of the cities in the northern section of southern Luzon which is blessed with not just cultural but historical Heritage. These heritage sites add a specific touch to the individuality of each Tanaueños particularly those who were born and chose to continue living within the city. Thus, the local government unit endeavors to create an atmosphere where the historic past co-exist in harmony with the modern society. With this thrust and in conformity with Republic Act No 10066, otherwise known as the National Cultural Heritage Act of 2009, Tanauan City fosters the preservation, enrichment, promotion of its historical and cultural heritage.

Following below are the illustrations and brief discussions on the Heritage sites, landmarks and products of the 48 barangays found within the city of Tanauan.



Museum Façade



7.5.1 Description of the Museum

Built through the advocacy of former President Jose P. Laurel, Sr., the Apolinario Mabini mausoleum, designed by National Artist for Architecture Juan F. Nakpil, is a fine testament to the life of a great statesman and the greatest Filipino political thinker of his time. On July 23, 1956, the mausoleum was inaugurated, highlighted by the transfer and re-internment of Apolinario Mabini's remains to the shrine's marble tomb from the Cemetery del Norte in Manila.

Boasting of interactive exhibits and touch screen computers, visitors can discover and learn about the life, times, and political initiatives of Apolinario Mabini during the course of the Philippine Revolution. The new Mabini Museum is also a rich repository of the hero's personal artifacts and memorabilia such as his pair of gold-rimmed eyeglasses, a collection of Revolutionary government decrees he had personally penned, and a rare whole-body standing photograph of Mabini as a student at the University of Santo Tomas.

Among the prized items in the museum’s art collection are award-winning paintings from the Apolinario Mabini Centennial Painting Contest held in 1963. Renowned Filipino Artist Angel Cacnio’s painting entitles “The Capture and Transfer of Apolinario Mabini” and a roundel three-quarter portrait of Apolinario Mabini in low relief sculpted by noted Classical sculptor Graciano T. Nepomuceno are part of the exhibit.

The museum also carries several late 19th century weapons used during the Philippine-American War such as sabers, carabao horn and ivory-handled bolos with inlaid arabesque designs, the heavy-bladed Muslim kampilan, and wavy-bladed kris. These artifacts are supplemented with photographs, editorial cartoons, and an interactive Theater of War.

7.5.2 The Sublime Paralytic

In 1896, Mabini was stuck down by polio; the disease paralyzed both his legs. In illness, Mabini’s mind became even sharper. With the Spanish-American War looming on the horizon, he wrote a manifesto warning Filipinos not to trust the Americans. The document made its way to Hong Kong, into the hands of the exiled leaders of the 1896 revolution. General Emilio Aguinaldo sent for Mabini, who, upon seeing him, was unsure of Mabini’s capabilities. What was he supposed to do with this cripple? But when Mabini spoke, Aguinaldo saw his worth. From then on, Mabini was installed as Aguinaldo’s adviser, for which the Americans called him the “true instigator of the Philippine Revolution.”

At the outbreak of the Filipino-American War in 1899, Mabini was captured by the Americans and was imprisoned for almost a year. However, this did not stop him from writing patriotic articles to incite the people to remain steadfast to the cause of freedom. Angered, the Americans exiled him to Guam.

Fearing he would never see the Philippines again, Mabini reluctantly took an oath of allegiance to the United States that allowed him to come home in February 1903. On 13 May 1903, he died of cholera at the age of 38. Due to his unwavering love of country and commitment to Philippine independence, history has given him the accolade “Sublime Paralytic.”

To arrange a visit to the new **Mabini Museum** at the **Mabini Shrine Tanauan**, please call (043) 455-2105.

Inside the Mabini Shrine Tanauan premises, you will see his mausoleum and his final resting place designed by Arch. Juan F. Nakpil. The nipa hut was a reproduction of Mabini's house where Apolinario M. Mabini was born and all of his seven siblings. In celebration of A. Mabini's 150th birth anniversary, the Museo ni Apolinario Mabini was opened to the public last July 23, 2014.

The ground floor of the museum consists an Audio-Visual Room and 3 galleries. The Audio-Visual Room shows an animated film viewing about A. Mabini's life and works. Gallery I showcase the early life and student years of Apolinario Mabini. Gallery II shows the contribution of Apolinario Mabini as a reformist together with Jose Rizal, Marcelo H. Del Pilar, Graciano Lopez Jaena and other pertinent heroes. Gallery III explains how Mabini was known to be the "Brains of Philippine Revolution".

Second floor was divided into four galleries and additional stereoscopy room. Gallery IV shows how the Americans became part of the Philippine history and as the new colonizer. Gallery V features about the war in Luzon and will also mentioned the Macabebe's of Pampanga. Gallery VI tells about the war in Visayas and Mindanao, which covers the history of the battle in Balangiga and its church bells. The last gallery shows the legacy of the 'Brains of the Revolution". 3-D pictures during the Filipino-American war can be seen in the stereoscopy room

7.6 Heritage Sites, Landmarks and Products Per Barangay

7.6.1 Barangay Poblacion I



- Known as riverside before as it is located beside the San Juan River, until the barangay was divided during President Ferdinand Marco's regime and known at present as Poblacion 1.
- Has a total land area of 19.98 hectares
- 3rd smallest urban barangay



Yema

Main product of the Barangay

Landmarks



St. John the Evangelist Parish Church

It was first built in 1881, the design was heavily influenced by Romanesque and Renaissance architecture and was renovated in 1948. It is a pilgrimage site where the faithful can come and enrich their spiritual relation to God.



Pres. Jose P. Laurel Ancestral House

Birthplace of President Jose P. Laurel, Philippine President during the Japanese Government. It was donated to the Philippine Government as a historical site. It was built in 1880 and was restored in 1964.



Gov. Modesto Q. Castillo Memorial Cultural Center

Named after the Tanaueño and first governor of Batangas elected for three consecutive terms, where Lakbay Aral lectures are being conducted as well as other special events.



Almeda House

Has been witnessed to many significant events and activities in the city.



Tanauan Packaging and Service Center

TPSC is envisioned to be a Social Transformation Activator for better quality and improved product packaging.

Resort



Me-sing Garden

A great place to share memorable experiences with the family and colleagues.

7.6.2 Barangay Poblacion II



It was first called “Purok Mabini” until the barangay was divided during President Ferdinand Marco’s regime and known at present as Poblacion 2.

- Has a total land area of 17.04 hectares
- 2nd smallest rural barangay
- Has the largest gymnasium among urban barangays with approximately 1,705 m², has become the venue of

numerous sports and special events



Best delicacy of the barangay, **bibingka**

Landmarks



Museo ng Tanauan

Used to be the seat of local governance, now it houses a collection of priceless memorabilia of Tanauan's history and culture as well as the legacies of its people.



The Pride of Every Tanaueños, **Gat Apolinario Mabini's** Monument at Plaza Mabini.



Gonzales Ancestral House

Abode to four (4) former town Mayors namely:

- | | |
|----------------------------|-------------|
| Hon. Nicolas Gonzales, Sr. | (1908-1912) |
| Hon. Fulgencio Platon | (1922-1925) |
| Hon. Nicolas Gonzales | (1942-1943) |
| Hon. Pedro Gonzales | (1951-1967) |



La Consolacion College Tanauan

One of the 23 pioneering educational institutions in the Philippines administered by Augustinian Sisters of Our Lady of Consolacion.

Tanauan Event Center

An ideal venue for events such as weddings, debuts, children's parties, anniversaries and seminars.



7.6.3 Barangay Poblacion III



Long ago, it was called laborers' zone (*purok manggagawa*) as most of the residents are working as carpenter, sewer, vendor, government employee and factory worker, until the barangay was divided during President Ferdinand Marco's regime and known at present as Poblacion 3. This is also the location of the City Government of Tanauan.

- Has a total land area of 41.38 hectares
- 3rd largest urban barangay



Known maker of delicious type of steamed Filipino rice-cake called "***puto***"

Landmarks

DMMC-Institute of Health Sciences

The only institution of higher learning in the city with its own base hospital.



Daniel O. Mercado Medical Center (DMMC)

Providing affordable, quality healthcare in Calabarzon for more than 50 years thru modern medical technology

Resorts



Su Casa Garden Resort
A perfect place to capture special memories

7.6.4 Barangay Poblacion IV

- It was called piel subdivision before, a Spanish term which means railroad, until the barangay was divided during President Ferdinand Marco's regime and known at present as Poblacion 4.
- Has a total land area of 32.87 has.
- Main product: bread



Bread

Landmarks



Christian College of Tanauan

An institution accredited by TESDA that offers Technical and Vocational Education and Training.



Tanauan Institute

One of the oldest academic institutions in the city



C. P. Reyes Hospital

A Level 2 hospital duly accredited by the Department of Health and the first ISO 9000:2008 accredited hospital in Tanauan City Batangas.

7.6.5 Barangay Poblacion V



- Known as central as it is the center of the City of Tanauan, until the barangay was divided during President Ferdinand Marco's regime and known at present as Poblacion 5.
- Has a total land area of 8.71 hectares
- Smallest urban barangay

The barangay is known for its delicacy, creamy *bibingka*



7.6.6 Barangay Poblacion VI

- It was before a portion of Barangay Sambat and Barangay Trapiche planted with rice grains. It was called “barn” before, until the barangay was divided during President Ferdinand Marco’s regime and known at present as Poblacion 6.
- Has a total land area of 20.36 has.



The barangay is known for its main delicacy *kutsinta*, which is at its best taste when combined with grated coconut.

Landmarks



STI College

Provides ICT-enhanced education to more than 100 campuses here and abroad

Resorts



D'Linor Resort



Uncle Vince



La D'este

These resorts offer great choices to capture every memorable moments.

7.6.7 Barangay Poblacion VII

- It was before a one barangay until it was divided during President Ferdinand Marco's regime and known at present as Poblacion 7.
- Has a total land area of 36.53 has.

Landmark



Tanauan City Public Market

Central to life-giving vitality and sustenance to Tanauan and even neighboring towns

Resort



Villa Carandang Resort and Function Hall

A very spacious and accessible meeting place for every event from board meetings to formal banquet and other big special social gatherings

Barangay Altura

- The word Altura is derived from the Spanish word, which means altitude, since it is situated in a high place.
- Other barangays named after Altura:
 - Altura Matanda (Northern part of Altura)
 - Altura Bata (Western part of Altura)

- Altura South

7.6.8 Barangay Altura Bata

- Has a total land area of 164.64 hectares
- 9th smallest rural barangay
- Has approximately 150 hectares of agricultural land
- Main crop string beans “*sitaw*”
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “*sitaw*”

Landmarks



Baseball diamond field

Serves as the practice venue for our baseball team which has brought forth so much recognition worldwide that it is now considered as one of the top teams to watch out for.



Sta. Ana- San Joaquin Bahay Ampunan

An orphanage institution for female elderly

7.6.9 Barangay Altura Matanda

- Has a total land area of 100.97 hectares
- 3rd smallest rural barangay
- Has approximately 90 hectares of agricultural land



- Main crop: lima bean “*patani*”
- Other cash crops : string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Lima bean “*patani*”

7.6.10 Barangay Altura South



- Has a total land area of 102.18 has.
- 4th smallest rural barangay
- Has approximately 97 hectares of agricultural land

- Main crops: sponge gourd “*patola*” and bottle gourd “*upo*”



Sponge gourd “*patola*”



Bottle gourd “*upo*”

7.6.11 Barangay Ambulong

Ambulong was a derivation of Ambubuyog (bees) because of the murmuring characteristics of these insects. The early American invaders who established an army detachment here called this barrio as “El Pueblo de Ambulong” meaning the Ambulong was an urban place then. At the present time, the word “Ambulong” is used to designate this barrio.

- Has a total land area of 218.38 has.
- Has approximately 198 hectares of agricultural land
- Has the largest barangay hall with approximately 227.44 m²
- Main crop: string beans “*sitaw*”
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “*sitaw*”

Landmarks



Philippine Atmospheric, Geophysical and Astronomical Services Association (PAG-ASA) Synoptic Station

A Department of Science and Technology (DOST) national service institution, it provides public weather forecasts, advisories, warnings and other scientific information and services to protect life and property.



Suprema Dela Iglesia del Ciudad Mistica De Dios, Inc.

A Mistica religion means "mysterious and enchanted" (*mahiwaga* in Tagalog) beginnings, as the founder manifested extraordinary actions since she was three. Since its beginnings, they have had women priests in the samahan who are tasked with officiating liturgical celebrations (men could be priests, but most priests in the samahan have been women, priests do not necessarily have to be celibates).



Fish Port

Resort



Awilihan Resort

A family-owned resort located at the shores of Taal Lake in the city. It has an inspiring view of Taal Lake and Taal Volcano.

7.6.12 Barangay Bagbag



- The name was derived from the word “nababagbag” which means erosion of the soil.
- Has a total land area of 569.67 has.
- 2nd largest rural barangay
- Has the biggest

agricultural area with approximately 550 hectares.

- Main crop: string beans “*sitaw*”
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “*sitaw*”

Resort

Averosa Farm and River Run Resort

A perfect starting point from which to explore Batangas. The hotel offers guests a welcoming atmosphere and a range of services and amenities designed to provide comfort and convenience.



7.6.13 Barangay Bagumbayan

- The name was derived from “Bagobayan”, “kitanakwartel”, uttered by an Ilocano spy of the insurgent during the dark days of Guardia Civil.
- Has a total land area of 236.39 has.
- Main crop: sweet potato
- Other cash crops: string beans “sitaw”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Sweet potato

7.6.14 Barangay Balele



The name was derived from the word “Bali-li”, stuttered from speaking exclaimed with grief and horror by one person when the priest who once asked to baptize the barrio chapel fell from the back of the horse when he was on

his way. Time however, has changed it into its present name. It was established between the years 1800-1825.

- Has a total land area of 620.43 hectares which is the largest among rural barangays.
- Has approximately 350 hectares of agricultural land
- Has the largest gymnasium among rural barangays
- Main crop: string beans “*sitaw*”
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)

String beans “*sitaw*”



Natural Attraction



Clean and refreshing water of Sabang River (left) and Tibanglan River (right)

7.6.15 Barangay Bañadero



It is said that this place has always been called Bañadero since its founding many years ago. The name was used to designate the place because of the presence of springs that afford excellent bathing place. The inhabitants of the locality and those from distant places used to take their bath in these springs because of their refreshing and healing effects, so it was said.

- Has a total land area of 189.28 hectares
- Has a total of approximately 160 hectares of agricultural land
- Has a total land area of 189.28 hectares
- Has a total of approximately 160 hectares of agricultural land
- Main crop: calamansi

- Other cash crops: string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Calamansi

Landmarks



Ruins of Old Tanauan



Lakeshore view



Plant Nursery

Resort



Casita De Jose

Accommodating place for team building and weekend family get away

7.6.16 Barangay Banjo East



- It was before a part of the large barangay of Bungcalot. On February 19, 1972, Barrio Bungcalot was divided into East and West. It was named after a former Mayor Jaime "Banjo" Laurel.

- Has a total land

area of 145.92 has.

- 8th smallest rural barangay
- Has a total of approximately 110 hectares of agricultural land
- Lanzones Capital of Tanauan



Lanzones

7.6.17 Barangay Banjo West



- Has a total of approximately 250 hectares of agricultural land.
- It was before a part of the large barangay of Bungcalot. On February 19, 1972, Barrio Bungcalot was divided into East and West. It was named after a former Mayor Jaime “Banjo” Laurel.
- Has a total land area of 308.45 hectares
- Rambutan and Lanzones Capital of Tanauan



Rambutan



Lanzones

Natural Attractions

Century old tree



Eco park- refreshing water falls and Balete River

7.6.18 Barangay Bilogbilog



During the Spanish time, the former position of the group of houses is circular (pabilog) from then, the Spanish Officer called it the barrio Bilogbilog. It is also believed that the name derived from bilo-bilo (now the palaeros or pinindot) which is a common favorite dish during that period.

- Has a total land area of 406.44 has.
- 5th largest rural barangay
- Has a total of approximately 250 hectares of agricultural land
- Main crop: string beans “sitaw”
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “sitaw”

Landmarks



Materials Recovery Facility (MRF) and Organic Farm

A facility designed to receive, sort, process, and store compostable and recyclable materials efficiently and in an environmentally sound manner to produce organic fertilizer being used in **organic farm** and mixed non-biodegradable wastes for final segregation, re-use and recycling.

Resort



Mae's Private Pool

Offers a place for relaxation or recreation to spend with families, friends and love ones.

7.6.19 Barangay Boot

Accordingly, cacao was so abundantly grown that there were plenty of cacao seeds or “buto” in the dialect. The word “buto” was changed to Boot, which became the popular name of the barrio.

- Has a total land area of 385.43 has.
- 7th largest rural barangay
- Has a total of approximately 310 hectares of agricultural land
- Home to Dragon Boat Festival
- Main crop: string beans “*sitaw*”
- Other cash crops: squash, bitter melon “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “*sitaw*”

Kamias Capital of Tanauan

Numerous trees of Kamias perfect for sinigang and sinaing na isda



Landmark



Dragon Boat Landing



Dragon Boat Competition

7.6.20 Barangay Cale



The name was originated from the Spanish word “Calle” which means street. When the Spaniards came to this place, they lived in the Calle. Since then, the barrio was called Cale. It was established on 1911.

- Has a total land area of 366.04 hectares

- 9th largest rural barangay
- Has a total of approximately 259 hectares of agricultural land
- Garlic Capital of Tanauan
- Main crop: hyacinth bean “*bataw*”
- Permanent crop: sugarcane

- Other cash crops: string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Garlic



Hyacinth bean “*bataw*”



Sugarcane

Landmark



Old Tower

It is known as “*iluhan ng tubo*”, a sugarcane mill, part of our rich history which was built during the Spanish period with approximately 20 ft. high made of adobe blocks and now being developed as private property.

7.6.21 Barangay Darasa

There are two conflicting versions regarding how this barrio got its present name: One version is that the word has been derived from the word “*darasna*” which means cleaned or cleared already, as it is said that long ago when there is no roads but only trails, people had to clear the way “*daras*”, a kind of tool used for cutting shrubs and scrapping grass. Another version is that the word came from the word “*daza*”, a word used to designate lineage or blood relationship originating in the barangay.

- Has a total land area of 327.28 has.
- Largest urban barangay
- This barangay has the 2nd smallest agricultural land area with a total of approximately 20 hectares
- Main crop: tomato
- Other cash crops: string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Tomato

Resort



Hacienda Darasa

Relaxing and comfortable atmosphere with great amenities that caters to day-tripper, vacationers and corporate clients.



Sunshine Garden Resort

A good place to relax and enjoy precious moments with family and friends

Landmark



Walter Mart

A community mall which provides the necessary link between the customers' homes and work life in one convenient location.

First Asia Institute of Technology and Humanities

An institution of higher learning and research envisioned to be a premier educational organization in the high-growth region south of Metro Manila.



7.6.22 Barangay Gonzales



- A part of Barangay Janopol before and was separated as one barangay in 1968 via R.A 3590. It was named after the local hero during Spanish period, Pedro Racamura Gonzales, uncle of former Mayor Pedro B. Gonzales. It is one of the lakeshore barangays.

- Has a total land area of 188.29 hectares
- Has a total of approximately 110 hectares of agricultural land
- Main crop: malunggay

- Other cash crops: string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Malunggay

Natural Attraction



Lakeshore view

Resorts



Nicayeren Lakefront Resort

A place to enjoy vacation in this peaceful
ambiance and relaxing sights.



Montecillo de Leonardo Resort

Relax, unwind and experience lake-
side paradise.



Tierra Salva Lakeview Resort

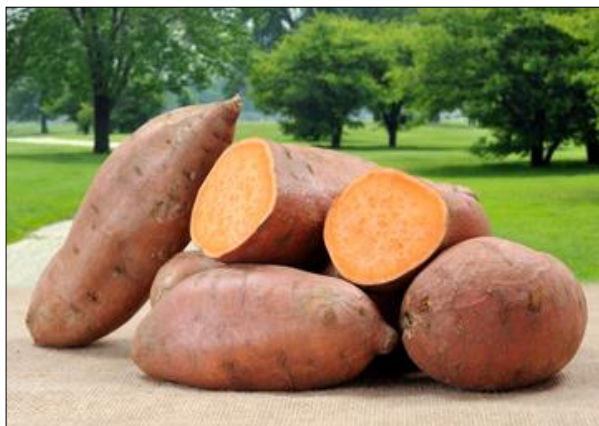
Experience a serene respite from the
city, with the lake literally at your
backdoor

7.6.23 Barangay Hidalgo

Long ago, it was a sitio of Barangay Bungcalot which is known at present as Barangay Banjo. It was called Camalig before due to abundance of big plantation of sugarcane owned by the late Cecilio Sonciongco.



- Has a total land area of 97.31 hectares
- 2nd smallest rural barangay
- Has a total of approximately 65 hectares of agricultural land
- Main crop : sweet potato
- Permanent crop : sugarcane
- Other cash crops : string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Sweet potato



Sugarcane

Barangay Janopol

It was divided into three barangays due to big population. Barangay Janopol Oriental on the eastern part, Barangay Janopol Occidental on the middle part and Barangay Gonzales near the lakeshore

Natural Attraction



Awesome view of Taal Lake



Sunset view of Taal Lake

7.6.24 Barangay Janopol Occidental

- More or less 7 kilometers away from the city proper
- Has a total land area of 245.1 has.
- Has a total of approximately 210 hectares of agricultural land
- Main crop: string beans
- Other cash crops: squash, bitter gourd “ampalaya”, lady’s finger “okra” and eggplant (pinakbet vegetables)



String beans “sitaw”

Resort

Villa Glover

Perfect for meetings, team buildings and other special events.



7.6.25 Barangay Janopol Oriental



- Has a total land area of 289.91 hectares
- Has a total of approximately 260 hectares of agricultural land
- Main crop: string beans
- Other cash crops: squash, bitter gourd “ampalaya”, lady’s finger “okra” and eggplant (pinakbet vegetables)

String beans “*sitaw*”



7.6.26 Barangay Laurel



Long ago, it was a part of Barangay Ulango and on April 23, 1962, it was established as a separate Barangay Laurel through a resolution passed by Captain Proceso Tercero. It was named after the son of Tanauan and late President Jose P. Laurel, Sr.

- Has a total land area of 269.19 hectares
- Has approximately 100 hectares of agricultural land
- This barangay has the 2nd largest industrial area with a total of 164.69 hectares
- Main crop: sweet potato
- Permanent crops: sugarcane and corn
- Other cash crops: string beans “sitaw”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)
- The 2nd largest industrial zone among barangays with a total of 164.69 hectares



Sweet potato



Sugarcane



Corn

7.6.27 Barangay Luyos

- It was started with the abundance of palm tree during the Spanish time. From then, the Spanish called it Luyos. It was established in 1850.
- Has a total land area of 183.23 has.
- Has a total of approximately 110 hectares of agricultural land
- Main crop: string beans
- Permanent crop: corn
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “sitaw”



Corn

Landmark



Tanawan Hills

A good place to take a respite and escape from the stress of the city living. One can truly enjoy the tranquility and serenity of nature at this place.

7.6.28 Barangay Mabini

It was before Zone III of western part of Barangay Tinurik and due to large population, most of the residents suggested to make it a barrio and was approved in 1965. It was named after our national hero and the Brains of the Revolution Gat Apolinario Mabini.



- Has a total land area of 183.13 hectares
- 10th smallest rural barangay
- Has a total of approximately 120 hectares of agricultural land
- Has a total land area of 183.13 hectares

- 10th smallest rural barangay
- Has a total of approximately 120 hectares of agricultural land
- Main crop: string beans “*sitaw*”
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “sitaw”

Landmark



Calamansi Farm

7.6.29 Barangay Malaking Pulo



- Derivation of the name from vast and towering forest. It was established in 1750
- Has a total land area of 543.6 hectares
- 3rd largest rural barangay
- Has a total of approximately 495 hectares of agricultural land

- Main crop: pechay
- Permanent crop: sugarcane
- Other cash crops: string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Pechay



Sugarcane

Landmark



Century old acacia tree

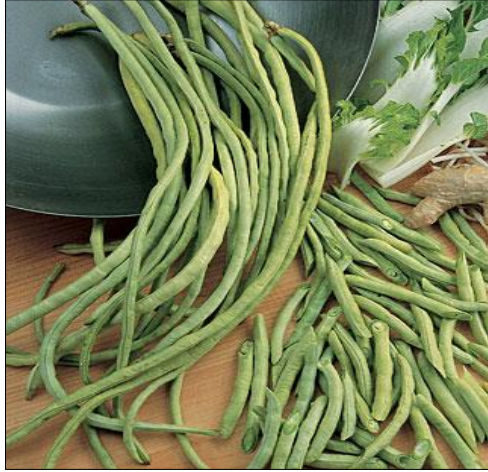
7.6.30 Barangay Maria Paz



It was named after the prominent woman Doña Maria Paz Laurel who owned the biggest part of the land within the barangay. It was before a sitio of Barangay Boot that was called “sitio talumpok”. It is one of the lakeshore barangays.

- Has a total land area of 295.56 has.
- Has a total of approximately 220 hectares of agricultural land
- Main crop: string beans “sitaw”

- Other cash crop: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “sitaw”

Natural Attractions



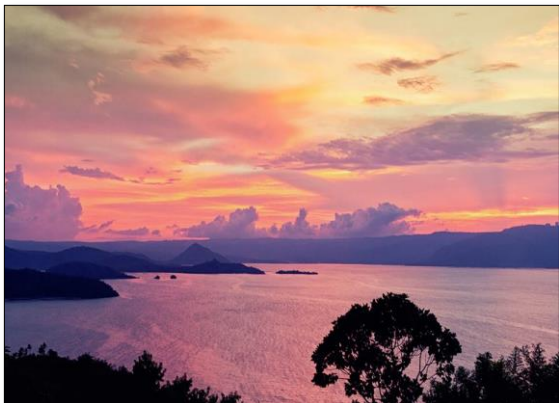
Napayong Island

The shoe-shaped island is a 10-minute boat-ride from Brgy. Wawa. This humble island was an otherwise impregnable local sanctuary during the Japanese occupation.



“Talumpok” providing a refreshing lakeshore view

Tours and sightseeing at Talumpok Eco Park



7.6.31 Barangay Maugat



The early settlers learned that the name of the place was Ambulong. It was not until 1893, when an inhabitant by the name of Leon Mendoza became the teniente of the place that the site got its name, Maugat. It was named Maugat because of the benefit they derived from

the roots of big trees “Maugat” in its literal translation means “rooty” “Ma” means “so much” “ugat” means roots. It was established in 1820.

- Has a total land area of 222.69 has.
- Has a total of approximately 195 hectares of agricultural land
- Main crop: eggplant
- Permanent crop: corn

- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and string beans “*sitaw*” (pinakbet vegetables)



Eggplant



Corn

7.6.32 Barangay Montaña

- The derivation of the name came from Spanish term which means mountain. It was called Barangay Ik-Ik before.
- Has a total land area of 94.12 has.
- Smallest rural barangay
- Has a total of approximately 85 hectares of agricultural land



String beans “*sitaw*”

- Main crop: string beans “*sitaw*”
- Permanent crop: corn
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Corn

7.6.33 Barangay Natatas

- The name came from word *Nata-as* which means going-uphill. It is more or less 2 kilometers away from the city proper.
- Has a total land area of 374.79 hectares
- 8th largest rural barangay
- Has a total of approximately 200 hectares of agricultural land
- Where **El Gamma Penumbra**, first-ever champion of the 2015 Asia's Got Talent was nurtured
- Main crop : hyacinth bean "*bataw*"
- Other cash crops : string beans "*sitaw*", squash, bitter gourd "*ampalaya*", lady's finger "*okra*" and eggplant (pinakbet vegetables)



Hyacinth bean "bataw"

Landmark

Drop-off Center at Laurel Hill

Where some farm produce particularly watermelon and other products, are being sold at prices lower than those in regular retail outlets.



Resorts



Alon Garden Resort

A choice of every Tanaueño to share love, fun and excitement together with the family and friends



Tarawoods

Experience Mediterranean–inspired country house embraced by vines and flowers, where visitors and guests can take a dip in the pool, relax in the shade and bask in the beauty of surroundings.

7.6.34 Barangay Pagaspas



The name of this barangay before was Balokbalok, a name derived from a tree of the same name. In 1969, this barangay was named Pagaspas.

- Has a total land area of 311.71 has.
- Has a total of approximately 100 hectares of agricultural land
- This barangay has the 5th largest industrial area with a total of 90.15 hectares
- Main crop: rambutan
- Permanent crop: sugarcane and corn
- Other cash crops: string beans “*sitaw*”,

squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)

Rambutan



Sugarcane



Corn



Calderetang kambing

Famous cuisine of the barangay

Landmark

Philtown Industrial Estate

One of the companies it houses is the Uni-President (Philippines) Corporation, maker of instant HOMI noodles



7.6.35 Barangay Pantay Bata

It was named after the common physical features of the locality, pantayin or wide level land and divided into two barangays namely: Pantay Bata and Pantay Matanda. It was established in 1867

- It is more or less 6 kilometers from the city proper
- Has a total land area of 310.66 hectares
- Has a total of approximately 50 hectares of agricultural land
- This barangay has the largest industrial area with a total of 170.52 hectares



Squash

Landmark



First Philippine Industrial Park

Various companies within the First Philippine Industrial Park which are located in this barangay are PMFTC Inc., Canon, Murata and Maxim Philippines. A total of 116.85 hectares of manufacturing complex occupies barangay Pantay Bata, helping create sustainable economic growth in the countryside as well as financial and non-financial incentives to new businesses and prospective investors.

7.6.36 Pantay Matanda



- Has a total land area of 257.56 has.
- Has total of approximately 150 hectares of agricultural land
- This barangay has the 4th largest industrial area with a total of 110.17 hectares
- Main crop: squash
- Permanent crop: sugarcane
- Other cash crops: string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Squash



Sugarcane

7.6.37 Barangay Sala

It is said that this place has always been called Sala since its founding many years ago. Destruction of lives, properties and institutions during wars occurred in 1941-1945.

- Has a total land area of 216.89 has.
- Has a total of approximately 100 hectares of agricultural land
- Main crop: string beans “*sitaw*”
- Permanent crop: sugarcane
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “*sitaw*”



Sugarcane

Landmark

Baseball field

Serves as training field of our baseball teams and continuously being developed for competitive purposes



Natural Attraction



Majestic view of Mt. Makiling from Barangay Sala

7.6.38 Barangay Sambat



Formerly, this barrio was a part of Barangay Natatas. When it became densely populated, the municipal council passed a resolution separating said barrio from Natatas.

- Has a total land area of 88.82 has.
- 2nd largest urban barangay
- This barangay has the smallest agricultural land area with a total of approximately 10 has.



Bibingkang Galapong

A coal-steamed rice cake made out of ground glutinous rice, water and egg



Bibingkang Malagkit

Made from glutinous or sticky rice top with caramelized sauce made of coconut cream, brown sugar and muscovado sugar



Sinukmani

Sweet sticky rice with latik topping



Sumang Yakap

Made of sticky rice wrapped in banana leaves, steamed, then served with sweet sauce called *kalamayhati*

Home of Native Delicacies

Landmarks

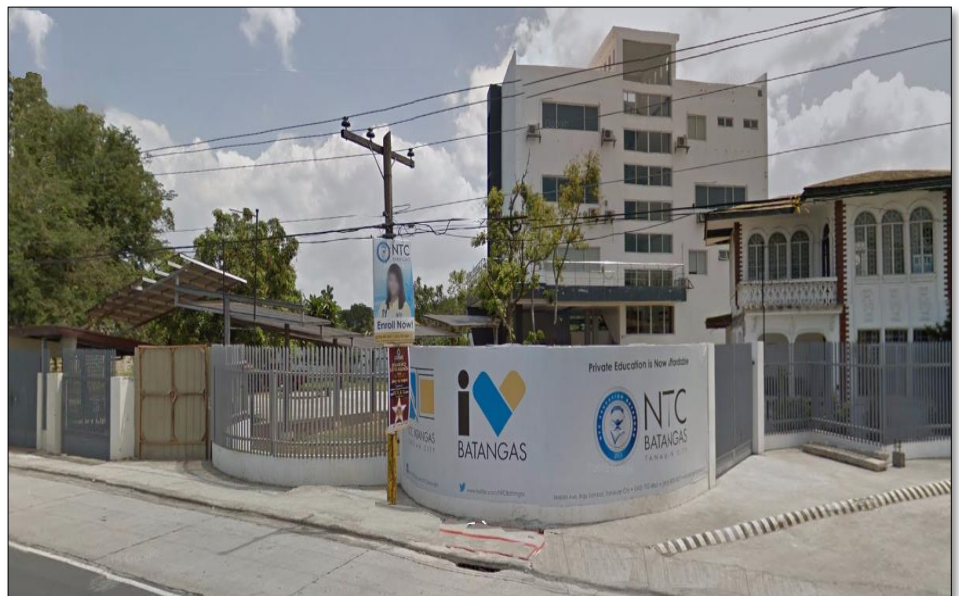


Star Tollway

Offers a virtual tour thru a sustainable road network and provides more than satisfactory mobility to the residents and travelers.

NTC Batangas

An institution that aims to provide leaders and innovators in the academe and industries who are equipped, responsible, and competent individuals.

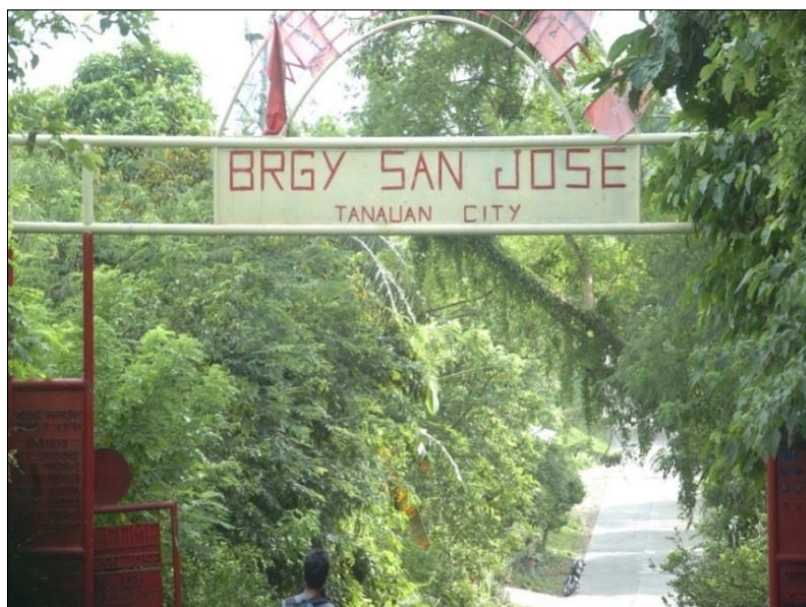




Tropical Breeze Hotel and Resort

A place for leisure and good venue for family outings, weddings, birthday parties, corporate seminars and conferences

7.6.39 Barangay San Jose



- 7th smallest rural barangay
- Has a total of approximately 105 hectares of agricultural land
- Main crop: string beans "*sitaw*"
- Permanent crop: corn

- Formerly a part of Barangay Luyos, but in August 1972, due to dense population, it was separated and became a one barangay.
- Has a total land area of 127.29 has.

- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



String beans “*sitaw*”



Corn

7.6.40 Barangay Santol

- Derived from the santol tree which grew in abundance and bear fruit plentifully.
- Has a total land area of 104.03 has
- 5th smallest rural barangay
- Has a total of approximately 95 hectares of agricultural land
- Main crop: string beans “*sitaw*”
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)





String beans “*sitaw*”

7.6.41 Barangay Santor

A long time ago, the patron saint of the barrio was San Pastor. One day while the children are playing, a Spanish civil guard came along and ask the children about the name of the barrio was. The children misunderstood him and answered, “San Pastor”. The guard repeated over and over “Santor” hence, the barrio became known as Santor.

- Has a total land area of 318.85 hectares
- 10th largest rural barangay



Vinegar Capital of Tanauan

Abundance of *sukang kaong*, produce from the sap of male kaong tree

Landmark



Sugarcane Plantation



Plant Nursery

Contributes a lot in agricultural condition of the city.



Site of New Tanauan City Hall

7.6.42 Barangay Sulpoc



- Derived from a folktale in which the principal character is a girl named Sula. Its past name was “sulok” or “pinangbahayan” and was established in 1813.
- Has a total land area of 400.18 hectares
- 6th largest rural barangay
- Main crop : tomato
- Other cash crops : string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and eggplant (pinakbet vegetables)



Tomato

7.6.43 Barangay Suplang



- It is said that this place has always been called Suplang since its founding many years ago.
- Has a total land area of 229.57 has.
- Has a total of approximately 100 hectares of agricultural land

- Main crop: eggplant
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*” and string beans “*sitaw*” (pinakbet vegetables)



Eggplant

Landmark



Sprawl of Saratoga Hills and Plantation Hills



Plant Nursery

7.6.44 Barangay Talaga

- The name was derived from the old tagalog word “talaga” meaning “well” which is a source of water during the Spanish period.
- Has a total land area of 442.62 has.



- 4th largest rural barangay
- Has a total of approximately 150 hectares of agricultural land

Landmarks

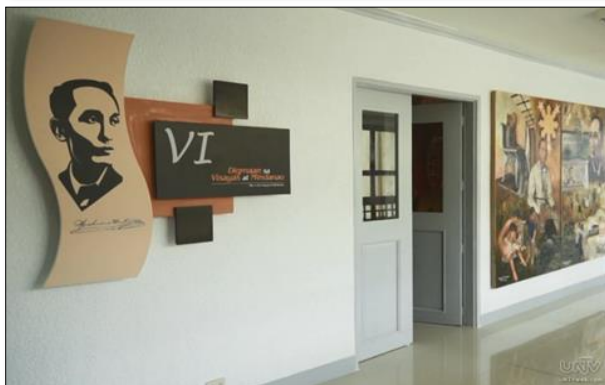


Mabini Shrine

This is a memorial to the Sublime Paralytic and Brains of the Revolution, Gat Apolinario Mabini, the country's national hero and the city's greatest son. Beside is a replica of the house of Mabini which was built on the very spot where the hero was born.



Museo ni Apolinario Mabini



Two storey building of 2000 sq. meter houses the museum with 7 galleries, considered as the biggest in terms of floor area among the 22 historical shrines and landmarks in the Philippines, showcasing the life of Mabini from the time he was a student until he became a revolutionary.



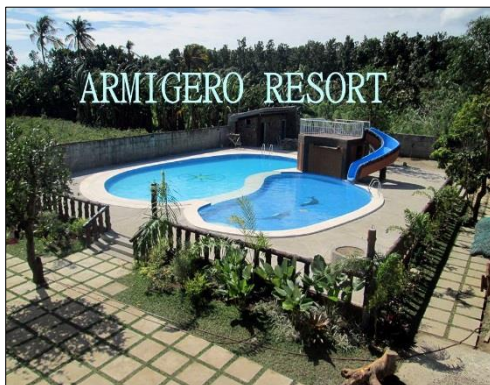
Mabini Educational Institution

An institution of higher education, named after our national hero, Gat Apolinario Mabini.

Plant Nursery



Resort



Armigero

A perfect place to enjoy, relax and have fun.



Jardin de Antonio

A perfect event garden venue for all occasions

7.6.45 Barangay Tinurik

There was no known derivation of its name, however, known recall about this barangay is that during the early part of the Japanese occupation, a guerilla organization was formed and many young men of the barrio joined. The deep ravine between this barrio and Bungcalot used to be the usual hideout of the guerillas. There was an encounter between the guerillas and the Japanese soldiers but with no casualty on both sides, however.

- Has total land area of 229.82 hectares
- Has a total of approximately 190 hectares of agricultural land.
- Main crop: sweet potato
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*”, eggplant and string beans “*sitaw*” (pinakbet vegetables)



Sweet potato

Landmark



Home to Rope Making

Zapata Rope Making

A licensed abaca processor in the city.



Proud supplier of plastic rope and straw within Batangas, Laguna, Quezon and Mindoro.

7.6.46 Barangay Trapiche



- The name came from the word which means sugarcane mill. It refers to the two heavy logs joined together to squeeze sugarcane juice.
- Has a total land area of 241.21 has.
- Has a total of approximately 150

hectares of agricultural land

- Main crop: sponge gourd “*patola*” and bottle gourd “*upo*”
- Other cash crops: string beans “*sitaw*”, squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*”, and eggplant (pinakbet vegetables)



Sponge gourd “*patola*”



Bottle gourd “*upo*”

Landmark



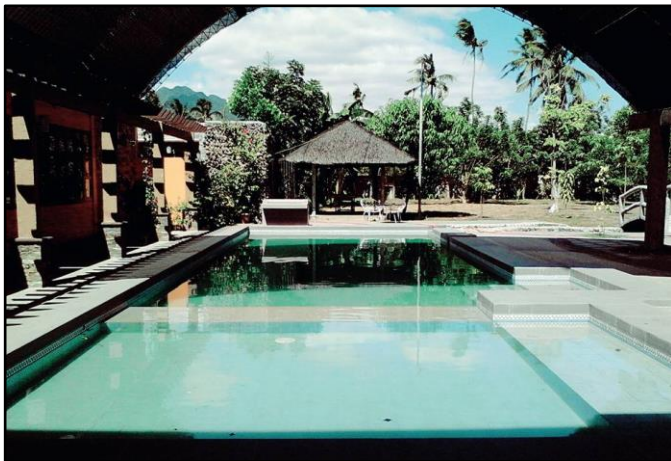
St. John the Evangelist Tanauan Park Cemetery

It is said to be the oldest burial ground established during the Japanese Occupation.



Tanauan City High School and Tanauan City College

Providing free education to constituents of Tanauan.



Mount Lour-des Resort and Hotel

Offers a serene ambiance, where you can find relaxation and pleasure with loved ones.

7.6.47 Barangay Ulango

- Derived from the name of a certain shrimp called “ulang”, which thrived well in wells in that locality
- Has a total of approximately 110 hectares of agricultural land
- This barangay has the 3rd largest industrial area with a total of 162.57 has.



- Main crop: sponge gourd “*patola*” and bottle gourd “*upo*”
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*”, eggplant and string beans “*sitaw*” (pinakbet vegetables)



Sponge gourd “*patola*”



Bottle gourd “*upo*”

Landmark



First Philippine Industrial Park

This barangay houses various companies in the First Philippine Industrial Park (FPIP) within its 162.57 hectares. This manufacturing complex hosts industrial leading multinational companies in the electronic and semiconductors manufacturing such as Honda Philippines Inc.,

Nestle Philippines, Inc., B/E

Aerospace, Isteel Inc., Sonion Man Plant, Hoya Glass Disk Phil. Inc., Brother and Sunpower.

7.6.48 Barangay Wawa



- Its location along the shore of Taal Lake and Sabang River therein gave its name.
- Has a total land area of 112.93 has.
- 6th smallest rural barangay
- Has a total of

approximately 65 hectares of agricultural land

- Main crop: string beans “sitaw”
- Other cash crops: squash, bitter gourd “*ampalaya*”, lady’s finger “*okra*”, eggplant (pinakbet vegetables)



String beans “*sitaw*”

Landmark



Malunggay Farm

Abundance of malunggay paves the way to be known as **Malunggay Capital of Tanauan**

Natural Attraction

Enchanting view of **Napayong Island** from a vantage point in Brgy. Wawa



Chapter 8

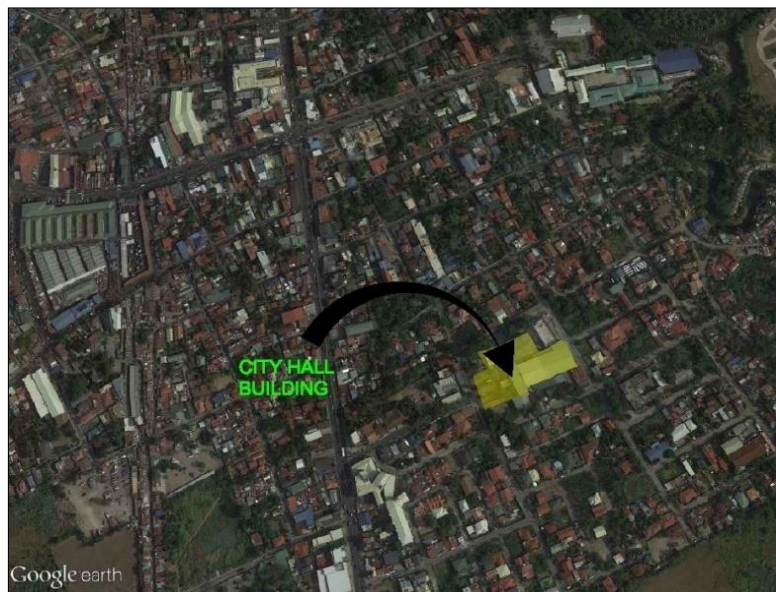
LOCAL AND FISCAL ADMINISTRATION

Local Administration focuses on the operation and management of the day-to-day activities of a certain office while Fiscal Administration is the act of managing monetary transactions. It focuses primarily on the participation of each office in the allocation and appropriation of money for funding government operations. Both are vital factors not only in determining a Comprehensive Land Use Plan (CLUP) for a given local government unit but also in implementing projects and programs within the territory. This portion presents the level of effectiveness and capabilities of the government unit in terms of manpower, income, and expenditure management.

8.1 The Administrative Setting

The seat of the City Government at present is located at Tindalo Avenue, Mount View Subdivision, Poblacion 3, Tanauan City. It is contained within an area of 14,485 m².

The said area is fully occupied with structures of both local and national government offices serving the constituents of the city. However, other local government offices such as the City Cooperative and Livelihood Development Office, City Library, Traffic Management Office, Civil



Security Unit, and national government agencies (i.e. Department of Agrarian Reform, Post Office, PhilHealth and Bureau of Internal Revenue) have to be located elsewhere as they are no longer within the capacity of the current setting. Aside from the said offices, the City also operates a Public Market, Slaughterhouse, Auction

Market, Trading Post and Tanauan City College (TCC). Record shows that there are 666 permanent employees, 798 job order/contract of service, 1 CSB teacher and 19 Tanauan City College Faculty with the total of 1, 484 employees (HRMO, July 2016).

Based on the average growth rate of the city hall employees for the past years, said manpower complement will double its number within the next ten (10) years. The current place for the administrative setting, as previously mentioned is considered to be the most populated among the barangays of Tanauan. Thus, it has been resolved to move the administrative setting to the new city hall which will be constructed within the proposed Central Business District (CBD).

8.2 Local Administrative Machinery

The elective positions in the city government are the Mayor who heads the executive department, the Vice-Mayor, who heads the legislative department, otherwise known as the Sangguniang Panlungsod with twelve (12) members. Ten (10) members of the Council are coterminous with the Mayor, the remaining two (2) are ex-officio members, the President of the Association of Barangay Captains (ABCs) of the City, and the president of the Sangguniang Kabataan, whose terms are coterminous with their incumbency. Under the supervision of the City Mayor and City Council is the lower and basic Local Government Unit, the Barangay. There are eight (8) barangay officials, the Barangay Chairman who heads the executive, legislative and judicial branches under their jurisdiction and within limits of the law, and two (2) mandatory appointed officials, the Barangay Treasurer and the Barangay Secretary. There are volunteer workers such as the Barangay Tanod, LupongTagapamayapa, Barangay Nutrition Scholar, Barangay Health Worker, BAHW and others. The office of the City Mayor heads all thirty-three (33) offices of the City Government of Tanauan.

THE ORGANIZATIONAL STRUCTURE

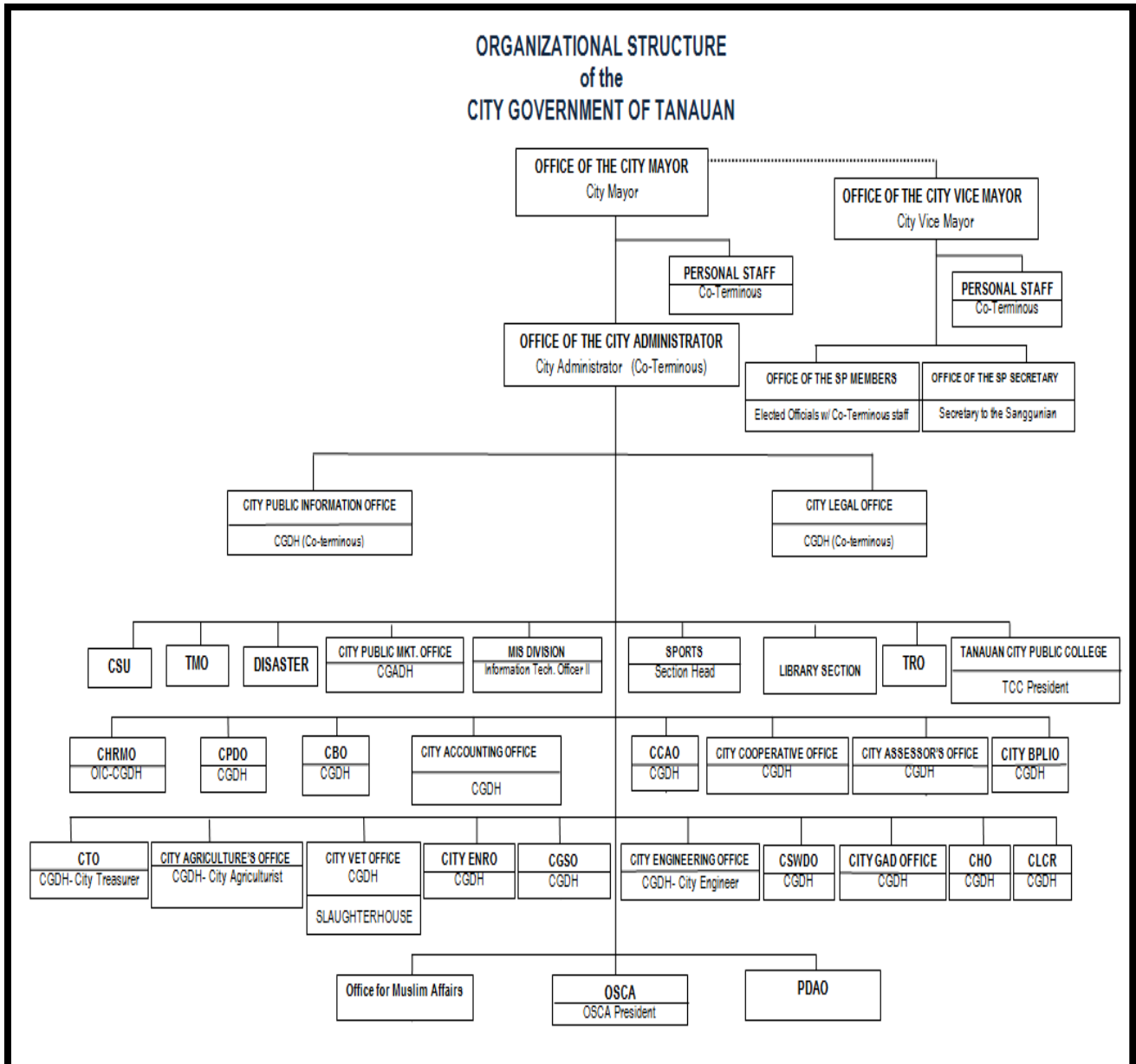


Figure 1. Organizational Structure of the City Government of Tanauan

8.3 THE EXECUTIVE ADMINISTRATION

8.3.1 The Office of the City Mayor

The Office of the City Mayor exercises general supervision and control over all programs, projects, services, and activities of the city government; enforces all laws and ordinances relative to the governance of the city and to the exercise of the appropriate corporate powers provided for under Section 22 of the Local Government Code; implements all approved policies, programs, projects, services, and activities of the city; initiates and maximizes the generation of resources and revenues and apply the same to the implementation of the development plans, programs, activities, and priorities as provided for under Section 18 of the Local Government Code particularly those resources and revenues programmed for agro-industrial development and countryside growth and progress; ensure the delivery of basic services and the provision of adequate facilities as provided for under Section 17 of the Local Government Code; exercises such other powers and performs such other duties and functions as may be prescribed by law or ordinance.

There are six (6) sections under Office of the City Mayor such as:

- Records and Education Program Section
- Executive Section and Services
- Barangay Affairs and Tourism Program Section
- Security and Safety (LCE)
- Task Force Clearing
- Mayor's Anti-Crime (MAC) Group. Mayor's Anti-Crime (MAC) Group is a special anti-criminality unit existing through the personal initiative of the Local Chief Executive for the purpose of direct and immediate response to all illegal activities and to deter criminal elements from perpetrating action that can be threat to the citizenry and the community.

Out of the total fifty-four (54) personnel, the Mayor included twelve (12) permanent employees detailed at the other departments, eight (8) are co-terminous with the

Mayor, thirty-four (34) are job orders while the Mayor's Anti-Crime (MAC) Group has a seventy-seven (77) personnel who have undergone appropriate trainings.

In addition, there are some other city hired job orders being charged to the office of the mayor but are detailed at various national government agencies and other offices such as City Schools Division/ DepEd, DILG and Muslim Affairs, RD/ COA/ Prosecutor's Office, COMELEC/ PNP and Senior Citizen Office as reinforcement.

8.3.2 CITY PUBLIC ORDER AND SAFETY OFFICE

City Public Order and Safety is an office proposed to be created which would generally focus on the regularity and safety of constituents. This office shall have four (4) Divisions, namely: Traffic Regulatory Division, Civil Security Unit, Traffic Management, Disaster Risk Reduction and Management and Special Action Task Force.

8.3.3 CITY INFORMATION OFFICE

It is the City Government's frontline department in information dissemination. This office is created by virtue of City Ordinance No. 2013-18 on October 21, 2013 which is tasked to provide the public with timely, adequate, relevant and accurate information. It is also responsible for the promotion of the City of Tanauan as Southern Luzon's premier city for investment and eco-tourism and center for education, culture, history, and sports whose economy is sustained through industrial growth. Fundamental administrative units support the office of the City Mayor to fulfill its mandate.

8.3.4 OFFICE OF THE CITY ADMINISTRATOR

The Office of the City Administrator develops plans and strategies and upon approval thereof by the mayor implement the same particularly those which have to do with the management and administration-related programs and projects which the mayor is empowered to implement and which the Sanggunian is empowered to provide for

under the Local Government Code; assists in the coordination of the work of all officials of the local government unit under the supervision, direction, and control of the mayor, and for this purpose may convene the chief of offices and other local officials of the local government unit; establishes and maintains a sound personnel program for the local government unit designed to promote career development and uphold the merit principle in the local government service; conducts a continuing organizational development of the local government unit with the end in view of instituting effective administrative reforms; be in the frontline of the delivery of administrative support services, particularly those related to the situations during and in the aftermath of man-made and natural disasters and calamities; reports to the Sanggunian and advise the mayor on all matters relative to the management and administration of the local government unit; exercises such other powers and performs such other duties and functions as may be prescribed by law or ordinance.

8.3.5 CITY LEGAL OFFICE

Headed by the city legal officer, the city legal office formulates measures for consideration of the Sanggunian and provides legal assistance and support to the mayor in carrying out the delivery of basic services and provisions of adequate facilities as provided under Section 17 of RA 7160. The legal office develops plans and strategies and upon approval thereof by the mayor, implements the same, particularly those which have to do with programs and projects related to legal services which the mayor is empowered to implement and which the Sanggunian is empowered to provide for under RA 7160. Represents the local government unit in all civil actions and special proceedings wherein the local government unit or any official thereof, in his official capacity, is a party: Provided, that, in actions or proceedings where a component city is a party adverse to the provincial government or to another component city or municipality, a special legal officer maybe employed to represent the adverse party. When required by the mayor or the Sanggunian, draft ordinances, contracts, bonds, leases, and other instruments involving any interest of the local government unit and provide comments and recommendations on any

already drawn. The office renders his opinion in writing on any question of law when requested to do so by the mayor, or Sangguniang Panlungsod.

In addition, it investigates or cause to be investigated any local official or employee for administrative neglect or misconduct in office and recommend appropriate action to the mayor or Sanggunian, as the case may be. Investigates or cause to be investigated any person, firm or corporation holding any franchise or exercising any public privilege for failure to comply with any term or condition in the grant of such franchise of privilege and recommend appropriate action to the mayor or Sanggunian, as the case may be. When directed by the mayor, or Sanggunian, initiate and prosecute, in the interest of the local government unit concerned, any civil action on any bond, lease or other concerned, lease or other contract upon any breach or violation thereof; Reviews and submits recommendation on ordinances approved and executive orders issued by component units. Recommends measures to the Sanggunian and advise the mayor on all other matter related to upholding the rule of law. Be in the frontline of protecting human rights and prosecuting any violations thereof, particularly those which occur during and in the aftermath of man-made or natural disasters and calamities. Exercises such other powers and perform such other duties and functions as may be prescribed by law or ordinance. Performs such other duties and exercise such other powers that shall be assigned from time to time by the City Mayor.

8.3.6 CITY LIBRARY

The City Library is the unit responsible for the promotion of library services, particularly targeting schools within the territory, for the purpose. Personnel at the City Library are tasked to compile, organizes and preserve books and other printed materials as well as maintain system of acquisition, procurements, and disposal of the same.

8.3.7 SPORTS OFFICE

The Sports Office is responsible for the planning, development, and implementation of the city's sports programs. Moreover, this office is in charge of the improvement of sports development academy, recreational facilities, playground, and sports centers to benefit the citizenry particularly the youth.

8.3.8 CITY PUBLIC MARKET OFFICE

The City Public Market Office ensures efficient revenue collection while guaranteeing that plans, policies, and other applicable laws and regulations governing the operation of Public Market are fulfilled.

Under the office of the Public Market there are three (3) sections: The Administrative Section, Operation and Monitoring Section, and Collection Section.

8.3.8.1 ADMINISTRATIVE SECTION

This section maintains a systematic safekeeping and management of files and records of the Public Market Office including the preparation and consolidation of reports, preparation of budget, annual procurement plan and investment plan. It is also responsible for the inventory and preparation of Requisition Issuance Slip/ Purchase Requests (RIS/PRs) for needed supplies and equipment for the smooth operation in the Public Market Office. In-charge with the over-all scheduling of market personnel; coordinates with Human Resource Management Office in relation with employees' concerns. The office is also in-charge in the supervision of the over-all maintenance of cleaning of the market premises and in between of buildings. In addition, this section coordinates with concerned allied offices which provide the necessary support services within the Public Market domain regarding security, peace and order, building maintenance, utilities and sanitation. It also ensures the standard procedures for collecting market fees, entrance/tariffs are exercised by the scheduled inspectors, appraisers and booth masters.

8.3.8.2 OPERATION AND MONITORING

This section is in-charge in the over-all operation and monitoring of Public Market and formulates mechanism on how to control massive occurrence of ambulant vendors thru imposition of penalties/fines for violators. It also ensures the smooth operation of Public Market and provides other related services to vendors and public/consumers and ensures that all posts are properly manned, market facilities are well-maintained and sanitary rules and regulations are followed.

8.3.8.3 COLLECTION SECTION

This section is over all in-charge of the all revenue collections of fees of all market booths and restrooms and the issuance of Official Receipts and Cash Tickets from City Treasurer's Office to market booths. It maintains updated records of all collections for ready references. This section also formulates mechanisms/coordinates with Market Inspectors to effectively collect arrears from delinquent stall holders.

8.3.9 TOURISM DIVISION

The Tourism Office focuses on the formulation of measures for consideration of Sanggunian and provision of technical assistance to the mayor in carrying out measures to ensure the promotion of tourism in the city; develops plans and strategies and upon approval thereof by the mayor, implements the same particularly those programs and projects which the mayor is empowered to implement including those which will promote the cultural heritage and values of the inhabitants; establishes and maintains the city museum, parks, and other tourism projects; and advise the mayor on all matters relating to protection, conservation, maximum utilization of tourist areas.

8.3.10 Management Information System (MIS) Division

The Management Information System division is the office which takes responsibility of all successful development, implementation, maintenance, and enhancement of all information system of the local government unit as per standards and policies governing the full operation of the ICT system. Under the MIS division are two (2) sections:

8.3.10.1 Software and Development Maintenance Section

This section ensures the full implementation of standards and policies governing the full operation of the ICT systems. It adopts guidelines on hardware and software platforms in all departments/agencies to guarantee compatibility, interoperability, and sharing of applications and to achieve savings through economies of scale.

8.3.10.2 Hardware Maintenance and Network Management Section

It provides and manages major areas of operation and services to different departments to meet the administrative, communication, network, server, desktop, and telecommunication needs of the City Government in the most effective and efficient way possible. It also provides technical assistance in the repair and maintenance of IT equipment and other periphera.

8.3.11 HUMAN RESOURCE AND MANAGEMENT OFFICE

The Human Resource and Management Officer, assists and advises the City Mayor in the formulation and execution of policies concerning personnel management accordance with the CSC rules and laws. This office is mandated to implement comprehensive and balanced personnel career development and relevant training program. Moreover, it is mandated to establish and administer a sound recruitment and selection system within the organization and provide assistance in various personnel management problems, employee welfare, and retirement benefits. Furthermore, to establish and administer a continuing employee suggestions, incentives, and awards system for improvement of employee's performance and

productivity and maintain a complete and up-to date personnel information system. The Human Resource and Management Office is subdivided into two (2) divisions:

8.3.11.1 Administrative Division

Develops and implements policies and guidelines on management of HRMDO's office supplies, materials, and equipment and service vehicles, maintains 201 files and records, implements effective and efficient management of records and communications. This division has two (2) sections namely: **a)** Records Management and **b)** Communication Section and General Services and Supplies Management Section.

8.3.11.2 Recruitment, Selection and Placement Division

The Recruitment, Selection and Placement Division is headed by a division chief who will be in-charge of the following sections:

8.3.11.2.1 Pre- Employment Section

The Pre-Employment Section is in-charge of the Pre-employment screening of applicants and ensures timely and appropriate selection and placement of personnel in the City Government of Tanauan (CGT). As such, it shall perform the following functions: develops and implements policies and processes on the recruitment of personnel, including the adoption of appropriate pre-employment tools; conducts pre-employment tests and interviews of applicants and prepare evaluation/assessment reports; develops and administers targeted evaluation system and pre-employment screening procedures for applicants; implements CGT's Merit and Selection/Promotion Plan (MS/PP) System of Ranking Position (SRP) and Competency-Based System Manual; develops, implements and undertakes continual review of the CGT's selection and placement practices and proposes enhancements, if necessary; takes charge of the hiring and extension of contractual personnel; processes requests for designation in an acting capacity; and coordinates meetings

and provides technical assistance to the Personnel Selection Board (PSB) and Committee on Personnel Matters.

8.3.11.2.2 Interview & Evaluation Section

This section performs the interview of applicants and prepares evaluation/assessment reports.

8.3.11.3 Personnel Appointment & 201 Section

The Personnel Appointment and Records Division shall perform activities of the department related to appointment of personnel and their records in the City Government (CGT). As such it shall perform the following: prepares appointment papers or letter contracts of employees (regular, job order and contractual) hired by the CGT; prepares salary adjustment notices of personnel; provides technical assistance to departments/offices of the CGT on appointment of personnel; takes charge of the maintenance and updating of the records on employee history; services requests for certification of employment, service records and other related information of CGT's personnel; analyzes personnel data and statistics and prepare reports for the HR department head; publishes vacant positions and the outcome of PSB Deliberation; and publishes names of those who have been issued appointments.

8.3.11.4 Gender and Development (GAD) Division

The City Gad Office shall be the coordinating, regulatory, and monitoring office of the city which will focus on gender sensitive projects and activitie. This office shall have three (3) divisions, namely:

8.3.11.4.1 Administrative Division

Develops and implements policies and guidelines on management of CGAD office supplies, materials, equipment and service vehicle; and implements effective and efficient management of records and communications.

8.3.11.4.2 Gender and Development (GAD) Monitoring and Coordinating Division

This division assures the realistic, measurable, and tangible results in the implementation of the Tanauan City GAD Plans and Programs as mandated by existing laws and local codes.

8.3.11.4.3 Training and Special Services Division

This division establishes protocols and standards in implementing trainings and special services and shall be involved in all the processes related to the conceptualization, development, assessment, and evaluation of gender development and advocacy programs of the City Government.

8.3.12 CITY PLANNING & DEVELOPMENT OFFICE

The City Planning and Development Office focuses on the over-all development planning for the City of Tanauan, coordinating with all other departments in the city government, national agencies, private sectors, POs, NGOs to come up with integrated plans, programs and projects. The City Planning and Development Office formulates integrated economic, social, physical and other development plans and policies for consideration of the local government development council; conducts continuing studies, researches and training programs necessary to evolve plans and programs for implementation; integrates and coordinate all sectoral plans and studies undertaken by the different functional groups of agencies; monitors and evaluates the implementation of the different development programs, projects and activities in the local government unit concerned in accordance with the approved development plan; prepares comprehensive plans and other development planning documents for the consideration of the local development council; analyzes the income and expenditure patterns and formulates and recommends fiscal plans and policies for consideration of the finance committee of the local government unit concerned; promotes people participation in development planning within the local government unit, exercises supervision and control over the secretariat of the local development council. Two (2) divisions are under this office, namely:

8.3.12.1 Plans and Programs Development, Research and Statistics and Administrative Division

The plans and programs division of the City Planning and Development Office is concerned with the formulation of objectives, policies, strategies, programs, and projects for the city's development.

8.3.12.2 Zoning, Land Use and Monitoring Division

The functions of this division include but not limited to, the preparation of a master plan on land use and zoning ordinance and its effective implementation based on existing laws being adopted by the city.

8.3.13 CITY BUDGET OFFICE

Headed by the budget officer, the City budget reviews and consolidates the budget proposals of different departments and offices of the local government unit; assists the mayor in the preparation of the budget and during budget hearings; studies and evaluates budgetary implications of proposed legislation and submit comments and recommendations, thereon; submits periodic budgetary reports to the Department of Budget and Management. The city budget office is responsible for the preparation of forms, orders, and circulars embodying instructions on budgetary and appropriation matters. The city budget office has two (2) divisions:

8.3.13.1 City Budget Section

This section of the City Budget Office is where the checking of vouchers for various expenditures of all offices happen as well as the preparation for budgetary and financial reports of assigned office based on planned targets and the evaluation reports on releases of allotments. It also provides assistance to the budget officer in the preparation of the City's Annual Budget.

8.3.13.2 Barangay Budget Section

This section is concerned with the evaluation of the annual and supplemental budget of forty-eight (48) barangays within the city government's jurisdiction. It is also involved in the conduct of seminars/trainings for barangay officials regarding budget rules and guidelines.

8.3.14 CITY ACCOUNTING OFFICE

It takes charge of both the accounting and internal audit services of the local government unit, and appraises the City Mayor, the Sanguniang Panlungsod, and other local government officials on the financial status and operation of the local government unit. Listed below are the two (2) sections under the accounting office.

8.3.14.1 Accounting Section

It ascertains that all obligations incurred under all funds are incorporated in the approved budget of the current year and such expenditures are in conformity with the existing government accounting rules and regulations; and ensures the timely submission of financial reports of the local government funds for management information to enable the executive and the legislative body to implement the locally funded projects and deliver the basic services to its constituents.

8.3.14.2 Barangay Accounting Section

It is involved in the preparation of financial statements of different barangays; controls the release of barangay obligations; pre-audit all documents attached to the vouchers; assists the barangay officials concerning technical aspects of barangay transactions; and coordinates with other offices concerning the proper disposal of barangay fund.

8.3.15 TANAUAN CITY COLLEGE



The City College office is tasked to provide meaningful education opportunities geared towards the demand of an emerging agro-industrial and industrial-tourist-commercial community at an educational cost within the affordable reach of the citizens through quality training and instruction in technology and sciences, and excellent education in languages, humanities and the arts; advanced studies, applied research, and experimentation in the field of studies

and endeavor it undertakes; and modeling the patriotism and nationalism of its visionary leaders Apolinario M. Mabini and Jose P. Laurel.

8.3.16 COMMUNITY AFFAIRS OFFICE

The Community Affairs Office is responsible for the formulation of policies relative to community development for consideration of the Sangguniang Panlungsod and shall provide technical assistance to the City Mayor in the implementation of those policies. It is also involved in the development of plans and strategies to implement. It shall also coordinate, integrate, and promote all programs and services of the national and

local government agencies in the locality. Conduct training activities, monitoring and evaluation; assist the City Mayor in the exercise of the power of general supervision over all barangays and in the exercise of other devolved functions; provide secretariat services to the Ligangmga Barangay; formulate and implement measures to enhance social, political, economic, moral, spiritual, and physical development of the youth of the city; administer public affairs and assistance functions and disseminate information beneficial to the general public. There are two (2) sections under the Community Affairs Office, namely:

8.3.16.1 Community Development Section

This section shall take charge of the implementation of the city's development programs. It shall integrate and promote the programs and services of the National and local government agencies in the locality, NGOs, POs, and the private sectors; conduct monitoring and evaluation activities on the city's programs and projects; assist the Mayor in the exercise of the power of general supervision over all barangays of the city and in the exercise of other devolved functions; provide secretariat services to the Ligangmga Barangay. It shall take charge of the enhancement of the social, economic, cultural, intellectual, moral, spiritual, and physical development of the inhabitants. It shall also provide technical assistance and secretariat services; conduct physical fitness and sports development programs; conduct training activities; implement programs on Drug Abuse Prevention and rehabilitation of drug users; consult and coordinate with all the organizations for policy formulation and program implementation and coordinate with appropriate national government agencies for the implementation of development projects and programs.

8.3.16.2 Public Affairs, Information, and Assistance Section

It shall take charge of public affairs, public assistance functions, and dissemination of information of general interest to the public. It shall publish periodicals, establish, and maintain display center, capture in still pictures and video tapes MBN activities and other important events and undertake public exhibition of the same. It shall also maintain baseline data on employment opportunities; conduct a continuing inventory

of available skilled and unskilled manpower; and coordinate with appropriate government agencies to enhance employment opportunities. It shall supervise the celebration of commemorative events. In addition, it shall assist Community Development Section in the implementation of some programs and projects.

8.3.17 CITY COOPERATIVE OFFICE

This office is in charge with the development of cooperatives through formulation of measures for consideration of the Sangguniang Panlungsod. It provides technical assistance and support to the city mayor in carrying out measures to ensure the delivery of basic services and provisions of facilities for the same; provides technical and other forms of assistance to existing cooperatives to enhance their viability as an economic enterprise and social organization; assists cooperatives in establishing linkages with government agencies and non-government organizations involved in the promotion and integration of the cooperatives in the livelihood of the people and other community activities; be in the frontline of cooperatives organization, rehabilitation or viability-enhancement particularly during and in the aftermath of man-made and natural calamities and disasters, ensures the viable and successful operation of the Center for Livelihood and Cooperatives and Tanauan Packaging and Service Center. Under this office are five (5) divisions, to list:

8.3.17.1 Cooperative Development Center

Undertakes assistance interventions on cooperative formation and strengthening through mentoring, training and consultancy in the areas of organizational, business and financial management and advocacy.

8.3.17.2 MSME and Livelihood Development Center

Provides capability building on entrepreneurial and livelihood development, credit, support in product development, plant facility improvement and marketing. Includes Negosyo Center operation and business advisory.

8.3.17.3 Tanauan Packaging and Service Center

Offers services on toll packaging, label design, retail of packaging materials and training and consultancy on Food Safety and Good Manufacturing Practices.

8.3.17.4 Special Projects Center

Handles projects such as the Sustainable Economic Expansion for Development (SEED) for The Avenue, Herbage Production on Idle Lands and Vermicompost Production

8.3.17.5 Administrative Support

Responsible for coordinating and ensuring that needed materials and services are available to the different centers adequately and timely.

8.3.18 CITY ASSESSOR'S OFFICE

The City Assesor's Office is responsible in ensuring that all laws and policies governing the appraisal and assessment of real properties for taxation purposes are properly executed; initiates, reviews, and recommends changes in policies and objectives, plans, and programs, technique, procedures, and practices in the evaluation of the real properties; performs the duties and functions as provided under Book II of the Local Government Code; submits every semester and report of all assessment, cancellations, and modifications of assessment to the City Mayor and the Sanggunian; and exercises such other powers and performs such other duties. Listed below are the two (2) sections under the accounting office.

8.3.18.1 Assessment, Records, and Management Section

This section provides and maintains systematic filing of records; updates all assessment records, tax declarations or Property Record Form (PRF), field appraisal, and assessment sheets; computes tax assessment; prepares and sends notices of assessments to real property owners in case of new assessment made; administers

and supervises the preparation of tax rolls; cancels all the superseded tax declarations or duplications; issues certified copies of assessment records to any interested party upon payment of service charged to the treasurer's office; and annotates encumbrances or mortgages on face of the tax declarations.

8.3.18.2 Tax Mapping Section

This section prepares, installs, and maintains a system of tax mapping, showing graphically all properties subject to assessment and gathers all data concerning the same; identifies and provides inventory of real properties conforming to the standard prescribed by the Department of Finance; discovers undeclared parcels and newly introduced improvements; updates tax maps and TMCR; prepares work plan for the tax mapping teams indicating the area to be covered; prepares pre-tax mapping control rolls; ties-up fill copies of tax declaration with index number to the tax declaration; prepares sketches and profile of the location and political boundaries, detailed land descriptions, and plot maps; and reviews tax mapping techniques used by the field teams.

8.3.19. CITY BUSINESS PERMITS, LICENSING, INVESTMENT OFFICE (BPLIO)

This pertains to the office which is in charge of the formulation and development of plans geared towards the implementation of effective tax enhancement measures and income-generating programs for the city. Under this office are five (5) divisions, to list:

8.3.19.1 Records Administrative Division

The records administrative division takes charge of the filing system and acts as property custodian of the office. Works therein include the keeping and maintenance of records of approved Mayor's permit / related licenses and updating of the business permit and licensing system.

8.3.19.2 Taxmapping and Inspection Division

It takes charge of the monitoring and inspection of businesses operating in the city, conducts information dissemination drive regarding the provision of Tax Ordinance 2011-01 and other related laws and ordinances; serves notice of violations and enforce closure order in accordance with the city legal office and other lawful procedures in dealing with violators of provisions of the city revenue code.

8.3.19.3 Assessment and Processing Division

It conducts preliminary assessment of business taxes and other fees due from; takes charge of the processing of business permits and related licenses of various business establishments operating within the city boundaries including occupational permits of their respective employee and issues mayor's permit, plates, and stickers.

8.3.19.4 Tricycle Permits Processing and Monitoring Division

It processes applications for tricycle permits and related licenses operating in the city premises; and examines all documents related to the application of tricycle mayor's permit and licenses.

8.3.19.5 Investment Division

It endorses personnel to companies of the City of Tanauan; provides secretarial support to Local Investment Board (LIB) in the preparation of pertinent documents related to incentive application; and channels prospective investors/different locators and advises them about the pertinent requirements in securing business permits and licenses.

8.3.20 OFFICE OF THE CITY TREASURY

The Office of the City Treasury is responsible for the disposition of local government funds and on such other matters relative to public finance; takes custody and exercises proper management of the funds of the LGU concerned; takes charge of disbursement of all and such other funds of which may be entrusted by law or other

competent authority; supervises the inspection of private commercial and industrial establishments within the jurisdiction of the LGU concerned; and maintains and updates the tax information system of the LGU. There are two (2) divisions under the Office of the Treasury, namely:

8.3.20.1 Cash Disbursement Division

This division is responsible for the disbursement of vouchers, payrolls, and all other official valid claims and for the preparation of checks for payment of claims and remittances for GSIS, Medicare, PAG-IBIG, and others. It also maintains General Cash Book to record daily collections and disbursements made and liquidation of cash advances; and prepares daily cash report and depository report for submission to the City Accountant; and withdraws cash from the authorized depository bank.

8.3.20.2 Cash Receipt Division

It is in charge of the receiving and collecting of all kinds of taxes, fees, bonds, and all other impositions due to the local government; issues official receipts to taxpayers upon payment; prepares abstract of receipts and statements of daily collection and submits the same to the Cash Disbursement Division for recording in the General Cash Book. It is also the custodian of files of official records of daily deposits of cash and checks collections and daily deposits. Listed below are the three (3) sections under the Office of the Treasury.

8.3.20.2.1 Business Tax and Fees Section

It is accountable for the collection of license fees, business tax payments, and business taxes including those of delinquent. It responsible for the inspection of delinquent taxpayers and serves notices to the public in relation to the implementation of the tax ordinance pursuant to the Local Revenue Code.

8.3.20.2.2 Real Property Tax Section

It maintains and updates the Real Property Tax (RPT) information system of the local government unit; prepares and determines the real property taxes of every taxpayer;

maintains and preserves records of RPT; verifies and authenticates accounts and clearances; posts payments on account register and prepare monthly and annual RPT collection report; and conducts RPT information campaign and administers records management, general, clerical, and administrative support function.

8.3.20.2.3 Appraisal and Assessment and Exam Section

It takes charge of the appraisal and assessment of land, buildings, and machineries for the purpose of tax evaluation; establishes a systematic method of real property assessment; prepares schedule of the fair market value and assessment value for the different classes of real properties in accordance with Title II, Book II of the Local Government Code; applies uniform applicable assessment level and adjustment factors as prescribed in real property tax code; reviews and examines all tax declaration (PRF), FAAS; gathers relevant data on sales of land and property to establish baseline methods of appraisal and assessment with the agricultural technicians to establish land values based on productivity; and conducts regular ocular inspection trips to discover new improvements and transfer ownership of properties in the tax declaration of PRF.

8.3.21. CITY AGRICULTURE OFFICE

It takes charge of formulating measures for the approval of the Sanggunian and provides technical assistance and support to the City Mayor in carrying out measures to ensure the delivery of basic services related to the Agricultural services as provided for under Section 17 of the Local Government Code. It also develops plans and strategies upon approval thereof by the mayor, as the case may be, implement the same, particularly those which have to do with agricultural programs and projects which the mayor is empowered to implement. It also ensures that maximum assistance and access to resources in the production, processing and marketing of agricultural and aqua-cultural and marine products are extended to farmers, fishermen and local entrepreneurs. Under this office, there are two (2) sections as follows:

8.3.21.1 Crop Production and Development/Cooperative Section

This section is responsible for the preparation of development plans and programs for crops; and the implementation of improved crop production techniques with emphasis on the practice of integrated pest management, soil sampling activities, and establishment of farm demonstration. It also conducts location – specific agricultural researches; promotes organic farming and sustainable agricultural practices such as the use of high quality seeds and tapping of indigenous materials as source of organic fertilizers; administers production, propagation, and distribution of vegetable seeds and other planting materials; supervises and coordinates to all agricultural crop production programs and related projects and activities; organizes farmers' associations, seminar, and meetings among farmers; and initiates, reviews, and recommends policies and objectives related to agricultural development.

8.3.21.2 Animal Breeding and Production/Fishermen Development Section

This section is responsible for the preparation of development plans and programs for livestock, fishery and home management services. It enforces all livestock and fishery, laws, rules, and regulations; implements programs and plans for the

development of agri-business with emphasis on improved farming practices and prevention/control of animal and poultry diseases; conducts practical homemaking classes and food demonstrations and undertakes commodity product and by-product utilization and processing; delivers front line technical services to fisher folks; organizes rural improvement clubs for housewives, and fisher folks associations; conducts training and seminar for farmers, housewives and fishermen; conducts regular survey and inspection in the barangays to appraise the status of livestock and poultry industry; initiates review of its program objectives and recommends policies and measures to improve program/project implementation.

8.3.22 CITY VETERINARIAN OFFICE

The City Veterinarian office is in charge of assessing and providing technical assistance in carrying out measures to ensure the delivery of basic services and provision of adequate facilities pursuant to Section 17 of the Local Government Code. It develops plans and strategies and implements the same especially those which have to do with veterinary related activities. This office takes charge of all matters pertaining to the slaughter of animals for human consumption and the regulation of slaughterhouses; regulates the keeping of domestic animals; regulates and inspects poultry, milk, and dairy products for public consumption; enforces all laws and regulation for the prevention of cruelty to animals; and takes the necessary measures to eradicate, prevent, or cure all forms of animal diseases. Under this office, there are two (2) divisions as follows:

8.3.22.1 Livestock Division (Meat and Fish Inspection Division)

This section regulates and inspects poultry, milk, and dairy products for public consumption; maintains quarantine system for outgoing and incoming animals in the abattoir; supervises veterinary services, fish, livestock, and meat inspection; performs functions at the public market and abattoir; maintains hygiene and sanitation of abattoir; and issues meat inspection certificates.

8.3.22.2 Animal Health and Disease Division

It encourages participation of livestock producers in vaccination, medications, and disease control programs; conducts medication for disease prevention; intensifies livestock production and encourages farmers to adopt scientific farm practice; and takes the necessary procedures to eradicate, prevent, or cure all forms of animal disease.

8.3.23 CITY ENVIRONMENT AND NATURAL RESOURCES OFFICE (CENRO)

The office formulates measures for the consideration of the Sanggunian and provide technical assistance and support to the Mayor, as the case may be, in carrying out measures to ensure the delivery of basic services and provision of adequate facilities relative to environment and natural resources services as provided. It develops plans and strategies and upon approval thereof by the Mayor, as the case may be, implement the same, particularly those which have to do with environment and natural resources programs and projects which the Mayor is empowered to implement and which the Sanggunian is empowered to provide. City Environment and Natural Resources Office was created last Oct. 27, 2010 through City Ordinance No. 2010-05. Listed below are the three (3) divisions under the City Environment and Natural Resources:

8.3.23.1 Environmental Protection and Conservation Division

This division conducts inspection on all barangays regarding the implantation of Anti-Illegal Logging Act and Chain Saw Act; issues tree cutting permit; makes post inspections of those who have been issued tree cutting permits; monitors the compliance of all chain saw owner on the Chain Saw Act; and ensures the implementation of all national laws on the protection and conservation of the environment.

8.3.23.2 Environmental Sanitation Division

This division supervises the cleanliness and orderliness of the city; supervises all street sweepers; spearheads the advocacy in the implementation of the existing local ordinance in anti-littering and solid waste management; and ensures the promptness of the daily garbage collection and makes necessary adjustments whenever there are backlogs.

8.3.23.3 Pollution Control Division

This division ensures the compliance of all establishments which are under PD 1586 or the Philippine Environment Impact Statement System and secures copies of their Environmental Compliance Certificate (ECC) or Certificate of Non-Compliance (CNC) whichever is applicable, the implementation of the conditions stipulated in the ECC or CNC of the establishments, spearheads the implementation of the “No to Plastic Ordinance” and all the applicable local ordinance and national laws pertaining to pollution control and monitors all piggeries and poultries particularly their solid and liquid waste disposal.

8.3.24 CITY GENERAL SERVICES OFFICE (GSO)

The City General Services Office takes charge of the general services and provides technical assistance and support to the mayor in carrying out measures to ensure the delivery of basic services and provision of adequate facilities pursuant to Section 17 of RA 71690 and which require general service expertise and technical support services. The office serves as a frontline of general services related activities, such as the possible or imminent destruction or damage to records, supplies, properties, and structures and the orderly and sanitary cleaning up of waste materials or debris, particularly during and in the aftermath of man-made and natural disasters and calamities. The City General Services Office constitutes to three (3) divisions with sub-sections namely:

8.3.24.1 Supply and Property Division

It takes custody and accountable for all properties owned by local government unit and those granted to it in the form of donation, reparation, assistance, and counterpart in joint projects; and performs all other functions pertaining to supply and property management heretofore performed by the local government unit.

8.3.24.1.1 Supply Section

The Supply Section is responsible for the procurement, storage, and distribution of supplies of all local government offices. It collates and disseminates information regarding prices, shipping, and other costs of supplies and other items commonly used by the local government; prepares inventory and keeps records of supplies; receives and disposed by the office as well as the surrendered waste and condemned supplies; prepare abstract of bids and purchase orders.

8.3.24.1.2 Property Section

The Property Section assigns building or land space to local officials and other public officials who, by law, are entitled to such space with the approval of the mayor; recommends reasonable rental rates for local government properties, whether real or personal which will be leased to public or private entities by the local government; and recommends to the mayor the reasonable rental rates of private properties which may be leased for the official use of the local government unit.

8.3.24.2 General Maintenance Division

The General Maintenance Division supervises janitorial, security, landscaping, and other related services in all local government public building and other real property, whether owned or leased by the local government unit; maintains and establishes efficient and effective system of collecting and transporting solid waste. Under the General Maintenance Division are as follows:

8.3.24.2.1 Maintenance of Public Parks and Buildings

The Maintenance of Public Parks and Buildings is responsible for the cleanliness and orderliness of the public parks and plazas; it performs simple repair of equipment and office furnitures; repair defective faucets; helps in the installation of light replace worn out wiring bulbs and other defective electrical parts; and maintains the cleanliness in all public offices and the premises of the City hall building.

8.3.24.2.2 Maintenance of Government Vehicle

The Maintenance of Government Vehicles section takes charge of the registration and the movement of vehicles of the city government; and maintains the running conditions of all government vehicles of the city government

8.3.24.3 Solid Waste Collection and Management Division

The Solid Waste Collection and Management division takes charge of the proper waste disposal and maintains a system of collecting and transporting solid wastes.

8.3.25. CITY ENGINEERING OFFICE

The City Engineering office is responsible of infrastructure, public works and other engineering matters. It provides engineering services to the Local Government Unit including investigation and surveys, engineering designs, feasibility studies, and project management. The office exercises technical supervision over all engineering offices of the City Government; initiates, reviews and recommends changes in policies and objectives, plans and programs, techniques, procedures and practices in infrastructure development and public works in general of the local government. It administers, coordinates, supervises, and controls the construction, maintenance, improvement, and repair of roads, bridges, and other engineering and public works and projects of the Local Government Unit; and exercises such other powers and performs such other duties and functions as may be prescribed by law or ordinance. The office is also of charge all operations and the implementation of projects, actual

operation and engineering administrative functions. The City Engineering office is divided into different sections namely:

8.3.25.1 Administrative Section

The administrative section plans, prepares, and supervises all clerical records; issues all pertinent papers regarding office operations; takes charge of the acquisition, receipt, and disposal of all supplies and materials, equipment and condemned equipment, and materials of the department; and takes charge of all clerical and other administrative support services.

8.3.25.2 Motorpool Section

The Motorpool section directs operations, maintenance repair and replacement of all vehicles and heavy equipment; makes inventory status report of equipment, tools and other accessories, inventory and inspection report of unserviceable property and appraises the same for the purpose of disposal.

8.3.25.3 Building Permits & Inspection Section

Building Permits and Inspection section issues building permits and reviews and inspects all the new building construction and sees to it that all materials passed the qualification standard and specification as prescribed under the National Building Code.

8.3.25.4 Plan and Construction Section

This section initiates, reviews, recommends policies, objectives, plans, programs, and techniques in infrastructure development; coordinates, supervises, and controls construction and improvement and repair of roads, bridges, and other engineering public works; researches technical description for the relocation of the boundaries for road concreting and other projects; and checks and measures volume and quality of material delivered at CEO.

8.3.25.5 Maintenance Section

This section it administers repair and maintenance of city streets and barangay roads; repairs artesian wells and other water system facilities of the city; and prepares cost estimates plans, specifications, program of works, and other technical papers.

8.3.25.6 Electrical Section

This section plans lighting distributions to minimize power consumption; takes charge of maximizing the distribution of lights bulbs in all parks, plazas, city streets and in all other sites, inspects electrical lay-outs and circuits for security and fire prevention measures; safe-keeps electrical supplies to be used by the City.

8.3.26 CITY SOCIAL WELFARE AND DEVELOPMENT OFFICE

The City Social Welfare and Administration Office formulates different measures and provides technical assistance and support to the mayor in carrying out measures to ensure the delivery of basic services and provision of adequate facilities related to social welfare and development services as provided for under Section 17 of the Local Government Code of 1991; develops plans and strategies and upon approval thereof by the mayor, implement the same particularly those which have to do with social welfare programs and projects which the Mayor is empowered to provide for under RA 7160; be in the frontline of service delivery, particularly those which have to do with immediate relief during and assistance in the aftermath of man-made and natural disasters and natural calamities.

The City Social Welfare and Development Office exercises such other powers and performs such other duties and functions as may be prescribed by law or ordinance; Identifies the basic needs of the needy, the disadvantaged and the impoverished; and develops and implements appropriate measures to alleviate their problems and improve their living conditions. Moreover, the office is in charge of the assistance in implementing the barangay level program for the total development and protection of children up to six (6) years of age. They facilitate the implementation of welfare programs for the disabled, elderly, and victims of drug addiction, the rehabilitation of

prisoners and parolees, the prosecution of juvenile delinquency, and such other activities which would eliminate or minimize the ill-effects of poverty. Sections under the City Social Welfare and Development Office are as follows:

8.3.26.1 Administrative Section

This section provides support to all the programs implemented by all people organizations under CSWD in terms of program preparation, and its implementation. It caters the needs of the staff in term of self-development thru trainings and seminars.

8.3.26.2 Community- Based Section

This section caters the needs of different people organization in the Barangay like Kapisanan ng Liping Pilipina (KALUPI), ERPAT, Solo Parents, Senior Citizens and Person with Disabilities (PWDs). Various programs were provided to them like capability building, s training and provision of capital assistance for their small-scale livelihood projects.

8.3.26.3 Protective- Based Section

This cater the needs of clients who are victims of different form of abuse in both women and children, founding clients regardless of their ages, provision of temporary shelter (Tanauna Kanlungan Center) for victims of sexual abuse and women in extremely difficult circumstances.

8.3.27 CITY HEALTH OFFICE

It is the office on in charge of health services. It formulates and implements policies, plan, programs and projects to promote health of the people in the local government unit concerned. The office advises the City Mayor and the sanggunian on matters pertaining to health; executes and enforces all laws, ordinances, and regulations relating to public health; recommends the prosecution of any violation of sanitary laws, ordinances, and regulations relating to public health; directs the sanitary inspection of all business establishments selling food item or providing accommodations in accordance with the Sanitation Code; conducts health

information campaigns and renders health intelligence services; coordinates with other government agencies and non-governmental organization involved in the promotion and delivery of health services; be in the frontline of the delivery of health services; particularly during and in the aftermath of man-made and natural disasters and calamities; and exercises such other powers and performs such other duties and functions as maybe prescribed by law or ordinance. Divisions under the City Health Office are as follows:

8.3.27.1 Medical Division

It implements plans and programs related to preventive and curative aspects of medicines; conducts health information/education campaigns; coordinates with other government and non-government services involved in the promotion and delivery of health services, performs consultation and treatment at barangay health services; performs minor surgery; holds free clinic to remote barangays; evaluates and assesses the field health services in relation to the accomplishment of established objectives; plans and evaluates basic needs of families and community; gives immunization; provides family planning services; provides food assistance to vulnerable group; conducts assessment of the city's nutrition situation; performs oral consultation and treatment; performs prenatal and post natal check-up, newborn screening; performs birth deliveries and newborn care; performs physical examinations, autopsies, and other medico-legal works; refers patients to secondary/tertiary hospitals; and participates in all DOH-CHO projects.

8.3.27.2 Environmental Sanitation Division

It executes and enforces all laws, ordinances, and regulations related to public health; recommends the prosecution of any violation of sanitary laws, ordinances and regulations; inspects food establishments; collects water samples for laboratory analysis; inspects public places and campaigns for iodized salt utilization; provides sanitary toilets to households without sanitary toilets; and issues sanitary permit, health certificates, transfer permit and exhumation permit

8.3.27.3 Laboratory and Drug Testing Division

It performs routine laboratory examinations, sputum examinations and drug testing.

8.3.27.4 Administrative Division

It is in charge of the administrative matters relating to personnel, clerical, and other administrative support. It disseminates information from received communication and memoranda; monitors their attendance, checks office payrolls, and vouchers; prepares communications, memoranda, travel orders, directive and other reports; schedules ambulance services; supervises the inventory of medicines and medical supplies and proper dispensing of medicines; responsible in repair and maintenance of CHO properties; provides administrative support on Philhealth programs and projects; in charge of the records management; and endorses seminars/convention of personnel.

8.3.27.5 Administrative Records Management Division

The Administrative Records Management Division formulates policies on record creation and maintenance and formulates policies on GSO's personnel scheduling. Sections under this division are as follows:

8.3.27.5.1 Personnel Scheduling and Detailing Section

The Personnel Scheduling and Detailing Section takes charge of the proper, effective, and efficient scheduling of GSO personnel especially the details of assignments; and coordinates with the Office of the HRM regarding personnel scheduling and detailing.

8.3.27.5.2 Records and Archives Section

The Records and Archives Section takes charge not only of the records of GSO but also of the City Government's records; and assign a place wherein records can be maintained.

8.3.27.5.3 Public Health Services Section

It implements plans and programs related to preventive and curative aspects of medicine; conducts health information/ education campaigns and render health intelligence services; coordinates with other government and non-government agencies involved in the promotion and delivery of health services; performs consultation and treatment at barangay health centers; performs minor surgery; holds free-clinic to remote barangays; evaluates and assesses the field health services in relation to accomplishment of established objectives; plans and evaluates the basic health needs of families and community; gives immunization; and distributes contraceptives to family planning acceptors; distributes food commodities to depressed barangays.

8.3.27.5.4 Dispensary Health Services Section

It performs the activities involving the preventive and curative aspects of medicines through consultation and treatments; performs physical examination, minor surgery, autopsies, and other medico-legal works; prescribes oral medicines and injections; performs dental services and laboratory work; supervises the pharmacist in the proper dispensing of drugs and medicines; refers patients to secondary/tertiary hospitals that needs vaginal examination, pre and post natal check-up; participates in all DOH-CHO projects; and does other related tasks.

8.3.28 LOCAL CIVIL REGISTRY OFFICE

This office develops Civil Registry plans, programs and projects which the Mayor is empowered to provide under the Local Government Code; coordinates with the National Statistics Office in conducting educational campaign or vital registration and assists in the preparation of demographic and other statistic of the Local Government Unit; and transmits to the Office of the Civil Registrar General within prescribed period duplicate copies of registered documents required by law and ordinance. The office takes charge of the dissemination of information regarding Civil Registration and ensures that Civil Registry documents are available for use by the general public.

Under the Local Civil Registry Office are Birth and Miscellaneous Section, Marriage Section, and Death Section:

8.3.28.1 Birth and Miscellaneous Section

This section preserves and keeps registry books and original records of birth and miscellaneous documents; and reviews and accepts all documents for registration such as live birth, court decrees, legal instruments, and foundlings.

8.3.28.2 Marriage Section

This section preserves and safe keeps Registry Book and original records of Marriage; reviews, accepts all documents to be registered.

8.3.28.3 Death Section

This section preserves and safe keeps registry book and original records of death; reviews, and accepts all documents to be registered and judicial decrees affecting the civil status of persons; and transcribes and enters immediately upon review/receipt of all documents.

8.4 LEGISLATIVE ADMINISTRATION

8.4.1 OFFICE OF THE CITY VICE MAYOR

The office of the vice-mayor headed by the elected Vice-mayor, acts as the presiding officer of the SangguniangPanlungsod and signs all warrants drawn on the city treasury for all expenditures appropriated for the operation of Sangguniang Panlungsod, subject to civil service law, and rules and regulations; appoints all officials and employees of the SangguniangPanlungsod; acts as acting city mayor in the absence of the latter; and exercises such other powers and perform such other duties and functions as may be prescribed by law or ordinance.

8.4.2 Office of the Sangguniang Panlungsod

The Office of the Sangguniang Panlungsod is composed of the Sangguniang Panlungsod members, particularly known as city councilors, and the President of the Association of Barangay Councils (ABCs) of the City. This office enacts ordinances, approves resolutions, and appropriates funds for the general welfare of the city and its inhabitants pursuant to Section 16 of the Local Government Code and exercises other powers and performs such other functions as may be prescribed by law or ordinance. There are two (2) sections under the Sangguniang Panglungsod.

8.4.2.1 Ordinance and Resolution Section

Monitors and evaluates proposed measures and requests referred to committees; assists committees in the conduct of committee/public hearings and prepares the committee reports relative thereto; drafts ordinances and resolutions; conducts research in aid of legislation; keeps files of ordinances and resolutions; reviews barangay ordinances, and provides legislative assistance to Sangguniang Barangays.

8.4.2.2 Journal and Minutes Section

Takes down minutes during Sangguniang Panlungsod sessions; keeps journals of the Sanggunian proceedings; keeps records of all minutes of sessions and committee/ public hearings; and keeps files of request of the Executive Department and other government or private individual.

ATTRIBUTES OF PERSONNEL

The basic characteristics of personnel in City Government of Tanauan.

1. Age Level

Table 8.1. Age Level

AGE BRACKET	PERMANENT	JOB ORDER	TOTAL
19-25	8	68	76
26-30	25	102	127
31-35	53	106	159
36-40	95	124	219
41-45	91	145	236
46-50	129	102	231
51-55	109	78	187
56-60	97	33	130
61 and above	55	43	98
TOTAL	662	801	1463

Table 8.1 shows that the large number of the city government personnel age belongs to the range of 41-45 years old with the total of two hundred thirty-six (236) employees while the younger employees range to 19-25 years old with seventy-six (76) employees.

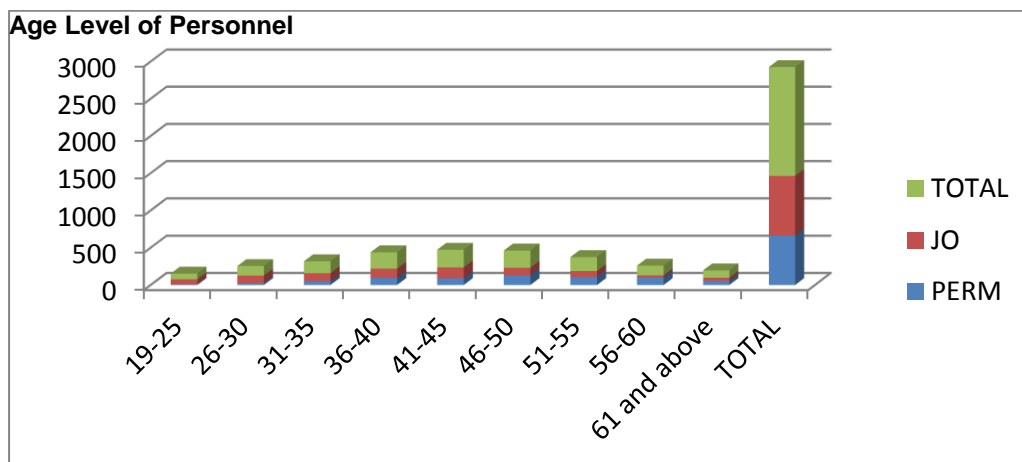


Figure 8.1. Age Comparison of Employees

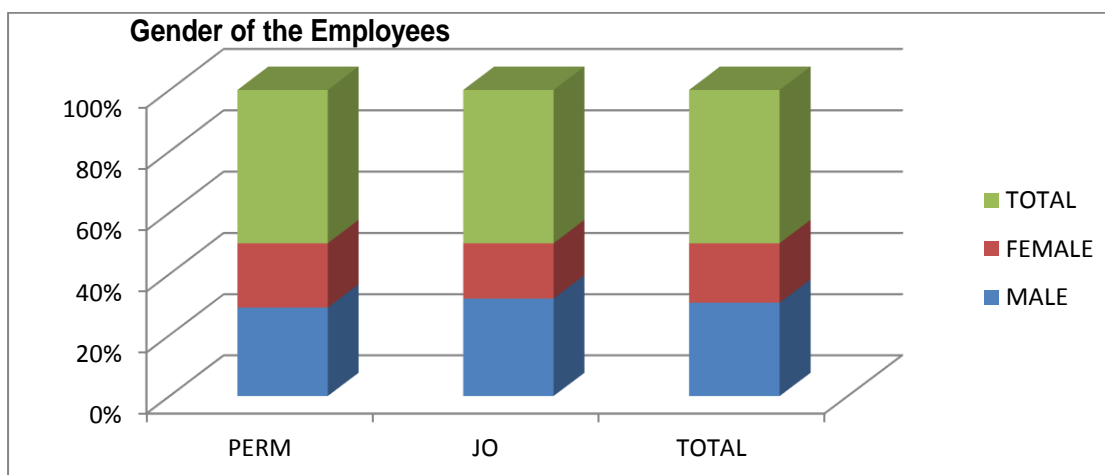
2. Gender of the Employees

Table 8.2. Gender of Employees

GENDER	PERMANENT	JOB ORDER	TOTAL
Male	384	512	896
Female	278	289	567
TOTAL	662	801	1463

Table 8.2 shows that the highest number of city government personnel gender constitute to male employees with the total of 896 including permanent and job order/ contract of service employees.

Figure 8.2. Distribution of Employees as to Gender

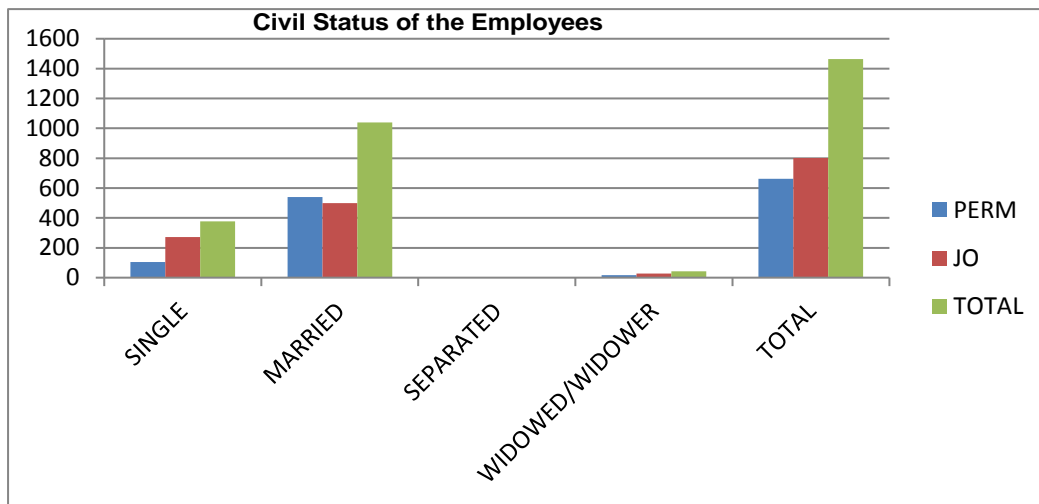


2. Civil Status of the Employees

Table 8.3 Civil Status of the Employees Source: HRMO (2016)

CIVIL STATUS	PERMANENT	JOB ORDER	TOTAL
Single	105	272	377
Married	540	500	1040
Separated	1	2	3
Widowed/ Widower	16	27	43
TOTAL	662	801	1463

Figure 8.3 Comparative Distribution of Civil Status of Employees



Of the 1463 employees, 71.08% (1040 employees) in all offices were married and the rest were distributed in the different civil statuses classification.

4. Educational Attainment of Employees

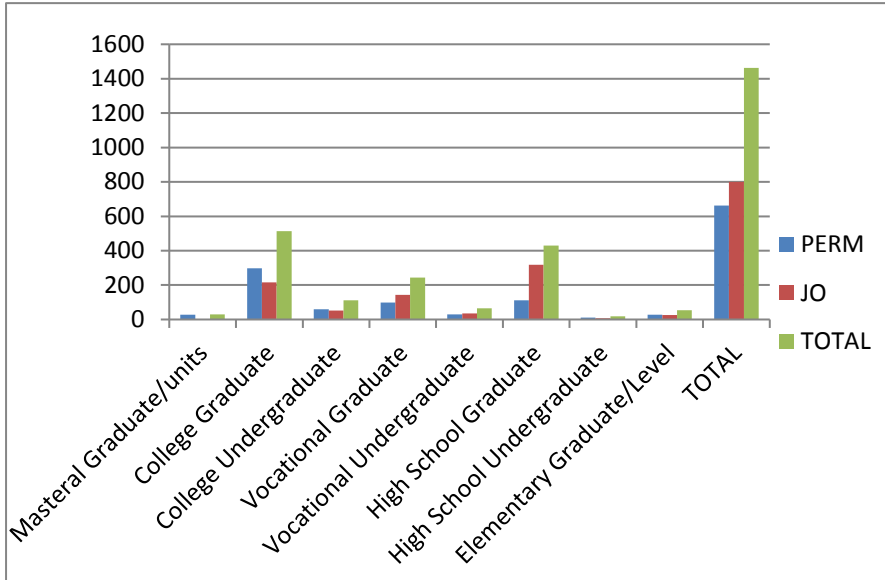
This table shows that the large numbers of the city government personnel are college graduates equivalent to a total of 513 constitutes to the 35.06 % of the total educational attainment. The level of educational attainment of those employed in the City Government of Tanauan determines the capability and competency of employees in the performance of their respective jobs.

Table 8.4. Comparative Distribution of Civil Status of Employee

EDUCATION	PERMANENT	JOB ORDER	TOTAL
Masteral Graduate/units	27	2	29
College Graduate	298	215	513
College Undergraduate	59	52	111
Vocational Graduate	99	144	243
Vocational Undergraduate	29	36	65
High School Graduate	111	319	430
High School Undergraduate	11	8	19
Elementary Graduate/Level	28	25	53
TOTAL	662	801	1463

Educational Attainment of Employees

Figure 8.4. Comparative Distribution of Civil Status of Employees



5 Years of Service

Table 8.5 Years in Service of Employees

Years in Service	Total No. of Employees
36-40years old	5
31-35years old	6
26-30years old	57
21-25years old	30
16-20years old	62
11-15years old	160
6-10years old	80
2-5 years old	172
1 month to 1 year	93
TOTAL as October, 2016	659

The table above shows the length of service of permanent employees. The greater number of personnel constitutes to employees, 2-5 years in service in the local government.

6. Civil Service Eligibilities

Table 8.6 Civil Service Eligibilities

ELIGIBILITY	PERMANENT	JOB ORDER	TOTAL
Professional	99	11	110
RA 1080	83	44	127
Sub- Professional	92	12	104
TESDA	24	4	28
Others	16	3	19
None	348	727	1075
TOTAL	662	801	1463

The table shows that the total eligibilities of employees 7.51% were career service professionals while 7.10% were career service sub-professionals.

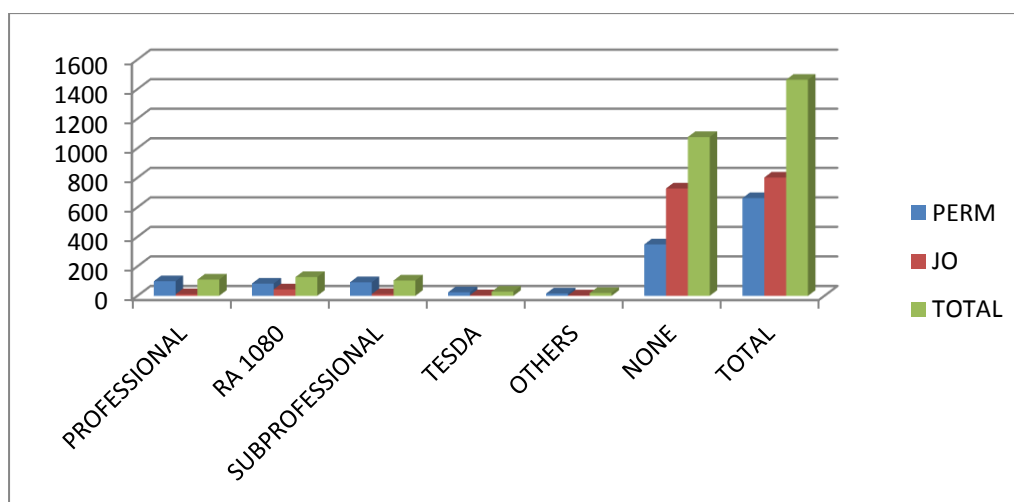
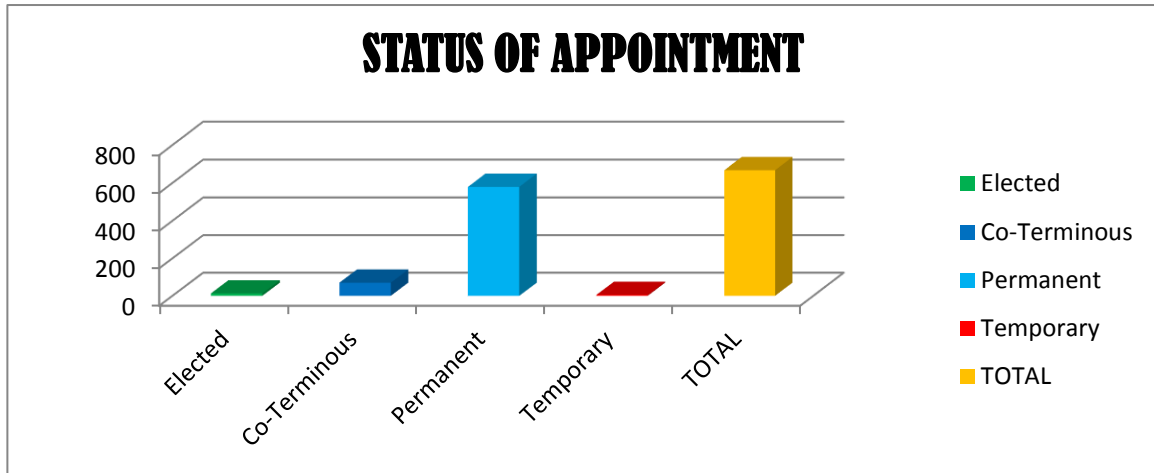


Figure 8.5 Civil Service Eligibilities of Employees

Table 8.7 Status of Employment

STATUS OF APPOINTMENT	FREQUENCY
Elected	13
Co-Terminous	70
Permanent	579
Temporary	5
TOTAL	667

Figure 8.6 Status of Appointment



The table shows that the total frequency of 86.80% constitutes to the permanent employees as status of appointment of employees while the lowest frequency comprises the temporary employees.

FISCAL ADMINISTRATION

Fiscal administration focuses on the monetary aspects of the operation. A brief discussion on some important aspects of the financial operations of the local government follows below:

Tanauan City Government's Income (Budget Year 2010-2014)

Table 8.8 Tanauan City Government's Income (Budget Year 2010-2014)

BUDGET YEAR	2010	2011	2012	2013	2014
INCOME					
Beginning Balance	159,342,724.76	253,885,175.78	165,364,446.19	232,205,621.70	118,752,455.34
Collection from taxpayers	285,178,642.31	253,180,970.11	381,135,610.56	430,014,114.45	279,212,409.58
Share from IRA	307,361,067.00	329,888,783.00	287,066,967.00	309,788,323.00	348,290,655.00
Interest Income	3,303,720.89	3,128,884.96	3,977,749.01	3,009,635.89	2,076,545.86
Misc. Operating and Service Income	24,375,802.67	15,888,164.42	42,681,947.58	31,139,128.12	36,804,542.49
Grand Total	779,561,957.63	855,971,978.27	880,226,720.34	1,006,156,823.16	785,136,608.27

Table 8.8 shows figures of the local government income for the Budget Year 2012-2016. Evidently, there is a continuous increase in the income of the city government from the year 2012-2013, the greater contributory item in the increase in most years is the collection from taxpayers. This is a good manifestation of effective tax collection system being adopted by the LGU. Moreover, this signifies the rise in the number of investors in the city. However, 2014 the realized income decreased by

28.15% equivalent to Php221,020,214.89 in amount. This could be explained by the decrease in collection from real property tax as an effect of the disaster (Typhoon Glenda) which distressed the constituents and their earnings on that year. Also, the

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City Treasury Office described the decrease in income as an effect on the rise in numbers of uncollected taxes which were paid in the year 2013.

EXPENDITURE BY OBJECTS (BY 2010-2015)

Table 8.9 Expenditure by Objects

PERIOD	BUDGET			PERCENT INCREASE OVER PREVIOUS YEARS
	REGULAR	SUPPLEMENTAL	TOTAL	
2010	560,020,37	66,017,677.00	626,038,056.00	
2011	650,000,000.00	129,254,831.00	779,254,831.00	24.47%
2012	650,000,000.00	96,673,024.00	746,673,024.00	19.27%
2013	700,000,000.00	280,345,622.00	980,345,622.00	31.30%
2014	855,000,000.00	660,197,244.43	1,515,197,244.43	54.56%
2015	885,780,000.00	253,326,742.19	1,139,106,742.19	24.82%

Table 8.10 LGU Expenditures 2010-2015

BUDGET YEAR	2010	2011	2012	2013	2014	2015
EXPENDITURE						
PS	149,822,499.10	178,059,881.93	210,228,636.74	236,352,551.90	258,117,457.95	255,502,870.82
MOOE	253,352,206.75	278,997,860.57	295,425,452.50	327,526,375.69	429,081,773.24	468,336,347.49
CO	34,326,729.25	50,440,818.59	45,094,735.88	155,298,143.41	134,990,853.50	132,864,758.04
Grand Total	437,501,435.10	507,498,561.09	550,748,825.12	719,177,071.00	822,190,084.69	856,703,976.35

The above table shows the expenditures of the LGU covering 2010-2015. As shown, there was also noticeable increase in spending in 2014 maintenance and other operating expenses (MOOE). Likewise, this attribute to passing of the typhoon and other calamities which has caused terrible effect on the different service facilities of the LGU.

BUDGETARY ALLOCATION, TANAUAN CITY, 2010-2014

Table 8.11. Budgetary Allocation

REVENUE SOURCE	2010	2011	2012	2013	2014	2015	AVERAGE ANNUAL GROWTH RATE
Tax Revenue	213,731,976.68	177,754,894.68	303,210,169.24	347,626,648.73	393,620,910.51	386,820,564.90	16%
Permits and Licenses	5,317,614.02	5,996,594.35	7,195,472.77	7,653,937.38	7,239,852.90	7,301,325.69	7%
Service Income	8,129,815.89	7,615,260.26	12,721,603.51	13,389,873.65	13,750,791.19	16,443,651.30	18%
Business Income	57,999,235.72	61,814,220.82	58,008,365.04	61,343,654.69	61,074,192.67	62,567,435.87	2%
Internal Revenue Allotment (IRA)	307,361,067.00	329,888,783.00	287,066,967.00	309,788,323.00	348,290,655.00	398,138,737.00	6%
Other General Income	27,679,523.56	19,017,049.38	46,659,696.59	35,202,722.64	39,767,313.61	38,550,221.51	20%
TOTAL	620,219,232.87	602,086,802.49	714,862,274.15	775,005,160.09	863,743,715.88	909,821,936.27	8%

Table 8.11 shows the budgetary allocation of Tanauan City Government (BY 2010-2015). The regular budget which is passed by each department and approved through the budget hearing has an increasing trend from the year 2010. This suggests that there is also an increasing need for a sustainable operation as there is an increase in population resulting to a need for more projects and programs to keep pace with the undeniable socio-economic growth of Tanauan City.

TANAUAN CITY’S PROJECTED INCOME

Table 8.12. Revenue Source, Tanauan City

REVENUE SOURCE	AVERAGE GROWTH RATE	2016	2017	2018	2019	2020
Tax Revenue	16%	376,120,000.00	425,220,000.00	425,220,000.00	425,220,000.00	425,220,000.00
Permits and Licenses	7%	7,230,000.00	7,230,000.00	7,230,000.00	7,230,000.00	7,230,000.00
Service Income	18%	16,800,000.00	17,600,000.00	17,600,000.00	17,600,000.00	17,600,000.00
Business Income	2%	36,100,000.00	40,100,000.00	40,100,000.00	40,100,000.00	40,100,000.00
Internal Revenue Allotment (IRA)	6%	438,000,000.00	495,267,060.00	495,267,060.00	495,267,060.00	495,267,060.00
Other General Income	20%	31,000,000.00	31,840,000.00	31,840,000.00	31,840,000.00	31,840,000.00
TOTAL	8%	905,250,000.00	1,017,257,060.00	1,017,257,060.00	1,017,257,060.00	1,017,257,060.00

8.5 ASSOCIATION OF BARANGAY CAPTAINS (ABC)

The “Liga ng mga Barangay” adheres to the principle that genuine and meaningful local autonomy can be best achieved through the process of decentralization and devolution of powers and authority from the national government to the local government units, particularly the barangay government, in order to make the barangays self-reliant and thus, it would become an effective partner in the attainment of national goals.

The “Liga ng mga Barangay” shall strive to attain the aspirations of all the barangays nationwide, that is to be treated as a decent, albeit small, unit of government , and to this end all delegates or representatives should act decency , dignity, honesty and sincerity;serve as a forum for which the member –barangay/ Liga Chapter may ventilate their sentiments , grievances and address issues and concerns; show solidarity with and among the individual member/ chapter; and endeavor to assist the member/ chapter towards their development and progress.

The primary purpose of this Liga ng mga Barangay is to determine the representation of the Liga ng mga Barangay in the local sanggunian and to ventilate, articulate, and crystallize issues affecting barangay government administration and through proper and legal means, secure the solutions thereto.

8.5.1 REPRESENTATION

Every barangay shall be represented by the Punong Barangay, or by the Liga Chapter President, as the case may be, with the right to vote and be voted upon, or in his/her temporary absence or temporary incapacity, by any member of the Sangguniang Barangay or by any other officer of the Liga Chaptyer concerned, duly elected for the purpose, who shall attend all meetings or deliberations called for by the different chapters of the Liga.

8.5.2 EX-OFFICIO MEMBERSHIP IN THE SANGGUNIAN

8.5.2.1 President of the Liga

The duly elected President of the Liga at the municipal, city and provincial chapters shall serve as Ex-Officio members of the Sangguniang Bayan, Sangguniang Panlungsod, and Sangguniang Panlalawigan, respectively.

8.5. 2.2 Ex-Officio Member

No Liga chapter President shall simultaneously be Ex- Officio member of two (2) sanggunians. When a component city or Municipal Liga Chapter President is elected as Provincial Liga President and assumes the position of Ex- Officio member of the Sangguniang Panlalawigan, the Vice-President of the Component City or Municipal Liga chapter shall automatically be the Ex-Officio member of the Sangguniang Panlungsod or Sangguniang Bayan, as the case may be, representing the Liga in the concerned Sanggunian. However, the Provincial Chapter President shall retain his Presidency in the same Component City or Municipal Liga Chapter, as the case may be.

Source: The Constitution and By-Laws of the Liga ng Mga Barangay sa Pilipinas

Chapter 9

LAND USE SECTOR

The land use plan for the City of Tanauan is synchronized with the Provincial Development Physical Framework Plan (PDPFP) where the city's spatial development strategy within the Ten-year period 2015-2025 combines balanced Industrial, Commercial, Tourism and Agri-industrial Development Mainstreaming Disaster Risk Reduction Management (DRRM) and Climate Change Adaptation (CCA). It covers the four (4) policy areas such as settlement, infrastructure, production and protection. The spatial development strategy is the general approach in utilizing the major land and water uses of the city. It is designed to strengthen the desired function/role of the city in the province, region and country as a whole.

In addition, the land uses of the National Capital Region (NCR), the present situation and foreseen effects to the City of Tanauan, and the land uses of the adjoining cities and municipalities were considered in the said strategy. The carrying capacity of the NCR, as validated by the indicators of population capacity of a community is reaching beyond limit. The possibility of environmental collapse could happen, if no measure or corrective action will be taken by the national government. The land area of Metro Manila can no longer support the basic needs and services required by its inhabitants, thus decongestion of the area needs to be prioritized.

On the other hand, the Municipality of Talisay and Laurel, the cities of Lipa and Tagaytay due to its geographical, physical and topographical conditions and limitations were restricted to allocate lands for industrial uses, thus, Tanauan City absorbs the said function role.

Likewise, the strategy shall be proposed in consonance with the objectives of the land and water use plan of efficiently utilizing the city resources and effectively promoting equitable distribution of socio-economic services and facilities.

The ensuing topic aim to provide a clearer view on Tanauan Land Use Sector.

9.1 Existing General Land Use

The table below is the existing land use of Tanauan as of 2015. The determination of the actual area was done by adopting the Barangay Boundaries as determined by CERTEZA Info Sys, Inc. Its survey was approved by the Land Management Services, DENR IV-A. It was overlaid on the Google Earth satellite image wherein the shots for Poblacion was taken on March 8, 2015, while Rural Areas shots were taken on November 3, 2014.

Considering the importance nowadays of being prepared from all forms of disasters, the proposed General Land Use Plan for Tanauan City already mainstream Disaster Risk Reduction and Management (DRRM) and Climate Change Adaptation (CCA).

Table 9.1 Detailed Existing Land Use

	BARANGAY	LAND USE	Square Meter (sqm)
1	ALTURA BATA	Residential	74,237.00
		Institutional	937.00
		Agricultural	1,545,820.35
		Park and Recreational	3,510.00
		Cemetery/Memorial Park	21,848.00
		TOTAL	1,646,352.35
2	ALTURA MATANDA	Residential	42,300.00
		Institutional	860.00
		Agricultural	966,439.40
		TOTAL	1,009,599.40
3	ALTURA SOUTH	Residential	66,885.00
		Institutional	1,287.00
		Agricultural	953,566.91
		TOTAL	1,021,738.91
4	AMBULONG	Residential	374,082.00
		Institutional	59,241.00
		Agricultural	1,745,286.70

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		Commercial	5,143.00
		TOTAL	2,183,752.70
5	BAGBAG	Residential	594,490.00
		Commercial	8,141.00
		Institutional	6,641.00
		Agricultural	5,087,365.72
		TOTAL	5,696,637.72
6	BAGUMBAYAN	Residential	612,864.00
		Institutional	4,745.00
		Agricultural	1,743,951.72
		Agri-Industrial	2,277.00
		TOTAL	2,363,837.72
7	BALELE	Residential	832,491.00
		Park and Recreational	5,585.00
		Institutional	16,993.00
		Agricultural	5,346,900.77
		Agri-Industrial	2,255.00
		TOTAL	6,204,224.77
8	BAÑADERO	Residential	334,706.00
		Institutional	3,316.00
		Agricultural	1,553,081.72
		Commercial	1,634.00
		TOTAL	1,892,737.72
9	BANJO EAST	Residential	182,108.00
		Agri-Industrial	57,656.00
		Institutional	6,503.00
		Agricultural	1,212,870.72
		TOTAL	1,459,137.72
10	BANJO WEST	Residential	183,574.00
		Institutional	11,309.00
		Agricultural	2,869,209.72
		Agri-Industrial	20,345.00
		TOTAL	3,084,437.72
11	BILOG BILOG	Residential	336,407.00
		Institutional	10,691.00
		Agricultural	3,685,982.08
		Agri-Industrial	31,278.00
		TOTAL	4,064,358.08
12	BOOT	Residential	673,699.00
		Institutional	8,610.00
		Agricultural	3,171,928.72
		TOTAL	3,854,237.72
13	CALE	Residential	244,161.00
		Institutional	1,576.00

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		Agricultural	3,414,650.53
		TOTAL	3,660,387.53
14	DARASA	Commercial	166,954.00
		Residential	1,496,069.00
		Institutional	81,018.00
		Agricultural	1,058,006.72
		Agri-Industrial	13,269.00
		Park and Recreational	457,421.00
		TOTAL	3,272,737.72
15	GONZALES	Residential	193,194.00
		Institutional	3,443.00
		Commercial	14,469.00
		Agricultural	1,671,731.72
		TOTAL	1,882,837.72
16	HIDALGO	Institutional	2,450.00
		Residential	70,407.00
		Agricultural	900,173.36
		TOTAL	973,030.36
17	JANOPOL OCCIDENTAL	Agricultural	2,240,938.36
		Residential	206,199.00
		Institutional	3,817.00
		TOTAL	2,450,954.36
18	JANOPOL ORIENTAL	Agricultural	2,642,088.03
		Institutional	7,232.00
		Residential	229,101.00
		Agri-Industrial	20,604.00
		TOTAL	2,899,025.03
19	LAUREL	Agricultural	2,529,746.72
		Institutional	5,486.00
		Residential	156,605.00
		TOTAL	2,691,837.72
20	LUYOS	Residential	135,482.00
		Institutional	10,486.00
		Agricultural	1,683,738.72
		Agri-Industrial	2,531.00
		TOTAL	1,832,237.72
21	MABINI	Residential	239,126.00
		Institutional	11,245.00
		Agricultural	1,580,825.85
		TOTAL	1,831,196.85
22	MALAKING PULO	Residential	296,637.00
		Institutional	9,341.00
		Agricultural	5,107,160.72

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		Cemetery/Memorial Park	22,799.00
		TOTAL	5,435,937.72
23	MARIA PAZ	Residential	174,018.00
		Institutional	4,142.00
		Agricultural	1,440,497.47
		Eco Tourism	585,585.25
		Forest Land	751,295.00
		TOTAL	2,955,537.72
24	MAUGAT	Residential	139,302.00
		Institutional	6,800.00
		Agricultural	2,030,790.51
		Agri-Industrial	49,985.00
		TOTAL	2,226,877.51
25	MONTAÑA	Residential	115,222.00
		Institutional	3,969.00
		Agricultural	821,946.72
		TOTAL	941,137.72
26	NATATAS	Agricultural	3,092,558.35
		Commercial	30,237.00
		Residential	545,652.00
		Industrial	22,504.00
		Cemetery/Memorial Park	45,879.00
		Institutional	11,030.00
		TOTAL	3,747,860.35
27	PAGASPAS	Agricultural	2,336,723.72
		Residential	91,359.00
		Commercial	23,164.00
		Institutional	5,154.00
		Industrial	660,637.00
		TOTAL	3,117,037.72
28	PANTAY BATA	Agricultural	1,775,461.72
		Industrial	1,168,535.00
		Residential	155,172.00
		Institutional	7,369.00
		TOTAL	3,106,537.72
29	PANTAY MATANDA	Agricultural	2,315,988.72
		Residential	247,569.00
		Institutional	11,980.00
		TOTAL	2,575,537.72
30	POBLACION 1	Vacant Lot	28,659.00
		Residential	110,558.00
		Commercial	11,475.00
		Park and Recreational	3,150.00

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		Institutional	45,958.00
		TOTAL	199,800.00
31	POBLACION 2	Residential	88,131.00
		Park and Recreational	1,584.00
		Commercial	21,791.00
		Institutional	35,316.00
		Vacant Lot	23,578.00
		TOTAL	170,400.00
32	POBLACION 3	Vacant Lot	125,245.00
		Residential	216,863.00
		Commercial	44,456.00
		Institutional	27,236.00
		TOTAL	413,800.00
33	POBLACION 4	Vacant Lot	91,201.00
		Residential	126,000.00
		Commercial	93,003.00
		Institutional	18,496.00
		TOTAL	328,700.00
34	POBLACION 5	Commercial	15,602.00
		Residential	70,845.05
		Institutional	665.00
		TOTAL	87,112.05
35	POBLACION 6	Institutional	3,597.00
		Residential	177,471.00
		Commercial	22,532.00
		TOTAL	203,600.00
36	POBLACION 7	Commercial	79,856.00
		Residential	154,679.00
		Institutional	3,170.00
		Vacant Lot	127,616.94
		TOTAL	365,321.94
37	SALA	Residential	146,342.00
		Institutional	5,217.00
		Agricultural	2,009,415.87
		Commercial	7,858.00
		TOTAL	2,168,832.87
38	SAMBAT	Cemetery/Memorial Park	64,822.00
		Residential	254,531.00
		Commercial	34,237.00
		Agri-Industrial	31,828.00
		Agricultural	491,105.72
		Institutional	11,614.00
TOTAL	888,137.72		

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39	SAN JOSE	Residential	77,879.00
		Institutional	3,858.00
		Agricultural	1,189,858.72
		Commercial	1,242.00
		TOTAL	1,272,837.72
40	SANTOL	Residential	48,153.00
		Institutional	2,712.00
		Agricultural	989,372.72
		TOTAL	1,040,237.72
41	SANTOR	Cemetery/Memorial Park	16,370.00
		Residential	485,287.00
		Commercial	44,253.00
		Institutional	17,137.00
		Agricultural	2,560,191.41
		Industrial	65,185.00
TOTAL	3,188,423.41		
42	SULPOC	Residential	550,627.00
		Institutional	2,959.00
		Agricultural	3,447,774.72
		Agri-Industrial	377.00
		TOTAL	4,001,737.72
43	SUPLANG	Residential	821,333.00
		Institutional	4,377.00
		Agricultural	1,469,912.72
		Park and Recreational	1,617.00
		Commercial	898.00
		TOTAL	2,298,137.72
44	TALAGA	Residential	402,293.00
		Institutional	15,976.00
		Agricultural	3,945,958.76
		Commercial	14,903.00
		Park and Recreational	12,694.00
		Agri-Industrial	34,293.00
		TOTAL	4,426,117.76
45	TINURIK	Park and Recreational	8,246.00
		Residential	384,118.00
		Institutional	17,031.00
		Agricultural	1,862,781.86
		Agri-Industrial	26,007.00
		TOTAL	2,298,183.86
46	TRAPICHE	Residential	401,507.00
		Institutional	36,631.00
		Agricultural	1,887,272.55

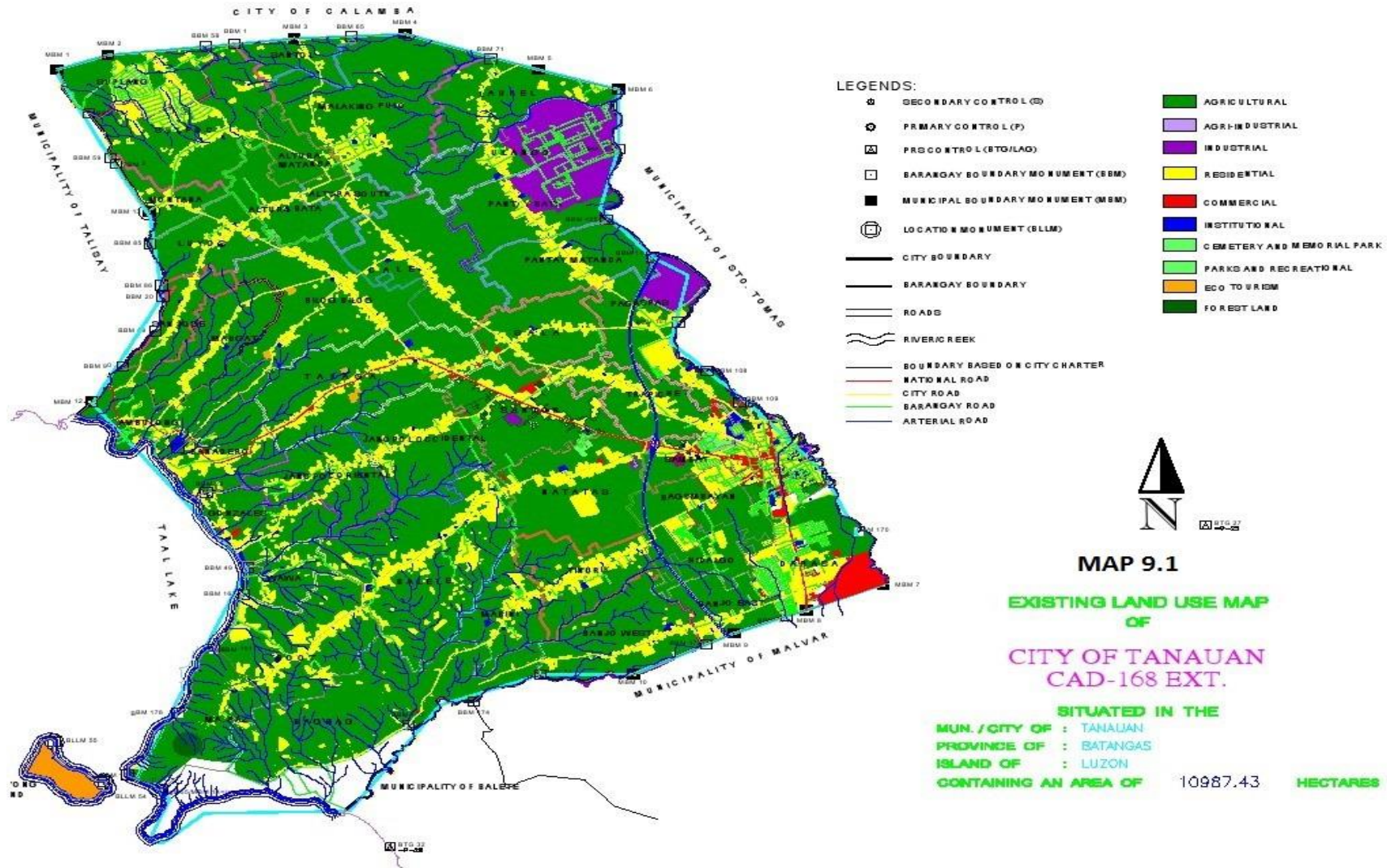
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		Park and Recreational	694.00
		Cemetery/Memorial Park	64,222.00
		Industrial	1,408.00
		Agri-Industrial	3,270.00
		Commercial	16,987.00
		TOTAL	2,411,991.55
47	ULANGO	Industrial	1,625,706.00
		Agricultural	1,135,419.72
		Residential	130,742.00
		Institutional	8,070.00
		TOTAL	2,899,937.72
48	WAWA	Residential	79,552.00
		Institutional	6,321.00
		Agricultural	1,043,364.72
		TOTAL	1,129,237.72

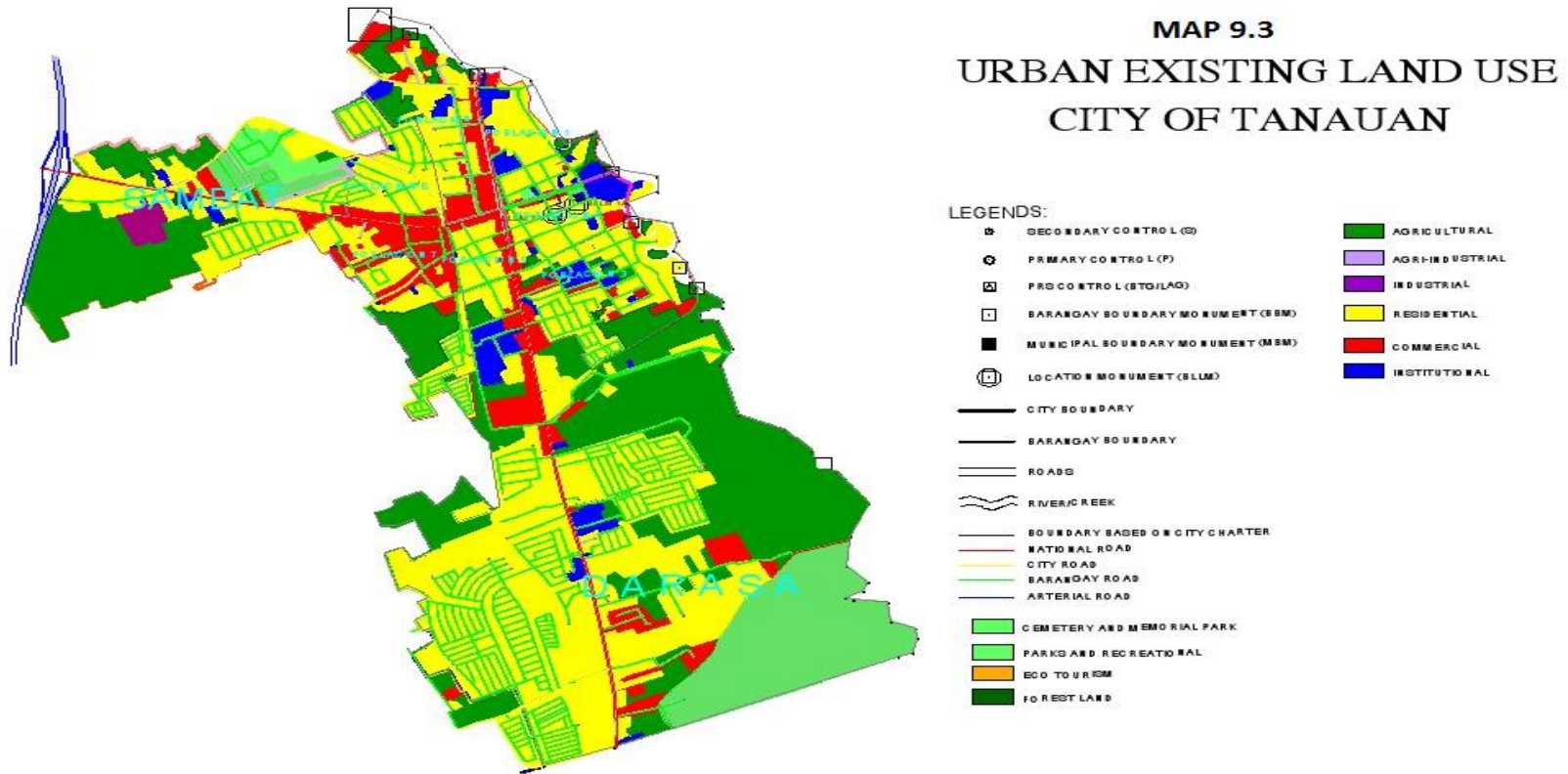
Table 9.2 Summary of Existing Land Use

	LAND USE	Square Meter (sqm)	Percentage
1	AGRICULTURAL	46,630,651.13	42.44%
	CROPS	20,425,066.33	18.59%
	ORCHARD	21,502,144.50	19.57%
	PASTURES		0.00%
2	AGRI-INDUSTRIAL	295,975.00	0.27%
3	CEMETERY/MEMORIAL PARK	235,940.00	0.21%
4	COMMERCIAL	1,055,134.94	0.96%
5	INDUSTRIAL	3,543,975	3.23%
6	INSTITUTIONAL	584,012.00	0.53%
7	PARKS AND RECREATIONAL	494,501	0.45%
8	RESIDENTIAL	9,530,779.05	8.67%
	ECONOMIC HOUSING	4,239,250.00	3.86%
9	ECO-TOURISM	585,585.25	0.53%
10	FOREST LAND	127,295.00	0.12%
	FOREST RESERVE	624,000.00	0.57%
	FOREST BUFFER	(124,295.00)	
	NATIONAL PARK	(56,481,293.00)	
	TOTAL	109,874,309.20	100.00%

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9.1.1 Urban Core Zones (Central Business Districts or CBD)

The Comprehensive Land Use Plan (2004-2014) designated three (3) Central Business Districts (CBD) such as Poblacion, Altura and Balele. Tanauan City proper or the Poblacion serves as nuclei of the City and act as the lead CBD. All CBDs shall function as administrative and coordinating centers, the major interactive nodes for commerce and trade.

The City proper that serves as the Urban Core Zone describes the boundaries of the General Residential, Commercial and Institutional Districts. Due to high urbanization level, Darasa and Sambat, the adjoining Barangays of Poblacion, are included in Poblacion Central Business District, comprising a total land area is 592.96 hectares. The dominant land utilization is residential with a total area of 261.51 hectares or 45.45 % share. The development or influx of planned of residential subdivisions particularly in Barangay Darasa contributed to the conversion of the land use from agricultural into residential.

The Commercial area with a total of 48.99 hectares or 8.26 % share including Waltermart in Barangay Darasa was formerly utilized for agricultural purposes but was now converted into a mall. Medium scale retail stores and opening of different branches of banks and well known fast foods, transformed the residential areas along the national highway into commercial uses. In addition, parks and recreational areas utilize 46.22 hectares or 7.79%. It includes the operation of Metro Turf in Barangay Darasa containing an area of 27.52 hectares. Moreover, the institutional area utilizes 22.71 hectares equivalent to 3.83 % of the total area. The First Asia Institute of Technology & Humanities (FAITH) and National Teachers College (NTC) Branch in Barangay Sambat are the new addition to the institutional areas. However, cemeteries in the urban, the city proper remains the same with a total area of 6.48 hectares or 1.09 %.

The on-going construction of the New City Hall, located in Barangay Natatas will be finished by the middle of 2016 and by 2017, the local government offices and operations will be transferred to the said building. In effect, this condition will greatly change the administrative and coordinating centers of the city. The New

City Hall site is located within the urban expansion zone, being along the Tanauan – Talisay – Tagaytay National Highway.

Another ongoing project with a foreseen impact in the future land use of the city is the construction of the Triple “AAA” Slaughterhouse and Bagsakan or the Wholesale Market of agricultural products in the 3.7 hectares, newly acquired property of the City Government situated in Barangay Sambat, near the Southern Tagalog Arterial Road (STAR). The Wholesale Market makes Tanauan as the major trading center of Batangas and adjacent municipalities, cities and provinces. In addition to fruits and vegetables and other farm produce that are being traded in bagsakan and the operation of the Triple “AAA” Slaughterhouse, the city will become the major trading center of meat and meat-by products.

Balele Central Business District however responded too slowly. The sixteen (16) hectares residential subdivision that was approved on 2015, is the only remarkable development in the area.

Land banking by well-known real estate developer was noted in Altura Central Business District. However, there is still no significant change in land use in that area except for an orphanage or home for the aged and a cemetery. No remarkable infrastructure development was realized on the area as a Central Business District (CBD) that should function as an administrative and coordinating center and an interactive node of trade and industry, after the 10-year land use planning period. Topographically the said area is the lowest elevation of Tanauan City and flooding is a major problem being experience in the area during rainy season.

9.1.2 Socialized Housing Zones (SHZ)

In terms of Socialized Housing Zones (SHZ), the locations of the City’s Socialized Housing Projects for the urban poor, informal settlers and migrants are the identified portions of Barangay Hidalgo, Pagaspas, Cale, Sala and Balele. About 1.2 hectares each from those Barangays where allocated for the said purpose. However, within the span of 10-year planning period, no socialized housing

project initiated by neither the national nor the city government has been implemented.

In order to support the realization of inclusive development and decongestion of the National Capital Region, the national government will revive and rehabilitate the existing Philippine National Rail Way from the Province of Tarlac to the Province of Sorsogon. The proposed North South Rail Project will branch from Calamba to Batangas City, thus, will traverse Tanauan rail road section, passing through the Barangays of Poblacion 4,5,7, and Darasa. The said project of the National Government will commence by 2017 and expect to be operational by 2021. At present, there are informal settlers living within the 30-meter wide Road Right of Way (ROW) of the PNR. This development requires the city government to identify the relocation site for socialized housing project intended for families who will be affected, prior to the project implementation.

As of the latest census there are 1,781 families that will be affected and need to be relocated. With a density of 100 housing units per hectare, the land area requirement will be eighteen (18) hectares. An additional two (2) hectares shall be added as reserve for other requirement of the communities such as school and religious institutions, thus, the total land area required for socialized housing will be twenty (20) hectares.

Shelter and housing program must also be crafted to address the issues of families living in dangerous areas, such those that are identified as rated high and moderate in landslide and flood susceptibility. Relocation site must be identified for those families living along the riverside of San Juan River located in Poblacion and Darasa areas. CBMS 2014 data revealed that there are 125 households living along the riverside of Poblacions I, II, and III and Barangay Darasa, it is to be noted that most of them are migrants whose income are below the poverty line. Evacuation of those families becomes routinary in times of typhoon and calamities. However, there must be simultaneous comprehensive program for the river bank rehabilitation that will protect the area for human alienation and a relocation plan for the informal settlers in the area.

Moreover, there are different sectors that will be affected by global warming; among them are fishermen and farmers. For the fishermen, aside from livelihood, housing is a concern to be addressed because settlement will be adversely affected in the event of extreme climate that may hit the area.

In implementing infrastructure development, which includes new road opening, road widening and improving drainage system and other important facilities to sustain the rapid growth and development of the city affects dwelling units of some families that are encroached with government properties, and private properties that are subject for development.

The change in land use and ownership of big land holdings that are not covered by Comprehensive Agrarian Reform Law will have an impact to the tenants and farm workers whose houses are built in the same lands they are tilling. Tenants who did not obtain the security of tenure are at risk of losing place and area where they live.

Abovementioned facts and situations are the basis for planning socialized housing projects in the city. Government alone cannot address the housing requirements brought by the development expected to happen in the city in the near future. Strong partnership with private sector in real estate business providing settlement and financing institution should be established to arrest the housing problem and to sustain the development.

As per record of the City Planning and Development Office there are 13 Subdivision projects that has been approved from 2011 up to present and Development Permit granted by the authorities. The total number of housing units is 4,972 and 1,468 of which are Socialized Housing. The list of the subdivisions is shown below:

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Table 9.3 List of Subdivisions with Socialized Housing Units

DATE APPROVED	NAME OF SUBIVISION	LOCATION	NO. OF ECONOMIC HOUSING UNITS	NO. OF SOCIALIZED HOUSING UNITS	TOTAL NO. OF HOUSING UNITS
Dec. 16, 2011	Amare Homes	Darasa	127		127
Dec. 16, 2011	Sandia Home Subd.	Cale	772		772
Aug. 28, 2012	Ciudad Victoria Phase I	Darasa	317		317
Oct. 4, 2012	St. Matthews	Darasa		353	353
Feb. 5, 2013	Ciudad Victoria Phase II	Darasa		70	70
May 13, 2014	Deca Homes Subdivision	Balele	814	733	1,547
Aug. 7, 2014	Primavera Subd. Phase II	Darasa	451		451
Dec. 22, 2014	Tanauan Hillsboro	Santor	129		129
Feb. 26, 2016	MCDC Ecoverde Homes	Banjo East	511		511
April 27, 2016	South Savana Courtyard	Janopol Oriental		312	312
June 20, 2016	Bakers Home	Darasa	22		22
Sept. 19, 2016	Grand View Heights	Sambat	255		255
April 4, 2017	Mabini Hills	Talaga	106		106
TOTAL			3,504	1,468	4,972

Compliance of Subdivision developers to the provision of Urban Development and Housing Law, providing decent shelter for the poor are evident in the data provided. However, the target beneficiaries are reluctant to avail those housing units for different reasons, one of which is that they do not know how to access the financial packages intended for them. With this problem, the local government should make an intervention, and a certain office should be tasked to address such problem and include in the Shelter Plan of the City of Tanauan.

9.1.3 Industrial Zones (IZ)

Barangays Laurel, Ulango, Pantay Bata, Pantay Matanda and Pagaspas are under Industrial Zones (IZ). The current/actual land area being utilized for industrial use is approximately 345.48 hectares.

These areas are intended sites for light to medium industries, and serve as manufacturing and processing centers. Out of 752.270 hectares designated for this purpose, the First Philippine Industrial Park, a PEZA regulated industrial park, developed more or less 300 hectares of land into industrial subdivision. Companies operating inside the Industrial Subdivision are: B/E Aerospace, Batangas Brothers, Inc., Canon Business Machines Phils. Inc, ELSOL, First Philec Inc, Murata, POSCO, Sunpower Philippine Manufacturing Ltd., PMFTC, Inc., Honda Phils. Inc., I Steel Inc., NEC TOKIN Phils. Nissin Brake Phils. Inc., WCL Ventures Development Inc., Citizen Machinery Phils. Inc., Eaton Cooper, EHS Lens Inc., Sanko Gosei Phils. Inc., Shimano, Sonion Manufacturing Plants, Union Autoparts Manufacturing Philippines, Inc. (UAM), and Nestle Phils. Inc. Due to the influx of multi-national locators, the FPIP is in process of expanding their coverage to accommodate the required land area.

Another Industrial Park, the Phil. Town Industrial Estate which covers 66.06 hectares of land has been recently acquired by FPIP. Companies operating inside the Industrial Subdivision are: Taiyo Nippon and Uni-President.

Data Land Industrial Park, located at Barangay Santor which covers 16.25 hectares of land which produces Pre-Cast Concrete Panels has been one of the latest Companies in the City.

9.1.4 Agricultural Zones (AGZ)

The Agricultural Zones contain productive and fertile lands and currently serve as croplands and sites for livestock and poultry production. These are areas classified under the Strategic Agricultural and Fisheries Development Zone (SAFDZ). The total land area of Tanauan intended for Agricultural Zone is

8,791.63 hectares. The dominant crops planted on agricultural land with flat terrain are sugar cane and corn as well as crop with high cultivation requirements. While hilly and rolling are planted with perennial crops such as Malunggay, high value fruit trees such as, Lanzones, Rambutan and citrus. Using new farming system, hilly areas are being planted with cash crop with less cultivation, avoiding the danger of soil erosion. Trellis are very popular with farmers in hilly and rolling barangays planting Amplaya and other vine vegetables. This reduce over cultivation of farm land with high return of investment.

On the other hand, the total area of Municipal Water of Tanauan in Taal Lake as provided by NAMRIA is 2,817.85 hectares. As zoned by the Protected Area Management Board (PAMB) of Taal Volcano Protected Landscape (TVPL), the Municipal Water of Tanauan is designated for tourism utilization. This is adopted as provided in the Unified Rules and Regulations for fisheries of TVPL. Construction of fish cages for aquaculture of fish species like Bangus, and Tilapia is prohibited, only open fishing is allowed. The transformation coastal barangays from fishing communities into a tourism area reduce the number of people who are engaged in fishing activities. Only the coastal area of Barangay Maria Paz popularly known as Sitio Mahabang Buhangin remain as the fishing community in the City of Tanauan. Fish nets are the only tools allowed to be used to catch Tilapia, Tawilis and another species.

9.1.5 Rural Built-up Zone (RBZ)

The designated Rural Built-up Zones (RBZ) are areas in the barangays located within 200 meters from the center of the road and 100meters from the center of sitio [farm to market road]. In the early days prior to the enactment of the City's Zoning Ordinance, road side areas are most preferred by Tanaueños to build their houses due to accessibility. This makes these residential areas complimentary in setting up their businesses. Permits and clearances issued indicate that in these areas the land use rapidly changed from agricultural to other uses.

The built-up areas of 1,693.6 hectares constitute the rural built-up areas distributed among the thirty-nine (39) Barangays outside Poblacion. These are clusters of at least ten (10) structures or any activity occupying a sizeable land area in every Barangay. The structure includes residential, institutional, commercial, cemeteries and recreational. The average rural built-up area per barangay is about 43.43 hectares. These areas are estimated to be within a radius of 500 meters from the barangay hall, chapel, school or basketball court. With a linear pattern of development, built-up areas extended about 100 meters on both sides of all existing roads whether national, provincial, municipal and barangay.

9.1.6 Urban Expansion Zone (UEZ)

Urban Expansion Zones (UEZ) are areas on both sides of the National Road extending about 500 meters from the center of the road. Areas on both sides of highways connecting Tanauan to Talisay and Tanauan to Malvar that fall within 500 meters from the center of these highways are classified as UEZ. Land area on both sides of the Southern Tagalog Arterial Road (STAR) covering Sto. Tomas to Malvar boundaries within 1 kilometer from the center of the road are likewise designated as UEZ.

Likewise, Jose P. Laurel Highway which is part of Manila –Batangas Road is the first major access road in the City linking Tanauan City to Manila, Lipa, Batangas City and to other center of commerce and trade. The geographic and topographic setting made the area along the J.P. Laurel highway the recipient of urban development. In Barangay Darasa, with its proximity to the town proper and where J.P. Laurel Highway passes through, land that was formerly utilized for livestock and agricultural activities were transformed into residential subdivisions. Rapid development of the area is attributed primarily to its accessibility, characteristics and features suitable for housing development. It is also the safest barangay for residential based on sieve mapping.

Currently, the areas on both sides of Tanauan – Talisay Road, designated as Urban Expansion Zone, are partly developed, while others are utilized for agricultural use. However, the on-going construction of City Hall at Barangay Natatas is expected to trigger the rapid urbanization on these sites. The urbanization of barangays near the City Hall site are expected to boost the development of business establishments along both sides of the road from the public market area going to the STAR Toll Way. This will also enhance proximity of the area to Tanauan City proper, in terms of access. At present, the constraint of limited access makes land area along the sides of the Star Toll Way remain agricultural.

9.1.7 Eco-Tourism Zone (ETZ)

The six coastal Barangays along Taal Lake: Ambulong, Bañadero, Gonzalez, Wawa, Boot and Maria Paz are designated as Eco- Tourism Zone. These Barangays are part of Taal Volcano Protected Landscape (TVPL), proclaimed by President Fidel V. Ramos by virtue of Presidential Proclamation 923, as part of the National Integrated Protected Area System (NIPAS). It is a site to demonstrate the harmonious and perpetual existence of native living as well as non-living elements of ecosystem. The unique biodiversity and features of these areas are the basis for the issuance of the Proclamation. Thus, the area is highly protected non-conforming development. To safeguard and serve its purpose, the City Government designated and zoned these barangays into Eco-Tourism Zones. Hence, it will be utilized mainly for activities focused on nature study and appreciations, refraining from disturbance of the landscape and natural ecosystems.

9.1.8 Residential Zone (RZ)

Residential zone are areas within the city principally for dwelling and housing purposes. Next to agricultural zone in terms of range, Residential Zone covers about 3173.761 hectares. As evidenced by the increase in population, Tanauan City is considered one of the most livable places within the region and can even be compared with other highly urbanized cities in CALABARZON. This may be associated with the availability of basic utilities such as; water, electricity, telecommunication services which add comfort to daily life and the ease of access to various commercial establishments. Added to this are the job opportunities in the city and nearby municipalities where multinational industries, locators and investor do business.

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The table below is the recent inventory of residential subdivisions in different barangays.

Table 9.4 Residential Subdivisions as of Year 2015

NAME OF SUBDIVISION	TYPE	BARANGAY	AREA (Has.)
Roman Ville Subdivision	R-2	Darasa	5.58
Ramonita Country Homes	R-3	Darasa	6.20
St. Joseph Subdivision 1 & 2	R-2	Darasa	7.9 / 2.4
Colbella Homes	R-3	Darasa	15.30
San Bernardo Village	R-2	Darasa	4.00
San Sebastian Village	R-2	Poblacion III	5.30
Darasa Compound	R-3	Darasa	3.10
Soledad Park	R-2	Darasa	6.57
Spring Homes Subdivision	R-3	Darasa	
Pilar Ville Subdivision	R-3	Darasa	7.70
Primavera Homes	R-2	Darasa	6.70
Blue Isle Subdivision	R-3	Darasa	3.00
Cambridge Place	R-2	Darasa	30.80
Kriscel Subdivision	R-3	Poblacion III	1.40
Mt. View Subdivision	R-2	Poblacion III	24.60
Celeste Subdivision	R-3	Poblacion III	1.00
Yatco Subdivision	R-2	Poblacion VII	0.92
Tapia Subdivision	R-2	Poblacion VI	5.20
Oltap Subdivision	R-2	Poblacion VI	2.90
Gloria Compound Subdivision	R-2	Poblacion VI	4.90
Teresa Subdivision	R-2	Poblacion VI	3.00
Laros Subdivision	R-2	Poblacion VII	0.92
Maligaya Subdivision	R-2	Sambat	7.90
Reaville Subdivision	R-3	Poblacion VII	6.90
Kaisahan Village	R-3	Bagumbayan	8.00
Bagumbayan Subdivision	R-2	Bagumbayan	9.30
Maryville Subdivision	R-3	Bagumbayan	3.50
Munting Paraiso	R-3	Mabini	1.10
Josefa Subdivision	R-2	Sambat	6.60
Saratoga Hills	R-1	Suplang	149.90
Plantacion Hills	R-1	Suplang	
Gentle Green Subdivision	R-1	Trapiche	12.40
Plantacion del Sol	R-1	Pagaspas	23.30
Villa Corazon	R-3	Santor	2.00
Sandia Homes	R-3	Cale	8.7953
Dona Narcisa Subdivision	R-2	Hidalgo	3.90
Amare Homes	R-2	Darasa	1.1655
Ciudad Victoria	R-2	Darasa	3.1789
Citta Maria	R-2	Darasa	4.40

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St. Matthews	R-2	Darasa	3.4752
Hillsboro Subdivision	R-1	Santor	4.8778
Primavera Subd. Phase II	R-2	Darasa	7.2971
Deca Homes Subdivision	R-3	Balele	15.8187
South Savana Courtyard	R-3	Janopol Oriental	3.1051
MCDC Ecoverde Homes	R-2	Banjo East	6.312
Bakers Home	R-3	Darasa	0.2027
Grand View Heights	R-2	Sambat	3.4195
Mabini Hills	R-3	Talaga	3.1051
TOTAL			436.203

Note:

R-1 = 20 housing units per hectare

R-2 = 21-65 housing units per hectare

R-3 = 66-100 housing units per hectare

Source: CPDO

9.1.9 Forestry zone

The Comprehensive Land Use Plan and Zoning Ordinance indicated that portions of Barangay Maria Paz and Barangay Suplang are classified as Forest Zone. The steep slope in these areas is the basis for the zoning classification. However, there is no available Land Classification map declaring the area as timber land. Furthermore, areas in Barangay Suplang has been converted into high end residential subdivision.

9.2 Land Use Trends: Historical Changes

The Cadastral Survey of Tanauan was executed and approved in 1920 to 1923 by the Bureau of Land during the Commonwealth Government. It was the first massive documentation of land in the Municipality of Tanauan. Approval of the survey plan was very relevant in the implementation of Commonwealth Act 141, otherwise known as Public Land Act providing compulsory or cadastral registration of land that was released from Forest or Timber Land Classification into Alienable and Disposable Land by the Government, respecting land titles that were issued by Spanish government.

As indicated in the approved Cadastral Plan, almost all lands in the Municipality of Tanauan have been released from Forest to Agricultural though Land Classification Plan of Tanauan is missing. The issue of 18 % slope which is the physical dividing line between the agricultural and forestry, in some rolling and hilly were surpassed and settled by the approval of the plan. The Issuance of Decree and registration of land to the rightful owner that as per record commenced right after the approval of the Cadastral Survey further strengthened the Agricultural classification of almost all lands in Tanauan, subject to alienation and disposition.

As reflected in the Cadastral Plan of Tanauan there only nineteen (19) cadastral projects and as a rule in cadastral survey, there were only nineteen (19) Barangays during that time. There were eighteen (18) rural barangay and only one (1) urban barangay, which is the Poblacion.

The approved Cadastral Plan and Land Registration showed that the Social Stratification Pyramid, portion existed since time immemorial in the Municipality of Tanauan. Large land holdings belong to few rich and powerful personalities; the middle class owns parcels of land that are sufficient for their needs while the masses are the tenants of the large holdings.

Historically, land use is basically agricultural. After the World War II, when residents experienced hunger and famine, residents focused on crop production. Rice and corn as basic staple food became the dominant crops. It is the custom that the families' needs for the whole year were stored and only the excess were sold into the market. Lifestyle changes, with farming practices. Promotion of integrated agriculture and livestock became popular in the municipality. Sugarcane, coconut, coffee, citrus, fruits and vegetables became the dominant crops in Tanauan, thus, the city become one of the significant food supplier in Metro Manila.

The eruption of Taal Volcano in 1965 affected the agricultural production of the municipality. Many looked for greener pasture and migrated in different places. Some transferred to places like Mindoro, Bicol and as far as Davao to continue their practices in agriculture. Other migrated to Metro Manila and tries to seek job opportunities. For couple of years, most of the agricultural land in Tanauan became less productive.

After a decade, soil fertility was revived and agriculture became productive again. Subsequently, the National Government implemented the Masagana 99 program where the lead person was former Department of Agriculture Secretary Domingo Panganiban, who is from Tanauan. New farming technologies were introduced to the farmers with subsidies and assistance on farm inputs resulting to better crop production. However, the government overlooked the marketing aspect and the reality of the law of supply and demand. Higher crop production did not make a significant impact on economic status of the farmers.

During the Martial Law, in 1972, Agrarian Reform Program was also implemented. There was land distribution for the landless and emancipating the

farmers from the bondage of soil. Record showed that Certificate of Land Ownership Award (CLOA) and Emancipation Patent (EP) were granted by the Department of Agrarian Reform to qualified beneficiaries. An Agrarian Reform Community was even organized in Sitio Dayapan, Barangay Bilogbilog. However, there are still large landholdings that are covered by the Certificate of Coverage but had not been distributed to the intended beneficiaries. Partially, agrarian reform program succeeded in Tanauan assuring security of tenure to the beneficiaries.

Aside from security of tenure, transfer of technology and government assistance, necessary infrastructure and utility services such as provision of electric and water supply were identified as essential components needed to safeguard agricultural sustainability. The national and local government initiated the provision of electricity to rural barangays together with the provision of water supply system connected to every household. The provision of electric and water supply in the rural barangays was a milestone in rural development that changed the lifestyle and way of life of people in rural barangays. It also provided wide range of livelihood opportunities as source of income other than farming.

Accessibility and availability of basic services, opening of new livelihood opportunities tend Tanaueños to return back to their place of origin. Others even migrated to Tanauan. In the later part of 1980's, the pattern for migration was further strengthened by the program of the national government to decongest Metro Manila.

Land Planning of the Poblacion area started in early 1960's, even prior to the enactment of PD 957 and BP 220 otherwise known as Subdivision and Condominium Buyers Protective Decree. There are Plan Unit Subdivisions that has been developed mostly in Poblacion area. Among these are Mt. View Subdivision in Poblacion 3, Maligaya Compound in Barangay 7 Josefa Village in Barangay Sambat, Tapia Subdivision and Gloria Compound in Poblacion 6, Yatco Compound and Laros Subdivision in Poblacion 7. The said Plan Unit Development leads to the expansion of the Poblacion which originally comprise

of Barangay 1 and 2 as reflected in the Cadastral Plan. During the term of Mayor Paquito Lirio, Poblacion was subdivided into seven (7) Barangays.

Enactment of Republic Act 7160 otherwise known as the Local Government Code of the Philippines mandated the local government units to prepare Comprehensive Land Use Plan and Zoning Ordinance. Crafting of the CLUP and Zoning Ordinance was devolved and decentralized land use regulation to the municipal/city government. The first CLUP and Zoning Ordinance covers the period 1995-2005 while the second covers the period of 2004-2014. In the preparation of the said land use, the national, regional and provincial plans were considered.

The City Government of Tanauan is one with the National Government in its goal to improve the quality of life of its people, empower the poor and marginalized and enhance social cohesion within the region and with the neighboring towns and cities. The city government believes that this can be achieved by adopting a framework of inclusive growth which is defined as high growth that is sustained, generates mass employment, and reduce poverty. The framework of plans for this strategic development focuses on improved transparency and accountability in governance, facilitating infrastructure, boosting the competitiveness of the industries, particularly in agricultural produce. The development Plan 2011-2016 for the CALABARZON Region specifically identified centers, corridors and wedges areas in the Province of Batangas as per the spatial development strategy. The overall spatial development strategy employs the Center/Cluster-Corridor-Wedge (CCW) planning approach seeking to direct and stimulate development and growth from west to east and strengthens north-south development and access corridors. The cities of Antipolo in Rizal, Calamba in Laguna, Dasmariñas in Cavite, Batangas in Batangas and Lucena in Quezon, as characterized by high population densities connected by congregated built infrastructures and multimodal transportation system, were identified as centers or the nucleus of economic activities.

The role of Tanauan City, on the other hand, together with San Jose, Bauan, Lipa City, Sto.Tomas and Malvar, from among the cities and municipalities of Batangas were as corridor areas which would primarily serve as transportation arteries linking centers to centers. These are accessible and connected areas which may serve as transit stations, interchange, established neighborhood or general corridor areas. These areas qualify to be the appropriate locations for the significant new growth.

In addition, Tanauan City, as among the identified growth centers, is expected to ease the decongestion of Metro Manila and address impacts of urban expansion.

In the Provincial Development and Physical Framework Plan of the Province of Batangas, the three (3) cities and thirty-one (31) municipalities of the province, were clustered in order to properly address the challenges of developments in a more specific and significant manner. Metro Lipa Urban Growth Cluster composed of municipalities of Sto. Tomas, Tanauan City, Malvar and Lipa City shall be developed and specialized as a service, institutional and commercial centers. Population will increase in almost all municipalities and cities of the province and the demand for housing and other services, facilities and amenities will also increase particularly in those regions with high population growth for 2007-2013. Tanauan City is one identified area.

Classification of province's settlements into various levels indicates the functional role of cities and municipalities based in the services they provide and the extent of areas they serve

Tanauan City – will be elevated from small city to medium city being near to Metro Manila which will catch the spillover of industries and other commercial activities.

Due to its strategic location, Tanauan City also serves as the Central Trading Post for Agriculture in the region. Some of the traders are from Mindoro, Quezon, Pangasinan, and other provinces from CALABARZON area. Various agricultural commodities such as fruits and leafy vegetables flow in and out of the city.

The City's auction market being ranked second to Padre Garcia in terms of livestock being brought and sold is one of the preferred choices of auctioneers to trade and sell livestock. The City has a "AA" Slaughterhouse producing safe meat that caters to the needs of meat suppliers to local and domestic consumers.

In CALABARZON area, the City is the first and only LGU who owns and operates a Packaging and Service Center that offers labeling and packaging facility. It was established to make Tanauan Products worldwide competitive through appropriate packaging. Continuous improvement is being applied on the products with the assistance from DOST-CALABARZON.

Moreover, Tanauan City turns out to be a preferred choice for investments of different local and foreign investors as well, due to its accessibility and suitability. At present, the City has a total number of 3,104 registered business establishments as well as two (2) major industrial parks in the city, the Phil. Town Industrial Estate with three (3) existing locators and the First Philippine Industrial Park with large scale manufacturing companies.

9.2.1 The CRAFTED COMPREHENSIVE LAND USE OF TANAUAN

9.2.1.1 FIRST CLUP and Zoning Ordinance (1995-2005)

The Municipal Government of Tanauan approved the first Ten (10) year Comprehensive Land Use Plan and Zoning Ordinance (1995-2005) on August 25, 1995. This was crafted with the assistance of the task force on Town Planning constituted by the College of Human Ecology, UP Los Banos. It covered the period from 1995 to 2005 and served as the over-all framework in the development of the municipality. That plan was problem-oriented in nature, but it also covered the socio-cultural, economic, political and religious context. The Task Force who penned that 10-year plan in consultation with the municipal management staff counterpart took cognizance of the importance of the environment which they deemed should not be compromised with whatever development efforts that should be undertaken.

During the formulation of the CLUP and ZO at that time, Tanauan has a population of 92,730 with population growth rate of 2.28 percent which is nearly the same as that of the national population growth rate. The municipality had a young population since the child and youth population accounted for 60% (53,729) of the total population, thus, the municipality had a high labor force which could be attributed to its high literacy rate of 97.5 percent.

Tanauan was basically an agricultural municipality with an agricultural land occupying the largest land area of 83.63 %. This is about 8,951 hectares of the total land area of Tanauan. The volume of major crops produced was enough to sustain the demands of the entire population.

Tanauan was one of the major trading centers in the Province, servicing adjacent municipalities such as Talisay, Sto. Tomas and Malvar. Industrial activities were mostly cottage or manufacturing types, like Nata De Coco and garments making industries. Only one quarrying site was present in the city which was located in Barangay Suplang.

The total built-up area in Tanauan was 1,745.4 hectares, included here are the residential, recreational area as well as cemeteries and road system. While the whole Poblacion area, Barangays 1-7 comprised the overall urban land use with the total area of 120 hectares, that was roughly 1% of the total land area of the municipality.

Road networks in the city proper were in relatively good conditions while the barangays have poor conditions. Often during rainy season, residents in the rural areas experienced worst travel condition. Drainage and sewerage systems were in worst conditions especially during rainy season. Only the Poblacion areas had a drainage system that was functioning, other barangays needed to improve their own.

The inadequate waste collection and disposal system, poor farm to market roads in some communities, insufficient water work system, poor delivery of basic services, such as in health and nutrition, educational and social services are

some of the major problems of the municipality which were in dire need of improvement.

Environmental conditions in the municipality was said to be in relatively good condition, with the on- going CALABARZON project then, impending changes in the environment had been foreseen. The South Luzon Expressway Extension Project (SLEEP) traversing eight (8) barangays in Tanauan (Pagaspas, Trapiche, Sambat, Natatas, Bagumbayan, Tinurik, Hidalgo, and Banjo East) was projected to initiate changes in the uses of the land. Moreover, the Batangas Provincial Framework Plan designated Tanauan as an industrial zone, thus, changes in the environment was inevitable.

Under the development strategy the plan adopted radial growth center development with the Poblacion Barangay as the major urban center or the Central Business District whose growth and development influenced the adjacent barangays and all those inner barangays. The adjacent barangays absorbed the spillover of the major center in terms of residential, commercial and institutional and recreational requirements, thus forming an expanded urban area. The urban areas extended to portion of Barangays Darasa, Hidalgo, Bagumbayan, Sambat, Trapiche and Pagaspas.

The commercial, institutional and residential areas within the Poblacion were retained. Plaza Mabini was also retained as the city's primary park. Expansion areas in the above-mentioned barangays were allocated for residential use. The existing cemeteries were also retained. Additional commercial and commercial areas were proposed at Barangay Darasa right after the boundaries of the Poblacion area.

The industrial areas were allocated in Barangay Laurel, Ulango, Pantay Bata, Pantay Matanda and portion of Pagaspas. These have depth of 200 meters from the edge of the road from Poblacion to Barangay Laurel.

Moreover, areas about 100 meters from the high water along the lakeshore were designated for tourism use. Also, included in the tourism areas were the

museums and historical places of the illustrious men of Tanauan such as Apolinario Mabini and Jose P. Laurel.

Forest area were retained in Barangay Suplang. During that period when the Municipality of Tanauan was converted into Component City of Batangas.

The large portion of the land resources were still for municipality's agricultural use.

Table 9.5 Existing Land Use (1995)

Land Classification	Hectare	Actual Existing Land Use
Tanauan City	8,951	82.75 %
Rural Built - Up area	1,745.4	16.14%
Urban area (Barangays 1-7)	120	1.11%
	10,816.4	100%

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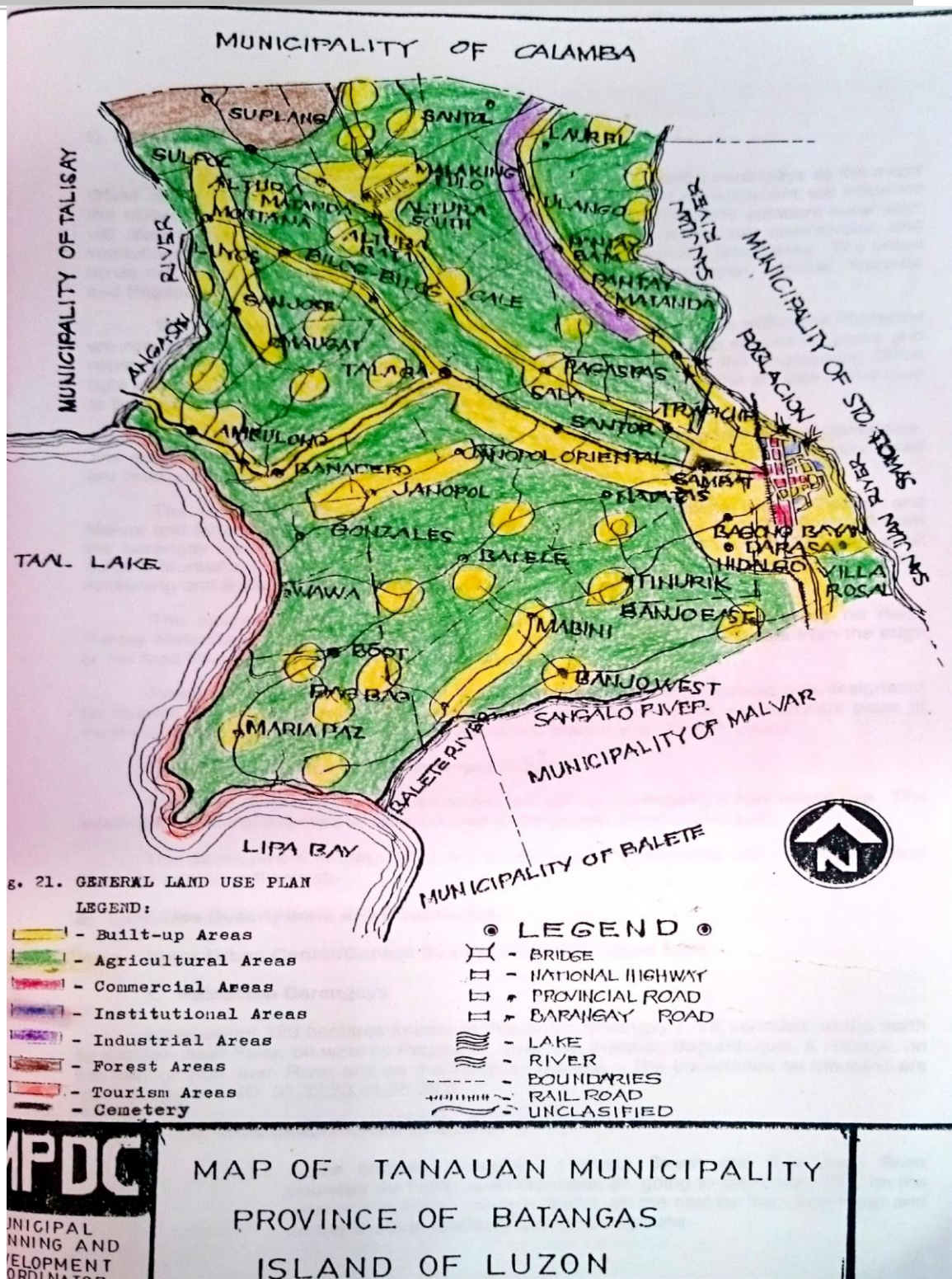


Figure 9.1 Map of Tanauan Municipality Year 1994 to 2004

Source: CLUP I

9.2.1.2 SECOND CLUP and Zoning Ordinance (2004-2014)

On May 4, 2005, the Sangguniang Panlungsod of Tanauan approved and adopted the second comprehensive Land Use Plan (CLUP) and Zoning Ordinance (ZO) of the City of Tanauan. The said CLUP and ZO covered the period of 2004 to 2014. The two (2) documents were products of extensive consultative process. MADECOR Environmental Management Systems, Inc. (MEMSI) provided the technical pool of consultants that led in the formulation of the said CLUP. This was in close coordination and consultation with the Technical Working Group (TWG) composed of key local government officials.

The formulation of the plan was guided by the following approach and general methodology.

1. Adoption of the human ecological perspective as a tool for holistic, integrative and multidisciplinary approach to the planning process.
2. Integration of environmental concern with socio-economic concerns according to the principle of sustainable development. The integration of environmental protection and management principles with the context of local socio-economic development plan was given emphasis to regulate or maximize environmental degradation and ensure the optimal utilization and sustainable productivity of the City's natural resources.
3. A multi-stakeholders approach to participatory planning was operationalized; representative from civil society, the local government and business sector were invited to participate in the planning process. Application of Geographic Information System (GIS) software that integrated maps and texts data was used in the storage, retrieval and analysis of map information. Information on land surface characteristics were obtained from satellite acquired images (IKONOS) Various key spatial data was determined by the use of the Global Positioning System (GPS).

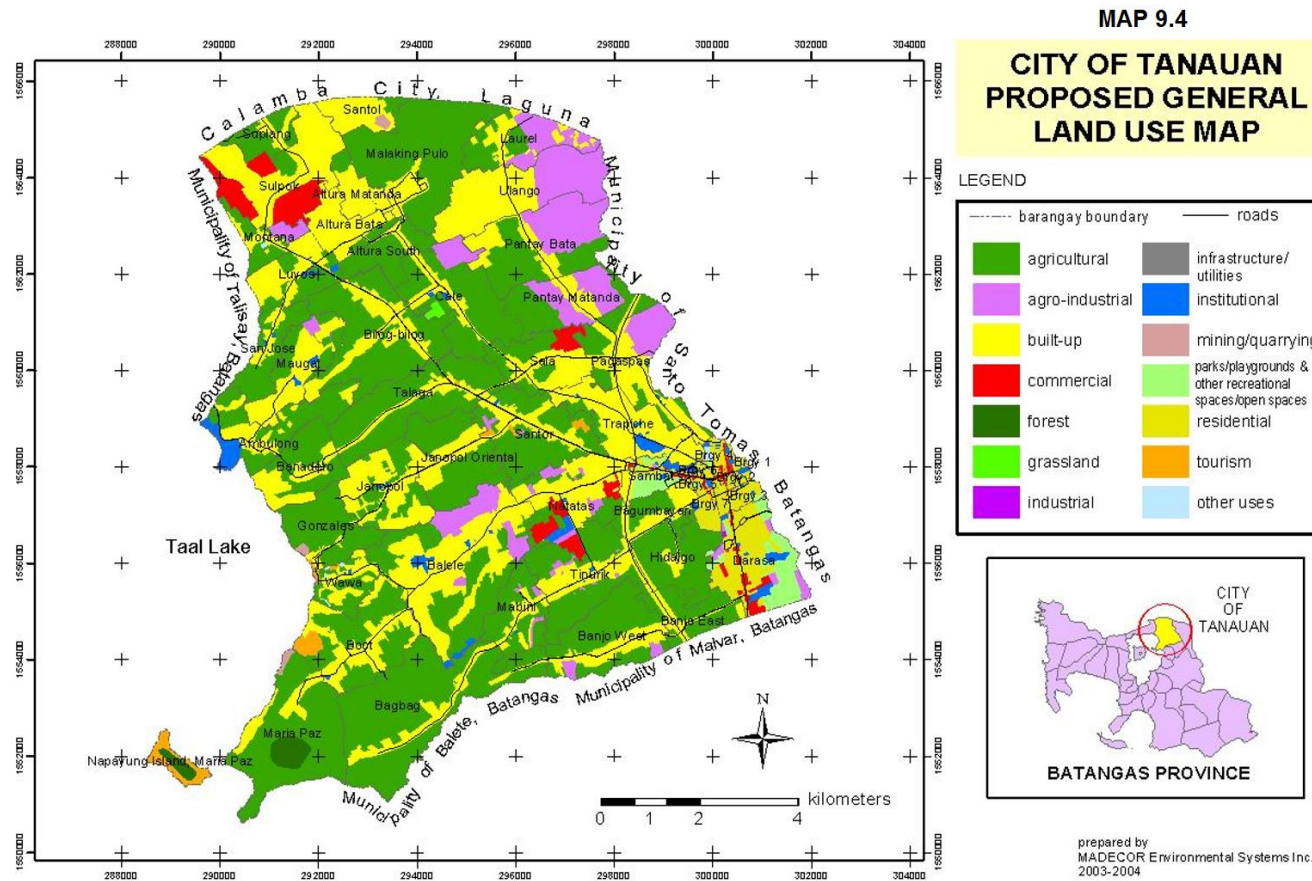
The total population of the city that time was 130,655 at an average growth rate of 2.68% with population projection of 174,771 by 2015. The population of the city was still relatively young (24 years and below) comprising 53% while the age groups of 15 years and below was accounted to 48.16%.

The Spatial Development strategy's rationale was that the land use plan for the City of Tanauan was synchronized with the Provincial Comprehensive Land Use Plan where the city's strategy within the ten-year period (2004-2014) combined Agri-Industrial Development with Ecotourism. This concept maintained and preserved the land use of agricultural barangays and suggested that they shall be supported by the required physical infrastructure such as irrigation facilities, farm to market road, credit/lending facilities and market facilities for their produce. Barangays which had been utilized as industrial site shall also be maintained. They should be supported by the required support utilities and services including water, power, roads, telecommunication, efficient solid and liquid waste disposal, drainage system and pollution control measures. While barangays along the lakeshore, which had rich attractions as tourist destinations, should be developed in conformity with the principle of ecotourism. This implied creating less human/structural impacts and facilities that blended with the environment and the community's culture.

It is to be noted that three (3) urban cores/nuclei distributed in strategic barangays that should serve as one. The central nucleus of the cluster of barangays whose main function is coordination, supervision and monitoring, to ensure that facilities, utilities required are provided; 2. The central business district (CBD) which functioned as the center of commercial activities and trade to ensure that efficient flow of goods and services in all barangays; 3. As provided in the Zoning Ordinance and as shown in official zoning maps, the Urban Core Zones are a.) Poblacion Central Business District , b.) Altura South, Altura Bata, Altura Matanda Central Business District Two, c.) Balele Central Business District Three.

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Below shows the existing land use during the time of the preparation the said CLUP (2004-2014).



For the General Land Use: The built-up areas, which occupied 2,963 hectares, comprised 26.5 % of the City's area. It accommodated at least ten (10) structures that were devoted to residential, institutional, and commercial uses as well as infrastructure and utilities. The urban area occupied 577.6 hectares included those lands within the city proper or former Poblacion. The rural built-up area comprised 2415.6 that covered 39 barangays. Croplands dominated the city's rural barangays. A total of 7,128.5 hectares which was 63.8% of the city's land area was devoted to agriculture. The areas utilized for manufacturing and processing accounted to 1.3 hectares of urban built-up areas and 784.4 hectares of rural areas. The area occupied by the remaining forest land was 62.4 hectares in Barangay Maria Paz which was 0.6 % of the City's total area. The major eco-tourism site in Barangay Maria Paz comprised a total area of forty-six (46) hectares which was 0.4 % of the total city's area. Special land uses area included mining/greening which covered 7.7 hectares, grasslands, 9.2 hectares and other uses with a total of 141.6 hectares. The special land use areas occupied 9.1 % of the total area.

The urban land uses included land use in the city proper or Poblacion for residential (305.5 hectares or 52.9 % of total), commercial (35.2 hectares or 6.1 of total), institutional (43.3 hectares or 7.5 % of total) parks and playground (161.6 or 23% of total), Infrastructure/utilities (0.7 hectares or 0.1% of total), industrial (1.3 hectares or 0.2% of total) and special uses (29.1 hectares or 5.2% of total).

Table 9.6 Existing Land Use (2004)

Rural Actual Existing Land Use

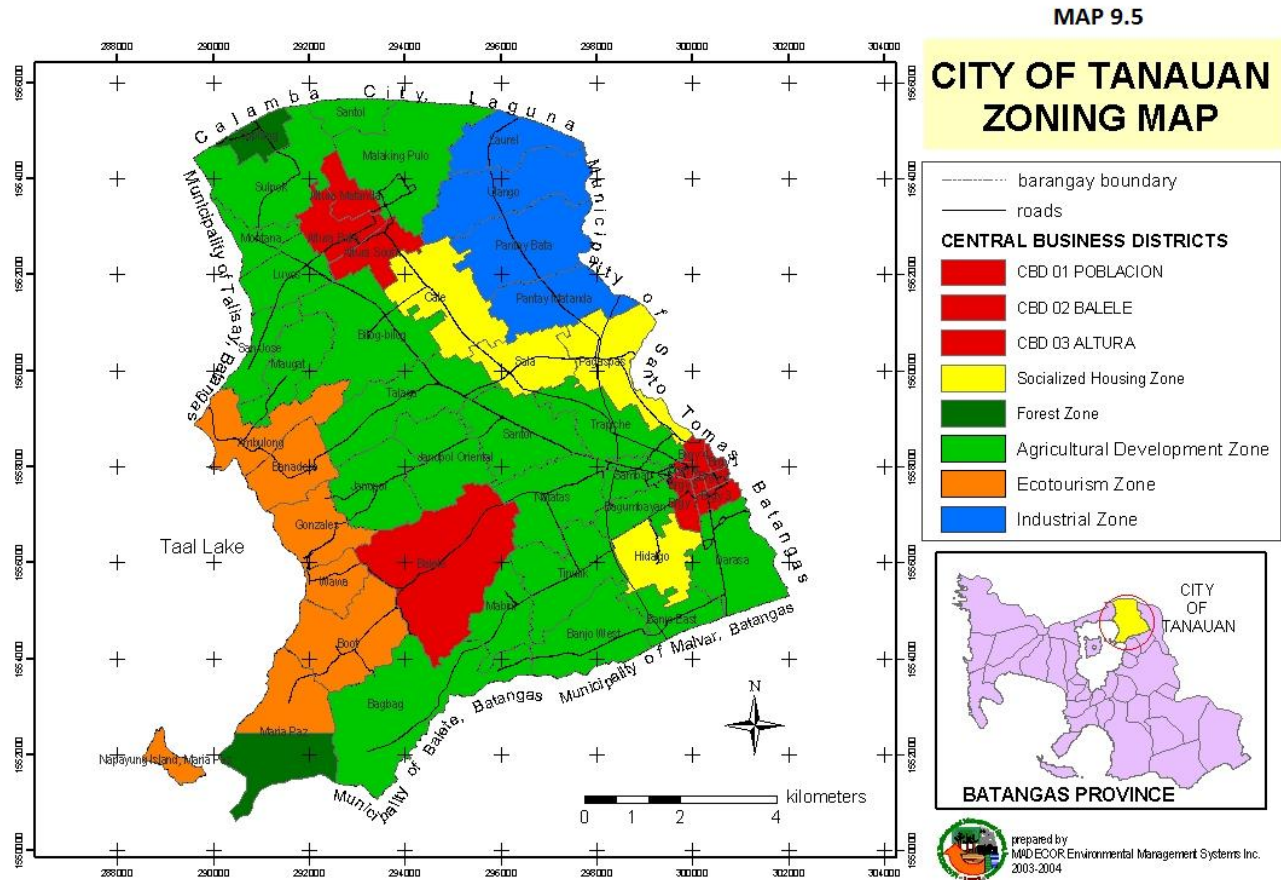
Land Classification	Hectare	Percentage
Agricultural		
Crop lands	7128.5	63.8%
Eco-tourism	46	0.4 %
Sub Total	7174.5	
Forest land	62.4	0.6 %
Non-Agricultural		
Rural built-up area	2,415.6	
Industrial area	784.4	
Sub Total	3,200	26.5 %
Special land uses area		
Mining and greening	7.7	9.1%
Grasslands	9.2	
Other uses	141.6	
Sub Total	158.5	
Grand Total	10 595.4	

Urban Actual Existing Land Use

Land Classification	Hectare	Percentage
Residential	305.5	52.9 %
Commercial	35.2	6.1%
Institutional	43.3	7.5 %
Infrastructure/utilities	161.6	23%
Parks a playground	0.7	0.1%
Industrial	1.3	0.2%
Special uses	29.1	5.2%
Total	576.7	

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Proposed General Land Use (2004-2014)



Proposed built-up areas. The proposed built-up area then was expected to increase from 2,963 hectares to 4,429 has (39.7%). Various sub-categories such as residential land uses shall be deducted from existing agricultural lands and open spaces. Increased in total area shall cover both urban and rural barangays. Agricultural areas would be reduced from 7,128.5 has. to 5,756.8 has (51.6 %) to accommodate the requirements of other land uses. Industrial lands with a total area of 799.5 has (7.25 of total area) allocated for industrial uses would be retained. There would be no additional area allocated for industrial uses. In terms of Forest Lands, the remaining 62.4 has (0.6%) located in Barangay Maria Paz, should be retained and should be further developed into an Ecotourism site. Tourism area: Development of the lake shore barangays should comprise the ecotourism circuit of the city. The total land area to be devoted should include the composite areas of Ambulong, Bañadero, Gonzales, Wawa, Boot and Maria Paz which would be utilized for the ecotourism purposes. The people and resources should serve to attract both local and foreign tourists. The total land that was proposed for ecotourism development was 445.1 has (3. 9%). Special Uses: The remaining land area of 38.1 has (0.03%) was proposed for activities, grassland and other uses including the city's waste disposal facility.

Urban Land Use (City proper)

The following are the proposed land uses for the city proper alone 301.3 has (52.2%) for the residential zone, 44.9 has (7.95 %) for commercial zone, 44.9 has (7.7%) for institutional zones, 155.8 has (27%) for parks and playgrounds, 0.6 has (0.1%) for infrastructure/utilities, 1.4 has (0.2%) for industrial site and 88.3 has (4.9%) for special uses.

Existing Land Use After Planning Period (2005-2015)

Evaluation of the existing land use after the 10-year planning period was conducted by the Office of the City Planning and Development Coordinator. Actual inspection and monitoring are regularly conducted. This is being done

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using the information derived from Google Earth and different applications measuring land development in the City. Table below is the summary of the existing land use.

Table 9.7 EXISTING LAND USE (2015)

Land Classification	Hectare	Actual Existing Land Use
Agricultural	8,855.79	80.60%
Agri-industrial	29.60	0.27%
Cemetery/memorial park	23.59	0.21%
Commercial	105.51	0.96%
Industrial	354.40	3.23%
Institutional	58.40	0.53%
Parks and recreational	49.45	0.45%
Residential	1,377.00	12.53%
Eco-tourism	58.56	0.53%
Forest land	75.13	0.68%
Sub total	10,987.43	100.00%
Disputed area	220.30	
Grand total	11,207.74	

Table 9.8 Detailed Existing Land Use of Urban Area

Land Use	Existing	Increase/Decrease	Proposed(Total)	Percentage
Residential Zone	301.3	0(retain)	301.3	52.2%
Commercial Zone	44.9	0(retain)	44.9	7.95%
Institutional Zones	44.9	0(retain)	44.9	7.7%
Infrastructure and Utilities	155.8	0(retain)	155.8	27%
Parks and Playgrounds	0.6	0(retain)	0.6	0.1%
Industrial Site	1.4	0(retain)	1.4	0.2%
Special uses	88.3	0(retain)	88.3	4.9%
Total			637.2	

The translation of the general land use plan became real mainly due to several considerations and events such as follows:

1. The framework of strengthening the industrial-based economy formulated by the national economic managers changed the land uses of provinces near Metro Manila, including the Province of Batangas. To be competitive, infrastructure developments, provisions of basic facilities and incentives were conceptualized, planned, provided and implemented by the national government that encouraged multi - national companies to invest in the country.
2. Construction of the Southern Tagalog Arterial Road (STAR) that traversed the City of Tanauan and the upgrading of Batangas Seaport into International Sea Port, widened the development opportunities in Tanauan. It influenced the development plan of the City.
3. The conversion of Tanauan from first class municipality into a component city classification in 2001 triggered economic growth. Enjoying a Cityhood status translated in increased revenues and became more self-sufficient in implementing development projects and programs. The local government, became more capable to administer and govern the city's implementation of development projects aligned with the rest of town and cities in CALABARZON.

As a result of positive development, the city's population grew with the town proper having very high-density ratio. The influx of industrial and manufacturing investors, the growth of commercial and business establishments and the real estate developers for housing projects were the factors that triggered the rapid changes on land use trends.

In early 20's, the First Philippine Industrial Park (FPIP), opened up in the City of Tanauan and Municipality of Sto.Tomas. The Industrial Park caused massive conversion of land from agricultural to industrial. The barangays affected by the change in land use are Barangays Ulango, Pantay Bata and Matanda. About

6.54% out of the 5,682,200 hectares of land in Barangay Pantay Bata and Matanda and 113,989 hectares in Barangay Ulango was acquired by the First Philippine Industrial Park (FPIP).

Agricultural land reclassified into residential land was also apparent in the city, particularly in Barangay Darasa, Sulpoc and Suplang. Similar to the development in the town proper, commercial establishments sprouted in Barangays Darasa that triggered remarkable employment and business opportunities. Land developers saw the potential for the construction of subdivisions, as workers tend to look for accommodation nearest to their work place. From about only three (3) registered subdivisions in the 1990's, there are now 19 registered subdivisions in Barangay Darasa.

There was an increasing trend in the number of businesses/commercial establishments in the last three (3) years. According to the records of the Business Permit & Licensing Office (BPLO), there was a total of 2,052 registered businesses in the year 2012, 2315 and 2550 in the year 2013 and 2014, respectively. Most of these business establishments were located in the town proper where the Public Market, banks, schools and service utility offices were situated. The continuing increase in number of businesses necessitated the conversion of land uses from residential to commercial, particularly in the Poblacion area.

In the early part of 2000, there had been noted conversion of land from Agricultural to Residential in the part of Barangay Sulpoc and Suplang. These two (2) barangays are nearest to Tagaytay Highlands. Associated to the peaceful, quiet and magnificent view of scenery that these places offer, upscale subdivisions were established and developed on these sites. Celebrities, businessmen, politicians are some of the few homeowners in these upscale subdivisions. Currently, there are twelve (12) registered upscale subdivisions located in these sites.

In the year 2004, lands along the lakeshore barangays changed in land use classification from Agricultural to recreational and tourism purposes translating

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the area into Eco-tourism zones. As proposed in the CLUP, the total land area in the conversion included the composite areas of Barangays Ambulong, Bañadero, Gonzales, Wawa, Boot and Maria Paz.

The transfer of the New City Hall to Barangay Natatas as proactive approach solution to congestion in the town proper will also contribute to land use conversion in these areas. Thus, it is expected that change in land use would also be prevalent in barangays surrounding the City Hall compound.

Table 9.9 Land Use Categories for the year 1995, 2004 and 2015

LAND CLASSIFICATION	Land Area		
Rural	1995	2004	2015
Agricultural	8,951		8,855.79
Crop Lands		7,128.5	
(Eco-Tourism)		46	
Sub total	8,951	7,174.5	8,855.79
Forest land		(62.4)	(75.13)
Non-agricultural			
Rural built-up area	1,745.4	2,415.6	
Industrial area		784.4	
Agri-industrial			29.60
Cemetery/memorial park			23.59
Commercial			105.51
Industrial			354.40
Institutional			58.40
Parks and recreational			49.45
Residential			1,377.00
Eco-tourism			58.56
Sub total	1,745.4	3,200	1,998.11
Special Land Uses Area			
Mining and greening		7.7	
Grasslands		9.2	

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Other uses		141.6	
Sub total		158.5	
Total	10,696.4	10,533	10,912.46
Urban			
Urban area (Barangays 1-7)	120		
Residential		305.5	301.3
Commercial		35.2	44.9
Institutional		43.3	44.9
Infrastructure/utilities		161.6	155.8
Parks and playground		0.7	0.6
Industrial		1.3	1.4
Special uses		29.1	88.3
Total	120	577.6	637.2
Disputed area			220.30
Grand total	10,816.4	11,110.6	11,769.96

9.3 COMPARATIVE/COMPETITIVE ADVANTAGES (DEVELOPMENT POTENTIALS)

9.3.1 Geographical/Physical

Tanauan City is strategically located at the southern part of Metro Manila and forms part of the emerging metropolitan area at the northeastern part of Batangas. It is considered as an immediate recipient of the spillover of industries and other commercial activities from the National Capital Region (NCR). Its distance from the Business Capital of the Philippines, Makati City, is only about 68 kilometers or 45-minute travel/driving time. It is halfway between the Ninoy Aquino International Airport and the Manila Harbor, and about 45 kilometers away from the Batangas Sea Port. Also, it is situated near five (5) cities in the CALABARZON Region namely: Calamba City, Tagaytay City, San Pablo City, Sta. Rosa City and Lipa City. Tanauan City's proximity to major growth centers like Metro Manila and Batangas City made it a recipient of rapid urbanization. It is embellished with natural and scenic features predominantly in the lakeshore barangays, Ma. Paz, Wawa, Boot, Ambulong, Bañadero, Gonzales, Janopol.

9.3.2 Accessibility

The city can readily be accessed from Metro Manila, Batangas City and other Cities of CALABARZON using the Southern Tagalog Arterial Road (STAR). The average travel time from the National Capital Region and Makati City takes only 45 minutes. Manila –Batangas Highway is another access road to get into the city proper. The said highway traversed the Poblacion and Barangay Darasa and being managed and maintained by the Department of Public Works and Highway. Tanauan - Talisay - Tagaytay is another major highway under the jurisdiction of DPWH. It originates from the Central Business District of the city and connect to different municipality of Batangas and the City of Cavite. The Maharlika Highway did not traverse the City of Tanauan but it is connected to Manila-Batangas Highway by the diversion road in Sto. Tomas that establish the connectivity of the city to different municipality of Laguna, Quezon and the Bicol Region.

In preparation for the urbanization, the city government would construct the remaining unpaved roads, maintain and improve all the existing City and Barangay roads. Aside from continues maintenance, the City Engineering Office would widen and improve the existing roads coping with the national standard incorporating all the necessary details required for a safe road design.

The construction and completion of the remaining missing link of Taal Lake Circumferential Road will further boost the city's tourism industry. DPWH plan to implement the construction of the Tanauan road section by 2017. Another national project that will enhance the accessibility of the city is the proposed rehabilitation of the Philippine National Railways (PNR). This will significantly affect the growth of trade, industry and commerce once the PNR is operationalize.

9.3.3 Agricultural

Tanauan City, with an agricultural area of 8,700.87 hectares, is blessed with moderately rich fertile soil suitable for all kinds of crops for year around farming. It is also not prone to natural calamities. Concrete roads, including farm to market roads, provide faster transport of various farm produce to the market. Likewise, the good road network connects the city to its neighboring towns and cities. Supporting the agricultural sector, there is a centrally located wholesale market that caters to local farmers as well as farmers from nearby cities and municipalities.

9.3.4 Commercial/Industrial

The city is recognized as the investment hub of CALABARZON considering the presence of two major industrial parks, the First Philippine Industrial Park (FPIP) and PhilTown Industrial Estate. In summation, there is a total of 306.06 locators of registered business establishments including rural and commercial banks. The FPIP has large scale manufacturing companies such as B/E Aerospace, Batangas Brothers, Inc., Canon, ELSOL, First Philec Solar Corporation, Hoya, Maxim Philippines Operating Corporation, Miyano Philippines, Inc., Murata, Pilipinas Green Solitech, Inc., POSCO, Sunpower Philippine Manufacturing Ltd.,

PMFTC, Inc., Schenker Philippines, Inc., Union Autoparts Manufacturing Philippines, Inc. (UAM), and Nestle. The second Industrial park, the Phil. Town Industrial Estate which covers 16.93 hectares has existing three locators such as the Uni-President Land Corporation, Taiyo Ippon Sanso, and Mitsubishi.

Apart from these locators inside the First Philippine Industrial Park and PhilTown Industrial estates, there are also light industries located in some barangays of Tanauan. Some of these are the Vine Dresser and Janopol Garments, both are into garments industry.

The latest addition to these industries is the Data Land Industrial Park located at Brgy. Santor which is involve in manufacturing concrete pre-cast.

Tanauan City, however, is prepared for commercial and industrial growth. The labor force which comprises about 37.69% of the total population, provides the workforce to existing industrial locators and commercial establishments. This indicate that the city has available pool of professional and skilled manpower resources. The gainfully employed persons of working age, 15 years and over comprises 85.7%.

Tanauan city was recorded to have 98.83% literacy rate based on Community-Based Monitoring System (CBMS) survey in 2011. It has also large number of schools producing college graduates; the First Asia Institute of Technology and Humanities (FAITH), Tanauan Institute (TI), La Consolacion College, Christian College of Tanauan (CCT), Systems Technology Institute (STI), Daniel Mercado Medical Institute of Health Sciences and Mabini Junior College. These academic institutions offer courses suited for the needs of the locators within the city. Thus, manpower pooling is not an issue to existing and upcoming investors.

9.3.5 Competitive LGU

The existence of annual ranking of Philippine cities and municipalities developed by the National Competitiveness Council through the Regional Competitiveness Committee and with the assistance of the United States Agency for International Development creates a healthy environment of competition to enhance all aspects of leadership and service. The three main pillars of the ranking include economic dynamism, government efficiency and infrastructure. Economic Dynamism is usually associated with activities that create stable expansion of business and industries and higher employment. This is the concrete representation of productivity as it matches the output of the local economy with local resources. Government Efficiency, on the other hand, refers to the quality and reliability of government services and support for effective and sustainable productive expansion. Conceptually, this factor looks at government support for effective and sustainable productive expansion. Infrastructure refers to the physical building blocks that connect, expand, and sustain a locality and its surroundings to enable the provision of goods and services. It involves basic inputs of production such as energy, water; interconnection of production such as transportation, roads, and communications; sustenance of production such as waste, disaster preparedness, environmental sustainability and human capital formation infrastructure.

The most recent CMCI ranking shows Tanauan City in rank #44 from among the 144 cities or entries. Tanauan City garnered 33.08, 15.30 and 8.58 scores in economic dynamism, government efficiency and infrastructure, respectively. Table below shows comparative ranking of the three cities in Batangas.

Table 9.10 CMCI Comparative Results, Year 2016

Comparative CMCI result of Three Cities (2016 – All Cities – 144 Entries)								
CATEGORY	OVER-ALL		ECONOMIC DYNAMISM		GOVERNMENT EFFICIENCY		INFRASTRUCTURE	
	RANK	SCORE	RANK	SCORE	RANK	SCORE	RANK	SCORE
2016 (All Cities) 144 Entries								
TANAUAN CITY	33	33.08	29	9.18	26	15.30	76	8.58
LIPA CITY	83	28.96	37	8.75	111	11.26	63	8.94
BATANGAS CITY	43	31.99	18	9.62	70	13.30	55	9.07

Source: CPDO

On the aspect of local administration, the city administration gained nine (9) ISO-certified service processes, sound fiscal management, and 5S implementer and recipient of Seal of Good Housekeeping Award given by the DILG.

9.3.6. Peace & Order

The peace and order situation in the city do not pose a threat to investors/locators. The BJMP reported a zero-escape record for the past eight (8) years. Crime incidence especially against person and property historically has been challenging, though. The local government has prioritized activities to restore and maintain peace & order. Initiatives were taken, deploying more police officers to keep up with the standard requirement. In the year 2014 the ratio of a police officer as to the population being served is 1:1330, only a little below standard which is 1:1000. This current ratio is improving for the past five years from 1:1900 in the year 2010. In addition, police visibility is increased in the barangay level as they conduct regular visit in the barangay areas through symposium and dialogues. There are also additional security groups created to augment the shortage in number of police as to population standard ratio. These groups include Civil Security Unit (CSU), SWAT and Barangay Tanods.

9.3.7 Other Competitive Features

The city is advantaged with the presence of telephone service providers, cell sites and internet services network. Residents can readily avail of these communication facilities. There is also the existence of tertiary health care facilities such as Daniel Mercado Medical Center and CP Reyes Hospital. In addition, Laurel District Memorial Hospital will be upgraded into a tertiary health care facility by the year 2017.

9.4 WEAKNESSES: PRIORITY ISSUES & CONCERNS (Challenges)

Tanauan City has been growing rapidly specially in terms of economic development. This fast-paced development is associated with the presence of Industrial Parks, accessibility via major road networks, and the city's proximity to significant growth centers, Metro Manila, Makati and Batangas City to name a few.

Consequently, with inevitable growth come the challenges that need immediate planning and attention to avoid deterioration and blight of the city. Among these challenges are traffic congestion, peace & order and other issues related to social, economic, infrastructure, land use and environment.

9.4.1 Traffic Congestion

Traffic Congestion compromises the city's productivity and efficiency. It slows down the movement of goods and delivery of services, increases vehicle operating costs, converts productive man-hours into travel time plus its negative impact on public health and environment.

Tanauan City is not exempted from this constraint. The expected influx of industrial, commercial and residential developments that could be initiated by private sectors within the city and its immediate boundaries, the changes in the urban setting of the city is nearly beyond the threshold or carrying capacity. Moreover, there are plans and proposals for tourism development, targeting in

particular the areas along Taal Lake. Also, re-location of the New City Hall on the west of the Star Toll is underway. Therefore, it is crucial to adopt a full transport and traffic management plan to maximize the impact of these plans and developments.

Though some ordinances already exist to address the traffic situation of the city, some of them are not strictly implemented. Traffic signages must also be improved. Currently to somehow ease the traffic situation in the city, the local government has an on-going infrastructure project funded from the Performance Challenge Fund (PCF) provided by the DILG.

Considering that non-vehicular traffic is being noted, the DPWH construct foot bridges on strategic locations such as in commercial and institutional areas. In effect, traffic flow improved and reduce dangers to all road users both vehicular and non-vehicular.

9.4.2 Flooding

Flooding in some of the streets within the Poblacion area and in some barangays, is another concern. This needs comprehensive planning in order for the city to retain its attractiveness and appeal.

Flooding is considered to be one of the causes of traffic during rainy season. This is due to ineffective drainage system, improper waste disposal and further compounded by increasing number of residential subdivisions, schools, commercial establishments, locators at two industrial parks and other economic activities within the city.

Areas prone to flooding should be clearly identified. Subsequently, a complete flood control plan must be created and constructed.

9.4.3 Solid Waste Management

Pursuant to R.A 9003 otherwise known as “Ecological Solid Waste Management Act of 2000, The City Government through the City Environment and Natural Resources Office, established its first Material Recovery Facility (MRF). The

facility started its operation on November 2014. The first 1-ton of compost was harvested on January 2015, and turned -over to the City Agriculture. Despite this project, disposal of solid waste still remains a challenge for the city government as the implementation is still in the infant stage. It is unfortunate that improper waste disposal is still prominent in different areas within the city. The city government must strengthen the implementation of penalties to offenders of the ordinance in order to realize the impact of its benefits.

9.4.4 Waste Water Treatment Facility

Lack of waste water treatment facility is another constraint, which if not addressed, could lead to serious ground water pollution and health problems. Currently, the Tanauan Water District (TWD) is capable to manage the distribution from water sources, to individual water service connection and manage non-revenue water levels. However, they have no program or project on septage management. With the common incorrect septic tank practices in the 48 barangays, the City Government of Tanauan and the TWD is facing sanitation and water pollution problems. Therefore, the city government and TWD must act on the challenge to establish an effective septage management plan that will improve water quality and public health. Moreover, this is a mandatory compliance with the existing laws and regulations of RA 9275 or the Philippine Clean Water Act of 2004, PD 856 or Code on Sanitation of the Philippines, Operations Manual on the Rules and Regulations Governing Domestic Sludge and Septage, Presidential Decree 198 and RA 7160 of the Local Government Code.

9.4.5 Informal Settlements

Apart from the aforementioned constrains, is the increasing number of informal settlers which is 12.94% of the total population, based from CBMS 2011 data. Increase in number of immigrants resulted to population increase making the city proper over populated and congested. Relative to the present situation, it is unfortunate that the city does not have available government owned socialized/low cost housing project yet. Furthermore, the increasing number of

“badjaos” roaming and begging around the city contributes to the social problems, garbage disposal and traffic concerns.

9.4.6 Education Sector

Based on the CBMS data, the situation of the education sector of the city showed a high percentage (25.6%) of out-of school youth (OSY) ages 13-16 years old. Children are forced to stop from school because they need to work to augment their family’s daily needs. During the barangay consultations conducted by the CPDO, it has been found that most OSYs are migrants. Some of them become drug dependent which caused them stop studying. To address this issue, the Department of Education in coordination with the City Government implemented Alternative Learning System (ALS), established Tanauan City College and promote campaign against illegal drugs.

Another concern of the Education Sector is the student-classroom population ratio in the secondary public schools. The ratio 1:51 is considered far from the ideal. Congested classrooms resulted to uncomfortable learning environment for students. Aside from this, the limited open spaces in public schools is becoming a problem due to increasing requirement for school buildings. Moreover, due to limited funds, inadequate facilities and lack of school equipment are still among the dilemmas in public schools.

9.4.7 Health Sector

Despite the local government’s programs which aim to reduce the number of households below poverty line, infant death rate (10.31%) remains a concern of the Health Sector. There are pregnant women who could not afford to provide themselves with proper nutrients, thereby resulted to maternal mortality rate (1.21%). Also, the city recorded a low percentage of facility-based deliveries (45.3% versus 85%). High hospital rates of child delivery forces low income women to get the services of “hilot”. The rate is relatively lower compared with the service charges of licensed midwives or even in public hospitals. The City Government through the assistance of the National Government, recently opened Malaking Pulo and Pagaspas Lying-in Clinics in addition to Sambat. Construction

of additional health facilities are currently planned particularly for barangay Darasa where there is rapid population growth.

9.4.8 Social Sector

Pertaining to the social welfare situation of the city, though the city has been implementing progress for women and children, still there is an increasing number of women in extremely difficult circumstances 45 cases in 2010 to 67 cases in 2011 and increase in number of children in conflict with law (CICL) from 11 cases (2010) to 49 cases (2011). Such situations can be attributed to poverty since most cases belong to the families with income below poverty threshold.

9.4.9 Agricultural Sector

In the agricultural sector, especially small-scale farmers are suffering from low income due to costly land preparation and cultivation. Expense rentals of private tractors are relatively high and some farmers cannot even afford. The city has only two (2) farm tractors to help farmers in this concern. Farm land is mostly rain-fed areas limiting farmers to plant simultaneously only at the onset of rainy months. Therefore, upon harvesting season, crops flood the market with farm produce driving the prices down resulting to almost losses on the part of farmers.

Unstable market price is another problem farmers has to face. There are no available post-harvest facilities for unsold products due to oversupply. Cold storage facility can house surplus in farm produce to prolong the shelf life and wait for fair market price. High prices of commercial farm inputs also add burden to farmers. Financial institutions that will extend assistance are inadequate. During dry season, only limited group of farmers were able to plant because of absence of irrigation facility.

Decreasing agricultural land due to conversion to industrial and residential uses also contribute to the decreasing income from agriculture. In addition to problems stated above recent attack of coconut scale insect in the coconut industry brought considerable loss of income to coconut farmers of Tanauan City. Furthermore,

Hilly barangays suffer from soil erosion thus lessening the productive capacity of these areas.

9.4.10 Vulnerability to Climate Change and Natural and Man- Made Disaster Risk

Global warming is being manifested by the trends of increasing number of hot days and warm nights, and decreasing number of cold days and cool nights. Both maximum and minimum temperatures are getting warmer. Extreme weather/climate events like intense rain have been seen to be more frequent. The trend of increasing frequency of tropical cyclone crossing Southern Tagalog area make Tanauan prone to disaster. Added heat stress, shifting monsoons, drier soils and water shortages as a result of higher temperatures affects the livestock industry and crop production pattern, thus reduction in food supplies which eventually resulted to higher food prices. Extreme warming increases drought which lessen the supply of water and could also result to negative impact on health, worst, could cause loss of life.

Taal Volcano is another threat that could affect Tanauan, in the event that eruption occur. There are barangays that is within 10 km radius, and some sitios or communities are not accessible by land including Sitio Mahabang Buhangin in Barangay Maria Paz.

Portions of the city is located in Environmentally Critical Area (ECA). It is within the influence area of Laguna de Bay and Makiling Reserve area. Half of the land area of the city is covered by Taal Volcano Protected Area Landscape.

9.4.11 Deterioration of Water Quality in Taal Lake

Existence of fish cages in neighboring towns and illegal fishing activities contribute to the dwindling fish catch and occurrence of fish kill. Low fish catch is now being experienced here in Tanauan City especially the endemic “tawilis” due to the proliferation of alien fish species like tilapia, guapote, janitor fish and pangasius. Households and illegal squatters in the twenty (20) meters easement

contribute to the deterioration of water quality of Taal Lake. Most of the wastes generated by these illegal occupants are somehow ended up in the lake.

9.4.12 Others

In relation with the commercial and industrial situation of the city, one of the major problems encountered is the poor condition of the public market's drainage, roofing, electrical wiring and poor waste collection. However, as of this writing the local government through Public-Private Partnership (PPP) is pushing for the Redevelopment of the existing public market.

9.5 FUNCTIONAL ROLE OF THE CITY (PER PDPFP)

1. The City Government of Tanauan is an identified growth center of the province as well as the region. The Provincial Physical Framework Plan identified the city as third level settlement area. The Functionality Role of the City of Tanauan is a medium city as embodied in the Hierarchy of Urban Centers as stipulated in the Provincial Development and Physical Framework Plan 2014-2022 of the Province of Batangas. Tanauan City falls under the medium city based on their 2010 urban population size of 75,000 to 10,000. Similarly, Tanauan City possess most of the indicators to be considered as a medium city to wit: existence of industrial estate, has existing educational and tourism facilities and shopping malls.

2. In regional plan, the City of Tanauan is one of the growth corridors of the region from Calamba to Batangas City. It is also within the CALABARZON development area.

3. Due to its proximity to the National Capital Region where the land area is reaching its carrying capacity, Tanauan City is identified catchment area for the overflow of economic development.

The city is situated along major transportation routes and a logical catchment area for the over spill of growth and development from north centers specially in terms of residential and industrial development

4. Tanauan is the major trading center in CALABARZON and MIMAROPA. The modernization and redevelopment of the existing public market, construction of modern "Bagsakan" (Whole Sale Market) and construction of Triple "A" Slaughterhouse will further enhance the local government service and improve facilities for trading and commerce. In addition, while there is a high demand for halal meat and meat products among Muslim consumers, there is no existing Halal slaughter house in Luzon and Visayas. Thus, a standing memorandum between the National Commission on Muslim Filipinos (NCMF) and the city government of Tanauan for the establishment of a Halal slaughter house in the city was executed. This "AA" Halal slaughter house is intended to promote Tanauan as a major source of halal meat and meat products.

5. The influx of business enterprises, real estate developers and multinational industries are indications that the city is a viable investment center.

6. The costal barangays are becoming a tourist destination with sports activities being held in Taal Lake. Construction and development of high standard resort along the lakeshore area, promotion of water sport such as dragon boat competition, the local government support for the provision of required amenities and facilities such as biking lane are catalyst for the translation of the area into eco-tourism zone.

7. Tanauan is still mainly agriculture in terms of land use. However, the new land use plan will adversely affect the land area utilize for agricultural production. The remaining agricultural land should be preserved and protected. To compete economically with other land uses modern agricultural technologies should be promoted.

8. Some Barangays of the city is within the 10km danger zone in the event of Taal Volcano eruption, and west valley Fault terminates in Barangay Ambulong.

9. The City of Tanauan will be one of the beneficiaries of the proposed rehabilitation and development of Philippine National Railways or the North South Rail Project (NSRP) to be implanted by the Department of Transportation and Communication (DOTC) and PNR. Likewise, the city is expected to directly benefit from the construction of Taal Lake Circumferential Road/Highway to be implemented by the Department of Public Work and Highway (DPWH). both are plan to be finished with the planning period. Moreover, the City government also plan to construct Service road on both side of the STAR Tollway within the planning period.

9.6 THE COMPREHENSIVE LAND USE PLAN (CLUP)

9.6.1 Vision

Tanauan City, the dynamic city in Southern Luzon, center of education, culture, history and sports with empowered God-loving people in a sustained environment, advanced agriculture, industry, commerce and tourism and leader in exemplary governance.

Outward looking

Goal 1: dynamic city

Goal 2: center of education, culture, history and sports

Inward looking:

- with empowered God-loving people - quality of the people as individual and society
- in a sustained environment - state of the natural/built environment
- advanced agriculture, industry, commerce and tourism - nature of the local economy
- leader in exemplary governance - capacity of local government leadership

9.6.2 Mission

- Enhancing consciousness of Tanaueños on our culture and heritage, spiritual values, personal capacities and harnessing of potential;
- Enforcing responsive, responsible, transparent and strong leadership at all levels of the local government unit;
- Creating an enabling environment for investments;
- Utilizing resources following globally-accepted principles on labor and environmental sustainability;
- Contributing too scientific, technological innovations and development in information and communication technology (ICT) and its use by the stakeholders for socio-economic development; and
- Creating a peaceful, safe, beautiful and orderly environment

9.7 DEVELOPMENT GOALS AND OBJECTIVES

9.7.1 Goals and Objectives

Goals are what it takes to close the gap between the vision and reality gaps and to address the observed conditions identified in each development sector. The City, through its sectoral development committees had extensive discussions on drawing out sectoral goals to serve as standards to measure the success or failure of actions and corresponding strategies to be implemented in three years. The goals set by the City of Tanauan are also reflective of Section 16 of Republic Act No. 7160, otherwise known as the Local Government Code of 1991.

9.7.2 Goals of Social Development Sector

- Sustain the preservation & enrichment of culture
- Promote health & safety
- Preserve the comfort & convenience of the inhabitants
- Maintain peace & order
- Reduce Risks of Communities in Kanlungan Centers
- Improve the Lives of PWDs as Productive Citizens
- Improve conditions of poor communities

9.7.3 Goals of Environment Development Sector

- Enhancement of the right of the people to a balanced ecology
- Reduction of risks of communities against natural and man-made hazards
- Full compliance to R.A 9003

9.7.4 Goals of Economic Development Sector

- Enhancement of economic prosperity & social justice

- Encouragement & support for the development of appropriate scientific & technological capabilities

9.7.5 Goals of Institutional Development Sector

- Improvement of public morals
- Implement measure to institutionalize judicious allocation and disbursement of funds

9.7.6 Goals of Infrastructure Development Sector

- Improve infrastructure support facilities for total development of the City

9.8 Development Thrusts and Strategies

Table 9.11 Tanauan City’s Thrusts and Strategies

THRUSTS	STRATEGIES
Agriculture Intensification	<ul style="list-style-type: none"> • Protection of agricultural lands from conversion to other uses • Crop Production Intensification • Provision of agricultural inputs subsidies • Provision of financial capital assistance to farmers • Coordination with land owners for the utilization of idle lands for crop production • Construction of irrigation facilities • Provision of farm machineries (Tractor, sheller) • Implementation of diversified farming (climate change adaptive crops) • Provision of post harvest facilities • Improve marketing support • Livestock and poultry production • Slaughterhouse modernization • Crop insurance • Continuous practice of organic farming

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Urbanization	<ul style="list-style-type: none"> • Identification of expansion areas for commercial activities • Re-development of existing Public Market thru public private partnership • Transfer of seat of government to Brgy. Natatas • Identification of suitable site for the City College
Industrialization	<ul style="list-style-type: none"> • Promote light to medium intensity industries • Encourage new investors (ease of doing business) • Develop economic incentives for the use of environment-friendly technologies (Green Technology)
Tourism Development	<ul style="list-style-type: none"> • Development of Lakeshore Barangays • Encourage investors to put up lodging places and hotel facilities • Promotion of Parade of Lights • Promotion of Dragon Boat Festival • Development of Sports and Recreational Area • Strict implementation of City Ordinance No. 2012-09

Source: CPDO

9.8.1 Agriculture Intensification

Sixty percent of the total area of Tanauan City is still agricultural. Although Tanauan City has 20 industrial locators in its two industrial parks, the backbone of its economy still relies on the agriculture sector. Tanauan City derives its income from its vast agricultural lands planted to vegetables and high value fruits and commercial crops and the presence of several piggery and poultry farms, both commercial and backyard levels.

To intensify crop and livestock and poultry production, Tanauan City will focus its attention and efforts in the protection of prime agricultural lands from conversion to other uses. Provision of agriculture inputs subsidies to small scale farmers for year around production despite high cost of farm inputs will be made available to

farmers since one of the factors which hinder crop production is the high cost of farm inputs. Trainings on organic fertilizer production and organic pesticides formulation will be extended to farmers to lessen dependence on commercial farm inputs. Financial institutions will be tapped to help finance farm operations and ensure sustainability of operations. Farmers' cooperative selling farm inputs will be formed to help farmers avail of farm inputs at a lesser price. Idle lands owned by private individual will be utilized to increase cultivated areas for crop production. Rehabilitation of old and non-functioning irrigation facilities in barangays Ambulong and Bañadero will be carried out to maximize land productivity. This facility if rehabilitated will help farmers extend farming activities up to dry season and enable them to do two croppings per year. Construction of additional irrigation facilities in the upland barangays will help farmers produce crops even during dry season for better price and maximized profit. Off-season farming is the strategy identified to avoid simultaneous planting resulting to over production and low price. Practicing off-season planting will enable farmers to produce not in season crops to command high market price.

Diversification of crops with emphasis on modern and good agricultural practices will also be the focus of the City to ensure adequate and multiple source of income for farmers and the City and at the same time taking into account the health of the consuming public and the environment as well.

Farm machineries like farm tractors, corn planters, corn shellers and rice threshers will play big roles in the crop intensification program of the City. These machineries will speed-up land preparation, cultivation, making planting and post-harvest activities up to date with the schedule dates of planting. Even new areas suitable for agriculture expansion like idle lands will be easily opened-up and cultivated for crop production. The City will also construct post harvest facilities like driers, cold storage and packaging center to improve shelf life and add value to farm produce.

Livestock and poultry production intensification even in the barangay will be promoted to encourage farmers and entrepreneurs to engage in these projects

and subsequently increase the livestock and poultry production. Loans will be made available to farmers bundled with free veterinary services and vaccines. The existing slaughterhouse will be upgraded and modernized to accommodate large volume and make it competitive and achieve AAA status for possible exportation.

A modern “Bagsakan center” that will accommodate large volume of products will greatly help not only the farmers but the wholesalers and retailers as well. The facility will not only ease the congested urban area but will also generate more income for the City. It will have ample parking spaces and well managed transaction area to make everyday transaction faster and convenient to consumers.

Another important strategy that the City will implement is the creation of a strong market linkage for all the farm produce that the farmers will harvest. This will make sure that products not accommodated by the local market will be channeled to other market like processors and other types of market.

9.8.2 Urbanization

In view of the hierarchy of centers per PDPFP, Tanauan is being envisioned to become a medium city being near Metro Manila. The city as expected to catch the spillover of development sees the need to transfer the seat of government from its current site to Brgy. Natatas. Consequently, additional commercial areas will have to be identified. The Public Market will have to be re-developed in conjunction with the public private partnership. Other requirements would be sites for a City Hospital, City College, Sports Complex.

9.8.3 Industrialization further spur development, the City encourages the expansion of existing industrial areas that will accommodate only light to medium intensity uses. This is also in consonance with the PDPFP where Tanauan City is identified as one of the centers of economic activities.

For Agri-Industrial activities, the City will identify suitable sites. Locators will be encouraged to put up mitigating devices to ensure that there will be no

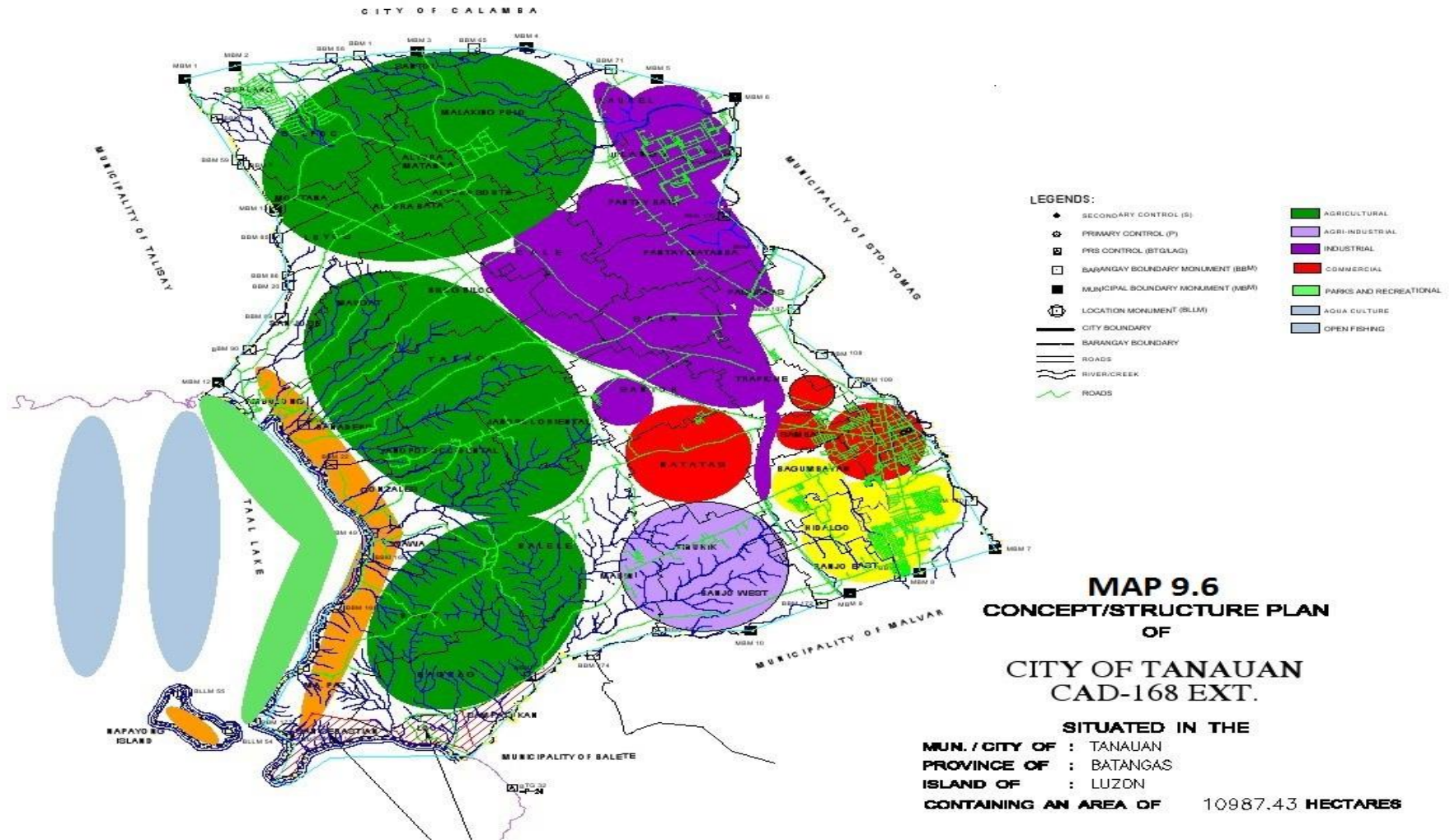
environmental pollution/degradation. These shall be situated in Barangays Banjo East, Banjo West, Mabini and Tinurik.

9.8.4 Tourism Development

The City Government espouses the development of the six (6) lakeshore barangays. However, prudence should be practiced such that any development that should be introduced should take cognizance of the need to protect Taal Lake. Any locator should comply with requisite environmental clearances prior to its operation.

The presence of historical and cultural places should be maintained. There are other potential tourism spots that need to be looked into.

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9.8.5 The Concept/Structure Plan

9.9 THE LAND USES PLAN

9.9.1 Quantified Land Requirements

The quantified land requirement of Tanauan City is based on the proposed plans & programs of the Local Government for the upcoming years. These projects and programs were derived from the identified needs of the people, taking into consideration the population growth and projection. Baseline of population considered is the census result for the Year 2011. The allocation of land for the projected population growth resulted to the identification of residential land requirement. All other land requirement, as shown on the following table, are quantified based on proposed areas for future projects.

9.9.2 Government

Residential Land Requirement

No.	Project Name	Zoning / Project Type Classification	Land Area Required (hectare)
1.	Housing Area/ Relocation Site for informal settlers	Residential	11.0

Institutional

No.	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Construction of City College	Institutional	5.0
2	Improvement/Construction of Government Buildings, Structures & Facilities including National Offices	Institutional	3.0
3	Additional Public Cemetery	Institutional	5.0
4	Construction of additional PNP sub-station	Institutional	2.50
5	Jails, Prisons, Reformatories & Correctional Institutions	Institutional	5.0
6	Orphanage, Nursing Homes, Home for the Aged	Institutional	3.0
7	Establishment of GAD Resource Center	Institutional	0.10

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8	Renovation/improvement of City Library, Museum	Institutional	0.15
9	Construction of Government Convention Center	Institutional	2.0
10	Projected Additional Daycare Center for 2025	Institutional	0.80
11	Projected additional Classrooms K-12 Requirement (Elem& Secondary) for 2025	Institutional	3.0

Commercial

No.	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Construction of food terminal	Commercial	2.0

Recreational

No.	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Construction of Sports Complex and Recreational Park	Recreational	10.0
2	Modernization of Gym 1	Recreational	0.20
3	Establishment of Pocket Parks for 48 Barangays	Recreational	2.40 (.05/barangay)

Infrastructure

No.	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Construction of Central Parking Terminal along Star Tollway	Infrastructure	5.0
2	Taal Lake Circumferential Road	Infrastructure	20.0
3	Road Widening & Provision of Service Road Parallel to STAR Tollway	Infrastructure	50.0
4	Road widening & Road Opening	Infrastructure	50.0

Potential Tourist Attraction Area

No.	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Sabang River Arboretum	Tourism	9.0
2	La Playa	Tourism	40.0
3	Biking Lane	Tourism	5.0

SPECIAL USE

No.	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Sanitary Land Fill	Special Use	10.0

9.9.3 PRIVATE

Table 9.12 Quantified Land Requirement (Government)

Residential

No	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Proposed Additional Subdivision/ Housing	Residential	50.0

Institutional

No	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Proposed Universities	Institutional	10.0
2	Additional Requirement for Private Hospital	Institutional	5.0
3	Churches, Place of Worship	Institutional	3.0

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Utilities, Transportation & Services – UTS

No.	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	BATELEC Office, Sub-station	UTS	5.0
2	Transport Terminal for PUVs, PUJs, Tricycle near the new City Hall building	UTS	3.0

Commercial

No.	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Proposed Commercial Business District- Natatas	Commercial	29.46
2	Proposed Commercial Business District-Santor	Commercial	256.03
3	Proposed Commercial Business District-Balele	Commercial	42.65
4	Proposed Commercial Business District-Bagumbayan	Commercial	50.54

Agri-Industrial

No	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
1	Proposed Agri-Industrial District in Tinurik	Agri-Industrial	188.89
2	Proposed Agri-Industrial District in Banjo West	Agri-Industrial	284.64
3	Proposed Agri-Industrial District in Banjo East (half-part)	Agri-Industrial	65.93

Industrial Requirement – Projected Light Industrial for 2025

No	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
	Expansion of Industrial Parks	Industrial	1146

Eco-Tourism

Table 9.13 Quantified Land Requirement (Private)

No	Project Name	Zoning/Project Type Classification	Land Area Required (hectare)
	Development of 500m zone for Eco-Tourism (six lakeshore barangays)	Tourism	523.0

9.10 Proposed Land Uses

The first CLUP and Zoning Ordinance adopted radial approach of development, wherein the growth of urbanization expands from the center of the urban area towards the adjoining rural areas. The target and projected land use translation within the ten-year planning period (1995-2005) almost came to realization. The second CLUP, however adopted nodal growth of development, designating two other Central Business Districts, namely the Altura and Balele Central Business Districts (CBD). It was noted that after the ten-year planning period, the target and projected translation of developing the other two (2) nuclear Central Business Districts did not materialize.

The major development that will affect the future land utilization of the city is the on-going construction of the New City Hall that was located in Barangay Natatas. The project is expected to be finished before the end of 2016. Upon transfer of the seat of the City Government, it is expected that commerce and trade will follow. It is noteworthy to mention that infrastructure investment both by the national and local government was concentrated in the said area in order to mitigate and minimize the negative impacts of urbanization.

Table 9.14 Proposed Land Use Map 2015-2025

Land Classification	Square Meter (sqm)	Percentage
AGRICULTURAL	63,147,530.57	57.47%
AGRI-INDUSTRIAL	4,996,138.58	4.55%
CEMETERY/MEMORIAL PARK	235,940.00	0.21%
COMMERCIAL	4,750,731.01	4.32%
INDUSTRIAL	14,358,847.97	13.07%
INSTITUTIONAL	584,012.00	0.53%
PARKS AND RECREATIONAL	494,501.00	0.45%
RESIDENTIAL	16,800,832.85	15.29%
ECO-TOURISM	4,505,787.50	4.10%
SUB-TOTAL	109,874,321.48	100.00%
FOREST LAND	865,283.01	0.77%
DISPUTED AREA	1,337,759.26	1.19%
GRAND TOTAL	112,077,363.75	

Considering that the radial development is more realistic than nodal development, the two Central Business Districts (CBDs) of the previous Comprehensive Land Use Plan and Zoning Ordinance will be returned back to agricultural use.

9.10.1 Land Development Policies to Guide the Implementation of the Spatial Development Strategy

9.10.1.1 Land Development Policies for Tanauan City

Although the proposed land use is intended to serve the regulative plan, the delineation of land use and the general statement of objectives/purposes of the plan are rather too broad for implementation to attain the desired development objectives of the city. For the land use plan to be more effective, it needs to be supported by pertinent and more specific development policies. These development policies may readily be applied in guiding orderly development in the city or these may later be translated into more detailed and enforceable development regulations or control ordinances.

It is the ultimate aim of the city government to conserve the natural resources endowment and optimize uses of land. To realize this objective, the city intends to pursue the following general policies on land development:

- The city shall be zoned according too rational and best uses and developments there shall be regulated accordingly;
- Loosely settled areas shall be consolidated first before carrying out developments of new major areas for urban uses; and
- Early and full development of lands in conformity with zoned uses shall be encouraged and promoted.

9.10.1.1.1 Residential Area

In general, the development of residential areas shall be objectively controlled so as to achieve and maintain a safe, healthy and pleasant environment for people to live in.

Residential areas shall be developed into viable neighborhood units by providing for and encouraging location of educational, religious, recreational, health and essential community service facilities including home occupations and industries.

Subdivision development shall be regulated and subjected to existing rules and regulations.

9.10.1.1.2 Commercial Areas

Commercial development shall be regulated to promote a safe, healthy and pleasant environment and at the same time complement the development schemes of the city.

Development of commercial activities shall be encouraged through the provision of proper investment atmosphere in appropriate locations.

Commercial land-related functions shall be distributed so as to serve the needs of development as well as the whole populace.

9.10.1.1.3 Agri-Industrial Areas

All commercial scale agri-industrial activities shall be concentrated in the identified agri-industrial zone.

The operation of agri-industrial activities shall be monitored and regulated to minimize pollution and other adverse environmental effects.

To boost the development of the city's ecologically sound agri-industrial activities, adequate infrastructure support must be provided.

9.10.1.1.4 Agricultural Areas

Optimum utilization of lands shall be encouraged.

9.10.2 Non-Conforming Use of Land

Any lawful non-conforming land use or existing building at the time of approval of this plan and accompanying zoning ordinances shall be allowed to continue for a period of two (2) years. Please refer to Zoning Ordinance for details.

Any development permit(s) for non-conforming use approved in accordance with the city's prevailing policies and regulations prior to the approval of the plan shall be considered current and valid for a period of two years up to four years from the enforcement of the plan. Nevertheless, a written approval of the Sangguniang Panlungsod shall first be secured before any development may be carried out thereon.

The Sangguniang Panlungsod at its discretion and upon the recommendation of the Zoning Administrator may permit a change of non-conforming use to provide proposed use which, will not adversely affect the adjoining areas and the visual amenities of the city or if the proposal compliments the intended use of the zone.

When a non-conforming use of land or building has been discontinued and/or abandoned, such land or building shall not thereafter be used for any purpose other than that which conforms to the provision of the plan.

When deemed necessary for public interest and/or beneficial to the development interest and welfare of the city, the Sangguniang Panlungsod may affect the discontinuance of a non-conforming use by purchase of the subject property/properties or by suitable agreement with the owner.

9.11 LAND USE IMPLEMENTATION

9.11.1 Approaches for Implementation

9.11.1.1 The Local Development Investment Program

The Local Development Investment Programming (LDIP) is a process for planned financing of the investment in the plan. In the process, the LGU particularly the Local Development Council shall determine how and in what ways the various strategies and goals of the Local Development Plan will be financed as specific projects and over what periods of time. These are the capital and non-capital projects programmed on a planned investment basis.

The capital investments concern planned financing of asset forming, tangible or capital improvement expenditures in infrastructure (e.g. roads, buildings, bridges, public markets, water systems, housing, etc.)

The non-capital investment concerns planned financing for the installation or improvement of services and systems in which new methodologies, reorganized, tasked and trained staff, research operations and applied results as well as other interventions augment the efficiency of the LGU as well as improve the quality of life of its citizens.

As the financial resources of the city are scarce, the LGU can exercise prudent planning and scheduling. The cost of resource can be reduced with their benefits expanded to meet the LGU needs and thereby serve more citizens. The objective is to obtain the lowest price for maximizing the social and economic benefits accruing to the citizens of an LGU.

9.11.1.2 Private Investments

All private investments refer to projects initiated by the private sector. The sector should be provided with incentives and/or disincentives to realize the objectives and desired outputs of the development plan.

9.11.2 Government Policies

The city can adopt nationally-initiated monetary and fiscal policies in order to influence local development.

9.12 DEVELOPMENT REGULATIONS

Regulations take root in the following powers of the state.

9.12.1 Police Power

This entails guiding, regulating and controlling (and even prohibiting) certain land use decisions in the public interest. An example is the enactment of the zoning Ordinance, which is practically the translation of the land use into law.

9.12.2 Power of Inherent Eminent Domain

This involves the taking of private lands by the government for public purpose, provided that it observes the requirements of due process and just compensation. Some innovative techniques for land acquisition are as follows:

Land Assembly

This refers to the acquisition of lots of varying ownership through, among others; expropriation or negotiated purchase, for the purpose of planning and development unrestricted by individual property boundaries.

Land Exchange

This refers to the process of bartering land for another piece of land and/or shares of stocks of equal value in a government or quasi-government corporation.

9.13 TOOLS OF IMPLEMENTATION

9.13.1 Tax on Idle Lands

- Expand the manning of “idle land” to include underutilized urban lands`
- Impose higher tax on idle or unutilized lands over the basic real property tax.
- Increase or selectively apply idle land tax in the urban areas to redirect investments in inner barangays.

9.13.2 Urban Enterprise Zone

The establishment of urban enterprise zones seeks to counter act the centrifugal locational tendencies of manufacturing industries and jobs. This can be counteracted by providing package of incentives to encourage preferred industries to locate within enterprise zones in the urban area.

9.13.3 Strategies to Keep Urban Fringe in and Open Character

9.13.3.1 Greenbelt Development

This includes the preservation of agricultural lands, as well as maintenance of open spaces, green parks and other low-density land uses.

This is one way to counteract offers to farmer-landowners to sell out and convert their agricultural land to urban use.

9.13.3.2 Reservation of Development Rights

Reserve the right to use land in certain designated areas in the hands of the government (Development rights refer to the right to use and/or develop land and improvements thereon, including putting them to more intensive use, conversion to a more profitable use, increasing density and the like).

Approval of development proposals within designated areas must be in accordance with the land use plan (issuance of Development Permits or Locational Clearances).

Sale or transfers of development rights to private groups who will ensure that those agricultural lands are protected.

9.13.3.3 Strategies to Achieve Equitable Access to Land

Captured and unearned increment in land values through imposition of any of the following:

- Betterment Levy - betterment levy is a tax that the state collects on a plot of land that its actions have in some way made 'better'
- Land Transfer Tax - transfer tax is imposed tax on the sale, donation, barter, or any other mode of transferring ownership or title of real property
- Capital Gains Tax - capital gains tax or CGT is a tax that is imposed on earnings the seller has gained from the sale of capital assets

9.14 LEGAL BASES FOR IMPLEMENTING THE LAND USE PLAN

9.14.1 Letter of Instruction No. 1350

This directive from the Office of the President provides for the institutional framework for national physical planning. It mandates the inventory of land resources and its current utilization and the subsequent adoption of national physical planning and supportive regional and sub-regional land classification

and utilization plans. These plans shall serve to indicate and not to mandate the desired use of land resources except as may otherwise be prescribed by specific laws.

9.14.2 Executive Order No. 72

E.O. No. 72 provides for the preparation and implementation of the comprehensive land use plans of LGYs. The plan formulation/updating process is described below.

The city or municipal development council (CDC/MDC) in consonance with the approved provincial comprehensive land use plans, shall initiate the formulation or updating of their comprehensive land use plans, in consultation with the concerned sectors in the community. The comprehensive land use plans prepared by the CDC/MDC shall be submitted to the Sanggunian concerned for enactment into zoning ordinance in accordance with Article 107 and 108 of the Implementing Rules and Regulations of the LGC.

On the other hand, the Provincial Development Council (PDC) shall initiate the formulation or updating its land use plan, in consultation with the concerned sectors in its component units. The comprehensive land use plan prepared by the PDC shall be submitted to Sangguniang Panlalawigan for enactment into an ordinance.

9.14.3 Republic Act No. 7160 – Local Government Code

Sec. 20 of the Local Government Code empowers cities and municipalities to reclassify agricultural lands to non-agricultural uses. The LGUs shall determine whether a piece of agricultural land has greater economic value for residential, commercial or industrial uses than for agricultural uses. Reclassification of agricultural lands by LGU shall be through an ordinance passed by the

Sangguniang Panlungsod after public hearing subject to percentage of the total agricultural land area at the time of the passage of the Ordinance:

- a. For highly urbanized cities independent component cities, 15%;
- b. For component cities and first to third class municipalities, 10%; and
- c. For fourth to sixth class municipalities, 5%.

Sec. 114 provides for the integration of LGUs plans into regional plans. The policies, programs and projects proposed by the local development councils shall be submitted to the Sangguniang Panlungsod concerned for approval. Approved local development plans shall be integrated with the development plans of provinces, highly urbanized cities and independent component cities. Likewise, approved LGUs plans shall be submitted to the Regional Development Council for integration into the Regional Development Plans.

9.14.4 Memorandum Circular No. 54

This circular prescribes the guidelines governing Section 20 of RA 7160 authorizing cities and municipalities to reclassify agricultural lands into non-agricultural uses.

Agricultural land may be reclassified when it ceases to be economically feasible and sound for agricultural purposes as determined by the Department of Agriculture and when the land shall have greater economic value for non-agricultural uses.

The reclassification is however limited to a maximum percentage of total agricultural land of a city or municipality as follows:

- For highly urbanized and independent component cities, fifteen percent (15%)
- For component cities and first to third class municipalities, ten percent (10%)
- For fourth to sixth class municipalities, five percent (5%)

In addition, the following types of agricultural lands shall not be covered by said reclassification:

- Agricultural land distributed subject to Section 65 of RA 6657
- Agricultural land already issued a notice of coverage under the Comprehensive Agrarian Reform Program (CARP);
- Agricultural lands identified under AO 20 series of 1992 as non-negotiable for land conversion.

The President upon the recommendation of the National Economic Development Authority (NEDA) may authorize the reclassification of land in excess of set limit.

9.14.5 Administrative Order No. 20

Under this Administrative Order, the following are lands which are non-negotiable for land conversion;

All irrigated lands where water is available to support rice and other crop production

- All irrigated lands where water is not available for rice and other crop production but within areas programmed for irrigation facility rehabilitation by DA and the NIA; and
- All irrigable lands already covered by irrigation projects with firm funding commitments at the time of the application for the land conversion or reclassification.

9.14.6 Executive Order 124

This Executive Order establishes priorities and procedures in evaluating development areas proposed for land conversion in Regional Agri-Industrial Centers, tourism development areas and sites for socialized housing. It has mandated the Regional Land Use Committee to evaluate priority development areas for land conversion as identified by the Department of Agriculture, Trade and Industry and Tourism.

9.14.7 Republic Act No. 7279 – Urban Development and Housing Act

Sections 7 and 8 of the Urban Development and Housing Act 1992 mandates the various local government units to identify sites for socialized housing and their integration into Comprehensive Land Use Plans and Zoning Ordinances of their respective cities or municipalities.

To effectively implement these provisions, guidelines for the inventory of lands and identification of suitable sites for socialized housing were provided by the Department of the Interior and Local Government through Memorandum Circular No. 93-03.

The following lands shall be covered by the inventory:

- All underdeveloped and vacant lands zoned for residential purposes as delineated in the Zoning Ordinance of the LGUs, duly approved by the Housing Land Use Regulatory Board (HLURB);
- Government-owned lands, whether owned by the national government or any of its subdivision, instrumentalities, or agencies including, government-owned or controlled corporations and their subsidiaries;
- Unregistered or abandoned agricultural and idle lands including idle government lands; and

Other lands such as:

- lands located outside the zoned built-up areas but suitable for socialized housing;
- squatter settlement;
- marginal agricultural lands which comply with the conversion criteria of DAR
- government-owned lands which have not been used for the purpose for which they have been reserved or set aside for the past ten (10) years from the effectivity of the Act.

9.14.8 Executive Order No.72

This order directs the integration and operationalization of the goals and objectives of sustainable development contained in the Philippine Agenda 21 and Philippine Strategy for Sustainable Development into the updated Philippine Medium-Term Development Plan into the plans of local government units.

9.14.9 Executive Order No.15

E.O. No. 15 provides for the creation of the Philippine Council for Sustainable Development (PCSD). Among others, the council is tasked with the establishment of guidelines and mechanism that will expand, concretize, and operationalize the sustainable development principles as embodied in the Agenda 21, the National Conservation Strategy and the Philippine Agenda 21 and incorporate them in the preparation of the development plans at the national and local levels

9.15 PRIORITY PROJECTS

9.15.1 Economic Sector

No.	Project
1	Provision of loans without interest to cooperatives
2	Tanauan Food Processing Technology Innovation Program
3	Direct renting of stalls to legitimate Tanauueños during town fiesta and holidays
4	Purchase of additional dump truck for Tanauan City Public Market
5	Installation of CCTV camera at the whole vicinity of Public Market
6	Purchase of multi-cab for monitoring and operation at Public Market
7	Conduct of eco-tourism activities and organization of stakeholders
8	Full operation of the Bilog-Bilog Techno Demo-Farm
9	Provision for subsidies on farm inputs (quality vegetable seeds, quality seedlings and fertilizers), farm machineries, post-harvest machineries and facilities, fishing nets and boats and other livelihood opportunities (ornamental fish)
10	
11	Desilting and repair of irrigation at Barangay Bañadero
12	Promotion and implementation of organic farming
13	Provision for quality vegetable seeds, quality seedlings and fertilizers to coconut farmers.
14	Creation of the City Meat Inspection Service (CMIS)
15	Modernize the slaughterhouse facilities & to maintain AA NMIS accreditation
16	Revenue Generation Enhancement Program; strict monitoring of business establishments - Joint Inspection team
17	Collection of delayed payments on Fixed Stall rentals and Electric Bills at Public Market
18	Identification of new Central Business Districts
19	Encourage investors to develop tourism sites/ Formulation of Tourism Master Plan
20	Organize associations for stakeholders
21	Develop new tourism zone and introduce new tourism activities
22	Lakeshore Development Program
23	Development of lodging resorts and hotels to accommodate tourist
24	Construction of Waste Water Treatment Facility
25	Marketing of local products through the City Cooperatives and Livelihood Development
26	Organizing local producers
27	Promotion of the city through media/newspaper and newsletter
28	Continuous development of local talents that will perform for the different cultural activities of the city
29	Creation of website that will be an avenue for advertising its tourist spots, tourism facilities and travel packages, travel information and even accept travel bookings

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30	Production and distribution of tourism promotion materials such as brochures, travel maps for walking tours and postcards.
31	Dialogue with electric power service provider, cable, internet and telecommunication utilities for the improvement of services in order to attract Business Process Outsourcing (BPO) companies
32	Expansion of industrial area for inclusion in the preparation/update of CLUP
33	Convince farmers per barangay to plant on agreed schedule of planting
34	Conduct meeting/orientation with farmers for the preparation of organic compost
35	Maintain the free-cage zone in Tanauan
36	Deputize Bantay-Lawa under Mayor's Office/ Dismantle illegal structure along 20m easement

9.15.2 Social Sector

1	Health Financing Program (Increase the number of PHILHEALTH Beneficiaries)
2	Information and wide dissemination of Early Registration Program of DepED
3	Acquisition of books and other instructional materials
4	Provision of learning equipment for Technology and Livelihood Education (TLE)
5	Provision of financial assistance support to deserving students to undergo TESDA skills test.
6	Peace & Order Program (Provision of 20 units of motorcycle and group of trained personnel)
7	Effective implementation of the Katarungang Pambarangay
8	Creation of Quick Response Team (QRT) of BJMP
9	Installation of additional fire hydrants within the city proper, public market, subdivision and in some barangays
10	Upgrade of Geographical Information System (GIS) Mapping
11	Acquisition of 5-hectare land for Tanauan City College

9.15.3 Institutional Sector

1	Institutionalization and implementation of Competency Base System (CBS) in recruitment, selection and placement of personnel under the Human Resource Management Program
2	Implementation of CBS in training in training and human development under the Human Resource Development Program
3	Establishment of City Succession Plan
4	Implementation of Local Scholarship Program for city employees
5	Implementation of Quality Management System (QMS) by end of 2014 under Systems and Standards Program
7	Implementation of local OHSAS in the CGT workplace.
8	Computerization programs for civil registry applications.
9	Mobile registration through barangay outreach program.
10	Creation of City Information Office (CIO)
11	Establishment of centralized database system
12	Creation of Internal Audit Department
13	Maintenance of Full Disclosure Policy Board at three conspicuous places
14	Update of Full Disclosure Policy Portal
15	Enactment of Health and Sanitation Code
16	Enactment of Children's Code
17	Adoption of Local Poverty Reduction Action plan
18	Updating of Code of General Ordinances
19	Enactment of an Ordinance regulating the installation and maintenance of distribution lines of various utilities in the City of Tanauan.
20	Enactment of Public Safety Code
21	Enactment of an ordinance regulating the construction of road humps and other protuberance.
22	Enactment of ordinance regulating the establishment of water refilling stations
23	Enactment of Senior Citizens and Person with Disabilities Code
24	Enactment of an ordinance banning the presence of fixers within the vicinity of Tanauan& imposing penalty for violation thereof
25	Enactment of an ordinance institutionalizing the provision of incentives in form of financial assistance to all Tanauueños who won in Regional, National & in any international competitions in any field of sports, cultural or any academic related activities.
26	Enactment of an ordinance institutionalizing the provision of incentives in form of financial assistance for all retired teachers who served in public schools (elementary& high school)
27	Strengthening of the Participatory Governance through accreditation of CSOs.

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28	Enactment of an Ordinance giving incentives to traffic officers.
29	Enactment of Market & Slaughterhouse Code
30	Update of Revision of Code of Classification, Appraisal and Assessment
31	Enactment of Local Investments and Incentives Code (LIIC)
32	Enactment of Personnel Management Code
33	Enactment of Personnel Development Code
34	Reorganization of Barangay Solid Waste Management Committee
35	Implementation of City Ordinance 2006-08 (Segregation at Source)

9.15.4 Environmental Sector

1	Enactment of Personnel Development Code
2	Reorganization of Barangay Solid Waste Management Committee
3	Implementation of City Ordinance 2006-08 (Segregation at Source)
4	Strict monitoring of BPLIO and CENRO/ Dialogue with business establishments as regards environmental clearances/ Strict implementation of CNC & ECC requirement
5	Establishment of Waste Management Program and waste control facilities such as Waste Water Treatment and Septage Treatment Facilities

9.15.5 Infrastructure

1	Construction of Comprehensive Drainage System
2	Tanauan Packaging Center Enhancement
3	Construction and modernization (inclusion of multi-level parking) of the city public market
4	Face lifting of Plaza Mabini and A. Mabini Avenue
5	Development of Eco-tourism zones (Lakeside Resort Program) including lake wharf and promenade park; bird park in Maria Paz (started); and opening of Tanauan Gateway to Taal started; foot trail for trekking identified)
6	Construction of TESDA accredited training center
7	Expansion of existing BOSS center and BPLO
8	Construction/Relocation of Bagsakan Area with Cold Storage Facilities along Star Tollway
9	Construction of Central Parking Terminal along Star Tollway
10	Creation of Emergency Medical Technician (EMT) Team
11	Road widening and provision of service roads parallel to STAR Tollway
12	Construction of Tanauan City Public Hospital
13	Establishment of Person with Disability Affairs Office (PDAO)
14	Establishment of Children-in-Conflict with the Law (CICL) Center
15	Construction of Rehabilitation Center for drug and alcohol dependents

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16	Establishment of Tanauan City College
17	Construction of additional SPED building at selected Public Schools
18	Construction or enable school libraries
19	Construction of underpass at the Public Market
20	Establishment of Police Outpost & Public Assistance Center
21	Construction of Sub Station on identified fire prone commercial area/public market
22	Construction of an alternative road from Sto. Tomas up to Tanauan-Malvar and convert as recreational park
23	Establishment of Resettlement Site for informal settlers
24	Setting up of evacuation centers/command post that will serve as logistics area) for CDRRM
25	Construction of Tanauan City Sports Complex
26	Establishment of City Trainer's Pool
27	Establishment and Operation of Professional Development Center
28	Construction/relocation of New City Hall
29	Construction of Materials Recovery Facility (MRF) and Sanitary Landfill
30	Construction of Waste Water Treatment Facility
31	Formulation of Traffic Management Plan
32	Construction of Water impounding facilities to trap and contain flood during monsoon months and provide irrigation facilities in order address the lack of water supply and non-production of crops during dry season

Source: ELA/CDP/LDIP