Republic of the Philippines
PROVINCE OF PAMPANGA
MUNICIPALITY OF MEXICO

COMPREHENSIVE LAND USE PLAN

(YEAR 2012 - 2017)

NOVEMBER 2011

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CHAPTER II - SECTORAL STUDY

Republic of the Philippines
Province of Pampanga
Municipality of Mexico

OFFICE OF THE MUNICIPAL MAYOR

M E S S A G E

To all planners, managers, developers, researchers, analysts, readers and to all of you dear town mates:

Thru this simple communiqué, I would like to narrate how we did the 2012-2017 Comprehensive Land Use Plan of the Municipality of Mexico.

As a matter of rule, the local government is mandated by law to come up with a Comprehensive Land Use Plan that will serve as a guide in planning and a management tool for development purposes. Under the R.A. 7160, the local government is mandated to continue enacting zoning laws & ordinances for proper utilization of land, regulate spatial development and control the reclassification of agricultural areas to non-agricultural uses. Moreover, the Municipality of Mexico being strategically located at the crossroads of developments has to be prepared and ready to meet the demands of economic development as well as to be consistent in providing sustainable progress to its people.

During the drafting of the plan, barangays were clustered where barangay officials, business and private sector representatives were invited and participated in workshops / seminars at the Municipal Conference Hall held last August 8, 9,10,14 & 15, 2011; thus, each barangay was able to draft its own existing land use plan, proposed land use plan & comprehensive development plan. Each of the plans showcases the features, terrain, boundaries, resources, needs, demographic & economic data and future programs of development. Each barangay submitted filled–up data capture forms on population, education, tourism, infrastructures, proposed development, utilities, and data on the economy.

Data, rules and various provisions from the NSO, DA, DAR, HLURB and NAMRIA were made bases of the plan; and development projects of the national government were considered too, such as the proposed implementation of the Manila North Railway Project from Manila to Clark to Subic, the expansion of the Subic-

Clark-Tarlac Expressway up to Poro Point and the on-going expansion of the DMIA and its transformation to a premiere international airport & convergence of flights. Also considered is the rapid urbanization of the town of Mexico becoming as the best alternative place of investment next to Angeles City, San Fernando and Mabalacat

The proposed 2012-2017 Comprehensive Land Use Plan of the Municipality of Mexico was prepared based on the following:

a. Salient features of the 2004 Town Comprehensive Land Use Plan were considered;
b. Preservation of productive agricultural areas and providing programs / projects for sustainable development;
c. Regulate /control / prohibit developments at low-lying areas and environmentally protected areas in conformity with the provisions of the R.A. 10121 otherwise known as the Philippine Disaster Risk Reduction and Management Act and in

compliance with the provisions of the Supreme Court En Banc Resolution implementing the Manila Bay Clean Up Rehabilitation and Preservation;

d. Focused / aligned all developments at highly elevated areas without being affected by the watershed area;
e. Mandatory establishment of barangay material recovery facility where bio-degradable material is processed to organic fertilizer and non-biodegradable materials picked up and disposed to sanitary landfills;
f. Aside from the existing resettlement established under the Mt. Pinatubo Commission located at Hacienda Pandacaqui, the Pandacaqui NHA Resettlement, the Acli NHA Resettlement, and aside from several Socialized Housing Projects implemented under B.P. 220, the LGU of Mexico has procured one-hectare property located at barangay San Juan for informal settlers and settlers residing at areas vulnerable to disaster. Of course, this proposed project will be undertaken thru NGOs, G.Os. and Private Sector Partnership.

How did we do our mapping strategies?

Administrative boundaries such as municipal & barangay boundaries were derived from combining all available resources such as newly – updated Assessor's tax maps, NAMRIA 1:50,000 topographic maps and Google Earth's satellite images. The delineation of each barangay and municipal boundaries were done thru the use of Geographic Information System (Arc GIS).

First, NAMRIA maps were geo-referenced based on its given coordinates;

Second, satellite images were downloaded from the Google Earth, then geo-referenced and over laid in the NAMRIA map output;

Third, newly-updated tax maps were geo-referenced over the satellite images;

Lastly, digitization of the barangay, municipal and lot boundaries using geo-referenced assessor's maps and satellite images.

To date, we have 43 digitized barangay maps and all parcels of lands and roads and creeks were also digitized.

Given a total land area of 11,767.35 hectares, the LGU is contemplating to use 551 hectares for development for the years 2012-2017. However, all of these will come from idle lands, grass lands, non-productive agricultural lands, highly-elevated areas and some from sugar cane areas which has lost economic viability.

Development of residential, commercial & industrial subdivisions must be provided with creeks, tree-planting areas, material recovery facilities and efficient drainage systems.

The Comprehensive Land Use Plan of Mexico is the product of our vision to see Mexico as a center of economic growth & development in the province of Pampanga with healthy, educated, empowered, self-reliant and God-fearing citizenry living in a peaceful, clean, safe and beautiful environment under a unified, dynamic and decent leadership.

Let us all unite and help attain a progressive Mexico where every Mexicano is a stakeholder, participant and a beneficiary.

TEDDY C. TUMANG
Municipal Mayor

HISTORY

The name Mexico is believe to be derived from the term *"Macasicu"*, as the town is endowed with river bends; or with the term ***"Masicu"***, which in ancient *Kapampangan* means abundant with water. Some believed that the town was abundant with *"Chico"* trees, hence the word ***"Ma-chico"***. Other historians believed that the town's name was simply taken from the Central American nation because of the trading ties of the Philippines to the Spanish-colonized Mexico, and was called Nuevo Mexico from the beginning. Other documents recalled the town as New Mexico.

Before 1755, there was no single capital town of Pampanga and according to Spanish Chronicler Fray Gaspar de san Agustin, provincial courts were located in this town as "es la corte de Pampanga". Mexico was once one of Pampanga capitals and centers of commerce and trade among Chinese traders due to its accessibility to Sapang Matulid, a straight river passing through several towns in the province up to Manila de Bay. *"Cascos"* and *"sampans"* maintained the flow of goods along the Malabon – Guagua- Mexico chain. Parian, the town's capital, was once the commercial center of Mexico. Mexico is a plain land bounded on the north by Angeles City & Magalang; on the south, by San Luis; on the east, by San Fernando; and Arayat and Sta. Ana on the west. It used to include some areas of San Fernando and Angeles in its geographical jurisdiction before they became independent cities.

The town lies on a flat terrain, with an elevation which is higher by one (1.0) meter compared to San Fernando and is gradually sloping by .30 % up north. It is primarily an agricultural land with crops ranging from rice, corn, sugar and vegetables. Livestock industries and aquaculture also thrive here. Bisecting the vast lands of Mexico is the great Abacan River. Other rivers which pass through the municipality and are therefore utilized for flood control and irrigation purposes these are the Mexico River, Sapang Bungang Guinto and the Betis River.

The Municipality of Mexico used to have 37 barangays which increased to 43 barangays at present, as enumerated below:

Acli	Dolores	Pandacaqui	San Juan	Sta. Cruz
Anao	Eden	Pangatlan	San Lorenzo	Sta. Maria
Balas	Gandus	Panipuan	San Miguel	Sto. Domingo
Buenavista	Lagundi	Parian	San Nicolas	Sto. Rosario
Camuning	Laput	Sabanilla	San Pablo	Sapang Maisac
Cawayan	Laug	San Antonio	San Patricio	Suclaban
Concepcion	Masamat	San Carlos	San Rafael	Tangle
Culubasa	Sto. Cristo (old name: Masangsang)	San Jose Malino	San Roque	
Divisoria	Nueva Victoria	San Jose Matulid	San Vicente	

Today, Mexico is a first class municipality by income. The advent of commercial investments and urbanization of some strategically located prime lands benefited neighboring barangays and brought prosperity and fame to the town. With Mexico's continuous growth and development and its aim to be the next city of Pampanga, this land use plan will serve as a blueprint of development and guideline to direct investments and improvement towards the attainment of the vision.

Chapter I
Comprehensive Land Use Plan

1. MISSION AND VISION

VISION

We envision the Municipality of Mexico as a center of economic growth and development in the Province of Pampanga with healthy, educated, empowered, self–reliant and God–fearing citizenry; living in a peaceful, clean, safe and beautiful environment under a unified, dynamic and decent leadership.

MISSION

The Municipal Government of Mexico commits to create a vibrant & sustainable economy in a business–friendly atmosphere; to maintain clean and attractive environment, nurture, peace and prosperity to the community and; to effectively and efficiently deliver social services to the people with competency and professionalism in local governance.

Mexico's physical landscape shall be continually shaped to attract industrial, commercial residential developments and technological investments and to improve its agricultural economy to bring sustainable growth and progress to its people.

Objectives:

- The CLUP has to be revised and updated to enumerate the commercial, industrial and residential developments despite the influences of the geophysical changes or landscape changes brought about by the eruption of Mt. Pinatubo.
- Mexico has to be prepared for good economic activities and respond to the needs and opportunities being brought about by the Metropolis.
- Proper zoning has to be implemented in order to protect the productive agriculture area and continuously sustain agricultural economy. Also to prevent, control and regulate establishment or erection of infrastructures at disaster prone areas.
- Mexico has to be provided a better direction and focus for developments which shall benefit the future generation.

2. MUNICIPAL PROFILE

2.1. HISTORICAL BACKGROUND

2.1.1 Cultural Aspect

The name Mexico is believe to be derived from the term *"Macasicu"*, as the town is endowed with river bends; or with the term ***"Masicu"***, which in ancient *Kapampangan* means abundant with water. Some believed that the town was abundant with *"Chico"* trees, hence the word ***"Ma-chico"***. Other historians believed that the town's name was simply taken from the Central American nation because of the trading ties of the Philippines to the Spanish-colonized Mexico, and was called Nuevo Mexico from the beginning. Other documents recalled the town as New Mexico.

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The Municipality of Mexico used to have 37 barangays which increased to 43 barangays at present, as enumerated below:

Acli	Gandus	Sabanilla	San Rafael
Anao	Lagundi	San Antonio	San Roque
Balas	Laput	San Carlos	San Vicente
Buenavista	Laug	San Jose Malino	Sta. Cruz
Camuning	Masamat	San Jose Matulid	Sta. Maria
Cawayan	Sto. Cristo (old name: Masangsang)	San Juan	Sto. Domingo
Concepcion	Nueva Victoria	San Lorenzo	Sto. Rosario

Culubasa	Pandacaqui	San Miguel	Sapang Maisac
Divisoria	Pangatlan	San Nicolas	Suclaban
Dolores	Panipuan	San Pablo	Tangle
Eden	Parian	San Patricio	

Today, Mexico is a first class municipality by income. The advent of commercial investments and urbanization of some strategically located prime lands benefited neighboring barangays and brought prosperity and fame to the town. With Mexico's continuous growth and development and its aim to be the next city of Pampanga, this land use plan will serve as a blueprint of development and guideline to direct investments and improvement towards the attainment of the vision.

2.1.2 Political Aspect

The town has produced many illustrious sons and daughters in different fields and endeavors. Don Miguel Maniago was awarded a royal *encomienda* of about one hundred *cabalitas* of land for his service to the Spanish King. Don Francisco Maniago, who was the Master–of–Camp in the Spanish Army was the leader of the *Kapampangan* Independence Revolt of 1660. Don Ruperto Laxamana was one of the founders of Masonic triangles of Pampanga. In 1898, General Maximino Hipolito Hizon, a *katipunero*, rallied *Kapampangans* to fight the Spaniards under Emilio Aguinaldo's revolutionary banner.

Today, Mexicanos work for progress and for the total development of the town. Prior to the new building, on this site sits the municipal building constructed in 1969 under the dynamism of then Mayor Jesus Santos. The face lifting to its present look was realized under the leadership of Mayor Teddy Canlas Tumang.

No recorded political history dating back to the Spanish period was kept for present's reference. The earliest record of political leadership to serve the municipality is in the year 1967 under the elected mayor and vice-mayor, Hon. Jesus L. Santos, Sr. and Hon. Anacleto C. Panlilio, respectively. The following is the list of elected mayors who served the Municipality of Mexico:

NAME	YEARS SERVED
1. Mayor Candido Rivera	
2. Mayor Dalmacio Timbol	
3. Mayor Maximo Briones	
4. Mayor Felife Hizon	
5. Mayor Miguel Sandico	1934 – 1937
6. Mayor Fernancio Sampang	1937 – 1941
7. Mayor Elmor Hidalgo	1948 – 1951

8. Mayor Pedro Lacson	1952 – 1955
9. Mayor Marcos Padilla	1956 – 1961
10. Mayor Dr. Tomas D. Guevarra	1961 – 1963
11. Mayor Jesus S. Santos	1964 – 1971
12. Mayor Dr. Tomas D. Guevarra	1972 – 1986
13. Mayor Javier A. Hizon	1986 – 1990
14. Mayor Ferdinand D. Meneses	1990 – 1998
15. Mayor Ernesto M. Punzalan	1998 – 2004
16. Mayor Teddy C. Tumang	2004 - 2013

At present, the elected officials are listed below:

Elected Officials 2010 - 2013

NAME	POSITION
Hon. Teddy C. Tumang	Municipal Mayor
Hon. Roy D. Manalastas	Municipal Vice-Mayor
Hon. Lourdes G. Sicat	SB Member
Hon. Jonathan R. Pangan	SB Member
Hon. Rudencio S. Gonzales	SB Member
Hon. Rex DL. Calma	SB Member
Hon. Carlos A. Rivera	SB Member
Hon. Merly E. Manalo	SB Member
Hon. Noel R. Sambile	SB Member
Hon. Emmanuel R. Manalo	SB Member
Hon. Gerardo P. Santos	ABC President
Hon. Emmanuel Stephen V. Tumang	SK Municipal Federation President
Adonis L. Cosio	Secretary to the Sangguniang Bayan

Heads of Offices

Mr. Fernando M. Maniago	Municipal Administrator
Ms. Alice A. Reyes	Municipal Budget Officer
Ms. Avelina P.Reyes	Municipal Treasurer
Ms. Perlita T. Lagman	Municipal Accountant
Dr. Hilario James M. Cunanan	Municipal Health Officer
Ms. Rosana T. Aguas	Municipal Civil Registrar
Engr. Jesus S. Punzalan	Municipal Engineer/Building Official and current Municipal Planning and Development Office
Mr. Antonio D. Reyes	Municipal Assessor
Mr. Romeo M. Razon	Municipal Agriculturist
Ms.Leonila S. Ignacio	Municipal Human Resources Management Officer
Ms. Jeanette DS. Lacson	Social Welfare Officer
Ms. Luz C. Bondoc	Private Secretary to the Mayor

Assisting National Government Offices

Ms. Maritess C. Burton	Department of Interior and Local Government
Hon. Christine Marie C. Capule	Municipal Circuit Trial Court - Judge
Police Supt. Wilson Santos	Chief of Police
Senior Insp. Allan Barredo	Municipal Fire Marshall

2.2. PHYSICAL CHARACTERISTICS

2.2.1 Geographic Location

The Municipality of Mexico is approximately centered on coordinates 15°05'N and 120°42'E at Pampanga province, Region III. It is 80 kilometers from the northwestern part of Metro Manila and is about one hour travel by land via North Expressway. It has a distance of 40 kilometers from the crater of Mt. Pinatubo and about five (5) kilometers from the foot of Mt. Arayat in the north.

The municipality is bounded by Angeles City, Mabalacat, and Magalang on the north; by Arayat and Santa Ana on the east; by San Luis and San Simon on the south; and by City of San Fernando on the west (See map below).

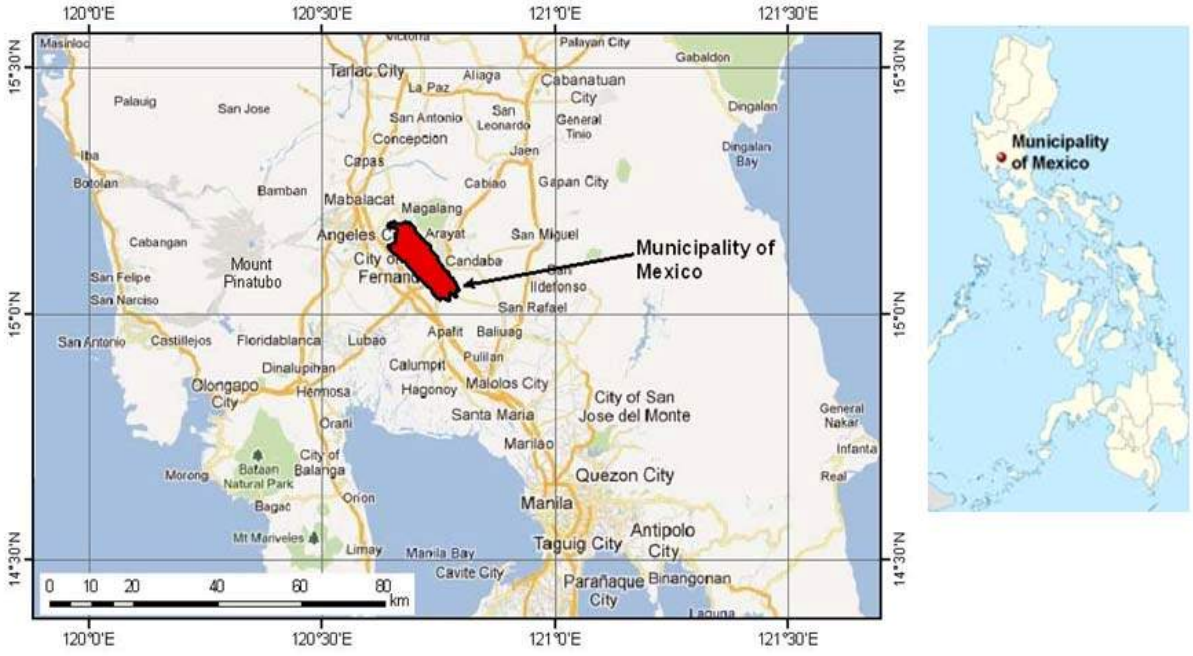


Figure 2.2.1 *Location Map of Mexico, Pampanga*

2.2.2 Administrative Boundary

The municipality is composed of 43 jurisdictional units or barangays with a total land area of 11,741 hectares, based on Bureau of Land The boundaries of these barangays were delineated based on

the Cadastral Maps and on tax mapping results conducted by the Municipal Assessor's Office (MAO),and surveys of the Municipal Engineering Office (MEO), and Municipal Planning and Development Office (MPDO) with the assistance of the Provincial Government. A map showing these boundaries is generated by using Geographical Information System (GIS) Software (See Figure 2.2.2). Areas of barangays are presented in the following table.

Table 2.2.1. *List of Barangays in Mexico and Corresponding Areas*

	Barangay	Area (ha)
1	Acli	272.9
2	Anao	447.8
3	Balas	185.8
4	Buenavista	190.0
5	Camuning	245.1
6	Cauayan	304.8
7	Concepcion	221.8
8	Culubasa	362.9
9	Divisoria	235.0
10	Dolores Piring	165.6
11	Eden	170.3
12	Gandus	214.3
13	Lagundi	197.4
14	Laput	190.6
15	Masamat	115.1
16	Sto. Cristo	41.5
17	Nueva Victoria	242.8
18	Pandacaqui	356.8
19	Pangatlan	244.4
20	Panipuan	465.0
21	Parian	82.4
22	Sabanilla	285.9

	Barangay	Area (ha)
23	San Antonio	162.3
24	San Carlos	74.1
25	Laug	383.7
26	San Jose Malino	658.7
27	San Jose Matulid	421.6
28	San Juan	390.6
29	San Lorenzo	306.4
30	San Miguel	297.3
31	San Nicolas	180.2
32	San Pablo	207.5
33	San Patricio	386.4
34	San Rafael	383.1
35	San Roque	137.3
36	San Vicente	453.3
37	Sapang Maisac	156.8
38	Sta. Cruz	322.5
39	Sta. Maria	270.3
40	Sto Domingo	275.5
41	Sto Rosario	95.3
42	Suclaban	262.9
43	Tangle	677.1

Total Area = 11,741.0 ha*

** Based on Bureau of Land*

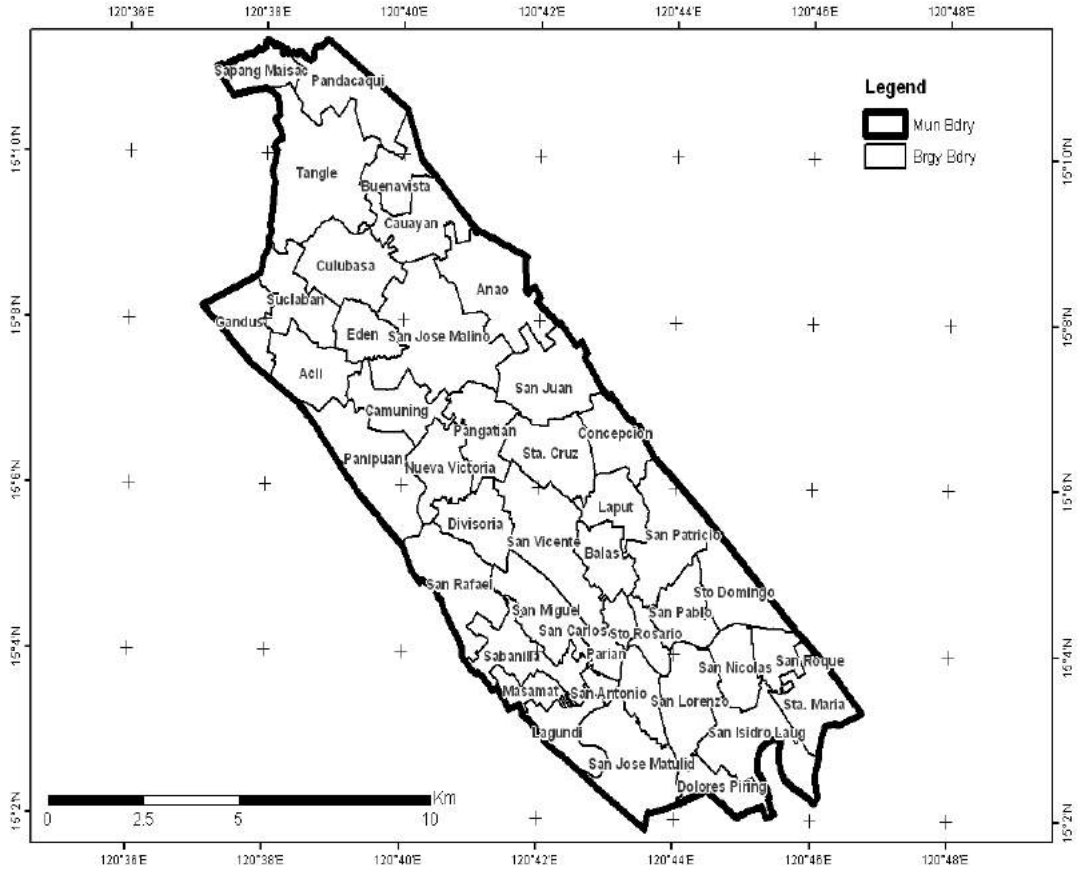


Figure 2.2.2 *GIS-Generated Administrative Map of Mexico (Based on Tax Mapping)*

2.2.3 Topography

The entire municipality is characterized by a relatively flat topography which is hence suitable for any type of residential, commercial, industrial and agricultural development. Its elevation in the northern portion, particularly at Sapang Maisac, to the southern portion at Dolores Piring, constantly reduces from high ground. Based on the NAMRIA topographic map, the average elevation of Sapang Maisac is about 60.0 m (MSL datum) while Dolores Piring is about 2.5 m, both at a horizontal distance of 20.0 km, as shown in Figure 2.2.3.

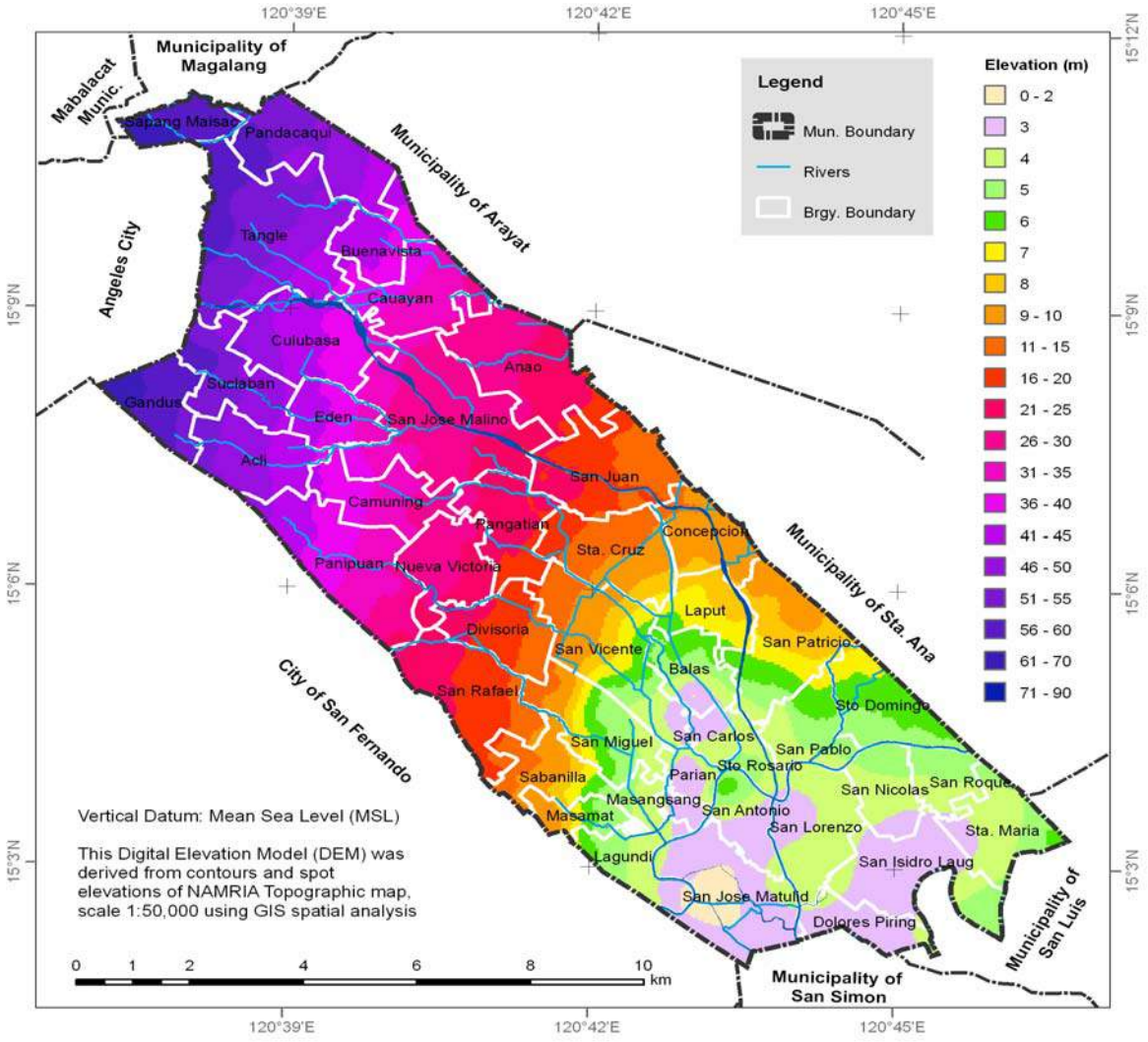


Figure 2.2.3 *Elevation Map of Mexico (Based on NAMRIA Topographic Map)*

The distribution of ground slopes is then calculated from the Digital Elevation Model and is then presented in Figure 2.2.4.

The total land area of the municipality is longitudinally divided by the Abacan River. The western side of the said river comprises 2/3 of the land portion and the remaining in the eastern side. The approximate bank-to-bank width of the river is about 135.0 m.

The ample width of this river is one of the major constraints which the municipality encounters in putting-up access roads which shall laterally connect the opposite sides of the river, not to mention that such roads shall require longer, durable, and expensive bridges.

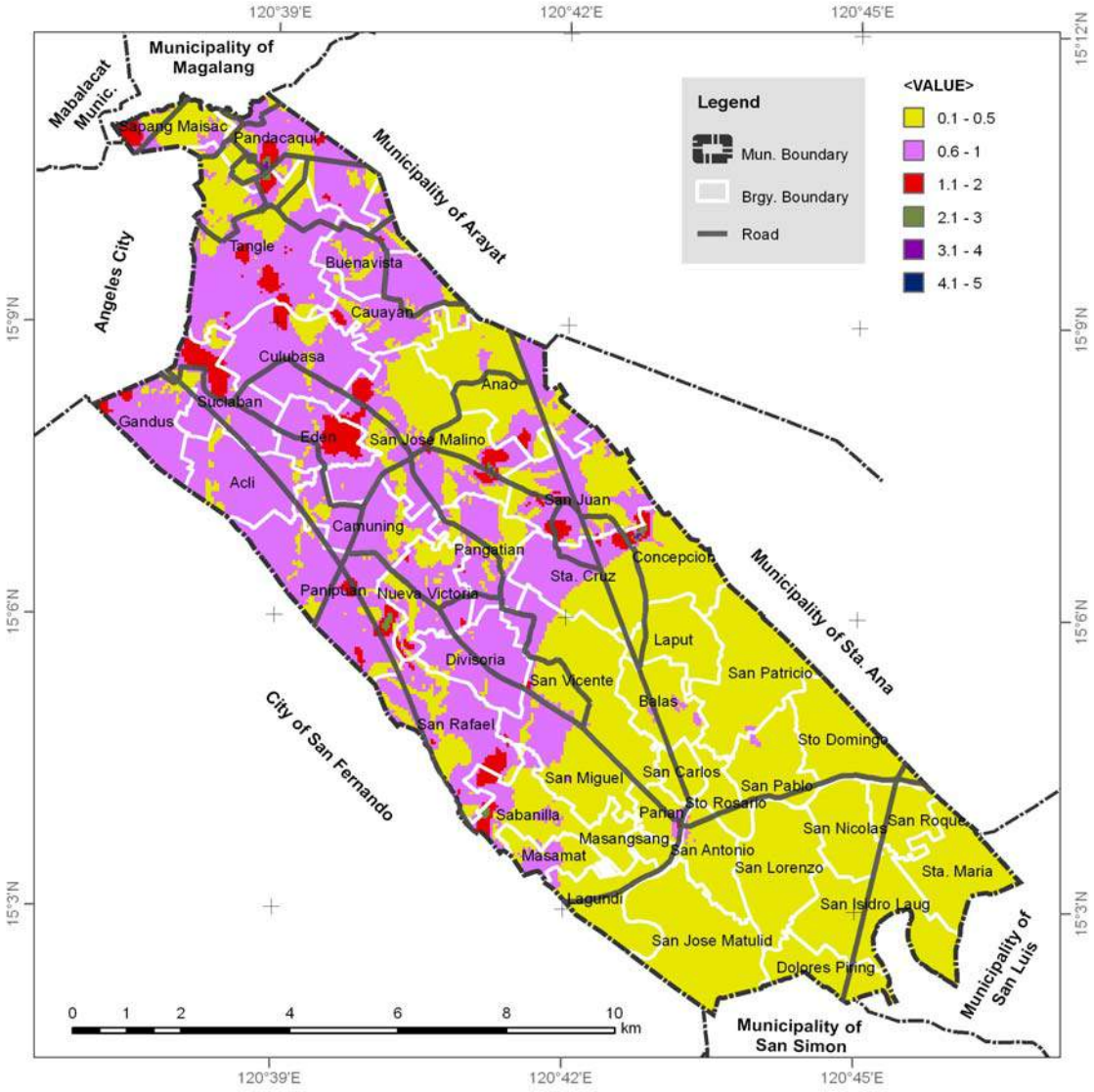
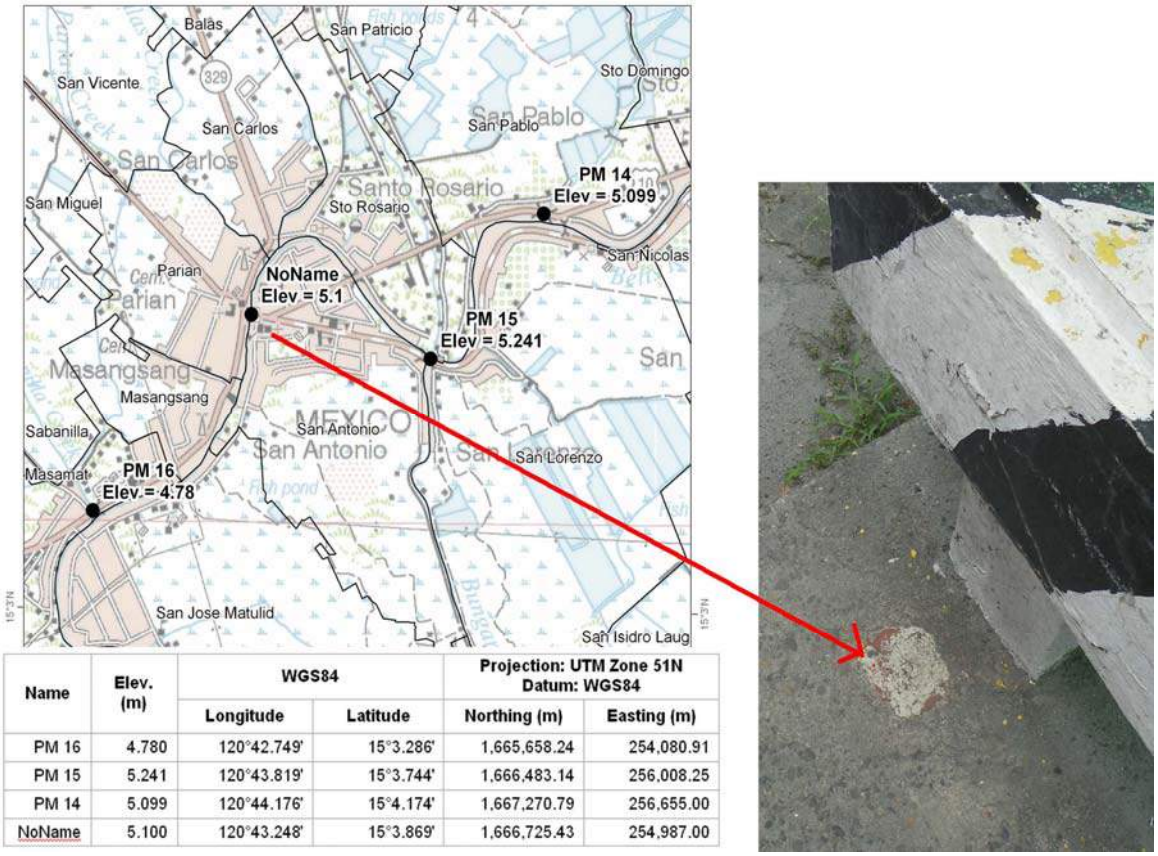


Figure 2.2.4 *Slope Map of Mexico*

There are several NAMRIA benchmarks in the municipality along Gapan-Olongapo Road and usually on bridges. Benchmarks are appointed points of reference to measure and evaluate quantifiable topographic characteristics such as elevation and slope. The technical descriptions of the benchmarks are shown in Figure 2.2.5.



Name	Elev. (m)	WGS84		Projection: UTM Zone 51N Datum: WGS84	
		Longitude	Latitude	Northing (m)	Easting (m)
PM 16	4.780	120°42.749'	15°3.286'	1,665,658.24	254,080.91
PM 15	5.241	120°43.819'	15°3.744'	1,666,483.14	256,008.25
PM 14	5.099	120°44.176'	15°4.174'	1,667,270.79	256,655.00
NoName	5.100	120°43.248'	15°3.869'	1,666,725.43	254,987.00

Figure 2.2.5 *Benchmark Points in Mexico based on NAMRIA Map and Actual Investigation*

2.2.4 Climate and Rainfall

The climate in Luzon is divided into four major types as identified by PAGASA (See Figure 2.2.6). The climate in Mexico falls under Type I, which is characterized by two seasons; dry season (November – April) and wet season (May – October). The hottest and most dry months of the year are March, April and May, averaging a temperature of 32 °C. The rainy season starts from June until October, with an average temperature of 23 °C. The wet season is dominated by the South-West monsoon. During this period, severe weather conditions associated with typhoons usually occur.

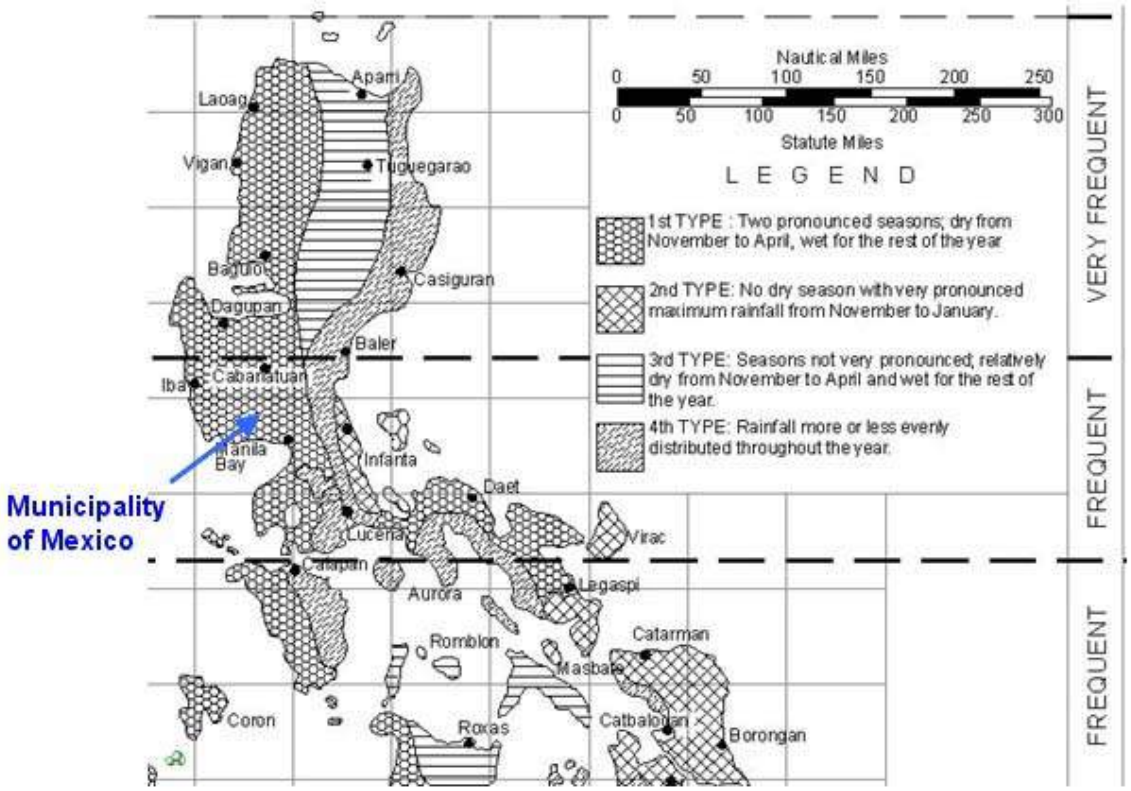


Figure 2.2.6 *Climate Map Based on PAGASA*

The annual average rainfall over the entire municipality ranges from 2,000 mm to 2,500 mm, as recorded by the NASA's Tropical Rainfall Measuring Mission Satellite (TRMM) and shown in Figure 2.2.7. The PAGASA rainfall monitoring station in Basa Airbase conforms to these recordings (See Figure 2.2.8). The average monthly rainfall is tabulated in Table 2.2.2.

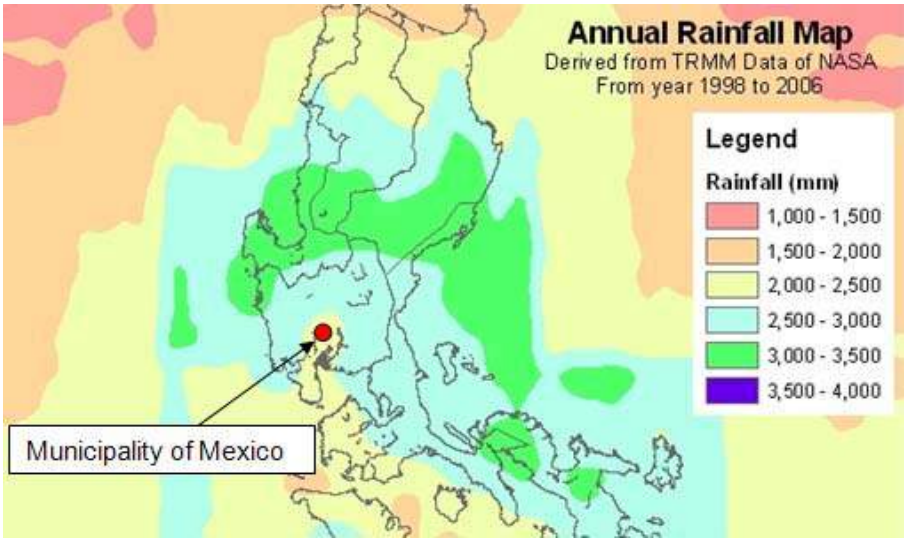


Figure 2.2.7 *Annual Average Rainfall Isohyets*

In any month of the year, tropical cyclones may manifest over the municipality. This natural condition has a frequency or probability of occurrence of about 20 times within a year, the highest being in the months of July and August. Despite accompanying destructive winds and rains, tropical cyclones prove beneficial to the municipality, since about 47% of water demands, especially by annual and perennial crops, come from these natural events.

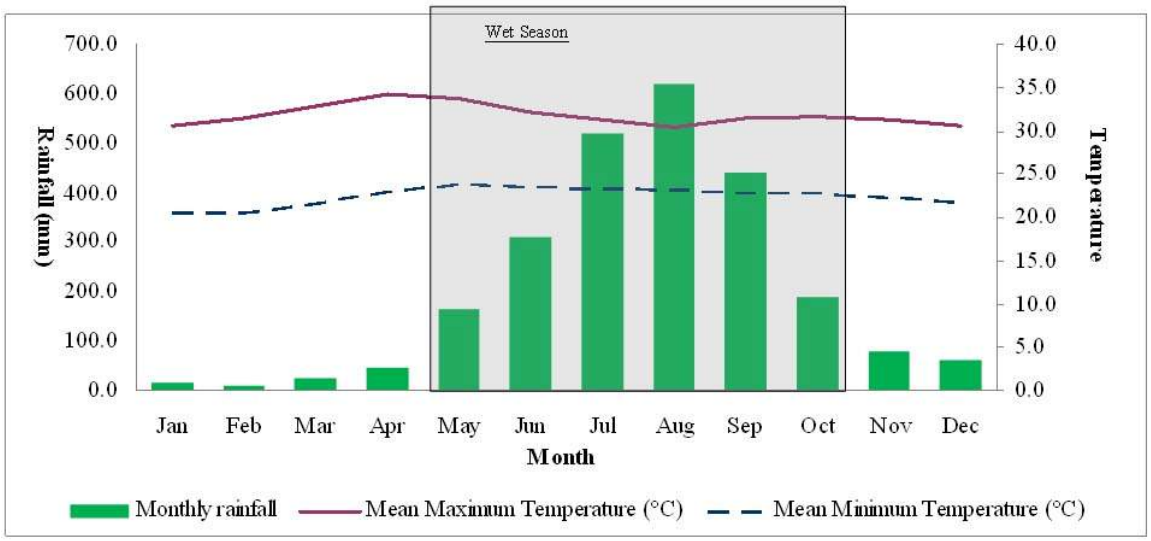


Figure 2.2.8 *Monthly Average Rainfall Chart (PAGASA – Basa Airbase Station)*

Table 2.2.2. *Monthly Average Rainfall (PAGASA - Basa Airbase Station)*

Monthly Average Rainfall (mm)												Annual Ave. Rainfall
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
15	10	25	50	130	300	510	610	420	190	90	80	2,430

2.2.5 Watershed and River Systems

Surface waters of the Municipality which accumulate into the Abacan River topographically originate from Angeles City and other northern portion of the town; while that what accumulates at Betis River comes from the Municipality of Sta. Ana. SCTEX is about 10km away from the town proper.

The accumulated water then concentrates in the Mexico-Bungang Guinto-Abacan River junction, situated in the boundaries of barangays Sto. Rosario, San Lorenzo and San Antonio. The amount of water from Abacan is divided into two confluence rivers namely Mexico and Bungang Guinto. The basin of Mexico, as well as its natural water systems, is presented in Figure 2.2.9.

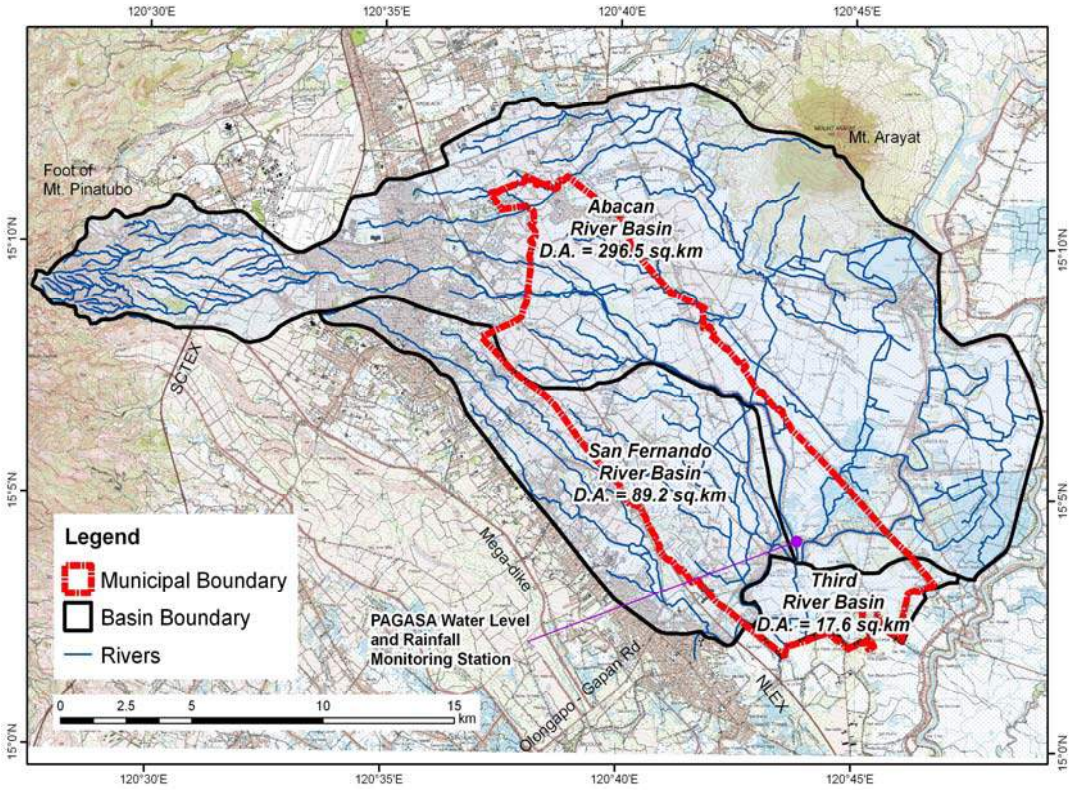


Figure 2.2.9 *Watershed and Natural Waterways of Mexico*

Mexico River runs along the municipality's commercial and densely inhabited residential areas, and then passes through the more populated area of San Fernando City. This scenario presents a threat to the economic and social conditions of the municipality should the downstream of the river passing the City of San Fernando become poorly managed. On the other hand, Bungang Guinto River annually affects the agricultural productivity as well as the situation of the residents in the low-lying barangays of San Jose Matulid, San Lorenzo, Dolores Piring, and a part of San Antonio.

2.2.6 Geology

Mexico is generally divided into two types of geological deposits. The surficial deposits on the upland occur mainly as unconsolidated alluvial deposits overlain by recent pyroclastic flow and ashfall deposits. Simultaneously, surficial deposits on the lowland are volcanically derived alluvial materials and are composed of loosely compacted gravels and sands with some silt and clay (Figure 2.2.10).

Figure 2.2.10 *Geology Map of Mexico*

2.2.7 Soil

Mexico's land is comprised of different soil types, as illustrated in Figure 2.2.11 below. More than half of the municipality is covered with sand, specifically La Paz Sand and La Paz Fine Sand. The third largest portion consisting of barangays in the northern part of the municipality is made up of Angeles Sand. The barangays which are traversed by the confluencing rivers of Abacan, Betis and a portion of Bungang Guinto are characterized by Quicua Silt Loam. The farthest southern part of Mexico is defined by San Fernando Clay Loam type. This characteristic is also one aspect which influences the high flooding susceptibility of the barangays in this part of the municipality, since clay is naturally more capable of water retention than absorption.

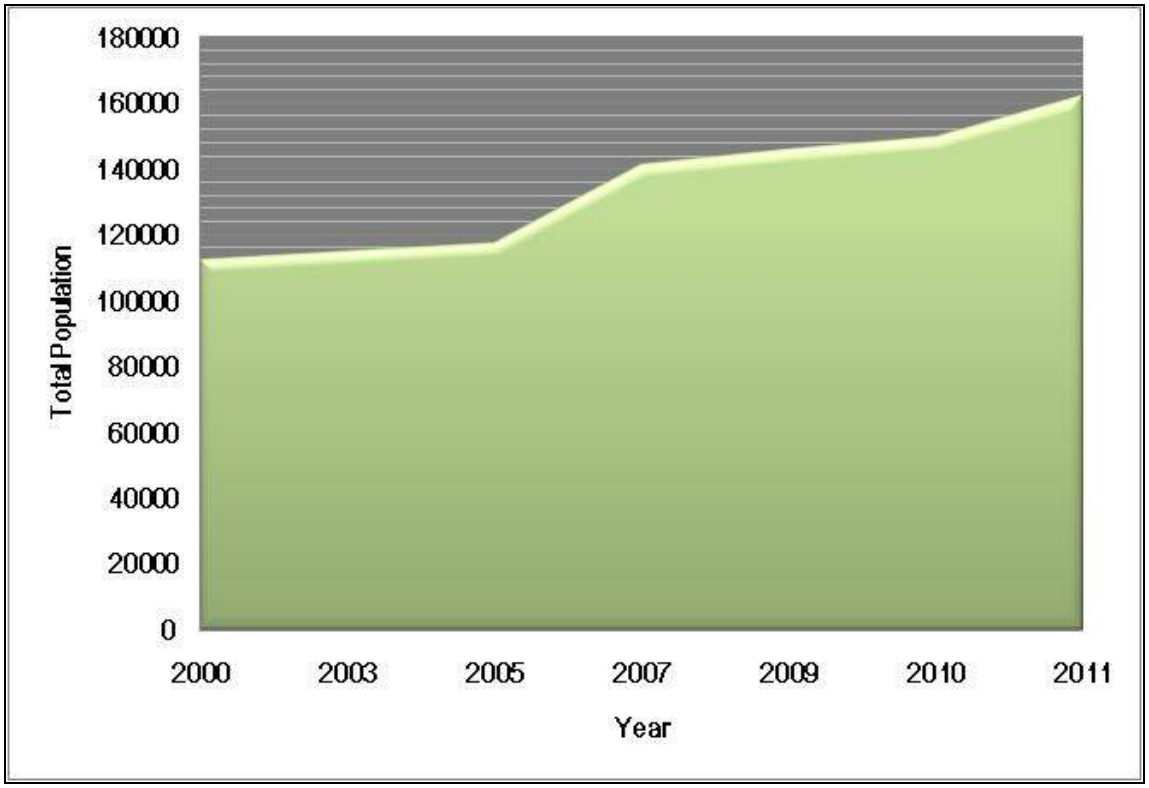
Source: Bureau of Soil

Figure 2.2.11 *Soil Map of Mexico*

2.2.8 Demography

According to the NSO Census Report of 2007, Mexico has a total population of 141,298 people. This record has increased by more than 29% from the total population of 109,481 in 2000, which might be likely attributed to the bulking of people who have resettled in barangays Acli and Pandacaqui during the onset of crisis brought by the Mt. Pinatubo Eruption in 1991. The up-to-date Barangay Census gives a total population of 162,293 which is equivalent to a 9.3% increase from the 2007 NSO Census.

Pandacaqui largely contributes to the total population of Mexico, leading at great discrepancy compared to all barangays in the municipality. Figure 2.2.12 below shows the total population of Mexico from 2003 to present as based on both NSO and Barangay Census records.



Source: National Statistics Office (NSO), Barangay Census

Figure 2.2.12 *Total Population of Mexico (2003 – 2011)*

2.3 SECTORAL PROFILE

2.3.1 Social Services and Infrastructures

A. Education

Mexico has public and private institutions for both primary and secondary levels of education. At present, there are 48 schools classified under primary level, nine (9) under secondary level and only one (1) under tertiary level. 38 barangays have their own public elementary school, the oldest being the Mexico Elementary School in Sto. Cristo (Figure 2.3.1). Seven (7) of the secondary level schools in the municipality are public schools. For the present school year 2011 – 2012, 18,716 and 9,958 are enrolled in the primary and secondary levels, respectively.

The only school in Mexico which offers college education is Don Honorio Ventura Technological State University (See Figure 2.3.2), an extension campus of the Don Honorio Ventura Technological State University Main in Bacolor, Pampanga. Most of the high school graduates from the municipality pursue their tertiary education in colleges and universities in San Fernando City, Angeles City and Metro Manila.

Figure 2.3.2. *Don Honorio Ventura Technological State University:*

Figure 2.3.1. *Mexico Elementary School Mexico Campus*

B. Health and Nutrition

The municipality has four (4) Rural Health Units, 27 Barangay Health Stations (BHS) and one (1) public hospital (Mexico Community Hospital) which provide health care services to the public. There are 15,555 currently enrolled at Philhealth (PHIC). Top 3 leading cause of morbidity are (1) Acute Respiratory Infection, (2) Skin Ailments, and (3) Gastrointestinal diseases. The top 3 leading cause of mortality are (1) Cancer, (2) Cardiovascular Diseases, and (3) Diabetes. Infant mortality rate is 1

out of 100,000 population, Crude Birth Rate (CBR) is 8 out of 1,000 population and Crude Death Rate (CDR) is out of 1,000 population. Prevalence rate of malnutrition is 1.2%.

The possible cause of aforementioned health problems in the municipality are (1) poverty and unemployment and (2) lifestyle changing – "westernized attitude".

Figure 2.3.3. *Mexico Community Hospital*

C. Social Welfare

The Mexico Municipal Social Welfare and Development Office (MSWDO) spearheads the provision of social welfare services to the municipality as an extension of function of the Department of Social Welfare and Development (DSWD) in accordance to the *Local Government Code of 1991* (Republic Act 7160).

Some of the social programs and services delivered by the MSWDO are food assistance, care assistance for victims of assault and child abuse and Day Care Centers.

D. Housing

Due to the volcanic eruption of Mt. Pinatubo in 1991, two barangays in Mexico, Acli and Pandacaqui served as resettlement areas for the victims of the said tragedy. Both barangays are considered urban, with Pandacaqui having the most number of settlers in all of the barangays in Mexico.

A few informal settlers reside in San Jose Matulid, Sto. Rosario, San Pablo and Lagundi. Low-cost housings are made available by the Local Government of Mexico in barangays like San Rafael, Sto. Rosario and even in Pandacaqui, in order to minimize if not totally eliminate, the number of people squatting in private and government-owned lands.

E. Protective Services

Mexico police stations are situated in barangays Parian, near the Municipal Hall; Lagundi, in front of SM San Fernando and; Pandacaqui, near the Barangay Hall. The police station in Parian is equipped with six (6) vehicles for its transportation and operations of which four (4) are patrol cars and two (2) are motor patrols.

There is also a Municipal Jail beside the Municipal Hall which has two (2) prison cells, each equipped with a bed and a lavatory. The jail only serves as a temporary containment for law offenders. All criminals are brought to the larger jail in Arayat upon the finalization of the Municipal Court's decision.

One (1) fire station in Mexico is also situated near the Municipal Hall. It is equipped with one (1) fire truck and controlled by eight (8) personnel.

F. Environmental Management

The main focus of the environmental management activities of Mexico is the minimization and proper disposal of solid wastes in the municipality. Collection of garbage from homes and public places are carried out by municipal garbage trucks in order to avoid uncontrolled dumping of wastes in any places. The Local Government of Mexico owns four (4) trucks, while some other barangays, like Pandacaqui and San Antonio, have their own garbage truck for waste collection.

Disease problems attributed to improper waste disposal is also regarded by the Municipality of Mexico. A Clean-Up Drive Program is performed monthly to remove solid wastes clogging the canals and thus prevent habitation of mosquitoes in these areas. Spraying pesticides to mosquitoes and mosquito larvae is also done.

Mexico has only one (1) Material Recovery Facility (MRF) which is located in Suclaban (Figure 2.3.4). It has its own composting area and equipment like segregator, shredder and pulverizer. All refuse wastes are carried to Kalangitan Sanitary Landfill in Clarkfield Pampanga for final disposal, since there is no sanitary landfill existing in the municipality.

Figure 2.3.4 *Compost Windrows of the Municipal MRF in Suclaban*

G. Utilities

Deep wells and shallow wells are the commonest sources of water in Mexico. Creeks, rivers and other fresh water bodies proximate to some barangays also serve as water supply for and irrigation purposes.

One major water supply system which provides the municipality access to water is the Sinukuan Water Supply Facility (Figure 2.3.5). It supplies water to residential and commercial areas in 32 barangays. There are no industrial and institutional areas being supplied by the said facility. There are another two minor water systems present in the municipality. The one owned by a certain Nuel Canda delivers water to 200 households in San Antonio while the other which is in Sto. Rosario Water System Cooperative supplies to few houses.

The electricity of Mexico, on the other hand, is supplied by two (2) power supply facilities. One is the PAMPANGA RURAL ELECTRIC SERVICE COOPERATIVE INC. (PRESCO) in Anao (See Figure 2.3.6) and the other is the PAMPANGA ELECTRIC COOPERATIVE, INC. 1 (PELCO 1) in Sto. Domingo (See Figure 2.3.7). Both facilities supply electric power to residential, commercial and institutional locations, as well as public buildings, irrigation and street lights.

Figure 2.3.5. *Sinukuan Water Pumping Station in Camuning*

Figure 2.3.7. *Pampanga Electric Cooperative Inc. 1 (PELCO 1)*

Figure 2.3.6. *Pampanga Rural Electric Service Cooperative Inc.(PRESCO) in Anao*

A station of National Grid Corporation of the Philippines, a sector which operates and maintains power transmission, is situated in San Jose Matulid. Its area of operation encompasses the whole island of Luzon.

Figure 2.3.8. *National Grid Corporation of the Philippines (NGCP) in San Jose Matulid*

H. Transportation and Communication

Mexico has paved asphalt roads which connect it to major cities in Pampanga, to other provinces and to Metro Manila. It can be accessed by vehicles from Metro Manila thru North Luzon Expressway (NLEX). MacArthur Highway serves as another main access road aside from NLEX, which serves as passage from Mexico to Angeles City. Olongapo – Gapan Road on the other hand, connects transport vehicles from the municipality to provinces like Bataan, Zambales and Nueva Ecija.

The main transportation means in Mexico are jeepney and tricycle vehicles. Associations exist among jeepney and tricycle drivers and operators. Buses are also available for provincial transport. A parking area in front of SM in Lagundi serves as stop-over for buses traveling to Olongapo, Baguio, Manila, Cabanatuan and other provinces.

Communication in Mexico on the other hand is delivered by postal, courier and telecommunication systems. Courier and package delivery services are conveyed thru branch offices of LBC, Air21, Cebuana Lhuillier and Mlhuillier. A post office is situated in Parian, right in front of the Municipal Hall. The said post office is not under the supervision of the Local Government of Mexico, but rather, operates under the jurisdiction of the Provincial Government.

Communication is further revolutionized by telecommunication technologies like telephones and cellular sites. PLDT and DIGITEL are the major telephone systems which operate in the municipality. The main office of PLDT is located in San Antonio while DIGITEL is in Sto. Cristo. Cell sites for Service Providers like SMART, Globe and Sun are situated in several barangays across the municipality to provide signals for mobile communication services. Internet services thru Digital Subscription Lines (DSL), Wireless Fidelity (Wi-Fi) and Broadband devices are also utilized by a more number of people due to its convenience and wider reach and coverage.

Figure 2.3.9. *SMART Cell Site situated in Parian*

Figure 2.3.10. *SMART and Sun Cell Sites in Sta. Cruz*

2.3.2 Economy

A. Agriculture and Agro-Industry

Majority of the land area of Mexico is utilized for agricultural purposes, totaling to a quantitative production area of 10,487.23 hectares in 2011. Rice, corn and mangoes are the major crops produced while minor crops include sweet potatoes, cassava and fruits and vegetables.

The largest crop land area is devoted to rice, followed by corn and mangoes. During seasons when rice is not applicable for planting due to dry weather, the farmers of Mexico plant corn instead. Other barangays like Gandus, Suclaban, Panipuan, Nueva Victoria and Acli wherein water is not sufficient for rice planting, prefer sugarcane for their crops.

Agro-industry in Mexico is characterized by piggery, poultry and fish ponds. Aside from small backyard agro-industrial businesses, the municipality has medium to large scale poultries and piggeries still in operation. For instance, a piggery with an area of almost four (4) hectares still runs in Tangle while another one of smaller size exists in Pangatlan. Poultries are more numerous in the municipality compared to piggeries, like in Panipuan, where there are five (5) poultries still active, the largest having an area of 4.96 hectares. Figures 2.3.11 and 2.3.12 show large operating poultries in Suclaban, Panipuan and Buenavista, respectively.

Figure 2.3.11. *6400-square meter poultry in Suclaban*

Figure 2.3.12. *An operating poultry in Buenavista*

Fishponds are also present in the municipality, utilizing an area of 472 hectares, of which the largest is located in Sto. Domigo (see Figure 2.3.13). Fingerlings of tilapia and catfish as well as some shellfishes are cultivated for market and profit.

Figure 2.3.13. *Large Fishponds of Mexico*

B. Trade and Industry

During the old times, Mexico was one of the major trade and commerce centers in Eastern Pampanga due to its proximity to rivers which serve as venue for trading ships and passenger boats.

Nowadays, the business environment of Mexico has reached a considerably flourished state as demonstrated by the rise of small-scale and light business establishments as well as very few large-sized ventures such as SM Pampanga. The land ownership of the latter is shared with San Fernando City, however, three quarters of the land area is owned by Mexico.

The municipality's public market located in Parian has a large capacity, accommodating several retail and wholesale traders of grocery, food, perishable and dry goods. Establishments which offer services are likewise prevalent, like banks, medical support clinics, construction companies, printing press and others.

Although the Municipality of Mexico has access and proximity to modernize economic gateways, developed road networks and large commercial and trading spots, its degree of industrialization is not yet tapped to its utmost capability and capacity as of present. The palpable potential of the municipality for industrial growth outlines the vision of the land use planning as well as the challenges already undertaken by the local government to encourage more investors thru adoption of modern tactics and measures.

C. Tourism

Mexico is well-known for its old churches which date back to the Spanish era. One of the churches is the San Jose Matulid Chapel, which is believed to be the oldest church in Pampanga, built in late 1580's (See Figure 2.3.14). Another is the St. Benedict's Institution de Mexico (Figure 2.3.15) and the Mexican-Aztec-styled Sta. Monica Church, which were both built by Fr. Jose dela Cruz in 1665, but believed to be established as early as 1645 and were renovated only in 1665 after an earthquake devastation. The only remaining structure of the old Sta. Monica Church as of present is its bell tower.

Figure 2.3.14. *View of the Ceiling of San Jose Matulid Chapel*

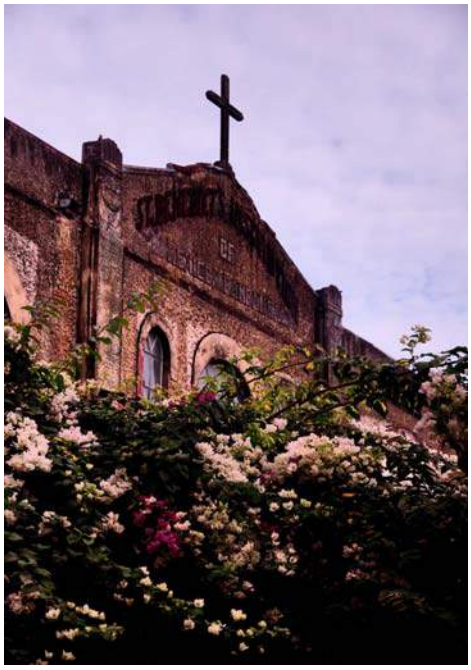


Figure 2.3.15. *St. Benedict's Institution de Mexico*

The Hizon ancestral house, the heritage house built in 1916 and owned by the famous *Kapampangan* Hizon clan, is still visited today by tourists who want to take a glimpse of its century-old kitchenwares. The houses of Lazatin at 2nd Street and Lising at Jose Abad Santos Street in Parian are also some of the old structures which are engraved in Mexico's history.

Mexico is also well-known for its leisure parks and world-class subdivisions such as The Lakeshore (Figure 2.3.16), Beverly Place and Sorrento. The product of specialty of the municipality is the local-made San Nicolas Biscuits (Figure 2.3.17).

Figure 2.3.16. *The Lakeshore Leisure Park and Subdivision*

Figure 2.3.17. *Sanikulas Biscuits*

3. COMPREHENSIVE LAND USE PLAN

3.1. INTRODUCTION

Land is a resource whose components and quality conditions are directly and indirectly influenced by human activities and management. Classification of a land's usage and cover determines its capability to support life and structures as well as its vulnerability to uncontrolled management and development systems.

As towns become cities and cities become metropolitan areas, utilization of land for different purposes becomes demanding and competitive. Therefore, a controlled land use plan must be established to ensure harmonious relationship between development and sustainability.

The Comprehensive Land Use Plan (CLUP), along with Sectoral Study and Zoning Ordinance, are tools which function as basis for reuse and future use of land structures and resources in consideration of growth, development and sustainability. These documents are portions of the embodiment of the Republic Act 7160 or the Local Government Code.

The Municipality of Mexico aims to complete the said reports which shall comprise five (5) developmental years (2012 – 2017) in accordance to the following objectives:

- The CLUP has to be revised and updated to enumerate the commercial, industrial and residential developments despite the influences of the geophysical changes or landscape changes brought about by the eruption of Mt. Pinatubo.

- Mexico is at the heart of Pampanga, and being a part of the emerging Clark Metropolis, it has to be prepared for good economic activities and respond to the needs and opportunities being brought about by the Metropolis.

- Proper zoning has to be implemented in order to protect the productive agriculture area and continuously sustain agricultural economy. Also to prevent, control and regulate establishment or erection of infrastructures at disaster prone areas.

- Mexico has to be provided a better direction and focus for developments which shall benefit the future generation.

3.2. STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS (SWOT) EVALUATION

Strengths, Weaknesses/Limitations, Opportunities and Threats (SWOT) Analysis is a strategical procedure essential to the CLUP Project in order to assess the capacity of the Municipality of Mexico to make a headway in land resources utilization. It also aims to give an overview of the internal and external aspects which might influence Mexico's plans and goals and which might therefore shape the future of its economy and different sectors. Table 3.2.1 presents a matrix summarizing the evaluated SWOT.

Table 3.2.1. SWOT Matrix

STRENGTHS:	WEAKNESSES / LIMITATIONS:
• High Percentage of Land Allocation for Rice Production • Availability of Developed Roads • Availability of Material Recovery Facility • Gravitation of People from Neighboring Municipalities to Mexico	• Large Disproportion Between Police Personnel and Population • Low Crime Solution Efficiency • Inadequacy of Arterial Roads and Underdevelopment of Farm-to-Market Roads • Insufficiency of Health and Protection Equipment • Lack of Waste Awareness and Development Necessity of Solid Waste Management System • Limited Irrigation and Other Farm Facilities • Capacity and Capability Development for Municipal Personnel • Land Allocation and Cultivation Inefficiency • Inefficacy in Utilization of Commercial Spaces

OPPORTUNITIES:	THREATS:
• Proximity to Large Commercial and Residential Ventures • Capability of Municipality to Further Residential Development • Terminal Expansion of Diosdado Macapagal International Airport (DMIA) and the Continuation of the North Rail Project • Untapped Potential of the Defunct Delta Project Irrigation Component • Pinatubo Hazard Urgent Mitigation Project Phase II (PHUMP II) • President's Bridge Program • Mid-Term Philippine Development Plan 2011 – 2016: Goals and Plans	• Proximity to Large Commercial and Residential Ventures • Environmental Threat of Garbage In-flow in Abacan River • Flooding Susceptibility and Withstanding Procedures • Deterioration of Civil Structures and other Infrastructures

Some specific interventions in order to address the weaknesses are as follows:

- To reduce the crime in the municipality, Barangay Tanods were trained in crime preventions and suppression and also conduct foot patrol nightly.
- Mobilized traffic aides for traffic management
- The municipality has purchased one (1) additional fire truck
- Budget is allocated for annual employee trainings and seminars
- Conducted feasibility study and implemented projects for improvement of irrigation and Farm-To-Market-Roads.
- Waste segregation campaign is being implemented already

3.2.1 Strengths

- *High Percentage of Land Allocation for Rice Production*

Majority of the upper land portion of Mexico are rice fields, thus making rice the primary crop produced in the municipality both for food and profit. A larger area for rice production ensures a stable supply of food for the Mexico populace, as well as a stable line of business for small to medium-level entrepreneurs.

- *Availability of Developed Roads*

The Municipality of Mexico is bounded by developed cities such as San Fernando and Angeles and is bisected by national highways and paved roads. Some of these roads are Olongapo-Gapan Road, Mexico-Angeles Road, Quezon Road, Mexico-Magalang Road, Mexico-Angeles Road, Sindalan -

Anao Road and two (2) NLEX exits near SM Pampanga and The Lakeshore. This condition represents a great potential for a further economic commercial and industrial growth for the municipality, marking it as one of the future investing bowls of Pampanga.

Added to this, interconnecting farm-to-market roads are already available in some rural areas, which are to be improved to provide an entry for development and smooth transportation.

- *Availability of a Material Recovery Facility*

Despite the existence of only one (1) MRF to operate for the whole municipality, the presence of such facility indicates a positive response of the Local Government to the growing problem of improper waste disposal. The starting steps towards more public awareness and cooperation regarding the dire solid waste situation have been taken, and still being taken by both officials and citizens. Emulating the same program at barangay levels shall not be that difficult if an already established system shall only be followed.

- *Gravitation of People from Neighboring Municipalities to Mexico*

The cities of San Fernando and Angeles are developed economic spots situated at the boundaries of Mexico. The barangay Pandacaqui at close proximity offers low-cost residential lands and housing compared to the said cities. This scenario promotes transfer of people from these cities to the Mexico, thus surging the number of populace or man resource in the municipality.

3.2.2 Weaknesses / Limitations

- *Large Disproportion between Police Personnel and Population*

The lack of police stations in strategic places as well as police personnel assigned to each station is a drawback which must be attended to ensure people's aid and protection at all times. According to the main police station in Parian, only 38 police officers are allocated to 165,823 people or one (1) police to every 4,364 populace.

The police department in Parian possesses four (4) patrol cars and two (2) motor patrols, vehicles which are vital to immediate counteraction during an urgent situation. Unfortunately, the police stations in the municipality also lack these modes of transport.

The severe imbalance of police to populace ratio, as well scarcity of police stations, vehicles and trainings, might pose an image of ineffective municipal protection and security. This might result to a belief of inadequacy of aid during possible events of emergency and moreover, a discouragement among investors to enter into business with Mexico.

- *Low Crime Solution Efficiency*

In 2010, the total crime cleared and solved efficiencies are 5.8% and 6%, respectively, as based on the records of Mexico Main Police Station in Parian. Up-to-date records show that the total crime cleared efficiency is 18% and crime solution efficiency is 11%. Despite the low crime incidence (106 cases for total of 6 crime indices based on 2011 records), low efficiency for clearing and solving crimes must be strictly attended since such situation reflects the lack of training among police officers and moreover mirrors the necessity to increase the number of police designated per given number of populace.

- *Inadequacy of Arterial Roads and Underdevelopment of Farm-to-Market Roads*

The road network of Mexico consists of concrete farm-to-market roads, paved asphalt roads and developed highways, making it possible for transportation to easily support commercial growth. However, roads laterally connecting developing urban residential areas which shall hence make transportation more convenient and direct, are not a common structure in the municipality.

For instance, Nueva Victoria, Pangatlan and San Juan are barangays with low density residential areas, which can be potentially subjected to further development. In order to arrive from one barangay to another, however, shall require a longer route. Proposed roads as those which are presented in figures 3.2.1 and 3.2.2 shall not only serve as means for easy and direct transportation, but also as a mode of commercial inducement.

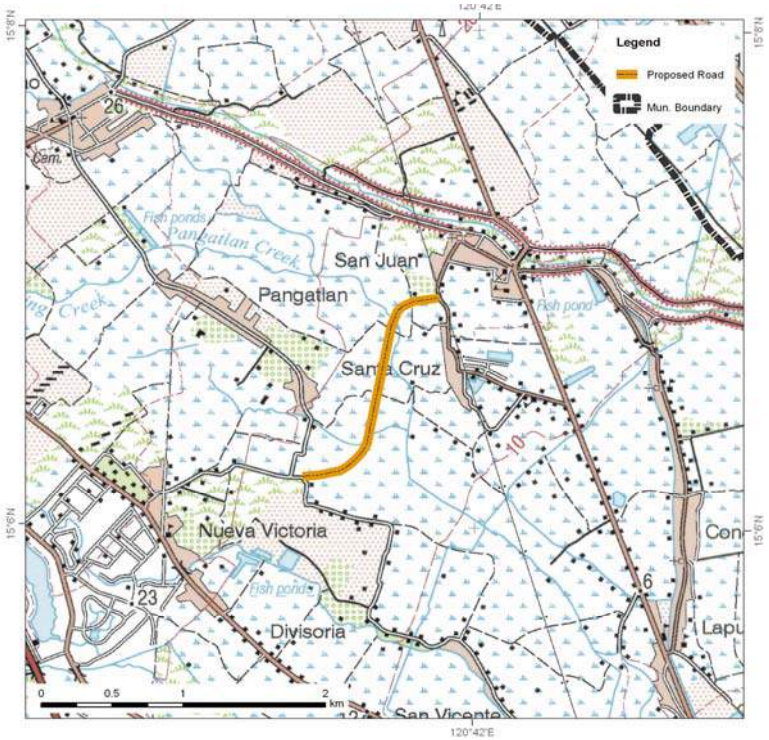


Figure.3.2.1. *Proposed Road Connecting Nueva Victoria, Pangatlan and San Juan*

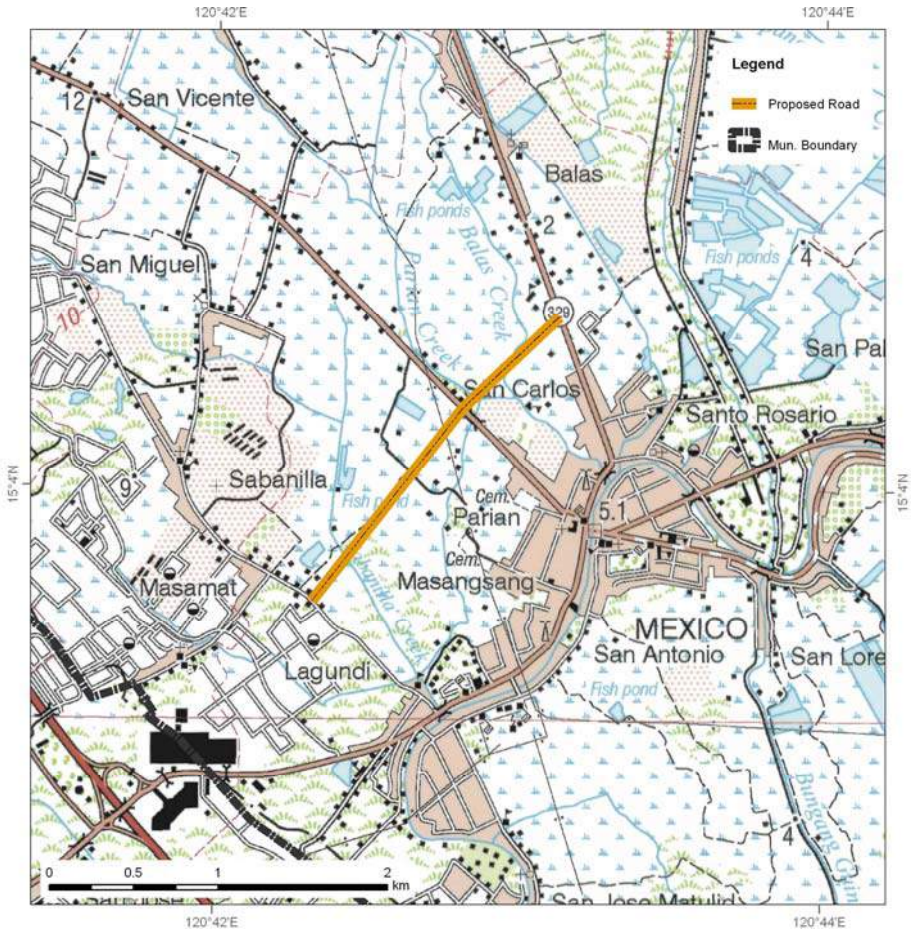


Figure.3.2.2. *Proposed Road Connecting Sabanilla and Balas*

Farm-to-market roads, usually with a width of four (4) meters to allow passage of small vehicles, are the common type of roads existent among the rural parts of the municipality. Some of these roads are already cemented, but a few are still made of earth cleared off of tall grasses and other impeding vegetation (See Figure 3.2.3).

Figure.3.2.3. *An Existing Dirt Road in Suclaban*

- *Insufficiency of Health and Protection Equipment*

The Municipality of Mexico has a total of four (4) Rural Health Units and one public hospital which respond to the people's need for health aid and support. These health facilities are equipped with the most conventional to sophisticated health support materials and devices, such as beds, stethoscope, first aid kits, blood pressure testing kits, and medicines. This condition must be observed particularly to the RHUs whose covered barangays are in very far distance from any hospital, public or private. The municipality has two ambulances in which one is for the Mexico Community Hospital.

Fire control services, on the other hand, must be fully equipped to ensure readiness at all times. Only one (1) fire truck is available at disposal for the whole municipality, which however, is dysfunctional and under repair. Thus, the Bureau of Fire Protection still depends on the fire protection units of other municipalities, during dire fire situations.

A highly urbanized barangay, Pandacaqui for instance, must also be provided with fire-fighting equipment and vehicle, since a large populace is existent in the barangay, and thus is more prone to fire accidents. Moreover, it is very far from Parian, wherein the municipal fire truck is situated.

- *Lack of Waste Awareness and Development Necessity of Solid Waste Management System*

Accumulation of solid wastes and its disposal is an old and foremost concern of the society from the smallest community units to the largest cities globally. The rampant and indiscriminate throwing of municipal and domestic wastes in the surroundings, natural waters and drainage systems has resulted to dire consequences in the environment, health and security, and even in economy.

The lack of awareness of the local people on proper waste management and disposal, and their lukewarm participation on waste management programs further fuel up the problematic outcomes of the aforementioned situation. Despite the passing of the *Ecological Solid Waste Management Act of 2000* (Republic Act of 9003) as well as other supporting environmental laws (Clean Air Act, Clean Water Act), the inefficient implementation of these laws by government and non-government organizations, either due to their lack of will or financial support, or both, has weaken the sustainability of the laws and programs against environmental violations, and wasted the time and effort of the environmentally-concerned individuals and group. This is such a case which is economically unwise.

Mexico used to have an open dumpsite which was rehabilitated and now, is fortunately closed. A Material Recovery Facility (MRF) is available in Suclaban for processing of municipal wastes, whilst the residual wastes are brought to Kalangitan Sanitary Landfill in Tarlac. The MRF is equipped with composting and segregating facilities and equipment. Four (4) garbage trucks are allotted for waste collection in the municipality, aside from other barangays, like Pandacaqui and San Antonio, which

have their own trucks. The limited number of trucks as well as the availability of only one MRF in a municipality with almost two hundred thousand residents can compromise human health and the environment due to waste collection and management inefficiency.

- *Limited Irrigation and Other Farm Facilities*

More than 80% of the lands of Mexico are subjected for agricultural utilization. Its primary cash and traditional crop is rice and hence, majority of its cultivated lands are rice fields. It is therefore vital to have more irrigation facilities to further boost agricultural production and aid the farmers in their livelihood.

During the five-day (September 7–9 and 14–15) consultation workshop done, the barangay captains have mentioned a large irrigation program known as the "Delta Project Irrigation Component" back in the period of the Estrada Administration. This program was established to give farmers in the country a more convenient way of supplying water to their crops. The said program has already constructed irrigation canals in some barangays, but was halted following the ousting of the former President. The barangays in Mexico which was included in the said irrigation project were Sta. Cruz, San Vicente, Concepcion, Laput, San Patricio, San Lorenzo, San Pablo, Sto. Domingo, San Nicolas and San Antonio.

At present, several of the barangays rely on rain and the traditional irrigative practices such as water sourcing from deep wells and manual watering. A few barangays, like San Lorenzo, have a motor-powered irrigation system, as shown in Figures 3.2.4 and 3.2.5. This system stands near the Betis River, from which it sources water out for crop irrigation.

Figure 3.2.4. *Irrigation System in San Lorenzo*

Figure 3.2.5. *Motor-Powered Engine of the Irrigation*

The dependence of the farmers on the old methods of planting and harvesting in several ways serves as a hindrance to increasing produce. The farmers, should they be equipped with the knowledge dissemination through their associations and technical assistance from agricultural

experts shall be able to boost up their harvests in spite of natural disturbances such as typhoons and floods.

- *Capacity and Capability Development for Municipal Personnel*

The achievement over the shortcomings and drawbacks encountered by all sectors of a municipality can be considerably offset, if the officials themselves are equipped with the necessary trainings and experiences. It is important that all departments shall consider the appropriateness of the skills and the number of working personnel, to avoid designation of inexperienced people to particular positions, as well as assignation of a role which does not have, or of limited use, to the department. Simple and common activities, such as documentation and archiving, must be of requisite practice and skill of all personnel working for the Local Government of Mexico.

- *Land Allocation and Cultivation Inefficiency*

According to the municipal data, almost 6,000 hectares of the agricultural lands in Mexico are devoted to rice and corn plantation and more than 2000 hectares are allotted for sugarcane. Some 200 hectares are planted with mangoes and other fruit trees. However, a hundred hectares is used for fish ponds and a little less than 2000 hectares are left untilled and unproductive

Crop selection among Mexico farmers is largely dependent on the land conditions and natural events which shape the existent soil topography in the municipality. Barangays like San Antonio, Laug, San Roque and Sto. Domingo which are situated in the river delta and in low-lying areas are periodically tempested by floods that farmers only plant once a year. In San Vicente among others, farmers plant rice during rainy season and corn during dry season.

Some barangays have water difficulties due to high elevation and/or far distance from downstream rivers wherein most of the water from different waterways accumulates. This condition induces the farmers in these barangays to plant sugarcane as a major cash crop instead of rice. However, the unavailability of a sugar mill proximate to the municipality makes sugarcane cultivation more costly than profitable, especially with respect to transportation expenses, since the nearest sugar mill is Hacienda Luisita in Tarlac and the San Fernando's Pampanga Sugar Development Company (PASUDECO) has been closed since 2009.

- *Inefficacy in Utilization of Commercial Spaces*

Mexico has great potential in becoming a center of economic development due to its proximity to large commercial ventures like SM Pampanga and series of roads like Olongapo-Gapan Road and Mexico-Angeles Road, among others.

However, possibly due to lack of business knowledge and capital, the commercial aspect of Mexico is more characterized by small establishments and cottage industries rather than large enterprises. Insufficient business skills also fail to provide the entrepreneurs a broader outlook on utilizing commercial spots and areas to their utmost capacity.

In Panipuan for example, there are available commercial warehouses which are vacant and unused. In the case of Pandacaqui, some of its commercial establishments, such as the market situated in the Resettlement area, are not patronized due to competing stores. This kind of competition can be used as an economic advantage, should strategic business plans and measures be fully realized.

Another setback is the existence of stalls occupying the roads' right-of-way, which causes traffic congestion (Figure 3.2.6). This scenario can be observed in Parian, right in front of the Municipal Hall and near the Municipal Public Market (Figure 3.2.7).

Figure 3.2.6. *Traffic-prone portion of Olongapo-Gapan Road*

Figure 3.2.7. *Mexico Public Market*

3.2.3 Opportunities

- *Proximity to Large Commercial and Residential Ventures*

The rise of large malls such as Robinson's and SM is an indicative point of the growing commerce in a municipality and its nearing path to cityhood. Mexico is proximate to Robinson's Starmills Pampanga and SM Pampanga, the latter whose larger land area covered is under the ownership of the municipality. Moreover, luxurious leisure parks and residential subdivisions like that of The Lakeshore, the Beverly Place and the Sorrento, give more credit to the commercial reputation of the municipality, which thus encourage entry of more investors.

- *Capability of Municipality to Further Residential Development*

Lands with high elevation are naturally lacking in water reservoirs formed by confluence of a main stem and its tributary waterways. Main river stream commonly recharges by precipitation in the uplands, and then flows downstream to a point where other tributaries join with it. This point is where water is abundant and capable of being tapped. Hence, elevated lands are more reliant on natural precipitation for water recharge which usually happens only during the rainy season.

Based on the existing agricultural land utilization of Mexico, the parts colored in red as shown in Figure 3.2.8 are areas which are either highly elevated or far from cornucopia of river waters, or

both. Due to these conditions, the people here have resorted to planting the less profitable sugarcane as their primary crop. The yellow-shaded portions on the other hand are built-up areas.

Evaluation of the figure shows that the sugar plantations in barangays Suclaban, Gandus, Eden, Acli and parts of Panipuan and Camuning can be potentially converted to residential areas instead to give more profit to its people. Expansion of built-up areas situated just at the foot of the plantations is inevitable, making the required construction and development not all too difficult. Moreover, some idle lands close to highways and highly developed roads are also potential development areas.

Construction of low-cost housing facilities on the said areas, should they be converted and developed, shall open the doors for possible investors and emigrants from neighboring cities of San Fernando and Angeles, wherein housings and lifestyles are much more expensive. This scenario shall increase the populace and therefore the human resource of Mexico, as well as trade and industry, paving the way to its aimed cityhood in the next five years.

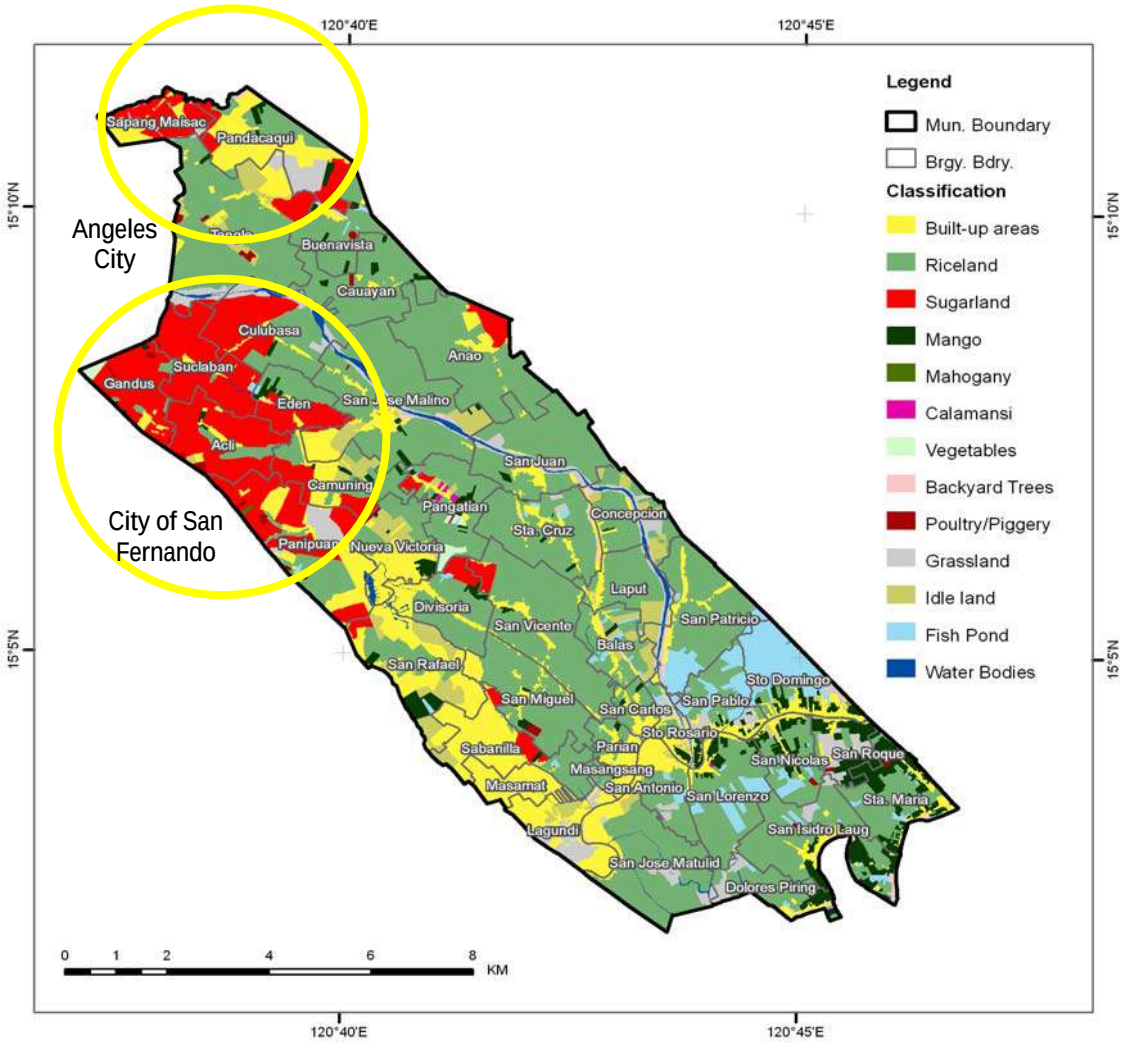


Figure 3.2.8. *Illustration of the Convertible Sugarcane Plantation to Residential Areas*

- *Terminal Expansion of Diosdado Macapagal International Airport (DMIA) and the Continuation of the North Rail Project*

The Diosdado Macapagal International Airport (DMIA), the main airport situated at the Clark Freeport Zone in Pampanga, an area which was formerly employed as an American Air Base. The said airport serves the general area of Angeles City, as well as the vicinities within Central and Northern Luzon.

Its first expansion spearheaded by the previous administration began on 2008 in order to accommodate the growing volume of passengers and cargoes brought by both foreign and local carriers. The second expansion of Terminal 1 is currently in progress. Completion of Terminal 2–Phase 1 is expected on 2013, while that of Phase 2 is still to be announced. Terminal 3 is aimed to be completed on 2025. The three (3) terminals shall be designed to accommodate 80 million passengers annually. Such expansion of DMIA shall open the doors to many local and foreign business opportunities for cities and municipalities all over the Central and Northern Luzon.

The great opportunities offered by the projected expansion of DMIA are further highlighted by the continuance of the North Rail Project, also a transportation program during GMA's term. The said project aims to bridge Metro Manila to the provinces in Northern Luzon through a railway under four (4) construction phases, as shown in the figure below.

Figure 3.2.9. *The Railway Route of the North Rail Project and its Proximity to DMIA*

- *Untapped Potential of the Defunct Delta Project Irrigation Component*

The unfinished Delta Project Irrigation Component of previous President Estrada Administration has included some barangays in Mexico such as Sta. Cruz, San Vicente, Concepcion, Laput, San Patricio, San Lorenzo, San Pablo, Sto. Domingo and San Nicolas. Irrigation canals have already been excavated and some earthworks have already been partially completed. Figure 3.2.10 illustrates the line of irrigation canal extending from San Vicente to Sta. Cruz. The canals were dug out at the sides of a running creek (see Figure 3.2.11).

Figure 3.2.10. *Irrigation Canal Line Bisecting San Vicente and Sta. Cruz*

Figure 3.2.11. *Irrigation Canals at Both Sides of a Creek in San Vicente*

Mexico has limited irrigation facilities; a case which needed to be one of the major development priorities since more than half of the land is planted with rice. Taking advantage of what the said Project has started shall be able to save considerable time, money and energy if this shall be developed and completed. Moreover, the line of canals can be extended at a wider range to cover other barangays which need irrigation.

- *Pinatubo Hazard Urgent Mitigation Project Phase III (PHUMP III)*

The PHUMP Phase II is a joint project by MPE-PMO (DPWH), Nippon Koei Ltd, PhilKoei International Inc., funded by the Japan Bank for International Cooperation (JBIC), which aims to mitigate the disastrous aftermath effects of lahar, mudflow and flood inundation in affected areas, promote disaster management and preparedness among involved communities and develop agricultural, institutional and environmental potentials of the municipal leaders and residents thru technical assistance and activities.

The study on comprehensive plans and detailed plan for sub-projects has been completed on January 2010, afterwhich, two (2) more activities, the Institutional Capability Building (ICAB) and the Monitoring and Evaluation of Flood and Watershed Management are to be carried out.

The ICAB is a conceptual approach which includes in its endeavors the realization of developmental goals among community leaders and residents, thru understanding roots of their incapacities while simultaneously augmenting their capabilities which shall give measurable and sustainable aftermath. The M & E of Flood and Watershed Management involves framework plans on observing the conditions of the watershed and mitigating causes and effects of its degradation. It also provides information on flooding risks and preparedness among settlers in the study areas.

Mexico is included in the study subjects of these activities. These shall benefit the municipality, not only by providing technical expertise to the Local Government and the people (e.g. Flood Forecasting and Warning Systems or FFWS), but also by opening doors to possible sub-projects, like a Municipal Drainage System, which is unavailable at present.

- *President's Bridge Program*

The President's Bridge Program is a project of Department of Public Works and Highways (DPWH) which was started by the former administration. It aims to build and replace 400 bridges all over the country. The said program is still on-going, and has successfully finished 50 bridges already. The Municipality of Mexico has an opportunity of being chosen as one of the municipalities in the country wherein new bridges can be established, given the participative and cooperative approach towards the departments involved.

- *Mid-Term Philippine Development Plan 2011 – 2016: Goals and Plans*

One of the development goals of the MTPDP for 2011 – 2016 is the Application of Climate Change Adaptation and Disaster Risk Reduction and Management (CCA–DRRM). Due to the growing environmental crises attributed to Climate Change as well as occurring disasters, both natural and man-made, the National Government aims to strategize and formulate plans and designs to offset the adverse effects of such events.

Other goals are in line with building of infrastructures for Sanitation and Sewerage Management. Another is entering an ecological and sustainable approach in adoption of Integrated Water Resources Management (IWRM). These procedures, thru participatory activities, shall strengthen relationship between the National and Local Governments and moreover develop municipal facilities and technical skills.

3.2.4 Threats

- *Environmental Threat of Garbage In-flow and Siltation in Abacan River*

The natural water system is a complex network of inter-connecting rivers and tributaries. The biotic and abiotic elements of one creek affect the biological and physic-chemical attributes of another.

Since the natural course of main water stem flows from high elevation to low-lying areas, the components of the water upstream deeply impacts the receiving water downstream.

Mexico is bisected by several creeks and major water ways. The known rivers which run in the municipality are the Mexico River, Bungang Guinto River, Betis River and the Abacan River. The latter runs a long course from the highly industrialized Angeles City to a point in the middle of San Antonio and San Lorenzo, where it is joined by Betis. It then exits the municipality with Bungang Guinto.

The figures below show an alarming condition brought by solid waste accumulation in the upstream of Abacan. In here, wastes consisting of plastics, styrofoams and other commercial wastes are shown being carried downstream by the heavy flow, passing the San Juan Bridge of Mexico. This situation poses a threat to both environment and human lives, since garbage of this amount does not only destroy the river ecosystem; it also blocks the regular river pathways, augmenting the possibility of flooding during heavy rains.

Figure 3.2.12. *Upstream Wastes Blocking the Abacan River*

Figure 3.2.13. *Scavengers on a Waste Build-up in Abacan River*

Another environmental threat delivered by the river downstream is siltation (Figure 3.2.14). Large and moderately-sized soil particles are easily scoured by a raging river due to weak vegetation, usually grass and weeds only, supporting the river banks. Siltation causes extreme turbidity which suffocates aquatic life, and also makes the river shallow and narrow.

Figure 3.2.14. *Silt and Trash carried away by Abacan River downstream*

- *Flooding Susceptibility and Withstanding Procedures*

The Municipality of Mexico, like other towns in Pampanga, is also beleaguered with floods brought by seasonally typhoons and heavy rains. The existence of large scouring rivers and bisecting narrow creeks, and also the wide areas of low-lying rice fields which are easily inundated, fuel the detrimental effects of flood to human lives and other sectors. The following map shows the depth ranges (in meters) of floods with 2-year return period in frequently inundated areas of Mexico.

The latest typhoon *"Pedring"* which directly hits the Central and Northern parts of Luzon on September 27–28, has greatly flooded several barangays in the municipality and even forced some families to evacuate to a safer place. Deeply inundated barangays included the lower parts of Lagundi, San Pablo, San Lorenzo, Parian, Balas, San Jose Matulid and San Carlos. Evacuees from the said barangays were relocated to schools, chapels and barangay halls with the assistance of the Municipal Disaster Risk Reduction and Management Council and the Department of Social Welfare and Development.

The flood was further enhanced by the overflows from Abacan and Betis Rivers. Bungang Guinto, a narrow river, was not able to contain the water coming from the two rivers. The same case happened to other creeks as well. Damage to agriculture is approximately 500 hectares on the matured stage, 450 hectares on reproductive stage and 2 hectares of fishponds. *Pedring* is considered the new strongest typhoon to hit the Municipality since *Ondoy*.

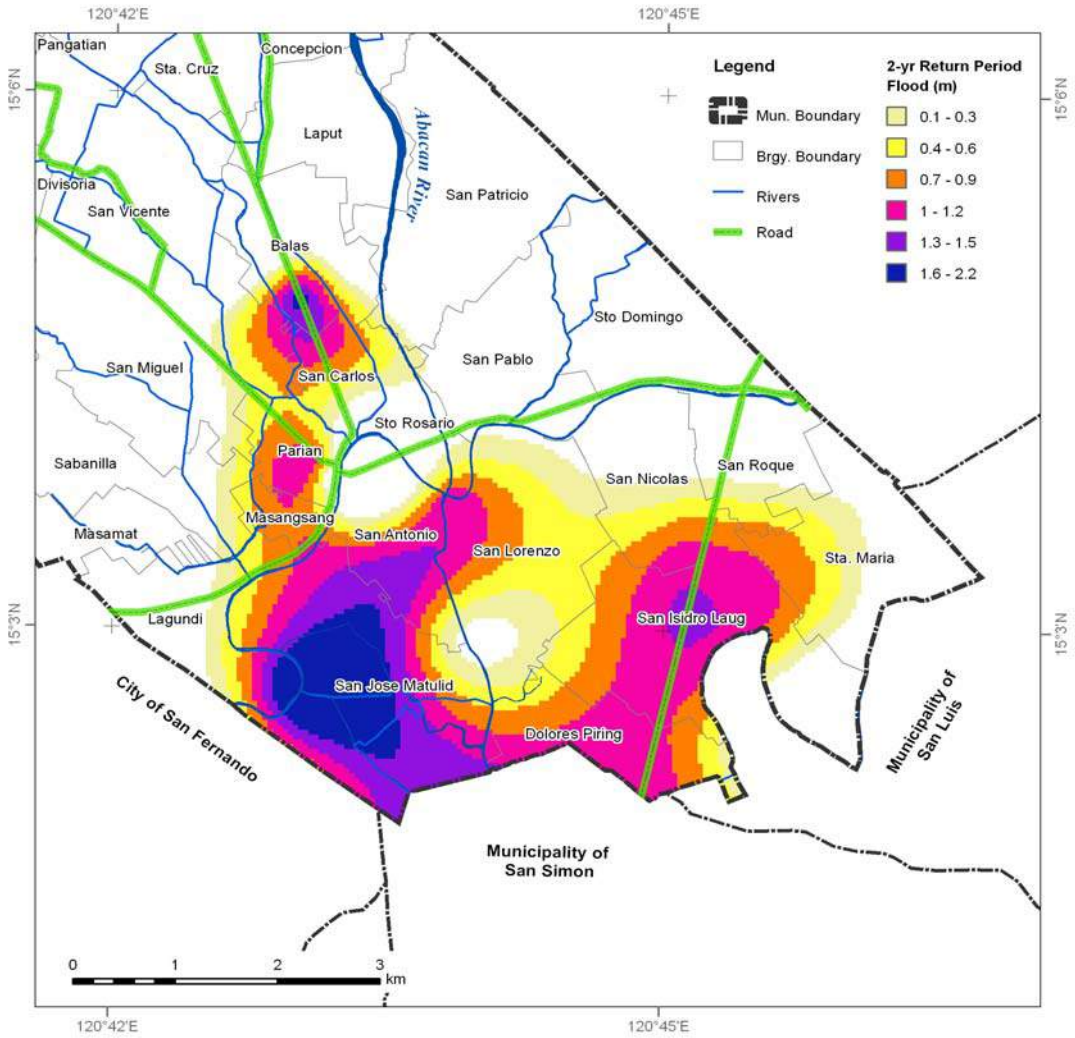


Figure 3.2.15. *Range of Flood Depth in Frequently Inundated Barangays*

Another case is the quick flooding which usually occurs in the more commercial areas and streets of Mexico. This is brought about by the absence of an established drainage system and canals in the municipality; a grave condition which must be counteracted upon immediately (See Figure 3.2.16).

Figure 3.2.16. *Flooding in San Antonio after a moderate down-pour. It can be seen that there are no drainage canals existent in the area.*

- *Deterioration of Civil Structures and other Infrastructures*

Some steel bridges in Mexico are encountering deterioration and weakening which poses a risk to passing vehicles and people. The Lagundi-San Jose Matulid (NGCP) Bridge and the other Matulid Bridge which are both busy access proximate to an elementary school might be dangerous to students and motorists. The Laput Steel Bailey Bridge (See Figure 3.2.17), Eden Steel Bailey Bridge and other bridges in San Vicente, Sto. Rosario and San Miguel, prevent transport vehicles from passing due to ruinous state.

Another threatening infrastructure is the destroyed concrete pavement resulting from diggings and excavations as well as cuttings by the Sinukuan Water System.

Figure 3.2.17. *A View of the Deteriorating Laput Steel Bailey Bridge*

Figure 3.2.18. *NGCP Bridge in San Jose Matulid*

Figure 3.2.19. *A Near View of the NGCP Bridge*

3.3. FRAMEWORK PLAN

3.3.1 Municipal Composition

For economic and development planning purposes, all barangays were classified into clusters based on the type of land usage most active and issues which are targeted to be developed in the area. Cluster A for instance, includes barangays which are highly susceptible to flooding. Cluster B is the group of barangays which are mostly residential. Cluster C comprises agricultural lands. Cluster D consists of both agricultural and settlement areas. Lastly, Cluster E is composed of barangays with high inevitability for improvement due to their proximity to the Highway. The list of barangay clusters is shown in Table 3.3.1 and a map is presented in Figure 3.3.1.

Table 3.3.1. List of Barangay Clusters

Cluster	Barangays
Cluster A	1. Masamat
	2. Lagundi
	3. Sto. Cristo
	4. Parian
	5. San Jose Matulid
	6. San Antonio
	7. San Carlos
	8. Sto. Rosario
Cluster B	9. Sabanilla
	10. San Miguel
	11. San Vicente
	12. Divisoria
	13. Nueva Victoria
	14. Camuning
	15. Panipuan
	16. San Rafael
Cluster C	17. San Pablo
	18. Sto. Domingo

	19. San Lorenzo
	20. San Roque
	21. San Nicolas
	22. Sta. Maria
	23. Laug
	24. Dolores Piring
	25. San Patricio
Cluster D	26. Balas
	27. Laput
	28. Concepcion
	29. Sta. Cruz
	30. San Juan
	31. Anao
	32. Pandacaqui
	33. Sapang Maisac
	34. Tangle
Cluster E	35. Gandus
	36. Acli
	37. Eden
	38. Suclaban
	39. Culubasa
	40. San Jose Malino
	41. Pangatlan
	42. Cauayan
	43. Buenavista

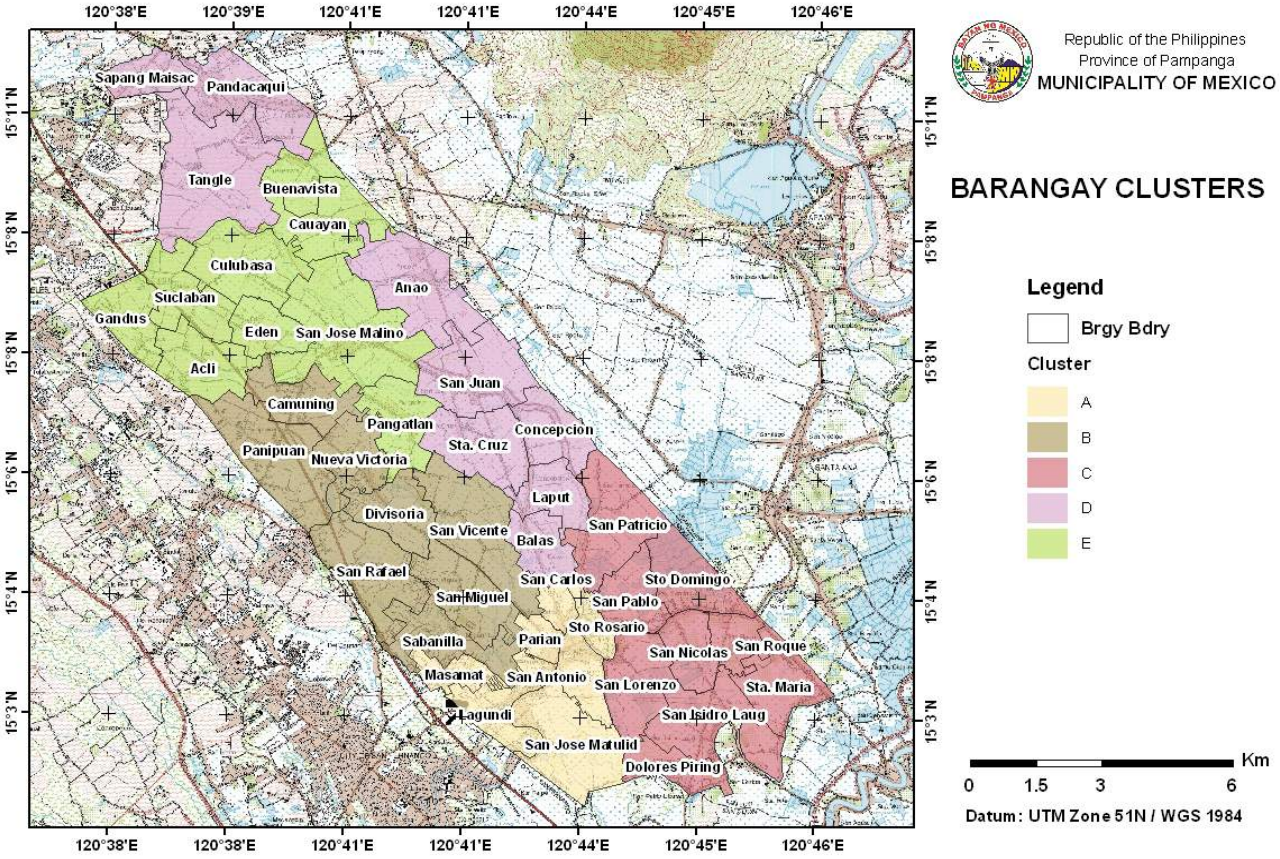


Figure 3.3.1. *Map of Barangay Clusters*

3.3.2 Mapping Strategy

A. Administrative Boundaries

Administrative boundaries of barangays were based on cadastral maps and tax mapping results accomplished by the joint coordination of Municipal Assessor's Office (MAO), Municipal Engineering Office (MEO), Municipal Planning and Development Office (MPDO) and the Provincial Government. The maps, which were typically hand-drawn on scaled paper maps, were scanned to be converted to a digital file format.

It should be understood however, that the boundaries used are not exact and authoritative. The tax mapping results from the Assessor's Office were overlaid on NAMRIA (2006) which also has its own delineated boundaries. The boundaries followed were those indicated by the tax mapping, and any conflicts between the latter and NAMRIA, were coordinated with the respective barangays, just like in the case of Pandacaqui. The boundary presented in tax mapping of Pandacaqui was validated by

the Cadastral Map kept and updated by the officials of the National Housing Authority (NHA) situated on the said barangay (Figures 3.3.2 and 3.3.3).

Upon completion of the process, the areas of each barangays were calculated and tabulated using ArcGIS 9.3 (Refer to Table 2.2.1 in Chapter II).

Figure 3.3.2. *Comparison of boundary features on NAMRIA and Cadastral Map by the NHA-Pandacaqui*

Figure 3.3.3. *Structures and polygonal features were used as reference points for validation*

B. Geographical Information System (GIS) Tools and Strategies

Structures, establishments, issues and land features are tools for characterizing the physical and sectoral conditions existent in a municipality. These attributes were located thru Global Positioning System (GPS) device and captured in images and observations all gathered during ground validation. Maps scaled and drawn on paper were scanned.

Using ArcMap (a substituent of ArcGIS 9.3, a Geographic Information System (GIS) Software), the maps were geo-referenced and overlaid on high resolution satellite images downloaded from Google Earth as well as on NAMRIA topographic map (2006 edition). The Universal Transverse Mercator Zone 51 Northern Hemisphere (UTM Zone 51N) was used in the geographic projection and the World Geodetic System 84 (WGS84) as the horizontal datum.

The located and captured features were pointed on the generated map layout, converting them into shapefiles. Shapefiles are points, polylines and polygons digitized on an ArcMap layout, from which coordinates, distance and even areas (in case of polygons) can be generated. For the GIS process, see Figure 3.3.4.

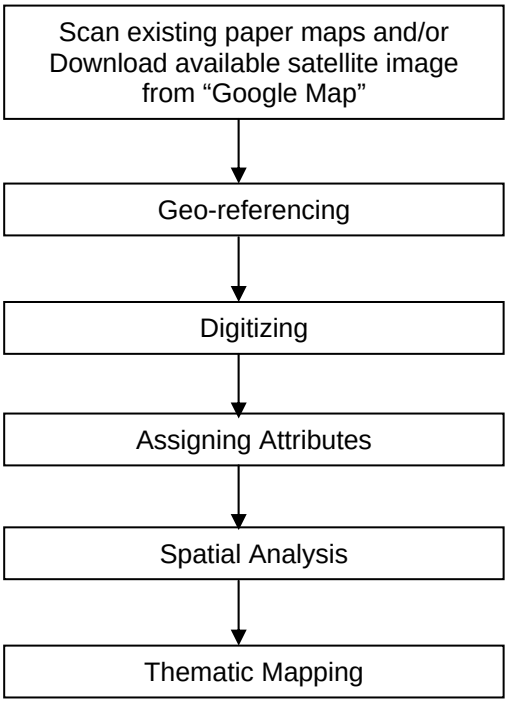
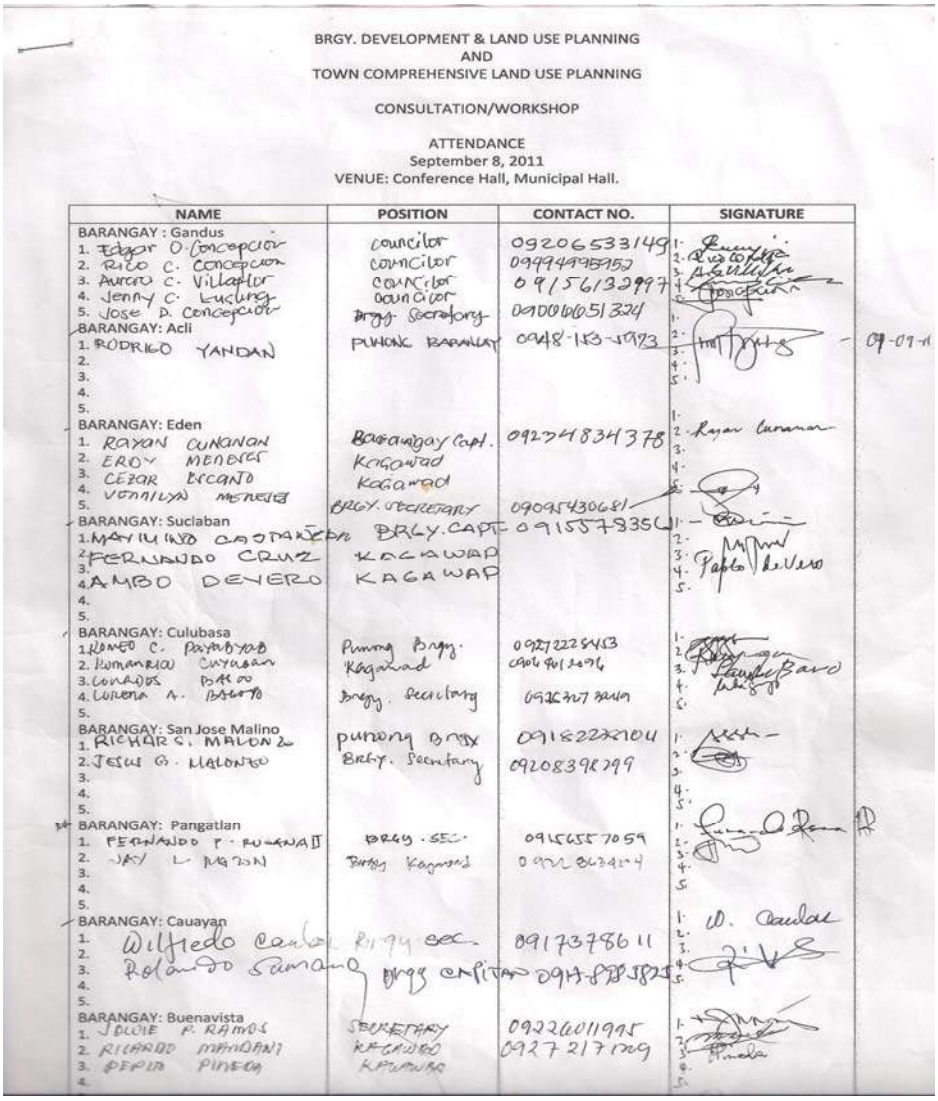


Figure 3.3.4. *GIS Process*

3.3.3 Participatory Seminar /Workshop

A Participatory Seminar/Workshop was held in preparation of the Municipal Comprehensive Land Use Plan and the subsequent processing of Barangay Development Plans. The activity was participated by at most five (5) proponents per barangay council on September 7-9 and 14-15 at the Conference Room of Municipal Hall. It was spearheaded by the Municipal Planning & Development Office and the Municipal Engineering Office in cooperation with the Project Consultant. The 43 barangays were grouped into clusters with respect to their needs, situational characteristics, growth potentials and sustainability to agricultural economy. One cluster was involved per day of the workshop.

The seminar comprises morning and afternoon sessions. Introduction to the importance of CLUP and BDP was tackled during the morning session. Existing issues and sectoral conditions, as well as the awareness of their impact, were also highlighted. Prepared questionnaires were given, to be completed and submitted on the next day of the workshop. Attendees were also listed as part of documentation (See sample on Figure 3.3.5).



BRGY. DEVELOPMENT & LAND USE PLANNING
AND
TOWN COMPREHENSIVE LAND USE PLANNING

CONSULTATION/WORKSHOP

ATTENDANCE
September 8, 2011
VENUE: Conference Hall, Municipal Hall.

NAME	POSITION	CONTACT NO.	SIGNATURE
BARANGAY : Gandus			
1. Edgar O. Concepcion	councilor	09206533149	
2. Rico C. Concepcion	councilor	09994998957	
3. Aurora C. Villaflor	councilor	09156132997	
4. Jenny C. Lucling	councilor		
5. Jose D. Concepcion	Brgy. Secretary	09006605324	
BARANGAY: Acli			
1. RODRIGO YANDAN	PUNONG BARANGAY	0948-183-1973	
2.			
3.			
4.			
5.			
BARANGAY: Eden			
1. RAYAN CUNANAN	Barangay Capt.	09274834378	
2. EROY MENDEZ	Kagawad		
3. CEZAR ESCANO	Kagawad		
4. VENNILYN MENESES	BRGY. SECRETARY	09095430681	
5.			
BARANGAY: Suclaban			
1. MARYLIN CASTANEDA	BRGY. CAPT.	09155783504	
2. FERNANDO CRUZ	KAGAWAD		
3.			
4. AMBO DEVERO	KAGAWAD		
4.			
5.			
BARANGAY: Culubasa			
1. ROMEO C. PAYABYAB	Punong Brgy.	09272225413	
2. HUMANRIO CUYUGAN	Kagawad	09064012096	
3. CONRADO BARCO			
4. LORENA A. BALITO	Brgy. Secretary	09263773440	
5.			
BARANGAY: San Jose Malino			
1. RICHARD S. MALONZO	punong brgy	09152224104	
2. JESUS G. MALONZO	Brgy. Secretary	09208398299	
3.			
4.			
5.			
BARANGAY: Pangatlan			
1. FERNANDO P. PUNANA II	BRGY. SEC.	09156557059	
2. JAY L. MAGSIN	Brgy. Kagawad	09128634104	
3.			
4.			
5.			
BARANGAY: Cauayan			
1.			
2. Wilfredo Caubat Punong Sec.		09173786611	
3. Rolando Samano	Brgy Capitan	09178838825	
4.			
5.			
BARANGAY: Buenavista			
1. JOCELE P. RAMOS	SECRETARY	09226011995	
2. RICHARD MAMARIL	KAGAWAD	09272171709	
3. DEPID PINEDA	KAGAWAD		
4.			

Figure 3.3.5. *Sample Attendance Sheet*

The afternoon session, supervised by the Consultant and Technical Working Team, introduced mapping and delineation of existing land use and proposed development plans, even infrastructures. Boundary conflicts were also brought up and consulted, since all maps used in the activity were based on Municipal Assesor's Tax Mapping System.

The participation of the barangay officials to the activity is crucial, because the formation of CLUP requires a cooperative approach among leaders and stakeholders to level-off ideas, plans and strategies, which shall aim a development uncompromising livelihood, security and sustainability. The following figures illustrate the events which have transpired during the five (5) – day workshop.

DAY 1 : CLUSTER B

Figure 3.3.6. *Importance of having a CLUP was introduced and discussed by the Municipal Engineer*

Figure 3.3.7. *Discussion of the HLURB Step-by-Step Procedures in constructing a CLUP*

Figure 3.3.8. *Conflicts on Barangay Boundaries were clarified*

Figure 3.3.9. *Participants were guided on delineation of land use (agricultural, residential, etc.) and establishments*

Figure 3.3.10. *Barangay Secretary from San Jose Malino discussing existing land use and proposed plans for CLUP*

DAY 2 : CLUSTER E

Figure 3.3.11. *Participants from a Cluster E Barangay consulting with each other*

Figure 3.3.12. *Team Leader explaining the use of NAMRIA as guide*

DAY 3 : CLUSTER A

Figure 3.3.13. *Participant busy delineating their existing and proposed development plans*

Figure 3.3.14. *A barangay secretary elaborating their proposed plans on their own maps*

DAY 4 : CLUSTER D

Figure 3.3.15. *Participants on Day 4 were assisted by the Municipal Engineer in Delineating their Existing and Proposed Land Use*

DAY 5 : CLUSTER C

Figure 3.3.16. *Participants on Day 5 listening to their assigned tasks*

Figure 3.3.17. *The Municipal Engineer emphasizing issues*

3.3.4 Ground Truthing and Validation

In order to personally observe and witness the existing characteristics of the different municipal sectors, as well as the changes which have shaped those characteristics, a ground validation was done. Questionnaires and data collection forms were prepared. Residents, especially those who are more commonly impacted by flooding, were interviewed. Coordinates of important establishments and facilities were taken using Global Positioning System (GPS) device. Data from different sectors and departments were also gathered. Figures below are some of the highlights of events which occurred during ground truthing. The complete list of issues and features observed, with corresponding pictures can be found in Annex 2

Figure 3.3.18. *Residents in Dolores Piring discussing the events of flooding in their barangay*

Figure 3.3.19. *Sugarcane Plantation along the way to Buenavista*

Figure 3.3.20. *Rice field in San Jose Matulid*

Figure 3.3.21. *Sinukuan Water System Facility in San Antonio*

3.3.5 Report Write-up and Documentation

Aside from the Comprehensive Land Use Plan (CLUP) Report, a Sectoral Study Report and Zoning Ordinance Report are also to be accomplished to guide the Municipality of Mexico in its land utilization and development plans and goals for the year 2012–2017. Maps shall be presented on both A0 and A3 sizes, of which the latter shall be compiled as Annexes in a separate document.

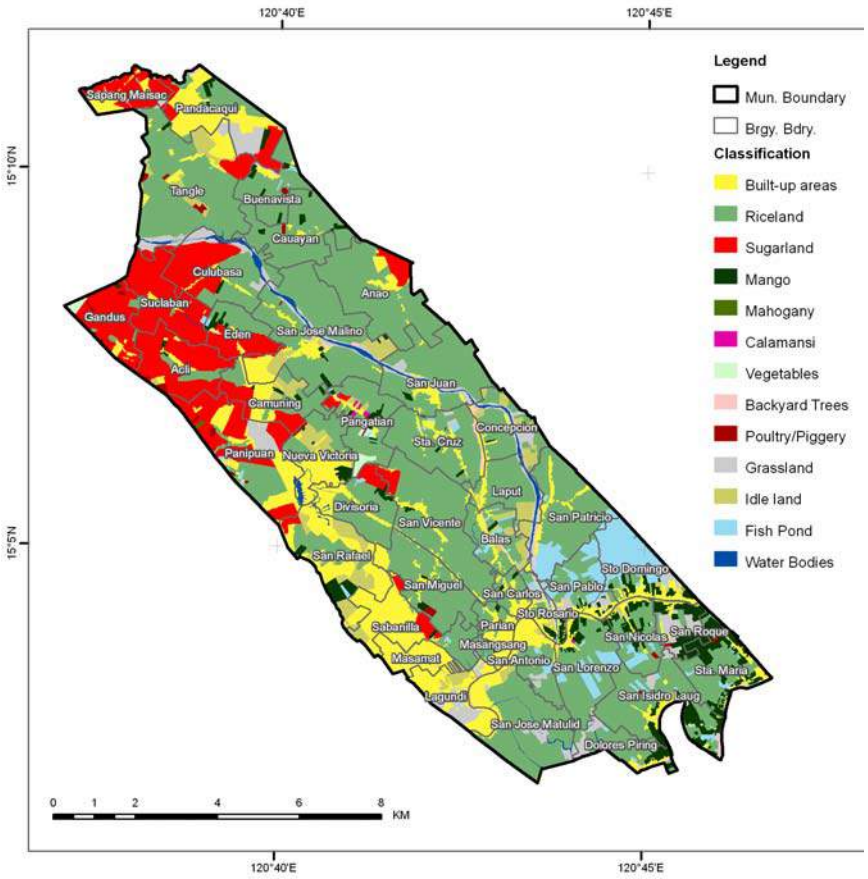
Raw data composed of photos, survey forms and other documents gathered during the Seminar/Workshop and Ground Validation shall be also compiled as Annexes.

3.4 LAND USE

3.4.1 Existing Land Use

Almost 70% which is equivalent to 8,195 hectares of the land resources in Mexico are utilized for agricultural purposes. Riceland that has an area of 6,257 ha are mostly located near Abacan River. However, high-yielding rice crops are only those located at segment of Abacan River from mid-stream in barangay Anao to downstream in barangay San Lorenzo due to its adequate water supply that comes from a large catchment area from neighboring municipalities of Arayat, Sta. Ana, and Angeles City. The soil type also contributes to the said rice productivity.

The Sugarland (colored red in Figure 3.4.1) in barangays Gandus, Suclaban, Culubasa, Acli, Eden, Camuning, and Panipuan with a total of 1,506 ha are the most un-productive agricultural crops in the municipality due to its inadequate water supply and its sandy soil type. In addition, the sugar milling in Hacienda Luisita in Tarlac is relatively far from these areas which cause the drying of sugar cane lost its content. With this situation, the municipality is eyeing to dispose this type of agriculture and transform it into a residential, recreational, and eco-tourism area due to its proximity in the North Expressway as well as its proximity to the two urbanized neighboring cities of San Fernando and Angeles City



Agricultural Categories	Area(ha)
Riceland	6,257.0
Sugarland	1,506.1
Mango	515.3
Fish Pond	472.0
Backyard-raised crops	57.6
Assorted vegetables	32.4
Calamansi	6.7
Mahogany	2.9
Poultry/Piggery	50.0

Figure 3.4.1 – Cropping System

Figure 3.4.2 shows the grouping of the different crops of Figure 3.4.1 into one agricultural classification and showing the different classifications of the built-up areas into residential, commercial, institutional, and industrial use as prescribed in the new CLUP Guidebook of HLURB.

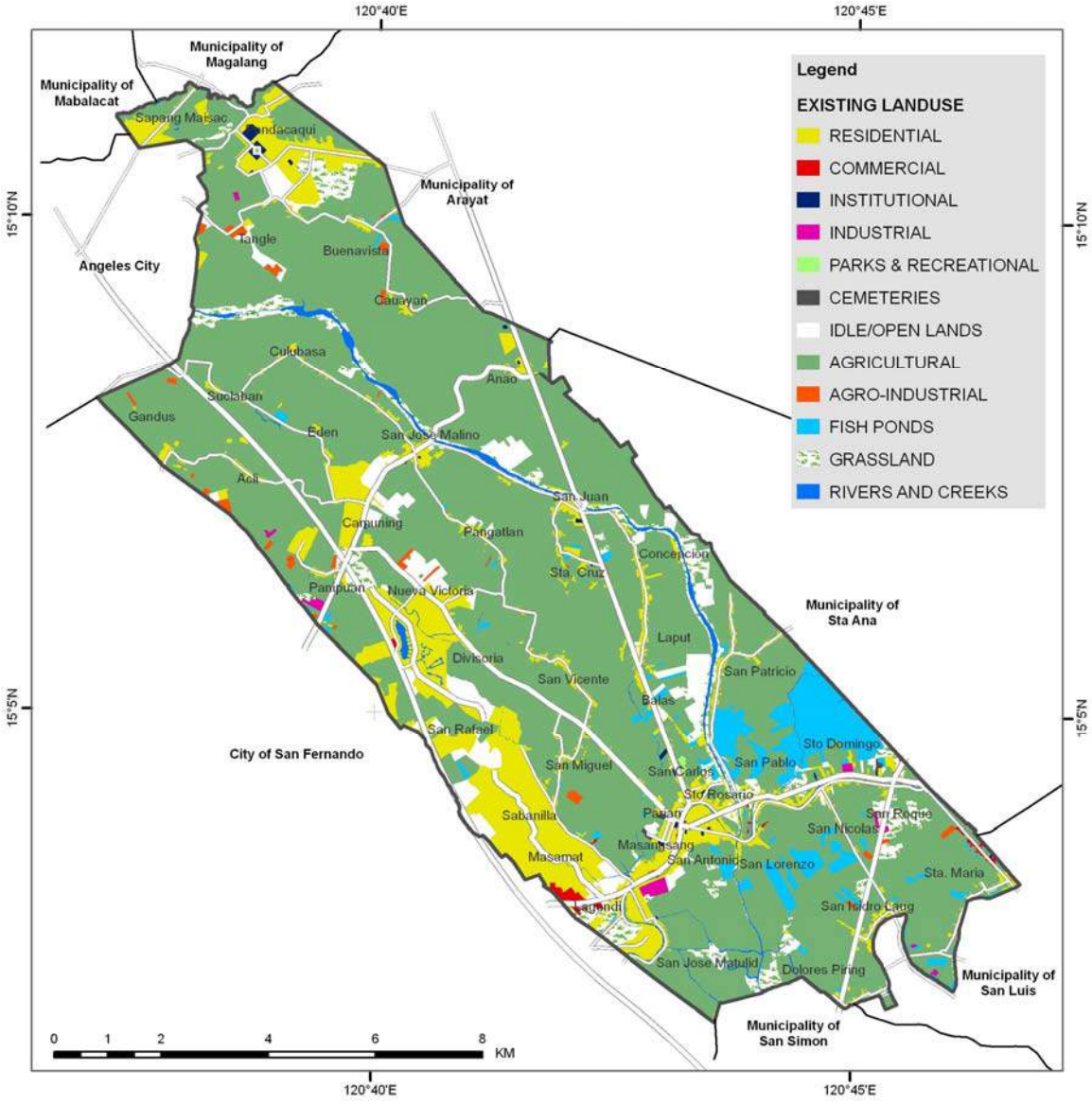


Figure 3.4.2 – Existing Land Use

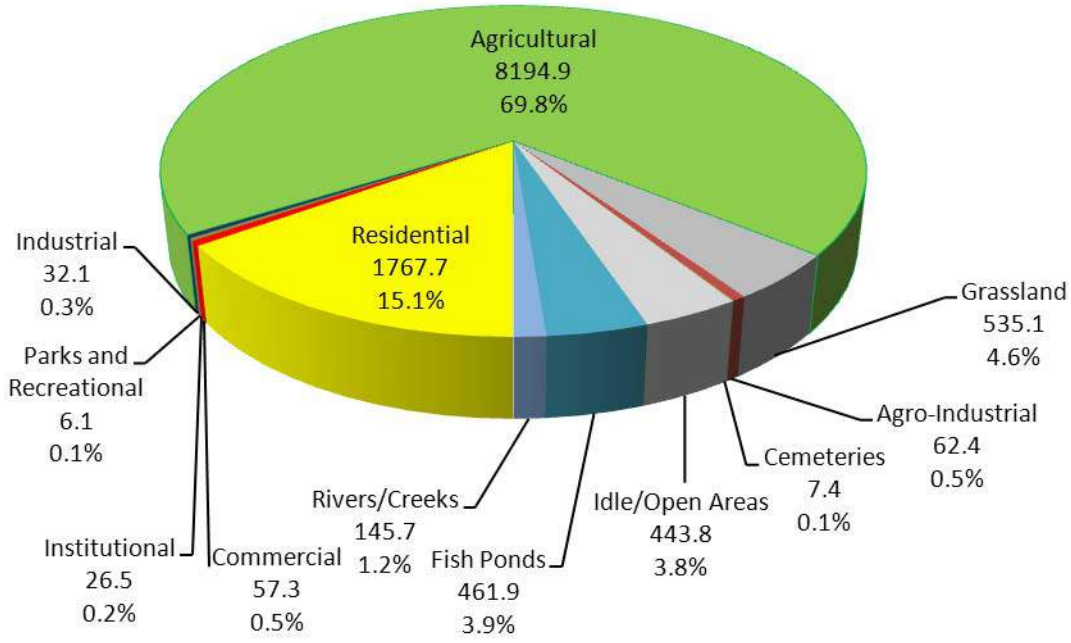


Figure 3.4.3 – Percentage and Areas of Existing Land Use Classification

The second type which utilizes a large portion of the municipality is residential areas that are colored yellow in Figure 3.4.2. First class subdivisions like Lake Shore and Beverly Place were strategically placed for easy access to the large commercial zone as well as to other neighboring cities and major thoroughfare like North Expressway which leads to either Metro Manila or DMIA, Tarlac and La Union. These two subdivisions are located in barangays Nueva Victoria, Divisoria, San Rafael, Sabanilla, and Masamat. Medium dense residential areas, wherein urbanization is evident, are partly located in barangays Lagundi, Sto. Cristo, Parian, Sto. Rosario, San Antonio, Camuning, and Sapang Maisac. The municipality also provides socialized housing mainly located in barangay Pandacaqui as part of its program for those underprivileged through National Housing Authority (NHA).

The areas of the existing land usage in Mexico presents that almost 5%, or 535 hectares of land, is grassland as shown in Figure 3.4.3. This classification actually occupies the third position in the largest land usage. Most grasslands are within residential areas, awaiting development, as shown in the map. The grasslands existent along the banks of the full extent of Abacan River which bisects the municipality function as vegetative buffer.

Grasslands and Idle or Open areas that are colored white in Figure 3.4.2 are almost 8.5% or 979 hectares occupies the third position in the largest land usage. Most of those open lands are bought by some private entities which occasionally use in agriculture while waiting for the opportunity in other development. The large grasslands existent is along the banks of Abacan River which function as vegetative buffer. Other large locations of grasslands are in the intersection of NLEX and

Sindalan-Anao Road, Southern side of JASA Road in barangay Lagundi, portion of Quezon Road in barangay San Roque, and in the agricultural mid-section of San Jose Matulid and Dolores Piring.

Fish pond is only about 4% or 462 hectares of the total municipal area. This percentage is considerably sound in fish farming and preventing environmental hazard like flooding that was happen in delta areas of Pampanga River during typhoon Pedring in September 2011. The fish pond areas are mainly located in barangays Sto. Domingo and San Pablo while small areas are partially located in barangay San Lorenzo and San Nicolas.

Large commercial areas, colored red in Figure 3.4.2, such as SM Department Store and Wilcon Builders are located in barangay Lagundi. Small scale businesses like merchandizing are located along JASA Road. The public market is located in barangay Parian.

Locations of commercial, industrial, and institutional areas colored red, magenta, and dark blue respectively can be found in Figure 3.4.2 while their corresponding percentage are illustrated in Figure 3.4.3. Large commercial establishment of the municipality is the SM Department Store and Wilcon Builders located in barangay Lagundi. Small scale businesses like merchandizing are located along JASA Road and the municipal public market is located in barangay Parian. The two large industrial establishments are the National Grid Corporation of the Philippines (NGCP) located in barangay San Antonio and Pampanga Electric Cooperative Inc. (PELCO1) located in barangay Sto. Domingo. The municipal hall is located in front of the public market in barangay Parian. The Mexico Community Hospital is located along Mexico-Magalang Road in barangay San Carlos. Almost all of the barangays have their own Elementary schools while High schools are as enumerated in Table 3.4.1 below

Table 3.4.1 – List of High School Establishment in Mexico

NAME OF SCHOOL	LOCATION/ BARANGAY	TYPE
Diosdado Macapagal High School	Sto. Domingo	Public
Don Jesus Gonzales High School	Pandacaqui	Public
Gerry Rodriguez High School	Divisoria	Public
San Jose Malino High School	San Jose Malino	Public
Mexico National High School	Balas/San Carlos	Public
Nicanor David Vergara High School	Anao	Public
Our Lady of Guadalupe School	San Antonio	Private
San Juan High School	San Juan	Public
St. Joseph's Academy	San Antonio	Private

3.4.2 Land Suitability Analysis (Sieve Mapping)

Land suitability analysis in identifying potential area for development/land use conversion was done by sieve mapping as recommended by HLURB.

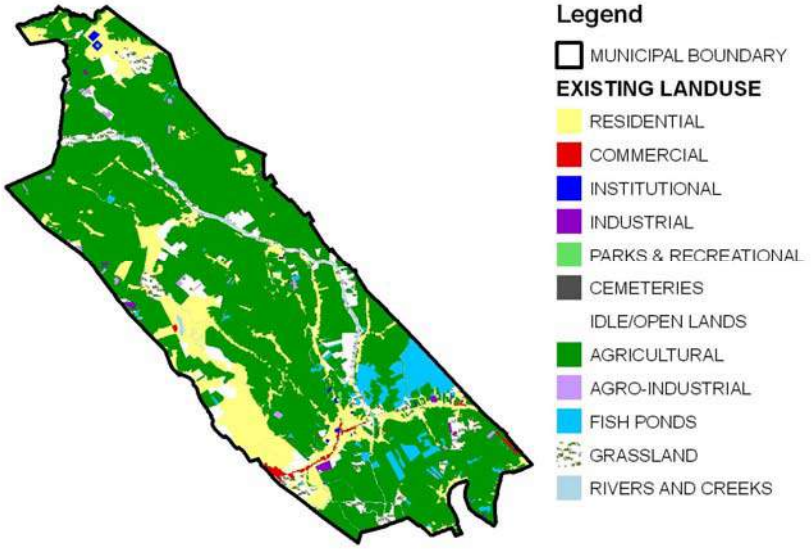


Figure 3.4.4 – *Existing Land Use Map*

From the existing land use map shown in Figure 3.4.4, area covered by the residential, commercial, institutional, industrial, parks/recreational, cemeteries, fish ponds and river classifications were removed and the resulting map suitable for development considering existing land use is as shown in Figure 3.4.5. The remaining land uses (e.g. agricultural, idle/open land, agro-industrial, and grassland) are considered to be suitable.

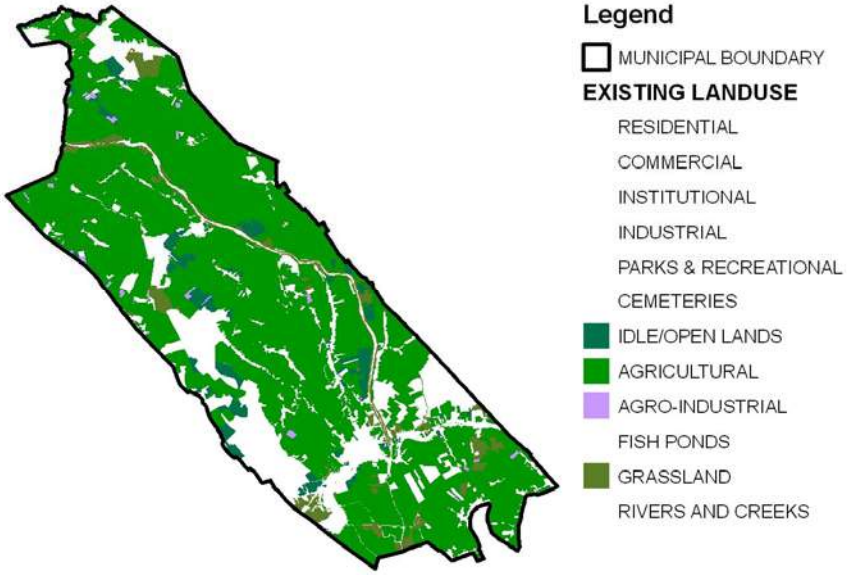


Figure 3.4.5 – *Sieved Existing Land Use Map (Removing Residential, Commercial, Institutional, Industrial, Parks & Recreational, Cemeteries, Fish Ponds, and Rivers & Creeks)*

With regards to slope as shown in Figure 3.4.6, the entire municipality is suitable for development since its slope is between 0 to 3% (erosion and landslide free) and has no reported event of liquefaction. Therefore, the remaining area after considering the slope remains unchanged.

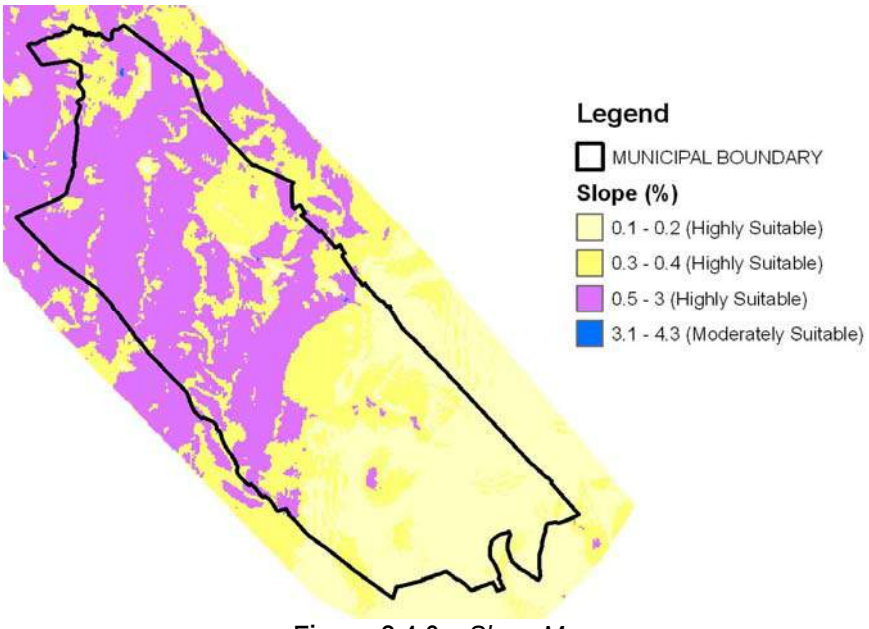


Figure 3.4.6 – *Slope Map*

Protected Areas, Fault Zone

The municipality has no protected areas such as NIPAS, AD, and Forest Reserve as well as Fault Zones.

Flooding

Flood prone areas are barangays located in the southern portion of the municipality as shown in Figure 3.4.7. The inundation map was processed based from the answers of the locality about the flood depth during typhoon Ondoy(September, 2009) and Pedring (September, 2011). Eliminating areas with flood depths >1m, the remaining suitable area is presented in Figure 3.4.8.

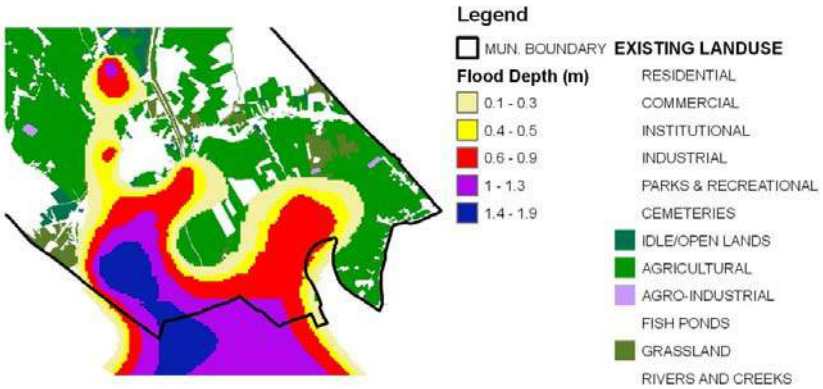


Figure 3.4.7 – *Inundation Map*

Figure 3.4.8 – *Sieved Map (Removing Flood Prone Areas)*

The municipality has a large agricultural area potentially suitable for development. However, agricultural area was divided into two sub-classes (Riceland and Sugarland) to aide selection process. Sugarland gives low income on the farmers as compared to Riceland due to water deficiency of the area. Selection of areas to be developed was done using the following priority (arranged form high to low priority):

1. Idle/Open Land
2. Grassland
3. Sugarland
4. Agro-Industrial
5. Riceland

The resulting land suitability analysis (sieve mapping) is as shown in Figure 3.4.9 wherein grayed portion are the potential developable areas.

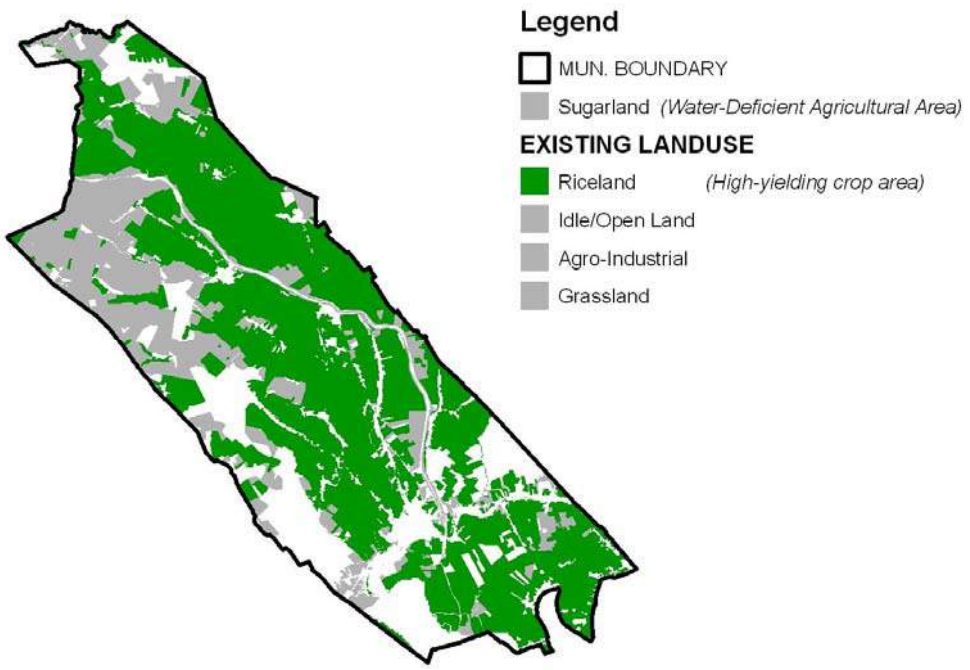


Figure 3.4.9 – *Potential Developable Areas*

3.4.3 Propose Land Use Plan

Figure 3.4.10 presents the proposed development in infrastructures and land utilization embodying the major goals of this CLUP. As part of the aimed urban development for the year 2017, Mexico shall undergo land conversions to make way for more commercial and residential growth particularly several barangays Panipuan, Sapang Maisac, San Rafael and Lagundi. Industrialization is also one of the challenging steps which shall be taken by the municipality.

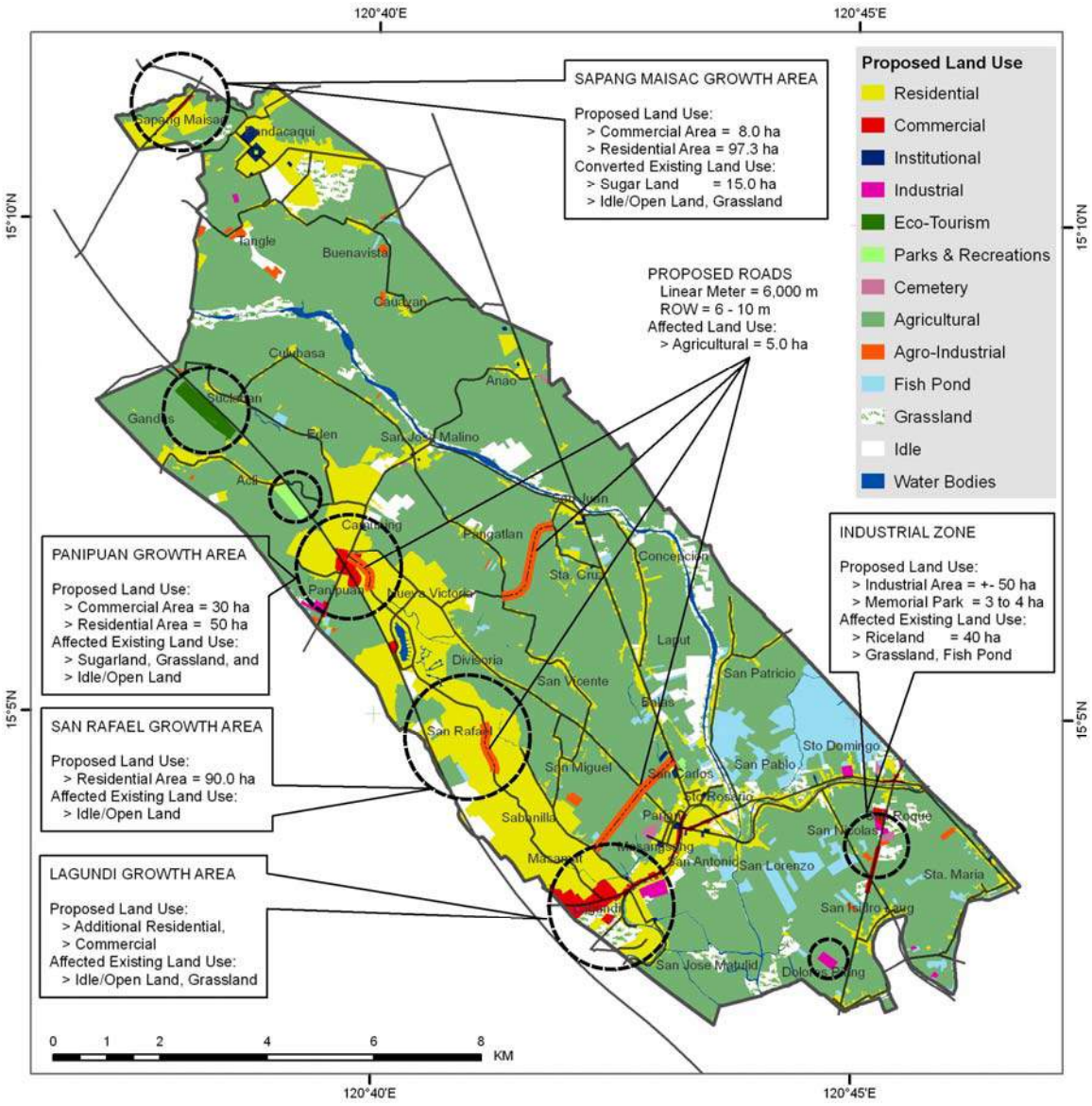


Figure 3.4.10 – Propose Land Use Plan

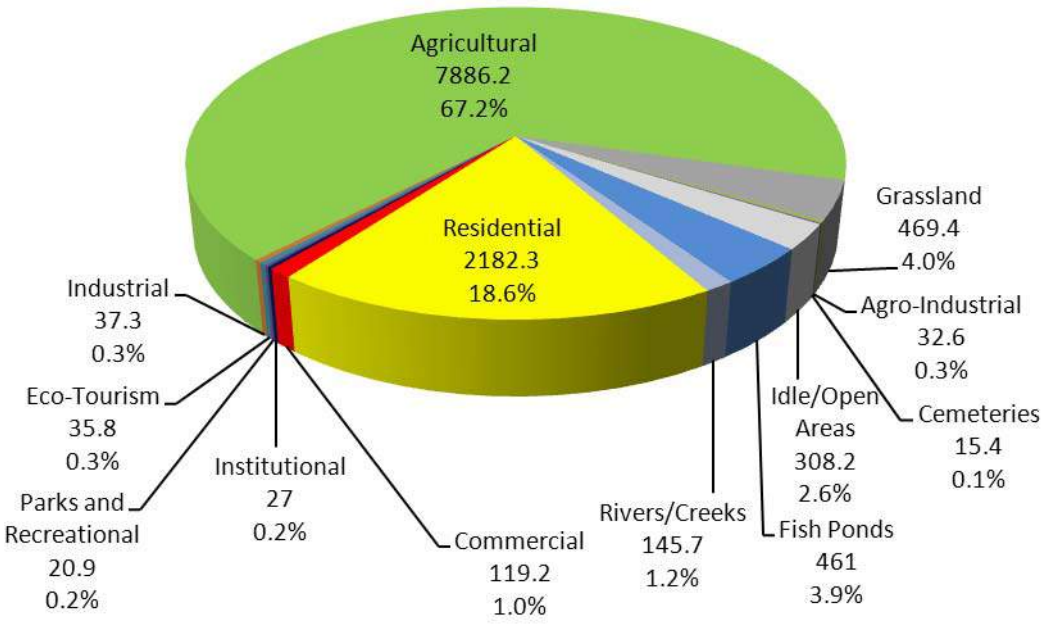


Figure 3.4.11 – Percentage and Areas of Propose Land Use Classification

Table 3.4.2 shows the area of existing land usages against the proposed land use, as well as the consequent increase and decrease among these areas upon the onset of the proposed developments. Land area of 309 hectares shall be cut out of the total 8,195 hectares of agricultural lands for conversion and development. Approximately ninety percent (90%) of these agricultural lands are Sugar lands and only 10% are Rice lands. Idle (67 ha) and grass lands (139 ha) shall also be subjected to land renovation. Agro-industrial area of around 30 ha shall also be removed since they are located near the proposed urbanization. These alterations shall give way to an increase of 3.5 % and 0.5% in residential and commercial areas, respectively.

The conversion of idle and grass lands, as well as the sugarcane fields in the upper barangays, into residential areas wherein low-cost housing projects shall be constructed, is one of the major plans of the Local Government of Mexico for the next five (5) years. The sugarcane fields of the upper barangays, although a producing agricultural area, shall be under reclassification due to the low productivity and income brought to the people. The minimal produce of these lands can be blamed to the lack of water and type of soil in the areas as well as the unavailability of a proximate sugar mill.

The existing agricultural area in Barangay Suclaban and Barangay Gandus is also being eyed for development by converting it into a modern agriculture and eco-tourism spot thru the innovative technology of “Hydroponics”.

Table 3.4.2 - Existing vs. Proposed Land Use Areas

Land Use Categories	Existing Land Use		Propose Land Use		Increase		Decrease	
	Area (ha)	%	Area (ha)	%	Area (ha)	%	Area (ha)	%
Residential	1,767.7	15.1	2,182.3	18.6	414.6	76.7		
Commercial	57.3	0.5	119.2	1.0	61.9	11.5		
Institutional	26.5	0.2	27.0	0.2	0.5	0.1		
Parks and Recreational	6.1	0.1	20.9	0.2	14.9	2.7		
Eco-Tourism	-	-	35.8	0.3	35.8	6.6		
Industrial	32.1	0.3	37.3	0.3	5.2	1.0		
Agricultural	8,194.9	69.8	7,886.2	67.2			308.6	57.1
Grassland	535.1	4.6	469.4	4.0			65.7	12.2
Agro-Industrial	62.4	0.5	32.6	0.3			29.9	5.5
Cemeteries	7.4	0.1	15.4	0.1	7.9	1.5		
Idle/Open Areas	443.8	3.8	308.2	2.6			135.6	25.1
Fish Ponds	461.9	3.9	461.0	3.9			1.0	0.2
Rivers/Creeks	145.7	1.2	145.7	1.2				
TOTAL	11,741.0		11,741.0		540.8		540.8	

In terms of infrastructures, proposed roads as presented in the following figure shall be constructed in order to have a more direct mode of transportation among commercially potent barangays and to improve the line of trade and commerce in these barangays. The proposed road number 1 shall be a direct entry and exit way from The Lakeshore and NLEX or vice-versa. Number 2 shall be a connecting road to complete the highway leading from Panipuan to the southern part of Mexico.

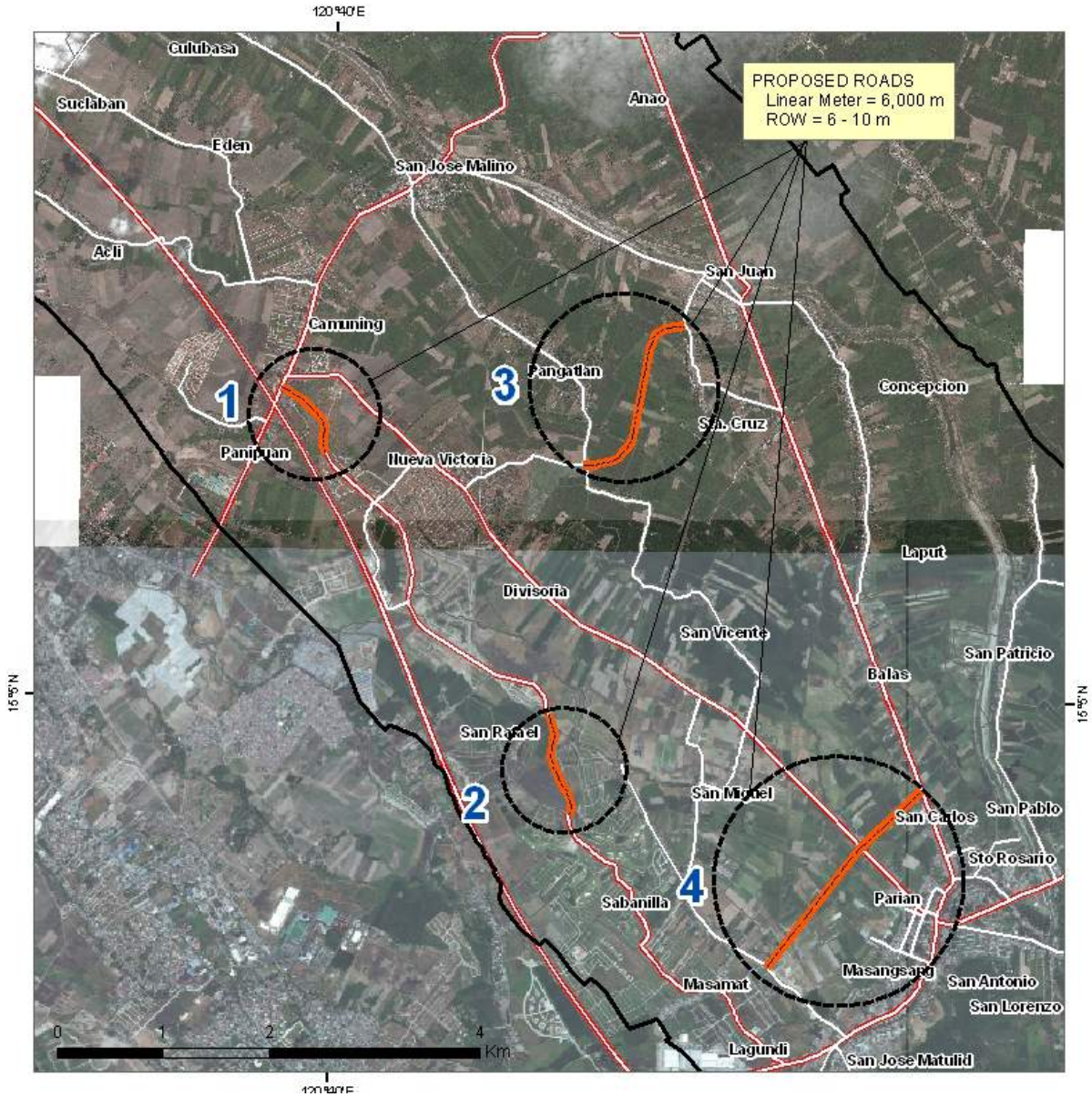


Figure 3.4.12 - *Proposed Road Network*

In addition to the proposed new roads, the following road interconnections and improvements are aimed for the planning period.

A. Inter-linking of Farm-to-Market Roads to create new Access Roads

1. Pangatlan to Sta. Cruz thru Looban
2. Pangatlan to Nueva Victoria
3. Nueva Victoria to San Vicente to Sta. Cruz
4. Divisoria to San Vicente to Sta. Cruz
5. Tangle to Pandacaqui
6. Gandus to Capaya, Angeles City

7. Masamat to Del Carmen, CSFP
8. San Juan to San Jose Malino Abacan Road Dike
9. Kaingin, Laug to Sta. Maria Gubat

B. Interconnection of Barangay Roads

1. Sabanilla / San Miguel to San Rafael via Beverly
2. San Antonio Traffic Diversion Route (Highway to Tinajero Street via St. Joseph's Subd. thru a proposed opening at Manggahan)

C. Widening of the JASA Road (Mexico Segment)

D. Upgrading of the Licu and Third Street

E. Replacement of Steel Bailey Bridges / Construction of RCDG

1. Sto. Rosario/ San Carlos Bridge
2. Lagundi / San Jose Matulid Bridge
3. San Jose Matulid Bridge
4. Laput Bridge
5. San Miguel Bridge
6. Eden Bridge
7. San Vicente Dayat Bridge
8. San Vicente Bridge
9. San Vicente – Divisoria RCBC

3.4.4 Spatial Strategy, Proposed Land Uses and Growth Development Areas

Among the several development strategies presented and evaluated during the workshop with stakeholders, the below-listed alternatives would best attain the vision, goals and objectives of the municipality.

a). Residential Development
b). Agricultural Development
c). Commercial Development
d). Combined Small-scale Commercial and Light-Medium Industrial Development
e). Combined Eco-tourism, Agro-industrial and Agricultural Development
f). Opening of Secondary Central Business District

At present and the years ahead show that Mexico is the most preferred site for residential, commercial and light-medium industrial expansions aside from the spill-over development coming Angeles City, City of San Fernando and City of Mabalacat. This strength / opportunity may be attributed to its strategic location of Mexico due to the following a) its proximity to three cities of Angeles, San Fernando & Mabalacat, b) it is bisected by the North Luzon Expressway and linked to the Subic-Clark-Tarlac Expressway making so easy to travel to Subic Freeport, Clark International Airport, Baguio and Manila, c) it is adjacent to the Mac Arthur Highway of San Fernando-the host of regional government centers, and d) it is being bisected by the Jose Abad Santos Avenue

(Olongapo-Gapan Road) from San Fernando to Arayat and the Mexico-Magalang Provincial Road from San Fernando to Magalang passing the town proper.

All identified special development areas are situated at non-flooded areas aside from Barangay Parian where major rivers and drainages are improved in order to protect lives, properties, commerce and source of livelihood.

Food production continue to be a major land using activity that should be given priority importance and improve its capability to produce more.

The Special Development Areas (SDA) spatially illustrated in Figure 3.4.10 and enumerated in Table 3.4.3 were distinctively established using Cost-Benefit evaluation presented in Tables 3.4.4.

Table 3.4.3 – *Special Development Areas*

SPECIAL DEV'T. AREAS	MAJOR LAND USE	OTHER LAND USES
1. Parian SDA	Residential	Commercial, Gov't. Center, Institutional
2. Masamat-Lagundi, Masangsang-Parian, San Antonio SDA	Residential	Commercial, Light Industrial
3. Lagundi-San Rafael, San Miguel, Divisoria, Panipuan, Nueva Victoria, Camuning SDA	Residential	Agricultural/Agro-Industrial
4. Panipuan-Camuning-San Jose Malino SDA	Agricultural	Residential, Commercial , Light Industrial, Eco-Tourism
5. Gandus-Acli-Suclaban SDA	Agricultural	Agro-Industrial, Eco-Tourism
6. Sapang Maisac-Pandacaqui SDA	Residential/Commercial	Agricultural, Institutional, Light Industrial
7. San Roque-Laug-Piring SDA	Agricultural	Residential, Agro-Industrial, Industrial, Commercial
8. Secondary Business District (San Carlos/ Balas-San Vicente/San Miguel-Lagundi SDA	Agricultural	Commercial, Light Industrial

Table 3.4.4 – *Cost-Benefit Analysis for Alternative Development Strategies*

Alternative Development Strategies	Rating Scales				
	Benefit	Cost	Ease of Implementation	Time	Secondary Impacts
1. Residential Development	4	2	4	4	2
2. Agricultural Development	4	3	4	4	3
3. Commercial Development	4	3	4	3	1
4. Small-Scale Commercial and Light-to-Medium Industrial Development	4	3	3	3	2
5. Combined Eco-Tourism, Agro-Industrial and Agricultural Development	4	3	3	2	2
6. Opening of New Secondary Business Areas	4	2	3	2	3
T O T A L	24	16	21	18	13

The rating scale for evaluating Alternative Development Strategies of the above table was defined in Table 3.4.5.

Table 3.4.5 – *Rating Scales in Evaluating Alternative Development Strategies*

Benefit	Cost	Ease of Implementation	Time	Secondary Impact
The expected benefits will be minimal = 1	The cost will be very high = 1	It will be very difficult to implement = 1	It will be more than 5 years before the benefits are seen = 1	It also result in some negative impacts = 1
The expected benefits will be good = 2	The cost will be high = 2	It will be difficult to implement = 2	It will be 1-5 years before the benefits are seen = 2	It also result in some negative impacts = 2
The expected benefits will be very good = 3	The cost will be low = 3	There will be a few obstacles to putting it into practice = 3	It will be 1 to 3 years before benefits are seen = 3	It also results in some positive impacts = 3
The expected benefits will be outstanding = 4	There will be no added cost = 4	It can be easily put into practice = 4	Benefits will be seen in fewer than 365 days = 4	

The Alternative Development Strategies were also evaluated from goals and vision of the municipality as presented in Table 3.4.6

Table 3.4.6 – *Evaluating Alternative Development Strategies from Municipality's Vision*

Vision: The Municipality of Mexico as a center of economic growth and development in the Province of Pampanga with a healthy, educated, empowered, self-reliant and God-fearing citizenry, living in a peaceful, clean, safe and beautiful environment under a unified, dynamic and decent leadership.						
GOAL/VISION Description	ALTERNATIVE DEVELOPMENT STRATEGIES					
	Residential Dev't.	Agricultural Dev't.	Comm'l Devt.	Combined Small-Scale, Comm. & Light to Medium Industrial Dev't.	Combined Eco-Tourism, Agro-Industrial and Agricultural Dev't.	Opening of Secondary Central Business Area
People as Individuals a. God-fearing b. Healthy c. Educated	3	3	3	3	3	3
People as Society a. Empowered b. Unified/Peaceful c. Self-reliant	3	3	3	3	3	3
Local Economy a. Center of economic growth	3	3	3	3	2	3
Natural Environment a. Clean b. Safe c. Beautiful	1	3	1	1	2	1
Built Environment a. Clean b. Safe c. Beautiful	2	1	3	2	2	3
Local Governance a. Unified b. Decent Leadership c. Dynamic	3	2	2	2	2	2
T O T A L	15	15	15	14	14	15

Scoring:

0 – Framework strategy has no relation to the vision
1 – The framework strategy has a positive effect
2 – The framework strategy can satisfactorily meet indicators
3 – The framework strategy will achieve the goal

Chapter II
Sectoral Study

I. INTRODUCTION

A Sectoral Study is a document which, along with a Comprehensive Land Use Plan (CLUP) Report and Zoning Ordinance, functions as a tool for government planning. In contrast to the CLUP which includes detailed project proposals, policies and strategic measures, a Sectoral Study only provides information and background analyses on different aspects and influencing policies in order to view and understand the scenario on which proposals and strategies can be made and acted upon.

According to the Housing and Land Use Regulatory Board (HLURB), a Sectoral Study must embody the following framework of analyses:

- Identification of issues prevailing in the sector
- Analysis of cause/s and effect/s
- Establish the potentials and development needs of the sector/s
- Determine the spatial requirements of each sector
- Policy interventions/ Programs and projects

In accordance with the Municipality of Mexico's goal to update its CLUP as part of its development plan for years 2012 to 2017, a research study on the existing conditions on different sectors was processed through actual ground investigations and consultations with the respective proponents. Table 1.1 shows the specific details of the research done and the limiting factors encountered during the study. The said research was guided by the following objectives:

1. To identify state/condition of different social and economic sectors
2. To determine capability of the sectors and the location, availability and accessibility of facilities supporting such sectors
3. To assimilate development needs, issues and concerns

Table 1.1. Background of Research Study

Research Setting	Data Collection	Limitations
➢ The research study shall focus on the situation of the whole Municipality of Mexico, or its 43 barangays. ➢ Sectors which shall be studied are Population, Social, Economy, Watershed and Environment.	Primary Data: ➢ Ground Validations ➢ Correspondent Interview ➢ Seminar/Workshop Secondary Data: ➢ Data from LGU and local departments ➢ Books, Internet	Data unavailability due to lack of archiving and documentation efficiency of LGU personnel

II. SITUATIONAL ANALYSIS AND CORRESPONDING DEVELOPMENT RECOMMENDATIONS

2.1. POPULATION CHARACTERISTICS

2.1.1 Population Growth Rate

According to the NSO census report of 2007, Mexico has a total population of 141,298 people. This record has increased by a rate of 3.58% from the 2000 total population of 109,481. The population growth rate of the municipality has decreased from 3.87% in 1995 to 3.58% in 2007, as shown in Table 2.1 below.

Table 2.1.1. Annual Population Growth Rate

Total Population			Population Growth Rate (%)		
01-Sep-1995	01-May-2000	01-Aug-2007	1995 – 2000	1995 – 2007	2000 – 2007
91,696	109,481	141,298	3.87	3.69	3.58

Source: National Statistics Office
2007 Census of Population

2.1.2 Population Projection

Using 3% as Population Growth Rate, a projected population for the years 2012 - 2017 was calculated and is presented in Table 2.1.2. Figure 2.1.1 shows the total population and its projection for the mentioned years. Sample calculation of projected population is illustrated below. The 3% growth rate used is a conservative estimation of population growth rate based on the municipality's take on NSO's 3.58% growth rate.

Illustrative calculation:

Growth Rate Used = 3.00%

Bgy. Acli $_{(2011)}$ = 2646
Bgy. Acli $_{(2012)}$ = 2646 * 1.03 = 2,725.38 say 2,725
Bgy. Acli $_{(2013)}$ = 2,725.38 * 1.03 = 2,807.14 say 2,807
Bgy. Acli $_{(2014)}$ = 2,807.14 * 1.03 = 2,891.35 say 2,891
Bgy. Acli $_{(2015)}$ = 2,891.35 * 1.03 = 2,978.09 say 2,978
Bgy. Acli $_{(2016)}$ = 2,978.09 * 1.03 = 3,067.43 say 3,067
Bgy. Acli $_{(2017)}$ = 3,067.43 * 1.03 = 3,159.45 say 3,159

From the table shown, Pandacaqui has the largest population with a figure of 27,197 and 29,163 as based on Census 2007 and Barangay Census 2011, respectively. By the year 2017, its projected population is 34,822 peoples, followed by the urban barangays San Antonio and Sto. Rosario, at 7,986 and 7,688 peoples, respectively.

The population of Pandacaqui surpasses other barangays with a very large discrepancy. This scenario might be attributed to its proximity to Angeles City, which influences the movement of people in and out of the barangay; and also its function as a resettlement area during the eruption of Mt. Pinatubo in 1992.

Population or man resource is an essential tool for cityhood. According to RA 9009, an amending the Section 450 of Republic Act 7160 or the Local Government Code of 1991, one of the requirements for declaring a city is a population of 150,000 or more. Mexico's up-to-date total population is 162,293, which is already a passing record.

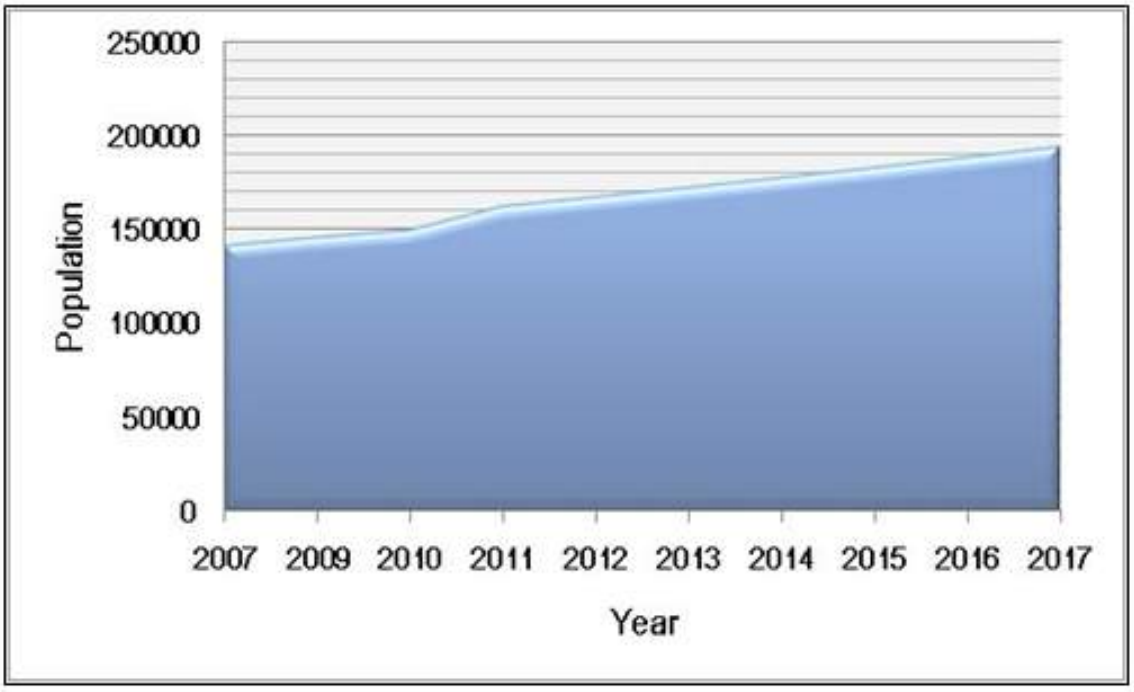


Figure 2.1.1 *Recorded and Projected Population*

Table 2.1.2 Projected Population 2012 – 2017

BARANGAY	POPULATION				PROJECTED POPULATION					
	2007	2009	2010	2011	2012	2013	2014	2015	2016	2017
	N.S.O	Brgy. Count	Census with Brgy.							
1. ACLI	2,573	2,601	2,622	2,646	2,725	2,807	2,891	2,978	3,067	3,159
2. ANAO	5,038	5,241	5,346	6,005	6,185	6,371	6,562	6,759	6,961	7,170
3. BALAS	2,654	2,761	2,816	2,864	2,950	3,038	3,130	3,223	3,320	3,420
4. BUENAVISTA	1,289	1,321	1,347	1,600	1,648	1,697	1,748	1,801	1,855	1,910
5. CAMUNING	2,501	2,602	2,657	2,737	2,819	2,903	2,990	3,080	3,173	3,268
6. CAWAYAN	997	1,037	1,058	1,090	1,122	1,156	1,191	1,227	1,263	1,301
7. CONCEPCION	2,179	2,267	2,313	2,710	2,791	2,875	2,961	3,050	3,142	3,236
8. CULUBASA	2,221	2,261	2,301	2,710	2,791	2,875	2,961	3,050	3,142	3,236
9. DIVISORIA	2,120	2,216	2,261	2,595	2,673	2,753	2,836	2,921	3,008	3,099
10. DOLORES PIRING	1,996	2,077	2,118	2,448	2,521	2,597	2,675	2,755	2,838	2,923
11. EDEN	633	663	679	816	840	866	892	918	946	974
12. GANDUS	761	788	802	811	835	860	886	913	940	968
13. LAGUNDI	5,601	5,637	5,688	5,702	5,873	6,049	6,231	6,418	6,610	6,808
14. LAPUT	2,230	2,320	2,367	2,438	2,511	2,586	2,664	2,744	2,826	2,911
15. LAUG	3,163	3,284	3,350	3,880	3,996	4,116	4,240	4,367	4,498	4,633
16. MASAMAT	1,480	1,533	1,565	2,010	2,070	2,132	2,196	2,262	2,330	2,400
17. STO. CRISTO (Masangsang)	2,980	3,088	3,150	3,986	4,106	4,229	4,356	4,486	4,621	4,759
18. NUEVA VICTORIA	1,869	1,945	1,984	2,135	2,199	2,265	2,333	2,403	2,475	2,549
19. PANDACAQUI	27,197	27,558	28,880	29,163	30,038	30,939	31,867	32,823	33,808	34,822
20. PANGATLAN	2,143	2,230	2,281	2,349	2,420	2,493	2,567	2,644	2,724	2,805
21. PANIPUAN	1,467	1,535	1,571	1,618	1,667	1,717	1,768	1,821	1,876	1,932

22. PARIAN	5,060	5,264	5,385	5,547	5,713	5,884	6,061	6,243	6,430	6,623
23. SABANILLA	1,782	1,854	1,889	2,228	2,295	2,364	2,435	2,508	2,583	2,660
24. SAN ANTONIO	5,588	5,817	5,935	6,688	6,889	7,095	7,308	7,527	7,753	7,986
25. SAN CARLOS	2,860	2,975	3,035	3,240	3,337	3,437	3,540	3,647	3,756	3,869
26. SAN JOSE MALINO	5,303	5,517	5,629	6,388	6,580	6,777	6,980	7,190	7,405	7,628
27. SAN JOSE MATULID	5,196	5,421	5,530	5,696	5,867	6,043	6,224	6,411	6,603	6,801
28. SAN JUAN	3,889	4,046	4,128	4,428	4,561	4,698	4,839	4,984	5,133	5,287
29. SAN LORENZO	2,508	2,609	2,661	2,800	2,884	2,971	3,060	3,151	3,246	3,343
30. SAN MIGUEL	2,206	2,295	2,341	2,729	2,811	2,895	2,982	3,072	3,164	3,259
31. SAN NICOLAS	2,524	2,626	2,680	2,810	2,894	2,981	3,071	3,163	3,258	3,355
32. SAN PABLO	2,296	2,388	2,437	2,517	2,593	2,670	2,750	2,833	2,918	3,005
33. SAN PATRICIO	3,880	4,037	4,117	4,241	4,368	4,499	4,634	4,773	4,916	5,063
34. SAN RAFAEL	1,514	1,621	1,679	1,711	1,779	1,851	1,925	2,002	2,082	2,165
35. SAN ROQUE	874	907	930	1,300	1,339	1,379	1,421	1,463	1,507	1,552
36. SAN VICENTE	3,688	3,795	3,850	3,966	4,084	4,207	4,333	4,463	4,597	4,735
37. SAPANG MAISAC	5,707	5,792	5,965	6,144	6,328	6,518	6,714	6,915	7,123	7,336
38. STA. CRUZ	2,184	2,211	2,277	2,341	2,411	2,484	2,558	2,635	2,714	2,795
39. STA. MARIA	2,514	2,580	2,657	2,730	2,812	2,896	2,983	3,073	3,165	3,260
40. STO. DOMINGO	2,221	2,280	2,344	2,414	2,486	2,561	2,638	2,717	2,798	2,882
41. STO. ROSARIO	3,560	3,649	3,758	3,871	3,987	4,106	4,230	4,357	4,487	4,622
42. SUCLABAN	947	981	1,022	1,468	1,512	1,557	1,604	1,652	1,702	1,753
43. TANGLE	1,905	2,021	2,067	2,716	2,797	2,881	2,968	3,057	3,149	3,243
Total	141,298	145,651	149,472	160,284	165,110	170,081	175,202	180,477	185,912	191,510

Source: National Statistics Office (NSO), Barangay Census
NSO Projected Annual Growth Rate for Mexico = 3.58%
Annual Growth Rate Used for Projection = 3.00%

2.1.3 Population Density

Based on the Barangay Census for 2011, the total population count for Mexico is 162,293. Against the total land area 12,138.807 hectares, there is a computed value of 14 peoples per hectare for the said year. The population density (no. of persons per hectare) for each barangay is shown in Table 2.1.3. The figures presented in the table are for projected years 2012 and 2017.

Table.2.1.3 Barangay Population Density 2012 - 2017

BARANGAY	Population Density (Persons / ha.)		Land Area (in hectares)
	Yr. 2012	Yr. 2017	
1. ACLI	10	2	268.9
2. ANAO	11	13	557.1
3. BALAS	17	20	175.2
4. BUENAVISTA	9	10	191.8
5. CAMUNING	11	13	247.0
6. CAWAYAN	4	4	312.8
7. CONCEPCION	13	2	214.0
8. CULUBASA	8	9	352.8
9. DIVISORIA	11	13	238.0
10. DOLORES PIRING	15	17	171.3
11. EDEN	5	6	174.8
12. GANDUS	4	1	211.7
13. LAGUNDI	33	4	180.7
14. LAPUT	13	15	192.8
15. LAUG	10	12	382.1
16. MASAMAT	31	6	64.4
17. STO. CRISTO (Masangsang)	104	121	39.5
18. NUEVA VICTORIA	8	10	265.6
19. PANDACAQUI	82	95	368.4
20. PANGATLAN	11	13	218.6
21. PANIPUAN	22	25	77.3
22. PARIAN	12	14	466.3
23. SABANILLA	8	9	286.5
24. SAN ANTONIO	44	51	156.0
25. SAN CARLOS	48	55	69.8
26. SAN JOSE MALINO	10	12	644.5
27. SAN JOSE MATULID	13	15	439.7
28. SAN JUAN	12	14	384.4
29. SAN LORENZO	10	11	301.5
30. SAN MIGUEL	9	11	305.6
31. SAN NICOLAS	15	18	188.2
32. SAN PABLO	12	14	209.3

33. SAN PATRICIO	11	13	390.7
34. SAN RAFAEL	5	6	376.2
35. SAN ROQUE	9	11	144.9
36. SAN VICENTE	9	11	450.9
37. SAPANG MAISAC	22	25	152.5
38. STA. CRUZ	11	13	317.5
39. STA. MARIA	11	13	272.5
40. STO. DOMINGO	14	2	269.7
41. STO. ROSARIO	70	81	95.0
42. SUCLABAN	6	1	271.8
43. TANGLE	4	5	668.9

A graphical illustration of the data presented in the previous table is shown in the figure below. Urban barangays Sto. Rosario, Pandacaqui and Sto.Cristo (Masangsang) with respective 2012 projected population densities of 70, 82 and 104. The 2017 projected population densities for the same barangays, on the other hand are 81, 95 and 121.

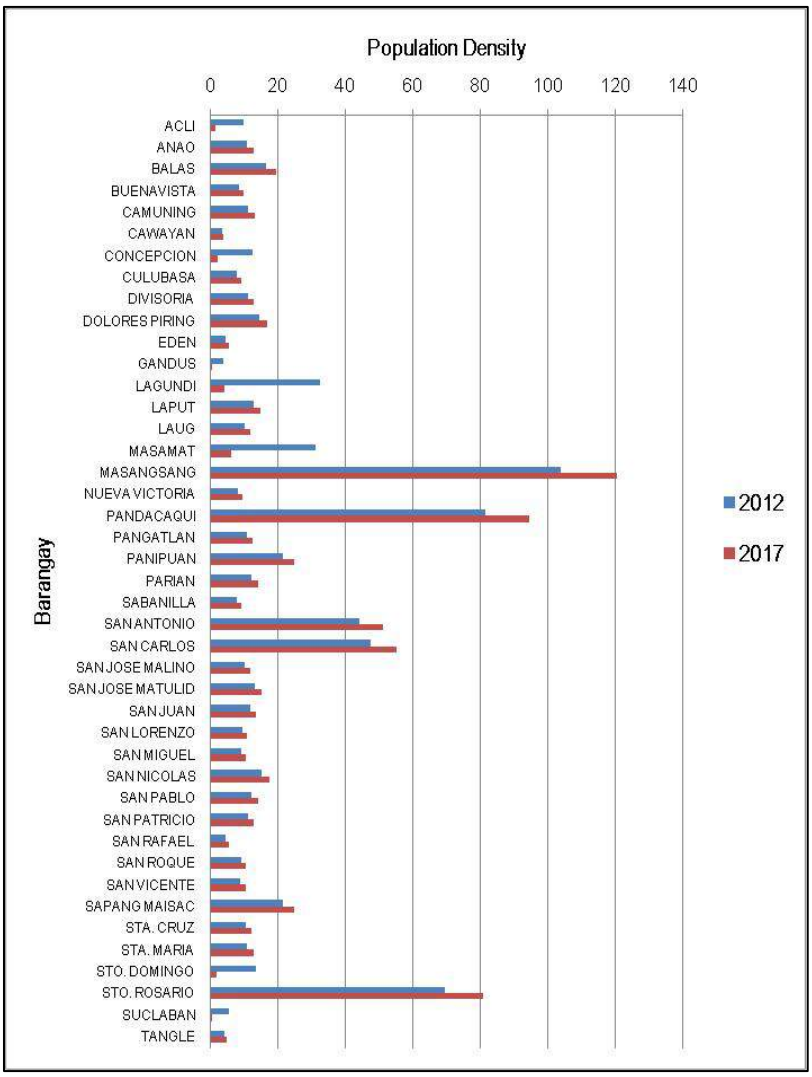


Figure 2.1.2 *Graphical Representation of Projected Population Densities per Barangay (2012, 2017)*

The range of population density per barangay is presented in the following maps (Figure 2.1.3 and Figure 2.1.4). Both illustrate that a projected density of 8 –15 people per hectare occurs at majority of the barangays for year 2012 and 6 –15 for 2017. Moreover, it can be observed that the heaviest concentration of populace is present on urban barangays which are smaller in area compared to others, like those in Sto. Rosario and Sto. Cristo (Masangsang).

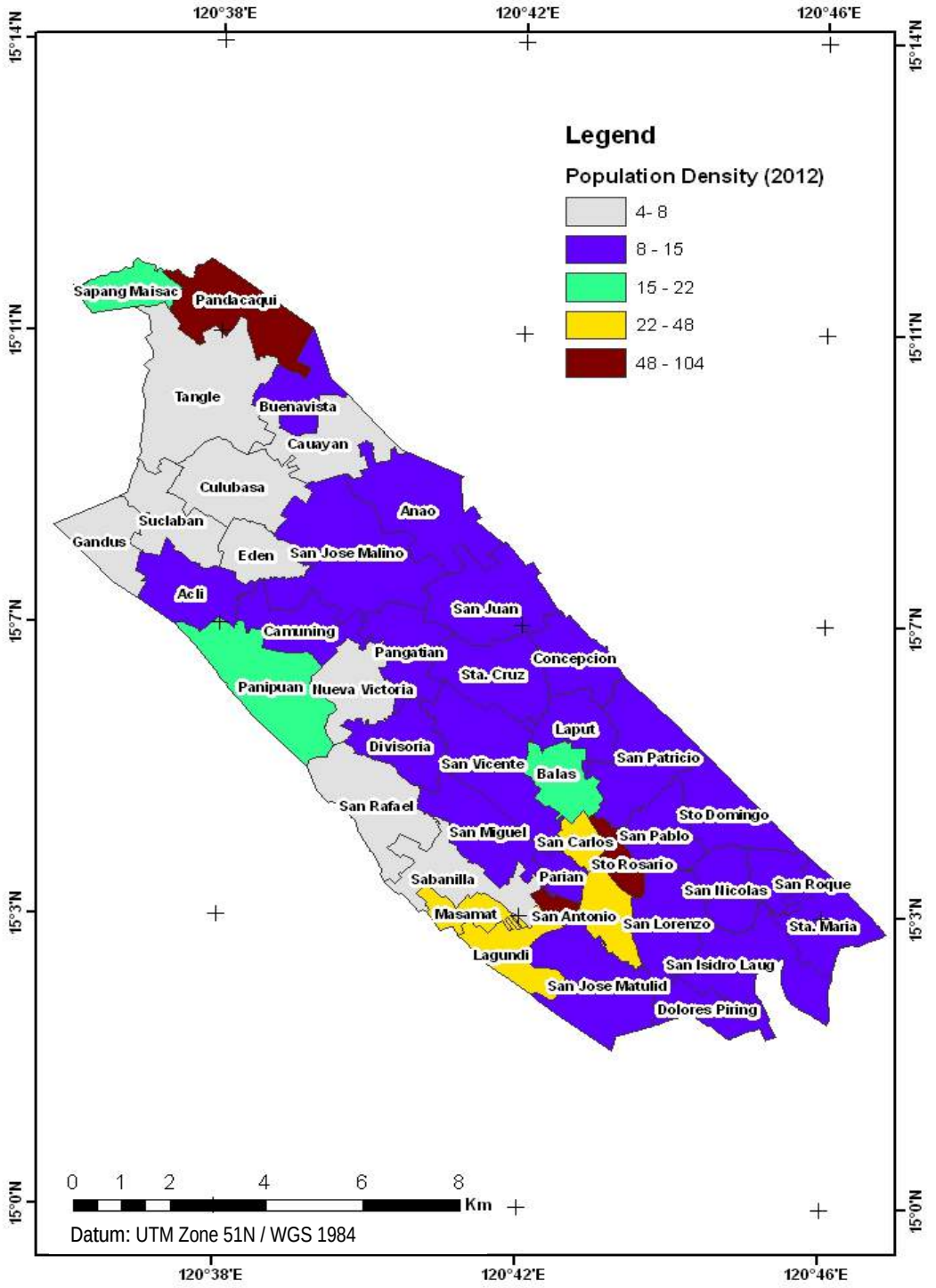


Figure 2.1.3. *Projected Population Density Map for Year 2012*

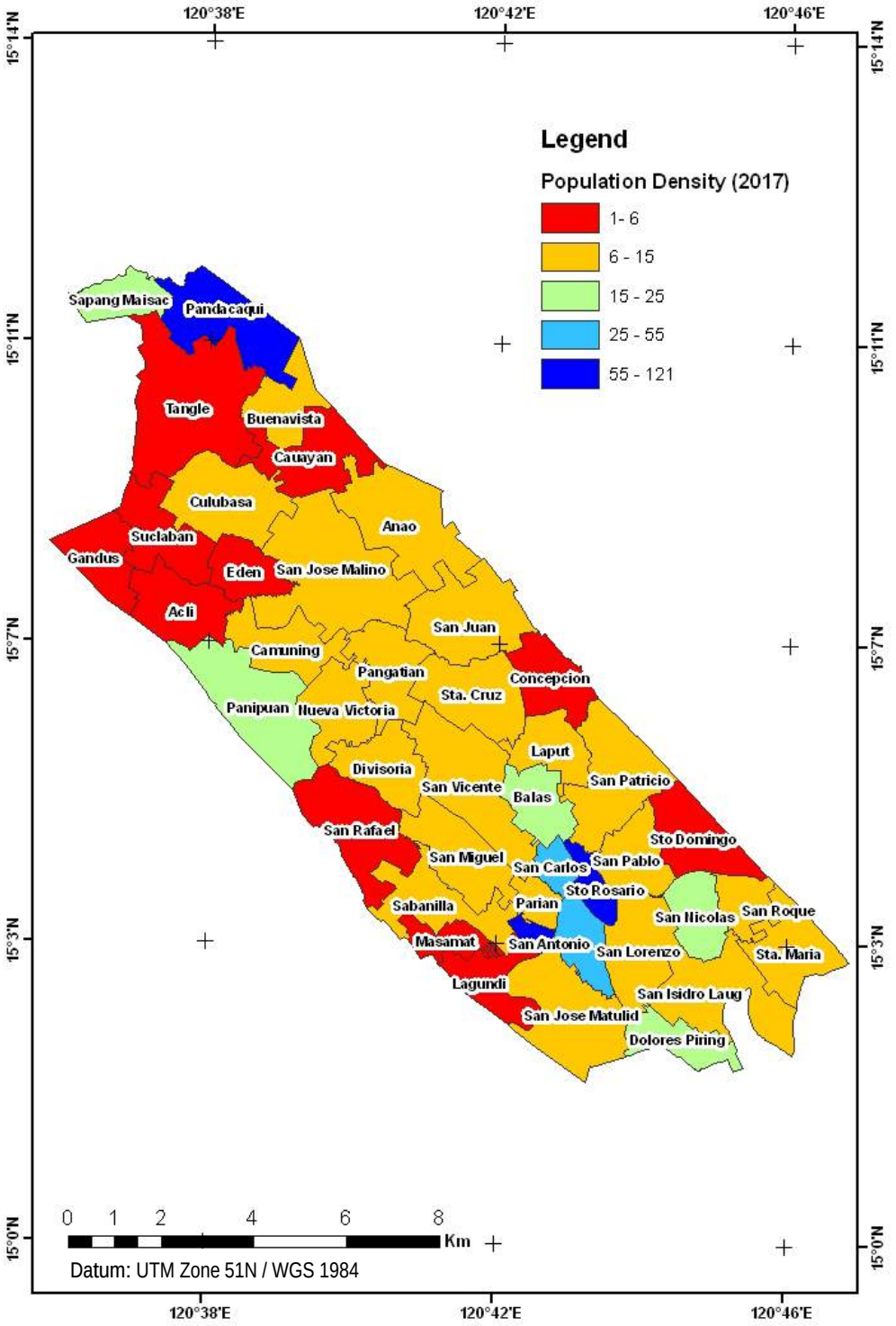


Figure 2.1.4. *Projected Population Density Map for Year 2017*

2.1.4 Household Population

The household population of Mexico based on both NSO 2007 and Barangay Census 2011 give the same scenario as the population data. Barangay Pandacaqui still records the highest number of households at great discrepancy in comparison to the other barangays which follow its lead particularly San Antonio and San Jose Malino (see Table 2.1.4). This case still holds for the projected years from 2012 to 2017.

Table.2.1.4 Recorded and Projected Household Population

BARANGAY	POPULATION				PROJECTED POPULATION					
	2007	2009	2010	2011	2012	2013	2014	2015	2016	2017
	NSO	Brgy. Count	Census with Brgy.							
ACLI	468	472	477	481	481	490	500	510	520	530
ANAO	916	948	972	1,009	1,125	1,158	1,193	1,229	1,266	1,304
BALAS	483	497	512	540	557	573	590	608	626	645
BUENAVISTA	234	249	245	290	300	309	318	327	337	347
CAMUNING	455	501	566	570	579	592	610	625	642	680
CAWAYAN	181	193	199	218	220	227	233	236	243	260
CONCEPCION	396	411	421	510	508	523	538	555	571	588
CULUBASA	404	415	418	510	522	537	554	570	587	605
DIVISORIA	385	392	406	471	504	519	535	551	568	585
DOLORES PIRING	363	378	380	385	420	433	446	459	473	487
EDEN	115	123	126	145	156	160	165	170	175	180
GANDUS	138	126	129	135	145	155	165	175	185	195
LAGUNDI	1018	621	690	754	790	800	825	850	875	900
LAPUT	405	418	430	443	457	470	484	499	514	529
LAUG	575	588	609	666	727	748	771	794	818	842
MASAMAT	269	282	285	415	460	470	480	485	490	500
STO. CRISTO (Masangsang)	542	560	573	720	733	755	778	801	825	850
NUEVA VICTORIA	340	351	367	395	407	427	440	453	467	481
PANDACAQUI	4,945	4,979	5,012	5,000	5,006	5,072	5,140	5,210	5,282	5,357
PANGATLAN	390	401	415	438	440	453	467	481	495	510
PANIPUAN	267	298	329	387	393	418	437	458	475	522
PARIAN	920	942	962	973	994	1,015	1,036	1,058	1,072	1,104
SABANILLA	324	345	350	450	425	438	451	473	487	502
SAN ANTONIO	1,016	1,032	1,052	1,350	1,375	1,390	1,403	1,420	1,436	1,450
SAN CARLOS	520	534	542	650	657	670	678	688	696	702
SAN JOSE MALINO	964	992	1,005	1,040	1,196	1,221	1,214	1,250	1,277	1,315
SAN JOSE MATULID	945	950	962	1,100	1,012	1,024	1,037	1,068	1,082	1,097
SAN JUAN	707	728	737	798	814	839	864	882	885	896
SAN LORENZO	456	462	498	560	565	570	575	580	585	595
SAN MIGUEL	401	417	426	452	489	504	519	558	565	592
SAN NICOLAS	459	470	487	506	517	532	539	550	567	578
SAN PABLO	417	430	478	551	557	561	566	571	576	586
SAN PATRICIO	705	728	735	754	760	776	792	809	819	844

SAN RAFAEL	275	354	367	479	487	498	511	522	545	565
SAN ROQUE	159	170	175	180	185	190	195	200	205	210
SAN VICENTE	671	686	697	708	723	738	760	776	793	803
SAPANG MAISAC	397	415	440	457	500	600	700	800	900	1,000
STA. CRUZ	457	472	482	602	617	630	643	657	670	685
STA. MARIA	404	415	423	492	539	546	557	569	576	583
STO. DOMINGO	647	465	469	482	510	520	530	540	550	560
STO. ROSARIO	1038	894	901	910	915	920	925	930	935	940
SUCLABAN	172	141	148	158	162	178	188	198	208	220
TANGLE	346	361	388	1,040	825	875	925	950	1,000	1,050
Total	25,689	25,606	26,284	29,175	29,752	30,525	31,278	32,097	32,864	33,776

2.1.5 Household Density

The table below shows the projected number of households per hectare of land area for years 2012 and 2017. The barangay which has the highest household density for both 2012 and 2017 is Sto. Cristo (Masangsang) with 15 and 18 households per hectare, respectively. These values are followed by that of Pandacaqui and Sto. Rosario.

The urbanized condition of Sto. Cristo despite its small land area compared to that of the other two barangays considerably effects the higher concentration of households per given hectare of land, the same as that in the case of population density. A bar-graph is shown in Figure 2.1.5 to illustrate the projected household density of the 43 barangays in Mexico.

Table.2.1.5 Household Population Density 2012 – 2017

BARANGAY	Household Density (No. of Households/ha)		Land Area (hectares)
	Yr. 2012	Yr. 2017	
ACLI	2	2	268.9
ANAO	2	2	557.1
BALAS	3	4	175.2
BUENAVISTA	1	2	191.8
CAMUNING	2	3	247.0
CAWAYAN	1	1	312.8
CONCEPCION	2	2	214.0
CULUBASA	1	1	352.8
DIVISORIA	2	2	238.0
DOLORES PIRING	2	3	171.3
EDEN	1	1	174.8
GANDUS	1	1	211.7

LAGUNDI	6	7	180.7
LAPUT	2	3	192.8
LAUG	2	2	382.1
MASAMAT	5	6	64.4
STO. CRISTO (Masansang)	15	18	39.5
NUEVA VICTORIA	1	2	265.6
PANDACAQUI	14	15	368.4
PANGATLAN	2	2	218.6
PANIPUAN	5	7	77.3
PARIAN	2	2	466.3
SABANILLA	1	2	286.5
SAN ANTONIO	7	8	156.0
SAN CARLOS	8	9	69.8
SAN JOSE MALINO	2	2	644.5
SAN JOSE MATULID	2	3	439.7
SAN JUAN	2	2	384.4
SAN LORENZO	2	2	301.5
SAN MIGUEL	1	2	305.6
SAN NICOLAS	3	3	188.2
SAN PABLO	2	2	209.3
SAN PATRICIO	2	2	390.7
SAN RAFAEL	1	2	376.2
SAN ROQUE	1	1	144.9
SAN VICENTE	2	2	450.9
SAPANG MAISAC	3	7	152.5
STA. CRUZ	2	2	317.5
STA. MARIA	2	2	272.5
STO. DOMINGO	3	3	269.7
STO. ROSARIO	12	14	95.0
SUCLABAN	1	1	271.8
TANGLE	1	2	668.9

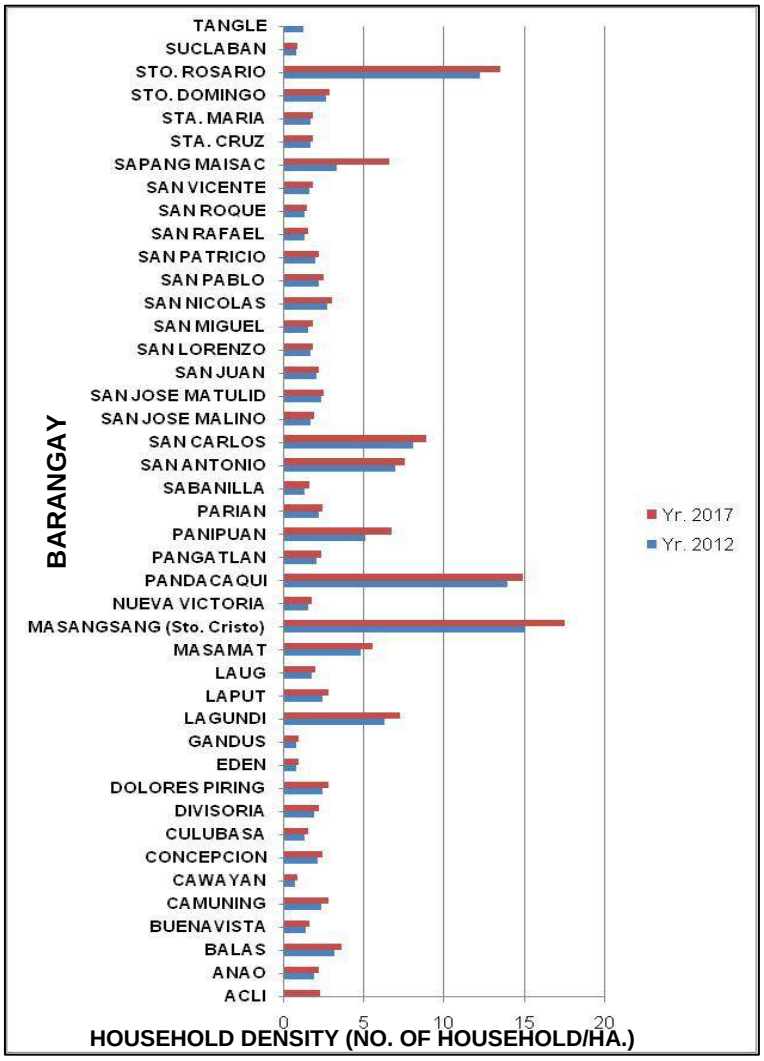


Figure 2.1.5. *Graphical Representation of Projected Household Densities per Barangay (2012, 2017)*

2.1.6 Development Recommendation

Population is equivalent to human resources, a supply of people who can provide the municipality labor and support, professionals or not.

In accordance to Mexico's aim for cityhood in the next five (5) years, the increase of population shall be an essential tool for passing the law's criteria for declaration of cityhood as well as an effective pool of white and blue collar workers who shall support the municipality in its existent and planned improvements in different aspects.

Development of housing systems and increase of residential areas shall attract people from neighboring cities of San Fernando and Angeles to reside in Mexico, thus, boosting the number of man resources in Mexico. However, programs and information about family planning must also be provided to families in order to check on the number of populace, since it must be understood that a bulking population, if not monitored, shall be more of a burden than help.

2.2 LOCAL ADMINISTRATION

2.2.1 Administrative Officers and Personnel

The Local Government of Mexico is administered by several departments at municipal and barangay levels as presented in the following tables below. The Municipal Hall is situated in Parian (Figure 2.1.6), in front of the Mexico Public Market. Other municipal facilities, such as the fire department and RHU 1, are also in Parian, near the Municipal Hall. The elected municipal mayor of Mexico is Hon. Teddy C. Tumang and the vice-mayor is Hon. Roy D. Manalastas. Elected and assigned officers and personnel are given below. The complete list of all personnel in different departments and municipal facilities are enumerated in Annex.

MUNICIPAL MAYOR - Hon. Teddy C. Tumang
VICE –MAYOR - Hon. Roy D. Manalastas

SANGGUNIANG BAYAN MEMBERS
Hon. Lourdes G. Sicat
Hon. Jonathan R. Pangan
Hon. Rudencio S. Gonzales
Hon. Rex DL. Calma
Hon. Carlos A. Rivera
Hon. Merly E. Manalo
Hon. Noel R. Sambile
Hon. Emmanuel R. Manalo

ABC PRESIDENT - Hon. Gerardo P. Santos
SANGGUNIANG KABATAANG MUN. FEDERATION PRESIDENT
- Hon. Emmanuel Stephen V. Tumang
SECRETARY TO THE SANGGUNIAN - Adonis L. Cosio

APPOINTED OFFICIALS

MUNICIPAL ADMINISTRATOR	-	Mr. Fernando M. Maniago
MUNICIPAL BUDGET OFFICER	-	Ms. Alice A. Reyes
MUNICIPAL TREASURER	-	Ms. Avelina P. Reyes
MUNICIPAL ACCOUNTANT	-	Ms. Perlita T. Lagman
MUNICIPAL HEALTH OFFICER	-	Dr. Hilario James M. Cunanan
MUNICIPAL CIVIL REGISTRAR	-	Ms. Rosana T. Aguas
MUNICIPAL ENGINEER/BUILDING OFFICIAL and current MUNICIPAL PLANNING & DEV'T COORDINATOR	-	Engr. Jesus S. Punzalan
MUNICIPAL ASSESOR	-	Ms. Purificacion L. Rivera
MUNICIPAL AGRICULTURIST	-	Mr. Romeo M. Razon
MUNICIPAL HUMAN RESOURCES MGMT. OFFICER	-	Ms.Leonila S. Ignacio
SOCIAL WELFARE OFFICER	-	Ms. Jeanette DS. Lacson

PRIVATE SECRETARY TO THE MAYOR	-	Ms. Luz C. Bondoc
ASSISTING NATIONAL GOVERNMENT		
DEPT. OF THE INTERIOR& LOCAL GOV'T	-	Ms. Maritess C. Burton
MUNICIPAL CIRCUIT TRIAL COURT- JUDGE	-	Hon. Christine Marie C. Capule
CHIEF OF POLICE	-	Police Supt. Ryan David
MUNICIPAL FIRE MARSHALL	-	Senior Insp. Allan Barredo

Figure 2.2.1. *Front View of the Mexico Municipal Hall in Parian*

Table.2.2.1 Elected Barangay Chairmen of Municipality of Mexico

Barangay	Barangay Chairman
1. ACLI	Rodrigo T. Yandan
2. ANAO	Jose T. Balajadia
3. BALAS	Ronnie D. Manaloto
4. BUENAVISTA	Alfredo I. Pineda
5. CAMUNING	Vicente S. Balajadia
6. CAWAYAN	Roland K. Sumang
7. CONCEPCION	Rustico D. Salita

8. CULUBASA	Romeo C. Payabyab
9. DIVISORIA	Reynaldo B. Bautista
10. DOLORES	Magno S. Maglaqui
11. EDEN	Ryan G. Cunanan
12. GANDUS	Isidro S. Tayag
13. LAGUNDI	Alfredo S. David
14. LAPUT	Elmerante P. Onofre
15. LAUG	Efren D. Reyes
16. MASAMAT	Ryan M. David
17. NUEVA VICTORIA	Ernesto S. Esguerra
18. PANDACAQUI	Carmelino D. Tayao
19. PANGATLAN	Ariel T. Dizon
20. PANIPUAN	Gerardo P. Santos
21. PARIAN	Javier C. Hizon Jr.
22. SABANILLA	Reborn D. Bondoc
23. SAN ANTONIO	Nida B. Esguerra
24. SAN CARLOS	Amado M. Bucad
25. SAN JOSE MALINO	Richard S. Malonzo
26. SAN JOSE MATULID	Remigio C. Bondoc
27. SAN JUAN	Leonardo S. Sinamban
28. SAN LORENZO	Ermeraido Canda
29. SAN MIGUEL	Jose C. Gonzales Jr.
30. SAN NICOLAS	Ruben M. Salas
31. SAN PABLO	Carnita C. Idos
32. SAN PATRICIO	Alma T. Lingad
33. SAN RAFAEL	Ricky T. Pangilinan
34. SAN ROQUE	Elmer M. David
35. SAN VICENTE	Eloy G. Dizon
36. SAPANG MAISAC	Domingo A. Hernandez
37. STA. CRUZ	Jesus F. Perez
38. STA. MARIA	Oscar Y. Dela Cruz
39. STO. CRISTO	Dante M. Serrano
40. STO. DOMINGO	Florante Balatbat
41. STO. ROSARIO	Benedicto B. Santos
42. SUCLABAN	Maximino Castaneda
43. TANGLE	Rodrigo L. Torres

2.2.1 Development Recommendations

The role of the local administration is crucial in the formulation, preparation, implementation, and revision- if practicality is necessary, of land use plans. One basic need that local officials must take advantage of is the honing of their managerial skills in documentation and archiving, planning and other skills and practices essential to knowledge of land utilization, enhancement of revenue generation, minimization of red tape, citizens' involvement, improvement of the investment climate and other governmental activities. Table 2.2.2 enumerates the observed skill insufficiencies and encountered administrative issues, as well as the suggested measures which must be taken to minimize, if not to eliminate, the weaknesses existent in the Administrative Department of Mexico.

Table.2.2.2 Summary of Observed Issues of Mexico Local Administration

Skills Required:	Issues Encountered:	Suggested Actions:
➢ Proper Documentation and Archiving ➢ Basic Knowledge in Land Utilization and Planning ➢ Database Management ➢ Basic Knowledge in Investment Improvements ➢ Skills and Knowledge in the field handled by the respective department (e.g. Agriculture and Agro-Industry, Commerce and Trade, Education, etc.) ➢ Administrative Planning and Management ➢ Information Technology	➢ Data and documents requested for research and studies lacking and insufficient ➢ Some personnel lacks basic knowledge on tasks and paperworks to which their department is assigned ➢ Manual Documentation and Mapping activities ➢ Observed assignation of position of little or no use ➢ Lack of necessary facilities and personnel with technical expertise	➢ Seminars, workshops and conferences under supervision of technical and managerial experts ➢ Evaluation of skills and knowledge requirements of all departments as well as personnel under each department ➢ Enlisting of required documents as guide for finding areas with data insufficiency ➢ Appointing personnel with required technical skills for a specific department ➢ Acquisition of required facilities and technical employees (GIS operators, MIS personnel, Engineers, etc.)

Integrated Taxation Management System (iTAX)

Aside from the genuine commitment of the local officials to the suggested improvements, the local administration must have the willingness to imbibe the bounties of contemporary knowledge available through different media particularly Information Technology. It has been too long since the dawn of Computer Age, and every field at present requires computer knowledge for a faster, easier and more accurate results and functions. The government is no exception.

For instance, tax mapping, a system which locates, measures and documents dimensions and other information referring to taxable parcels of land, is still done manually by several Municipal Assessor's Offices.

Since land information must be kept as public documents and manual mapping of lands is an arduous task, the use of computers is a necessity to make the said activities more convenient. The documents can be stored in a computer database which must be programmed in such a way that data and information can be easily extracted. Mapping, on the other hand, can be done using Geographical Information System (GIS) software and programs.

In developed countries and in some cities in the Philippines, the computer-based iTAX or Digital Tax Parcel Mapping is becoming a trend to counter the difficult tasks of manual documentation and paper-based mapping. In this system, all information about a parcel of land are stored in a database which can be extracted by users and updated by the administrator. Moreover, tax maps which can be graphically overviewed by both tax authorities and tax payers are integrated into the system thru employment of GIS software, like the freeware *QuantumGIS* or the purchasable *ArcGIS* (See Figure 2.2.2)

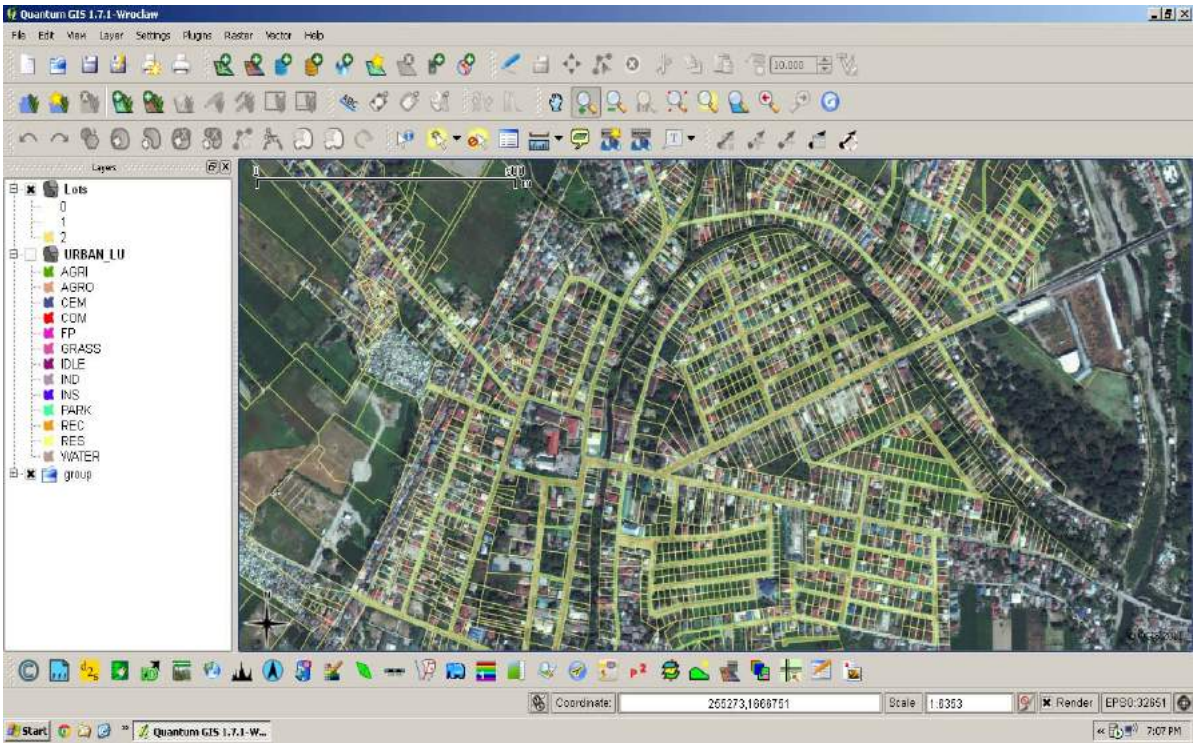


Figure 2.2.2. *Sample Digitized Lots Based on Cadastral Maps of Mexico using QuantumGIS*

The following figures illustrate a sample of the processes done in the iTAX System of the Province of Negros Oriental in cooperation with Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH, which can also be developed in the Municipality of Mexico.

1. Digital conversion of paper maps

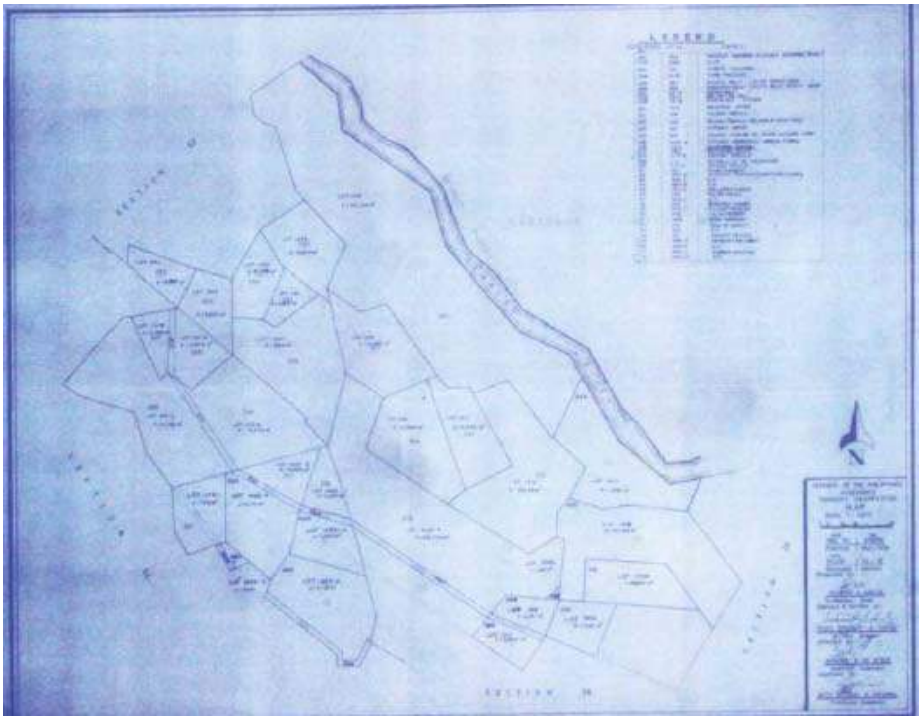


Figure 2.2.3. *Sample Parcel Map Drawn on Paper*

2. Merging of individual parcel maps in a barangay

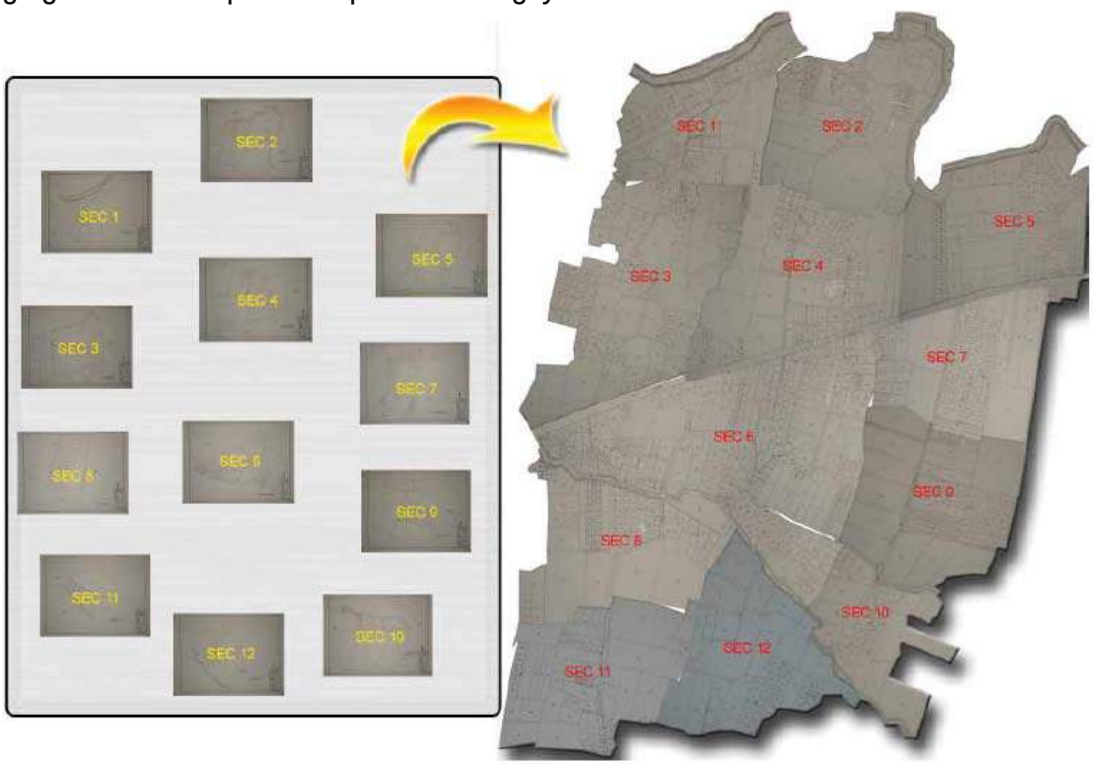


Figure 2.2.4. *Assembled Digital Maps forming a Barangay Parcel Map*

3. Determination and digitizing geographical control points (rivers, streets,etc.)

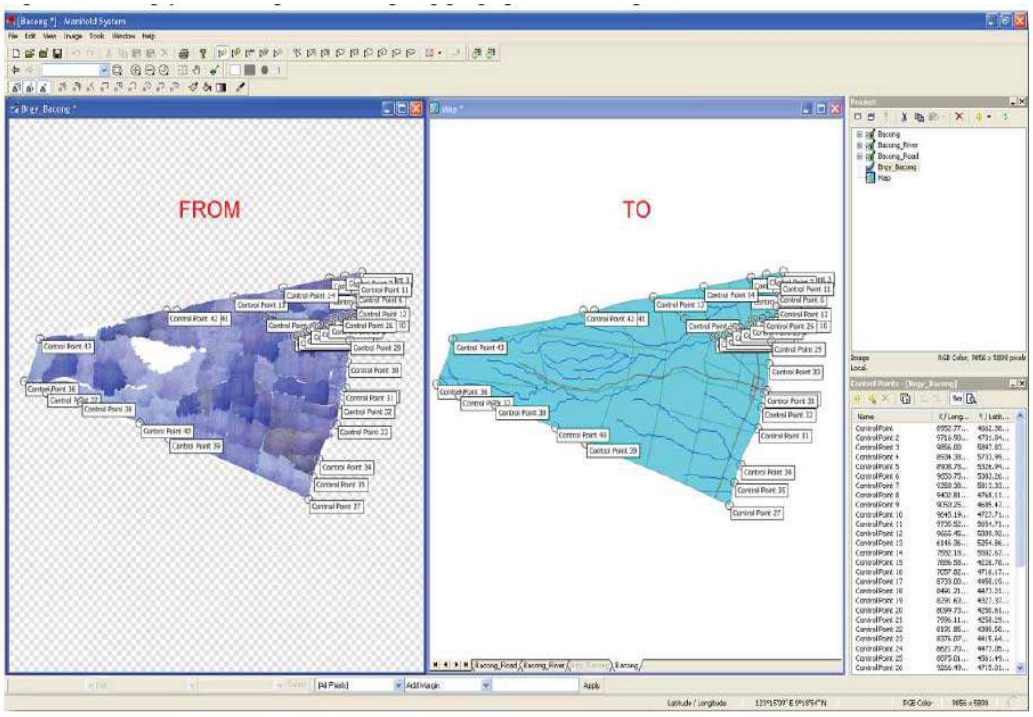


Figure 2.2.5. *Digitized rivers and streets overlaid on land parcel*

4. Incorporation of the parcel's Property Identification Numbers (PIN) and other information in a Database and Data and Map Linking

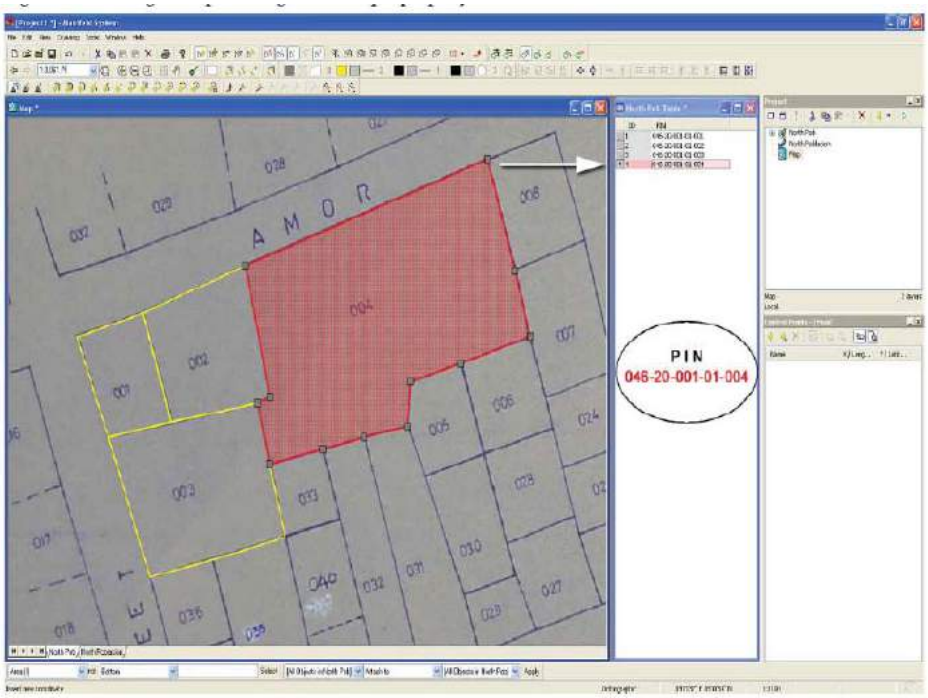


Figure 2.2.6. *Assigning PIN in a parcel of land*

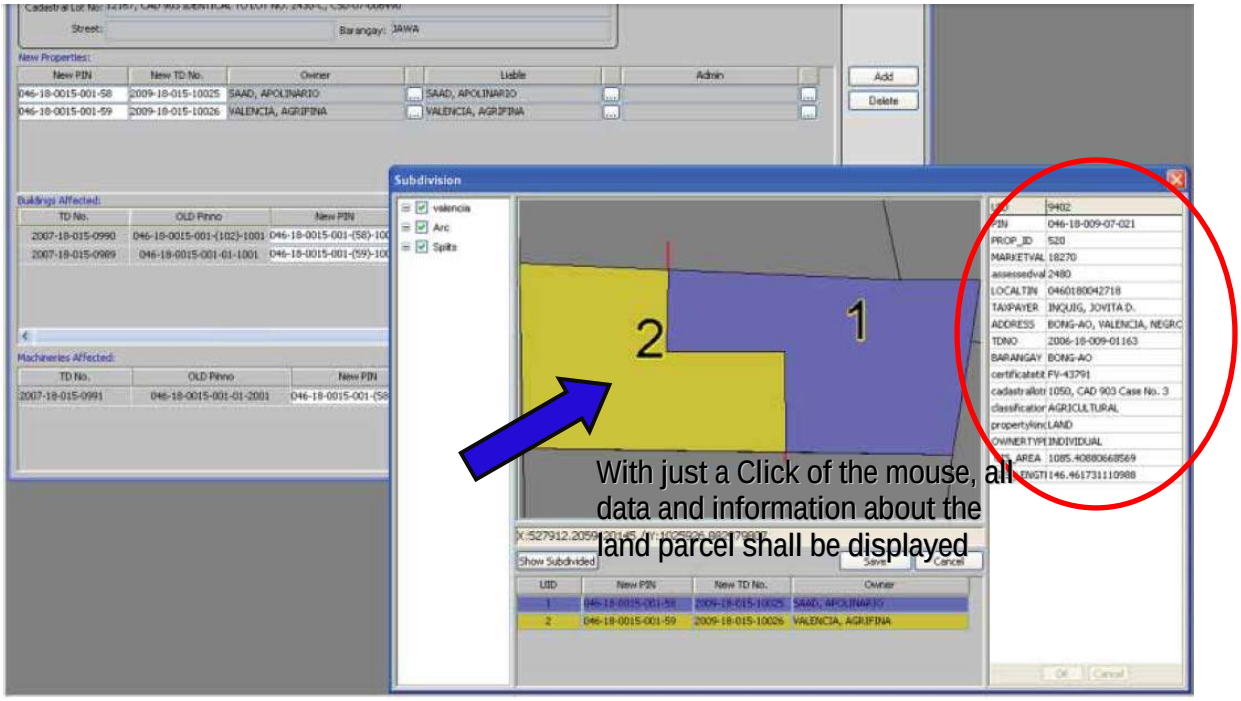
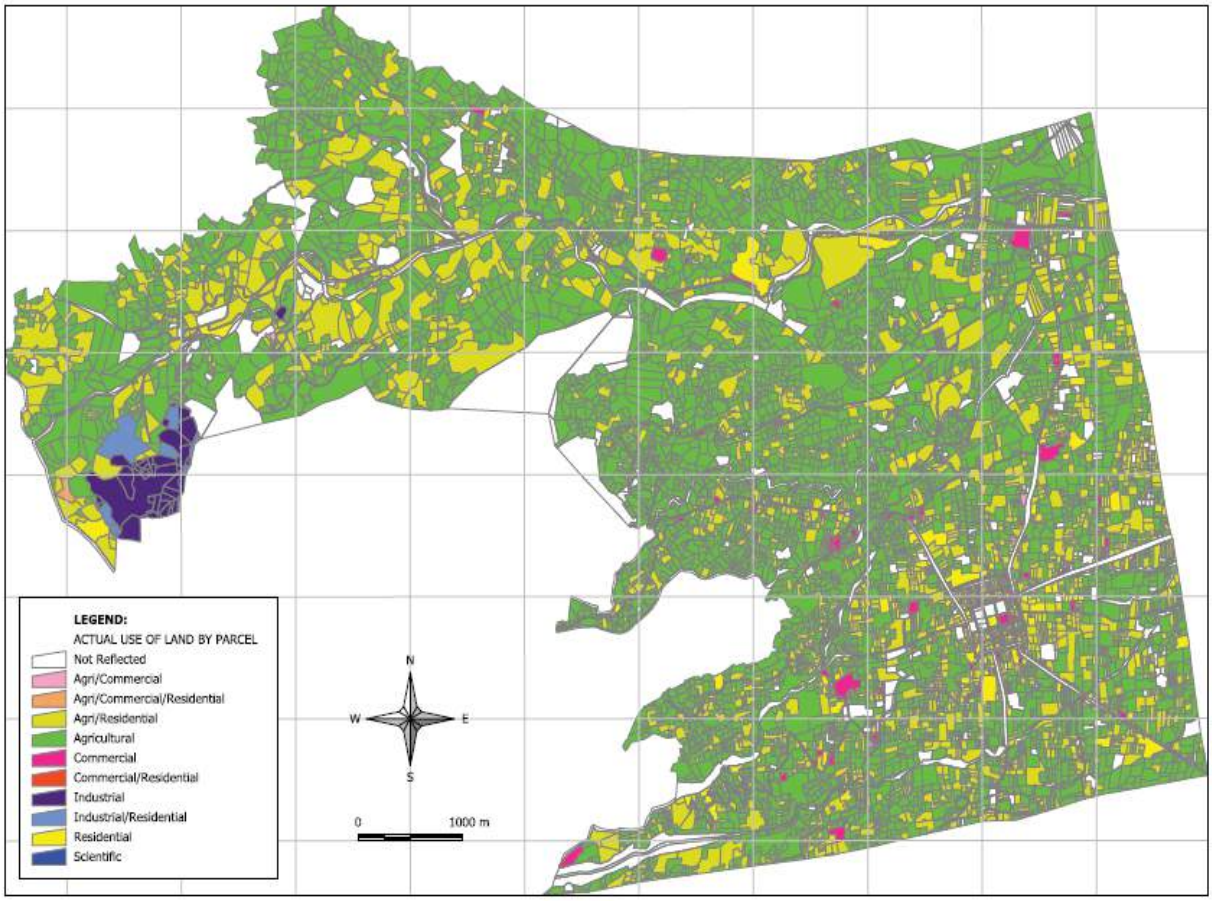


Figure 2.2.7. *Graphical User Interface (GUI) displaying information from a Database*

5. Lay-out of Thematic Maps



Source: http://www.methodfinder.net/pdfmethods/gtz-dp/example/gtz-dp_example87_1.pdf

2.3 SOCIO-ECONOMIC CHARACTERISTICS

2.3.1 Education

A. Situational Analysis

Education in Mexico, Pampanga is shaped by both public and private schools from primary to secondary level. At present, there are 42 schools classified under primary level, nine (9) under secondary level and only one (1) under tertiary level. Some of these schools are point-located in maps as shown in Figure 2.3.1 and Figure 2.3.2.

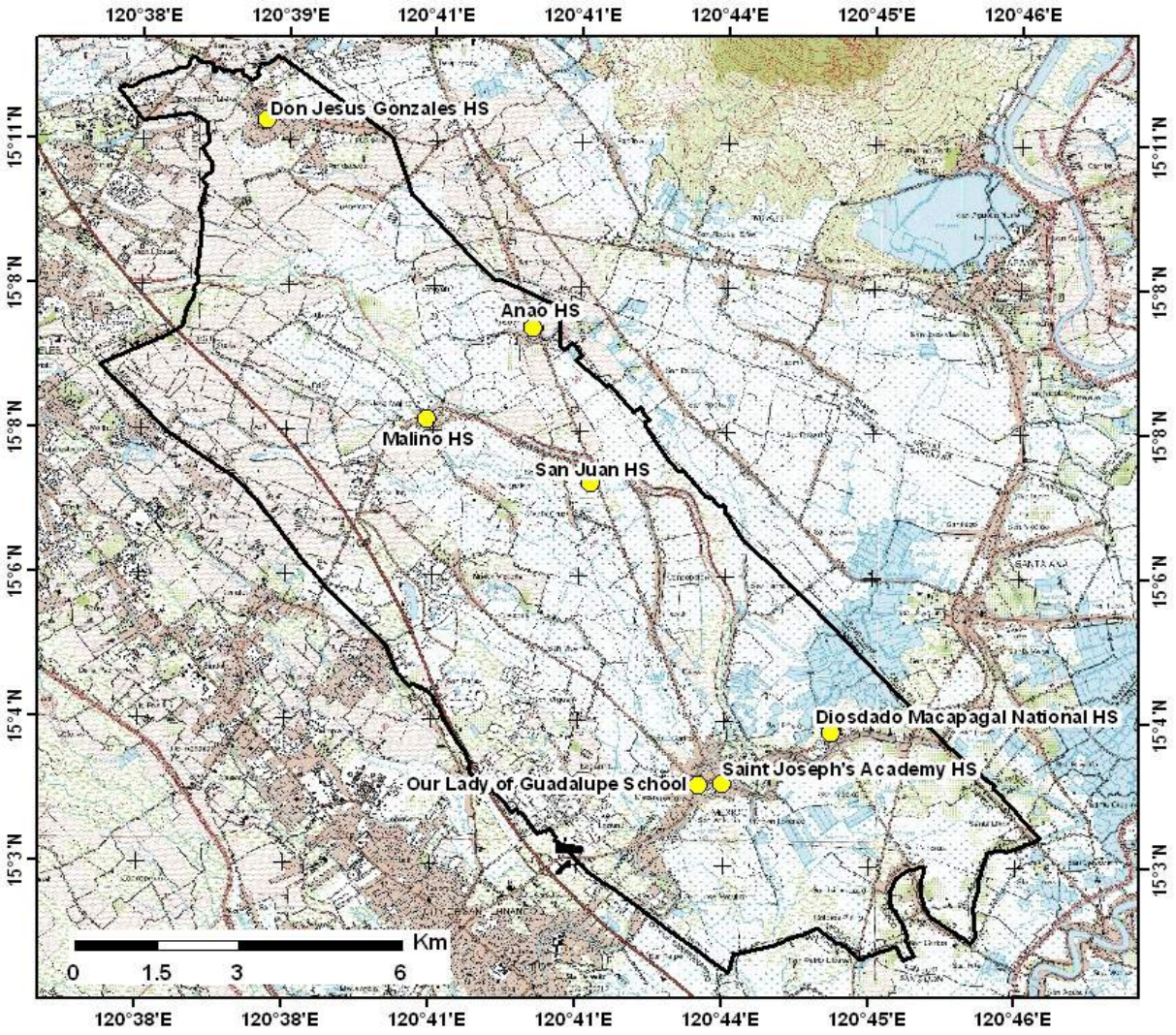


Figure 2.3.1 *Point location of High Schools in Municipality of Mexico*

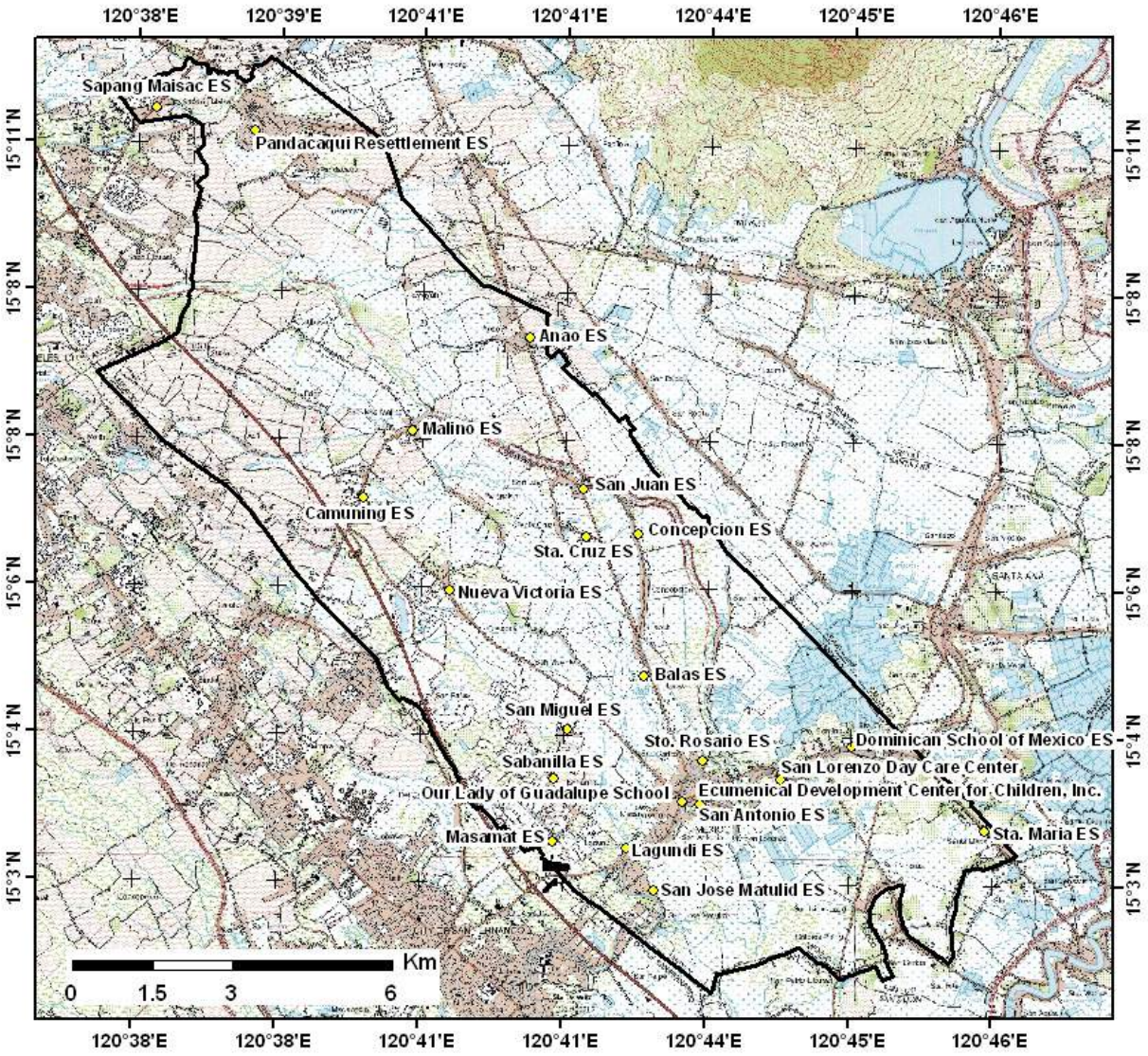


Figure 2.3.2 *Point location of Elementary Schools in Municipality of Mexico*

The only school in Mexico which offers college education is Don Honorio Ventura Technological State University (DHVTSU), an extension of the Don Honorio Ventura Technological State University Main in Bacolor. Most of the high school graduates from the municipality pursue their tertiary education in colleges and universities in San Fernando City, Angeles City and Metro Manila.

On the other hand, there are more public schools which offer primary and secondary levels of education than private schools. The 39 public schools for primary level are administered by two (2) districts namely; Mexico North District and South District. Mexico North District has 21 schools while Mexico South District has 18 schools. The list of schools is presented in Table 2.3.1.

Table.2.3.1 List of Schools for Different Levels

Level	Classification	
	Private	Public
Primary	Dominican School of Mexico, Inc.	Acli ES
	Mexico Ecumenical Development Center for Children, Inc.	Anao ES
	Our Lady of Guadalupe School	Balas ES
		Buenavista ES
		Camuning ES
		Cawayan ES
		Concepcion ES
		Culubasa ES
		Eden ES
		Gandus ES
		Laput ES
		Malino ES
		Pangatlan ES
		Panipuan ES
		San Juan ES
		San Patricio ES
		San Rafael ES
		Sta. Cruz ES
		Sto. Rosario ES
		Tangle ES
		Sabanilla ES
		San Antonio ES
		San Jose Matulid ES
		San Lorenzo ES
		San Miguel ES
		San Vicente ES
		Sapang Maisac ES
		Sta. Maria ES
		Sto. Domingo ES
		Suclaban ES
		Divisoria ES
		Dolores Piring ES
		Lagundi ES
		Laug ES
		Masamat ES
		Mexico ES
		Nueva Victoria ES
		Pandacaqui ES
		Pandacaqui Resettlement ES

Secondary	Our Lady of Guadalupe School	Diosdado Macapagal HS
	St. Joseph's Academy	Don Jesus Gonzales HS
		Gerry Rodriguez HS
		San Jose Malino HS
		Mexico National HS
		Nicanor David Vergara HS
		San Juan HS
Tertiary		Don Honorio Ventura Technological State University Mexico Campus

Mexico North District
Mexico South District

At the present school year 2011 – 2012, there are 18,716 total enrollees in the primary level and 9,958 in secondary level. Projected population of enrollees up to year 2017 for both primary and secondary levels is presented in Table 2.3.2 and Table 2.3.3, respectively.

Records of the number of enrollees from 2006 to present were collected from the respective primary and secondary schools. Some figures in the aforementioned tables were not supplied due to lack or absence of data. The five-year projection of the student population (2012 – 2017) was determined using Microsoft Excel. The number of enrollees recorded from 2006 to 2011 was plotted in a line graph. The equation which best defines the trend presented by the graph was extracted and employed to determine the projected population of enrollees for a certain year (See below).

Diosdado Macapagal High School	
SY	No. of Enrollees
2006 - 2007	307
2007 - 2008	443
2008 - 2009	538
2009 - 2010	680
2010 - 2011	851
2011 - 2012	1110

The given enrollee population records for Diosdado Macapagal High School, when plotted on a line graph (See Figure xxxx), obtained an equation as follows:

y = 308774.855011098 ln(x) - 2347622.12232874

Substituting the projected year to x, for example, 2012:
y = 1192.546 = 1193 enrollees

The projected number of enrollees for SY. 2012 - 2013 is 1193.

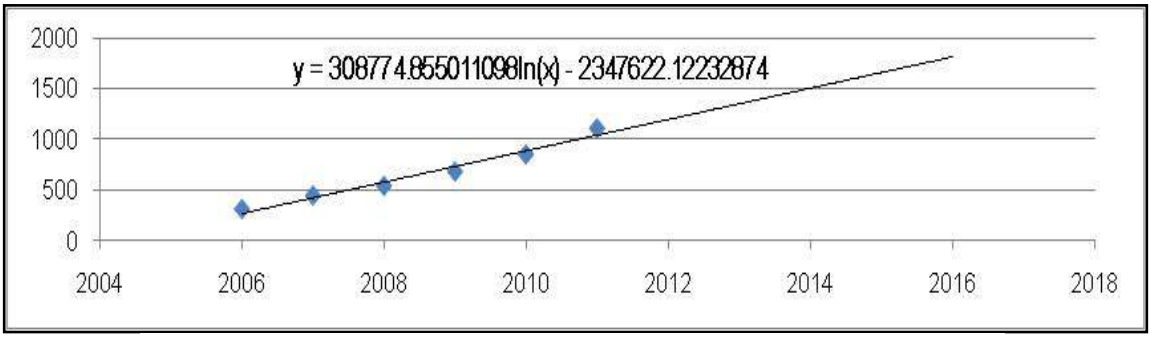


Figure 2.3.3 *Graph of Population of Enrollees in Diosdado Macapagal High School*

Table 2.3.2. Recorded and Projected Enrollee Population for Primary

NAME OF SCHOOL	LOCATION/ BARANGAY	OLD AND RECENT ENROLLEE POPULATION						PROJECTED ENROLLEE POPULATION				
		2006 2007	2007 2008	2008 2009	2009 2010	2010 2011	2011 2012	2012 2013	2013 2014	2014 2015	2015 2016	2016 2017
Acli Elementary School	Acli	140	146	148	152	141	139	143	142	142	141	141
Anao Elementary School	Anao	599	588	616	652	626	632	651	660	669	678	687
Balas Elementary School	Balas	166	177	174	188	198	199	206	213	220	226	233
Buenavista Elementary School	Buenavista	229	235	225	221	223	217	218	215	212	209	209
Camuning Elementary School	Camuning	324	341	333	334	331	320	323	321	320	318	317
Cawayan Elementary School	Cauayan	140	148	132	133	135	138	136	135	133	132	131
Concepcion Elementary School	Concepcion	241	247	249	260	246	244	244	244	245	246	246
Culubasa Elementary School	Culubasa	218	217	214	202	204	198	194	189	185	181	177
Divisoria Elementary School	Divisoria	267	272	265	285	268	295	289	294	298	302	306
Dolores Piring Elementary School	Dolores	190	183	202	206	202	210	215	220	224	229	223
Dominican School of Mexico, Inc.	Sto. Domingo	287	333	393	398	444	488	523	561	599	637	676
Eden Elementary School	Eden	88	84	77	76	85	97	89	90	92	93	94
Gandus Elementary School	Gandus	ND	ND	ND	39	45	52	59	65	72	78	85
Lagundi Elementary School	Lagundi	357	385	405	375		375	385	386	388	389	390
Laput Elementary School	Laput	375	368	394	395	395	380	395	398	401	404	407
Laug Elementary School	Laug	398	396	430	426	429	422	441	447	453	459	465
San Jose Malino Elementary School	San Jose Malino	680	730	729	749	768	776	798	815	833	850	868
Masamat Elementary School	Masamat	116	132	156	175	204	210	233	253	273	293	313
Mexico Ecumenical Development Center for Children, Inc.	Parian	291	282	265	254	254	236	228	217	207	196	186
Mexico Elementary School	Sto. Cristo	1798	1832	1912	1841	1803	1793	1815	1810	1805	1799	1794

Nueva Victoria Elementary School	Nueva Victoria	231	224	208	216	214	218	208	205	203	200	198
Our Lady of Guadalupe School	San Antonio	190	195	192	181	199	185	188	188	187	186	186
Pandacaqui Elementary School	Pandacaqui	561	602	512	584	590	585	588	592	596	601	605
Pandacaqui Resettlement Elementary School	Pandacaqui	3131	3267	3378	3440	3395	3330	3469	3510	3551	3592	3633
Pangatlan Elementary School	Pangatlan	293	313	314	318	296	292	299	298	297	295	294
Panipuan Elementary School	Panipuan	139	158	161	170	172	177	184	191	198	204	211
Sabanilla Elementary School	Sabanilla	204	187	202	199	194	218	210	212	215	217	220
San Antonio Elementary School	San Antonio	670	718	720	724	724	711	738	744	750	757	763
San Jose Matulid Elementary School	San Jose Matulid	464	467	502	496	486	508	513	521	528	536	544
San Juan Elementary School	San Juan	532	539	568	566	543	554	563	566	570	573	576
San Lorenzo Elementary School	Sa Lorenzo	599	576	586	573	547	508	508	492	476	460	445
San Miguel Elementary School	San Miguel	221	218	210	196	200	201	191	187	182	177	172
San Patricio Elementary School	San Patricio	438	445	467	505	522	526	554	575	595	615	635
San Rafael Elementary School	San Rafael	154	150	150	170	174	156	170	173	176	178	181
San Vicente Elementary School	San Vicente	456	469	473	455	474	470	473	475	477	478	480
Sapang Maisac Elementary School	Sapang Maisac	623	649	721	726	754	816	847	884	921	957	994
Sta. Cruz Elementary School	Sta. Cruz	204	202	206	215	210	213	216	218	220	222	225
Sta. Maria Elementary School	Sta. Maria	289	287	275	287	260	266	256	251	245	240	235
Sto. Domingo Elementary School	Sto. Domingo	351	347	398	354	350	333	342	338	335	331	328
Sto. Rosario Elementary School	Sto. Rosario	644	648	677	731	720	703	744	760	776	792	808
Suclaban Elementary School	Suclaban	81	93	102	103	110	127	128	136	144	152	160
Tangle Elementary School	Tangle	124	144	164	164	170	198	197	208	220	231	243
TOTAL		17,503	17,994	18,505	18,734	18,305	18,716	19,171	19,399	19,633	19,854	20,084

Table 2.3.3. Recorded and Projected Enrollee Population for Secondary Schools

NAME OF SCHOOL	LOCATION/ BARANGAY	TYPE	OLD AND RECENT ENROLLEE POPULATION						PROJECTED ENROLLEE POPULATION				
			2006 2007	2007 2008	2008 2009	2009 2010	2010 2011	2011 2012	2012 2013	2013 2014	2014 2015	2015 2016	2016 2017
Diosdado Macapagal High School	Sto. Domingo	Public	307	443	538	680	851	1110	1193	1346	1499	1653	1806
Don Jesus Gonzales High School	Pandacaqui	Public	2699	2451	2570	2702	2832	2794	2849	2899	2948	2998	3048
Gerry Rodriguez High School	Divisoria	Public	ND	ND	51	97	201	277	352	430	508	586	664
San Jose Malino High School	San Jose Malino	Public	1041	990	924	911	905	931	869	845	822	799	775
Mexico National High School	Balas	Public	809	852	827	770	793	831	802	798	795	791	787
Nicanor David Vergara High School	Anao	Public	ND	984	985	1007	1101	1141	1173	1215	1258	1301	1344
Our Lady of Guadalupe School	San Antonio	Private	38	64	73	87	161	162	190	216	243	269	295
San Juan High School	San Juan	Public	2180	2114	2179	2188	2250	2251	2205	2214	2223	2232	2241
St. Joseph's Academy	San Antonio	Private	557	475	456	463	478	461	435	422	409	396	382
TOTAL			7,631	8,373	8,603	8,905	9,572	9,958	10,068	10,385	10,705	11,025	11,342

**ND – No Data*

There are 524 teachers and 540 classrooms to support education for primary level. This shows an over-all ratio for student-teacher of 1:36 and 1:35 for student-classroom ratio. On the other hand, secondary level education has a total of 248 teachers and 129 classrooms which give over-all ratios of 1:40 and 1:68 for student-teacher and student-classroom, respectively. Tables 2.3.4 and 2.3.5 show the number of teachers and classrooms available for each school in primary and secondary levels, respectively. These conditions shall require municipal concern and assistance especially that an increasing trend of enrollee populace is inevitable in the next five (5) years, as shown in Figure 2.3.4.

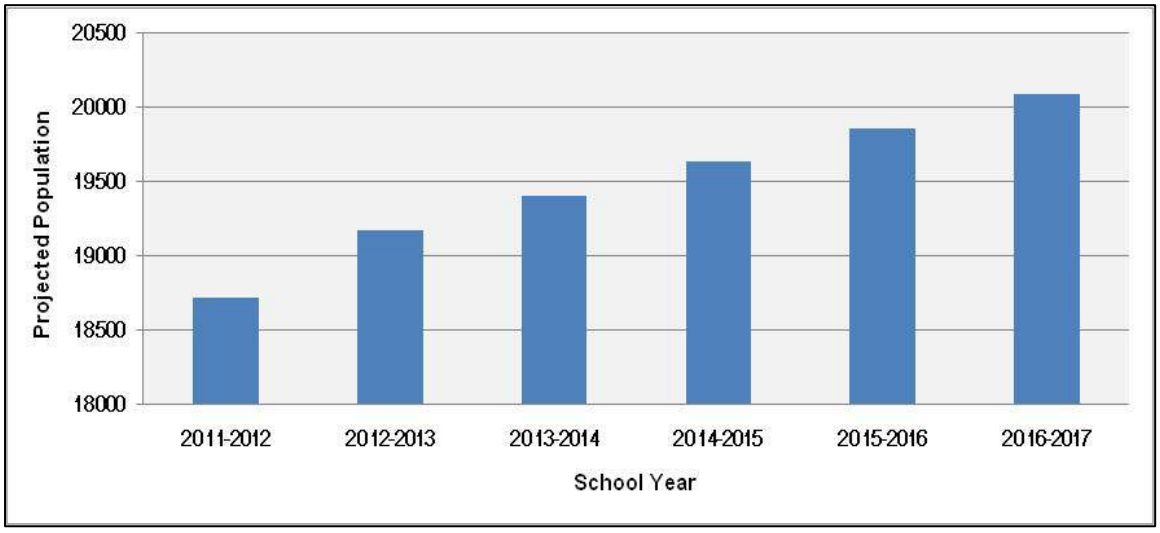


Figure 2.3.4 *Bar Graph of Projected Population of Enrollees from SY.2011 – 2012 to SY. 2016 – 2017*

Shifting or dividing school periods into morning and afternoon classes is the common practice of schools in secondary levels in order to accommodate the large number of enrolled students against few available classrooms. Three of the municipal high schools experiencing this kind of scenario are the Diosdado Macapagal High School, Don Jesus Gonzales High School and San Juan High School.

In terms of facilities, aside from the lack of classrooms, the insufficiency of essential tools for up-to-date quality of education, specifically in Information Technology, is also existent among schools both primary and secondary. Computer education is already a must for both elementary and high school students, since computers are already becoming a common part of our day-to-day activities. Moreover, some school structures are dilapidated and in bad need of renovation. Lack of comfort rooms for high schools and elementary schools is also existent. However, the municipality is building four classrooms each year since year 2005.

Table 2.3.4. Teacher and Classroom to Present Enrollee Ratio (Primary)

Name of Elementary School	Present Enrollees	Number of Teachers	Student-Teacher Ratio	Number of Classrooms	Student-Classroom Ratio	REMARKS
Acli Elementary School	139	6	1:23	6	1:23	
Anao Elementary School	632	16	1:40	9	1:70	lack of classroom
Balas Elementary School	199	6	1:33	6	1:33	
Buenavista Elementary School	217	7	1:31	10	1:22	
Camuning Elementary School	320	10	1:32	10	1:32	
Cawayan Elementary School	138	6	1:23	6	1:23	
Concepcion Elementary School	244	6	1:41	6	1:41	
Culubasa Elementary School	198	7	1:28	10	1:20	
Divisoria Elementary School	295	8	1:37	9	1:33	
Dolores Piring Elementary School	210	5	1:42	8	1:27	
Dominican School of Mexico	488	18	1:27	14	1:35	
Eden Elementary School	97	4	1:24	4	1:24	
Gandus Elementary School	52	3	1:17	4	1:13	
Lagundi Elementary School	375	11	1:34	12	1:31	
Laput Elementary School	380	13	1:29	14	1:27	
Laug Elementary School	422	12	1:35	12	1:35	
Malino Elementary School	776	20	1:39	20	1:39	
Masamat Elementary School	210	7	1:30	6	1:35	
Mexico Ecumenical Development Center for Children, Inc.	236	15	1:15	15	1:15	
Mexico Elementary School	1793	46	1:39	42	1:43	
Nueva Victoria Elementary School	218	6	1:37	9	1:23	
Our Lady of Guadalupe School	185	10	1:19	15	1:12	

Pandacaqui Elementary School	585	14	1:42	15	1:39	
Pandacaqui Resettlement E.S	3330	76	1:44	70	1:48	
Pangatlan Elementary School	292	9	1:32	9	1:32	
Panipuan Elementary School	177	7	1:26	6	1:30	
Sabanilla Elementary School	218	7	1:31	6	1:36	
San Antonio Elementary School	711	18	1:40	23	1:31	
San Jose Matulid Elementary School	508	13	1:39	14	1:36	
San Juan Elementary School	554	14	1:40	14	1:40	
San Lorenzo Elementary School	508	14	1:36	25	1:20	
San Miguel Elementary School	201	6	1:34	6	1:34	
San Patricio Elementary School	526	14	1:36	13	1:41	
San Rafael Elementary School	156	5	1:31	7	1:22	
San Vicente Elementary School	470	12	1:39	12	1:39	
Sapang Maisac Elementary School	816	17	1:48	20	1:41	
Sta. Cruz Elementary School	213	8	1:27	8	1:27	
Sta. Maria Elementary School	266	8	1:33	7	1:38	
Sto. Domingo Elementary School	333	9	1:37	9	1:37	
Sto. Rosario Elementary School	703	20	1:35	18	1:39	
Suclaban Elementary School	127	5	1:26	5	1:26	
Tangle Elementary School	198	6	1:33	6	1:33	

Table 2.3.5. Teacher and Classroom to Present Enrollee Ratio (Secondary)

Name of High School	Present Enrollees	Number of Teachers	Student-Teacher Ratio	Number of Classrooms	Student-Classroom Ratio	REMARKS
Diosdado Macapagal High School	1,110	21	1:52	9	1:123	2 shifts= 1:59 / shift; lack of classroom
Don Jesus Gonzales HighSchool	2,794	80	1:35	38	1:80	2 shifts= 1:40
Gerry Rodriguez High School	277	6	1:46	6	1:46	
San Jose Malino High School	931	25	1:38	19	1:49	
Mexico National High School	831	20	1:42	15	1:56	lack of classrooms
Nicanor David Vergara High School	1,141	27	1:43	21	1:55	lack of classrooms
Our Lady of Guadalupe School	162	4	1:40	4	1:40	
San Juan High School	2,251	49	1:46	19	1:118	2 shifts= 1:59 shift ;lack of classroom
St. Joseph's Academy	461	16	1:29	15	1:30	

B. Development Recommendations

Education is both a crucial and essential part of life of a person, specifically the youth. A complete set of facilities which supports education shall not only ensure a comfortable atmosphere for learning but also efficient skills and knowledge among students. Computers, for instance, must be provided especially to public schools. Classrooms and other school buildings must be monitored and renovated if necessary. Construction of additional classrooms to contain more students must also be done.

According to the Municipal Government, four (4) classrooms are constructed every year under the funding of the Local School Board. Table 2.3.6 enumerates the schools which shall need additional classrooms to accommodate projected number of enrollees for SY 2016 – 2017.

Table 2.3.6. Additional Room Requirement for SY 2016 – 2017 of Schools with Lacking Classrooms

Name of School	Level	Additional Rooms
Diosdado Macapagal High School	Secondary	4 rooms
Don Jesus Gonzales HighSchool	Secondary	1 room
Gerry Rodriguez High School	Secondary	2 rooms
Our Lady of Guadalupe School	Secondary	1 room
San Juan High School	Secondary	5 rooms
Anao Elementary School	Primary	1 room

Another issue which must also be addressed is the insufficient number of comfort rooms available, usually in public schools. Educational facilities, based on Plumbing Fixture Requirements, must have the following number of lavatories:

Table 2.3.7. Lavatory Requirement per Gender and Number of Person

Level	No. of Persons/Gender	Lavatories	
		Male	Female
Elementary Grades 1 – 5	1 - 25	1	2
	26 – 50	add 1	add 1
	51 – 75	add 1	add 1
	76 – 100	add 1	add 1
	ea. additional 50 over 100	add 1	add 2
Secondary Grades 6 -12 and higher	1 – 30	1	2
	31 – 60	add 1	add 1
	61 – 90	add 1	add 1
	76 - 100	add 1	add 1
	ea. additional 60 over 120	add 1	add 2

2.3.2 Health and Nutrition

A. Situational Analysis

1) Health Personnel and Facilities

Health and nutrition is one of the important concerns of the government, both local and national. The Local Government of Mexico has four (4) Rural Health Units and one hospital (Mexico Community Hospital) which provide health services to the public. The sources of all data for this Section are RHU 1, RHU 2, RHU 3, RHU 4 and MCH (2009, 2010, 2011)

The RHUs are situated in one barangay but covers several barangays under their jurisdiction (see Table 2.3.8). RHU 1 is located in Parian, RHU 2 in San Jose Malino, RHU 3 is in Sto. Domingo, and RHU 4 is in Pandacaqui.

Table 2.3.8 Barangays under RHU Divisions

RHU 1	RHU 2	RHU 3	RHU 4
Parian	Camuning	San Pablo	Pandacaqui
San Vicente	San Jose Malino	Sto. Rosario	Sapang Maisac
San Miguel	San Rafael	San Carlos	Tangle
Masamat	Suclaban	Balas	Cawayan
Sabanilla	Eden	San Nicolas	Buenavista
San Jose Matulid	Acli	Sto. Domingo	Sta. Cruz
Lagundi	Divisoria	San Lorenzo	San Juan
Sto. Cristo (Masangsang)	Gandus	Laug	Anao
San Antonio	Culubasa	Sta. Maria	
	Nueva Victoria	Dolores Piring	
	Panipuan	Laput	
	Pangatlan	Concepcion	
		San Patricio	
		San Roque	

The number of workers or personnel in RHUs depends on the size and availability of facilities. Table 2.3.9 enumerates the total number of personnel for each RHU as well as MCH. Complete name of personnel currently in positions mentioned in the said table are listed in Annex.

Table 2.3.9 List and Number of Personnel in Hospital and Health Units

Health Institutions	Personnel	
MEXICO COMMUNITY HOSPITAL (MCH)	Chief of Hospital	1
	Dietician	1
	Medical Officer III	4
	Medical Specialist II	1
	Rad Tech	3
	Med Tech I	4
	Pharmacist	1
	General Foreman	1
	Admin Officer III	2
	Admin Assistant	2
	Accountant II	1
	Accountant I	1
	Collecting Clerk	1
	Liaison Officer	1
	Admin Aide VI	7
	Admin Aide IV	7
	Admin Aide I	2
	Cook	2
	Food Server	1
	Laundry Worker	5
	Nurses	20
	Volunteers	100
RHU 1	Health Physician	1
	Nurse	1
	Midwife	5
	Dentist	1
	Med Tech	1
	Dental Aide	1
	Sanitary Inspector	1
	Administrative Aide	7
	Utility Worker	2

RHU 2	Health Physician 1 Midwife 5 Health Worker 3 Clerk 1 Utility Worker 2
RHU 3	Health Physician 1 Nurse 1 Midwife 4 Health Worker 2 Med Tech 1 Sanitary Inspector 1 Medical Clerk 1
RHU 4	Health Physician 1 Nurse 1 Midwife 5 Health Worker 35

The Mexico Community Hospital (Figure 2.3.5), the only public hospital in the municipality, is equipped with the facilities enumerated in Table 2.3.10. It has three (3) septic tanks for lavatories and one (1) water treatment facility which treats water used in laundry and cleaning.

Figure 2.3.5 *Main Entry of Mexico Community Hospital*

Table 2.3.10 Rooms and Beds in MCH

FACILITIES:

41 Beds – Initial Count Registered under DOH
19 Beds – Extra Beds

5 Executive Rooms
2 Private Rooms (2 beds each)
7 Wards (10 beds each)

1 Dialysis Room – convertible to Private Room

2) Live Birth and Death

According to the records from the four RHUs and the Mexico Community Hospital, the list of the major causes of mortality in the municipality is topped by Myocardial Infarction, Cancers, Pneumonia, Cardio-respiratory Arrest, Cardiac Arrest, Cerebro Vascular Arrest, Diabetes Mellitus and Chronic Renal Failure. Other causes include Multi-organ Failure, General Senility and Tuberculosis.

The Top Ten Leading Causes of Mortality in all RHUs for years 2009 and 2010 were compared and ranked. Myocardial Infarction, or more commonly known as Heart Attack, and Cancers have topped the first and second ranks, respectively, for both 2009 and 2010 (see Table 2.3.11).

The Mexico Community Hospital does not have an annual ranking list available, but the hospital's record for 2011 showed that starting from January to July, nine (9) people have died of Cardio Respiratory Arrest with some other complications.

Table 2.3.11 Top Ten Leading Causes of Mortality for 2009 and 2010

RANK	TOP TEN LEADING CAUSES OF MORTALITY	
	2009	2010
1	Myocardial Infarction	Myocardial Infarction
2	Cancers	Cancers
3	Hypertensive Cardio Vascular Diseases	Diabetes Mellitus
4	Cardio Vascular Arrest	Pulmonary Tuberculosis
5	Diabetes Mellitus	Renal Failure
6	Community Acquired Pneumonia	Emphysema
7	Renal Failure	Multi-organ Failure
8	Pulmonary Tuberculosis	Cardio Vascular Arrest
9	General Senility	Hypertensive Cardio Vascular Diseases
10	Multi-organ Failure	Community Acquired Pneumonia

The major causes of morbidity, or death of children and infants, are respiratory illnesses such as bronchitis, asthma, and pneumonia. The ten leading morbidity causes based on comparison of all RHU records for 2009 and 2010 are listed in Table 2.3.12.

Table 2.3.12 Top Ten Leading Causes of Morbidity for 2009 and 2010

RANK	TOP TEN LEADING CAUSES OF MORBIDITY	
	2009	2010
1	Acute Respiratory Infection	Acute Respiratory Infection
2	Bronchitis	Asthma
3	Pneumonia	Hypertension
4	Hypertension	Bronchitis
5	Intestinal Parasitism	Infected Wound
6	Asthma	Pneumonia
7	Infected Wound	Skin Allergies
8	Skin Disease	Diabetes
9	Common Colds	Common Colds
10	Diabetes	Gastritis

The latest available records for number of live births by sex have been provided by the Mexico Community Hospital. The records as shown in Table 2.3.13 are dated from October 2010 to July of the present year.

Table 2.3.13 Latest Records of Live Births by Sex (Oct. 2010 – July 2011)

Month	Both Sexes	Male	Female
October – November	85	48	37
December	77	42	35
January	94	55	39
February	104	63	41
March	103	44	59
April	131	64	67
May	118	65	53
June	104	58	46
July	110	62	48

B. Development Recommendations

Health is one important aspect which shall be always imbibed in both local and national government programs, since it is equivalent to life and safety of every citizen. Therefore, it must be of strict observance that facilities and equipment essential to promoting health and safety be available and accessible to all residents of a given community. Hospitals, health departments and organizations must be sufficiently equipped to ensure immediate actions in case of emergency.

For instance, there is only two (2) ambulances available for the whole municipality. Moreover, the RHU's, whose structure needs improvement and renovation, are also lacking in primary health tools and materials like bed, BP testing kit, first-aid kits and medicines. This scenario is alarming enough, especially for those barangays which are very far from any hospital and ambulance access.

The following table summarizes the issues observed in the health sector of Mexico, as well as the suggested measures which can be acted upon by the responsible officials and personnel.

Table 2.3.14 Issues and Suggested Actions on Mexico's Health Sector

Issues Encountered:	Suggested Actions:
➢ Data and documents requested for research and studies lacking and insufficient ➢ Some personnel lack basic knowledge on tasks and paperworks to which their department is assigned ➢ Observed assignation of position of little or no use ➢ Lack of necessary facilities and equipments (ambulance, medicines, bed, health kits) ➢ Improper Disposal of Sewage from MCH	➢ Seminars, workshops and conferences under supervision of medical and health experts ➢ Accomplish Proper Documentation and Archiving of Health Data and Information ➢ Evaluation of skills and knowledge requirements of all health personnel and assignation of able and experienced personnel qualified for a specific position ➢ Enlisting of required documents as guide for finding areas with data insufficiency ➢ Acquisition of required facilities and equipment ➢ Monitoring and Disciplined Regulation of Disposal of Medical Wastes and Sewages ➢ Spearheading of Health and Nutrition Programs for Health Safety and Development among people, especially children

2.3.3 Social Welfare

A. Situational Analysis

The Mexico Municipal Social Welfare and Development Office (MSWDO) spearheads the provision of social welfare services to the municipality as an extension of function of the Department of Social Welfare and Development (DSWD) in accordance to the ***Local Government Code of 1991*** (Republic Act 7160).

Table 2.3.15 shows the social welfare services and programs provided by the MSWDO from the year 2008 to 2010, as well as the number of people who have been given the said services.

Table 2.3.15 Social Services Provided from the Year 2008 to 2010

Project	2008	2009	2010
Food Assistance	ND	ND	1,000
Day Care Service - Conduct of 5-Day Refresher Course - Enrolment - Provision of educational materials - Monitoring - Children's Congress	ND	ND	ND
Self Employment Assistant (SEA)/Livelihood Program for Women	49	49	49
Food for Work (FFW)	1,275	1,410	1,531
Social Case Sturdy Report (SCSR) *for financial with referral	100	115	200
Basic Business Management (BBMSD)	60	122	130
PAG-ASA Youth Association (PYA)	60	90	180
Women/KALIPI	150	400	760
Seniors Citizen	450	510	600
Battered Women	3	3	4
Persons with disability (PWD)	50	150	800
Abused Cases 1. Sexual/Incest 2. Physical 3. Abandon 4. Abduction 5. Child's Custody 6. Missing 7. Child trafficking 8. Got Fregnant	 3/0 1 1	 10/1 7 2 1	 11/1 4 2 7 2 4 3
Child in Conflict with Law (CICL) Cases 1. Gang Rape 2. Perjury 3. Property Related	 9	 1 12	 1 1 2

4. SO-gang war	1		
5. Sexual		2	2
6. Frustrated Murder	1	2	2
7. Illegal Gambling	2		
8. Physical Injury	4		

ND – No Data

The Day Care Center programs and services are designed to ensure both educational and nutritional development by provision of educational guidance and materials as well as feeding programs to minimize malnourishment to pre-scholars from sub-marginal families. Table 2.3.16 lists the existing Day Care Centers in the Municipality.

Table 2.3.16 Location and Number of Day Care Centers in Mexico

Location of Day Care Centers	Enrollees	Teachers	Classroom	Remarks
Acli	20	1	1	2 shifts
Acli RA	34	1	1	2 shifts
Anao	30	1	1	2 shifts
Balas	26	1	1	2 shifts
Buenavista	22	1	1	2 shifts
Camuning	18	1	1	2 shifts
Cawayan	22	1	1	2 shifts
Concepcion	30	1	1	2 shifts
Culubasa	28	1	1	2 shifts
Divisoria	22	1	1	2 shifts
Dolores Piring	36	1	1	2 shifts
Eden	26	1	1	2 shifts
Gandus	23	1	1	2 shifts
Lagundi	85	1	1	3 shifts
Laput	21	1	1	2 shifts
Laug	46	1	1	2 shifts
Mabalucuc(San Vicente)	22	1	1	2 shifts
Nueva Victoria	53	1	1	2 shifts
Pandacaqui Hacienda	22	1	1	2 shifts
Pandacaqui NHA Diamond	56	1	1	2 shifts Private houses are used as DCC
Pandacaqui NHA Star	56	1	1	2 shifts Private houses are used as DCC
Pandacaqui RA	26	1	1	alternate

Pandacaqui RA 2	28	1		alternate
Pandacaqui RA 3	18	1	1	alternate
Pandacaqui RA 4	17	1	1	alternate
Pangatlan	20	1	1	2 shifts
Panipuan	27	1	1	2 shifts No CR
Parian	85	1	1	2 shifts
San Antonio	36	1	1	2 shifts
San Carlos	35	1	1	2 shifts
San Jose Matulid	28	1	1	2 shifts
San Miguel	50	1	1	2 shifts
San Nicolas	35	1	1	2 shifts
San Pablo	43	1	1	2 shifts
San Patricio	42	1	1	2 shifts
San Rafael	40	1	1	2 shifts
San Roque	35	1	1	2 shifts
San Vicente	22	1	1	2 shifts
Sapang Maisac	40	1	1	2 shifts
Sta. Cruz	27	1	1	2 shifts
Sta. Maria	37	1	1	2 shifts
Sto. Cristo	52	1	1	2 shifts
Sto. Rosario	43	1	1	2 shifts
Suclaban	23	1	1	2 shifts
Tangle	8	1	1	2 shifts

B. Development Recommendations

The Department of Social Welfare and Development does not solely function for support and assistance during emergency situations like floods or earthquakes, but also serves as a foundation which upholds human rights, welfare and livelihood for all members of society. Therefore, it must be ordained that all municipal personnel and officials enacting the vision and mission of the said department and other organizations supervised by it shall possess skills and expertise and be trained to develop knowledge required of their positions. Moreover, these personnel must be provided with the necessary financial assistance, facilities and equipment to effectively service the people of Mexico.

2.3.4 Housing

A. Situational Analysis

The municipality has no direct information regarding its number of houses, however, assessment of the number of houses were taken from the number household population of the recent Barangay census. The number of household or the number of houses based on the said census is equivalent to 29,175 and the existing residential land area is 1,806 hectares. This leads to 16.2 houses per hectare and reciprocating the ratio resulted to the following computation:

$$\text{Land area per house} = \frac{\text{Existing residential area}}{\text{No. of houses}}$$

$$= \frac{\text{1,806 ha (10,000 sq.meter / ha)}}{\text{29,175 houses}}$$

$$= \text{619.1 sq.meters / house}$$

The projected number of households or the number of houses in year 2017 is calculated to be equaled to 33,776 and maintaining the 650 sq.meters per house, the required residential land area shall now be,

Required residential area = (No. of houses in year 2017) * (650 sq.meters per house)

= 33,776 * 650

= 21,954,400 sq.meters or

= 2,195.4 ha

In reality, a few informal settlers reside in barangays San Jose Matulid, Sto. Rosario, San Pablo and Lagundi. Threats on the environment and competition in space therefore might be the inevitable consequences of rising number of squatters following Mexico's pursue of its cityhood and further development in the near future.

The municipality hosts both MPC Resettlement and NHA Resettlement in Pandacaqui and Tangle. Due to the volcanic eruption of Mt. Pinatubo in 1991, two barangays in Mexico, Acli and Pandacaqui served as resettlement areas for the victims of the said tragedy. The National Housing Authority (NHA), in accordance to the Republic Act 7279 (Urban Development and Housing Act of 1992), has bought the lands wherein the resettlement houses are presently standing due to its low vulnerability to *lahar* flows, as per the initial investigation of PHIVOLCS. Both barangays are considered urban, with Pandacaqui having the most number of settlers in all of the barangays in Mexico.

Locations of the existing and proposed sites for socialized housing are as shown in Figures 2.3.6, 2.3.7, and 2.3.8.

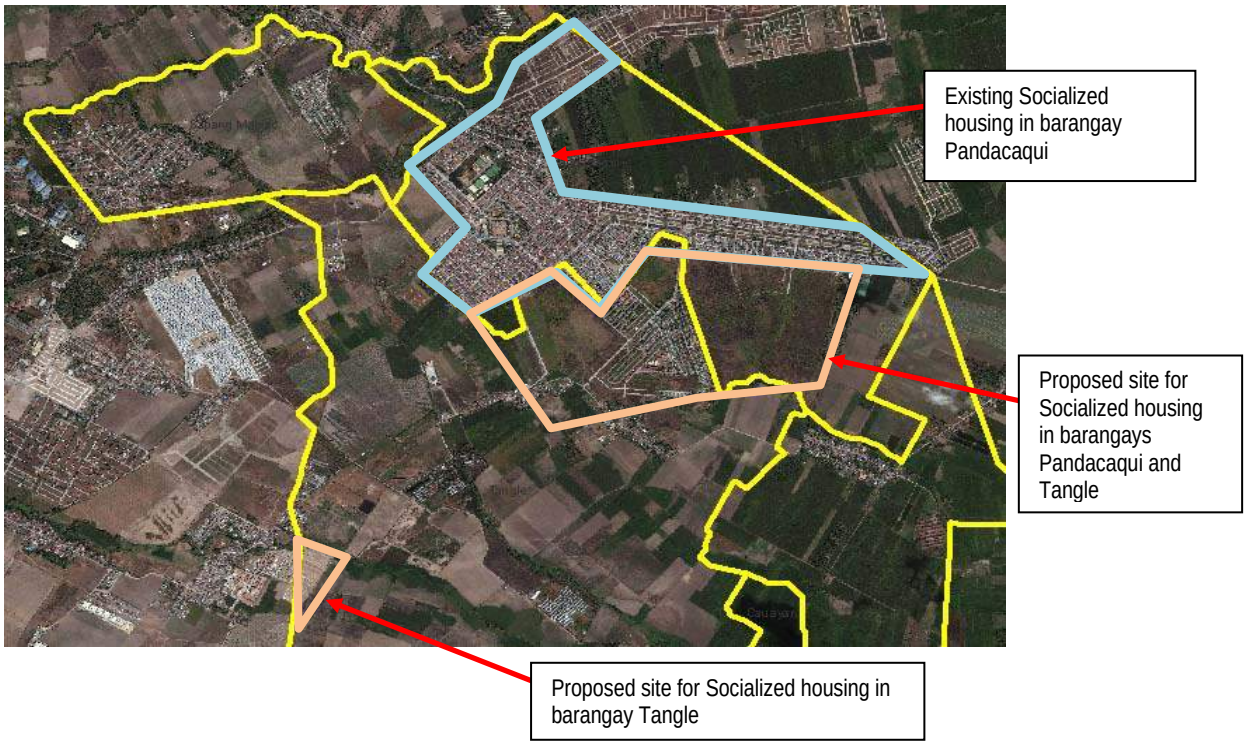


Figure 2.3.6 – Existing and Proposed site for Socialized Housing in Brgys. Tangle and Pandacaqui

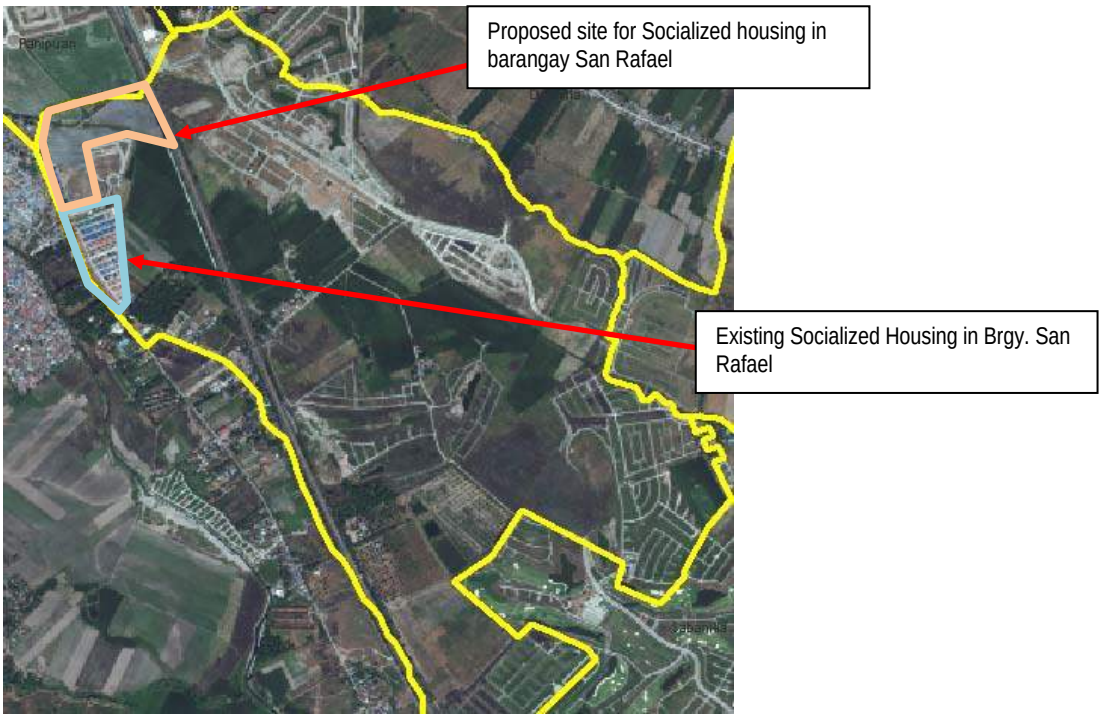


Figure 2.3.7 – Existing and Proposed site for Socialized Housing in Brgy. San Rafael

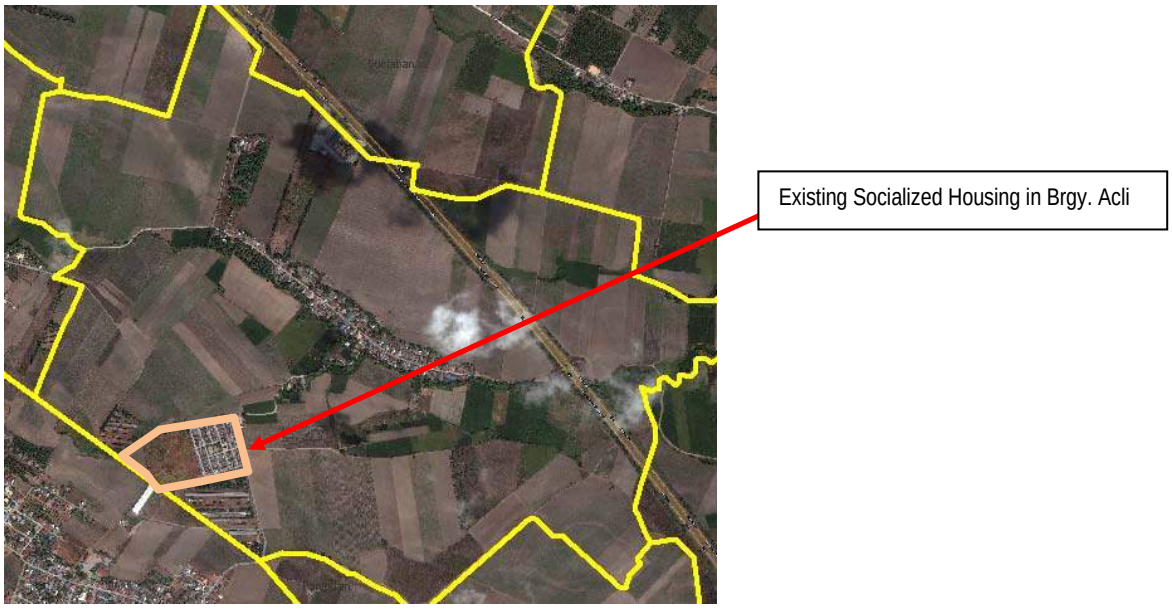


Figure 2.3.8 – Existing Socialized Housing in Brgy. Acli

B. Development Recommendations

In order to impede as earlier as possible the squatting in private lands as well as government lands, the Local Government of Mexico set aside a one (1) hectare of land property in San Juan for possible venture of low-cost housing project, in accordance to Section 21 of RA 7279. Other socialized housing projects shall not be removed from future projects and plans of the Local Government of Mexico.

In the event of conversion of sugarcane lands in barangays Suclaban, Gandus, Eden, Acli and parts of Panipuan and Camuning as part of the proposed development enclosed in this Project, construction of low-cost housings in the said barangays shall be advantageous to the revenue generation, since sugarcane plantations do not give as much income due to low produce connected to water scarcity and unavailability of a proximate sugar mill. Moreover, such scenario shall increase the man resources, since the aforementioned barangays are proximate to cities of San Fernando and Angeles.

2.3.5 Protective Services

A. Situational Analysis

Mexico police stations are situated in barangays Parian, near the Municipal Hall; Lagundi, in front of SM San Fernando and; Pandacaqui, near the Barangay Hall. The police station in Parian is equipped with six (6) vehicles for its transportation and operations of which four (4) are patrol cars and two (2) are motor patrols.

Table 2.3.17 shows the police personnel distribution for each police station. According to the Parian station, there are 38 police assigned to 165,823 people or an equivalent 1:4,364 police to populace ratio.

Table 2.3.17 Police Station and Personnel Distribution in Mexico

Police Stations	PCO	PNCO	NUP
PARIAN STATION	1	18	2
COMPAC 1 PANDACAQUI	0	7	0
COMPAC 2 SM	1	6	0
VIP MAYOR	0	2	0
VIP SENATOR LAPID	0	1	0

The types of index crime in the municipality are classified into Crimes against Person and Crimes against Property. Table 2.3.18 presents the number of cases per crime index which occurred from 2008 to present. The highest number of crimes recorded for both Crimes against Person and Crimes against Property occurred in 2010, with 69 and 107 cases of physical injuries and theft, respectively. These figures were followed by robbery at 35 cases, the third on the list of highest number of crimes committed for the same year.

In the up-to-date 2011 crime records, theft still tops the list at 38 number of cases, followed by robbery and physical injuries at records of 28 and 26 cases, respectively.

Table 2.3.18 Number of Cases per Crime Index (2008 – 2011)

TYPES OF INDEX CRIME				
	2008	2009	2010	2011
Crimes vs Person				
Murder	5	4	9	8
Homicide	6	4	2	1
Physical Injuries	6	45	69	26
Rape	3	2	5	5
Crimes vs Property				
Robbery	1	13	35	28
Theft	2	14	107	38

Total index crimes recorded for 2008 to 2011 is presented in Table 2.3.19. According to the records, the highest index crime recorded for the said years is 227, in year 2010. It is followed by 2011 up-to-date record of 106 index crimes. Out of these index crime records, only 17 were solved in 2010, and 9 in 2011, which thus give respective crime solution efficiencies of 7.4% and 8.5%.

Moreover, only 11 and 20 cases were cleared, giving crime cleared efficiencies of 4.8% and 18.9% for 2010 and 2011, respectively.

Table 2.3.19 Total Index Crime / Index Crime Solution and Cleared Efficiencies (2008 – 2011)

	2008	2009	2010	2011
Total Index Crime	23	82	227	106
Total Index Crime Solved	14	13	17	9
Total Index Crime Cleared	0	45	11	20
Total Index Crime Solution Efficiency	61%	16%	7.4%	8.5%
Total Index Crime Cleared Efficiency	0%	55%	4.8%	18.9%

Crime Volume in Mexico reached up to a figure of 393 in 2010, of which only 24 cases were solved and 23 cleared (see Table 2.3.20). This scenario equates to an efficiency of only 6% for solved cases and 5.8% for cleared cases. At present, there are already 185 volume crimes recorded, with 21 cases solved and 33 cleared.

Table 2.3.20 Total Crime Volume /Crime Solution and Cleared Efficiencies (2008 – 2011)

	2008	2009	2010	2011
Total Crime Volume	58	242	393	185
Total Crime Solved	26	29	24	21
Total Crime Cleared	1	116	23	33
Total Crime Solution Efficiency	45%	12%	6%	11%
Total Crime Cleared Efficiency	1.7%	48%	5.8%	18%

Fire protection service in Mexico, on the other hand, is hosted by only one (1) fire station in Mexico, which is situated in Parian, near the Municipal Hall. It is also equipped with only one (1) fire truck, controlled by eight (8) personnel.

2.3.6 Utilities

A. Situational Analysis

1) Water Supply

Deep wells and shallow wells are the commonest sources of water in Mexico. Creeks, rivers and other fresh water bodies proximate to some barangays also serve as water supply.

One (1) major water supply system which exists in the municipality is the Sinukuan Water Supply Facility. Table 2.3.21 shows the rate per volumetric capacity of water being supplied to different barangays. There are no industrial and institutional areas being supplied by Sinukuan Facility.

There are also minor water systems present in Mexico. The one owned by Mr. Nuel Canda which delivers water to 200 households in San Antonio and the Sto. Rosario Water System Cooperative which supplies to few houses.

Table 2.3.21 Sinukuan Water Supply Rate and Capacity

BARANGAY	RESIDENTIAL	COMMERCIAL	LOCATION	RESERVE CAPACITY
	Rate: P 177.00	*Rate: P 250.00 (first 10 cubic meters)*		
San Antonio	243	14	San Antonio	50,000 gal
San Lorenzo	285	0		
San Nicolas	182	0		
Sto. Rosario	156	0		
San Pablo	197	2		
San Carlos	179	45		
Parian	179	0		
Balas	116	1		
Sto.Cristo	100	9	Masamat	50,000 gal
Lagundi	285	49		
San Jose Matulid	250	3		
Masamat	69	2		
Beverly Place	2	6		
Sabanilla	42	0		
San Miguel	107	1		
San Vicente	110	1		
Culubasa	42	0	Camuning	None
Divisoria	26	1		
Camuning	98	0		
Nueva Victoria	24	0		
San Jose Malino	103	0		
Pangatlan	80	0		
Sto. Domingo	123	2	San Roque	50,000 gal
Laug	317	1		
Piring	158	0		

Sta. Maria	160	1		
San Roque	78	2		
Laput	69	0	San Juan	None
Concepcion	117	0		
Sta. Cruz	66	0		
San Juan	245	0		
Anao	112	0		
Pandacaqui Resettlement	1894	10	Pandacaqui	40,000 gal
NHA	893	0		
Hacienda	177	0		

Figure 2.3.9 *Sinukuan Water System Facility in San Jose Matulid*

Figure 2.3.10 *Water System which supplies water to 200 ho San Antonio*

2) Electricity

Electricity in Mexico is provided by two power supply facilities mainly the PAMPANGA RURAL ELECTRIC SERVICE COOPERATIVE INC. (PRESCO) in Anao (See Figure 2.3.11) and the PAMPANGA ELECTRIC COOPERATIVE, INC. 1 (PELCO 1) in Sto. Domingo (See Figure 2.3.12). Both facilities supply electric power to residential, commercial and institutional locations, as well as public buildings, irrigation and street lights.

Figure 2.3.11. *Pampanga Rural Electric Service Cooperative Inc. (PRESCO) in Anao*

Figure 2.3.12. *Pampanga Electric Cooperative Inc.(PELCO 1)*

The next tables present the list of barangays serviced by the said power facilities, as well as the electric capacity supplied and the charges applied for each type of consumer.

Table 2.3.22 Number of Serviced Homes and Facilities - PRESCO

BARANGAY	RESIDENTIAL	COMMERCIAL	PUBLIC BUILDING	IRRIGATION	HIGH VOLTAGE	LOCATION/ CAPACITIES
Acli	463	2	5			10 MVA Sub Station Located at Sanros Subd. Anao, Mexico, Pampanga
Anao	926	23	13			
Balas	544	5	8			
Buenavista	181	2	3			
Beverly Place	27	10	0			
Cawayan	183	3	4			
Concepcion	295	0	2			
Culubasa	375	2	4			
Divsoria	319	2	6			
Eden	121	1	5			
Gandus	144	5	2			
Lakeshore	74	44	0		1	
Laput	293	4	1			
Masamat	365	3	3		1	
Pangatlan	387	3	4			
Panipuan	312	36	4			
Royal Meadows	206	2	2			
Sabanilla	266	0	3			
Neuva Victoria	281	6	4			
San Jose Malino	919	14	12			
San Juan	716	17	12	1		
San Miguel	393	8	6			
San Pedro	506	17	6			
San Vicente	474	2	8			
Sta.Cruz	407	5	3	1		
Suclaban	148	2	3			
Tangle	83	3	2			
Panorama Heights	27	0	0			
Suarez	114	0	2			

Table 2.3.23 Generation Charges (Php/kWh) - PRESCO

Php/kWh	LOW VOLTAGE					HIGH VOLTAGE
	RES'L	COMM'L	PUBLIC BDLG	IRRIGATION	STREET LIGHTS	COMM'L
GENERATION CHARGES						
Generation System Charge	6.0661	6.0661	6.0661	6.0661	6.0661	6.0661
Franchise and benefits to host communities charge						
ICERA						
TRANSMISSION CHARGES						
Demand Charge	-	40.6474	-	35.8185	-	40.6474
Transmission System Charge	1.1318	1.0145	1.1317	1.0782	1.1318	1.0145
SYSTEM LOSS CHARGE	0.7953	0.7953	0.7953	0.7953	0.7953	0.7953
DISTRIBUTION CHARGES						
Demand charge	-	8.3300		8.3300		135.0100
Distribution System Charge	0.5901	.5231	.5763	.6813	.5780	.1809
SUPPLY CHARGES						
*Retail customer charge (php/customer/mo)	-	44.3100	43.0300	48.4900	32.7900	44.3100
Supply system charge	.5730					
METERING CHARGES						
Retail Customer Charge	5.000	38.8000	29.3500	49.8400	20.800	38.8000
Metering System Charge	0.3223					
MEMBERSHIP CONTRIBUTION FOR CAPEX	.2508	.2508	.2508	.2508	.2508	.2508
INTERCLASS CROSS SUBSIDY CHARGE						
UNIVERSAL CHARGES						
NPC stranded debts	-	-	-	-	-	-
NPC stranded contract cost	-	-	-	-	-	-
DU's stranded contract cost	-	-	-	-	-	-
Missionary Electrification						
Equalization of taxes and royalties	-	-	-	-	-	-
Environmental charge	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cross subsidy removal	-	-	-	-	-	-
OTHER CHARGES/ ADJUSTMENTS						
Power act reduction	-	-	-	-	-	-
Lifeline rate- subsidy (above 20 kWh)	0.0163	0.0163	0.0163	0.0163	0.0163	0.0163
Loan Condonation	0.0754	0.0323	0.0575	0.0899	.0371	0.0323
*Loan Condonation (php/customer/mo)	-	-	-	-	-	-
Lifeline rate- Discount (Residential only)						

Table 2.3.24 Number of Serviced Homes and Facilities – PELCO 1

BARANGAYS	RES'L	COMM'L	IND'L	INST'L	IRRIGATION	STREET LIGHTS	LOCATION / CAPACITIES
Dolores Piring	345	4		2	1	1	Sto. Domingo Substation 2.5 MVA
Lagundi	1261	229	2	4		3	Lagundi Substation 7MVA
Laug	624	11	1	3		1	Sto. Domingo Substation 2.5 MVA
Sto. Cristo	646	63	1	5			Lagundi Substation 7MVA
Pandacaqui	993	14				5	Pandacaqui Substation 2.25 MVA
Pandacaqui NHA	2188	25		2			Pandacaqui Substation 2.25 MVA
Pandacaqui Resettlement	2888	44	3	9		1	Pandacaqui Substation 2.25 MVA
Parian	1248	176		4		1	Sto. Domingo Substation 2.5 MVA
San Antonio	1126	68	3	19	1	1	Sto. Domingo Substation 2.5 MVA
San Carlos	566	15	1	9		1	Sto. Domingo Substation 2.5 MVA
San Jose Matulid	1060	30		2		1	Lagundi Substation 7MVA
San Lorenzo	509	5		5		1	Sto. Domingo Substation 2.5 MVA
San Nicolas	467	6		2			Sto. Domingo Substation 2.5 MVA
San Pablo	510	33	1	2			Sto. Domingo Substation 2.5 MVA
San Patricio	579	5		3		1	Sto. Domingo Substation 2.5 MVA
San Rafael	570	12		2		1	Lagundi Substation 7MVA
San Roque	310	10		2		1	Sto. Domingo Substation 2.5 MVA
Sta. Maria	460	17		3			Sto. Domingo Substation 2.5 MVA
Sto. Domingo	547	63		1		1	Sto. Domingo Substation 2.5 MVA
Sto. Rosario	729	29		13			Sto. Domingo Substation 2.5 MVA
Sapang Maisac	1254	21		2		1	Pandacaqui Substation 2.25 MVA

Table 2.3.25 Generation Charges (Php/kWh) – PELCO 1

	RES'L	COMM'L	IND'L	INST'L	IRRIGATION	STREET LIGHTS
GENERATION CHARGES (Php/kWh)	10.0443	9.0374	9.1580	9.0607	10.545	9.2307

2.3.7 Transportation and Communication

A. Situational Analysis

1) Transportation

Transportation is an advantageous aspect of Mexico due to the availability of developed highways and paved asphalt roads which bisect the whole municipality and connect it to major cities in Pampanga, other provinces and even Metro Manila. Access roads include the North Luzon Expressway (NLEX), MacArthur Highway, Quezon Road, Mexico – Magalang Road, Anao – Sindalan Road and the Olongapo – Gapan Road, among others. Moreover, steel bridges are also available in several parts of the municipality to convey transporting vehicles from one barangay to another. Several of these bridges however are in dire need of renovation or replacement, like the NGCP Bridge connecting Lagundi and San Jose Matulid, which is in state of deterioration (Figure 2.3.13). Traffic is inevitable in commercially congested areas, particularly in Parian.

Figure 2.3.13. *Deteriorating NGCP Bridge in San Jose Matulid*

The main transportation means in Mexico are jeepney and tricycle vehicles. Associations exist among jeepney and tricycle drivers and operators. Tricycle Operators and Drivers Associations (TODA) functioning in the municipality are listed in Table 2.3.25. Buses are also available for provincial transport. A parking area in front of SM in Lagundi serves as stop-over for buses traveling to Olongapo, Baguio, Manila, Cabanatuan and other provinces.

Table 2.3.25 List of TODA Operating in Mexico

	NAME OF TODA	DESIGNATED ROUTE
1	ACLI	Acli via Baliti and vice versa for hire
2	BALAS	balas via Poblacion and vice versa for hire
3	DALISDIS	Dalisdis/ Mexico via Sindalan and vice versa for hire
4	CONCEPCION	Concepcion via Poblacion and vice versa for hire
5	DIVISORIA	Divisoria via Poblacion and vice versa for hire
6	LAGUNDI	Lagundi/ SM/ Robinson and vice versa for hire
7	LAPID'S VILLE	Lapid's Ville via Sapang Maisac and vice versa for hire
8	LAPUT	Laput via Poblacion and vice versa for hire
9	LAUG	Sto. Domingo via Laug and vice versa for hire
10	MASALA	Masamat/ Sabanilla/ Lagundi and vice versa for hire
11	NV	Nueva Victoria via poblacion and vice versa for hire
12	SASL	San Antonio/ San Lorenzo via Poblacion and vice versa for hire
13	PANDACAQUI/ NHA	Pandacaqui via NHA and vice versa for hire
14	PARIAN	Parian via Poblacion and vice versa for hire
15	PIRING	Sto. Domingo via Dolores Piring and vice versa for hire
16	PTBT	Pandacaqui/ Telepayong/ Buenavista/ Tangle and vice versa for hire
17	SAN CARLOS	San Carlos via Poblacion and vice versa for hire
18	SAN JUAN	San Juan via Poblacion and vice versa for hire
19	SAN MIGUEL	San Miguel via Poblacion and vice versa for hire
20	SAN VICENTE	San Vicente via Poblacion and vice versa for hire
21	SAPA/SAN PATRICIO	San Patricio via Poblacion and vice versa for hire
22	SASL/CALTEX	San Antonio/ San Lorenzo via Poblacion and vice versa for hire
23	SCSM/ SAPANG MAISAC	Sapang Maisac via Sta. Clara and vice versa for hire
24	SD/STO.DOMINGO	Sto. Domingo/ Sta. Maria/ San Luis and vice versa for hire
25	SJM	San Jose Matulid/ SM/ Robinson and vice versa for hire
26	SMP	Malino/ Pangatlan/ Culubasa/ Anao/ San Juan and vice versa for hire
27	SPCOE	San Pedro Camuning via Overpass Exit and vice versa for hire
28	STA.CRUZ	Sta. Cruz via Poblacion and vice versa for hire
29	SDV/Sto. Domingo Village	Sto. Domingo Village/ SM/ Robinson and vice versa for hire
30	STO. ROSARIO	Sto. Rosario via Poblacion and vice versa for hire
31	SAN ROQUE	San roque via Poblacion and vice versa for hire

Source: Office of the Sangguniang Bayan

2) Communication

Communication in Mexico is characterized by postal, courier and telecommunication services. Postal service is provided by the post office in Parian, situated right in front of the Municipal Hall. The said post office is not under the supervision of the Local Government of Mexico, but rather, operates under the jurisdiction of the Provincial Government. Courier and package delivery services on the other hand are conveyed thru branch offices of LBC, Air21, Cebuana Lhuillier, Mlhuillier, and Western Union.

Telecommunication technologies like telephones and cellular sites are also employed in Mexico. PLDT and DIGITEL are the major telephone systems which operate in the municipality. The main office of PLDT is located in San Antonio while DIGITEL is in Sto. Cristo. Cell sites for Service Providers like SMART, Globe and Sun are situated in several barangays across the municipality to provide signals for mobile communication services (See Figure 2.3.14). Table 2.3.26 enumerates the barangays wherein the cell towers for Mobile Services are located.

A more revolutionary mode of communication is further breached for convenience and wider coverage thru internet services utilizing Digital Subscription Lines (DSL), Wireless Fidelity (Wi-Fi) and Broadband devices.

Table 2.3.26 Cellular Tower Site Locations

CELLULAR SERVICE PROVIDER	Tower Locations
GLOBE Telecommunications	- Anao - Gandus - San Miguel - San Antonio - Nueva Victoria - Camuning - Pandacaqui - Culubasa - Divisoria - Laug - Lagundi (SM City Pampanga)

SMART Telecommunications	- San Miguel - Parian - Nueva Victoria - Camuning - Culubasa - Lagundi - Laug - SM City Pampanga
SUN CELLULAR Telecommunications	- Gandus - Laug

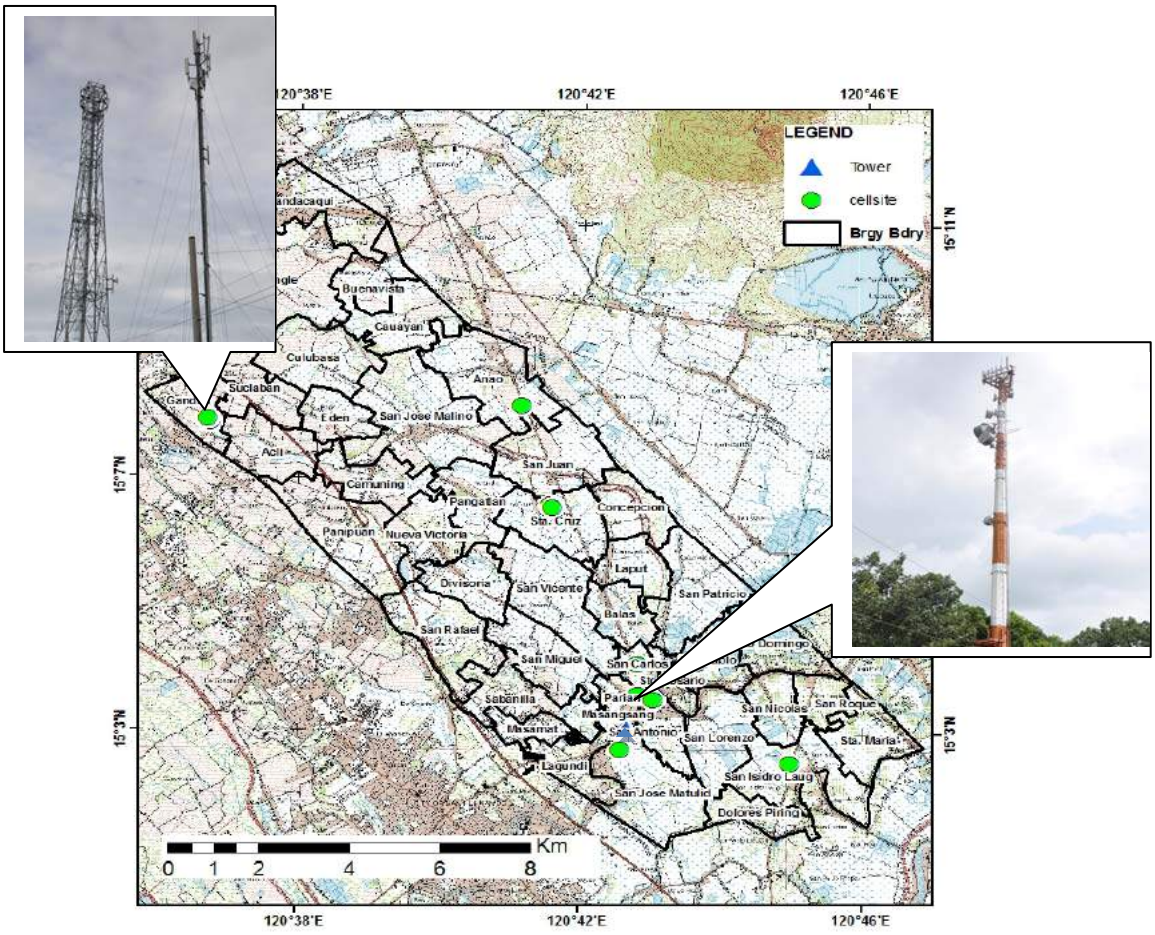


Figure 2.3.14. *Cell Tower Locations across Mexico*

B. Development Recommendations

Transportation can be further improved thru development of road networks. For instance, dirt roads which are still existent in barangays Eden and Suclaban can be converted into concrete farm-to-market roads or better, into wider municipal roads, to allow passage of more vehicles. Moreover, construction of roads connecting commercially growing barangays, especially those which require a longer, indirect route of transportation, shall convey transport vehicles easily and also enhance trade and industry. These advantages shall be served if the construction of proposed roads such as those illustrated in Figure 2.3.15 shall be pushed through. Table 2.3.27 presents the planned improvements on road and transportation infrastructures covered in the Proposed Development plans of this Project.

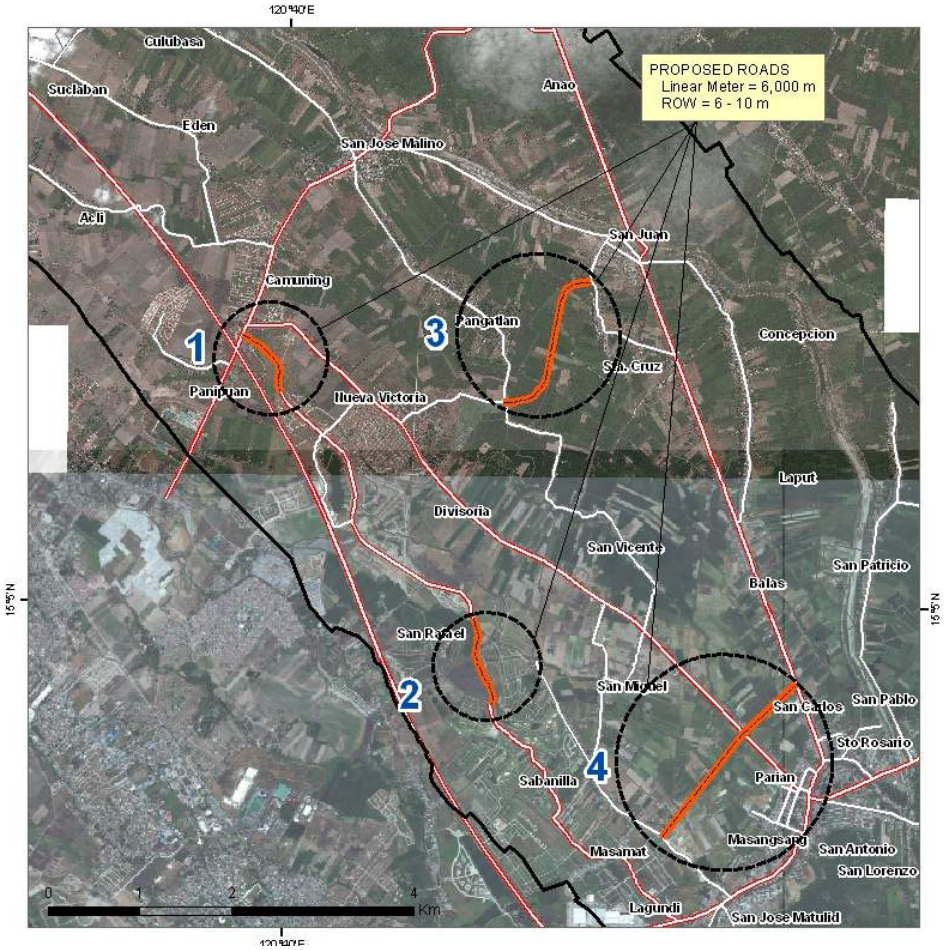


Figure 2.3.15. *Proposed Road Connections*

Table 2.3.27 Proposed Road and Bridge Construction and Developments

A. Inter-linking of Farm-to-Market Roads to create new Access Roads 1. Pangatlan to Sta. Cruz thru Looban 2. Pangatlan to Nueva Victoria 3. Nueva Victoria to San Vicente Mabalukuk to Sta. Cruz 4. Divisoria to San Vicente to Sta. Cruz 5. Tangle to Pandacaqui 6. Gandus to Capaya, Angeles City 7. Masamat to Del Carmen, CSFP 8. San Juan to San Jose Malino Abacan Road Dike 9. Caingin, Laug to Sta. Maria Gubat
B. Interconnection of Barangay Roads 1. Sabanilla / San Miguel to San Rafael via Beverly 2. San Antonio Traffic Diversion Route (Highway to Tinajero Street via St. Joseph's Subd. thru a proposed opening at Manggahan)
C. Widening of the JASA Road (Mexico Segment)
D. Upgrading of the Licu and Third Street
E. Replacement of Steel Bailey Bridges / Construction of RCDG 1. Sto. Rosario/ San Carlos Bridge 2. Lagundi / San Jose Matulid Bridge 3. San Jose Matulid Bridge 4. Laput Bridge 5. San Miguel Bridge 6. Eden Bridge 7. San Vicente Dayat Bridge 8. San Vicente Bridge 9. San Vicente – Divisoria RCBC

2.3.8 Trade and Commerce

A. Situational Analysis

The business environment of Mexico has reached a considerably flourished state resulting from the rise of small-scale and light business establishments as well as few large-sized ventures such as SM Pampanga and Wilcon Depot. The land ownership of the former is shared with San Fernando City, however, three quarters of the land area is owned by Mexico.

The municipality's public market located in Parian has a large capacity, accommodating several retail and wholesale traders of perishable and dry goods. Establishments which offer services like banks, medical support clinics, construction companies, printing press and others are also prevalent.

The proximate access to modernized economic gateways, developed road networks and large commercial and trading spots, unfortunately, has not yet fully support the boost of industrialization in Mexico. Only few industrial companies are operating in the municipality, such as the Kayabe Ice Plant in Lagundi. Commercial spots in several barangays are characterized by existence of small-scale business enterprises like *sari-sari stores.* List of registered business establishments can be found in Annex.

Figure 2.3.16. *Mexico Public Market in Parian*

B. Development Recommendations

In the advent of the road and residential developments, commercial and industrial growth shall be an inevitable series of aftermath. Such developments shall open doors for more investors. Moreover, training of municipal personnel on proper business and marketing sense shall also be an effective tool on spearheading improvements in commerce and industry.

2.4 AGRICULTURE

A. Situational Analysis

1) Agriculture and Agro-Industry

More than 80% of Mexico is attributed to agricultural use; out of which 6,257 hectares of land is planted with rice and corn in consecutive seasons. Other agricultural usages include mango orchards, sugarcane plantation, trees and backyard-raised crops. Figure 2.4.1 represents the percentage composition of the agricultural land use prevalent in Mexico. Agricultural area data presented in Table 2.4.1 are GIS-generated as based on actual ground investigations and workshop consultation with barangay officials of respective barangays. Agro-industrial areas are also presented, encompassing fishponds, poultries and piggeries which are currently in operation. Figure 2.4.2 illustrates the map of agricultural land classification in the whole Municipality of Mexico.

Agro-industry in Mexico is characterized by fishponds, poultry and piggery. Only a few moderate to large-scaled piggeries and poultries are still operating in the municipality, particularly in Acli, Panipuan, Nueva Victoria and Gandus. The largest fishponds are in Sto. Domingo.

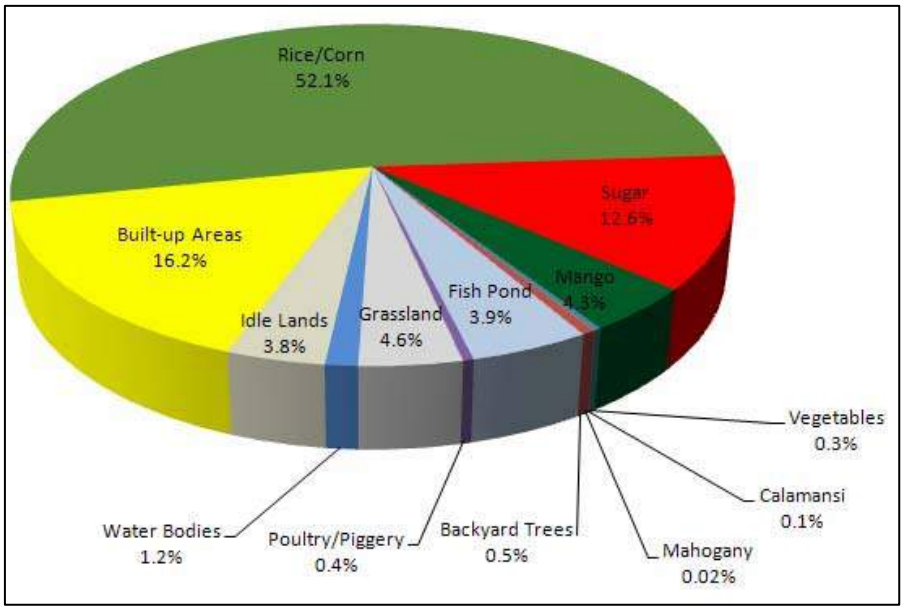


Figure 2.4.1. *Percentage of Existing Agricultural Land Usage*

Table 2.4.1 Area of Existing Agricultural Land Uses

Barangay	Built-up Areas	Agricultural Land Use										Water Bodies	Idle Lands	TOTAL
		Rice/ Corn	Sugar	Mango	Vegetables	Calamansi	Mahogany	Backyard Trees	Grass land	Poultry / Piggery	Fish Pond			
1. Acli	12.8	29.5	225.1	3.3	-	-	-	-	-	6.7	-	-	2.9	280.3
2. Anao	30.9	389.7	37.1	-	-	-	-	-	-	-	-	-	-	457.8
3. Balas	21.9	111.8	-	2.4	-	-	-	2.4	1.9	-	15.2	1.9	32.4	189.9
4. Buenavista	7.6	161.3	-	14.3	-	-	-	2.9	-	2.4	3.3	-	-	191.8
5. Camuning	52.3	99.5	63.8	5.7	-	-	-	-	-	-	-	-	29.5	250.8
6. Cawayan	7.1	292.2	-	9.5	-	-	-	-	-	1.9	-	1.0	-	311.7
7. Concepcion	13.3	129.4	-	1.4	-	-	-	1.4	35.2	-	-	10.5	34.3	225.6
8. Culubasa	14.8	145.1	148.9	2.9	-	-	-	1.9	40.9	-	-	16.7	-	371.2
9. Divisoria	51.4	147.5	23.8	6.7	-	-	-	-	-	-	2.9	5.7	-	237.9
10. Dolores Piring	9.5	106.1	-	19.0	-	-	-	4.3	25.7	-	3.3	1.0	-	168.9
11. Eden	6.7	68.0	86.1	10.9	-	-	-	2.4	-	-	1.9	0.5	-	176.5
12. Gandus	10.5	14.3	174.6	1.9	10.0	-	-	-	-	4.8	-	-	-	216.0
13. Lagundi	114.7	-	-	-	-	-	-	-	60.4	-	1.0	4.3	21.9	202.2
14. Laput	15.2	132.3	-	-	-	-	-	-	14.8	-	-	11.4	21.4	195.1
15. Masamat	112.8	-	-	-	-	-	-	-	-	-	-	0.5	5.7	119.0
16. Sto. Cristo (Masangsang)	18.6	21.4	-	0.5	-	-	-	0.5	-	-	-	-	1.0	41.9
17. Nueva Victoria	98.0	84.2	-	12.4	-	-	-	-	1.9	4.3	-	7.1	42.4	250.3
18. Pandacaqui	158.9	78.0	63.3	16.2	-	-	-	3.8	46.2	-	-	-	-	366.4
19. Pangatian	13.3	167.5	12.8	19.0	21.9	6.2	-	0.5	-	1.0	1.4	-	4.8	248.4
20. Panipuan	107.5	98.0	203.7	-	-	-	2.9	-	47.1	5.7	2.4	3.8	-	471.1

21. Parian	41.9	38.1	-	1.9	-	-	-	-	-	-	2.4	-	-	84.2
22. Sabanilla	171.8	70.0	30.9	3.3	-	-	-	-	-	-	1.9	0.5	12.8	291.2
23. San Antonio	50.0	87.1	-	-	-	-	-	-	10.9	-	9.0	4.8	5.2	167.0
24. San Carlos	25.2	46.2	-	3.3	-	-	-	-	-	-	1.0	-	1.4	77.1
25. Laug	30.0	262.7	-	54.2	-	-	-	10.9	13.8	1.0	19.0	2.4	-	394.0
26. San Jose Malino	75.7	473.0	4.3	10.0	-	-	-	4.3	30.9	0.5	-	20.9	53.8	673.3
27. San Jose Matulid	52.8	325.5	-	-	-	-	-	1.9	27.6	-	-	13.8	7.6	429.2
28. San Juan	26.6	329.8	-	2.9	-	-	-	-	32.4	-	-	9.0	-	400.7
29. San Lorenzo	20.5	207.0	-	21.9	-	0.5	-	1.0	1.9	-	55.2	5.2	1.4	314.5
30. San Miguel	37.6	252.7	-	7.1	-	-	-	-	-	4.8	0.5	0.5	-	303.1
31. San Nicolas	19.0	100.4	-	34.3	-	-	-	1.0	1.0	1.9	22.8	-	3.3	183.7
32. San Pablo	22.4	86.6	-	6.7	0.5	-	-	1.4	22.8	-	67.1	5.2	1.0	213.7
33. San Patricio	32.4	271.7	-	-	-	-	-	3.8	10.5	-	58.5	5.2	12.8	395.0
34. San Rafael	171.8	79.9	10.5	31.9	-	-	-	-	-	-	2.9	1.4	93.7	392.1
35. San Roque	13.8	15.2	-	61.4	-	-	-	-	46.6	1.9	-	-	-	138.9
36. San Vicente	32.8	407.3	22.8	1.4	-	-	-	-	-	-	-	-	-	464.4
37. Sapang Maisac	47.6	0.5	98.5	1.4	-	-	-	5.7	4.8	-	1.0	-	-	159.4
38. Sta. Cruz	34.7	276.5	-	3.3	-	-	-	5.2	5.7	-	6.2	-	-	331.7
39. Sta. Maria	22.4	135.6	-	101.8	-	-	-	2.4	-	2.9	10.9	-	0.5	276.5
40. Sto Domingo	38.1	21.4	-	28.1	-	-	-	-	11.9	-	171.8	3.3	5.2	279.8
41. Sto Rosario	32.4	15.7	-	12.4	-	-	-	-	18.6	-	8.1	6.7	3.8	97.5
42. Suclaban	7.1	1.0	256.0	-	-	-	-	-	-	1.0	2.4	1.0	-	268.4
43. Tangle	59.5	477.3	43.8	1.9	-	-	-	-	39.5	9.5	-	5.2	54.2	690.9
TOTAL	1,943.9	6,257.0	1,506.1	515.3	32.4	6.7	2.9	57.6	552.9	50.0	472.0	149.4	453.0	11,999.1

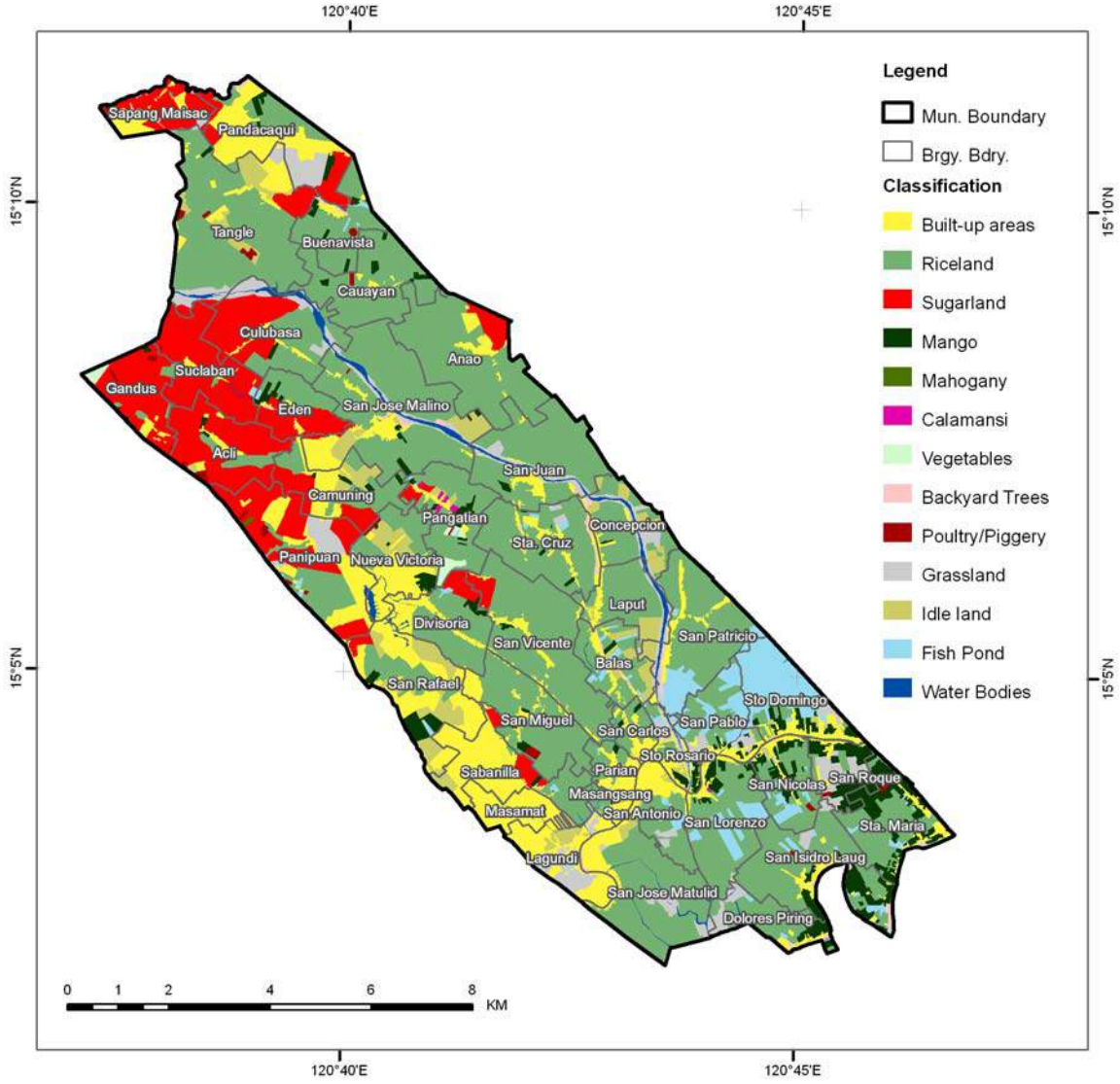


Figure 2.4.2. *Agricultural Land Classification Map*

According to the municipal-assisting Department of Agriculture, the total production area devoted to commit irrigated rice is 6,368.48 hectares in 2010. This area has produced to 31842 metric tons of rice which is equivalent to a cash profit of Php 541,314,000.00. Other details of production and corresponding profit of different crops from year 2006 to 2010 are presented in tables 2.4.2 through 2.4.5.

Table 2.4.2 Production Area of Different Crops

MAJOR CROPS	2006	2007	2008	2009	2010	2011
RICE						
• Irrigated	6604.38	6604.38	6844.48	6481.48	6368.48	7496.63
• Non-irrigated	966.0	966.0	706.20	706.20	702.0	437.1
CORN						
• Yellow corn	1420.5	1500.0	1520.0	1883.6	2000.0	2000.0
• Green corn	300.0	400.0	400.0	350.0	350.0	276.6
MUNGO	55.0	55.0	38.0	35.0	52.9	52.9
CAMOTE	1.5	1.5	2.5	5.0	4.5	2.0
CASSAVA	5.0	-	-	-	4.3	-
FRUITS & VEGETABLES	14.0	12.0	14.0	15.0	9.0	10.0
MANGO	158.0	165.0	208.0	208.0	208.0	212.0
TOTAL	9424.38	9703.88	9733.18	9684.28	9699.18	10487.23
NOTE: PRODUCTION AREA= CROPPING FREQUENCY x PHYSICAL AREA						

Table 2.4.3 Total Mass of Production (Metric Tons)

MAJOR CROPS	2006	2007	2008	2009	2010
RICE					
• Irrigated	29719	29719	32 169	19433	31842
• Non-irrigated	3670.0	3864.0	2824.0	2118.0	2808.0
CORN					
• Yellow corn	7102.5	7500.0	8360.0	11301.6	13000.0
• Green corn	1050.0	1400.0	1400.0	1225.0	1225.0
MUNGO	44.0	44.0	280.0	28.0	42.3
CAMOTE	22.15	22.15	37.25	75.50	67.45
CASSAVA	100.5	-	-	-	86.43
FRUITS & VEGETABLES	112.0	96.0	112.0	120.0	72.0
MANGO	869.0	907.5	1144.0	1144.0	1144.0

Table 2.4.4 Total Value of Production (Pesos)

MAJOR CROPS	2006	2007	2008	2009	2010
RICE					
• Irrigated	356,628,000	386,347,000	450,366,000	291,645,000	541,314,000
• Non-irrigated	44,040,000	50,232,000	39,536,000	31,770,000	47,736,000
CORN					
• Yellow corn	56,820,000	60,000,000	66,880,000	146,920,000	159,900,000
• Green corn	6,000,000	8,000,000	12,000,000	14,000,000	17,500,000
MUNGO	1,375,000	1,430,000	1,064,000	1,050,000	1,692,800
CAMOTE	30,000	30,000	50,000	70,000	90,000
CASSAVA	200,000	-	-	-	172,000
FRUITS & VEGETABLES	560,000	480,000	896,000	1,200,000	1,080,000
MANGO	17,380,000	18,150,000	22,880,000	28,600,000	28,600,000

Table 2.4.5 Percentage of Agricultural Lands Devoted for Crop Production

MAJOR CROPS	2006	2007	2008	2009	2010
RICE					
• Irrigated	69.34	68.0	70.32	66.9	65.6
• Non-irrigated	10.0	9.9	7.2	7.3	7.2
CORN					
• Yellow corn	14.9	15.4	15.6	19.4	20.6
• Green corn	3.14	4.12	4.10	3.6	3.6
MUNGO	.6	.5	.39	.36	.54
CAMOTE	.015	.015	.025	.051	.046
CASSAVA	.052	-	-	-	.044
FRUITS & VEGETABLES	.14	.12	.14	.15	.09
MANGO	1.65	1.2	2.13	2.14	2.14

2) Agricultural Facilities

Despite the agricultural abundance of Mexico, particularly in rice production, the municipality is not fortunately endowed with up-to-date farming technologies and facilities and has not been actively prioritized by municipal project developments. Farmers are still reliant on deep wells and nearby surface waters for water source and manual water and fertilizer application for their crops.

A few barangays, like San Lorenzo, has small irrigation system which utilizes the Betis River for water supply (Figure 2.4.3). Pandacaqui has an irrigation system servicing 118 hectares of rice plantation. The latest recorded number of agricultural facilities and area of lands serviced were of year 2010, and are listed as follows:

Table 2.4.6 Farming Facilities Recorded as of 2010

FACILITIES	NUMBER	SERVICE AREA (ha)
NIA (National Irrigation Administration)	--	972.25
COMMUNAL	358	1074.0
PUMPS (Private)	1220	3660
SWIP (Small Water Impounding Project)	2	100
STW-DA (Shallow Tube Well)	79	237

Figure 2.4.3. *Irrigation System in San Lorenzo*

3) Municipal Projects for Agriculture and Farmers' Associations

The Local Government of Mexico spearheads programs and activities which aim to provide trainings, livelihood and support for further improvement of crop and livestock production. Some of these programs are listed in Table 2.4.7. Associations among farmers and agro-industrialists are also prevalent, functioning as one voice when participating in the decision-making procedures of the municipal government and when disseminating agricultural information and technologies. Existing associations are enumerated in Table 2.4.8.

Table 2.4.7 Municipal Government Projects on Agriculture and Agro-Industry

I. CROP PRODUCTION a. Provision of Seeds - Rice, Corn, HVCC(High Value Commercial Crops) b. Barangay Techno Demo (Research) - Rice, Corn c. Pest & Disease Mgmt. For Rice & Corn - Zinc Phosphide - Insecticides - Fungicides d. Provision Soil Ameliorant - Biozone - Zinc Sulfate
II. ANIMAL PRODUCTION a. Animal Dispersal b. Animal Disease Mgmt. - Vaccination

- Anti-Rabies for Dogs & Cats
- Hemosep(Carabaos & Cattles)

c. Treatment

- Antibiotics
- Vitamins
- Supplementation

III. FISHERY

- Fingerling Dispersal for Fresh Water

IV. OTHER PROGRAMS/ PROJECTS

a. Conduct Trainings/ Seminars/ Meetings

- Farmers Educational Trip

b. Mushroom Culture Production & Management

c. BAFC & MAFC (BARANGAY AND MUNICIPAL AGRICULTURAL & FISHERY COUNCIL)

d. Livelihood Skills & Training for RIC (Rural Improvement Club)

- Food Processing (Fish, Meat, Vegetables)
- Candle Making
- Flower Arrangement

e. NURSERY MANAGEMENT & MAINTENANCE

- Production / Propagation of Fruit Forests and Ornamental Plants for distribution and tree planting

Table 2.4.7 Farmers and Agro-Industrialists Associations

- Pandacaqui Irrigators Association - San Lorenzo Irrigators Association - Anao Irrigators Association - San Jose Malino Irrigators Association - MACUPA (Multi Purpose Cooperative)- Malino, Culubasa, Pangatlan - MAFC- Municipal Agricultural & Fishery Council - BAFC- Barangay Agricultural & Fishery Council
*** All of the barangays enumerated in this table have irrigation systems

B. Development Recommendations

Agriculture is the main use of lands in Mexico, thus supporting the idea that the major portion of the municipal populace is farmers and agriculturists. Protecting the rights and supporting the livelihood wellness of these people must be one of the priorities of the aspired developments of the Local Government of Mexico. The very essence of this Project is that Mexico, under the supervision of its leaders, must encounter the challenge of building harmony between urban development and sustainability. Aside from their profitability, agricultural crops also answer to man's most basic requirement: FOOD.

Provision of more sophisticated farming technologies and facilities must be further improved. Irrigation systems must be developed and serviced to as many barangays as possible. For instance, the irrigation canals and components of the halted Delta Irrigation Project can be constructed again instead of leaving it wasted and unutilized.

2.5 ENVIRONMENTAL MANAGEMENT

A. Situational Analysis

1) Solid Waste Disposal

The Municipality of Mexico has no existing landfill which receives refuse wastes from households, market, stores and other waste generators. Wastes are collected from every barangay by only four (4) garbage trucks.

Only one (1) Material Recovery Facility (MRF) exists in the municipality, specifically in Suclaban. It has its own composting area, and equipment like segregator, shredder and pulverizer. Biodegradable components of the municipal wastes collected are either utilized as compost or transformed to charcoal briquettes. All residual wastes are carried to Kalangitan Sanitary Landfill in Tarlac, for final disposal.

Uncontrolled dumping of wastes is one of the observed problems in Mexico. Houses encroaching at the opposite sides of a river or a nearby creek are already an on-going scenario, and such case if not halted earlier, might pose irreversible dangers to the environment and health safety. Solid waste in-flow in the downstream section of Abacan River is also a detrimental issue which occurs in a disturbing scene during heavy rains. Silt is also carried by river currents especially during heavy stream flows.

Figure 2.5.1. *Encroachment of houses in nearby creek*

Figure 2.5.2. *Wastes from Public Market are dumped in nearby creek*

Figure 2.5.3. *Wastes Carried by Abacan River*

2) Environmental Programs

The Municipality of Mexico conducts programs and activities which promote environmentalism. A Clean-Up Drive Program is done monthly to remove solid wastes clogging the canals and prevent habitation of mosquitoes in these canals. Spraying pesticides to mosquitoes and mosquito larvae is also done.

Another environmental activity is the Tree Planting Program which aims to plant trees like mahogany and bamboo along control dikes to serve as support against erosion and soil weathering.

B. Development Recommendations

One of the highlighted proposed developments of this Project is the construction of Material Recovery Facilities (MRF) with an area of 500 square meters at barangay levels, in order to strictly control improper waste disposal. Supporting this goal is the preparation of financial and administrative assistance to barangays for acquisition of their own garbage collecting trucks.

In case of the downstream flow of commercial and domestic wastes in Abacan River, a suggested counteraction is an Inter-Municipality Coordination of the Municipality of Mexico with neighboring cities and municipalities situated in the upstream of the said river. These include Mabalacat, Sta. Ana, Angeles and San Fernando, among others. Siltation on the other hand, can be minimized through bank stabilization or strengthening the buffer vegetation covering the banks of rivers and creeks. Bamboo or mahogany trees are good choices as vegetation for this purpose.

The safety of water for people's use, as well as the ecological condition of the natural water systems, can also be monitored through Annual Water Monitoring, which shall test the physico-chemical and biological properties of creeks and rivers under such parameters as Dissolved Oxygen, Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), pH and Temperature.

2.6 WATERSHED MANAGEMENT

The natural drainage systems rejuvenating the lands of Mexico are Abacan, Mexico, Betis and Bungang Guinto. Abacan River is divided into three segments (Upper, Middle, and Lower segments). The Upper segment is the portion that traverses barangays Tangle, Culubasa, and San Jose Malino; Middle segment traverses barangays San Juan, Concepcion, and Laput; and the Lower segment traverses barangays San Patricio and Sto. Rosario.

The Mexico river segment includes barangays Parian, Sto. Cristo, and Lagundi and the Bungang Guinto river segment includes barangays San Antonio, San Jose Matulid, and Dolores Piring.

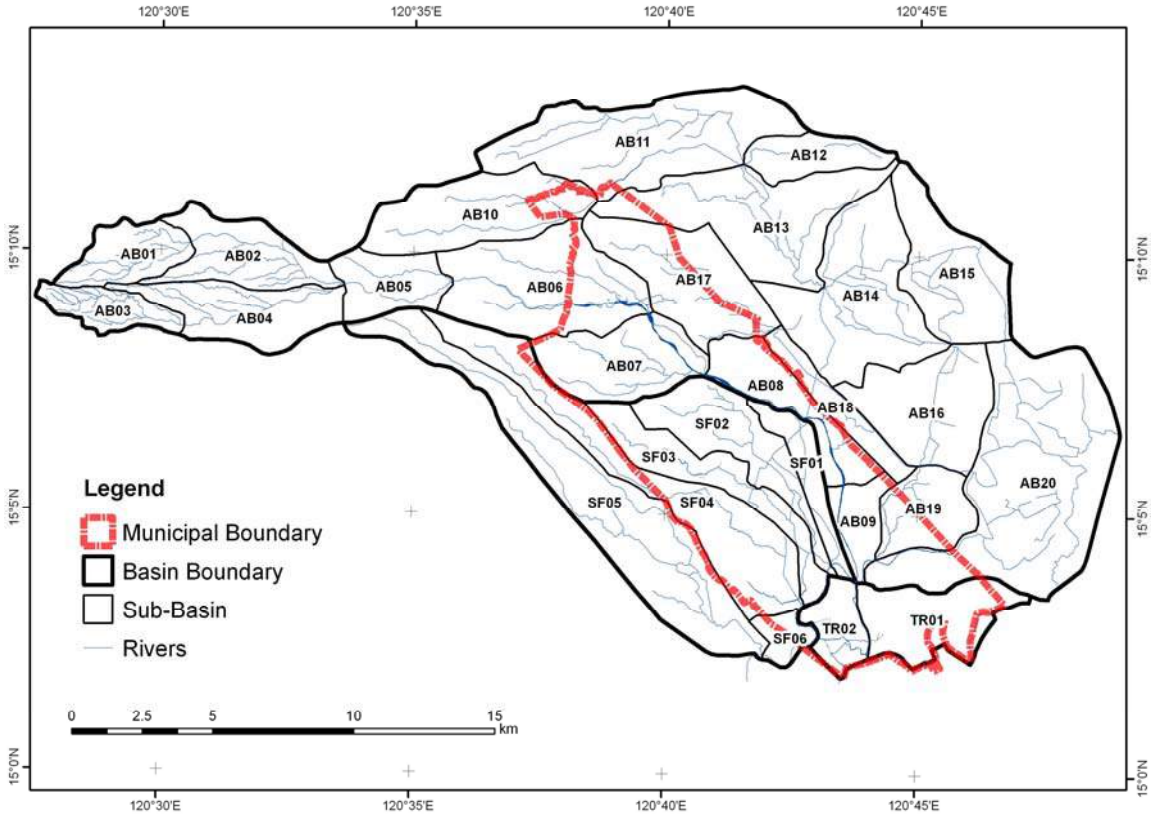


Figure 2.6.1. *Sub-Basin Boundaries and Drainage System Covering Mexico*

The monthly and annual amounts of surface water were estimated using the DPWH guidelines and parameters of each the sub-basins. Wherein the monthly average rainfall in Table 2.6.1, the drainage area of each sub-basin, and the appropriate runoff coefficient in Table 2.6.2 are multiplied to get the gross surface water availability as illustrated in the sample calculation below.

$$Q_{AB01, Aug} = \frac{R_{Aug} * DA_{AB01} * C_{AB01}}{1000}$$

$$Q_{AB01, Aug} = \frac{610 * 7.62 * 0.7}{1000}$$

$$Q_{AB01, Aug} = 3.25 \text{ MCM}$$

Where,

$Q_{AB01, Aug}$ is the gross water available in sub-basin AB01 for the month of August.
Unit is in Million Cubic Meter (MCM)

R_{Aug} is the monthly average rainfall for the month of August.
Unit is in mm

DA_{AB01} is the drainage area of sub-basin AB01.
Unit is in sq.km

C_{AB01} is the runoff coefficient for sub-basin AB01.
Unit is dimensionless

Table 2.6.1 Runoff Coefficients

Surface Characteristics	Runoff Coefficient
Lawn, gardens meadows and cultivated lands	0.05 - 0.25
Parks, open spaces including unpaved surfaces and vacant lots	0.20 - 0.30
Suburban districts with few buildings	0.25 - 0.35
Residential districts not densely built	0.30 - 0.55
Residential districts densely built	0.50 - 0.75
For watershed having steep gullies and not heavily timbered	0.55 - 0.70
For watershed having moderate slope, cultivated and heavily timbered	0.45 - 0.55
For suburban areas	0.34 - 0.45
For agricultural areas	0.15 - 0.25

Source: Design Guidelines Criteria and Standards, Volume I, MPWH, 1987

Table 2.6.2 Annual Gross Water Availability (Networked sub-basins)

Sub-Basin	Drainage Area (sq.km)	C	Annual Volume (MCM) (a)	Inflow (b)	Gross Water Availability (MCM) (a) + (b)	Remarks
AB01	7.62	0.7	12.96	-	12.96	Inflow to AB02
AB02	11.23	0.5	13.64	12.96	26.61	Inflow to AB05
AB03	5.71	0.7	9.71	-	9.71	Inflow to AB04
AB04	12.65	0.5	15.37	9.71	25.08	Inflow to AB05
AB05	7.91	0.6	11.53	51.69	63.22	Inflow to AB06
AB06	22.05	0.5	26.79	63.22	90.01	Inflow to AB07
AB07	13.63	0.2	6.62	90.01	96.64	Inflow to AB08
AB08	10.35	0.2	5.03	96.64	101.67	Inflow to AB09
AB09	5.11	0.2	2.48	239.54	242.02	50% Inflow to SF01, 50% Inflow to TR02
AB10	16.79	0.4	16.32	-	16.32	Inflow to AB11
AB11	26.02	0.2	12.65	16.32	28.97	Inflow to AB13
AB12	6.33	0.6	9.23	-	9.23	Inflow to AB13
AB13	22.41	0.3	16.34	38.19	54.53	Inflow to AB14
AB14	24.02	0.4	23.35	62.88	86.22	40% Inflow to AB18, 60% Inflow to AB16
AB15	15.61	0.55	20.86	-	20.86	40% Inflow to AB14, 40% Inflow to AB16, 20% Inflow to AB20
AB16	16.48	0.2	8.01	60.08	68.09	Inflow to AB19
AB17	16.85	0.2	8.19	-	8.19	Inflow to AB18
AB18	5.52	0.2	2.68	42.68	45.36	Inflow to AB09
AB19	8.45	0.2	4.11	68.09	72.20	Inflow to AB09
AB20	41.80	0.2	20.31	-	20.31	Inflow to AB09
SF01	5.64	0.2	2.74	121.01	123.75	Inflow to SF02
SF02	13.12	0.2	6.38	123.75	130.13	Inflow to SF03
SF03	11.28	0.2	5.48	130.13	135.61	Inflow to SF04
SF04	23.58	0.2	11.46	135.61	147.07	Inflow to SF06
SF05	32.73	0.5	39.77	74.40	114.17	Outfall (Mexico River)
SF06	2.86	0.25	1.74	147.07	148.81	50% Inflow to SF05, 50% Inflow to TR02
TR01	12.16	0.2	5.91	-	5.91	Inflow to TR02
TR02	5.42	0.2	2.63	201.32	203.96	Outfall (Bungang Guinto River)

Note:
MCM means Million Cubic Meter

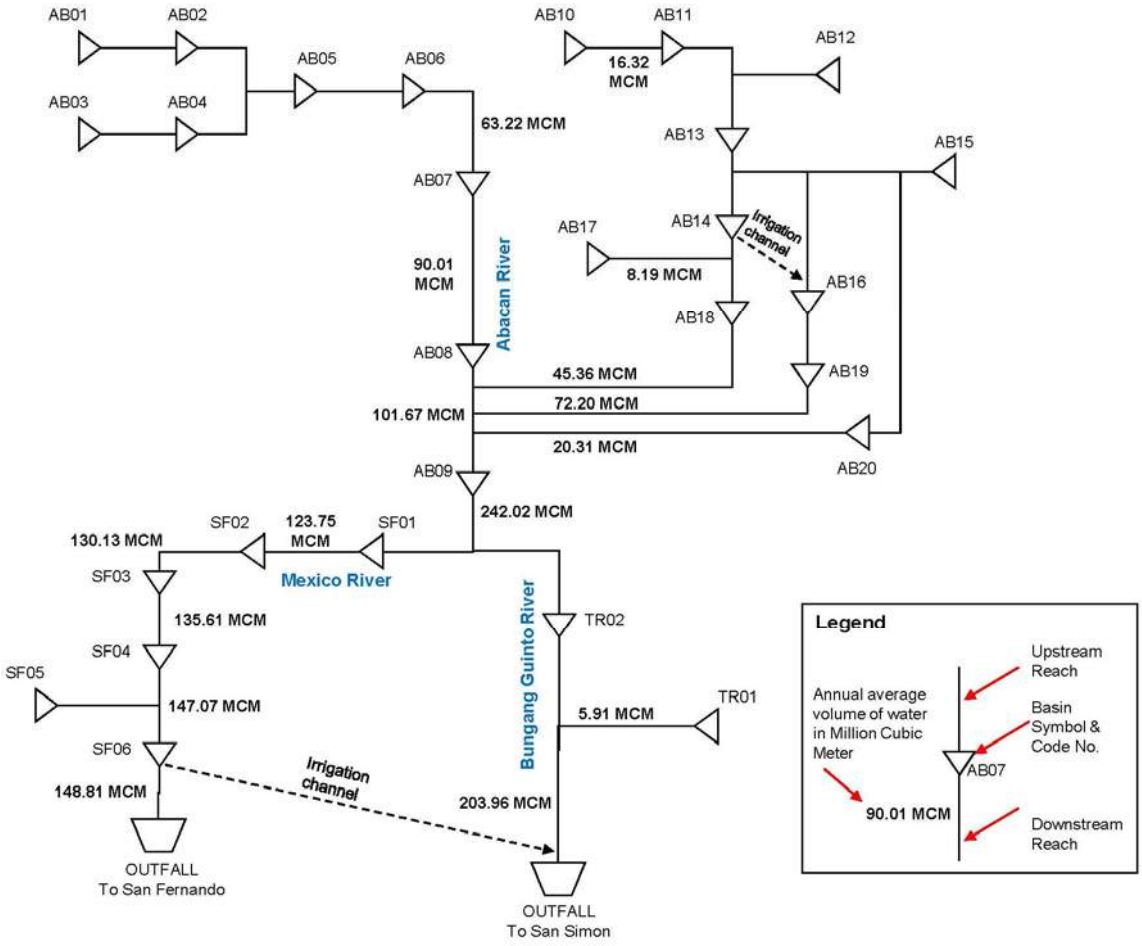


Figure 2.6.2 *River Network Diagram*

The river network diagram shown In Figure 2.6.2 was also used to identify the flow direction and relations of each river reach in the analysis.The calculations of annual average volume of each segment as well as its resulting monthly average distribution which are presented in charts are as follows:

Abacan River (Upper Segment)

Traversed Barangays: Tangle, Culubasa, San Jose Malino

Annual Average Volume = (V_{AB06} + V_{AB07}) / 2
= (63.22 + 90.01) / 2
= 76.62 MCM

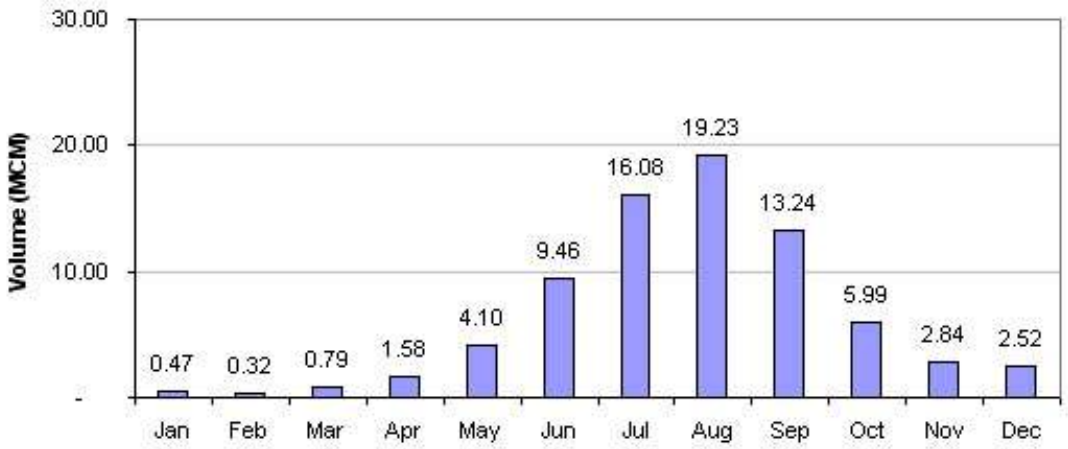


Figure 2.6.3 *Monthly average water availability of Abacan River in Barangays Tangle, Culubasa, and San Jose Malino*

Abacan River (Middle Segment)

Traversed Barangays: San Juan, Concepcion, Laput

Annual Average Volume = (V_{AB07} + V_{AB08}) / 2
= (90.01 + 101.67) / 2
= 95.84 MCM

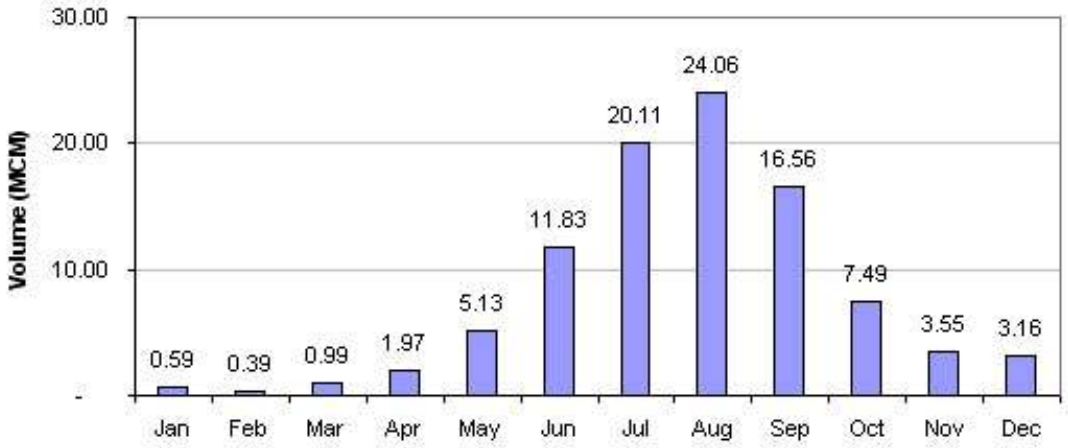


Figure 2.6.4 *Monthly average water availability of Abacan River in Barangays San Juan, Concepcion, and Laput*

Abacan River (Lower Segment)

Traversed Barangays: San Patricio, Sto. Rosario

Annual Average Volume = (V_{AB08} + V_{AB09}) / 2
= (101.67 + 242.02) / 2
= 171.85 MCM

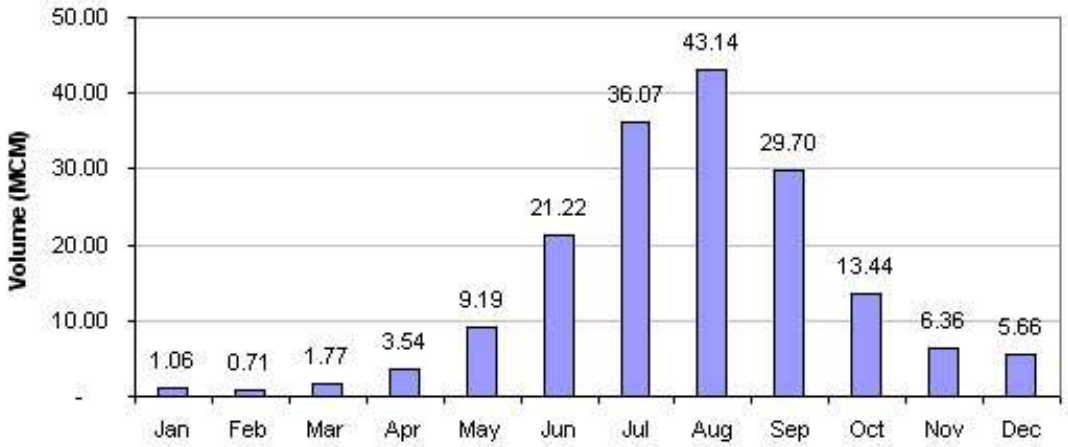


Figure 2.6.5 *Monthly average water availability of Abacan River in Barangays San Patricio, and Sto, Rosario*

Mexico River

Traversed Barangays: Parian, Sto. Cristo (Masangsang), Lagundi

Annual Average Volume = (V_{SF02} + V_{SF03} + V_{SF04} + V_{SF06}) / 2
= (130.13 + 135.61 + 147.07 + 148.81) / 4
= 140.05 MCM

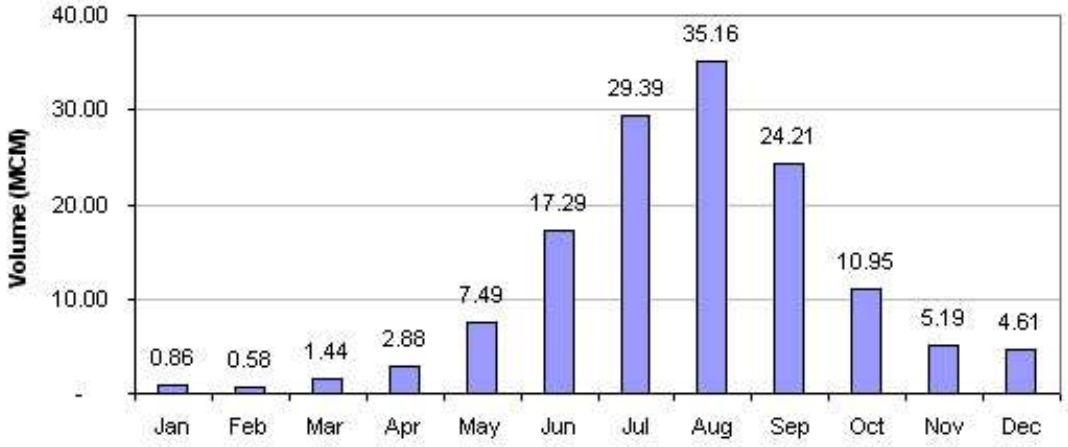


Figure 2.6.6 *Monthly average water availability of Mexico River in Barangays Parian, Sto. Cristo, and Lagundi*

Bungang Guinto River

Traversed Barangays: San Antonio, San Jose Matulid, Dolores Piring

Annual Average Volume = V_{TR02}
= 203.96 MCM

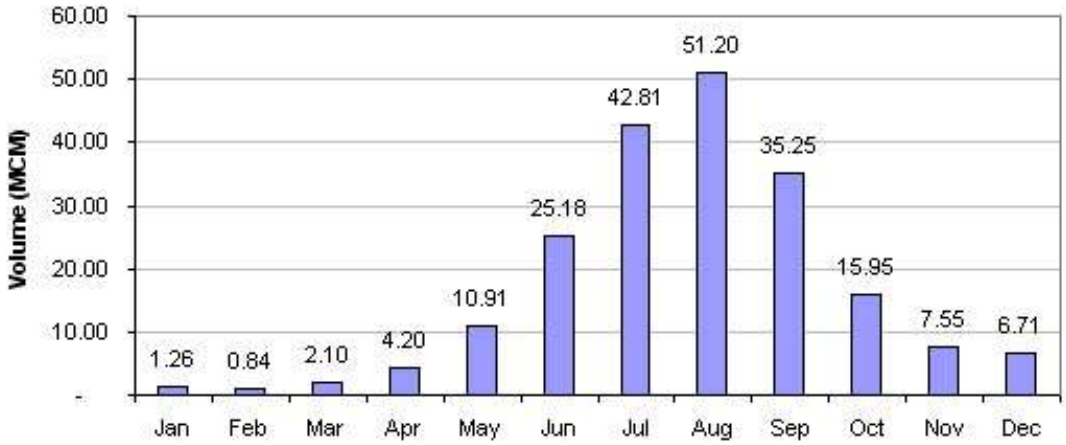


Figure 2.6.7 *Monthly average water availability of Bungang Guinto River in Barangays San Antonio, San Jose Matulid, and Dolores Piring*

2.7 DISASTER RISK REDUCTION MANAGEMENT

A. Situational Analysis

The Municipality of Mexico, like other towns in Pampanga, is also beleaguered with floods brought by seasonal typhoons and heavy rains. The existence of large scouring rivers and bisecting narrow creeks, and also the wide areas of low-lying rice fields which are easily inundated, fuel the detrimental effects of flood to human lives and other sectors.

The latest typhoon *"Pedring"* which has directly hit the Central and Northern parts of Luzon on September 27–28, 2011, has greatly flooded several barangays in the municipality and even forced some families to evacuate to a safer place. Severely inundated barangays included the lower parts of Lagundi, San Pablo, San Lorenzo, Parian, Balas, San Jose Matulid and San Carlos (Figure 2.7.1). Evacuees from the said barangays were relocated to schools, chapels and barangay halls with the assistance of the Municipal Disaster Risk Reduction and Management Council and the Department of Social Welfare and Development.

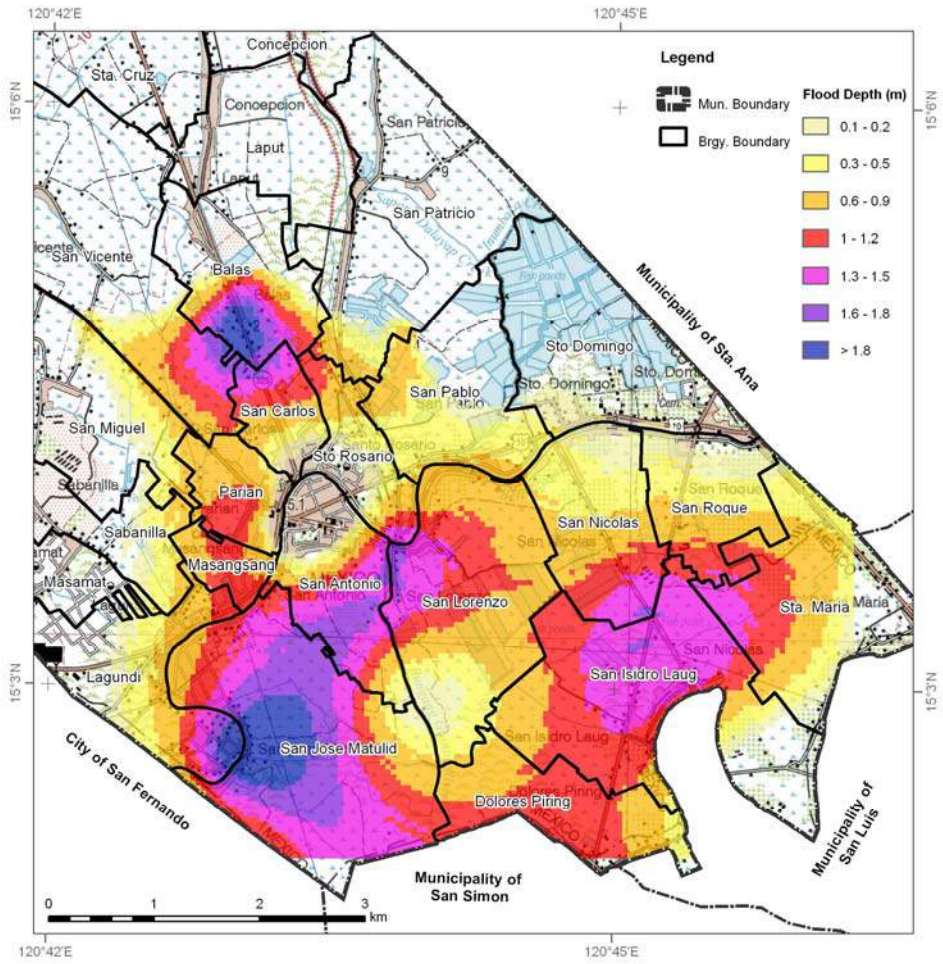


Figure 2.7.1 *Range of Flood Depth during Typhoon "Pedring" (September, 2011)*

The flood was further enhanced by the overflows from Abacan and Betis Rivers. Bungang Guinto, a narrow river, was not able to contain the water coming from the two rivers. The same case happened to other creeks as well. Damage to agriculture is approximately 500 hectares on the matured stage, 450 hectares on reproductive stage and 2 hectares of fishponds. *Pedring* is considered the new strongest typhoon to hit the Municipality since *Ondoy*. Retardation of flood brought by *Ondoy* in 2009 is illustrated in Figure 2.7.2, with Dolores Piring having the longest period of flood duration during that time.

According to the residents interviewed during the inundation survey, the strongest and most pernicious typhoon to hit the municipality was typhoon *Dading* in 1972. Flood of more than three (3) meters in depth has covered the whole town, remaining in some areas for more than 30 days. This kind of typhoon has a 100-return period.

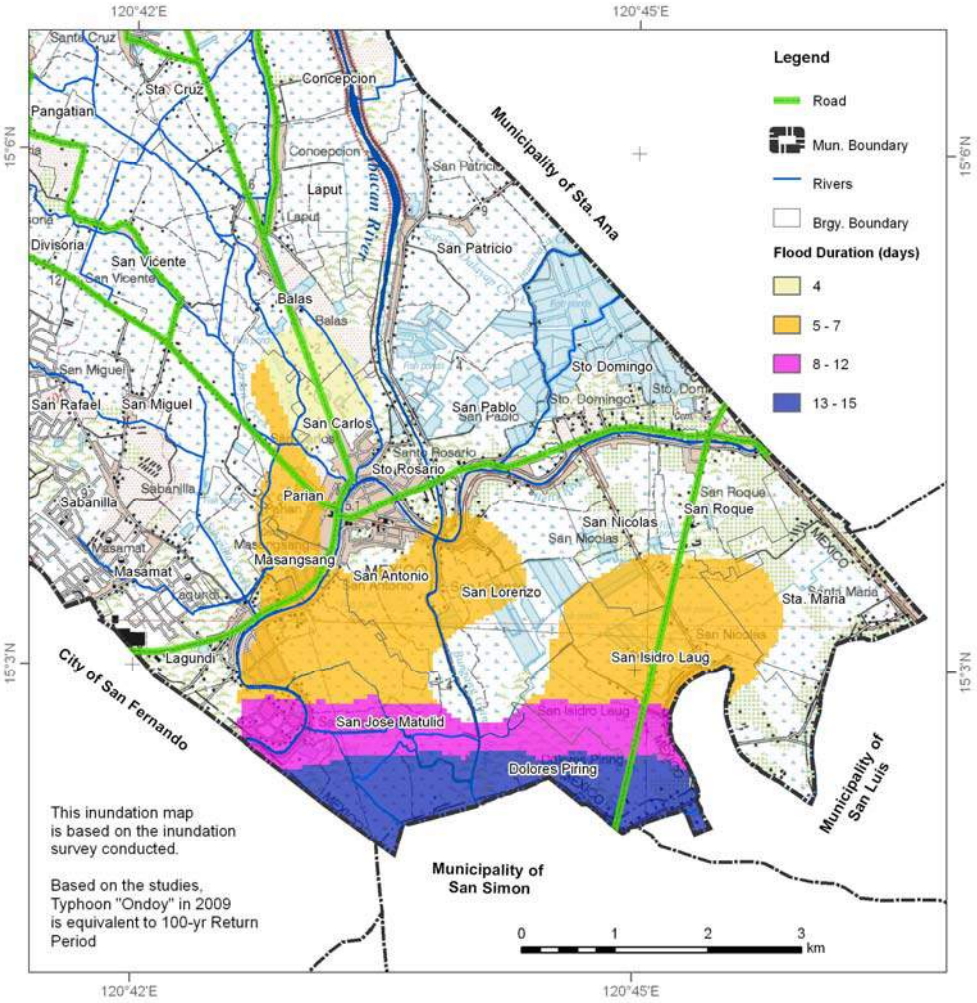


Figure 2.7.2 *Flood Duration during Typhoon "Ondoy" (September, 2009)*

Figure 2.7.3 *Mexico River During Pedring*

Figure 2.7.4 *Knee-high Floodwaters of Pedring in Lagundi*

B. Development Recommendations

Luzon is periodically devastated by natural disturbances such as typhoons. In order to minimize the disastrous aftermath of these typhoons, people must be ready and vigilant to withstand these circumstances. Evacuation facilities, relief goods and life-saving equipment must be provided by the government officials to support life and safety of people during those dire times.

Local budget must prioritize, among others, equipment systems, facilities and sophisticated training and devices embodying disaster risk reduction and management strategies. The wisdom reflected by the common saying *"Prevention is Better than Cure"* is highly and constantly applicable to the act of readying ourselves, citizens and government officials alike, to the onset of the said natural disasters.

Flooding is primarily induced by the natural conditions of the existing water systems, as well as the man-made actions which shape these natural systems. For instance, the Bungang Guinto River is a narrow river which catches the confluencing waters of the rivers Abacan and Betis. A heavy streamflow in these rivers shall cause an overflow of water in Bungang Guinto due to its small withholding capacity. Therefore, the Local Government of Mexico can facilitate either dredging to widen and deepen Bungang Guinto or dike construction to protect nearby barangays.

Moreover, solid wastes from the upstream section of Abacan River which poses the risk of clogging in waterways and overflowing of river must be monitored and removed regularly. Siltation, which makes rivers and creeks shallow and narrow, must also be counteracted upon thru stabilization of riverbank vegetation.

In terms of flood risk readiness, Mexico has flood prevention facilities already existent in some barangays. These facilities function as flood retarding systems. One example is the flood control facility in San Lorenzo, which traps solid wastes and water hyacinths brought by the flowing river. The agglomerated wastes and hyacinths catch other solids and control the passage of water, thus

withholding as much floodwater as necessary to prevent immediate water overflow and flooding. Likewise, weirs function as flood retarding systems whilst also employed as water containment for crop watering purposes. These facilities are still usable, and must be maintained as regularly as necessary

Figure 2.7.5 *Flood Control System in San Lorenzo*

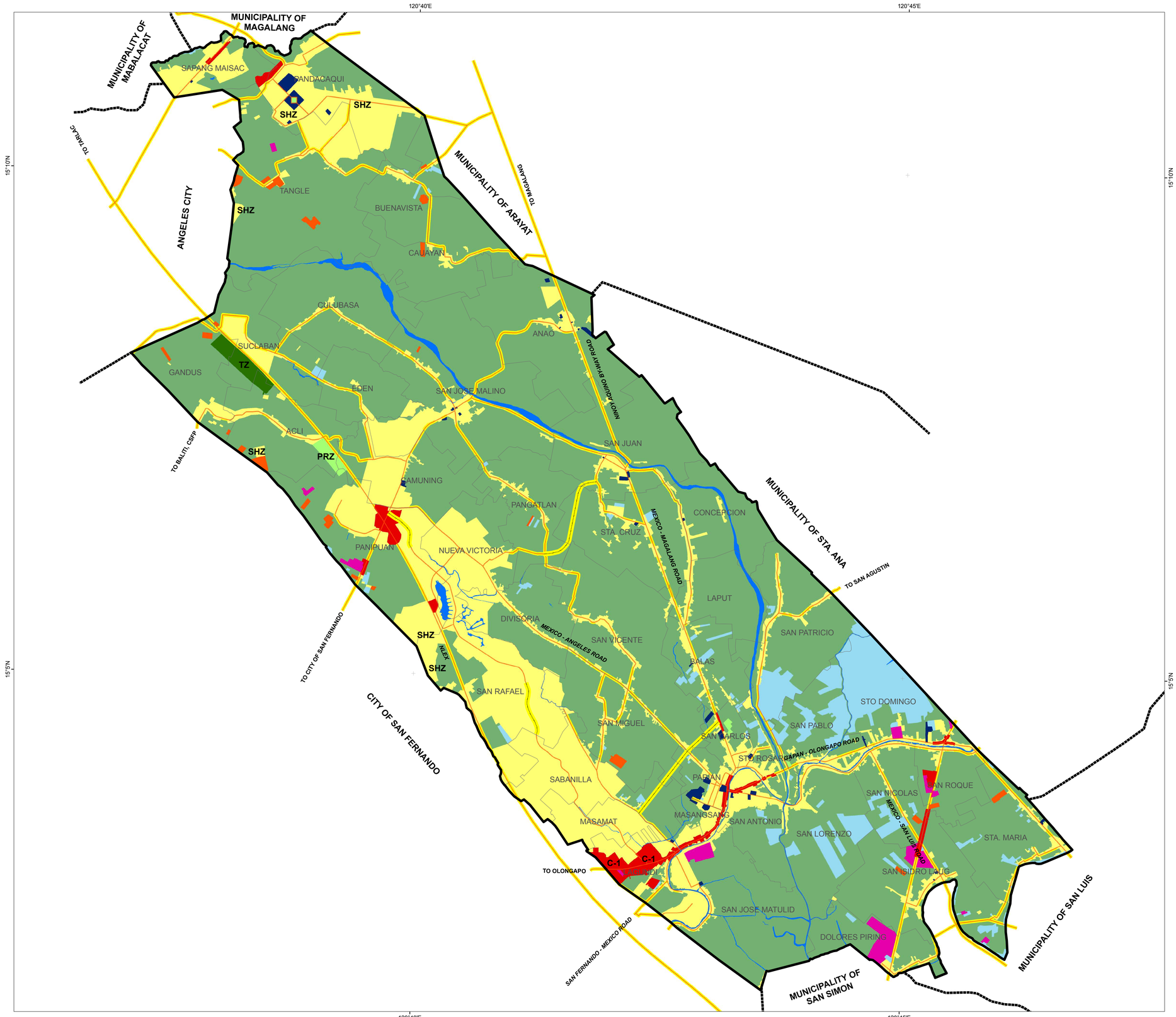
Figure 2.7.6 *Water Hyacinths trapped in the pillars of the flood control system withholds water passage*

Figure 2.7.7 *Weir in Buenavista*

Figure 2.7.8 *Weir in Pandacaqui*

In case of extreme flooding, the protection services of Mexico must be equipped with two (2) rubber boats in order to effectively aid evacuees to be transported to a safe place.

Chapter III
Zoning Ordinance



REPUBLIC OF THE PHILIPPINES
PROVINCE OF PAMPANGA

MUNICIPALITY OF MEXICO

MUNICIPAL PLANNING AND DEVELOPMENT OFFICE (MPDO)

N
W E
S

0 0.5 1 2 3 4 KM

SCALE : 1:25,000

PROJECTION: UNIVERSAL TRANSVERSE MERCATOR (ZONE 51N)
HORIZONTAL DATUM: WGS 84
VERTICAL DATUM: MEAN SEA LEVEL

LEGEND

- MUNICIPAL BOUNDARY
- BARANGAY BOUNDARY
- EXISTING ROADS

ZONE CLASSIFICATIONS

- GENERAL RESIDENTIAL ZONE (GRZ)
- SHZ — SOCIALIZED HOUZING ZONE (SHZ)
- C-1 — LOW DENSITY COMMERCIAL ZONE (C-1)
- MEDIUM DENSITY COMMERCIAL ZONE (C-2)
- GENERAL INSTITUTIONAL ZONE (GIZ)
- LIGHT INDUSTRIAL ZONE (I-1)
- AGRICULTURAL ZONE (AGZ)
- AGRICULTURAL ZONE (FP)
- TZ — TOURISM ZONE (TZ)
- PRZ — PARKS & RECREATION ZONE (PRZ)
- AGRO-INDUSTRIAL ZONE (AIZ)
- WATER ZONE (WZ)

ZONING MAP

NOTE:

DISCLAIMER:

THIS MAP IS MADE FOR COMPREHENSIVE LAND USE PLANNING ONLY. BOUNDARIES ARE NOT AUTHORITATIVE. USERS NOTING ERRORS OR OMISSIONS ON THIS MAP ARE REQUESTED TO MARK HEREIN AND REFER TO THE MUNICIPAL PLANNING AND DEVELOPMENT OFFICE OF MEXICO

MUNICIPAL MAYOR	MPDC
HON. TEDDY C. TUMANG	**ENGR. JESUS S. PUNZALAN**
MUNICIPAL ENGINEER	MUNICIPAL ASSESSOR
ENGR. JESUS S. PUNZALAN	**ANTONIO REYES**
GIS/CARTOGRAPHER	-
ENGR. JOSEPH F. OCAMPO	-

DRAWN DATE: OCTOBER, 2011

ACTUAL PAPER SIZE: A0

EXCERPTS FROM THE MINUTES OF THE REGULAR SESSION OF THE SEVENTH SANGGUNIANG BAYAN OF THE MUNICIPALITY OF MEXICO, PROVINCE OF PAMPANGA HELD ON JULY 11, 2012 AT THE SANGGUNIAN SESSION HALL.

PRESENT:

Hon. Roy D. Manalastas	-	Municipal Vice-Mayor / Presiding Officer
Hon. Lourdes G. Sicat	-	S. B. Member
Hon. Jonathan R. Pangan	-	"
Hon. Rudencio S. Gonzales	-	"
Hon. Rex DL. Calma	-	"
Hon. Carlos A. Rivera	-	"
Hon. Noel R. Sambile	-	"
Hon. Emmanuel R. Manalo	-	"
Hon. Merly E. Manalo	-	"
Hon. Emmanuel Stephen V. Tumang	-	S.K.M.F. President

ABSENT:

Hon. Gerardo P. Santos	-	A.B.C. President

RESOLUTION NO. 091-2011

A RESOLUTION ADOPTING THE COMPREHENSIVE LAND USE PLAN OF THE MUNICIPALITY OF MEXICO, PROVINCE OF PAMPANGA.

WHEREAS, Subsection (2) (vii) of Section 447 of Republic Act No. 7160 empowers the Sangguniang Bayan to adopt a Comprehensive Land Use Plan consistent with the approved Comprehensive Land Use Plan of the province; and

WHEREAS, the Comprehensive Land Use Plan would enable the Municipality to rationalize land reclassification under which land within its territorial coverage shall be reclassified according to their best uses to enhance development and economic growth and at the same time it will serve as the basis for the enactment of a zoning ordinance that will ensure a more balanced and orderly spatial development most beneficial to our people.

NOW THEREFORE –

On motion of Honorable Carlos A. Rivera and jointly seconded by Honorable Noel R. Sambile and Honorable Lourdes G. Sicat,

THE SANGGUNIANG BAYAN OF THE MUNICIPALITY OF MEXICO, PROVINCE OF PAMPANGA, in regular session assembled:

RESOLVED, as it is hereby resolved, that the proposed Comprehensive Land Use Plan of the Municipality of Mexico, Province of Pampanga which is hereto attached and made an integral part hereof **be, as it is hereby ADOPTED,** in pursuance to the pertinent provisions of Subsection (2) (vii) of Section 447 of Republic Act No. 7160.

RESOLVED FINALLY, that copies of this Resolution be forwarded to the Office of the Sangguniang Panlalawigan of the Province of Pampanga and the Housing and Land Use Regulatory Board of Region III stationed at the City of San Fernando, Pampanga for their review and approval.

UNANIMOUSLY APPROVED.

I HEREBY CERTIFY to the correctness of the above Resolution.

ADONIS L. COSIO
Secretary to the Sanggunian

ATTESTED:

LOURDES G. SICAT
S. B. Member

JONATHAN R. PANGAN
S. B. Member

RUDENCIO S. GONZALES
S. B. Member

REX DL. CALMA
S. B. Member

CARLOS A. RIVERA
S. B. Member

NOEL R. SAMBILE
S. B. Member

EMMANUEL R. MANALO
S. B. Member

MERLY E. MANALO
S. B. Member

E. STEPHEN V. TUMANG
S.K.M.F. President

ROY D. MANALASTAS
Municipal Vice-Mayor
Presiding Officer

APPROVED BY:

TEDDY C. TUMANG
Municipal Mayor

Date of Approval: AUG 06 2012

EXCERPTS FROM THE MINUTES OF THE REGULAR SESSION OF THE SEVENTH SANGGUNIANG BAYAN OF THE MUNICIPALITY OF MEXICO, PROVINCE OF PAMPANGA HELD ON JULY 11, 2012 AT THE SANGGUNIAN SESSION HALL.

PRESENT:

Hon. Roy D. Manalastas	-	Municipal Vice-Mayor / Presiding Officer
Hon. Lourdes G. Sicat	-	S. B. Member
Hon. Jonathan R. Pangan	-	"
Hon. Rudencio S. Gonzales	-	"
Hon. Rex DL. Calma	-	"
Hon. Carlos A. Rivera	-	"
Hon. Noel R. Sambile	-	"
Hon. Emmanuel R. Manalo	-	"
Hon. Merly E. Manalo	-	"
Hon. Emmanuel Stephen V. Tumang	-	S.K.M.F. President

ABSENT:

Hon. Gerardo P. Santos	-	A.B.C. President

MUNICIPAL ORDINANCE NO. 019-2011

A MUNICIPAL ORDINANCE ENACTING THE COMPREHENSIVE ZONING ORDINANCE OF THE MUNICIPALITY OF MEXICO, PROVINCE OF PAMPANGA; PROVIDING FOR THE ADMINISTRATION, ENFORCEMENT AND AMENDMENT OR MODIFICATION THEREOF; AND REPEALING ALL EXISTING MUNICIPAL ORDINANCES INCONSISTENT THEREWITH.

WHEREAS, the implementation of the Comprehensive Land Use Plan contained in Resolution No. 091-2011 of the Sangguniang Bayan requires the passage of a zoning regulatory measure in order to translate its planning goals and objectives into reality; and

WHEREAS, the Local Government Code of 1991 empowers local government units to enact zoning regulatory measures in consonance with their respective approved comprehensive land use plan, subject, however to existing laws, rules and regulations.

NOW THEREFORE—

On motion of Honorable Carlos A. Rivera and jointly seconded by Honorable Noel R. Sambile and Honorable Lourdes G. Sicat,

BE IT ORDAINED BY THE SANGGUNIANG BAYAN OF THE MUNICIPALITY OF MEXICO, PROVINCE OF PAMPANGA, in regular session assembled:

ARTICLE I
TITLE OF THE ORDINANCE

Section 1. Title of the Ordinance. This Municipal Ordinance shall be known as the **Comprehensive Zoning Ordinance of the Municipality of Mexico, Province of Pampanga** and shall be referred to as the Ordinance.

ARTICLE II
AUTHORITY AND PURPOSE

Section 2. Authority. This Municipal Ordinance is enacted in pursuance to the pertinent provisions of Subsection a.2(ix) of Section 447 of Republic Act No. 7160, authorizing the Municipality of Mexico through the Sangguniang Bayan to adopt a Zoning Ordinance subject to existing laws, and in conformity Executive Order No. 72, series of 1993 of the Office of the President.

Section 3. Purpose. This ordinance is enacted for the following purposes:

1. Guide, control and regulate future growth and development of Mexico, Pampanga in accordance with its Comprehensive Land Use Plan;

2. Protect the character and stability of residential, commercial, industrial, institutional, forestry, agricultural, open spaces and other functional areas within the locality and promote the orderly and beneficial development of the same;

3. Promote and protect the health, safety, peace, comfort, convenience and general welfare of the inhabitants in the locality.

Section 4. General Zoning Principle. This Zoning Regulation is based on the approved General and Urban Land Use Plan as per Resolution No. 091-2011 of the Municipality of Mexico, Province of Pampanga.

ARTICLE III
DEFINITION OF TERMS

The definition of technical terms used in the Zoning Ordinance shall carry the same meaning given to them in already approved codes and regulations, such as, but not limited to the National Building Code, Water Code, Philippine Environmental Code and other Implementing Rules and Regulations, promulgated by the HLURB. The words, terms and phrases enumerated hereunder shall be understood to have the meaning corresponding indicated as follows:

1. Agricultural Zone (AGZ) – an area within the municipality intended for cultivation / fishing and pastoral activities e.g., fishing, farming, cultivation of crops, goat / cattle raising, etc.;

2. Agro-Industrial Zone (AIZ) – an area within the municipality intended primarily for integrated farm operations and related product processing activities such as plantation for bananas, pineapple, sugarcane, etc.;

3. Agro- Forestry Zone (AFZ) – an area within the local government unit devoted to agro-forestry uses;

4. **HLURB / Board –** shall mean the Housing and Land Use Regulatory Board;

5. **Buffer Areas –** these are yards, parks or open spaces intended to separated incompatible elements or uses to control pollution / nuisance and for identifying and defining development areas or zones where no permanent structures are allowed;

6. **Central Business District –** refers to area designated principally for trade, services and business purposes (Commercial Zone);

7. **Certificate of Non-Conformance –** certificate issued to owners of all uses existing prior to the approval of the Zoning Ordinance, which do not conform in a zone as per provision of the said Ordinance;

8. **Certificate of Non-Coverage –** a document issued by the DENR certifying that the proposed project or undertaking is not included in the Environmental Impact Statement (EIS) system;

9. **Cockpit –** a pit or enclosure within a building or a portion thereof where cockfights are held. Money betting maybe made or not;

10. **Commercial Garage –** a garage where motor vehicles are housed, cared for, equipped, repaired or kept for remuneration, hire or sale;

11. **Compatible Use –** uses of land activities capable of existing together harmoniously, e.g. residential use and parks and playgrounds;

12. **Comprehensive Land Use Plan (CLUP) –** a document embodying specific proposals for guiding and regulating growth and / or development. The main components of the Comprehensive Land Use Plan in this usage are the sectoral studies, e.g. Demography, Socio-Economic, Infrastructure and Utilities, Local Administration and Land Use;

13. **Conflicting Uses –** a use or land activities with contrasting characteristics sited adjacent to each other, e.g., residential units adjacent to industrial plants;

14. **Conforming Use –** a use that is in accordance with the zone classification as provided for in the Ordinance;

15. **Easement –** open space imposed on any land use / activities sited along waterways, road-right-of-ways, cemeteries / memorial parks and utilities;

16. **Environmental Compliance Certificate –** a document issued by DENR certifying that the proposed project or undertaking will not cause significant negative environment impacts and the proponent has complied with the requirements of the EIS system;

17. **Environmentally Critical Areas –** refer to those areas that are environmentally sensitive and are listed in Presidential Proclamation 2146 dated December 14, 1981;

18. **Environmentally Critical Projects –** refer to those projects that have high potential for negative environmental impacts and are listed in Presidential Proclamation 2146 dated December 14, 1981;

19. **Exception –** a device which grants a property owner relief from certain provisions of a Zoning Ordinance where because of the specific use would result in a particular hardship upon the owner, as distinguished from a mere inconvenience or a desire to make more money;

20. **Floor Area Ratio or "FAR" –** the ratio between the gross floor area of a building over the area of the lot on which it stands, determined by dividing the gross floor area of the building and the area of the lot. The gross floor area of any building should not exceed the prescribed FAR multiplied by the lot area. The FAR of any zone should be based on its capacity to support development in terms of the absolute level of density that the transportation and other utility networks can support;

21. **Forest zone –** an area within the municipality intended primarily for forest purposes;

22. **General Commercial Zone (GCZ) –** an area within the municipality for trading / services / business purposes;

23. **General Institution Zone (GIZ) –** an area within the municipality principally for general types of institutional establishments, e.g. government offices, schools, hospitals / clinics, academic / research, convention centers;

24. **General Residential Zone (GRZ) –** an area within the municipality principally for dwelling / housing purposes;

25. **General Zoning Map –** a duly authenticated map delineating the different zones in which the whole municipality is divided;

26. **Gross Floor Area (GFA) –** is the total floor space within the perimeter of the permanent external building walls, occupied by:

    - Office areas;
    - Residential areas;
    - Corridors;
    - Lobbies;
    - Mezzanines;
    - Vertical penetrations which shall mean stairs, fire escapes, elevator shafts, flues, pipe shafts, vertical ducts, and the like, and their enclosing walls;
    - Rest rooms or toilets;
    - Machine rooms and closets;
    - Storage rooms and closets;
    - Covered balconies and terraces;
    - Interior walls and columns, and other interior features

    but excluding:

    - Covered areas used for parking and driveways, including vertical penetrations in parking floors where no residential or office units are present;

- Uncovered areas for air-condition cooling towers, overhead water tanks, roof deck, laundry areas and cages, wading or swimming pools, whirlpools or jacuzzis, gardens, courts or plazas

27. **High Density Residential Zone –** a subdivision of an area principally for dwelling / housing purposes with a density of 66 or more units per hectare;

28. **Hospital –** an institution providing health services primarily for in-patient, medical or physical care of the sick or injured, including as an integral part of the institution, such related facilities as laboratories, out-patient department, training facilities, and staff offices;

29. **Innovative Design –** introduction and / or application of new / creative designs and techniques on development project e.g. Planned Unit Development (PUD), Newton, etc.;

30. **Light Industrial Zone (L-1) –** a subdivision of an area principally for the following types of industries:

a) Non-pollutive / non-hazardous;
b) Non-pollutive / hazardous;

31. **Locational Clearance –** a clearance issued to a project that is allowed under the provisions of this Zoning Ordinance as well as other standards, rules and regulations on land use;

32. **Low Density Commercial Zone –** an area within the municipality principally for trade, services and business activities ordinarily referred to as the Central Business District;

33. **Low Density Residential Zone –** an area within the municipality principally for dwelling / housing purposes with a density of 20 dwelling units and below per hectare;

34. **Medium Density Commercial Zone –** an area within the municipality with quasi-trade business activities and service industries performing complementary / supplementary functions to principally commercial zone (CBD);

35. **Medium Density Residential Zone –** an area within the municipality principally for dwelling / housing purposes with a density of 21 to 65 dwelling units per hectare;

36. **Medium Industrial Zone –** an area within the municipality principally for the following types of industries:

- Non- Pollutive / non-hazardous;
- Pollutive / hazardous;

37. **Mitigating Device –** a means to grant relief in complying with certain provisions of the Ordinance;

38. **New Town –** shall refer to a town deliberately planned and built which provides, in addition to houses, employment, shopping, education, recreation, culture and other services normally associated with a city or town;

39. **Non-Conforming Use –** existing non-confirming uses / establishments in an area allowed to operate in spite of the non-conformity to the provisions of the Ordinance subject to the conditions stipulated in this Zoning Ordinance;

40. **Parks and Recreation Zone (PRZ) –** an area designed for diversion / amusements and for the maintenance of ecological balance of the community;

41. **Planned Unit Development (PUD) –** it is a land development scheme wherein project site is comprehensively planned as an entity via unitary site plan which permits flexibility in planning / design, building siting, complementarily of building types and land uses, usable open spaces and the preservation of significant natural land features;

42. **Rezoning –** a process of introducing amendments to or a change in the text and maps of the Zoning Ordinance. It also includes amendment or change in view of reclassification under Section 20 of RA 7160;

43. **Rural Area –** area outside of designated urban area;

44. **Service / Filling Station –** a building and its premises where gasoline, oil, grease, batteries, tires and car accessories may be supplied and dispensed at retail and where in addition, the following services may be rendered:

- Sale and servicing of spark plugs, batteries and distributor parts;
- Tire servicing and repair, but not recapping and re-grooving;
- Replacement of mufflers and tail pipes, water hose, fan belts, brake fluids, light bulbs, fuses, floor mats, seat covers, windshield wipers & wiper blades, grease retainers, wheel bearings, mirror & the like;
- Radiator cleaning and flushing;
- Washing and polishing, and sale of automotive;
- Greasing and lubrication;
- Minor servicing and carburetors;
- Adjusting and repairing of brakes;
- Minor motor adjustments not involving removal of the head or crankcase or raising the motor;
- Sale of softdrinks, packaged foods, tobacco and similar convenient goods for service station customers as accessory and incidental to the principal operation;
- Provision of road maps and other informational materials to customers and provision of rest room facilities;

Major mechanical and body work straightening of body parts, painting, welding, storage of automobiles not in operating conditions, or other works involving noise, glare, fumes,

smoke or other characteristics to any extent greater than normally found in service stations, are not permitted at a service station.

45. **Setback –** the open spaces left between the building and lot lines;

46. **Tourist Zone –** are sites within the municipality endowed with natural or manmade physical attributes and resources that are conducive to recreation, leisure and other wholesome activities;

47. **Urban Area(s) –** include all barangay(s) or portion(s) of which comprising the Poblacion, Central Business District (CBD) and other built-up areas including the urbanizable land in and adjacent to said areas and where at least more than fifty percent (50%) of the population are engaged in non-agricultural activities. CBD shall refer to the areas designated principally for trade, services and business purposes;

48. **Urban Zoning Map –** a duly authenticated map delineating the different zones into which the urban area and its expansion area are divided;

49. **Urbanizable Land –** area designated as suitable for urban expansion by virtue of land use studies conducted;

50. **Variance –** a special locational clearance which grants a property owner relief from certain provisions of Zoning Ordinance where, because of the particular physical surrounding, shape or topographical conditions of the property, compliance on height, area, setback, bulk and / or density would result in a particular hardship upon the owner, as distinguished from a mere inconvenience or a desire to make more money;

51. **Warehouse –** refers to a storage and / or depository of those in business of performing warehouse services for others, for profit;

52. **Water Zone –** refers to bodies of water within the municipality that include rivers, streams, lakes and seas except those included in other zone classification;

53. **Zone / District –** an area within the municipality for specific land use as defined by manmade or natural boundaries;

54. **Zoning Administrator / Zoning Officer –** a city or municipal government employee appointed by the Mayor and who is responsible for the implementation / enforcement of the Zoning Ordinance in the community; and

55. **Zoning Ordinance –** a local legal measure that embodies regulations affecting land use.

ARTICLE IV
ZONE CLASSIFICATIONS

Section 5. Division, Zone or Districts. To effectively carry out the provisions of this Ordinance, the municipality is hereby divided into the following zones or districts as shown in the official zoning map (refer to Annexes and for the appropriate color codes):

1. General Residential Zone (GRZ)
2. Socialized Housing Zone (SHZ)
3. Low Density Commercial Zone (C-1)
4. Medium Density Commercial Zone (C-2)
5. General Institutional Zone (GIZ)
6. Light Industrial Zone (I-1)
7. Agricultural Zone (AGZ)
8. Agro-Industrial Zone (AIZ)
9. Parks and Recreational Zone (PRZ)
10. Tourism Zone (TZ)
11. Water Zone (WZ)

Section 6. Zoning Maps. It is hereby adopted as an integral part of this Ordinance, the official zoning maps for urban areas and for the whole municipality (General), wherein the designation, location and boundaries of the districts / zones herein established are shown and indicated. Such official zoning maps shall be signed by the local chief executive and duly authenticated by the Sangguniang Bayan.

Section 7. Zone Boundaries. The locations and boundaries of the above mentioned various zones into which the municipality has been divided are hereby identified and specified as follows:

ZONE BOUNDARIES

ZONE	LOCATION
General Residential Zone (GRZ)	• All areas colored yellow in Zoning Map • 10 to 100 meters from road centerlines applicable to all road but shall not encroach waterways
Socialized Housing Zone (SHZ)	• Areas colored yellow labeled “SHZ” in Zoning Map in barangays Pandacaqui and Tangle • Areas colored yellow in Zoning Map in barangay San Rafael west side of NLEX adjacent to Summerfield and Tierra Vista subdivision
Low Density Commercial Zone (C-1)	• Areas colored red labeled “C-1” in Zoning Map located in barangay Lagundi • Both sides of JASA Road • 50 to 400 meter from the centerline of JASA Road • from the municipal boundary of Mexico and CSFP up to Lagundi Bridge
Medium Density Commercial Zone (C-2)	• Areas colored red in Zoning Map other than specified as C-1 • Both sides of JASA Road from Lagundi Bridge up to Abacan River • 10 to 50 meters from JASA Road centerline

	• Areas within 10 to 50 meters from road centerline starting from municipal hall up to Parian and San Carlos barangay boundary • 10 to 50 meters from road centerline portions of Quezon Road in barangays San Roque, San Nicolas, and Laug • 10 to 300 meter radius from intersection of NLEX and Sindalan-Anao Road • 10 to 50 meters from centerline of Angeles-Magalang Road in barangay Sapang Maisac as shown in Zoning Map • 10 to 100 meters from centerline of road in northern part of Pandacaqui resettlement area • 10 to 50 meters from centerline of Mexico-Magalang Road in barangay San Carlos from Mexico Community Hospital up to Mexico National High School
General Institutional Zone (GIZ)	• All colored dark blue in Zoning Map
Light Industrial Zone (I-1)	• All colored magenta/pink in Zoning Map • NGCP area located in San Jose Matulid at around 14 hectares • 6 hectares Industrial area at north side of Sindalan-Anao Road in Panipuan near the Mexico and CSPF municipal boundary • 4 hectares PELCO1 area in barangay Sto. Domingo, north side of JASA Road • 6.5-hectare area between Mexico-San Luis road and Quezon road in barangay Laug • 27-hectare area in barangay Dolores Piring west side of Quezon Road
Agricultural Zone (AGZ)	• All areas colored green in the Zoning Map which represents cultivation of crops • All areas colored light blue in the Zoning Map which represents fish farming
Agro-Industrial Zone (AIZ)	• All areas colored orange in Zoning Map
Parks and Recreational Zone (PRZ)	• All areas colored light green and labeled “PRZ” in the Zoning Map • Around 15 to 30 hectare land located west side of NLEX in barangay Acli
Tourism Zone (TZ)	• All areas colored dark green and labeled “TZ” in the Zoning Map • Around 30 to 50 hectare land located west side of NLEX in barangays Acli, Suclaban, and Gandus
Water Zone (WZ)	• All areas colored blue in the Zoning Map

Section 8. Interpretation of the Zone Boundary. In the interpretation of the boundaries for any of the zones indicated on the zoning map, the following rules shall apply:

1. Where zone boundaries are so indicated that they approximately follow the center of street or highway, the street or highway right-of-way lines, shall be construed to be the boundaries;

2. Where zone boundaries are so indicated that they approximately follow the lot lines, such lot lines shall be construed to be the boundaries;

3. Where zone boundaries are so indicated that they are approximately parallel to the center lines or right-of-way lines of street and highway, such zone boundaries shall be construed as being parallel thereto and at such distance there from as indicated in the zoning map. If no distance is given, such dimension shall be determined by the use of the scale shown in said zoning map;

4. Where the boundary of a zone follows approximately a railroad line, such boundary shall be deemed to be the railroad right-of-way;

5. Where the boundary of a zone follows a stream, lake or other bodies of water, such boundary line should be deemed to be at the limit of the political jurisdiction of the community unless otherwise indicated;

6. Where a lot of one's ownership, as of record at the effective date of this Ordinance, is divided by a zone boundary line, the lot shall be construed to be within the zone where the major portion of the lot is located. In case the boundary line bisects the lot, it shall fall in the zone where the principal structure falls;

7. Where zone boundary is indicated as one-lot-deep, said depth shall be construed to be the average lot depth of the lots involved within each particular city / municipal block. Where, however, any lot has a depth greater than said average, the remaining portion of said lot shall be construed as covered by the one-lot-deep zoning district provided the remaining portion has an area less than equivalent to fifty percent (50%) or more of the total area of the lot than the average lot depth shall apply to the lot which shall become a lot divided and covered by two or more different zoning districts, as the case may be;

   In case of any remaining doubt as to the location of any property along zone boundary lines, such property shall be considered as falling within the less restrictive zone;

8. The textual description of the zone boundaries shall prevail over that of the Official Zoning Maps.

Section 9. General Provisions. The uses enumerated in the succeeding sections are neither exhaustive nor all-inclusive. The Local Zoning Board of Adjustment and Appeals (LZBAA) shall, subject to the requirements of this article, allow other uses not enumerated hereunder provided that they are compatible with the uses expressly allowed.

Unless otherwise herein provided, no building structure or land shall be used or occupied, and no building or structure or a part thereof shall hereafter be erected, constructed or reconstructed, moved or structurally altered except in conformity with the provisions of the National Building Code of the Philippines (P.D. 1096) and all the implementing rules and regulations issued hereto. This provision shall be uniformly observed in all the zones.

Allowance of further uses shall be based on the intrinsic qualities of the land and the socio-economic potential of the locality with due regard to the maintenance of the essential qualities of the zone.

Specific uses / activities of lesser density within a particular zone (low density residential) may be allowed within the zone of higher density (medium density residential, high density residential) but not vice versa, nor in another zone and its subdivisions (e.g. general commercial, low density commercial, medium density commercial), except for uses expressly allowed in said zones, such that the cumulative effect of zoning shall be intra-zonal and not inter-zonal.

Section 10. Use Regulations in Residential Zone. A Residential Zone shall be used principally for dwelling / housing purposes so as to maintain peace and quiet of the area within the zone. The following are the allowable uses:

1. Detached family dwelling
2. Multi-family dwelling e.g. row-houses, apartments
3. Residential condominium
4. Apartment
5. Hometel – home stay
6. Pension House
7. Hotel apartment or apartelles
8. Dormitory
9. Boarding House
10. Branch libraries and museums
11. Customary accessory uses like:

    a) Servant's quarter
    b) Private garage
    c) Guard house

12. Home occupation for the practice of one's profession or for engaging home business such as dressmaking, tailoring, baking, running a sari-sari store and the like provided that:

    a) The number of persons engaged in such business / industry shall not exceed five (5) inclusive of the owner;

    b) There shall be no change in the outside appearance of the building premises;

    c) No home occupation shall be conducted in any customary accessory uses cited above;

    d) No traffic shall be generated by such home occupation in greater volume than would normally be expected in a residential neighborhood and any need for parking generated by the conduct of such home occupation shall be met off the street and in a place other than the required front yard; and

e) No equipment or process shall be used in such home occupation which creates noise, vibration, glare, fumes, odors and electrical interference detectable to the normal senses and visual or audible interference in any radio or television receiver or causes fluctuations in line voltage off the premises.

13. Home industry classified as cottage industry provided that:

a) Such home industry shall not occupy more than thirty percent (30%) of the floor area of the dwelling unit. There shall be no change or alteration in the outside appearance of the dwelling unit and shall not be a hazard or nuisance;

b) Allotted capitalization shall not exceed the capitalization as set by the Department of Trade & Industry;

c) Such shall consider same provisions as enumerated in letters c, d and e number 12, home occupation, and this section.

14. Recreational facilities for the exclusive use of the members of the family residing within the premises, such as:

a) Swimming pool
b) Pelota court
c) Others

15. Nursery / elementary school
16. High School
17. Vocational school
18. Sports club
19. Religious use
20. Multi-purpose hall / barangay hall
21. Clinic, nursing and convalescing home, health center
22. Plant nurseries

Section 10a. Use Regulations in General Residential Zone (R-1). A GRZ shall be used principally for housing / dwelling purposes so as to maintain the peace and quiet of the area within the zone with a density of 20 dwelling units and below per hectare. The following are allowable uses:

1. Detached family dwelling
2. Semi-detached family dwelling e.g., duplex, rowhouses
3. Customary accessories uses like

a) Servant's Quarter
b) Private Garage
c) Guard House

4. Home occupation for the practice of one's profession or for engaging home business such as dressmaking, tailoring, baking, running a sari-sari store and the like, provided, that:

a) The number of persons engaged in such business / industry shall not exceed five (5) inclusive of the owner;

b) There shall be no change in the outside appearance of the building premises;

c) No home occupation shall be conducted in any customary accessory uses cited above;

d) No traffic shall be generated by such home occupation in greater volume than would normally be expected in a residential neighborhood and any need for parking generated by the conduct of such home occupation shall be met off the street and in a place other than the required front yard; and

e) No equipment or process shall be used in such home occupation which creates noise, vibration, glare, fumes, odors and electrical interference detectable to the normal senses and visual or audible interference in any radio or television receiver or causes fluctuations in line voltage off the premises.

5. Home industry classified as cottage industry provided that:

a) Home industry shall not occupy more than thirty percent (30%) of the floor area of the dwelling unit. There shall be no change or alteration in the outside appearance of the dwelling unit and shall not be a hazard or nuisance;

b) Allotted capitalization shall not exceed the capitalization as set by the Department of Trade & Industry;

c) Such shall consider same provisions as enumerated in letters c, d and e number 12, home occupation, and this section.

6. Recreational facilities for the exclusive use of the members of the family residing within the premises, such as:

a) Swimming pool
b) Pelota court
c) Others

7. Religious use
8. Multi-purpose hall / barangay hall
9. Pre-school
10. Sports Club
11. Clinic, nursing and convalescing home, health center
12. Plant nurseries

Section 10b. Use Regulations in Medium Density Residential (R-2) Zone. R-2 zones shall be for housing / dwelling purposes, i.e., from 21 to 65 dwelling units per hectare. The following are the allowable uses:

1. All uses allowed in R-1 zone
2. Apartment
3. Boarding House
4. Dormitory
5. Branch Library and Museum
6. Elementary School
7. High School

Section 10c. Use Regulations in High Density Residential (R-3) Zone. An R-3 zone shall be for housing / dwelling purposes of high density, i.e.,66 or more dwelling units per hectare. The following are the allowable uses:

1. All uses allowed in General Residential Zone, R-1, R-2, and R-3 Zones
2. Residential Condominium
3. Pension House
4. Hometel
5. Vocational School
6. Home Apartments and Apartelles
7. High School

Section 10d. Use Regulations in Socialized Housing Zone (SHZ). A SHZ shall be used principally for socialized housing / dwelling purposes for the unprivileged and homeless as defined in RA 7279. Allowed uses:

1. All uses allowed in General Residential Zone,R-1, R-2 and R-3 Zones.

Section 11. Use Regulations in Commercial Zone (GCZ). A Commercial Zone shall be for business / trade / services. Within the zone the following types of establishments shall be allowed:

1. Offices like:

    a) Offices building
    b) Office condominium

Section 11a. Use Regulations in C-1 Zone. Referred to as Central Business District (CBD), a C-1 Zone shall be principally trade, services and business activities. Enumerated below are allowable uses:

1. Offices like:

    a) Office building
    b) Office condominium

2. General retail condominium:

    a) Department store
    b) Bookstore and office supply shop
    c) Home appliance store
    d) Car shop
    e) Photo shop
    f) Flower Shop

3. Food markets and shops like:

    a) Bakery and bake shop
    b) Wine store
    c) Grocery
    d) Supermarket

4. Personal service shops like:

a) Beauty parlor
b) Barber shop
c) Sauna bath and massage clinic
d) Dressmaking and tailoring shops

5. Recreational centers / establishments like:

a) Movie house / theater
b) Play court, e.g. tennis court, bowling lane, billiard hall
c) Swimming pool
d) Day and night club
e) Stadium, coliseum, gymnasium
f) Other sports and recreational establishment

6. Restaurants and other eateries

7. Short term special education like:

a) Dancing schools
b) School for self defense
c) Driving school
d) Speech clinics

8. Storerooms but only as may be necessary for the efficient conduct of the business

9. Commercial housing like:

a) Commercial condominium (with residential units in upper floors)

10. Embassy / consulate
11. Library / museum
12. Filling station / service station
13. Clinic
14. Vocational / technical school
15. Convention center and related facilities
16. Messengerial service
17. Security agency
18. Janitorial service
19. Bank and other financial institutions
20. Radio and television station
21. Building garage
22. Commercial and job printing
23. Typing and photo engraving services
24. Repair of optical instruments and equipment and cameras
25. Repair of clocks and watches
26. Manufacture of insignia, badges and similar emblems except metal
27. Transportation terminal / garage
28. Plant nursery
29. Scientific, cultural and academic centers and research facilities except nuclear, radioactive, chemical and biological warfare facilities.

Section 11b. Use regulations in C-2 Zone. A C-2 Zone shall be for quasi-trade, business activities and service industries performing complimentary functions to principally Commercial Zone (CBD). Within the C-2 Zone the following uses are allowed:

1. All uses in C-1 may be allowed in C-2
2. Repair shops like:

    a.) House appliances
    b.) Motor vehicles and accessories
    c.) Home furnishing shops

3. Transportation terminal / garage with repair
4. Publishing
5. Medium scale junk shop
6. Machinery display shop / center
7. Gravel and Sand
8. Lumber / Hardware
9. Manufacture of ice, ice blocks, cubes, crushed, except dry ice
10. Manufacture of signs and advertising displays (except printed)
11. Chicharon factory
12. Welding shop
13. Machine shop service operation (repainting / rebuilding or custom job order)
14. Repair of motorcycles
15. Lechon or whole toasting
16. Biscuit factory – manufacture of biscuits, cookies, crackers and other similar dried bakery products
17. Doughnut and hopia factory
18. Other bakery products not elsewhere classified
19. Repackaging of food products, e.g. fruits, vegetables, sugar and other related products
20. Funeral parlors, mortuaries and crematory services and memorial chapels
21. Parking lots, garage facilities
22. Other commercial activities not elsewhere classified

Section 12. Use Regulations in Light Industrial Zone (l-1). An l-1 Zone shall be for non-pollutive / non-hazardous and non-pollutive / hazardous manufacturing / processing establishments. Enumerated below are the allowable uses:

Non- Pollutive / Non-Hazardous Industries:

1. Drying fish
2. Biscuit factory-manufacture of biscuits, crackers and other similar dried bakery products
3. Doughnuts and hopia factory
4. Manufacture of macaroni, spaghetti and vermicelli and other noodles
5. Other bakery products not elsewhere classified
6. Life belts factory
7. Manufacture of luggage, handbags, wallets and small leather goods
8. Manufacture of miscellaneous products of leather and leather substitutes and n.e.c
9. Manufacture of shoes except rubber, plastic and wood
10. Manufacture of slippers and sandals except rubber and plastic
11. Manufacture of footwear parts except rubber and plastic
12. Printing, publishing and allied industries and those n.e.c
13. Manufacture of assembly of typewriters, cash registers, weighing, duplicating and accounting machines

14. Manufacture or assembly of electronics data processing machinery and accessories.
15. Renovation and repair of office machinery
16. Manufacture or assembly of miscellaneous office machines and those n.e.c
17. Manufacture of rowboats, bancas, sailboats
18. Manufacture of animal drawn vehicles
19. Manufacture of children vehicles and baby carriages
20. Manufacture of laboratory and scientific instruments, barometers, chemical balance, etc.
21. Manufacture of measuring, controlling equipment, plumb bomb, rain gauge, taxi meters, thermometer, etc.
22. Manufacture or assembly of surgical, medical, dental equipment and medical furniture
23. Quick freezing and cold packaging for fish and other sea foods
24. Quick freezing and cold packaging for fruits and vegetables
25. Popcorn / rice factory
26. Manufacture of medical / surgical supplies, adhesive tapes, antiseptic dressing, sanitary napkins, surgical gauge, etc.
27. Manufacture of orthopaedic and prosthetic appliance (abdominal supporter, ankle supports, arch support, artificial limb, kneecap supporters, etc.
28. Manufacture of photographic equipment and accessories
29. Manufacture or assembly of optical instruments
30. Manufacture of eyeglasses and spectacles
31. Manufacture of optical lenses
32. Manufacture of watches and clocks
33. Manufacture of pianos
34. Manufacture of string instruments
35. Manufacture of wind and percussion instruments
36. Manufacture or assembly of electronic organ
37. Manufacture of sporting gloves and mitts
38. Manufacture of sporting balls (not of rubber or plastic)
39. Manufacture of gym and playground equipment
40. Manufacture of sporting tables (billiards, pingpong, pool)
41. Manufacture of other sporting and athletic goods, n.e.c
42. Manufacture of toys and dolls, except rubber and mold plastic
43. Manufacture of pens, pencils and other office and artist materials
44. Manufacture of umbrella and canes
45. Manufacture of buttons except plastic
46. Manufacture of brooms, brushes and fans
47. Manufacture of needles, pens, fasteners and zippers
48. Manufacture of insignia, badges and similar emblems (except metal)
49. Manufacture of signs and advertising displays (except printed)
50. Small- scale manufacture of ice cream

Non- Pollutive / Hazardous Industries:

1. Manufacture of house furnishing
2. Textile bags factories
3. Canvass bags and other canvass products factory
4. Jute bag factory
5. Manufacture of miscellaneous textile goods, embroideries and weaving apparel
6. Manufacture of fiber batting, padding and upholstery filing except jackets
7. Men's and boy's garment factory
8. Women's and girl's and ladies' factory

9. Manufacture of hats, gloves, handkerchiefs, neckwear and related clothing accessories
10. Manufacture of raincoats and waterproof outer garments except jackets
11. Manufacture of miscellaneous wearing apparel except footwear and those n.e.c
12. Manufacture of miscellaneous fabricated millwork and those n.e.c
13. Manufacture f wooden and cane containers
14. Sawali, nipa and split cane factory
15. Manufacture of bamboo, rattan and other similar products
16. Manufacture of cork products
17. Manufacture of wooden shoes, shoe lace and other similar products
18. Manufacture of miscellaneous wood products and those n.e.c
19. Manufacture of miscellaneous furniture and fixture except primarily of metals and those n.e.c
20. Manufacture of paper stationary, envelopes and related articles
21. Manufacture of dry ice
22. Repackaging of industrial products e.g. paints, varnishes and other related products.

Section 13. Use Regulations in Medium Industrial Zone (I-2). An I-2 zone shall be for pollutive / non hazardous and pollutive / hazardous manufacturing and processing establishments. Enumerated are the allowable uses:

Pollutive / Non-Hazardous Industries

1. Manufacturing and canning of ham, bacon and native sausage
2. Poultry processing and canning
3. Large –scale manufacture of ice-cream
4. Corn mill / Rice mill
5. Chocolate and cocoa factory
6. Candy factory
7. Chewing gum factory
8. Peanuts and other nuts factory
9. Other chocolate and confectionery products
10. Manufacturing of flavoring extracts
11. Manufacture of food products n.e.c (vinegar, vetsin or MSG)
12. Manufacture of fish meal
13. Oyster shell grading
14. Manufacture of medical and pharmaceutical preparations
15. Manufacture of stationary, art goods, cut stone and marble products
16. Manufacture of abrasive products
17. Manufacture of miscellaneous non-metallic mineral products n.e.c
18. Manufacture of cutlery, except table flatware
19. Manufacture of hand tools
20. Manufacture of general hardware
21. Manufacture of miscellaneous cutlery hand tools and general hardware n.e.c
22. Manufacture of household metal furniture
23. Manufacture of office, store and restaurant metal furniture
24. Manufacture of metal blinds, screens and shades
25. Manufacture of miscellaneous furniture and fixture primarily of metal n.e.c
26. Manufacture of fabricated structural iron and steel
27. Manufacture of architectural and ornamental metal works
28. Manufacture of boilers, tanks and other structural sheet metal works
29. Manufacture of other structural products n.e.c

30. Manufacture of metal cans, boxes and containers
31. Manufacture of stamped coated and engraved metal products
32. Manufacture of fabricated wire and cable products
33. Manufacture of heating, cooking and lighting equipment except, electrical
34. Sheet metal works generally manual operation
35. Manufacture of other fabricated metal products except machinery and equipment n.e.c
36. Manufacture or assembly of agricultural machinery and equipment
37. Native plow and harrow factory
38. Repair of agricultural machinery
39. Manufacture or assembly of service industry machines
40. Manufacture of assembly of elevators and escalators
41. Manufacture or assembly of sewing machines
42. Manufacture or assembly of cooking ranges
43. Manufacture or assembly of water pumps
44. Refrigeration industry
45. Manufacture or assembly of other machinery and equipment except electrical n.e.c
46. Manufacture and repair of electrical apparatus
47. Manufacture and repair of electrical cables and wires
48. Manufacture of electrical cables and wires
49. Manufacture of other electrical industry machinery and apparatus n.e.c
50. Manufacture or assembly of electric equipment radio and television, tape recorders, stereo
51. Manufacture or assembly of radio and television transmitting, signaling and detection equipment
52. Manufacture or assembly of telephone and telegraphic equipment
53. Manufacture of other electronic equipment and apparatus n.e.c
54. Manufacture of industrial and commercial electrical appliances
55. Manufacture of household cooking, heating and laundry appliances
56. Manufacture of other electrical appliances n.e.c
57. Manufacture of electric lamp fixtures

Pollutive / Hazardous Industries

1. Flour mill
2. Cassava flour mill
3. Manufacture of coffee
4. Manufacturing of unprepared animal feeds, other grain milling n.e.c
5. Production of prepared feeds for animals
6. Cigar and cigarette factory
7. Curing and redrying of tobacco leaves
8. Miscellaneous processing tobacco leaves, n.e.c
9. Weaving hemp textile
10. Jute spinning and weaving
11. Miscellaneous spinning and weaving mills, n.e.c
12. Hosiery mill
13. Underwear and outwear knitting mills
14. Fabric knitting mills
15. Miscellaneous knitting mills n.e.c
16. Manufacture of mats and mattings
17. Manufacture of carpets and rugs
18. Manufacture of cordage, rope and twine
19. Manufacture of related products from abaca, sisal, henequen, hemp, cotton paper, etc.

20. Manufacture of linoleum and other surfaced coverings
21. Manufacture of artificial leather, oil cloth and other fabrics except rubberized
22. Manufacture of coir
23. Manufacture of miscellaneous textile, n.e.c
24. Manufacture of rough lumber, unworked
25. Manufacture of worked lumber
26. Re-sawmills
27. Manufacture of veneer, plywood and hardwood
28. Manufacture of doors, windows and sashes
29. Treating and preserving of wood
30. Manufacture of charcoal
31. Manufacture of wood and cane blinds, screens and shades
32. Manufacture of containers and boxes of paper and paper boards
33. Manufacture of miscellaneous pulp and paper products, n.e.c
34. Manufacture of perfumes, cosmetics and other toilet preparations
35. Manufacture of wax and polishing preparations
36. Manufacture of candies
37. Manufacture of inks
38. Manufacture of miscellaneous chemical products, n.e.c
39. Tire retreading and rebuilding
40. Manufacture of rubber shoes and slippers
41. Manufacture of industrial moulded rubber products
42. Manufacture of plastic footwear
43. Manufacture of plastic furniture
44. Manufacture of other fabricated plastic products, n.e.c
45. Manufacture of table and kitchen articles
46. Manufacture of pottery, china and earthenware, n.e.c
47. Manufacture of flat glass
48. Manufacture of glass containers
49. Manufacture of miscellaneous glass and glass products, n.e.c
50. Manufacture of clay bricks, clay tiles and hollow clay tiles
51. Manufacture of miscellaneous structural clay products, n.e.c
52. Manufacture of structural concrete products
53. Manufacture of asbestos products
54. Manufacture of engines and turbines except motor vehicles, marine and aircraft
55. Manufacture of metal cutting, shaving and finishing machinery
56. Manufacture of wood working machinery
57. Manufacture, assembly, rebuilding, repairing of food and beverage making machinery
58. Manufacture, assembly, rebuilding, repairing of textile machinery and equipment
59. Manufacture, assembly, rebuilding, repairing of paper industry machinery
60. Manufacture, assembly, rebuilding, repairing of printing, trade machinery and equipment
61. Manufacture of rice mills
62. Manufacture of machines for leather and leather products
63. Manufacture of construction machinery
64. Manufacture of machines for clay, stove and glass industries
65. Manufacture, assembly, repair, rebuilding of miscellaneous special industrial machinery and equipment, n.e.c
66. Manufacture of dry cells, storage, battery and other batteries
67. Boat building and repairing
68. Ship repairing industry, dock yards, dry dock, shipways
69. Miscellaneous ship building and repairing, n.e.c
70. Manufacture of locomotive parts

71. Manufacture of railroad and street cars
72. Manufacture of assembly of automobiles, cars, jeepneys, utility vehicles, buses, trucks and trailers
73. Manufacture of wood furniture including upholstered
74. Manufacture of rattan furniture including upholstered
75. Manufacture of box beds and mattresses

Section 14. Use Regulations in Heavy Industrial Zone (I-3). An I-3 zone shall be highly pollutive / non-hazardous, highly pollutive/ hazardous, high pollutive / extra hazardous, non-pollutive / extremely hazardous manufacturing and processing establishments. Enumerated below are the allowable uses:

Highly pollutive/ non- hazardous industries

1. Meat processing, curing, preserving except processing of ham, bacon, sausage and chicharon
2. Milk processing plants (manufacturing filled, reconstituted, or recombined milk, condensed or evaporated)
3. Butter and cheese processing plants
4. Natural fluid milk processing (pasteurizing, homogenizing, vitaminizing, bottling of natural animal milk and cream related products)
5. Other dairy products n.e.c
6. Canning and preserving fruits and fruit juices
7. Canning and preserving vegetables and vegetable juices
8. Canning and preserving vegetable sauces
9. Miscellaneous canning and preserving of fruits and vegetables n.e.c
10. Fish canning
11. Patis factory
12. Bagoong factory
13. Processing, preserving and canning of fish and other seafood n.e.c
14. Manufacture of starch and its products
15. Manufacture of wines from juices of local fruits
16. Manufacture of malt and malt liquors
17. Manufacture of soft drinks carbonated water
18. Manufacture of instant beverages and syrups
19. Other non- alcoholic beverages n.e.c
20. Other slaughtering, preparing and preserving meat products n.e.c

Highly Pollutive / Hazardous Industries

1. Vegetable oil mills, including coconut oil
2. Manufacturing of refined cooking oil and margarine
3. Manufacture of fish, marine and animal oils
4. Manufacture of vegetables and animal oils and fats n.e.c
5. Sugar cane milling (centrifugal and refined)
6. Sugar refining
7. Muscovado sugar mill
8. Distilled, rectified and blended liquors n.e.c
9. Cotton textile mill
10. Ramie textile mill
11. Rayon and other man-made fiber textile mill
12. Bleaching and drying mills
13. Manufacture of narrow fabrics
14. Tanneries and leather finishing plants
15. Pulp mill
16. Paper and paperboard mills
17. Manufacture of 21ocational

18. Manufacture of inorganic salts and compounds
19. Manufacture of soap and cleaning preparations
20. Manufacture of hydraulic cement
21. Manufacture of lime and lime kilns
22. Manufacture of plaster
23. Products of blast furnaces, steel works and rolling mills
24. Products of iron and steel foundries
25. Manufacture of smelted and refined non-ferrous metals
26. Manufacture of rolled, drawn or extruded non-ferrous metals
27. Manufacture of non-ferrous foundry products

Highly Pollutive / Extremely Hazardous Industries

1. Manufacture of industrial alcohol
2. Other basic industrial chemicals n.e.c
3. Manufacture of fertilizers
4. Manufacture of pesticides
5. Manufacture of synthetic resins, plastic materials and man-made fibers except glass
6. Petroleum refineries
7. Manufacture of reclaimed, blended and compound petroleum products
8. Manufacture of miscellaneous products of petroleum and oil n.e.c

Pollutive / extremely Hazardous Industries

1. Manufacture of plants
2. Manufacture of varnishes, shellac and stains
3. Manufacture of fertilizer
4. Manufacture of other paint products
5. Manufacture of matches
6. Manufacture of tires and inner tubes
7. Manufacture of processed natural rubber not in rubber position
8. Manufacture of miscellaneous rubber products n.e.c

Non-Pollutive / Extremely Hazardous Industries

1. Manufacture of compressed and liquefied gasses

Section 15. Use Regulations in General Industries Zone (GIZ). In GI Zone the following uses shall be allowed:

1. Government center to house national, regional or local offices in the area
2. Colleges, universities, professional business schools, vocational and trade school, technical schools and other institutions for higher learning
3. General hospitals, medical centers multi-purpose clinics
4. Scientific cultural and academic centers and research facilities except nuclear, radioactive, chemical and biological welfare facilities
5. Convention centers and related facilities
6. Religious structures e.g. church, seminary convents
7. Museums
8. Embassies / consulates
9. Student housing e.g dormitories, boarding house

Section 16. Use Regulations in Special Institutional (SIZ) Zone. In SI Zone, the following cases shall be allowed:

1. Welfare, orphanages, boys and girls town, home for the aged and the like
2. Rehabilitation and vocational training center for ex- convincts, drug addicts, unwed mothers, physically, mentally and emotionally handicapped, ex-sanitaria inmates and similar establishments
3. Military camps / reservations / bases and training grounds
4. Penitentiary and correctional institution

Section 17. Use Regulations in Parks and Recreation Zone. The following uses shall be allowed in Parks and Recreational Zones:

1. Parks / gardens
2. Resort areas e.g. beaches, including accessory uses
3. Open air or outdoor sports activities and support facilities, including low raise stadia, gyms, ampitheaters and swimming pools
4. Golf courses, ball courts, race tracts and similar uses
5. Memorial / Shrines, monuments, kiosks and other park structures
6. Sports Club
7. Cockpit arena
8. Underground parking structures / facilities

Section 18. Use Regulations in Agricultural Zone (AGZ). In Agricultural Zones the following uses shall be permitted:

1. Cultivation, raising and growing of staple crops such as rice, corn, camote, cassava and the like;
2. Growing of diversified plants and trees, such as fruit and flower bearing trees, coffee, tobacco, etc;
3. Silviculture, mushroom culture, fishing and fish culture, snake culture, crocodile farm, monkey raising and the like;
4. Customary support facilities such as palay dryers and rice threshers and barns and warehouses;
5. Ancillary dwelling unit / farmhouses for tillers and laborers;
6. Agricultural research and experimentation facilities such as breeding stations, fish farms, nurseries, demonstration farms, etc.
7. Pastoral activities such as goat raising and cattle fattening;
8. Home occupation for the practice of one's profession or engaging home business such as dressmaking, tailoring, baking, running a sari-sari store and the like, provided that:

    a) Number of persons engaged in such business / industry shall not exceed five (5), inclusive of the owner;

    b) There shall be no change in the outside appearance of the building premises;

    c) No home occupation shall be conducted in any customary accessory uses cited above;

    d) No traffic shall be generated by such home occupation in greater volume than would normally be expected in a residential 23ocational23od and any need for parking generated by the conduct of such home occupation shall be met off the street in a place other than the required front yard;

    e) No equipment or process shall be used in such occupation which creates noise, vibration, glare, fumes, odors and

electrical interference detectable to the normal senses and visual or audible interference in any radio or television receiver or causes fluctuations in line voltage off the premises.

9. Home industry classified as cottage industry e.g. mat weaving, pottery making food preservation, etc. Provided that:

   a) Such home industry shall not occupy more than thirty percent (30%) of floor area of the dwelling unit. There shall be no change or alteration in the outside appearance of the dwelling unit and shall not be hazard or nuisance;

   b) Allotted capitalization shall not exceed the capitalization as set by the Department of Trade and Industry (DTI);

   c) Such shall consider same provisions as enumerated in letters c, d e of Home Occupation, this section.

10. Backyard raising of livestock and fowl, provided that:

   a) For livestock – a maximum of 10 heads; and
   b) For fowl – a maximum of 500 birds.

Section 19. Use Regulations in Agro-Industrial Zone (AIZ). In Agro-Industrial Zones the following uses shall be permitted:

1. All uses allowed in Agricultural
2. Rice / corn mills (single pass)
3. Drying, cleaning, curing and preservation of meat and its by products and derivatives
4. Drying, smoking and airing tobacco
5. Flour mill
6. Cassava flour mill
7. Manufacture of coffee
8. Manufacture of unprepared animal feeds, other grain milling, n.e.c
9. Production of prepared feeds for animals
10. Cigar and cigarette factory
11. Curing and redrying tobacco leaves
12. Miscellaneous processing tobacco leaves, n.e.c
13. Weaving hemp textile
14. Jute spinning and weaving
15. Manufacture of charcoal
16. Milk processing plants (manufacturing filled, reconstituted or recombined milk, condensed or evaporated)
17. Butter and cheese processing plants
18. Natural fluid milk processing (pasteurizing, homogenizing, vitaminizing, bottling of natural animal milk and cream related products)
19. Other dairy products, n.e.c
20. Canning and preserving of fruits and fruit juices
21. Canning and preserving of vegetables and vegetable juices
22. Canning and preserving of vegetable sauces
23. Miscellaneous canning and preserving of fruit and vegetables n.e.c
24. Fish canning
25. Patis factory
26. Bagoong factory
27. Processing, preserving and canning of fish and other seafoods n.e.c

28. Manufacture of dessicated coconut
29. Manufacture of starch and its products
30. Manufacture of wines from juices of local fruits
31. Vegetable oil mills, including coconut oil
32. Sugarcane milling (centrifugal and refines)
33. Sugar refining
34. Muscovado sugar mill
35. Cotton textile mill
36. Manufacture / processing of other plantation crops e.g. pineapple, bananas, etc.
37. Other commercial handicrafts and industrial activities utilizing plant or animal parts and/or products as raw materials, n.e.c
38. Other accessory uses incidental to agro-industrial activities

ARTICLE V
GENERAL DISTRICT REGULATION

Section 20. Development Density. Permitted density shall be based on the zones capacity to support development.

Section 21. Height Regulations. Building height must conform to the height restrictions and requirements of the Air Transportation Office (ATO) as well as the requirements of the National Building Code, the Structural Code as well as laws, Ordinances, design standards, rules and regulations related to land development and building construction and the various safety codes.

A. RESIDENTIAL ZONES

A.1. Low Density Residential Zones (R-1) – in R-1 Zone, no building or structure for human occupancy whether public or private shall be higher than ten (10) meters above the highest natural grade line in the property or front sidewalk (main entry); Low rise dwellings are up to three storeys.

A.2. Medium Density Residential Zones (R-2) – in R-2 Zone, no building or structure for human occupancy whether public or private shall be higher than twenty one (21) meters above the highest natural grade line in the property or front sidewalk (main entry) level; mid-rise dwellings are fourth to seven storeys.

A.3. High Density Residential Zones (R-3) **–** in R-3 Zone, high rise dwelling units of eight (8) or more storeys are allowed provided they conform with the zone's prescribed Floor Area Ratio (FAR). The FAR of an R-3 shall be based on the planned density of development intended for the zone.

B. ALL OTHER ZONES

There is no fixed building height limits except those prescribed by the Air Transportation Office (ATO), and other government regulations within these zones, building heights shall be based on the prescribed Floor Area Ratio (FAR).

Section 22. Exemptions from Height Regulations in R-1 and R-2. Exempted from the imposition of height regulations in Residential Zones are the following: towers, church steeples, water tanks and other utilities and such other structures not covered by the height regulations of the National Building Code and / or the Air Transportation Office.

Section 23. Area Regulations. Area regulation in all Zones shall conform with the minimum requirement of existing codes such as:

a) P.D. 957 – the "Subdivision and Condominium Buyers' Protective Law" and its revised implementing rules and regulations
b) B.P. 220 – "Promulgation of Different Levels of Standards and Technical Requirements for Economic and Socialized Housing Projects" and its revised implementation rules and regulations
c) P.D. 1096 – National Building Code
d) Fire Code
e) Sanitation Code
f) Plumbing Code
g) Structural Code
h) Executive Order No. 648
i) Other relevant guidelines promulgated by the national agencies concerned.

Section 24. Road Setback Regulations. The following road setback regulations shall be applied:

Zoning Classifications	Major Thoroughfare 30M and above Diversion / Railways	Secondary Road Provincial	Tertiary Road 6M and below Municipal / Barangay
Residential	5 m	5 m	3 m
Commercial	10 m	10 m	7 m
Industrial	30 m	25 m	10 m
Agriculture	20 m	20 m	7 m
Agro- Industrial	50 m	50 m	10 m
Institutional	20 m	20 m	10 m
Parks & Recreation	10 m	10 m	3 m
Forest	30 m	25 m	10 m

Section 25. Easement. Pursuant to the provisions of the Water code:

1. The banks of rivers and streams and the shores of the seas and lakes throughout their entire length and within a zone of three (3) meters in urban areas; twenty (20) meters in agricultural area and forty (40) meters in forest areas, along their margins, are subject to 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 than what is necessary for space or recreation, navigation, floatage, fishing or salvage or to build structures of any kind.

2. Mandatory five-meter easement on both sides of the Marikina fault traces and such other fault traces on the ground identified by Phivolcs.

Section 26. Buffer Regulations. A buffer of 3 meters shall be provided along entire boundary length between two or more conflicting zones allocating 1.5 meters from each side of the district boundary. Such buffer strip should be open and not encroached upon by any building or structure should be a part of the yard or open space.

Section 27. Specific Provisions in the National Building Code. Specific provisions stipulated in the National Building Code (P.D. 1096) as amended thereto relevant to traffic generators, advertising and business signs, erection or more than one principal structure, dwelling or rear lots, access yard requirement and dwelling groups, which are not in conflict with the provisions of the Zoning Ordinance, shall be observed.

ARTICLE VI
INNOVATIVE TECHNIQUES

Section 28. Innovative Techniques or Designs. For projects that introduce flexibility and creativity in design or plan such as but not limited to Planned Unit Development, housing projects covered by New Town Development under RA 7279, BLISS Commercial Complexes, etc., the Zoning Administrator / Zoning Officer shall, on grounds of innovative development techniques, forward applications to HLURB for appropriate action, unless the local government unit concerned has the capacity to process the same. That after the approval of this Zoning Ordinance and Comprehensive land Use Plan by the Provincial Land Use Committee, the LGU, having the capacity to process application and enforce this Ordinance, shall process applications for locational / zoning clearance and will no longer be forwarded to the HLURB.

ARTICLE VII
ENVIRONMENTAL MANAGEMENT

Section 29. Environmental Compliance Certificate (ECC). Notwithstanding the issuance of Locational Clearance under Section 39 of this ordinance, no Environmentally Critical Projects or projects located in Environmentally Critical Areas shall be commenced, developed or operated unless an Environmental Compliance Certificate (ECC) or a Certificate of Non-Coverage (CNC) is issued by the Department of Environment and Natural Resources.

Section 30. Performance Standards. All land uses, development, or construction in all Zones shall conform to the following standards:

1. Noise and Vibrations

All noise and vibrations-producing machinery shall be enclosed by a building and shall be provided with effective noise-absorbing materials, noise silencers and mufflers, an open yard of a distance not less than twenty (20) meters from the street or adjoining property lines and property planted with dense trees as buffers. To minimize vibration, a machinery should be mounted on shock-absorbing mountings, such as cork set on reinforced concrete foundations or a floating isolated foundation set on piles as needed by the machinery concerned, to reduce all noise and vibration to a reasonable degree. A noise is considered objectionable due to intermittence, beat frequency or high pitch, noise proof buildings are tested and approved by the Municipal officials concerned.

2. Smoke

Any smoke emitted from any source for a period aggregating seven (7) minutes in any given thirty (30) minute time particularly when starting a new fire, shall have a density not greater than No. 2 of Ringlemann Chart

3. Dust, Dirt and Fly Ash

The emission of dust, dirt or fly ash from any source of activity that will pollute the air and render it unclean, destructive, unhealthful or hazardous or cause visibility to be impaired, shall not be permitted. In no case whatsoever shall dust, dirt or fly ash be allowed to exceed 0.30 grams per cubic meter of fuel gas at stack temperature of 60 degrees centigrade so as not to create a haze with opaqueness equivalent to or greater than No. 1 of the Ringlemann Chart.

4. Odors and Gases

The emission of foul odors and gases deleterious to public health, safety and general welfare shall not be permitted. Buildings and activity emitting foul odors and obnoxious gases shall be enclosed within airtight buildings provided with air conditioning system, filters, deodorizing and other air cleansing equipment.

5. Glare and Heat

Glare and heat from any operation or activity shall not be allowed to radiate, be seen or felt from any point beyond the limits of the property.

6. Industrial Waste

Industrial waste shall be disposed of only in a manner that will not create any nuisance or danger to adjoining properties or to the community in general.

7. Sewerage Deposit

No sewerage dangerous to the public health, safety and general welfare shall be discharged to any public sewer system, natural waterway or drainage channel. In addition to other requirements, all sewage shall comply with the pertinent requirements of the National Pollution Control Commission.

8. Acidity

Acidity shall be neutralized to a Ph (ion concentration) of between 6.5 and 8.5 at a daily average volume basis with a temporary variation of 5.0 to 10.0 Ph. Wastewater shall not contain oil and greases in excess of 300 PPM (parts per million) or exceed a daily average of 10 PPM.

Section 31. Special Permit Uses. A special permit shall be required for each of the following uses, subject to terms and conditions as hereunder prescribed:

1. Material Recovery Facility

- No open dumpsite is allowed.
- Adequate fencing shall be put to prevent undue scattering of wastes
- Poisoning of rats and spraying of flies shall be the sole responsibility of the applicant
- The MRF shall not be located outside of the applicant's premises, if private, and shall be located within a reasonable distance from residential zones, if public
- Other sanitary requirements of the Municipality shall be complied with
- This shall be allowed in an area provided by the barangay under a special zoning district as indicated on the zoning plan

2. Cemeteries / Memorial Parks

- They shall be located on the special zoning district and are outside of or within reasonable distance from Residential Zones
- Their proper maintenance shall be the exclusive duty of the applicant or persons running them

3. Funeral Parlors

- Establishment of funeral parlors may be permitted and operated along national or through streets within the Municipality. A one-way private road or alley of not less than three (3) meters with corresponding entrance within the sire of such parlor for the parking of cars or cartage shall be installed

4. Telecommunication Stations

- They may be located within Commercial Zones
- Their sound maintenance shall be the exclusive responsibility of the applicant and / or the persons running them.
- In a case-to-case basis, however, they may be denied location to some Residential Zones provided the preceding condition is complied with.
- Cell sites / towers may be located at built up areas or agricultural areas.

5. Cockpit Arena

- They shall be located within the Parks and Recreation Zone and have at least a 200-meter radius away from residential and commercial areas.
- Adequate parking space should be provided for all its patrons.
- Sanitary regulations should be complied
- Only one cockpit arena may be allowed in a town

6. Abattoir

- Sufficient parking space should be provided.

ARTICLE VIII
MISCELLANEOUS PROVISIONS

Section 32. Projects of National Significance. Projects may be declared by the NEDA Board as Projects of National Significance pursuant to Section 3 of E.O No.72. When a project is declared by the NEDA Board as a project of National Significance, the Locational Clearance shall be issued by HLURB pursuant to E.O No. 72.

Section 33. Environmental Compliance Certificate (ECC). Notwithstanding the issuance of locational clearance under Section 37 of this Ordinance, no environmentally critical projects located in environmentally critical areas shall be commenced, developed or operated, unless the requirements of ECC have been complied with.

Section 34. Subdivision Projects. All owners and / or developers of Subdivision Projects shall, in addition to securing Locational Clearance under Section 37 of this Ordinance, be required to secure a Development Permit pursuant to the provisions of P.D 957 and its implementing rules and regulations of B.P No. 220 and its implementing rules and regulations in the case of Socialized Housing Projects in accordance with the procedures laid down in E.O No. 71, series of 1993.

34.1. All owners / developers must have their own Material Recovery Facility equipped with composting equipments / devices for bio-degradable and possess trucks for transporting collected residual waste to sanitary landfill transfer stations.

34.2. Planting strips along and in both sides of road must be provided by the developer; Strips must be planted with trees and must be maintained and shall never be occupied with temporary/permanent structures.

ARTICLE IX
MITIGATING DEVICES

Section 35. Deviation. Exceptions, variances or deviations from the provisions of this Ordinance may be allowed by the Local Zoning Board of Adjustment and Appeals (LZBAA) only when the following terms and conditions are existing:

1. **Variance**

   a. The property is unique and different from other properties in the adjacent locality and because of its uniqueness, the owner/s cannot obtain a reasonable return on the property.

      This condition shall include at least 3 of the following provisions:

      - Conforming to the provisions of the Ordinance will cause undue hardship on the part of the owner or occupant of the property due to physical conditions of the property (topography, shape, etc.), which is not self-created.

- The proposed variance is the minimum deviation necessary to permit reasonable use of the property.

- The variance will not alter the physical character of the district or zone where the property for which the variance is sought is located, and will not substantially or permanently injure the use of the other properties in the same district or zone.

- That the variance will not weaken the general purpose of the Ordinance and will not adversely affect the public health, safety or welfare.

- The variance will be in harmony with the spirit of this Ordinance.

2. **Exceptions**

a. The exception will not adversely affect the public health, safety and welfare and is in keeping with the general pattern of development in the community.

b. The proposed project shall support economic based activities/provide livelihood, vital community services and facilities while the same time posing no adverse effect on the zone/community

c. The exception will not adversely affect the appropriate use of adjoining property in the same district.

d. The exception will not alter the essential character and general purpose of the district where the exception sought is located.

Section 36. Procedures for Granting Exceptions and Variances. The procedure for the granting of exception and / or variance is as follows:

1. A written application for an exception or variance shall be filed with the Local Zoning Board or Adjustment and Appeals (LZBAA) citing the section of this Ordinance under which the same is sought and stating the ground/s thereof;

2. Upon filing of application, a visible project sign, (indicating the name and nature of the proposed project) shall be posted at the project site;

3. The Local Zoning Board of Adjustment and Appeals shall conduct preliminary studies on the application.

4. A written affidavit of non-objection of the project by the owners of the properties adjacent to the project shall be filed by the applicant with the LZBAA at least fifteen (15) days prior to the decision for exception / variance;

5. In case of objection, the LZBAA shall hold public hearing;

6. At the hearing, any party may appear in person, or be represented by agent/s. All interested parties shall be accorded the opportunity to be heard and present evidences and testimonies.

7. The LZBAA shall render a decision within thirty (30) days from filing of the application, exclusive of the time spent for the preparation of written affidavit of non-objection and the public hearing in case of any objection to the granting of exception/variance.

ARTICLE X
ADMINISTRATION AND ENFORCEMENT

Section 37. Locational Clearance. All owners / developers shall secure Locational Clearance from the Zoning Administration / Zoning Officer or in Cases of Variances and Exemptions, from the Local Board of Adjustment and Appeals (LZBAA) prior to conducting any activity or construction on their property / land.

Section 38. Building Permit. No building permit shall be issued by the Local Government Building Official without a valid Locational Clearance in accordance with this Ordinance.

Section 39. Non-Use of Location Clearance. Upon issuance of a Locational Clearance, the grantee thereof shall have one (1) year within which to commerce to or undertake the use, activity or development covered by such clearance on his property. Non-use of clearance within said period shall result in its automatic expiration, cancellation and the grantee shall not proceed with his project without applying for a new clearance.

Section 40. Certificate of Non- Conformance. A certificate of Non-Conformance shall be applied for by the owner of the structure or operator of the activity involved within six(6) months from the ratification of the Zoning ordinance by the HLURB or the Sangguniang Panlalawigan (S.P). Failure on the part of the owner to register / apply for a certificate of Non- Conformance shall be considered in violation of the Zoning Ordinance and is subject to fine/ penalties.

Upon approval of this Ordinance, the Zoning Administrator/ Zoning Officer shall immediately notify owners of known existing non- conforming use to apply for a Certificate of Non- Conformance.

Section 41. Existing Non-Conforming Uses and Buildings. The lawful uses of any building, structure or land at the time of adoption or amendment of this Ordinance may be continued, although such uses do not conform with the provision of this Ordinance, provided:

1. That no such non-conforming use shall be enlarged or extended to occupy a greater area of land than that already occupied by such use at the time of the adoption of this Ordinance or moved in whole or in part, to any other portion of the lot or parcel or land where such non-conforming use exists at the time of the adoption of this Ordinance;

2. That such non-conforming use which has ceased operation for more than one (1) year be again revived as non-conforming use;

3. An idle / vacant structure may not be used for non-conforming activity;

4. That any non-conforming structure or structures under one ownership which has / have been damaged may be reconstructed and used as before, provided that such reconstruction is not more than fifty percent (50 %) of the replacement cost;

5. That should such non-conforming portion of structure be destroyed by any means to an extent of more than fifty percent (50%) of its replacement cost at the time of destruction, it shall not be reconstructed except in conformity with the provisions of this Ordinance;

6. That no such non-conforming structure may be enlarged or altered in a way, which increases its non-conformity, but any structure or portion thereof may be altered to decrease its non-conformity;

7. That should such structure be moved for any reason to whatever distance it shall thereafter conform to the regulation of the district in which it is moved or relocated

In addition, the owner of a non-conforming use shall program the phase-out and relocation of the non-conforming use within ten (10) years from the effectivity of this Ordinance.

Section 42. Responsibility for Administration and Enforcement. This Ordinance shall be enforced and administered by the Local Chief Executive through the Zoning Administrator / Zoning Officer who shall be appointed by the former in accordance with existing rules and regulations on the subject.

Section 43. Powers and Functions of a Zoning Administrator / Zoning Officer. Pursuant to the provisions of Executive Order No. 72 implementing R.A No. 7610 in relation to Section 5 paragraph a and d and Section 7 of Executive Order No. 648 dated 07 February 1981, the Zoning Administrator / Zoning Officer shall perform the following functions, duties and responsibilities:

1. Enforcement –

A. Act on all applications for Locational Clearance for all projects.

1. Issuance of Locational Clearance for projects conforming to zoning regulations

2. Recommend to the Local Zoning Board of Adjustment and Appeals (LZBAA) the grant or denial of application for variances and exemptions and the issuance of Certificate of Non-Conformance for non-conforming projects lawfully existing at the time of the adoption of the zoning ordinance, including clearances for repairs / renovations on non-conforming uses consistent with the guideline thereof

B. Monitor on-going / existing projects within their respective jurisdictions and issue notices of violation and show cause order to owners, developers, or mangers of projects that are violative of Zoning Ordinance and if necessary, pursuant to Sec. 3 of E.O No.

72 and Sec. 2 of E.O No. 71, refer subsequent actions thereon to the HLURB

C. Call and coordinate with the Philippine National Police for enforcement of all orders and processes issued in the implementation of this ordinance

D. Coordinate with the Municipal Legal Officer for other legal actions / remedies relative to the foregoing

2. Planning –

A. Coordinate with the Provincial Land Use Committee / Regional Office of the HLURB regarding proposed amendments to the Zoning Ordinance prior to the adoption by the Sangguniang Bayan

Section 44. Actions on Complaints and Oppositions. A complaint for violation of any provision of the Zoning Ordinance or of any clearance or permit issued pursuant thereto shall be filed with the LZBAA.

However, oppositions to application for clearance, variance or exception shall be treated as a complaint and dealt with in accordance with the provision of this section.

Section 45. Functions and Responsibilities of the Local Zoning Board of Adjustment. There is hereby created a LZBAA which shall perform the following functions and responsibilities:

A. Act on Applications of the following nature:

1. Variances
2. Exceptions
3. Non- Conforming Uses
4. Complaints and Opposition to Applications

B. Act on Appeals on Grant or Denial of Locational Clearance by the Zoning Administration / Zoning Officer

Decisions of the Local Zoning Board of Adjustments and Appeals shall be appealable to the HLURB.

Section 46. Composition of the Local Zoning Board of Adjustment and Appeals (LZBAA)._ The Municipal Development Council shall create a sub-committee that will act as the LZBAA composed of the following members:

1. Municipal Mayor as Chairman
2. Municipal Legal Officer
3. Municipal Assessor
4. Municipal Engineer
5. Municipal Planning and Development Coordinator (if other than the Zoning Administrator)
6. Two (2) representatives of the private sector or non-government organizations, nominated by their respective organizations and confirmed by the Municipal Mayor. In the event of no-availability of any of the officials enumerated above, the Sangguniang Bayan

shall elect the number of its members as may be necessary to meet the total number above set forth, as representatives

Section 47. Interim Provision. Until such time that the LZBAA shall have been constituted, the HLURB shall act as the LZBAA. As an appellate Board, the HLURB shall adopt its own rules of procedure to govern the conduct of appeals arising from the administration and enforcement of this Ordinance.

Section 48. Review of the Zoning Ordinance. The Municipal Development Council shall create a sub-committee, the Local Zoning Review Committee (LZRC) that shall review the Zoning Ordinance considering the Comprehensive Land Use Plan, as the need arises, based on the following reasons / situations:

a) Change in local development plans
b) Introduction of projects of national significance
c) Petition for rezoning
d) Other reasons which are appropriate for consideration

Section 49. Composition of the local Zoning Review Committee (LZRC). The Local Zoning and Review Committee shall be composed of sectoral experts.

These are the Local Officials / Civic Leaders responsible for the operation, development and progress of all sectoral undertakings in the locality, e.g.:

a) Municipal Planning and Development Coordinator
b) Municipal Health Officer
c) Municipal Agriculturist
d) Association of Barangay Captains (ABC) President
e) Municipal Engineer
f) Community Environment and Natural Resources Officer (CENRO)
g) Municipal Agrarian Reform Officer (MARO)
h) District Schools Supervisor
i) Three (3) Private Sector Representatives (Local Chamber of Commerce, Housing and Industry, and Homeowner's Association)
j) Two (2) NGO Representative

For purposes of policy and program coordination, the LZRC shall be attached to the Municipal Development Council (MDC).

Section 50. Functions of the Local Zoning Review Committee. The Local Zoning Review Committee shall have the following powers and functions:

A. Review the Zoning Ordinance for the following purposes:

1. Determine amendments or revisions necessary in the Zoning Ordinance because of changes that might have been introduced in the Comprehensive Land Use Plan;

2. Determine changes to be introduced in the Comprehensive Land Use Plan in the light of permits given and exceptions and variances granted;

3. Identify provisions of the Ordinance that are difficult to enforce or are unworkable.

B. Recommend to the Sangguniang Bayan necessary legislative amendments and to the local planning and development staff the needed changes in the plan as a result of the review conducted; and

C. Provide information to the HLURB that would be useful in the exercise of its functions.

Section 51. Amendments to the Zoning Ordinance. Changes in the Zoning Ordinance as a result of the review by the Local Zoning Review Committee shall be treated as an amendment, provided that any amendment to the Zoning Ordinance or provisions thereof shall be subject to public hearing and review evaluation of the Local Zoning Review Committee and shall be carried out through a resolution of three fourths vote of the Sangguniang Bayan. Said amendment shall take effect only after approval and authentication by the Sangguniang Panlalawigan.

Section 52. Violation and Penalty. Any person who violates any of the provisions of this Ordinance, shall, upon conviction, be punished by a fine not exceeding FIVE THOUSAND (~~₱~~ 5,000.00) PESOS or an imprisonment for a period not exceeding six (6) months or both at the discretion of the Court. In case of violation by a corporation, partnership or association the penalty shall be imposed upon erring officers thereof.

Section 53. Suppletory Effect of Other Laws and Decrees. The provisions of this Ordinance shall be without prejudice to the application of other laws, Presidential Decrees, Letter of Instructions and other Executive or Administrative Orders vesting national agencies with jurisdiction over specific land areas, which shall remain in force and effect, provided that land use decisions of national agencies concerned shall be consistent with the Comprehensive Land Use Plan of the locality.

Section 54. Separability Clause. Should any section or provision of this Ordinance be declared by the Courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinance as a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

Section 55. Repealing Clause. All ordinances, rules or regulations in conflict with the provisions of this Ordinance are hereby repealed provided that the rights that are vested upon the effectivity of this Ordinance shall not be impaired.

Section 56. Effectivity Clause. This Ordinance shall take effect upon approval by the Housing and Land Use Regulatory Board / Sangguniang Panlalawigan .

UNANIMOUSLY ENACTED.

I HEREBY CERTIFY to the correctness of the above Municipal Ordinance.

ADONIS L.COSIO
Secretary to the Sanggunian

ATTESTED:

LOURDES G. SICAT
S. B. Member

JONATHAN R. PANGAN
S. B. Member

RUDENCIO S. GONZALES
S. B. Member

REX DL. CALMA
S. B. Member

CARLOS A. RIVERA
S. B. Member

NOEL R. SAMBILE
S. B. Member

EMMANUEL R. MANALO
S. B. Member

MERLY E. MANALO
S. B. Member

E. STEPHEN V. TUMANG
S.K.M.F. President

ROY D. MANALASTAS
Municipal Vice-Mayor
Presiding Officer

APPROVED BY:

TEDDY C. TUMANG
Municipal Mayor

Date of Approval: AUG 0 6 2012