Batangas

SOCIO-ECONOMIC & PHYSICAL PROFILE 2021

GOVERNOR HERMILANDO I. MANDANAS

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Republic of the Philippines
PROVINCE OF BATANGAS
OFFICE OF THE GOVERNOR
Capitol Building, Kumintang Ibaba
Batangas City

MESSAGE

The Province of Batangas thru the efforts of the Provincial Planning and Development Office undertakes the annual updating of our Socio-Economic and Physical Profile (SEPP). This is in line with our commitment for better public service and the desire to strengthen our Province's' database.

The SEPP is the product of compiled qualitative and quantitative data collected from various sources through rigorous research. The data analyzed and interpreted may be used as a timely and relevant tool for the formulation of data-driven future plans, programs, services, and enhancement of current policies of the government and involved key stakeholders. Likewise, it can serve as reference material to our constituents, data users and the general public.

Now therefore, as we face challenges brought upon by the African Swine Fever (ASF), the Eruption of Taal Volcano and the world-wide pandemic caused by the Coronavirus (COVID-19) and other natural calamities, it is my great hope that upon publication of the Province's SEPP it will serve as a guide to combat unexpected events through our utmost preparation and quality decisions.

United as One, the Province of Batangas will continue to valiantly withstand all adversities and head towards a brighter future. **Ang Batangas ay Magiting! Mabuhay ang Lalawigan ng Batangas!**

HERMILANDO I. MANDANAS
Governor

F O R E W O R D

The Socio-Economic and Physical Profile (SEPP) presents various information relative to the demographic, social, economic, environmental, physical, and institutional condition of the Province of Batangas. Updated data and statistics which are gathered annually from different primary and secondary sources such as national and local agencies/ offices, LGUs and other private institutions are analyzed and consolidated for accessible use.

The Provincial Planning and Development Office remains steadfast in fulfilling our mandate of providing quality data to our end-users such as planners, investors, students, stakeholders and the general public. We also recognize the importance of updated information for our policy makers and other relevant entities in the formulation of policies and development strategies of the province. Facing uncertain situations amidst the pandemic, reliable and accurate data serve as essential elements in all areas of development planning. Cognizant of these, it is with utmost pleasure that we would like to present the SEPP of the Province of Batangas for the year 2021.

ENGR. EVELYN L. ESTIGOY, EnP/Ch.E.
Provincial Planning and Development Coordinator

A&D	Alienable and Disposable
AFP	Armed Forces of the Philippines
AMCR	Average Monthly Crime Rate
APCN	Asia-Pacific Cable Network
APCN-2	Asia-Pacific Cable Network 2
APSE	Air Pollution Source Equipment
ARA	Agency Remittance Report
ASF	African Swine Flu
BATELEC	Batangas Electric Cooperative
BCG	Bacille Calmette-Guerin
BDRRMC	Barangay Disaster Risk Reduction and Management Council
BEmONC	Basic emergency Obstetric and Newborn Care
BHW	Barangay Health Workers
BNS	Barangay Nutrition Scholars
BOI	Board of Investments
BPLO	Business Permit Licensing Office
BWP-RWSAs	Barangay Water Works-Rural Water Works and Sanitation Associations
CALABARZON	Cavite, Laguna, Batangas, Rizal, Quezon
CBD	Central Business District
CBR	Crude Birth Rate
CCA	Climate Change Adaption
CCE	Crime Clearance Efficiency
CCW	Center – Corridor – Wedge
CDR	Crude Death Rate
CGS	Child Growth Standard
CHED	Commission on Higher Education

CHT	Community Health Team
CLS	Cable Landing Station
CLUP	Comprehensive Land Use Plan
CMD	Contaminant Mass Discharge
CMR	Child Mortality Rate
COA	Commission on Audit
COVID-19	Coronavirus Disease 2019
CSE	Crime Solution Efficiency
CSO	Civil Society Organization
CSR	Cohort Survival Rate
DA	Department of Agriculture
DCC	Day Care Center
DCW	Day Care Worker
DENR	Department of Environment and Natural Resources
DepEd	Department of Education
DILG	Department of the Interior and Local Government
DO	Dissolved Oxygen
DOE	Department of Energy
DOH	Department of Health
DPWH	Department of Public Works and Highways
DRR	Disaster Risk Reduction
DSWD	Department of Social Welfare and Development
DWDM	Dense Wavelength Division Multiplexing
ECEd	Early Childhood Education
EFHSIS	Electronic Field Health Services Information System
ELA	Executive-Legislative Agenda

EPI	Expanded Program on Immunization
EPZs	Export Processing Zones
FAB	Fernando Air Base
FIC	Fully Immunized Child
FTZs	Free Trade Zones
Gbps	Gigabytes per Second
GCQ	General Community Quarantine
GER	Gross Enrolment Ratio
GPI	Gender Parity Indicator
GPR	Gender Parity Ratio
GSIS	Government Service Insurance System
GTS	General Telephone System
HDMF	Home Development Mutual Fund
HEIs	Higher Education Institutions
HEPA	Hepatitis
HH	Household
HIV-AIDS	Human Immunodeficiency Virus-Acquired Immunodeficiency Syndrome
HRCDD	Human Resource Career Development Division
IEEC	Ibaan Electric Engineering Corporation
IEs	Industrial Estates
IMR	Infant Mortality Rate
IRA	Internal Revenue Allotment
IRR	Implementing Rules and Regulations
ISF	Integrated Social Forestry
IYCF	Infant and Young Feeding
JHS	Junior High School

JMP	Joint Monitoring Programme
KBS	Kumintang Broadcasting System
LFP	Labor Force Participation
LFPR	Labor Force Participation Rate
LGU	Local Government Unit
LPS	Low Pressure Seawater
LRME	Locally Registered Meat Establishment
LTO	Land Transportation Office
LUCs	Local Universities and Colleges
MARINA	Maritime Industry Authority
MCV	Meningococcal vaccine
MERALCO	Manila Electric Company
MGB	Mines and Geosciences Bureau
MMR	Measles-Mumps-Rubella vaccine
MMR	Maternal Mortality Ratio
MNCHN	Maternal, Neonatal, Child Health and Nutrition
MPA	Marine Protected Area
MSEZ	Manufacturing Special Economic Zone
MT	Metric Ton
MWS	Municipal Water System
NER	Net Enrolment Ratio
NHTS	National Household Targeting System
NMIC	National Meat Inspection Commission
NMIS	National Meat Inspection Service
NOSA	Notice of Salary Adjustment
NOSI	Notice of Salary Increment

OCD	Office of Civil Defense
OJT	On the Job Trainee
OPT	Operation Timbang
OPV	Oral Polio Vaccine
PAF	Philippine Air Force
PAF AETC	Philippine Air Force Air Education and Training Command
Pag-IBIG	Pagtutulungan sa Kinabukasan: Ikaw, Bangko, Industria at Gobyerno
PCLEDO	Provincial Cooperative Livelihood and Entrepreneurial Development Office
PCSO	Philippine Charity Sweepstakes Office
PAGCOR	Philippine Amusement and Gaming Corporation
PCV	Pneumococcal Conjugate Vaccine
PDPFP	Provincial Development and Physical Framework Plan
PDRRCMC	Province Disaster Risk Reduction and Crises Management Council
PDRRMC	Provincial Disaster Risk Reduction Management Council
PENTA	Pentavallent
PEO	Provincial Engineering Office
PETC	Private Emission Testing Center
PEZA	Philippine Economic Zone Authority
PG-ENRO	Provincial Government-Environment and Natural Resources Office
PhilHeath	Philippine Health Insurance Corporation
PHO	Provincial Health Office
PLDT	Philippine Long Distance Telephone
PMO-BGS	Port Management Office – Batangas
PNP R4A	Philippine National Police Region 4A
PPDO	Provincial Planning and Development Office
PSA	Philippine Statistics Authority

PTCAO	Provincial Tourism and Cultural Affairs Office
PTV	Perennial Trees and Vines
PUD	Planned Unit Development
RC	Reinforced Concrete
RCDG	Reinforced Concrete Design Girder
ROTA	Rota Virus Vaccine
RPFP	Regional Physical Framework Plan
RPT	Real Property Tax
RSET	Regional Social and Economic Trends
SCC	Suitable to annual Cultivated Crops
SEF	Special Education Fund
SHS	Senior High School
SIR	Suitable to Irrigated Rice
SMW3	Sea-Me-We 3
SpEd	Special Education
SSE	South- South East
STI	Sexually Transmitted Infection
SUCs	State Universities and Colleges
SWM	Solid Waste Management
TBAs	Traditional Birth Attendants
TBps	Terabytes per Second
TSP	Total Suspended Particulates
UNICEF	United Nations Children's Fund
VIP	Verde Island Passage
WBTS	Western Batangas Telephone System
WHO	World Health Organization

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Chapter 1 GENERAL INFORMATION

1.1 Historical Background

Long before the colonization era, a civilization had already thrived in the province of Batangas. These inhabitants were said to be found in one of the major waterway of the province, the Pansipit River. Also, historical accounts thru archeological findings suggest that the natives within the purlieu are in extensive contact with other people as far as China and other neighboring countries. This can be proved by some notable findings of relics, stone implements, jewelries, ancient potteries, finding of fossils and the likes within the province.

The name “Batangan” or “Batangas” was derived from the word “batang”, which is a term of the natives for the numerous logs found in the Calumpang River, the body of water that runs through the northeastern portion of the town and assumes the shape of a tuning fork.

Originally, Batangas was comprised of Occidental Mindoro, Oriental Mindoro, Marinduque and portions of Laguna and Ambos-Camarines and originally known as “Coumintan” or “Kumintang”. It is a song and dance repertoire that is very popular and distinct to the province.

Batangas was officially founded in the year 1581 and became the first practically organized province in Luzon in 1534. Balayan was the capital of the province for 135 years from 1597-1732. In 1732 it was moved to Taal, the then most progressive and flourishing town of the Province. After several calamitous eruptions of Taal Volcano that buried the old Taal town site, the capital was transferred to Batangas (now a city) in 1754 where it has remained to the present.

During the Spanish-American war, many illustrious Batangueños made some pages in our history, most particularly Apolinario Mabini, the sublime paralytic and Brains of the Revolution, Marcela Agoncillo who made the present Philippine Flag, and General Miguel Malvar who was recognized as the last Filipino general to surrender to the Americans. Upon restoration of peace in 1901, the reign of Don Jose Villanueva who was installed Civil Governor by the Americans, marked a new thrust towards education, economic development and democratic government.

The Second World War somehow slackened progress in Batangas. However, prominent Batangueños did their best and contributed efforts to the speedy growth of the province after the war. To name a few are Sanoy Leviste, the Rectos, the Dioknos, Kalaws, and the Laurels who did their best not only for Batangas but for the whole Philippines as well.

1.2 Geographic Location and Features

1.2.1 Location, Land Area and Political Subdivisions

As shown in Map 1.1, the province of Batangas is one of the five (5) provinces that comprise the **CALABARZON** (Cavite, Laguna, Batangas, Rizal and Quezon) Region or Region IV-A. It is located at the intersection 13°15' north latitude and 121° east longitude in southwestern Luzon in the midst of Tagalog region.

It is bounded on the north by the province of Cavite; on the northeast and east by the provinces of Laguna and Quezon respectively; on the south by Verde Island passages and the islands of Occidental and Oriental Mindoro; and on the west by West Philippine Sea. It can be reached through good roads from Manila by way of Cavite via Taqaytay City on the northwest and by way of Laguna via Calamba-Sto. Tomas boundary on the northeast; from Quezon province by way of two entrances at the boundaries of San Antonio and Padre Garcia and Candelaria and San Juan on the east.

It has a total land area of 316,581 hectares or 3,165.81 square kilometers and accounts for 1.06 percent of the Philippines' total land area. The largest share of the provincial land area belongs to Batangas City which has 28,296 hectares, equivalent to 8.93 percent while the smallest land area belongs to the Municipality of Sta. Teresita with 1,250 hectares, just about 0.4 percent of the Province's total land area.

Batangas Province is comprised of thirty (30) municipalities, four (4) component cities and has one thousand seventy-eight (1,078) barangays. Likewise, as shown on Map 1.2, the Province is politically subdivided into six (6) congressional districts classified as follows:

District I – the western section known as Sugar, Aqua-culture and Tourism Area composed of the eight (8) Municipalities of Nasugbu, Lian, Calatagan, Tuy, Balayan, Calaca, Lemery and Taal.

District II – the southern portion and Industrial Area comprised of Municipalities of Bauan, Mabini, Lobo, San Luis, San Pascual and Tingloy.

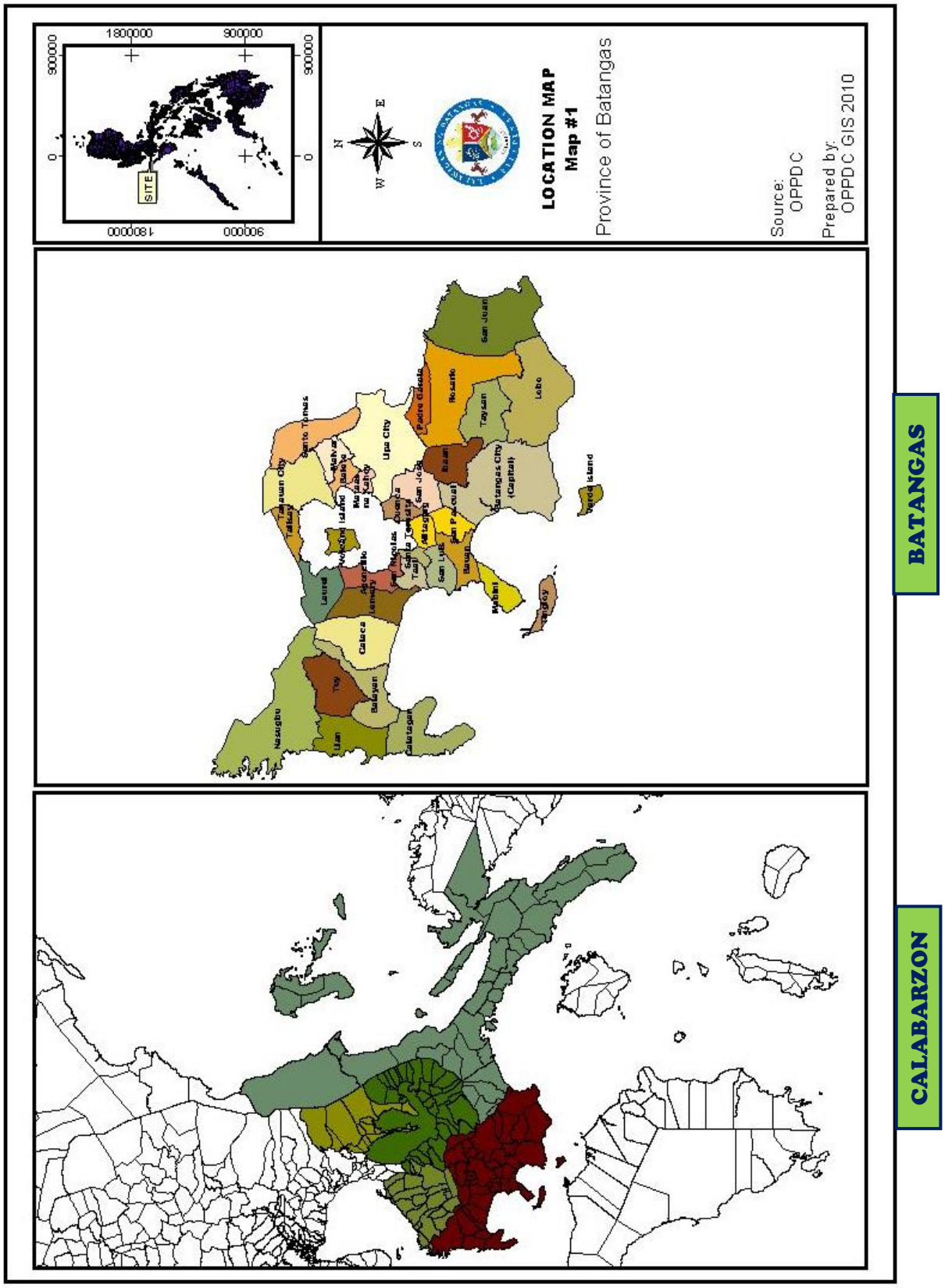
District III – the Taal Lakeshore Area which is the northern part of the Province, cradling Tanauan City and the eleven (11) Municipalities of Agoncillo, Alitagtag, Balete, Cuenca, Laurel, Mataasnakahoy, Malvar, San Nicolas, Sta. Teresita, Sto. Tomas, Talisay.

District IV – the eastern section and Agribusiness area comprised of the six (6) Municipalities of Ibaan, Padre Garcia, Rosario, San Jose, San Juan and Taysan.

District V – City of Batangas, regarded as the capital of the Province and the seat of the Provincial Government. It is also considered as the center of trade and commerce as well as the major urban center of CALABARZON where the international port of entry is located.

District VI – City of Lipa, considered as the Little Rome of the Philippines, and the bastion of Catholic Faith in the country

Map 1.1: Location Map of Batangas Province



Map 1.2: Congressional District Map, Province of Batangas

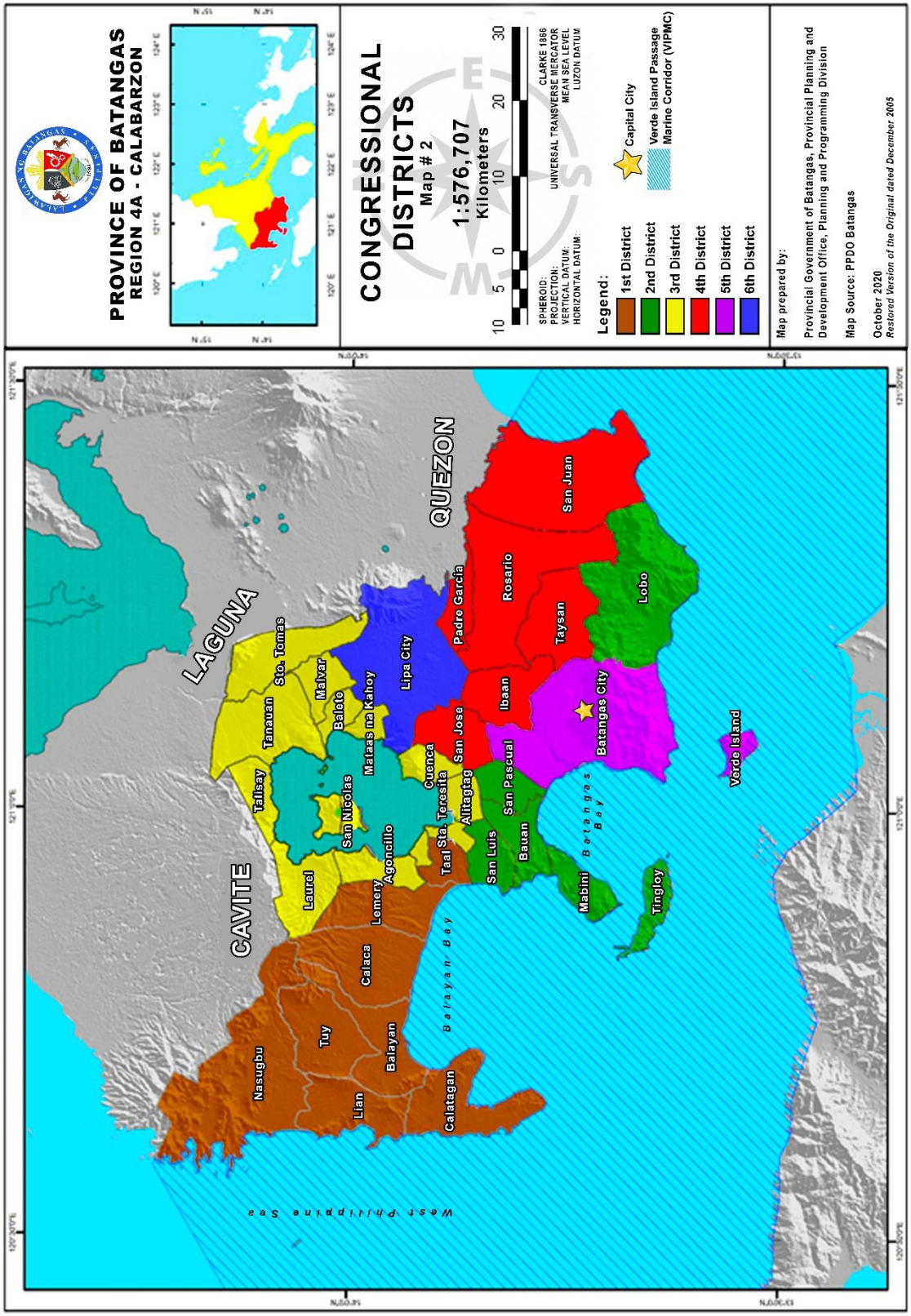


Table 1.1 shows the composition of the Province in terms of number of barangays, their land area and its percent distribution. The city/municipality that has the most number of barangays is Batangas City which has a total of 105 barangays, second is Lipa City with 73 barangays and third is Tanauan City. The Municipalities of Balayan and Rosario both have 48 barangays. In terms of land area, Batangas City has the largest land area with a total of 28,296 hectares; followed by San Juan with the total of 27,340 hectares; and third by Nasugbu with 26,299 hectares. It's percent distribution comprises of 8.93%, 8.63% and 8.3% respectively to the total land percentage of the Province.

Table 1.1: Number of Barangays and Land Area by City/Municipality

PROVINCE / CITY/ MUNICIPALITY	LAND AREA (in Hectares)	NO. OF BARANGAYS
BATANGAS CITY	28,296	105
LIPA CITY	20,940	72
TANAUAN CITY	10,716	48
STO TOMAS CITY	9,114	30
AGONCILLO	5,468	21
ALITAGTAG	2,344	19
BALAYAN	10,873	48
BALETE	2,504	13
BAUAN	6,660	40
CALACA	10,025	39
CALATAGAN	11,197	25
CUENCA	4,036	21
IBAAN	9,895	26
LAUREL	6,812	21
LEMERY	10,155	46
LIAN	7,681	19
LOBO	19,268	26
MABINI	4,296	34
MALVAR	3,645	16
MATAASNAKAHOY	2,213	16
NASUGBU	26,299	42
PADRE GARCIA	9,374	18
ROSARIO	18,943	48
SAN JOSE	4,947	33
SAN JUAN	27,340	42
SAN LUIS	3,916	26
SAN NICOLAS	2,664	18
SAN PASCUAL	3,495	29
STATERESITA	1,250	17
TAAL	2,976	42
TALISAY	2,822	21
TAYSAN	10,936	20
TINGLOY	3,243	15
TUY	12,238	22
TOTAL	**316,581**	**1,078**

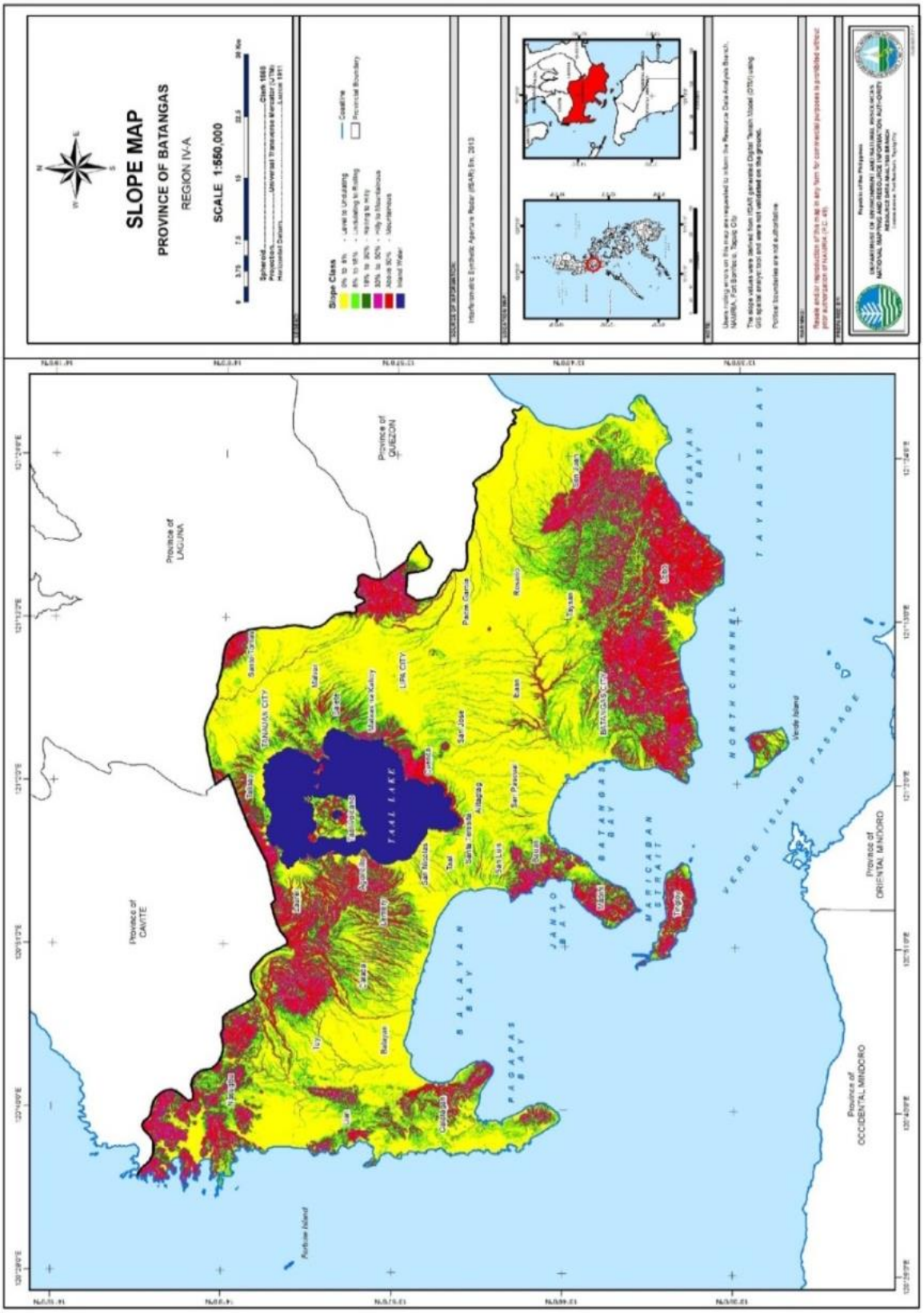
Data Source: Land Area: Provincial Assessor's Office, No. of Barangays: PDRRMO

1.2.2 Slope and Topography

The terrain of Batangas Province is mostly composed of elevated lands, rolling hills, small low flat lands and numerous mountains as illustrated in Map 1.3. Municipalities in the elevated lands are Malvar, Mataasnakahoy, San Jose and the Cities of Lipa, Tanauan and Sto. Tomas. Low flat lands well suited for lowland rice culture are found in Padre Garcia and some portions of Rosario, Taysan, Lemery, Calaca, Lian, San Juan and Nasugbu. The lands of Cuenca, Calatagan, Balayan, Ibaan, Bauan, San Pascual, Taal, San Nicolas, Sta. Teresita, Alitagtag and Batangas City are gently rolling with some mountains. Mountainous municipalities are Lobo, Mabini, Tingloy, Laurel, and Talisay. Rolling hills are found in Rosario, Lemery, Calaca, Lian, San Juan, San Luis, Tuy and Agoncillo.

Some of the prominent mountains in the Province are Lobo Mountains in Lobo, Batulao in Nasugbu, Panay in Mabini, Makulot in Cuenca, Banoy and Pinamucan in Batangas City, Susong Dalaga in Lipa City, San Pedrino in Southwestern Balayan, Los Picos and Pico de Loro in Nasugbu and Compradia in between San Juan and Rosario. Batangas shares with Laguna and Quezon Mt. Makiling and Mt. Malipunyo and Tagaytay Ridge with Tagaytay City. Batangas has generally rolling terrain with some 50% of its land area having a grade of less than 15°. Slopes are found along the shores of Verde Island Passage and the shores of Taal Lake. In the central part of the Province is Mt. Makulot with an average of 957 meters above sea level.

Map 1.3. Slope Map of Batangas Province



Irrigated Land *- Land serviced by natural irrigation or man - made irrigation facilities. These include lands where water is not readily available as existing irrigation facilities need rehabilitation or upgrading or where irrigation water is not available year-round.*

Fishpond *- A land-based facility enclosed with earthen or stone material to impound water for growing fish.*

Annual Cultivated Crops *- These are production areas devoted to sugarcane, corn, peanuts, and vegetables like eggplants, squash, mustard and root crops such as cassava, gabi, ube, and sweet potato.*

Perennial Tree & Vine Crops *- Plant or trees that last for more than two growing seasons, either dying back after each season or growing continuously.*

Plantation forest *- Generally intended for the production of timber and pulpwood increase the total area of forest worldwide.*

Production forest *- Production forests are forestlands utilized for timber production and non-timber uses. This can either be grassland, secondary forest or logged over areas which includes tenured forest land wherein utilization of forest resources in the area are regulated and well managed.*

Forest Reserve Mountains *- Forest lands that have been reserved by the President of the Philippines for any specific purpose or purposes.*

Table 1.2 shows the description of the slope categories as well as its crop suitability and Map 3 shows the Land Suitability of Batangas. Major areas that are found to be Suitable to Irrigated Rice (SIR) land use are located in the municipalities of Balayan, Lemery, Lian, Nasugbu, Rosario, San Juan and Taysan, while minor areas are found in Lobo, Padre Garcia, Calatagan, Laurel and Calaca. These are low lying areas where irrigation water is abundant and can sustain rice crop production, if properly developed and maintained.

Table 1.2: Slope Categories, Area, Description & Crop Suitability

Range	Area	Description	Crop Suitability
	(ha.)		
0 - 3%	25,253	Level to nearly level	Irrigated/Paddy Fishpond
3 - 8%	54,624	Gently sloping to undulating	Annual cultivated crops
8 - 18%	8,490	Moderately sloppy to rolling	Perennial tree & vine crops
18 - 30%	12,810	Strongly sloping to moderately steep	Plantation forest
30 - 50%	17,750	Steep hills and mountains	Production forest
More than 50%	87,654	Very steep hills	Forest reserve mountains

Municipalities that are usually found near the seashore or adjacent to river areas are considered to be suitable to Fishpond Production. These are the areas from Balayan, Calatagan, Lian, Lobo, Nasugbu, San Juan and Batangas City.

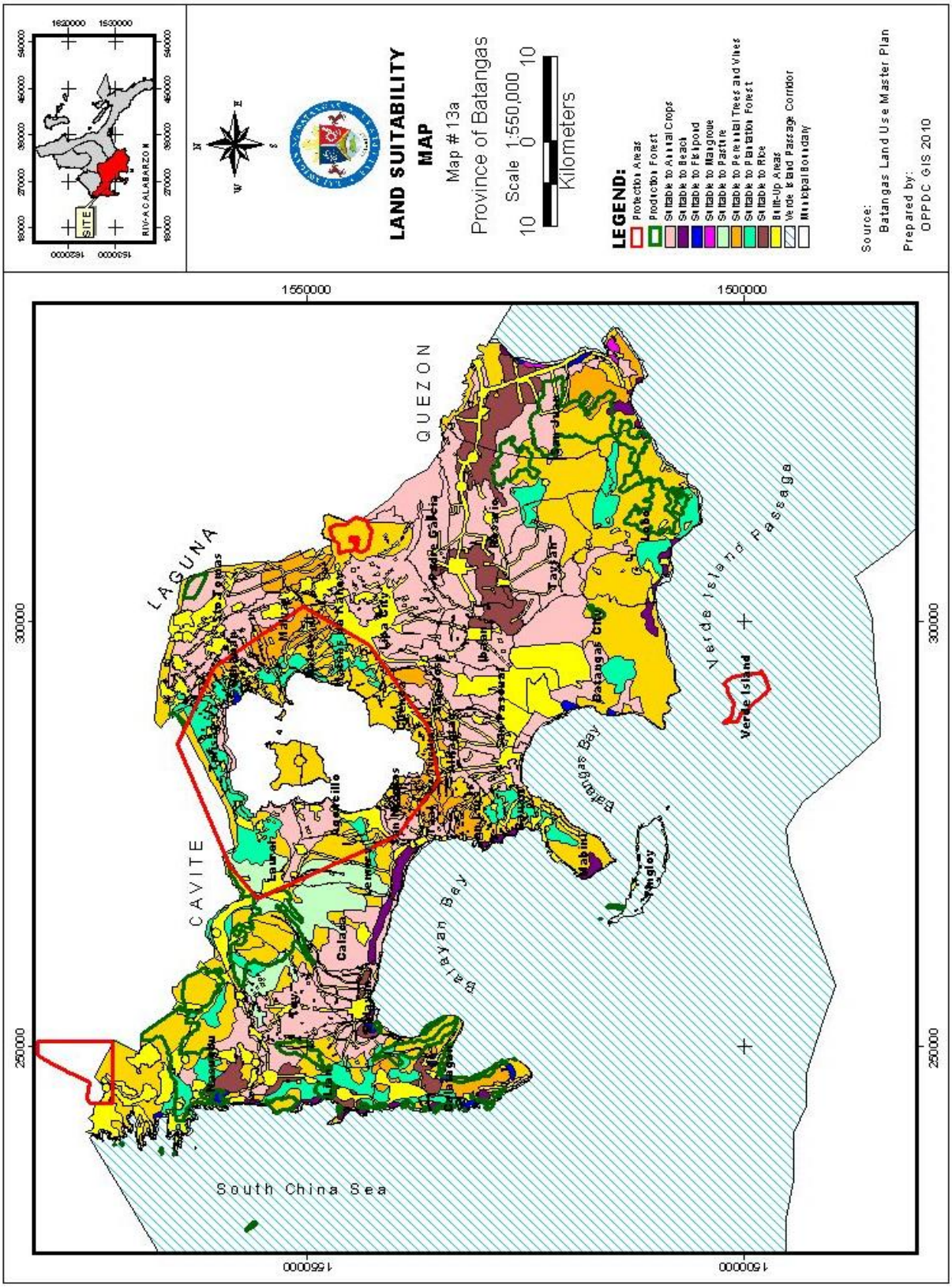
Moreover, the largest land area found Suitable to annual Cultivated Crops (SCC) which are generally devoted and planted to sugarcane crops can be found in western part of Batangas and a few number of hectares are situated in the eastern part of the Province.

Perennial Trees and Vines (PTV) production is identified and found to be suitable in Balete, Bauan, Cuenca, Malvar, Rosario, San Jose, San Pascual, and Cities of Tanauan, Batangas and Lipa.

There are minimal areas that are found to be suitable to pasture land purposes because of less availability of grass during dry season. These are located at Calatagan and Tuy which are intermittently distributed by patches somewhere in Lipa City.

Furthermore, areas found to be suitable for forest plantation in the province are usually found and located at Laurel, Balayan, Lemery, Lian, Nasugbu, Lobo, Talisay, Agoncillo, Bauan, Mabini, Malvar, Rosario, San Juan, San Luis, Tingloy and Cities of Tanauan, Batangas and Lipa. Aside from plantation forest, areas suitable to production forest purposely for the production of timber are frequently found in Agoncillo, Alitagtag, Bauan, Lemery, Lobo, Mabini, Mataasnakahoy, San Jose, San Juan, San Luis, Taysan, Tingloy, Tuy Tingloy and Cities of Tanauan, Batangas and Lipa.

Map 1.4. Land Suitability Map, Batangas



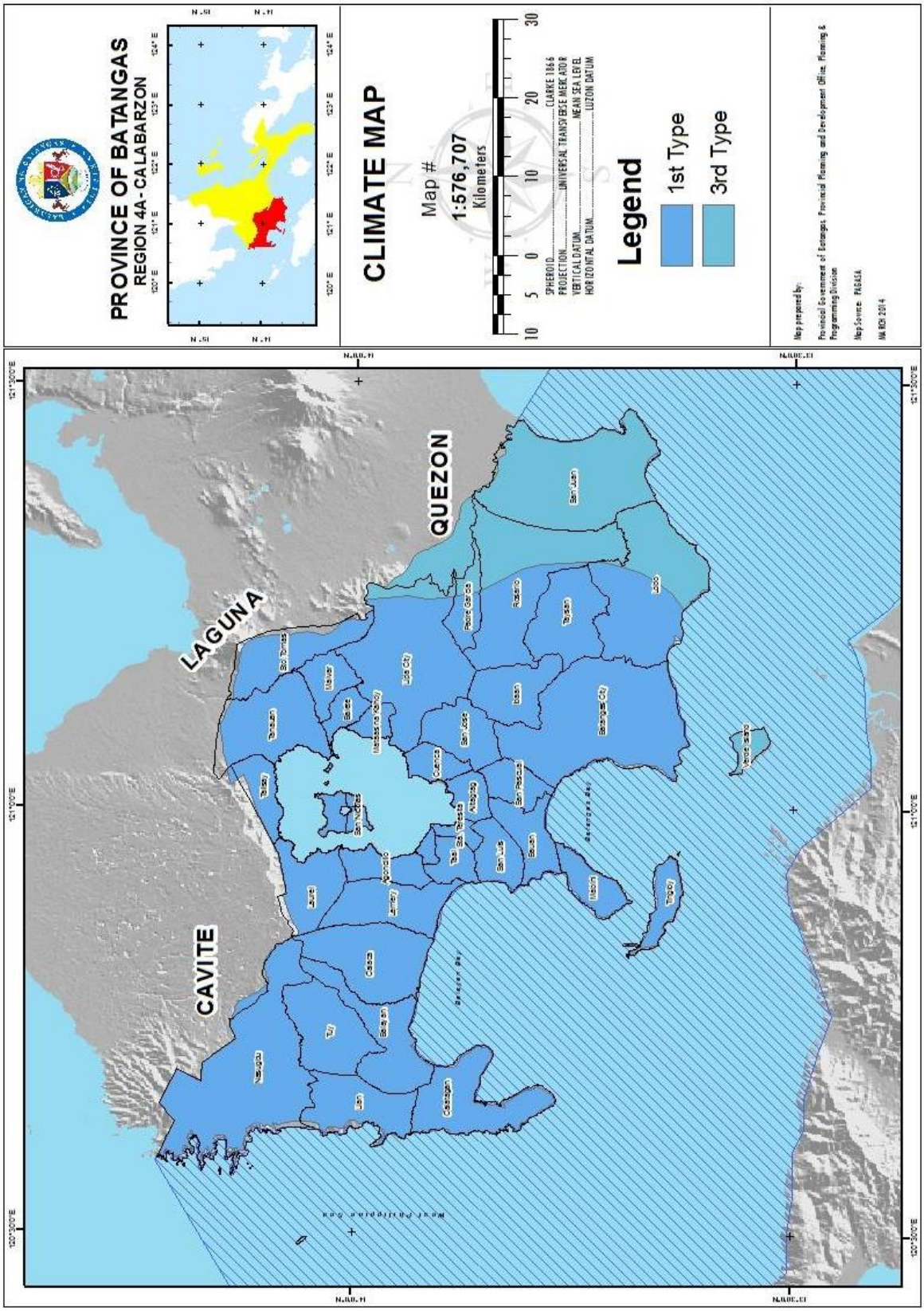
1.2.3 Climate and Rainfall

Batangas has two types of climate: Type I and Type III. Type I has two pronounced seasons; dry from November to April and wet during the rest of the year. Type III has no very pronounced maximum rain period with a dry season lasting only from one to three months, either during the period from December to February or from March to May. This type resembles types I since it has short dry season. Generally, the climate of the province is cool and air is humid. However, the climate varies according to ones' topography and locality. May is usually the hottest month and the coldest month is February.

As shown in Climate Map of Batangas Province (Map 1.5), the region west of the imaginary line running northeast/southwest from the foothills of Mt. Pinamucan in Batangas City and Mt. Malipunyo at the Batangas-Laguna Boundary falls under Type I. Moreover, Municipalities of Agoncillo, Alitagtag, Balayan, Balete, Bauan, Calaca, Calatagan, Cuenca, Ibaan, Laurel, Lemery, Lian, Mabini, Malvar, Mataasnakahoy, Nasugbu, San Jose, San Luis, San Nicolas, San Pascual, Sta. Teresita, Sto. Tomas City, Taal, Talisay, Tanauan City, Tingloy, Tuy and half portion of Lobo, Padre Garcia, Rosario and Taysan; and the Cities of Batangas and Lipa also falls under this type.

Verde Island and the Municipality of San Juan and some portions of Lobo, Padre Garcia, Rosario and Taysan fall under Type III.

Map 1.5: Climate Map of Batangas Province



1.2.4 Soil Types and Fertility

The Province has been endowed with rich, volcanic soil above par in quality and easy to cultivate. The geographical formation of soil consists mostly of water-laid volcanic tuff. The tuffaceous formation covers the agricultural regions. Map 1.6 and Table 1.3 shows the graphical and tabular presentation of soil typologies of the Province.

Map 1.6: Soil Map of Batangas Province

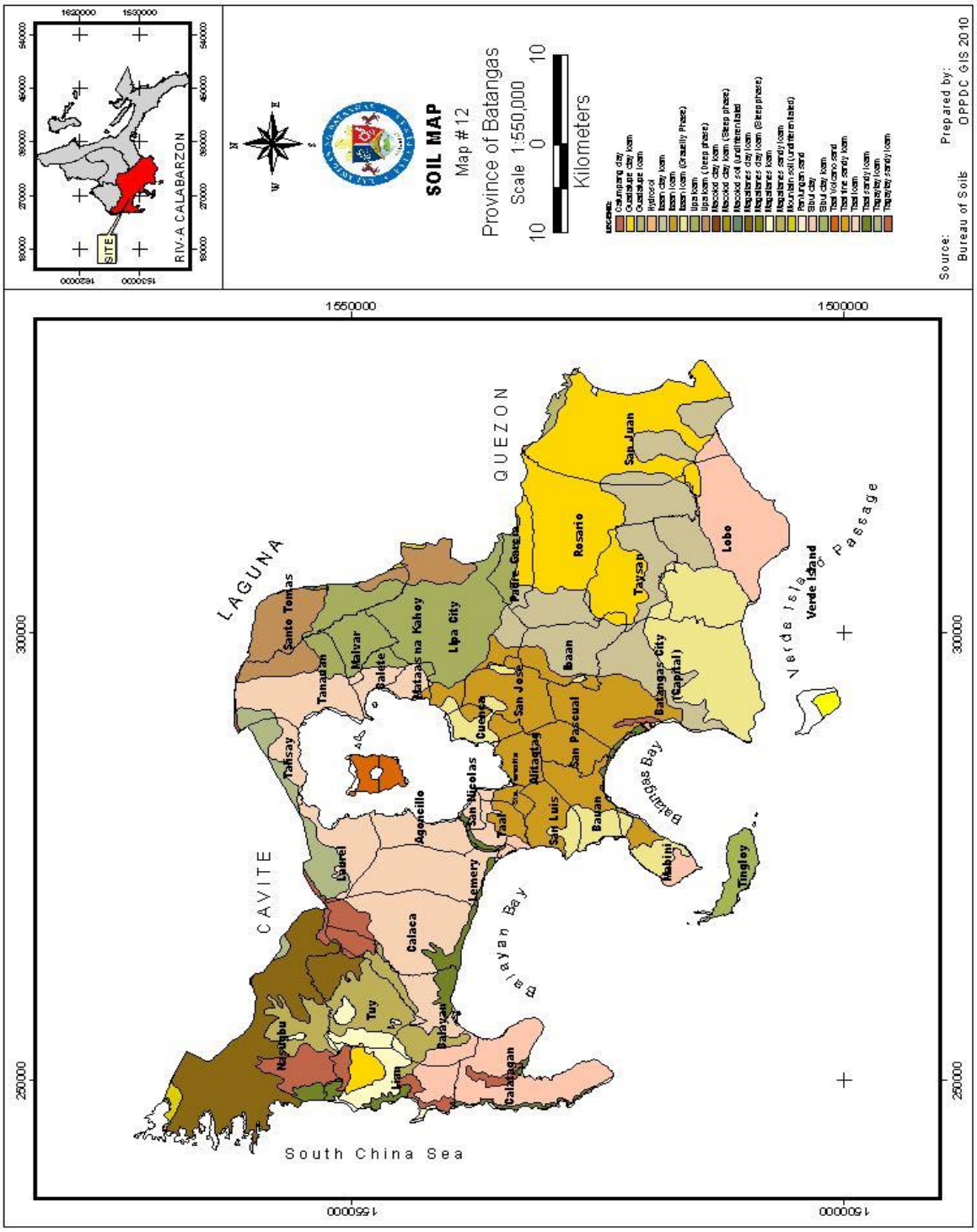


Table 1.3: Soil Type Distribution

CITY/ MUNICIPALITY	CLAY	LOAM	SANDY
1. Batangas City		x	
2. Lipa City		x	
3. Tanauan City			
4. Sto. Tomas		x	
5. Agoncillo		x	
6. Alitagtag		x	
7. Balayan		x	
8. Balete	x	x	x
9. Bauan		x	
10. Calaca		x	x
11. Calatagan	x	x	x
12. Cuenca		x	
13. Ibaan	x	x	
14. Laurel		x	
15. Lemery		x	x
16. Lian	x	x	x
17. Lobo	x	x	
18. Mabini		x	
19. Malvar		x	
20. Mataasnakahoy		x	
21. Nasugbu	x	x	x
22. Padre Garcia	x	x	
23. Rosario	x	x	
24. San Jose		x	
25. San Juan	x	x	
26. San Luis		x	
27. San Nicolas		x	
28. San Pascual		x	
29. Sta. Teresita		x	
30. Taal		x	
31. Talisay		x	
32. Taysan	x	x	
33. Tingloy	x	x	x
34. Tuy		x	

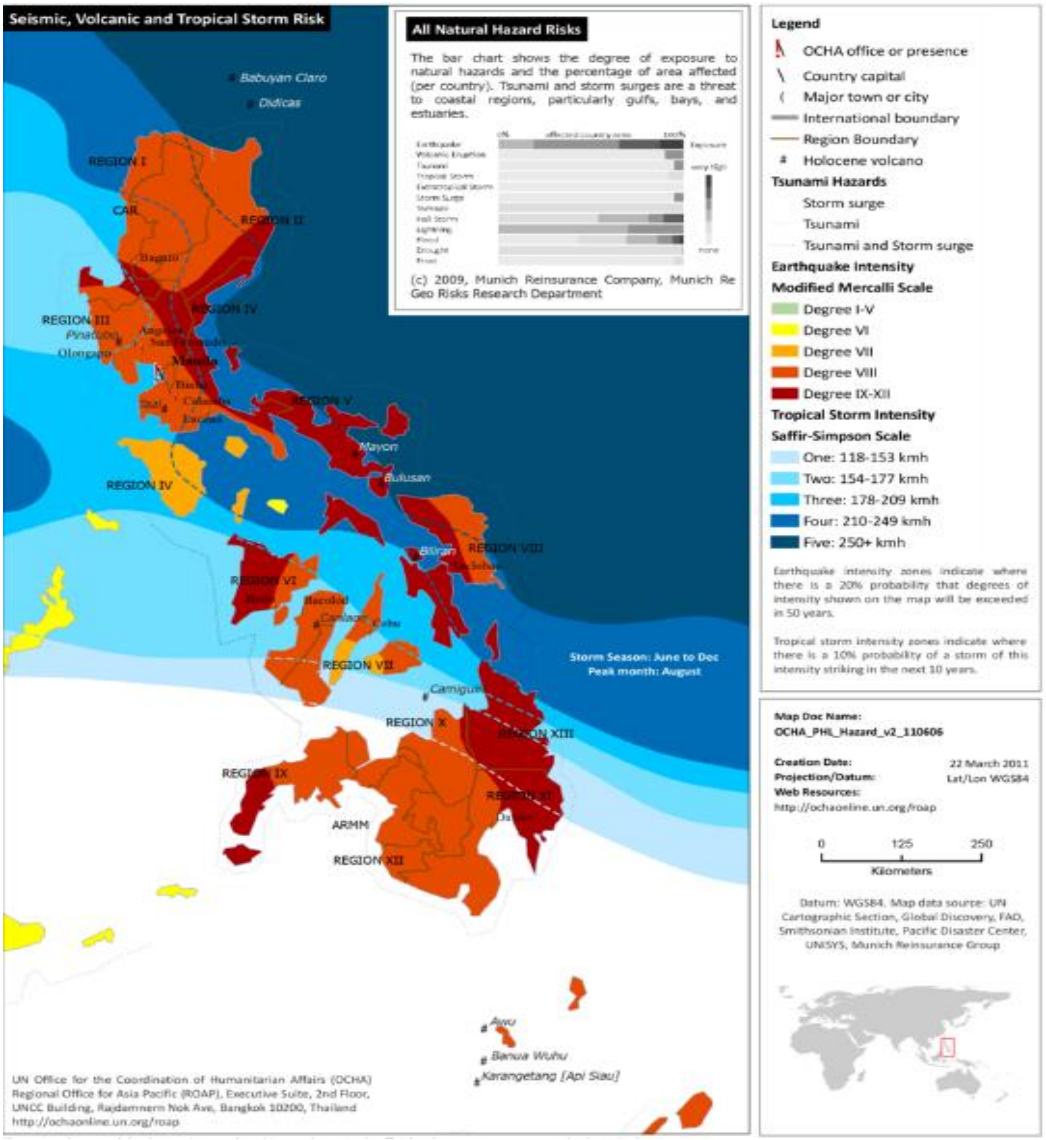
Data Source: Department of Agriculture

1.3 Vulnerability to Natural Hazards

Philippines is considered as one of the most disaster-prone countries of the world. Its location in the southern portion of the Pacific Ring of Fire where two major tectonic plates (Philippine Sea and Eurasian) meet, makes it highly prone to earthquakes - and as a consequence, to tsunamis - and volcanic eruptions. Likewise, the country is exposed to multiple hydro-meteorological and geo-physical hazards such as storms, typhoons, floods, droughts, further aggravated by the effects of climate change. Batangas Province is susceptible to volcanic, flood, landslide, tsunami and ground shaking hazards.

Map 1.7 shows a national map of major natural hazard risks the Philippines is facing, including a bar chart with the degree of exposure to natural hazards, and the percentage of areas affected. Disaster trends for the Philippines show that the impacts of disasters are increasing, not only by total people affected, but also by the impacts of disaster trends by estimated damage.

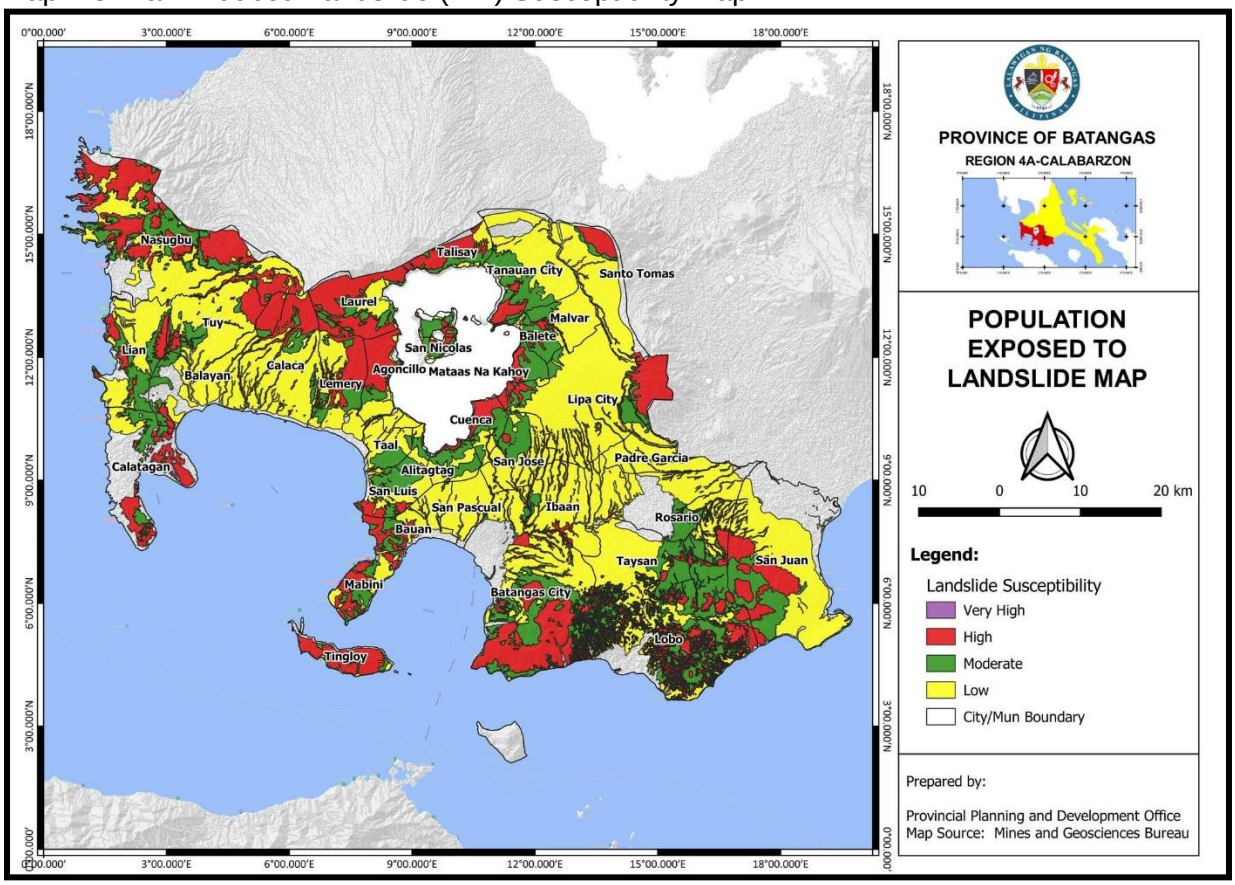
Map 1.7: Natural hazards assessment of the Philippines



1.3.1. Rain Induced Landslide (RIL) Hazard

Shown below is the landslide susceptibility map (Map 1.8) and the extent of exposure of this hydrometeorologic hazard to the Province (Table 1.4).

Map 1.8: Rain Induced Landslide (RIL) Susceptibility Map



Source: Provincial Planning and Development Office

As presented in Table 1.4, one (1) city and two (2) municipalities are with Very High Susceptibility to Rain Induced Landslides (RIL) mainly the Municipality of Lobo with 7.65 sq.km exposed area which is recorded the most susceptible followed by the City of Batangas with 0.77 sq.km and lastly the Municipality of Taysan with 0.11. In summation, 8.53 sq.km of the Province of Batangas is Very Highly Susceptible to RIL.

Three (3) Municipalities are tagged as Highly Susceptible to RIL. Nasugbu holds the biggest area exposed to this geological hazard with 99.02 sq.km followed by Laurel with 42.74 sq.km and lastly San Juan with 39.24 sq.km. The total area with High Susceptibility to RIL is 517.04 sq.km and with Moderate Susceptibility is 260.32 sq.km.

Table 1.4: Susceptibility Summary Table for Rain Induced Landslide (RIL)

CITY/MUNICIPALITY	NO. OF BARANGAYS	LAND AREA (in KM)	POPULATION	VERY HIGH SUSCEPTIBLE AREAS (in sq.km)	HIGH SUSCEPTIBLE AREAS (in sq.km)	MODERATE SUSCEPTIBLE AREAS (in sq.km)
Agoncillo	21	38	38,059		20.14	5.23
Alitagtag	19	26	25,300		2.00	0.00
Balayan	48	98	90,699		15.89	0.01
Balete	12	21	22,661		3.90	0.00
Batangas City	105	278	329,874	0.77	0.02	0.02
Bauan	40	50	91,297		11.77	0.00
Calaca	39	119	81,859		24.48	0.01
Calatagan	25	106	56,449		23.14	0.01
Cuenca	21	25	32,783		10.12	8.58
Ibaan	26	69	52,970		6.08	0.01
Laurel	21	70	39,444		42.74	0.01
Lemery	46	82	93,157		27.62	0.01
Lian	19	87	52,660		12.05	0.01
Lipa City	72	203	332,386		37.58	0.02
Lobo	26	205	41,504	7.65	0.02	0.02
Mabini	34	40	46,211		16.65	0.00
Malvar	15	34	56,270		1.16	5.29
Mataas na Kahoy	16	18	29,187		4.96	10.53
Nasugbu	42	266	134,113		99.02	40.62
Padre Garcia	18	40	48,302		1.31	
Rosario	48	198	116,764		21.62	43.91
San Jose	33	62	76,971		4.21	17.25
San Juan	42	240	108,585		39.24	31.83
San Luis	26	42	33,149		7.24	16.77
San Nicolas	18	17	22,623		1.84	4.81
San Pascual	29	34	65,424		0.68	0.04
Sta Teresita	17	13	21,127		0.21	6.99
Sto Tomas City	30	87	179,844		11.05	3.22
Taal	42	30	56,327		0.58	9.14
Talisay	21	49	45,301		19.89	16.14
Tanauan City	48	103	173,366		8.80	27.01
Taysan	20	91	38,007	0.11	0.01	0.01
Tingloy	15	34	17,919		24.48	0.00
Tuy	22	96	43,743		16.56	12.81
			TOTAL	**8.53**	**517.04**	**260.32**

Data Source: PDRRMO – Batangas, 2020

1.3.2. Flooding Hazard

The Flood Susceptibility of the Province, which can be seen from Table 1.5, shows that the area susceptible to flood is approximately about 281.20 sq.km regardless of its susceptibility level. The top three LGUs with very high exposure to flooding are the municipalities of Lobo, Rosario and Lian with an exposed area of 1.72 sq.km, 0.96 sq.km and 0.34 sq. km, respectively. These comprises the “Very Highly Susceptible” areas of the Province with a total of 3.02 sq.km.

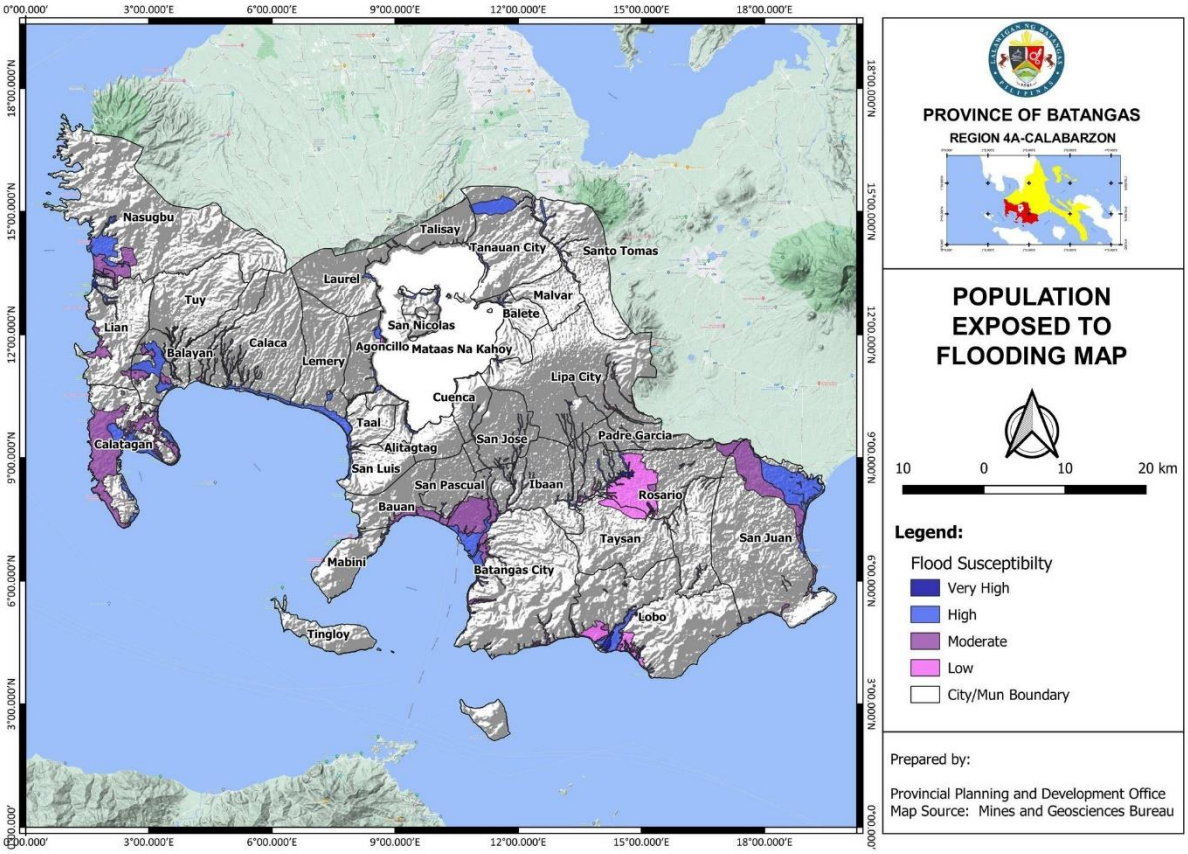
Still and all, a huge chunk of the province is still tagged as "Highly Susceptible." Thirty-three (33) LGUs are included in the category, three of which owns the highest area that are highly susceptible. The Municipality of San Juan tops the list with an exposed area of 24.55 sq.km followed by the City of Batangas with 13.90 sq.km and lastly the municipality of Balayan with 13.08 sq.km. In consummation, 135.60 sq.km of the Province is reported to be highly susceptible to flooding.

Table 1.5: Susceptibility Summary Table for Flooding

CITY/MUNICIPALITY	NO. OF BARANGAYS	LAND AREA (in KM)	POPULATION	VERY HIGH SUSCEPTIBLE AREAS (in sq.km)	HIGH SUSCEPTIBLE AREAS (in sq.km)	MODERATE SUSCEPTIBLE AREAS (in sq.km)
Agoncillo	21	38	38,059		2.38	
Alitagtag	19	26	25,300		0.45	
Balayan	48	98	90,699		13.08	7.29
Balete	12	21	22,661		0.69	
Batangas City	105	278	329,874		13.90	27.30
Bauan	40	50	91,297		0.28	4.79
Calaca	39	119	81,859		4.80	0.14
Calatagan	25	106	56,449		12.40	41.37
Cuenca	21	25	32,783		0.77	
Ibaan	26	69	52,970		2.18	
Laurel	21	70	39,444		1.83	
Lemery	46	82	93,157		6.51	
Lian	19	87	52,660	0.34	2.52	5.39
Lipa City	72	203	332,386		1.04	3.38
Lobo	26	205	41,504	1.72	6.48	4.51
Mabini	34	40	46,211		0.08	0.94
Malvar	15	34	56,270		0.00	
Mataas na Kahoy	16	18	29,187		0.04	
Nasugbu	42	266	134,113		10.75	10.62
Padre Garcia	18	40	48,302		0.37	1.72
Rosario	48	198	116,764	0.96	6.49	6.47
San Jose	33	62	76,971		1.84	0.10
San Juan	42	240	108,585		24.55	26.31
San Luis	26	42	33,149		1.32	0.02
San Nicolas	18	17	22,623		1.76	
San Pascual	29	34	65,424		0.28	0.74
Sta Teresita	17	13	21,127		0.84	
Sto Tomas City	30	87	179,844		3.05	0.05
Taal	42	30	56,327		0.90	
Talisay	21	49	45,301		3.03	
Tanauan City	48	103	173,366		9.55	
Taysan	20	91	38,007		0.28	0.17
Tingloy	15	34	17,919			
Tuy	22	96	43,743		1.15	1.25
			TOTAL	**3.02**	**135.60**	**142.58**

Data Source: PDRRMO – Batangas, 2020

Map 1.9. Flood Susceptibility Map

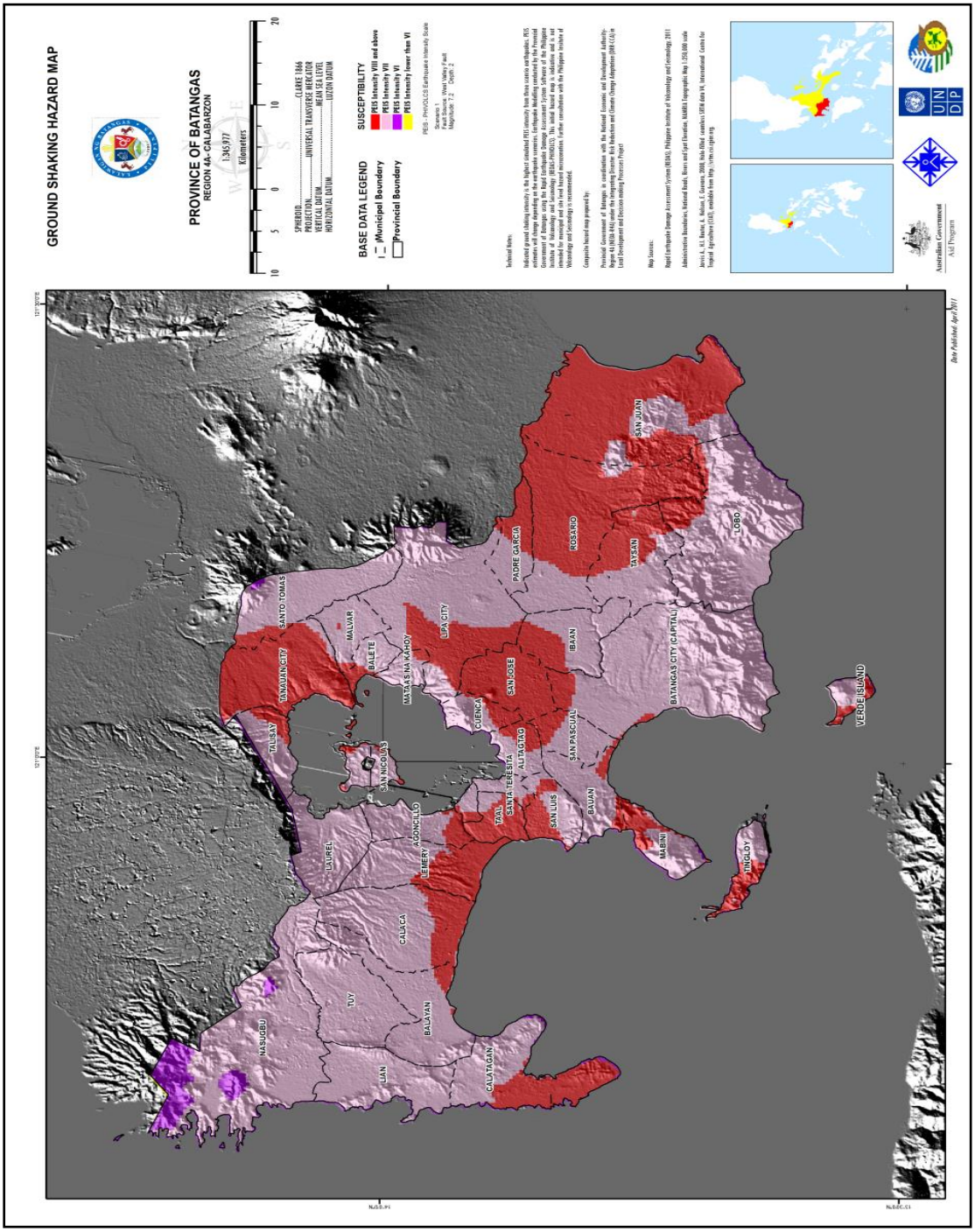


Source: Provincial Planning and Development Offfice

1.3.3. Ground Shaking Hazard

Ground shaking is created by seismic earth movement. It is describe as the vibration of the ground during an earthquake wherein seismic waves travel rapidly from the source through the earth's crust. Upon reaching the ground surface, they produce shaking that may last from seconds to minutes.

Map 1.10: Ground Shaking Hazard Map



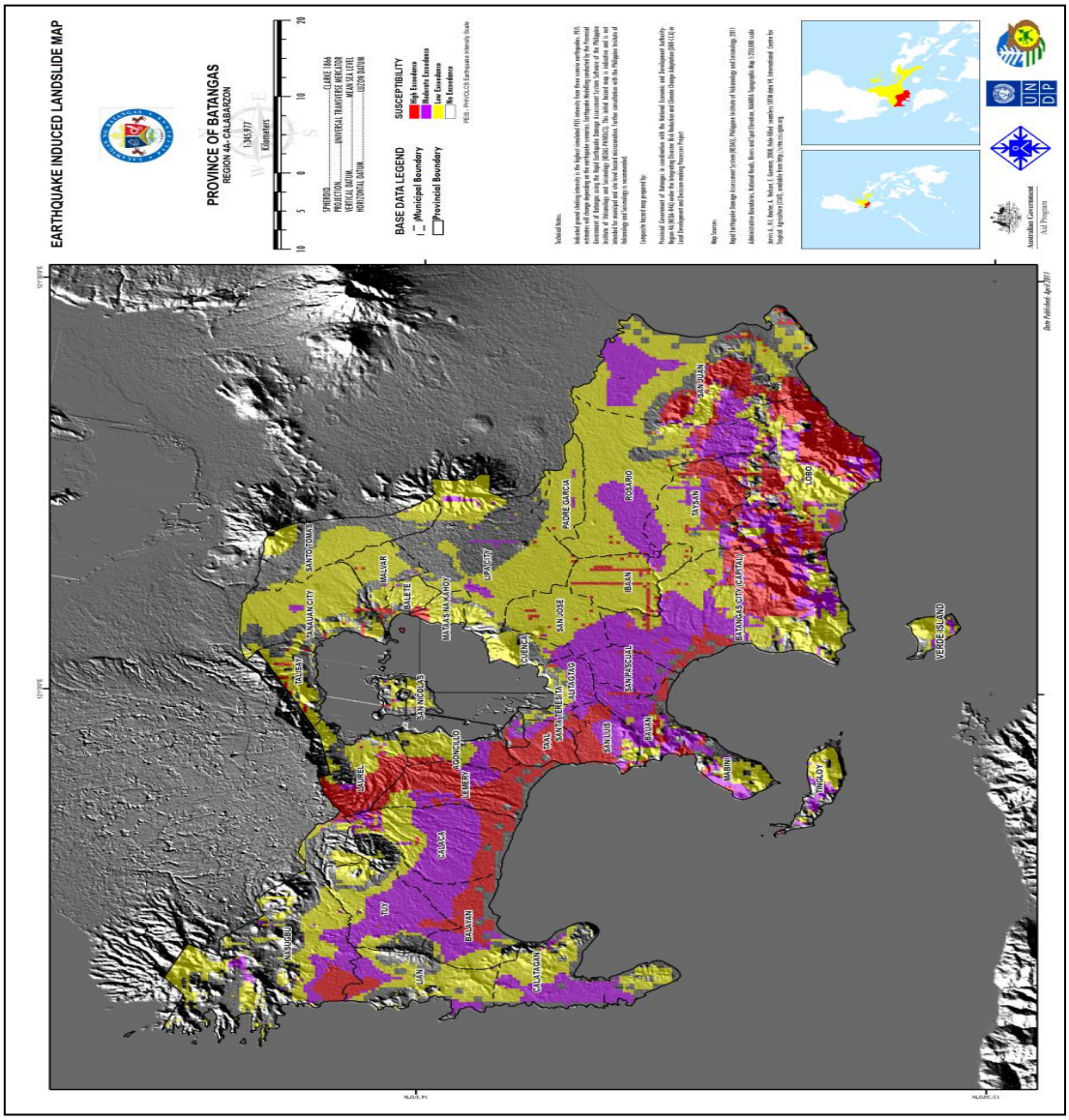
Source: Mines and Geosciences Bureau

As shown in Map 1.10, all municipalities of the province are susceptible to ground shaking however, as based on the five scenarios, 671 barangays, have high risks of being stricken with Intensity 8 and above. The municipality with the most number of barangays that are seen to be affected is Tanauan City with 48, while Nasugbu has the largest area at risk with 120.064 square kilometers followed by San Juan 101.953 square kilometers. Tanauan City although having the most barangays at risk only comes third in area size in terms of

exposure to risk with 53.004 square kilometers. The municipality that is least exposed to the hazard is Malvar, with 0.128 square kilometers spread in 4 barangays.

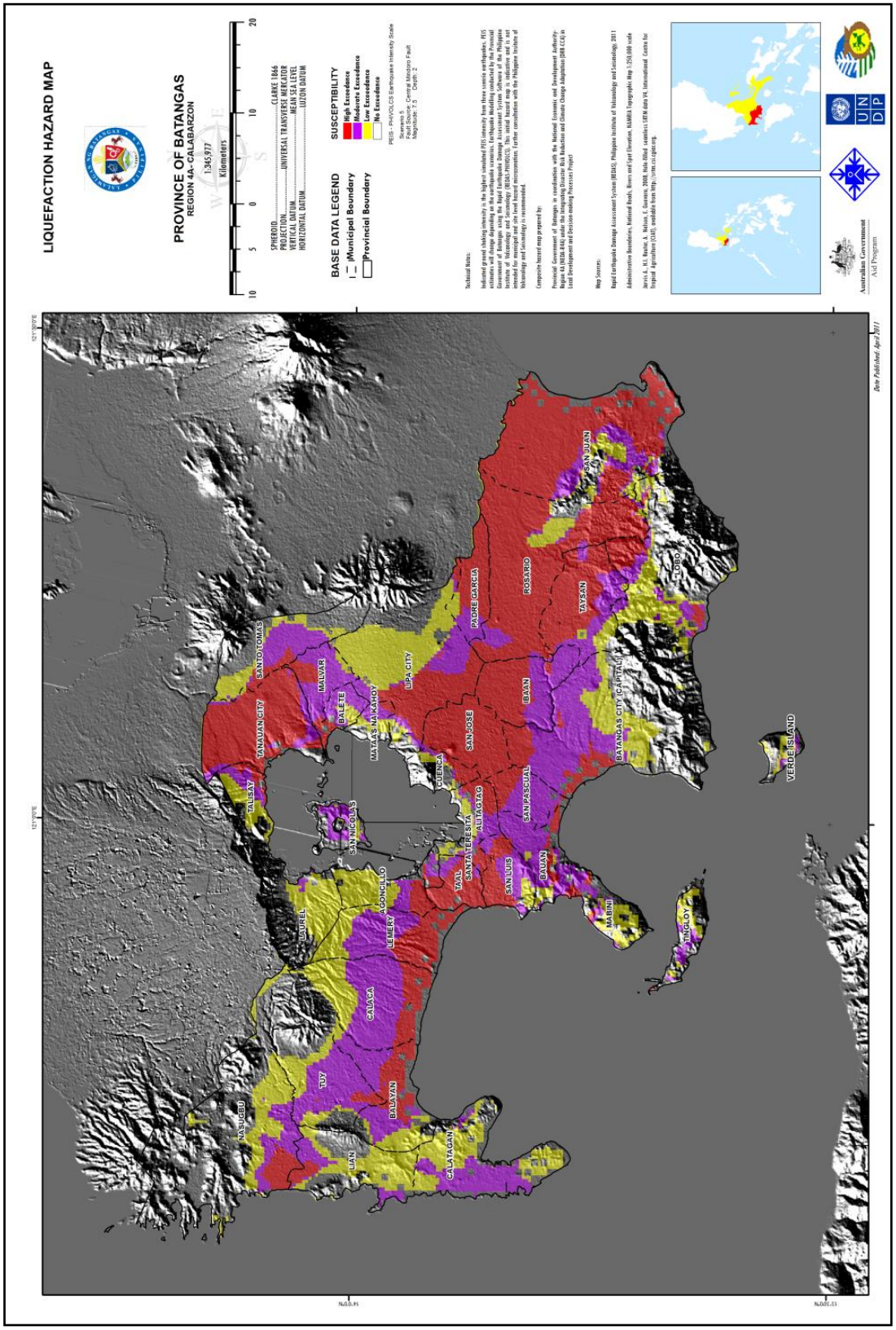
Ground shaking is both a hazard created by earthquakes and triggers other hazards such as liquefaction and landslides. Most damages vary over an area due to such factors as topography, bedrock type, location and orientation of the fault rupture. Maps 1.11 and 1.12, shows the earthquake induced landslide and liquefication hazard maps.

Map 1.11: Earthquake Induced Landslide Hazard Map



Source: Mine and Geosciences Bureau

Map 1.12: Liquefaction Hazard Map



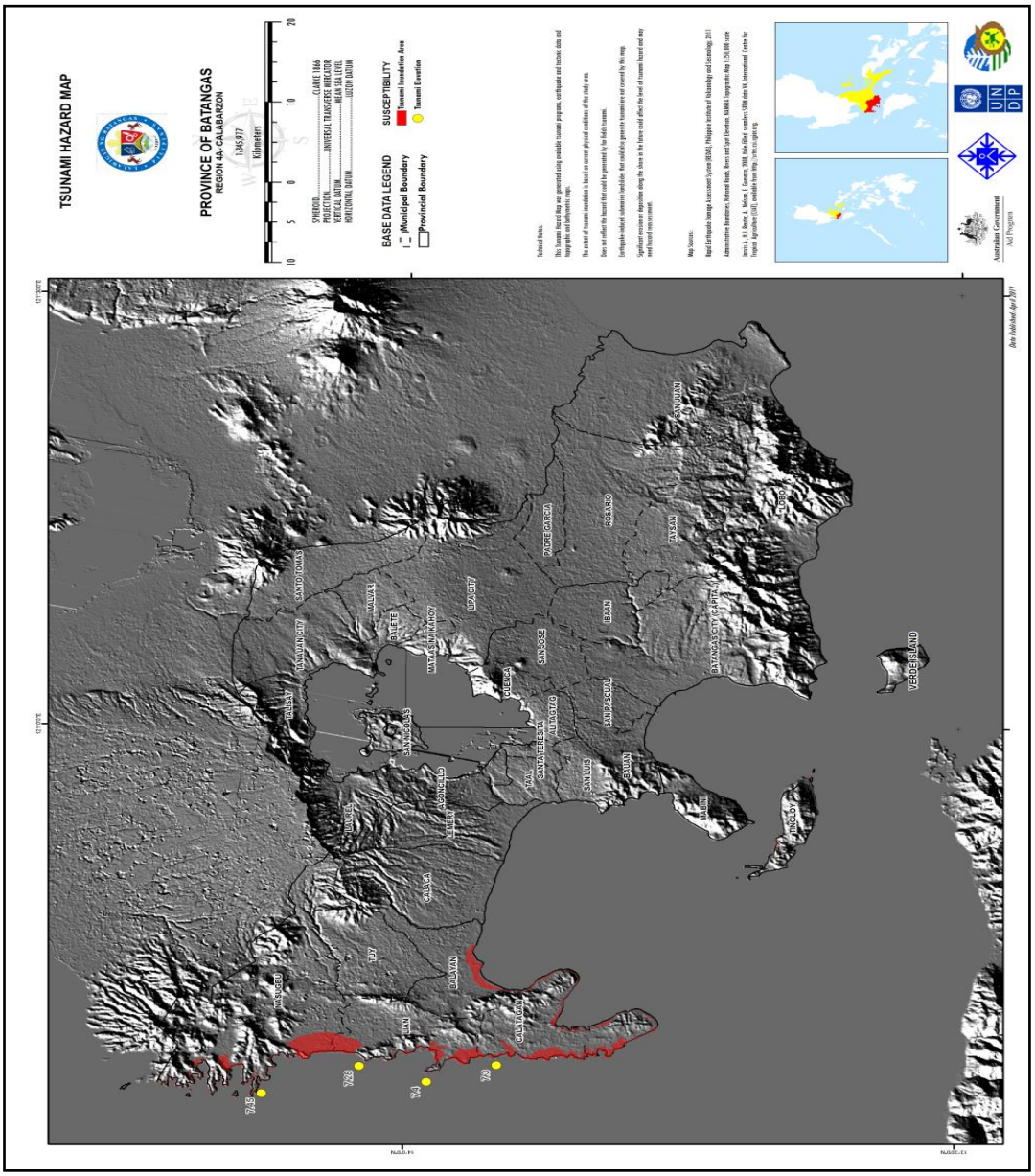
Source: Mine and Geosciences Bureau

1.3.4 Tsunami Hazard

Tsunami is generated by a huge displacement of water usually from ocean or large lake. This displacement is ussually caused by earthquakes, volcanic eruptions and other underwater explosions (including detonations of underwater nuclear devices), landslides, glacier calvings, meteorite impacts and other disturbances above or below water.

As for the dangers of tsunami as shown in Map 1.13, Nasugbu has the most number of barangays seen to be affected, with 26 barangays and at the same time, also largest area affected with 16.789 square kilometers. At least 84 barangays distributed in the five coastal municipalities of Nasugbu, Balayan, Calatagan, Lian and Tingloy are the most susceptible to the hazard.

Map 1.13: Tsunami Hazard Map


TSUNAMI HAZARD MAP
PROVINCE OF BATANGAS
REGION 4A- CALABARZON
1:36,977
Kilometers
10 5 0 10 20
SPHEROID ..... CLARKE 1866
PROJECTION ..... UNIVERSAL TRANSVERSE MERCATOR
VERTICAL DATUM ..... MEAN SEA LEVEL
HORIZONTAL DATUM ..... LUZON DATUM
BASE DATA LEGEND
Municipal Boundary
Provincial Boundary
SUSCEPTIBILITY
Tsunami Inundation Area
Tsunami Elevation
Technical Notes:
This Tsunami Hazard Map was generated using available tsunami, earthquake and tsunami data and topographic and bathymetric maps.
The extent of tsunami inundation is based on current physical conditions of the study area.
Does not reflect the hazard that could be generated by far-field tsunami.
Earthquake-related submarine landslides that could also generate tsunami are not covered by this map.
Significant erosion or depositions along the shore in the future could affect the level of tsunami hazard and may need hazard reassessment.
Map Sources:
Regional Earthquake Damage Assessment System (REDAS), Philippine Institute of Volcanology and Seismology, 2011
Administrative Boundaries, National Roads, Rivers and Land Elevation, NAMRIA Topographic Map 1:50,000 scale
Jarvis A., A.J. Reuter, A. Nelson, E. Guevara, 2008. Hole-filled seamless SRTM data V4. International Centre for Tropical Agriculture (CIAT), available from http://srtm.csi.cgiar.org.
Australian Government
Aid Program
UN DP
Date Published: April 2011
SANTO TOMAS
TAAL
TALISAY
TANAUAN CITY
TAYSAN
TAYSAN
TAYSAN

1.3.5 Volcanic Eruption Hazard

Situated along the Pacific Ring of Fire, the Philippines is also prone to volcanic eruptions. Out of 220 volcanoes in the archipelago, 22 are classified as active. The most active volcanoes in the Philippines are Bulusan, Mayon, Canlaon, Taal and Mount Pinatubo. A volcanic eruption is caused by the injection of magma into a full magma chamber, the buoyancy of magma and the pressure exerted by the gases in the magma. The volcano simply acts as an opening through which magma and dissolved gases are discharged. Magma is formed when part of the Earth's lower crust or upper mantle melts. Since magma has a lower density compared to the surrounding rocks, it rises. As the magma rises, bubbles are formed from the dissolved gas within the magma. These gas bubbles exert immense pressure. This pressure brings magma to the surface and forces it into the air at great heights. During volcanic eruptions, cinders, red-hot ash and chunks of hot rock shoot out forming fiery clouds over the volcano.

Volcanic eruptions can occur without any prior warning, making them hard to predict. Understanding how a volcano works and how its eruptions can be predicted is important to the preservation and well-being of the inhabitants of volcanically vulnerable areas. There are three main classifications of volcanoes: 1) Active volcanoes have recently erupted; 2) dormant volcanoes have not erupted in a long while but are likely to erupt in the future; and 3) extinct volcanoes have not erupted in a long while and are not expected to erupt in the future.

The province being site of the Taal volcano is prone to this geological hazards.

Taal Volcano is the second most active volcano in the Philippines and has forty-seven (47) craters. Its main crater is 1.9 km in diameter lake water and about 4 meters above sea level. Its deepest point is 76 meters with pH levels of 2.3-2.5, based on the monitoring of Taal Lake, Buco, Talisay DOST Phivolcs Observatory. The volcano island has a total land area of 2,500 hectares which has six (6) community groupings known as sitios, or locally called as “Pulo” that are within the jurisdiction of 3 municipalities whichis categorized as the Taal volcano permanent danger zone as shown in Figure 1, namely the municipalities of Talisay, San Nicolas and Balete.

On January 12, 2020, around 2:30pm, the Philippine Institute of Volcanology and Seismology (Phivolcs) raised Alert Level 2 for Taal Volcano at 2:30 pm due to a phreatic explosion, a steam-driven episode that occurs when the water beneath the ground is heated by magma, lava, hot rocks, or new volcanic deposits. By 4:00 pm, Alert Level 3 was raised and volcanic tremors and earthquakes were felt in the Volcano Island and in the barangays of Agoncillo, Batangas. Ashfall was also present southwest of Taal. Two (2) volcanic earthquakes of magnitudes 2.5 and 3.9 felt at Intensity III in Tagaytay City and Alitagtag, Batangas respectively prompted the PHIVOLCS to raise the alert to Level 4 at 7:30 pm of the same day until January 25, 2020. It was decreased to Alert Level 3 on January 26, 2020 and to Alert Level 2 by February 14, 2020. *(Source: Taal Volcano PDNA Report)*

Another phreatomagmatic explosion occurred at the Main Crater and spewed a dark grayish plume reaching 1,000 meters on July 1, 2021 exactly at 3:16pm. After one (1) year and four (4) months of being on Alert Level 2, it was then raised to Alert Level 3. An emission of

Sulfur Dioxide (SO_2) averaged at 13,287 tonnes/day was observed reaching nearby provinces and affecting cities in the NCR. The highest SO_2 emission was recorded on July 4, 2021 with a load of 22,628 tonnes/day and then followed by a series of decline from July 8 to July 22, 2021 which leads to the lowering of the volcano's Alert Level to Level 2 on July 23, 2021.

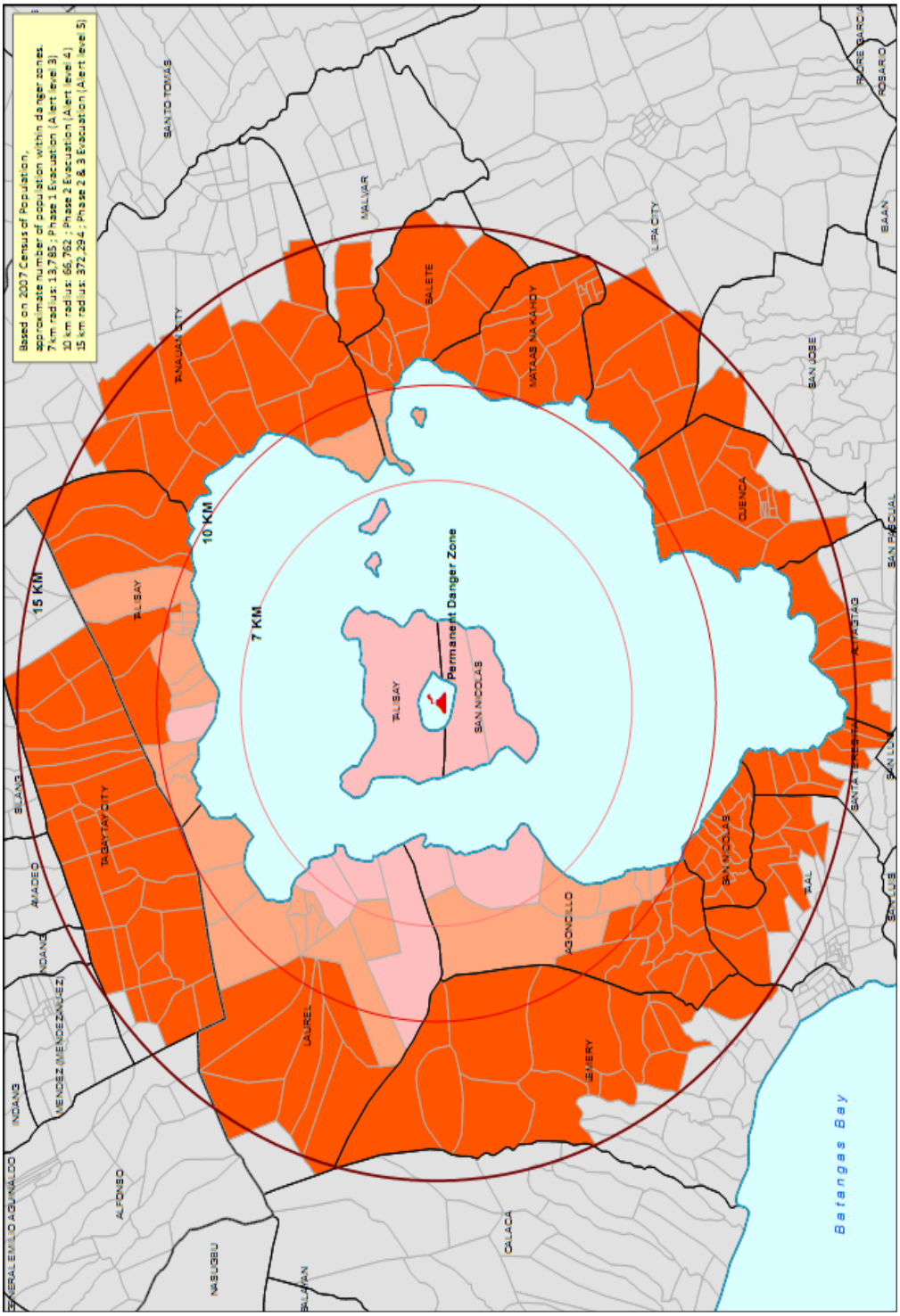
The Taal Volcano Eruption affected twelve (12) municipalities and three (3) cities of the Province of Batangas, all within the 7km to 14km danger zone. These are Alitagtag, Balete, Cuenca, Mataasnakahoy, Santa Teresita, Taal, Talisay, Laurel, San Nicolas, Agoncillo, Lemery, Malvar, Tagaytay City, Lipa City and Tanauan City.

January 12, 2020 Eruption
Courtesy of Mr. Karl Ambida (PIO – Batangas)

July 1, 2021 Eruption
Courtesy of DOST-PHIVOLCS

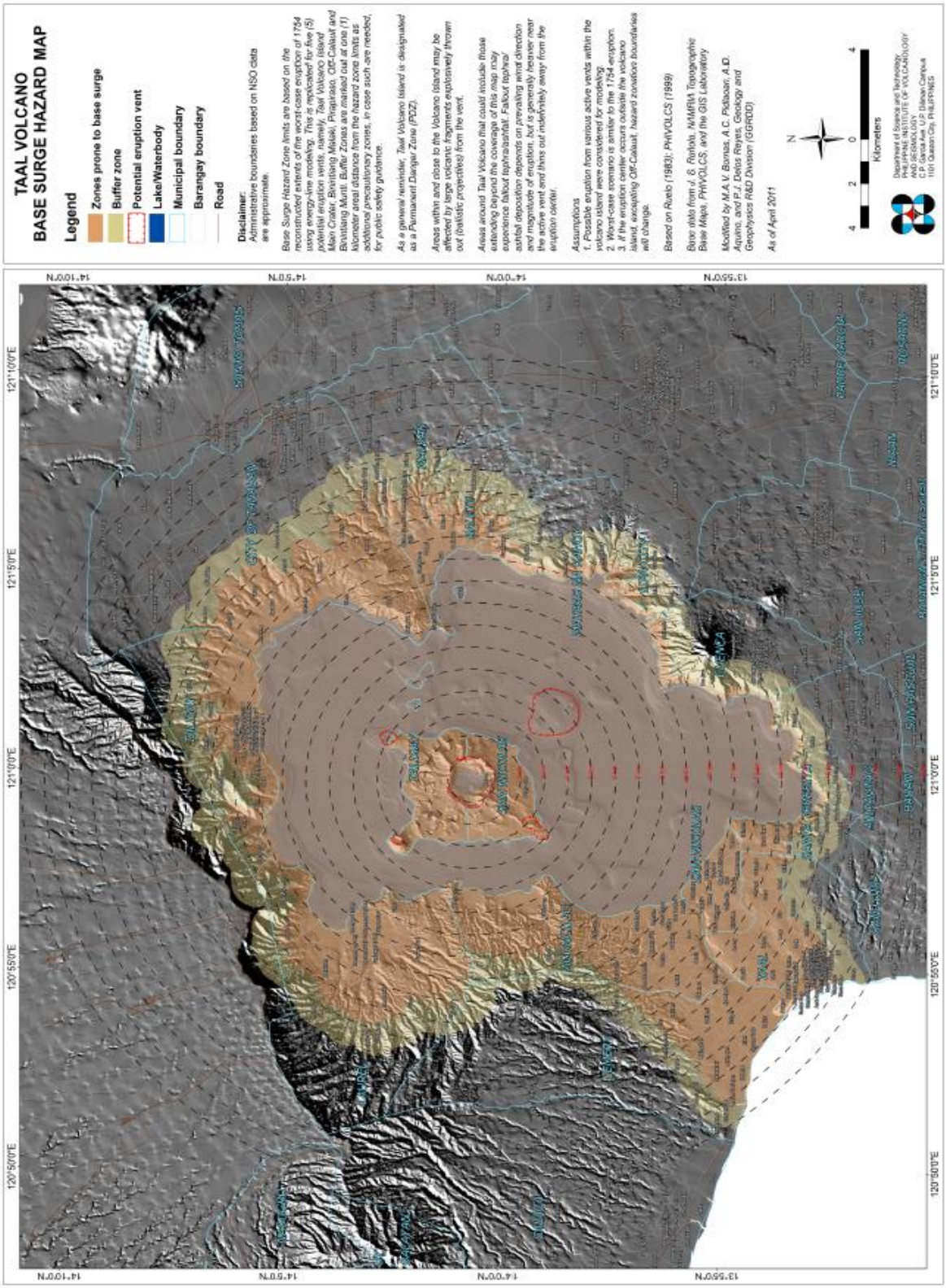
Annexes 1,2,3 provides the list of barangays that are prone to Taal Volcano Base Surge, Tsunami and Ballistic Projectiles as of 21 January 2020 as shown in Map 14, 15 and 16.

Figure 1.1: Taal Volcano Permanent Danger Zone



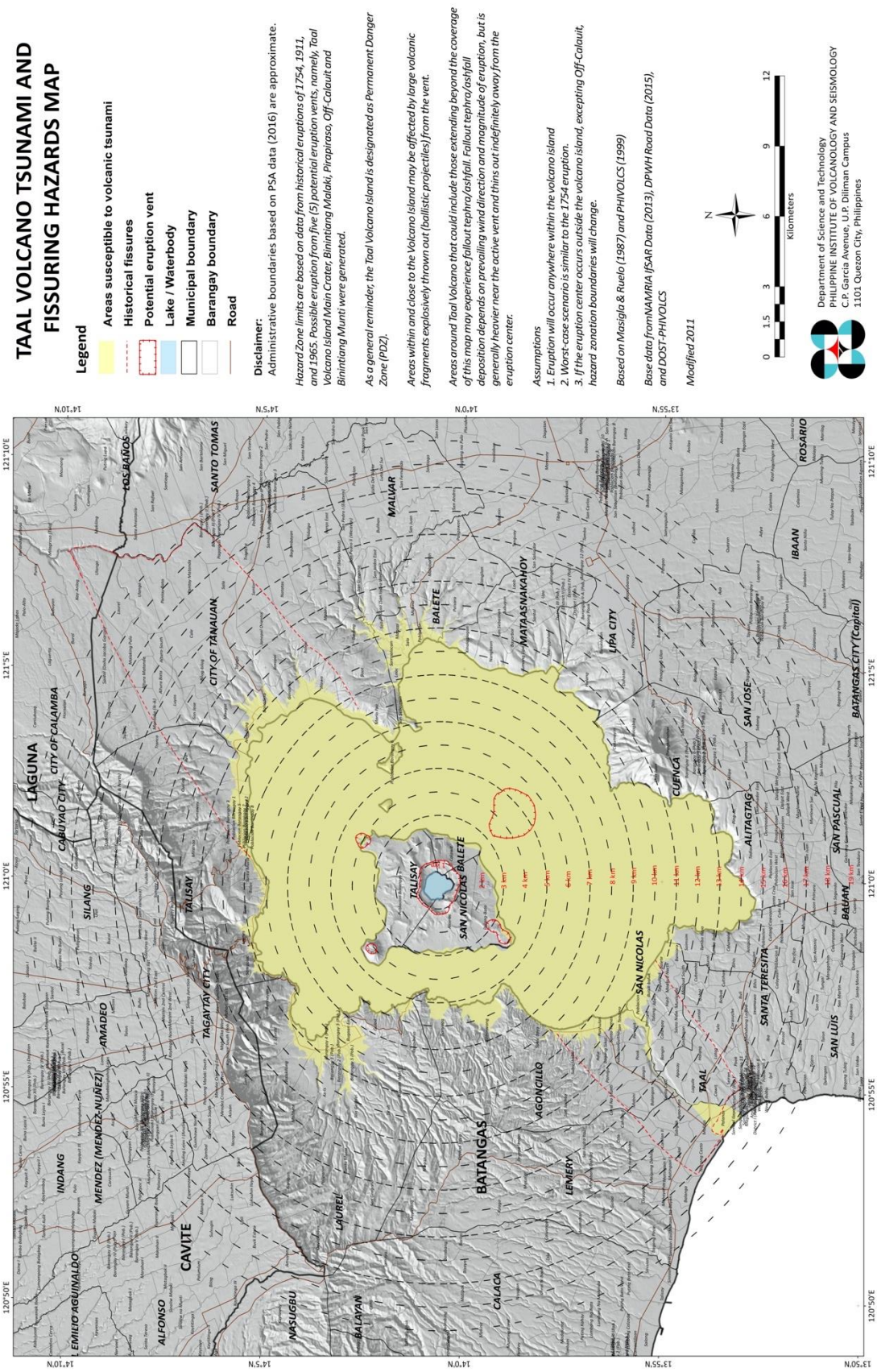
Data Source: Office of the Civil Defense, Region IV-A

Map 1.14. Taal Volcano Base Surge Hazard Map

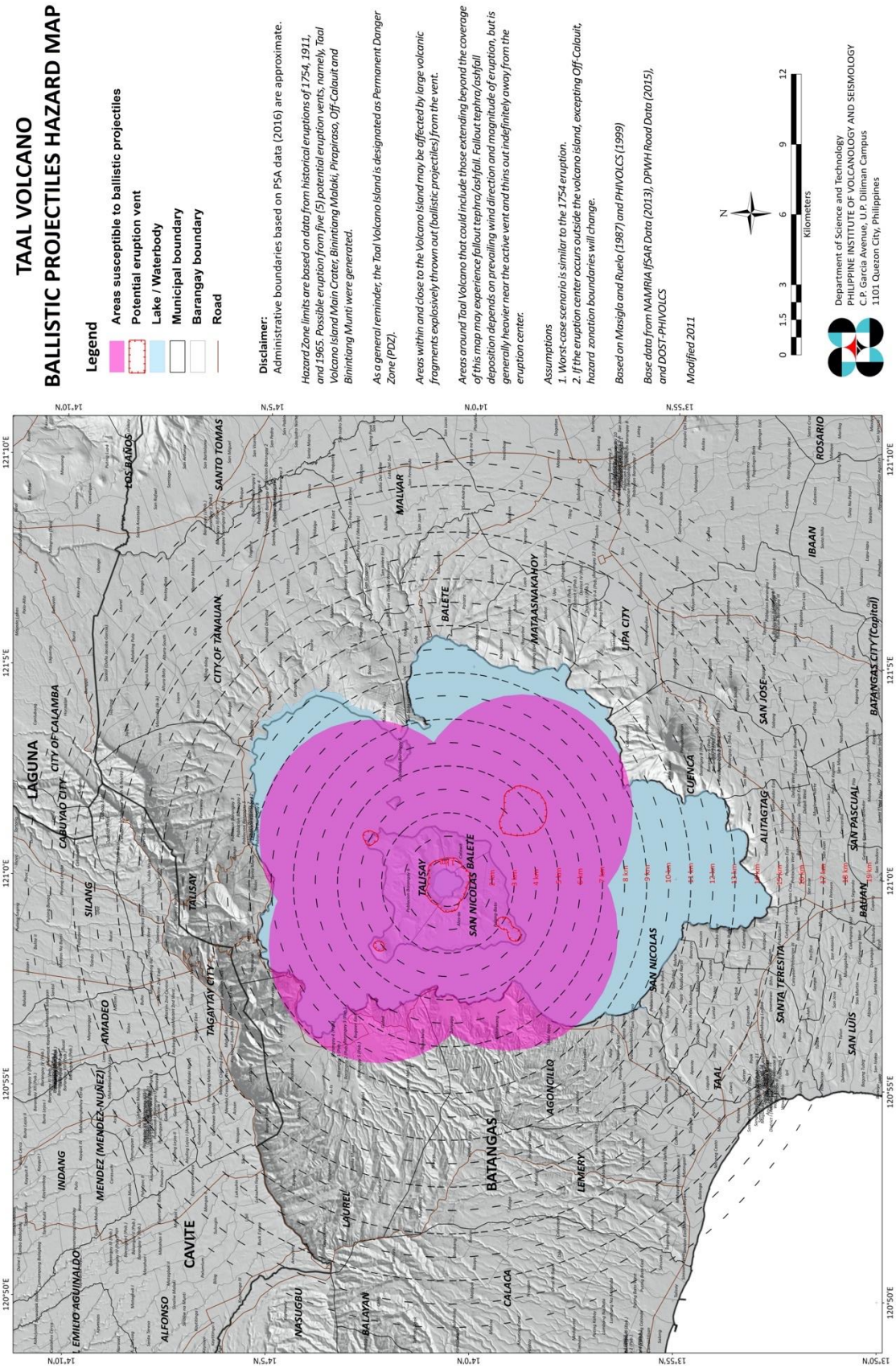


Data Source: PHIVOLCS

Map 1.15. Taal Volcano Tsunami and Fissuring Hazard Map



Map 1.16. Taal Volcano Ballistic Projectile Hazard Map



1.3.6. Summary of Geological Hazard Susceptibility

Table 1.6 for Geologic Hazard Susceptibility indicates the High Susceptibility of municipalities to the four geologic hazards: liquefaction, ground shaking, earthquake induced landslide and tsunami.

For the three hazards: earthquake induced landslides, liquefaction and ground shaking, (per five (5) Earthquake Modelling scenarios) Scenario 1, with fault source at West Valley Fault, and Scenario 5, with fault source at Central Mindoro Fault have the likelihood of affecting the most number of municipalities at high level than the other three simulation.

Scenarios 2, with Laguna-Banahaw Fault as source have most municipalities at moderate and low levels of exceedance.

Of the 31 municipalities and 3 cities of the Province, 13 municipalities and 1 city are all highly susceptible to three hazards---Agoncillo, Balayan, Bauan, Calaca, Lemery, Lobo, San Juan, San Luis, San Pascual, Sta. Teresita, Taal, Talisay, Taysan and Tanauan City. Nine municipalities including Alitagtag, Ibaan, Nasugbu, Lian, Padre Garcia, Rosario, San Jose, , Tingloy and Cities of Lipa and Sto. Tomas are highly vulnerable to 2 of the 4 hazards. The remaining 9 municipalities that include Balete, Calatagan, Cuenca, Laurel, Mabini, Malvar, Mataasnakahoy, San Nicolas, and Tuy are prone to one of the three hazards identified herein.

On the other hand, coastal barangays of Nasugbu, Lian, Calatagan, and Balayan are considered as tsunami inundation areas. The same applies to some parts of Tingloy. These are caused by tsunami elevations that ranged from 7.28 to 7.45 meters.

Out of the 1,078 barangays in the province, 540 are highly exposed to earthquake induced landslides. Batangas City has the most number of barangays with 48 out of its 105 barangays, and with the largest area with 174.46 km^2.

Batangas City and Tanauan City have the most number of barangays, with 49 each that prone to liquefaction, while the largest area exposed to the hazard with 88.627 km^2 is the municipality of Rosario. This area comprises 46 out of its 48 barangays. Although there are more barangays that are at risk to liquefaction hazard in Batangas City, the municipalities of Rosario, San Juan and Tanauan City have larger area exposure, with 88.627 km^2, 78.321 km^2, and 46.504 km^2, respectively. All over the province, there are at least 647 barangays that run the risk of the consequences of liquefaction.

On the other hand, all municipalities of the Province are susceptible to ground shaking however, as based on the five (5) scenarios, 671 barangays, have high risks of being stricken with Intensity 8 and above. The municipality with the most number of barangays that are seen to be affected is Tanauan City with 48, while Nasugbu has the largest area at risk with 120.064 km^2, followed by San Juan 101.953 km^2. Tanauan City although having the most barangays at risk only comes third in area size in terms of exposure to risk with 53.004 km^2. The municipality that is least exposed to the hazard is Malvar, with 0.128 km^2 spread in 4 barangays.

As for the dangers of tsunami, Nasugbu has the most number of barangays seen to be affected, with 26 barangays and at the same time, also largest area affected with 16.789 km^2. At least 84 barangays distributed in the five (5) coastal municipalities of Nasugbu, Balayan, Calatagan, Lian and Tingloy are the most susceptible to the hazard.

Table 1.6: Summary Table for Geologic Hazard Susceptibility

MUNICIPALITIES / CITIES		EXTENT OF EXPOSURE TO GROUND SHAKING			EXTENT OF EXPOSURE TO EARTHQUAKE INDUCED LANDSLIDE			EXTENT OF EXPOSURE TO LIQUEFACTION			EXTENT OF EXPOSURE TO TSUNAMI		
		# of Brgys	Area Exposed	Pop. Exposed	# of Brgys	Area Exposed	Pop. Exposed	# of Brgys	Area Exposed	Pop. Exposed	# of Brgys	Area Exposed	Pop. Exposed
1	Agoncillo	15	2.107	1,380	18	11.26	7,375	16	2.151	1,409	0		0
2	Alitagtag	13	3.162	3,190	4	6.56	6,619	13	3.159	3,187	0		0
3	Balayan	11	1.517	1,141	27	19.51	14,672	27	6.774	5,094	23	5.360	4,031
4	Balete	10	0.604	487	8	7.12	5,746	8	0.473	382	0		0
5	Batangas City	20	4.386	4,737	48	174.46	188,417	49	13.989	15,108	0		0
6	Bauan	17	1.675	2,045	30	17.28	21,099	26	2.442	2,982	0		0
7	Calaca	26	14.337	10,079	24	31.37	22,053	24	8.550	6,011	0		0
8	Calatagan	15	6.834	3,171	21	16.13	7,484	0	0	-	18	14.943	6,934
9	Cuenca	13	5.332	4,127	2	7.76	6,006	10	4.865	3,766	0		0
10	Ibaan	11	3.339	1,636	23	32.53	15,940	23	17.560	8,604	0		0
11	Laurel	21	20.689	10,841	15	11.75	6,157	0	0	-	0		0
12	Lemery	43	18.827	15,175	43	29.82	24,035	37	11.453	9,231	0		0
13	Lian	19	30.783	18,408	7	12.94	7,738	7	0.609	364	8	11.483	6,867
14	Lipa City	33	21.073	21,979	3	74.25	77,443	31	27.242	28,413	0		0
15	Lobo	4	8.882	1,705	25	56.4	10,829	9	4.724	907	0		0
16	Mabini	29	3.821	3,947	11	6.41	6,622	9	0.176	182	0		0
17	Malvar	4	0.128	161	4	8.51	10,731	9	0.758	956	0		0
18	Mataasnakahoy	10	2.953	3,626	3	11.6	14,245	8	2.574	3,161	0		0
19	Nasugbu	41	120.064	55,950	22	36.41	16,967	20	3.537	1,648	26	16.789	7,824
20	Padre Garcia	10	8.579	4,109	1	17.14	8,210	15	15.552	7,449	0		0
21	Rosario	33	66.441	37,008	14	85.59	47,674	33	88.627	49,365	0		0
22	San Jose	33	23.687	32,806	11	28.76	39,833	33	24.448	33,860	0		0
23	San Juan	41	101.953	35,174	15	62.22	21,466	41	78.321	27,021	0		0
24	San Luis	23	4.261	3,341	24	11.73	9,196	21	4.226	3,313	0		0
25	San Nicolas	9	0.629	486	10	1.5	1,160	11	0.530	410	0		0
26	San Pascual	12	3.920	6,684	11	19.24	32,804	15	4.763	8,121	0		0
27	Sta. Teresita	7	0.595	829	10	2.66	3,705	10	1.090	1,518	0		0
28	Sto. Tomas City	12	5.349	7,323	29	19.79	27,093	9	3.535	4,839	0		0
29	Taal	39	11.361	19,666	40	11.53	19,958	40	11.144	19,290	0		0
30	Talisay	8	3.003	4,213	6	5.43	7,618	6	20.183	28,317	0		0
31	Tanauan City	48	53.004	58,145	12	46.68	51,208	48	46.504	51,015	0		0
32	Taysan	10	12.021	3,883	12	29.5	9,529	17	21.485	6,940	0		0
33	Tingloy	12	1.737	903	1	2.44	1,269	1	0.115	60	9	0.167	87
34	Tuy	19	10.6	3,530	6	17.95	5,977	6	0.467	156	0		0
	Total	**671**	**577.65**	**381,886**	**540**	**934.23**	**756,876**	**647**	**432.03**	**333,079**	**84**	**48.74**	**25,742**

Legend :

Most Susceptible

2nd Most Susceptible

3rd Most Susceptible

Least Susceptible

Data Source: Mines and Geosciences Bureau, 2012

Relative to the four hazards identified, and as per simulations indicated, Table 1.7 summarizes the province's extent of susceptibility in percentage as per area and the number of barangays that are most likely to be affected by the hazards.

Table 1.7: Percentage Susceptibility to Geologic Hazards

GEOLOGIC HAZARDS	% AFFECTED		
	Barangays	Area	Population
Liquefaction	60.01	13.65	14.01
Earthquake Induced Landslide	50.09	29.51	31.84
Ground Shaking	62.25	18.25	16.06
Tsunami	7.79	1.54	1.08

Data Source: Batangas Province- Disaster Risk Reduction and Climate Change Adaptation (2014-2022)

1.4. Disaster Risk Reduction and Climate Change Adaptation *(DDR-CCA-PDPFP 2014-2022, Batangas Province)*

As population and settlements continue to increase, disaster awareness and preparedness remains as one of the most notable concerns of the Provincial Government of Batangas. To further reinforce the thrust and vigilance of the Provincial Government, programs evolving on disaster risk and climate change are anchored in the HELP Program of the present administration, echoing and resonating the Vision-Mission of the Provincial Government; the Executive-Legislative Agenda (ELA) and the provisions of RA 10121, otherwise known as the "Philippine Disaster Risk Reduction and Management Act of 2010"; which provides the adoption and implementation of a coherent, comprehensive, integrated, efficient and responsive disaster-risk reduction program incorporated in the development plan at various levels of government.

Crucial to the effective implementation of DRR/CCA principles are building the capacities of the Provincial Disaster Risk Reduction Management Council (PDRRMC) to appropriately respond to pre, during, and post-disaster events; and the involvement of communities through the Barangay Disaster Risk Reduction and Management Councils (BDRRMC) in disaster management efforts. Strengthened private sector and donor organization involvement are also important factors in disaster rescue and relief operations as well as in mitigation and education drives.

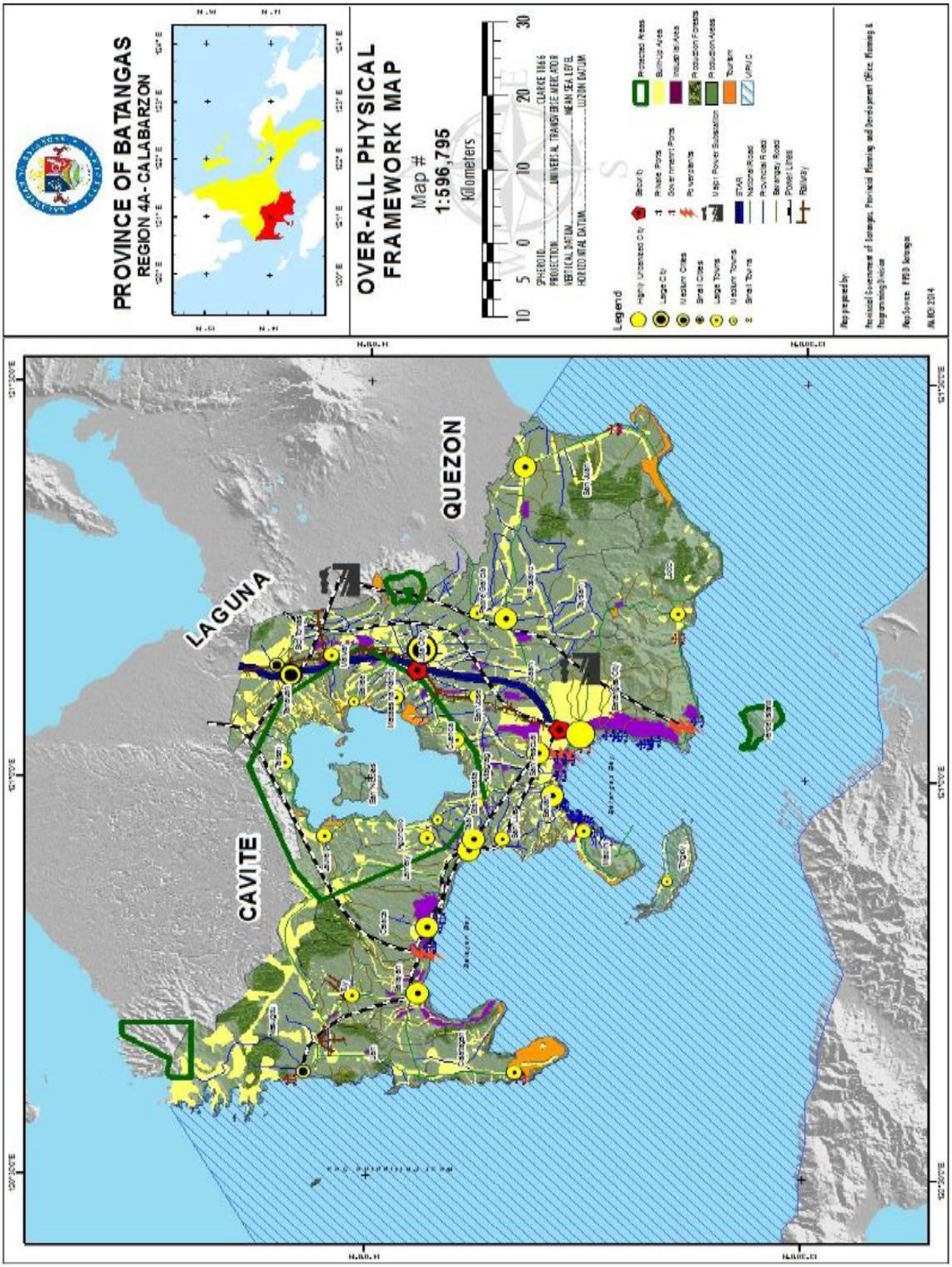
1.5 Overall Physical Framework *(Provincial Development and Physical Framework Plan (PDPFP, 2014-2022, Batangas Province)*

The province will pursue its development and achieve its vision, goals and targets through utilizing a spatial development strategy. The overall provincial development and physical framework as shown in Map 1.17, will serve as the general guide in order to achieve rational and sustainable allocation of land within the planning period; identify targets and priority areas for improvement; increase participation and role of Central Business Districts (CBDs) in achieving holistic socio-economic growth of the province; and recognize areas with high potentials for development.

Consistent with the Spatial Development Strategy of the Regional Physical Framework Plan (RPFP) 2004-2030, where Center – Corridor – Wedge (CCW) Planning Approach is applied, the Batangas DRR-CCA Enhanced-PDPFP 2014-2022 shall utilize the same.

In the CCW Approach as discussed in RPFP, Batangas City is among the identified centers/clusters or “the nuclei of economic activities with high population densities connected by built infrastructures and multimodal transportation system”. Apparently, the city, being the Capital and Administrative Center of the Province, serves as a primary and common link of all the municipalities in the Province. It shall further strengthen its function as center of economic – commercial and industrial – activities in the Province, as it is where an international port, power plants, petrochemical complexes, medium and large-scale and industries and commercial centers are located.

Map 1.17: Overall Physical Framework Map, Batangas Province



Data Source: PDPFP 2014-2022, Batangas Province

Chapter 2 DEMOGRAPHY

2.1 Population Composition

Based on Philippine Statistics Authority (PSA) Census of Population and Housing 2015, out of the 2,686,444 household populations, males accounted to 1,348,893 or 50.21% while females comprised of 1,337,551 or 49.79%. These figures resulted in a sex ratio of 101 males for every 100 females.

The median age of the population was 24.4 years, which means that half of the population was younger than 24.4 years. This was higher than the median age of 22.2 years that was recorded in 2000. Moreover, nearly one in every 3 persons (32.1%) were under 15 years old. Children aged 0 to 4 years comprised the largest group (10.3%), followed by those in age group 5 to 9 years (10%) and 10 to 14 years (9.7%). Males outnumbered females in the age groups 0 to 54 years. On the other hand, there are more females than males in the older age groups (55 years old and older).

Table 2.1: Household Population by Age and Sex: 2015

Age	Male	Female	Total	Proportion
0 - 4	144,045	131,506	275,551	10.3
5 - 9	138,695	128,632	267,327	10.0
10 - 14	134,536	125,705	260,241	9.7
15 - 19	134,466	129,258	263,724	9.8
20 - 24	130,326	129,392	259,718	9.7
25 - 29	113,733	113,273	227,006	8.5
30 - 34	104,231	103,126	207,357	7.7
35 - 39	96,189	93,834	190,023	7.1
40 - 44	82,583	78,940	161,523	6.0
45 - 49	73,149	71,428	144,577	5.4
50 - 54	58,334	57,979	116,313	4.3
55 - 59	47,696	48,959	96,655	3.6
60 - 64	35,808	40,397	76,205	2.8
65 - 69	24,248	31,727	55,975	2.1
70 - 74	14,218	20,781	34,999	1.3
75 - 79	9,105	15,567	24,672	0.9
80 and over	7,531	17,047	24,578	0.9
TOTAL	**1,348,893**	**1,337,551**	**2,686,444**	

Data Source: Philippine Statistics Authority

The Population Composition by Age Group and Sex is presented on Table 2.2. The school going population aged 3 – 22 years old, comprising of pre-school (3-4), kindergarten (5), elementary level (6-11), secondary level or high school (12-15), senior high school (16-17) and tertiary level or college (18-22), has a total of 1,066,346. Pre-school population constitutes 115,080 or 10.79% while kindergarten composed of 53,888

or 5.05% of the total school-going population. Elementary level pupils are about 319,276 or 29.94%, secondary level or high school students totaled to 209,277 or 19.63% and those in senior high school counted to 103,936 or 9.75% of the total. Tertiary level or college students constitute 264,889 or 24.84% of the total school-going population. Of the total school-going population, 548,568 or 51.44% are males and 517,778 or 48.56% are females.

Productive or working age population aged 15 – 64 years old is 1,750,563 or 64.97% of the total population. Males account for 50.42% while females account for 49.58%. Labor force with ages 15 years old and over constitute about 70.18% or 1,890,939 of the total population, with 49.59% males and 50.41% females.

On the other hand, dependent population consists of the young population with ages 0-14 years old and population aged 65 years old and over. Table 2.2 shows that 803,396 or 29.82% of the total population are young dependent population, with 51.96% or 417,427 are males and 48.04% or 385,969 are females. For the old age bracket of 65 years old and over, it shows that out of 140,376 populations, 55,163 or 39.30% are males and 85,213 or 60.70% are females.

Table 2.2: Population Composition by Age Group & Sex: 2015

Age Group	Both Sexes	Male		Female		Sex Ratio
		No.	%	No.	%	
School Going Population						
Pre-school (3-4)	115,080	60,082	52.21%	54,998	47.79%	109
Kinder (5)	53,888	28,059	52.07%	25,829	47.93%	109
Elementary (6-11)	319,276	165,476	51.83%	153,800	48.17%	108
Secondary (12-15)	209,277	108,198	51.70%	101,079	48.30%	107
Senior High School (16-17)	103,936	53,225	51.21%	50,711	48.79%	105
Tertiary (18-22)	264,889	133,528	50.41%	131,361	49.59%	102
Total School Going Population	**1,066,346**	**548,568**	**51.44%**	**517,778**	**48.56%**	**102**
Working Age (15-64)	**1,750,563**	**882,597**	**50.42%**	**867,966**	**49.58%**	**102**
Labor Force (15 and over)	**1,89,939**	**937,760**	**49.59%**	**953,179**	**50.41%**	**98**
Dependent Population						
Young (0-14)	803,396	417,427	51.96%	385,969	48.04%	108
Old (65-over)	140,376	55,163	39.30%	85,213	60.70%	65
Total Dependent Population	**943,772**	**472,590**	**91.26%**	**471,182**	**108.74%**	**173**

Data Source: Philippine Statistics Authority

Using the PSA data, for highest educational attainment, as based in the attained tertiary education, Batangas has 292,498 or 13.74% academic degree holders, where 123,202 or 42.12% are males and 169,296 or 57.88% are females. It also shows that there are 237,960 or 11.18% college undergraduates, 48.39% or 115,153 males and 51.61% or 122,807 females.

A total of 56,503 or 2.65% completed the Technical/Vocational or Post-Secondary Education, 43.52% or 24,588 of whom are males and 31,915 or 56.48% are females. However, there are 3,578 or 0.17% who were not able to finish until the last level, consisting of 1,917 or 53.58% males and 1,661 or 46.42% females. When it comes to Secondary Education, a total of 694,785 or 32.63% students comprising of 351,628 or

50.61% males and 343,157 or 49.39% females completed the high school level. Of the 283,954 or 13.34% undergraduates, 150,621 or 53.04% of them are males and 133,333 or 46.96% are females.

In the elementary level, 337,117 or 15.83% of the total population completed the 1st to 4th grade, consisting of 180,105 or 53.43% males and 157,012 or 46.57% females. On the other hand, those who have completed 5th to 7th grade account to 109,249 or 5.13% of the population, where 57,380 or 52.52% are males and 51,869 or 47.48% are females. Moreover, 3.21% or 68,440 of the total population 5 years and over completed only the Pre-school level having 32,970 or 48.17% females and 35,470 or 51.83% males. However, 45,073 or 2.12% Batangueños who were not able to complete any grade level at all, 23,430 or 51.98% account for males and 21,643 or 48.02% for females.

Table 2.3: Household Population 5 years and over by Highest Educational Attainment: 2015

Highest Educational Attainment	Male		Female		Both Sexes	
	No.	%	No.	%	No.	%
No. Grade Completed	23,430	51.98	21,643	48.02	45,073	2.12
Pre school	35,470	51.83	32,970	48.17	68,440	3.21
Elementary						
1st to 4th grade	180,105	53.43	157,012	46.57	337,117	15.83
5th to 7th grade	57,380	52.52	51,869	47.48	109,249	5.13
High School						
Undergraduate	150,621	53.04	133,333	46.96	283,954	13.34
Graduate	351,628	50.61	343,157	49.39	694,785	32.63
Post Secondary						
Undergraduate	1,917	53.58	1,661	46.42	3,578	0.17
Graduate	24,588	43.52	31,915	56.48	56,503	2.65
College Undergraduate	115,153	48.39	122,807	51.61	237,960	11.18
Academic Degree Holder	123,202	42.12	169,296	57.88	292,498	13.74

Data Source: Computed using Philippine Statistics Authority

2.2 Population Distribution

Table 2.4 shows that more than 31 percent of the total population of Batangas reside in the Cities of Batangas (12.85%), Lipa (11.92%), Sto. Tomas (5.25%) and Tanauan (6.41%) These four cities are also on top in terms of population size in 2010. The Municipalities of Sta. Teresita and Tingloy registered the lowest share in population with 0.73 percent and 0.71 percent, respectively.

As PSA has not released the Urban-Rural Classification of Barangays for 2015, 2010 data was used, wherein, 182 barangays are classified urban and 896 are rural barangays. Out of the 2,377,395 total population, urban population was 776,789 while rural population was 1,600,606 representing 32.67 percent and 67.33 percent, respectively.

Table 2.4: Household Population by Urban & Rural Barangay: 2010

City / Municipality	Population	No. of Barangays	Population Per Barangay					
			Urban			Rural		
			No. of Barangay	Population	% Over Pop	No. of Barangay	Population	% Over Pop
BATANGAS	**2,377,395**	**1,078**	**182**	**776,789**	**32.67%**	**896**	**1,600,606**	**67.33%**
Batangas City	305,607	105	42	196,937	64.44%	63	108,670	35.56%
Lipa City	283,468	72	30	165,420	58.36%	42	118,048	41.64%
Tanauan City	152,393	48	17	78,621	51.59%	31	73,772	48.14%
Agoncillo	35,794	21	1	1,793	5.01%	20	34,001	94.99%
Alitagtag	23,649	19	2	3,601	15.23%	17	20,048	84.77%
Balayan	81,805	48	8	16,196	19.80%	40	65,609	80.20%
Balete	20,214	13	0	0	0.00%	13	20,214	100.00%
Bauan	81,351	40	10	38,107	46.84%	30	43,244	53.16%
Calaca	70,521	40	4	8,747	12.40%	36	61,774	87.60%
Calatagan	51,997	25	0	0	0.00%	25	51,997	100.00%
Cuenca	31,236	21	2	1,056	3.38%	19	30,180	96.62%
Ibaan	48,482	26	3	8,059	16.62%	23	40,423	83.38%
Laurel	35,674	21	0	0	0.00%	21	35,674	100.00%
Lemery	81,825	46	6	8,449	10.33%	40	73,376	89.67%
Lian	45,943	19	1	514	1.12%	18	45,429	98.88%
Lobo	37,070	26	1	2,672	7.21%	25	34,398	92.79%
Mabini	44,391	34	1	1,472	3.32%	33	42,919	96.68%
Malvar	45,952	15	3	18,256	39.73%	12	27,696	60.27%
MataasnaKahoy	27,177	16	2	2,688	9.89%	14	24,489	90.11%
Nasugbu	122,483	42	9	48,170	39.33%	33	74,313	60.67%
Padre Garcia	44,877	18	2	7,358	16.40%	16	37,519	83.60%
Rosario	105,561	48	6	14,855	14.07%	42	90,706	85.93%
San Jose	68,517	33	4	15,692	22.90%	29	52,825	77.10%
San Juan	94,291	42	2	8,683	9.21%	40	85,608	90.79%
San Luis	30,701	26	2	4,941	16.09%	24	25,760	83.91%
San Nicolas	20,599	18	0	0	0.00%	18	20,599	100.00%
San Pascual	59,598	29	3	24,249	40.69%	26	35,349	59.31%
Sta. Teresita	17,415	17	0	0	0.00%	17	17,415	100.00%
Sto. Tomas	124,740	30	15	90,126	72.25%	15	34,614	27.75%
Taal	51,503	42	3	936	1.82%	39	50,567	98.18%
Talisay	39,600	21	1	5,523	13.95%	20	34,077	86.05%
Taysan	35,357	20	2	3,668	10.37%	18	31,689	89.63%
Tingloy	16,870	15	0	0	0.00%	15	16,870	100.00%
Tuy	40,734	22	0	0	0.00%	22	40,734	100.00%

Data Source: Philippine Statistics Authority Census Population 2010

The PSA data on Urbanization Levels showed a total of 1,905,348 population in 1,077 barangays in the province in 2000. With that, 409 barangays or 37.98% are classified urban with a population of 844,981 or 44.35% of the total population. Furthermore, with 2,245,869 total population in 2007 and 2,377,395 in 2010 living in 1,078 barangays in Batangas, there are 343 or 31.82% urban barangays for both year, comprising of 588,498 or 26.20% urban population in 2007 and 776,789 or 32.67% in 2010.

Table 2.5: Urbanization Levels: 2000-2010

Year	Population			Urban Barangays		
	Total	Urban	% Urban	Total	Urban	% Urban
2000	1,905,348	844,981	44.35	1,077	409	37.98
2007	2,245,869	588,498	26.20	1,078	343	31.82
2010	2,377,395	776,789	32.67	1,078	343	31.82

Data Source: Philippine Statistics Authority

2.3 Population Growth

From the census year of 1903, Batangas population of 257,715 continually increased up to 2,694,335 by 2015 based on the Census of Population of the Philippine Statistics Authority (PSA). In view of the PSA data in different census years, it was recorded that the highest increase in population was between 2000 and 2007 wherein the total population increase is 340,521 and the average annual growth rate is 2.29%. The 2015 population outstandingly increased by 90.43% from the year 1903.

The 2.41% Provincial Growth Rate of 2015 is 0.54% higher than 1.87% growth rate in 1918. Regional Growth Rate of 2.58% in 2015 decreased by 1.41% with 3.99% growth rate in 1960. National Growth Rate of 2.87% in 1903 is 1.15% higher than the growth rate of 1.72% in 2015.

Table 2.6: Historical Population Growth, 1903-2015

Year	Population	Increase or Decrease	Growth Rate		
			Provincial	Regional	National
1903	257,715				2.87
1918	340,199	82,484	1.87*	no data	2.03
1939	442,034	101,835	1.76*	no data	2.11
1948	510,224	68,190	1.61*	no data	2.07
1960	681,414	171,190	2.44*	3.99*	2.89
1970	926,308	244,894	3.12*	2.92*	3.08
1975	1,032,009	105,701	2.18*	3.19*	2.78
1980	1,174,201	142,192	2.4	3.22	2.71
1990	1,476,783	302,582	2.32	2.32	2.35
1995	1,658,567	181,784	2.2	2.36	2.32
2000	1,905,348	246,781	2.58a	3.91a	2.34a
2007	2,245,869	340,521	2.29c	3.21c	2.04b
2010	2,377,395	131,526	2.24b	3.07b	1.9b
2015	2,694,335	316,940	2.41e	2.58e	1.72e

Data Source: Philippine Statistics Authority publications and results

Note: a- 1990-2000 growth rate c-2000-2007 growth rate
*b- 2000-2010 growth rate e- 2010- 2015 growth rate *As computed*

Based on the data from the Provincial Health Office (PHO), Crude Birth Rate (CBR) has recorded decrease of 494 or -1.37% in 2010 from 36,081 in 2009. Decreases in CBR were also noted for 2011, 2013, 2014, 2016 and 2017, most notable of which were the

decrease in 2013 with 8,727 or -18.86% and in 2016 with -7076 or -17.44%. The most number of crude birth was recorded in 2012, with CBR percentage increase of 50.19%. Crude Death Rate (CDR) decreased by 1,972 from 6,858 in 2010 to 4,886 in 2011 or by -28.75%. Another significant decrease of -12.08% was noted in 2017, with a total reduction of 1,509 in crude deaths; however, most noteworthy CDR increases were recorded for 2012 with 1,735 or 35.51%; 2015 with 2,631 or 41.47% and 2016 with 39.12%. These are all presented in Table 14.

Table 2.7: Crude Birth Rate (CBR) & Crude Death Rate (CDR) for the Last Nine (9) years: 2009-2017

Period	CRUDE BIRTH TOTALS	INCREASE / DECREASE	CBR % INC / DEC	CRUDE DEATH TOTALS	INCREASE / DECREASE	CDR % INC / DEC
2009	36,081			6,636		
2010	35,587	-494	-1.37	6,858	222	3.35
2011	30,815	-4,772	-13.41	4,886	-1,972	-28.75
2012	46,281	15,466	50.19	6,621	1,735	35.51
2013	37,554	-8,727	-18.86	6,436	-185	-2.79
2014	35,075	-2,479	-6.60	6,345	-91	-1.41
2015	40,567	5,492	15.66	8,976	2,631	41.47
2016	33,491	-7,076	-17.44	12,487	3,511	39.12
2017	32,547	-944	-2.82	10,978	-1,509	-12.08

Data Source: Provincial Health Office

Based on the Philippine Statistics Authority (PSA) Census of Population it has been recorded that from Batangas Province's total population of 1,905,348 in year 2000, 2,377,395 in 2010, and 2,694,335 in 2015, the population increased up to 2,908,494 in 2020 with growth rates of 2.24, 2.41, 1.62 and 2.04 respectively. It can be seen that most of the Batangueños are residing in the capital city of the Province, Batangas City, with population of 247,588 in 2000; 305,607 in 2010, 329,874 in 2015 and 351,437 in 2020; with the 2000-2010 annual growth rate of 2.13, 1.46 in 2010-2015, 1.34 in 2015-2020 and 1.41 in 2010-2020. The least populated LGU is Tingloy, with 17,028 total populations in 2000; 16,870 in 2010, 17,919 in 2015 and 19,215 in 2020 census, with a recorded 2000-2010 growth rate of -0.09, 1.15 in 2010-2015, 1.48 in 2015-2020 and 1.31 from 2010 to 2020.

Table 2.8: Population & Annual Growth Rates by City/Municipality, 2000-2020

Province/ City / Municipality	Total Population				Annual population Growth Rate			
	1-May-00	1-May-10	1-Aug-15	1-May-20	2000-2010	2010-2015	2015-2020	2010-2020
BATANGAS	**1,905,321**	**2,377,395**	**2,694,335**	**2,908,494**	**2.24**	**2.41**	**1.62**	**2.04**
Batangas City	247,588	305,607	329,874	351,437	2.13	1.46	1.34	1.41
Lipa City	218,447	283,468	332,386	372,931	2.64	3.08	2.45	2.78
Sto. Tomas City	80,393	124,740	179,844	218,500	4.49	7.21	4.18	5.76
Tanauan City	117,539	152,393	173,366	193,936	2.63	2.48	2.39	2.44
Agoncillo	26,584	35,794	38,059	39,101	3.02	1.17	0.57	0.89
Alitagtag	20,192	23,649	25,300	26,819	1.59	1.29	1.23	1.26
Balayan	67,170	81,805	90,699	95,913	1.99	1.98	1.18	1.6
Balete	15,792	20,214	22,661	24,055	2.5	2.2	1.26	1.75
Bauan	72,604	81,351	91,297	90,819	1.14	2.22	-0.11	1.11
Calaca	58,489	70,521	81,859	87,361	1.89	2.88	1.38	2.16
Calatagan	45,068	51,997	56,449	58,719	1.44	1.58	0.83	1.22
Cuenca	25,642	31,236	32,783	36,235	1.99	0.92	2.13	1.49
Ibaan	40,165	48,482	52,970	58,507	1.9	1.7	2.11	1.9
Laurel	27,604	35,674	39,444	43,210	2.6	1.93	1.94	1.93
Lemery	66,528	81,825	93,157	93,186	2.09	2.5	0.01	1.31
Lian	39,129	45,943	52,660	56,280	1.62	2.63	1.41	2.05
Lobo	33,909	37,070	41,504	40,736	0.89	2.17	-0.39	0.95
Mabini	37,474	44,391	46,211	50,858	1.71	0.77	2.04	1.37
Malvar	32,691	45,952	56,270	64,379	3.46	3.93	2.87	3.43
MataasnaKahoy	20,706	27,177	29,187	30,621	2.76	1.37	1.01	1.2
Nasugbu	96,113	122,483	134,113	136,524	2.45	1.74	0.38	1.09
Padre Garcia	34,504	44,877	48,302	51,853	2.66	1.41	1.5	1.45
Rosario	86,110	105,561	116,764	128,352	2.06	1.94	2.01	1.97
San Jose	51,965	68,517	76,971	79,868	2.8	2.24	0.78	1.54
San Juan	78,169	94,291	108,585	114,068	1.89	2.72	1.04	1.92
San Luis	26,924	30,701	33,149	36,172	1.32	1.47	1.85	1.65
San Nicolas	16,278	20,599	22,623	23,908	2.38	1.8	1.17	1.5
San Pascual	49,014	59,598	65,424	69,009	1.97	1.79	1.13	1.48
Sta. Teresita	14,074	17,415	21,127	21,559	2.15	3.75	0.43	2.16
Taal	43,455	51,503	56,327	61,460	1.71	1.72	1.85	1.78
Talisay	32,465	39,600	45,301	46,238	2.01	2.59	0.43	1.56
Taysan	29,836	35,357	38,007	40,146	1.71	1.38	1.16	1.28
Tingloy	17,028	16,870	17,919	19,215	-0.09	1.15	1.48	1.31
Tuy	35,672	40,734	43,743	46,519	1.34	1.37	1.3	1.34

Data Source: Philippine Statistics Authority

2.4 Population Projection

With population of 2,377,395 and 2,694,335 for Philippine Statistics Authority (PSA) Census 2010 and 2015 base years, the Province's population is projected by 2.4% annually, whereby it is expected to reach to 3,082,630 by year 2020, as shown in Table 2.9.

Table 2.9: Population Projection by City/Municipality: 2016-2020

City/ Municipality	Total Population 2015	Projected Population				
		2016	2017	2018	2019	2020
Batangas City	329,874	336,746	341,683	346,693	351,775	356,933
Lipa City	332,386	346,976	357,658	368,670	380,020	391,720
Sto. Tomas City	179,844	198,505	212,831	228,192	244,661	262,319
Tanauan City	173,366	179,504	183,968	188,542	193,230	198,034
Agoncillo	38,059	38,694	39,149	39,609	40,075	40,546
Alitagtag	25,300	25,765	26,098	26,436	26,778	27,124
Balayan	90,699	93,260	95,112	97,000	98,926	100,890
Balete	22,661	23,371	23,885	24,410	24,948	25,497
Bauan	91,297	94,183	96,275	98,414	100,600	102,835
Calaca	81,859	85,219	87,674	90,199	92,798	95,471
Calatagan	56,449	57,714	58,625	59,549	60,488	61,442
Cuenca	32,783	33,213	33,521	33,831	34,144	34,459
Ibaan	52,970	54,251	55,173	56,112	57,066	58,036
Laurel	39,444	40,528	41,311	42,109	42,922	43,752
Lemery	93,157	96,475	98,888	101,362	103,897	106,496
Lian	52,660	54,635	56,074	57,550	59,066	60,621
Lobo	41,504	42,789	43,720	44,671	45,642	46,635
Mabini	46,211	46,715	47,074	47,435	47,800	48,167
Malvar	56,270	59,431	61,769	64,199	66,725	69,349
MataasnaKahoy	29,187	29,754	30,162	30,574	30,993	31,417
Nasugbu	134,113	137,436	139,832	142,269	144,748	147,271
Padre Garcia	48,302	49,270	49,965	50,670	51,385	52,110
Rosario	116,764	119,986	122,313	124,686	127,105	129,570
San Jose	76,971	79,426	81,206	83,025	84,886	86,788
San Juan	108,585	112,800	115,874	119,032	122,275	125,607
San Luis	33,149	33,842	34,341	34,846	35,359	35,879
San Nicolas	22,623	23,202	23,620	24,046	24,479	24,920
San Pascual	65,424	67,091	68,294	69,518	70,764	72,032
Sta. Teresita	21,127	22,258	23,092	23,958	24,856	25,788
Taal	56,327	57,704	58,697	59,707	60,734	61,778
Talisay	45,301	46,975	48,194	49,445	50,728	52,044
Taysan	38,007	38,756	39,293	39,837	40,390	40,949
Tingloy	17,919	18,213	18,424	18,636	18,852	19,070
Tuy	43,743	44,592	45,202	45,820	46,446	47,081
BATANGAS	**2,694,335**	**2,789,279**	**2,858,997**	**2,931,052**	**3,005,561**	**3,082,630**

Data Source: Philippine Statistics Authority (based on PSA new computation for projection)

2.5 Population Density

Table 2.10 shows the total population for 2015 with 2,694,335 and 2,908,494 in 2020 Total Population. Based from the total land area of 3,115.05, there is an increase of 7.36% in a population density per square kilometer in 2020 total population. Among the cities/municipalities with high population densities are Sto. Tomas City, Taal and Malvar with 2,290, 2,065 and 1,951, respectively. The Municipalities of Lobo, San Juan and Taysan have low population densities with only 233, 417 and 429, respectively.

Table 2.10: Population Density: 2015 & 2020

City / Municipality	Area	Total Population (2015)	Population Density	Total Population (2020)	Population Density
BATANGAS	**3,115.05**	**2,694,335**	**865**	**2,908,494**	**934**
Batangas City	282.96	329,874	1,166	351,437	1,242
Lipa City	209.40	332,386	1,587	372,931	1,781
Sto. Tomas City	95.41	179,844	1,885	218,500	2,290
Tanauan City	107.16	173,366	1,618	193,936	1,810
Agoncillo	49.96	38,059	762	39,101	783
Alitagtag	24.76	25,300	1,022	26,819	1,083
Balayan	108.73	90,699	834	95,913	882
Balete	25.00	22,661	906	24,055	962
Bauan	53.31	91,297	1,713	90,819	1,704
Calaca	114.58	81,859	714	87,361	762
Calatagan	101.50	56,449	556	58,719	579
Cuenca	58.18	32,783	563	36,235	623
Ibaan	68.99	52,970	768	58,507	848
Laurel	71.29	39,444	553	43,210	606
Lemery	109.80	93,157	848	93,186	849
Lian	76.80	52,660	686	56,280	733
Lobo	175.03	41,504	237	40,736	233
Mabini	44.47	46,211	1,039	50,858	1,144
Malvar	33.00	56,270	1,705	64,379	1,951
MataasnaKahoy	19.66	29,187	1,485	30,621	1,558
Nasugbu	278.51	134,113	482	136,524	490
Padre Garcia	41.51	48,302	1,164	51,853	1,249
Rosario	226.88	116,764	515	128,352	566
San Jose	53.29	76,971	1,444	79,868	1,499
San Juan	273.40	108,585	397	114,068	417
San Luis	42.56	33,149	779	36,172	850
San Nicolas	22.61	22,623	1,001	23,908	1,057
San Pascual	50.70	65,424	1,290	69,009	1,361
Sta. Teresita	16.30	21,127	1,296	21,559	1,323
Taal	29.76	56,327	1,893	61,460	2,065
Talisay	28.20	45,301	1,606	46,238	1,640
Taysan	93.62	38,007	406	40,146	429
Tingloy	33.07	17,919	542	19,215	581
Tuy	94.65	43,743	462	46,519	491

Data Source: Philippine Statistics Authority (PSA)

Using the 2010 base year data of 511,530 households, a progressive increase in the numbers of households is projected from 2016 to 2020, which may reach to about 641,854. Per city / municipality increase in households are presented in the succeeding table.

Table 2.11: Projected Number of Households, 2016 – 2020

City/ Municipality	Base Year (2010)		Projected Number og Household				
	No. of HH	Popn	2016	2017	2018	2019	2020
Batangas City	67,357	305,607	70,257	71,753	73,282	74,843	83,160
Lipa City	59,063	283,468	62,223	63,865	65,551	67,282	76,645
Sto. Tomas City	29,567	124,740	38,149	40,191	41,995	43,932	45,869
Tanauan City	31,268	152,393	32,934	33,800	34,689	35,602	40,536
Agoncillo	7,161	35,794	8,487	8,801	9,061	9,387	9,664
Alitagtag	4,869	23,649	5,306	5,446	5,513	5,640	5,709
Balayan	17,864	81,805	19,932	20,490	20,900	21,319	21,748
Balete	4,364	20,214	5,017	5,169	5,289	5,474	5,600
Bauan	18,289	81,351	19,407	19,730	20,044	20,245	20,512
Calaca	14,996	70,521	16,634	17,111	17,444	17,723	18,071
Calatagan	11,948	51,997	12,905	13,179	13,418	13,594	13,772
Cuenca	6,736	31,236	7,516	7,745	7,863	8,044	8,230
Ibaan	10,249	48,482	11,374	11,713	11,923	12,137	12,355
Laurel	7,258	35,674	8,393	8,667	8,925	9,131	9,403
Lemery	16,520	81,825	18,541	19,112	19,495	19,887	20,287
Lian	10,432	45,943	11,388	11,696	11,836	12,043	12,255
Lobo	7,981	37,070	8,344	8,512	8,586	8,658	8,731
Mabini	9,097	44,391	9,984	10,270	10,390	10,571	10,754
Malvar	9,737	45,952	11,838	12,330	12,796	13,215	13,710
MataasnaKahoy	5,671	27,177	6,620	6,856	7,073	7,237	7,466
Nasugbu	26,374	122,483	30,233	31,236	32,017	32,819	33,579
Padre Garcia	9,094	44,877	10,553	10,946	11,198	11,516	11,843
Rosario	22,196	105,561	24,868	25,584	26,114	26,655	27,210
San Jose	14,778	68,517	17,290	17,956	18,431	18,920	19,486
San Juan	21,346	94,291	23,677	24,330	24,826	25,268	25,718
San Luis	6,782	30,701	7,274	7,442	7,551	7,661	7,707
San Nicolas	4,042	20,599	4,614	4,753	4,863	4,975	5,090
San Pascual	13,310	59,598	14,833	15,234	15,585	15,880	16,182
Sta. Teresita	3,938	17,415	4,435	4,596	4,638	4,745	4,855
Taal	10,772	51,503	11,822	12,113	12,332	12,556	12,785
Talisay	8,351	39,600	9,329	9,571	9,791	10,017	10,187
Taysan	7,435	35,357	8,160	8,372	8,506	8,641	8,778
Tingloy	3	16,870	3,419	3,434	3,455	3,415	3,433
Tuy	9,217	40,734	9,897	10,143	10,248	10,419	10,525
BATANGAS	**508,065**	**2,377,395**	**565,653**	**582,146**	**595,628**	**609,451**	**641,855**

Data Source: Philippine Statistics Authority

With the 2015 as base year, the projected school-age population, labor force and dependent population are presented in Table 2.12. Labor Force (ages 15-64) is projected to rise up to 2,043,387 by the year 2020, while young and old dependent population (under 14 years for young dependent population and 65 years and above for old dependent population) for the same year projection are calculated to go up to 850,597 and 176,431, respectively.

Table 2.12: Projected Household Population by Age-Group: 2016-2020

Age-Group	2015	Projected Number of Households				
		2016	2017	2018	2019	2020
Under 1	52,808	53,582	54,136	54,695	55,260	55,830
1-4	222,743	228,213	232,176	236,229	240,371	244,607
5-9	267,327	270,681	273,092	275,539	278,023	280,545
10-14	260,241	262,650	264,369	266,103	267,852	269,615
15 - 19	263,724	270,839	275,987	281,239	286,595	292,062
20 - 24	259,718	274,825	286,021	297,677	309,812	322,444
25 - 29	227,006	235,203	241,212	247,409	253,802	260,403
30 - 34	207,357	214,408	219,555	224,850	230,294	235,898
35 - 39	190,023	198,514	204,749	211,190	217,847	224,726
40 - 44	161,523	166,466	170,058	173,737	177,503	181,361
45 - 49	144,577	152,800	158,890	165,228	171,824	178,688
50 - 54	116,313	121,006	124,446	127,993	131,656	135,435
55 - 59	96,655	101,881	105,751	109,781	113,975	118,341
60 - 64	76,205	80,487	83,664	86,976	90,430	94,029
65 - 69	55,975	61,040	64,895	69,000	73,371	78,027
70 - 74	34,999	36,192	37,064	37,962	38,885	39,833
75 - 79	24,672	25,824	26,680	27,570	28,495	29,461
80 years and over	24,578	25,654	26,461	27,300	28,186	29,110
All Ages	**2,686,444**	**2,780,265**	**2,849,206**	**2,920,478**	**2,994,181**	**3,070,415**

Data Source: Philippine Statistics Authority

2.6 Literacy

For 2015, household population 10 years old and over is posted at 2,143,566; 1,066,153 or 49.74% of which are males and 1,077,413 or 50.26% are females. Of these household population, 1,059,285 or 49.42% males and 1,070.525 or 49.94% females are literate. On the other hand, 6,868 or 0.32% males and 6,888 females or 0.32% are considered illiterate; which shows that the province's literacy rate is placed at 99.36%.

Table 2.13: Literacy Rate of Household Population 10 years and over, by Sex: 2015

	Male		Female		Both Sexes	
	No.	%	No.	%	No.	%
Population 10 years old and over	1,066,153	49.74	1,077,413	50.26	2,143,566	100%
Literate	1,059,285	49.42	1,070,525	49.94	2,129,810	99.36
Literacy Rate (%)						
Illiterate	6,868	0.32%	6,888	0.32%	13,756	0.64%

Data Source: Philippine Statistics Authority 2018

2.7 Labor Force

Based on the 2015 Labor Force Survey (LFS), Batangueños who are within the fifteen (15) years old and over that are considered eligible labor force comprised 63.2% of the population of the province with a 92.6% employment rate. Labor Force Participation (LFP) is placed at 64.7% as of October of 2015. Labor Force Participation Rate (LFPR) in the province varies at any given time in a year. It may be noted in the succeeding table that the 3rd and 4th quarters for years 2013 to 2014 are relatively higher than the 1st and 2nd quarter and except for 2015, where LFPR was relatively lower. Highest LFPR was noted in July of 2014 with 67.4 and lowest was posted on July of 2015 with 60.8. Overall, LFPR average for 2013, 2014 and 2015 are posted at 63.35; 65.9 and 62.63 respectively.

Table 2.14: Labor Force Participation Rate: 2013-2015

Province	Labor Force Participation Rate		
	2013	2014	2015
Batangas			
January	62.9	66.1	62.9
April	63.1	65.4	62.1
July	62.3	67.4	60.8
October	65.1	64.7	64.7
Average	63.35	65.9	62.63

Data Source: Regional Social and Economic Trends (RSET), 2018

2.8 Poverty Incidence

Based on 2021 Regional Social and Economic Trends (RSET), poverty incidence in the Province has significantly showed a reduced rate of about 9.7% from its 19% in 2012 to 9.3% in 2015. As the Province of Batangas is predominantly agriculture and fisheries based there are geographically isolated and disadvantaged areas (GIDAs) where employment and livelihood opportunities are limited and typically have less access to public services, there may be noted higher poverty incidence in those GIDAs.

Table 2.15: Poverty Incidence among Population: 2012-2018

Province	Poverty Incidence among Population (%)		
	Estimate (%)		
	2012	2015	2018
Batangas	19.0	22.3	11.4

Data Source: Regional Social and Economic Trends (RSET), 2021

Chapter 3 ENVIRONMENT AND NATURAL RESOURCES SECTOR

3.1. Land Classification

There are two major classifications of land, Alienable and Disposable (A&D) and Forest Lands, both of which are considered lands of the public domain. Lands which have been declared but not needed for forest purposes are considered A&D; while those lands in the public domain that have been classified for forest use are public forest, permanent forest or forest reserves, timberland, grazing lands, game refuge and bird sanctuaries, and areas which are not yet declared as A&D. A&D land is limited to lands classified as agricultural lands and may be further classified according to the uses to which they are devoted.

Based on the CALABARZON Region IV-A 2017 Information Statistics, Batangas Province has a total land area of 316, 581 hectares. Table 3.1 below shows that 85.65% or 271,167 hectares of which is classified as Certified Alienable and Disposable Land and 14.35% or 45,414 hectares is Forest Land. This forest land is divided into Classified Forest and Unclassified Forest of which 37,691 hectares or 11.91% is Classified Forest; 28,784 hectares or 9.09% is Timberland; 8,537 hectares or 2.70% is National Parks; 0.02% or 51 hectares is Military and National Reservation and 319 hectares or 0.10% is Fish Pond. On the other hand, 7,723 hectares or 2.44% is Unclassified Forest.

Table 3.1: Land Classification by Hectares and Provincial Share to Total Provincial Land, 2020

LAND CLASSIFICATION	AREA (in Hectares)	PERCENTAGE SHARE
I. Certified Alienable and Disposable Land	**271,167**	**85.65%**
A. Agricultural	181,592	57.36%
B. Built-Up	89,575	28.29%
II. Forest Land	**45,414**	**14.35%**
A. Classified Forest	37,691	11.91%
-Timberland	*28,784*	*9.09%*
-National Park	*8,537*	*2.70%*
-Military and National Reservation	*51*	*0.02%*
-Fish Pond	*319*	*0.10%*
B. Unclassified Forest	7,723	2.44%
TOTAL LAND AREA	**316,581**	**100.00%**

Data Source: DENR – CALABARZON (ENR Information and Statistics C.Y. 2020)

3.2. Land Use and Physical Framework

3.2.1. Existing General Land Use

By definition, land use is the manner of utilization of land, including its allocation, development, and management. It basically refers to human use of land; and includes the arrangement, activities, and inputs that people undertake and bring impacts on the land e.g. settlement, production system, and infrastructure.

The major land use categories in Batangas include; Built-Up/Settlement Areas, Production Areas, Protection Areas, and the Special Uses. Data for the existing land uses were gathered from the Comprehensive Land Use Plans (CLUP) of cities/municipalities as well as from the records of the City/Municipal Offices of Planning and Development Coordinator, Assessor, Agriculturist and Engineer.

3.2.1.1. Built-up Settlement Areas

Areas that include cities, towns, villages, strip developments along highways, transportation, power, and communication, facilities, and areas occupied by mills, shopping centers, etc. are considered built-up settlements. A total of 34,527.93 hectares or 10.94 percent comprises the built-up/settlement area in the Province. Residential, commercial, and institutional areas such as schools, churches, hospitals, cemeteries, parks and playgrounds are under this category. Also, the areas for facilities like disposal facilities as well as road networks – that allow efficient movement of people and production commodities – are included.

3.2.1.2. Production Areas

Under the category of production areas are the lands where productive activities are being undertaken; basically, to meet the requirements for food security and economic growth and development. Among the land uses under this category are Industrial/Agro-Industrial Areas, Agricultural Areas, Pasture/Grassland, Tourism, and Mineral Land.The total land area of the Province that falls under this land use category is 76.16 percent.

3.2.1.2.1. Industrial/Agro-Industrial Areas

Industrial sites start to thrive in the Province with a total of forty-seven (47) economic zones and industrial parks. Fourteen (14) are operating and five (5) are proclaimed as per the 2020 Philippine Economic Zone Authority (PEZA) data. A total of 1,862.09 hectares is being utilized by these operating and proclaimed eco-zones, mostly Manufacturing Special Economic Zones (MSEZ). The Province has a total industrial area of 3,920.04 hectares or 1.49 percent of its total land area.

3.2.1.2.2. Agricultural Areas

Batangas Province is dominantly Agricultural, with 71.53 percent of its total land area devoted to agricultural activities such as planting of crops, growing of fruit trees, and raising of livestock, poultry, and fish or aquaculture production. About three percent of the Province's total land area is used as Pasture/Grassland. Not all cities/municipalities in the province have identified areas under this category. This land use is mostly found in Calatagan, Balayan, Lemery, and Agoncillo.

3.2.1.2.3. Tourism Areas

Out of the 34 cities/municipalities, 22 have identified tourism areas. A total of 2,693.07 hectares (0.85 percent) of the tourism area is noted in the province. The biggest tourism areas belong to the municipalities of Laurel, Nasugbu and San Juan.

3.2.1.2.4. Mineral Land

Mineral lands in the Province are found in the Municipalities of Taysan, Tuy and Rosario, and in the Cities of Lipa and Tanauan. Total mineral area comprises 0.14 percent of the Province's total land area.

3.2.1.3. Protection Areas

Protection Areas comprise the uses of land primarily for rehabilitation, conservation and protection purposes, and for the promotion, of ecological and life support systems. These include the Forest Areas/Upland Areas, Water bodies, and Swamps/Marshlands totaling to 38,798.76 hectares or 12.29 percent of the Province's total land area.

Included in the forest lands are lands on which the vegetation is characterized by more or less dense and extensive tree cover. It also includes lands from which trees have been harvested and the intent is to maintain the land for tree production or land with tree cover set aside for the protection of other resource values.

It also refers to those lands for public domain which have been subjected to land evaluation and classification and designated for multiple uses. The majority of the cities and municipalities in the province have forest areas. Among these Municipalities are Nasugbu, San Juan, Lemery, Lobo, Tuy and Mabini.

Land is resources found on the surface, below, and above the ground including inland waters. Thus, water bodies and swamps/marshlands are also listed among the land uses in the Province. According to the combined numbers of water bodies in the cities/municipalities based on the CLUPs, the province has a total of 4,397.27 hectares or 1.39 percent.

Meanwhile, the Province has only 1,232.16 hectares or 0.39 percent of swamp/marshlands found at San Nicolas, Calatagan, Batangas City, San Juan, Balayan and Lobo.

3.2.1.4 Special Uses

Other land uses aside from the aforesaid land use categories are included in the special uses. Among the uses included in this category are the Reclaimed Areas, Military Reservation, and Other Uses. A total of 1,948.33 hectares or 0.61 percent falls under this category.

The reclaimed areas are found only at Bauan while the only military reservation is located at Fernando Airbase, Lipa City and Mataasnakahoy. About 0.64 percent of the total land area of the Province is being utilized distinctively. Based on the CLUPs, the municipalities of

Calatagan and Malvar declared 871.08 and 589.98 hectares, respectively, which are being utilized for Planned Unit Development (PUD).

Table 3.2: Summary of Existing Land Uses: 2019

LAND USES	AREA (in Hectares)	PERCENTAGE SHARE
Urban Use Areas (Built-Up)	**34,527.93**	**10.94%**
Production Areas	**240,399.47**	**76.16%**
Industrial / Agri-Industrial	4,695.41	1.49%
Agricultural	225,785.01	71.53%
Pasture / Grassland	6,793.67	2.15%
Tourism	2,693.07	0.85%
Minerald Land	432.31	0.14%
Protection Areas	**38,798.76**	**12.29%**
Forest Areas / Upland Areas	33,169.33	10.51%
Waterbodies	4,397.27	1.39%
Swamps / Marshland	1,232.16	0.39%
Special Use	**1,948.33**	**0.61%**
Reclaimed Areas	7.69	0.002%
Military Reservation	437.19	0.14%
Others	1,503.45	0.47%

Data Sources:
**-data from updated Comprehensive Land Use Plans (CLUPs), as of December 2019*
***- data from Municipal Planning and Development Office/ Municipal Assessor's Office/ Municipal Agriculture Office*

3.3. Mineral Resources

Minerals are natural substances usually comprising inorganic element or compound, having an orderly internal structure and characteristics, chemical composition, crystal form, and physical properties. Any concentration of these minerals, with a potential economic value that can be extracted at a profit, is considered a mineral resource.

The geological setting of Batangas Province is highly indicative of the occurrence of both metallic and non-metallic mineral deposits with very promising economic potential. Based on the geological surveys undertaken by the Mines and Geosciences Bureau (MGB), occurrences of metalliferous deposits containing gold, copper, lead and zinc are evident in Cities of Batangas and Lipa and Municipalities of Lobo, Taysan, Mabini, Ibaan, Cuenca and Maricaban Island of Tingloy. Cement raw materials such as limestone, shale and silica deposits occur in huge quantities in Calatagan, Batangas City and Taysan while construction materials or concrete aggregates consisting of basalt, andesite, sand and gravel are abundant in the localities of Sto. Tomas City, Lipa City, Tanauan City, San Juan, San Luis, Calaca and Balayan. Industrial mineral deposits such as clays of various types, barite, gypsum and pumice are present in Nasugbu, Calatagan, Batangas City, San Juan, Lobo and Mabini; while fertilizer raw materials like guano and rock phosphate can be found in Lobo.

A number of the known mineral deposits as mentioned above have been explored in detail and some have been commercially operated by private companies. The technical reports submitted by these companies combined with those prepared or rendered by geologists and mining engineers of Mines and Geosciences Bureau (MGB) have been collated to arrive at the current ore reserve estimates or mineral resources inventory. However, some of these mineral resource inventories are merely "geologic or inferred" reserves based on rough estimates or interpolated projection and cannot be considered as "measured or positive" reserves until they are confirmed by intensive diamond drilling and/or other detailed exploration works. There are great potentials that these current mineral resource inventories may increase or even multiply if extensions of known ore bodies or possibly new mineralized areas are discovered as more detailed exploration activities are undertaken by the MGB and/or the private sector.

3.3.1 Production of Non-Metallic Materials

By definition, non-metallic materials are materials that have no metallic luster and break easily. This is also called industrial materials and is typically some form of sediment. Non-metallic materials are not malleable. Sand, limestone, marble, clay and salt are all examples of non- metallic minerals. They are not recyclable because they cannot be reshaped significantly and repurposed, unlike metals that can be melted down and easily reshaped into a new product. An exemption is concrete because concrete is often used from a mixture of non-metallic minerals that have been crushed or ground into small, fine pieces.

Table 3.3 shows several non-metallic materials such as aggregates, base coarse, boulder, cement, filling materials, gabbro, limestone, sand and gravel and shale. The values of production for the non-metallic materials have been decreasing for the past three years. From Php 3,641,715,322 in 2018 it has significantly dropped into Php 170,718,280.96 or 95.31% in 2020. Almost all non-metallic commodities had decreased in production except Filling Materials which has a notable increase of 174,486.28 cubic meters with an increased value of Php 36,088,310.75. One factor of the massive decrease in production is the non-inclusion of commodities like Base Coarse, Boulder and Cement on the latest data releases of the Mines and Geosciences Bureau due to some changes on the policies of their agency on the release of data. Despite of the absence of these commodities from the latest data, Gabbro was added on the list pushing the production value quite a bit with Php 32,999,999.26.

Table 3.3: Production of Non-Metallic Materials from CY 2018 to CY 2020

Commodity	Unit	2020		2019		2018	
		Volume	Value	Volume	Value	Volume	Value
Aggregates	CU.M.	38,027.69	₱ 16,091,511.44	396,540.33	₱ 208,826,360.93	204,947.00	₱ 110,636,675.00
Base Coarse	Cu.M.					4,115.77	₱ 1,157,466.00
Boulder	Cu.M.					3,654.00	₱ 1,893,599.00
Cement	Bags					19,720,400.00	₱ 3,383,747,748.00
Filling Materials	CU.M.	181,033.20	₱ 37,295,214.24	6,546.92	₱ 1,206,903.49	34,496.00	₱ 11,955,398.00
Gabbro	M.T.	40,074.83	₱ 32,999,999.26				
Limestones	M.T.	977,644.00	₱ 76,187,860.14	1,224,845.89	₱ 108,790,759.46	1,459,154.00	₱ 102,549,601.00
Sand and Gravel	CU.M.	12,235.50	₱ 343,800.00	26,922.00	₱ 6,920,640.00	31,448.00	₱ 13,230,999.00
Shale	M.T.	127,542.00	₱ 7,799,895.88	212,832.00	₱ 12,434,360.66	344,187.00	₱ 16,543,836.00
TOTAL			**₱ 170,718,280.96**		**₱ 338,179,024.54**		**₱ 3,641,715,322.00**

Note: Due to the change of policies of Mines and Geosciences Bureau on the release of data, production on commodities like Base Coarse, Boulder and Cement are not included in the 2019 and 2020 MGB Data on Production of Non-Metallic Minerals..
Data Source: CALABARZON Region IV-A 2018-2020 Mineral Statistics
Mines and Geo-Sciences Bureau

3.3.2. Sales of Non-Metallic Materials

Table 3.4 shows the sales of non-metallic minerals by contractor/operator in the Province of Batangas. MAV Trading has recorded the highest sales among eleven (11) listed contractors/operators in the Mines and Geosciences Bureau (MGB) CALABARZON with a total of Php 42,363,027.25 for their commodity of rocks, aggregates, and filling materials. It was followed by Montevil Trading with Php7,629,315.23 with aggregates or base course as their commodity. On the third spot comes Canipaan Earth Resources, Inc. with Php3,080,014.70 selling similar commodities as MAV Trading. Noticeably, six out of eleven contractors/operators came from the Municipality of Taysan which also holds the majority of sales with a total combined amount of 54,908,750.06 which comprises 88% of the total sales of the entire province with 62,415,794.66. Thus, the said municipality is rich and abundant of non-metallic minerals.The Municipalities of Lobo, Calatagan and Nasugbu contributed the remaining 12% with 7,507,044.60.

Table 3.4: Non-Metallic Mineral Sales by Contractor/Operator (Batangas Province)

Commodity	Contractor/Operator	Permit Number	Municipality	Unit Used	Sales		Grade Analysis
					Quantity	Value	
Limestone for Cement	**Republic Cement & Building Materials, Inc. - Batangas Plant**	MPSA-029-95-IV	Taysan	M.T.	25,410.00	₱ 1,539,490.49	92% CaCO3
Sand & Gravel	**Kimberly T. Ramirez**	IP-SAG-IVA-032	Lobo	CU.M.	140.00	₱ 75,600.00	
Sand & Gravel	**Marcelita T. Ramirez**	IP-SAG-IVA-033	Lobo	CU.M.	2,465.50	₱ 1,373,770.80	
Rock/Agggregates, Base Coarse & Filling Materials	**2L Batangas**	QP-03-18	Taysan	CU.M.	0.00	₱ 1,317,314.49	
Rock/Agggregates, Base Coarse & Filling Materials	**Canipaan Earth Resources, Inc.**	QP-08-18	Calatagan	CU.M.	0.00	₱ 3,080,014.70	
Aggregates/Base Coarse	**Cornerstone Agg., Inc.**	QP-02-15	Calatagan	CU.M.	1,694.12	₱ 1,042,659.10	
Aggregates/Base Coarse/Filling Materials	**GQM Trading**	QP-05-18	Taysan	CU.M.	6,376.00	₱ 1,370,306.60	
Aggregates/Base Coarse	**Intermodal Bacao Development Corp.**	QP-09-17	Taysan	CU.M.	2,287.00	₱ 689,296.00	
Rocks, Aggregates, Base Coarse & Filling Materials	**MAV Trading**	QP-14-18	Taysan	CU.M.	75,473.17	₱ 42,363,027.25	
Rocks, Aggregates & Filling Materials	**Pamintuan, Rodolfo S.**	QP-10-17	Nasugbu	CU.M.	3,225.00	₱ 1,935,000.00	
Aggregates/Base Coarse	**Villena, Hernando / Montevil Trading**	QP-01-15	Taysan	CU.M.	11,470.76	₱ 7,629,315.23	

Data Source: Mines and Geosciences Bureau – CALABARZON 2020

3.3.3 Mines and Quarries

Mining and Quarrying includes the extraction of minerals occurring naturally as solids (coal & ores), liquids (petroleum) or gases (natural gas). Extraction can be achieved by different methods such as underground or surface mining, well operation, seabed mining, etc. This also includes supplementary activities aimed at preparing the crude materials for marketing, e.g. crushing, grinding, cleaning, drying, sorting, concentration ores, and liquefaction of natural gas and agglomeration of solid fuels.

There is a total area of 146,305.44 hectares of operating mines and quarries in the province as shown in Table 3.5 Municipality of Taysan has the largest area of mines and quarries with 96,095.38 hectares, followed by the Municipalities of Lian and Lemery with 41,284 hectares and 4,000 hectares respectively. Limestone, Shale, Tuff, Silica Sand, Aggregates/ Base Course, Filling Materials, Sand and Gravel are the top commodities being mined and quarried in the Province.

Table 3.5: Operating Mines and Quarries in Batangas as of CY 2019

Commodity	Contractor/Permit Holder	Permit Type	Date Approved (mm/dd/yyyy)	Date of Expiration (mm/dd/yyyy)	Area (hectares)	Barangay	Municipality, Province	Producing (√) Non-Producing (X)
Sand	**Celis, Teresa D.**	**CSAG**	11/6/2020	11/6/2021	4.9999	Laiya Aplaya	San Juan, Batangas	√
Sand and Gravel	**Atienza, Demetrio L.**	**CSAG**	7/1/2020	7/1/2021	0.9895	Sapangan	San Juan, Batangas	√
Sand	**Ereño, Gilbert M.**	**CSAG**	11/6/2020	11/6/2021	4.9997	Laiya Aplaya	San Juan, Batangas	√
Sand and Gravel	**Ramirez, Efren M.**	**ISAG**	4/18/2017	4/18/2022	19.7625	Nagtalontong and Lagadlaran	Lobo, Batangas	X
Sand and Gravel	**Ramirez, Kimberly T.**	**ISAG**	4/18/2017	4/18/2022	9.9919	Tayuman and Mabilog na Bundok	Lobo,Batangas	√
Sand and Gravel	**Ramirez, Marcelita T.**	**ISAG**	4/18/2017	4/18/2022	11.5136	Tayuman, Olo-olo, and Poblacion	Lobo,Batangas	√
Sand and Gravel	**Silver Rock Aggregates and Development Corporation**	**ISAG**	3/13/2018	3/13/2023	4.9070	Toong	Tuy, Batangas	√
Limestone, Shale	**Asturias Industries, Inc.**	**MPSA**	7/29/1997	7/28/2022	1,633.8372	Baha, Talibayog, Punta and Hukay	Calatagan, Batangas	X
Gold, silver, copper	**Egerton Gold Philippines, Inc.**	**MPSA**	11/21/2002	11/20/2027	1,163.6195	Mabilog na Bundok and Nagtalontong	Lobo, Batangas	X
Gold, silver, copper	**Egerton Gold Philippines, Inc.**	**MPSA**	11/21/2002	11/20/2027	1,011.5434	Balibago	Lobo, Batangas	X
Limestone	**LandTech Mining Resources, Inc.**	**MPSA**	8/27/2004	8/26/2029	214.5968	Calatagan	Calatagan, Batangas	X
Limestone, Shale	**Republic Cement and Building Materials, Inc.**	**MPSA**	9/29/2020	9/28/2045	321.1700	Mapulo	Taysan, Batangas	√
Rocks, Aggregates, Base Coarse and Filling Materials	**2L Batangas Corporation**	**QP**	6/7/2018	6/7/2023	4.9774	San Marcelino	Taysan, Batangas	√
Rocks, Aggregates & Filling Materials	**A.D. Dela Vega Quarrying Services / Alejandro Dela Vega**	**QP**	10/4/2017	10/4/2022	4.1284	Putingkahoy	Lian, Batangas	√
Rocks, Aggregates and Filling Materials	**Aliling, Wilfredo B.**	**QP**	12/2/2016	12/2/2021	4.6097	Toong	Tuy, Batangas	√
Rock/Aggregates Materials	**Balatbat, Ramon R.**	**QP**	4/26/2017	4/26/2022	4.0000	Kayrilao	Nasugbu, Batangas	X
Rocks, Aggregates and Filling Materials	**Berberabe Solid Aggregates**	**QP**	10/5/2017	10/5/2022	4.9666	Luya	Calatagan, Batangas	√
Rocks, Aggregates, Base Coarse and Filling Materials	**Canipaan Earth Resources, Inc.**	**QP**	6/27/2018	6/27/2023	4.1360	Piña	Taysan, Batangas	√
Aggregates and Base Coarse	**Cornerstone Aggregates, Inc.**	**QP**	7/20/2016	7/20/2021	4.0607	Lucsuhin	Calatagan, Batangas	√
Filling Materials	**Delos Reyes, Rolando**	**QP**	8/19/2016	8/19/2021	2.5300	Sinisian	Calaca, Batangas	√

Filling Materials	**De Villa, Quirino**	**QP**	2/3/2017	2/3/2022	1.1202	Sinisian	Calaca, Batangas	X
Rocks, Boulders and other Quarry Resources	**Eco Summit Aggregates Corporation**	**QP**	10/19/2020	10/19/2025	5.0000	Piña	Taysan, Batangas	√
Rock/Aggregates Materials	**Estrada, Jocelyn P.**	**QP**	4/26/2017	4/26/2022	4.0000	Kayrilao	Nasugbu, Batangas	X
Rocks, Aggregates, Base Coarse and Filling Materials	**GQM Trading**	**QP**	6/7/2018	6/7/2023	4.3260	San Marcelino	Taysan, Batangas	√
Aggregates and Filling Materials	**Humarang, Julius M.**	**QP**	7/12/2018	7/12/2023	4.000	Mahabang Dahilig	Lemery, Batangas	X
Rocks and Aggregates Materials	**Intermodal Bacao Development Corporation**	**QP**	11/8/2017	11/8/2022	4.9998	Bacao	Taysan, Batangas	√
Basalt Rock, Aggregates, and Backfill Materials	**JFM Enterprises**	**QP**	12/17/2019	12/17/2024	5.0000	Piña	Taysan, Batangas	√
Rocks, Backfill and Other Quarry Materials	**Kimusabi Quarrying**	**QP**	12/21/2020	12/21/2025	5.0000	Piña	Taysan, Batangas	√
Rocks, Backfill and Other Quarry Materials	**Lakan Seven Stars Enterprise Corporation / Fausto V. Manzanilla Jr.**	**QP**	11/6/2020	11/6/2025	5.0000	Pinagbayanan	Taysan, Batangas	√
Rocks, Aggregates and Backfill Materials	**LYZ Quarrying and Trading**	**QP**	11/19/2019	11/19/2024	5.0000	Piña	Taysan, Batangas	√
Rocks, Aggregates & Filling Materials	**Magbitang, Rommel Anthony V.**	**QP**	12/6/2018	12/6/2023	4.1366	Utod	Nasugbu, Batangas	√
Rocks, Aggregates, Base Coarse and Filling Materials	**MAV Trading**	**QP**	11/29/2018	11/29/2023	5.0000	Piña	Taysan, Batangas	√
Basalt Rocks	**ML Rock Quarry Operations/Leonila J. Llanes**	**QP**	6/25/2020	6/25/2025	1.0000	Antipolo Del Sur	Lipa City, Batangas	√
Rocks, Aggregates, Base Coarse, and Filling Materials	**MML Aggregates Supply/ Marlon M. Luancing**	**QP**	1/25/2019	1/25/2024	4.9219	Antipolo Del Sur	Lipa City, Batangas	√
Rocks, Aggregates and Base Coarse	**New Sea and Land Realty and Development**	**QP**	4/23/2019	4/23/2024	5.0000	Tangoy	Balayan, Batangas	X
Rock Aggregates and Backfill Materials	**Ocampo, Gian Nicolo**	**QP**	12/10/2019	12/10/2024	4.6541	Toong	Tuy, Batangas	√
Rocks, Aggregates & Filling Materials	**Pamintuan, Rodolfo S.**	**QP**	10/13/2017	10/13/2022	4.9944	Malapad na Bato	Nasugbu, Batangas	√
Rocks, Aggregates & Filling Materials	**Panaligan. Richard Michael D.**	**QP**	5/3/2019	5/3/2024	2.9716	Dayap	Nasugbu, Batangas	X
Sand and Filling Materials	**Picazo, Ramoncito D.**	**QP**	12/4/2018	12/4/2023	2.2936	Sinisian	Calaca, Batangas	√
Rocks, Aggregates, Base Coarse and Filling Materials	**Primerock Philippnes, Inc.**	**QP**	3/15/2018	3/15/2023	4.9999	San Marcelino	Taysan, Batangas	√
Rock/Aggregates Materials	**Puyat, Aristeo G.**	**QP**	4/26/2017	4/26/2022	5.0000	Kayrilao	Nasugbu, Batangas	X
Rocks, Aggregates and Filling Materials	**Quiniquini, Ruben B.**	**QP**	3/15/2018	3/15/2023	3.7059	Butucan	Nasugbu, Batangas	√
Sand and Filling Materials	**Razon, Dominador**	**QP**	8/5/2019	8/5/2024	0.6475	Calantas	Calaca, Batangas	X
Rock Aggregates and Backfill Materials	**RCCMG Star Development Corporation**	**QP**	3/10/2020	3/10/2025	4.9571	Utod	Nasugbu, Batangas	√
Clay, Rock Aggregates and Backfill Materials	**RTCB Aggregates Trading**	**QP**	11/26/2019	11/26/2024	4.9999	Bilaran	Nasugbu, Batangas	√

Rocks and Aggregates	**Southern Star Aggregates, Inc.**	**QP**	4/15/2019	4/15/2024	5.0000	Antipolo Del Sur	Lipa City, Batangas	X
Sand and Filling Materials	**Tolentino, Reynaldo C.**	**QP**	7/12/2018	7/12/2023	1.1000	Lumbang na Matanda	Calaca, Batangas	√
Basalt Rock, Aggregates, and Other Quarry Materials	**Top Gold Builders and Construction Supplies**	**QP**	10/30/2020	10/30/2025	4.1386	San Isidro	Rosario, Batangas	√
Rocks/Aggregates , Base Coarse and Filling Materials	**Torreverde Corporation/Villar, Rey G.**	**QP**	8/18/2017	8/18/2022	4.5972	Piña	Taysan, Batangas	√
Rocks, Aggregates and Filling Materials	**Total Quality Builders Ent. Inc./Gilbert So Hu**	**QP**	12/2/2016	12/2/2021	4.5000	Butucan	Nasugbu, Batangas	X
Rocks, Boulders, Backfill and other Quarry Materials	**True Rock Aggregates Trading**	**QP**	11/6/2020	11/6/2025	5.0000	San Marcelino	Taysan, Batangas	√
Aggregates, Base Coarse and Filling Materials	**Villena, Hernando/ Montevil Trading**	**QP**	7/8/2016	7/8/2021	3.7246	San Marcelino and Piña	Taysan, Batangas	√

Data Source: Mines and Geo-Sciences Bureau – CALABARZON 2020

3.3.4 Status of Small-Scale Mining Permits in the Province of Batangas

Based on the Provincial Government-Environment and Natural Resources Office (PG-ENRO) as illustrated in Table 3.6, Batangas Province list of small-scale mining permit holders as of December 31, 2020, their office have issued sixty-six (66) permits: three (4) Commercial Sand and Gravel, fourty-one (41) quarry permits wherein only thirty-one (31) are Operational; and twenty-one (21) special permits to transport and dispose.

Table 3.6: List of Small-Scale Mining Permits in the Province of Batangas

LIST OF SMALL-SCALE MINING PERMITS IN THE PROVINCE OF BATANGAS										
Updated as of: December 31, 2020										
No.	**Permit Holder**	**Type of Permit**	**Permit Number**	**Area (has.)**	**Location**	**Duration of Permit**		**Kind of Mineral Resources**	**Method of Extraction**	**Status of Permit/ Remarks**
						Effectivity	**Expiration**			
COMMERCIAL SAND AND GRAVEL PERMIT										
1st District										
1	Silver Rock Aggregates	ISAG	ISAG-01-18	4.9070	Brgy. Toong, Tuy, Batangas	13-Mar-18	13-Mar-23	rocks materials	mechanical	operating
4th District										
1	Gilbert M. Ereño	CSAG	CSAG-06-18	4.9997	Brgy. Laiya Aplaya, San Juan, Batangas	6-Nov-20	06-Nov-21	sand	mechanical	operating
2	Teresa D. Celis	CSAG	CSAG-07-18	4.9999	Brgy. Laiya Aplaya, San Juan, Batangas	6-Nov-20	06-Nov-21	sand	mechanical	operating
3	Demetrio L. Atienza	CSAG	CSAG-01-20	0.9895	Brgy. Sapangan, San Juan, Batangas	1-Jul-20	01-Jul-21	sand and gravel	mechanical	CSAG permit approved/ permit not yet issued

QUARRY PERMIT										
1st District										
1	Cornerstone Aggregates, Inc.	QP	QP-02-15	4.0607	Brgy. Lucsuhin, Calatagan, Batangas	20-Jul-16	20-Jul-21	aggregates and base coarse	mechanical	operating
2	Delos Reyes, Rolando	QP	QP-03-16	2.5300	Brgy. Sinisian, Calaca, Batangas	19-Aug-16	19-Aug-21	filling materials	mechanical	operating
3	De Villa, Quirino	QP	QP-01-17	1.1202	Brgy. Sinisian, Calaca, Batangas	03-Feb-17	03-Feb-22	filling materials	mechanical	no operation due to inaccessible road
4	New Sea and Land Realty & Devt.	QP	QP-04-19	5.0	Brgy. Tangoy, Balayan, Batangas	23-Apr-19	23-Apr-24	rocks, aggregates and base coarse	mechanical	no operation due to inaccessible road
5	Puyat, Aristeo G.	QP	QP-05-17	5.0	Brgy. Kayrilaw, Nasugbu	26-Apr-17	26-Apr-22	rock/ aggregates materials	mechanical	no operation/ access road construction still pending
6	Balatbat, Ramon R.	QP	QP-03-17	4.0	Brgy. Kayrilaw, Nasugbu	26-Apr-17	26-Apr-22	rock/ aggregates materials	mechanical	no operation/ access road construction still pending
7	Estrada, Jocelyn P.	QP	QP-04-17	4.0	Brgy. Kayrilaw, Nasugbu	26-Apr-17	26-Apr-22	rocks/ aggregates materials	mechanical	no operation/ access road construction still pending
8	Aliling, Wilfredo B.	QP	QP-04-16	4.6097	Brgy. Toong, Tuy, Bats.	02-Dec-16	02-Dec-21	rocks, aggregates and filling materials	mechanical	operating
9	Total Quality Builders Ent. Inc./Gilbert So Hu	QP	QP-05-16	4.5	Brgy. Butucan, Nasugbu, Bats.	02-Dec-16	02-Dec-21	rocks, aggregates and filling materials	mechanical	No operation
10	Berberabe Solid Aggregates	QP	QP-07-17	4.9666	Brgy. Luya, Calatagan, Batangas	05-Oct-17	05-Oct-22	rocks, aggregates and filling materials	mechanical	operating
11	A.D. Dela Vega Quarrying Services/ Alejandro Dela Vega	QP	QP-08-17	4.1284	Brgy. Putingkahoy, Lian, Batangas	04-Oct-17	04-Oct-22	rocks, aggregates and filling materials	mechanical	operating
12	Pamintuan, Rodolfo S.	QP	QP-10-17	4.9944	Brgy. Malapad na Bato, Nasugbu, Batangas	13-Oct-17	13-Oct-22	rocks, aggregates and filling materials	mechanical	operating
13	Quiniquini, Ruben B.	QP	QP-04-18	3.7059	Brgy. Butucan, Nasugbu, Batangas	15-Mar-18	15-Mar-23	rocks, aggregates and filling materials	mechanical	operating
14	Tolentino, Reynaldo C.	QP	QP-09-18	1.1000	Brgy. Lumbang na Matanda, Calaca, Batangas	12-Jul-18	12-Jul-23	Sand and filling materials	mechanical	operating

15	Humarang, Julius M	QP	QP-11-18	4.0000	Brgy. Mahabang Dahilig, Lemery, batangas	12-Jul-18	12-Jul-23	Aggregates and filling	mechanical	No operation
16	Ramoncito D. Picazo	QP	QP-13-18	2.2936	Brgy. Sinisian, Calaca, Batangas	04-Dec-18	04-Dec-23	Sand and filling materials	mechanical	operating
17	Rommel Anthony V. Magbitang	QP	QP-12-18	4.1366	Brgy. Utod, Nasugbu, Batangas	06-Dec-18	06-Dec-23	rocks, aggregates and filling materials	mechanical	operating
18	Richard Michael D. Panaligan	QP	QP-02-19	2.9716	Brgy. Dayap, Nasugbu, Batangas	03-May-19	03-May-24	rocks, aggregates and filling materials	mechanical	No operation
19	Dominador M. Razon	QP	QP-05-19	0.6475	Brgy. Calantas, Calaca, Batangas	05-Aug-19	05-Aug-24	Sand and filling materials	mechanical	No operation
20	RTCB Aggregates Trading	QP	QP-11-19	4.9999	Brgy. Bilaran, Nasugbu, Batangas	26-Nov-19	26-Nov-24	clay, rock aggregates and backfill materials	mechanical	operating
21	Gian Nicolo Ocampo	QP	QP-08-19	4.6541	Brgy. Toong, Tuy, Batangas	10-Dec-19	10-Dec-24	rock aggregates and backfill materials	mechanical	operating
22	RCCMG Star Dev't Corp.	QP	QP-03-20	4.9571	Brgy. Utod, Nasugbu, Batangas	10-Mar-20	10-Mar-25	rock aggregates and backfill materials	mechanical	operating
23	Angel Daniel Pia's Quarrying Services	QP	QP-04-20	4.4763	Brgy. Utod, Nasugbu, Batangas			rockS, boulders and other quarry resources	mechanical	Quarry Permit approved/ Permit not yet issued
4th District										
1	Intermodal Bacao	QP	QP-09-17	4.9998	Brgy. Bacao Taysan, Batangas	08-Nov-17	08-Nov-22	rocks and aggregates materials	mechanical	operating
2	Montevil Trading/ Villena, Hernando	QP	QP-01-15	3.7246	Brgys. San Marcelino & Piña, Taysan, Batangas	08-Jul-16	08-Jul-21	aggregates, base coarse and filling materials	mechanical	operating
3	Torreverde Corp./Rey G. Villar	QP	QP-06-17	4.5972	Brgy. Piña, Taysan, Batangas	18-Aug-17	18-Aug-22	rocks/aggregates, base coarse and filling materials	mechanical	operating
4	Prime Rock Phil. Inc.	QP	QP-02-18	4.9999	Brgy. San Marcelino, Taysan, Batangas	15-Mar-18	15-Mar-23	rocks, aggregates, base coarse and filling materials	mechanical	operating
5	2L Batangas Corporation	QP	QP-03-18	4.9774	Brgy. San Marcelino, Taysan, Batangas	07-Jun-18	07-Jun-23	rocks, aggregates, base coarse and filling materials	mechanical	operating
6	GQM Trading	QP	QP-05-18	4.3260	Brgy. San Marcelino, Taysan, Batangas	07-Jun-18	07-Jun-23	rocks, aggregates, base coarse and filling materials	mechanical	operating
7	Canipaan Earth Resources Inc.	QP	QP-08-18	4.1360	Brgy. Piña, Taysan, Batangas	27-Jun-18	27-Jun-23	rocks, aggregates, base coarse and filling materials	mechanical	operating
8	MAV Trading	QP	QP-14-18	5.0000	Brgy. Piña, Taysan, Batangas	29-Nov-18	29-Nov-23	rocks, aggregates, base coarse and filling materials	mechanical	operating

9	LYZ Quarrying and Trading	QP	QP-10-19	5.0000	Brgy. Piña, Taysan, Batangas	19-Nov-19	19-Nov-24	rock aggregates and backfill materials	mechanical	operating
10	JFM Enterprises	QP	QP-12-19	5.0000	Brgy. Piña, Taysan, Batangas	17-Dec-19	17-Dec-24	basalt rock aggregatesand backfill materials	mechanical	operating
11	Eco Summit Aggregates Corp.	QP	QP-05-20	5.0000	Brgy. Piña, Taysan, Batangas	19-Oct-20	19-Oct-25	rocks, boulders and other quarry resources	mechanical	operating
12	Top Gold Builders and Construction Supplies	QP	QP-01-20	4.1386	Brgy. San Isidro, Rosario, Batangas	30-Oct-20	30-Oct-25	basalt rock aggregatesand other quarry materials	mechanical	operating
13	True Rock Aggregates Trading	QP	QP-06-20	5.0000	Brgy. San Marcelino, Taysan, Batangas	06-Nov-20	06-Nov-25	rocks, boulders, backfill and other quarry materials	mechanical	operating
14	Lakan Seven Stars Enterprise Corp. / Fausto V. Manzanilla Jr.	QP	QP-07-20	5.0000	Brgy. Pinagbayanan, Taysan, Batangas	06-Nov-20	06-Nov-25	rocks, backfill and other quarry materials	mechanical	operating
15	Kimusabi Quarrying	QP	QP-08-20	5.0000	Brgy. Piña, Taysan, Batangas	21-Dec-20	21-Dec-25	rocks, backfill and other quarry materials	mechanical	operating
6th District										
1	MML Aggregates Supply/ Marlon M. Luancing	QP	QP-01-19	4.9219	Brgy. Antipolo del Sur, Lipa City, Batangas	25-Jan-19	25-Jan-24	rocks, aggregates, base coarse and filling materials	mechanical	operating
2	Southern Star Aggregates Inc.	QP	QP-03-19	5.0000	Brgy. Antipolo del Sur, Lipa City, Batangas	15-Apr-19	15-Apr-24	rocks and aggregates	mechanical	No operation
3	ML ROCK Quarry Operations/ Leonila J. Llanes	QP	QP-02-20	1.0000	Brgy. Antipolo del Sur, Lipa City, Batangas	25-Jun-20	25-Jun-25	basalt rocks	mechanical	operating

SPECIAL PERMIT TO TRANSPORT & DISPOSE										
1st District										
1	Calba Rocks Enterprises, Inc./Mr. Edgardo de Ocampo	SP	SP-04-17 (E)	1.0	Brgy. Lucsuhin, Calatagan, Batangas	21-Aug-20	21-Feb-21	rocks and backfilling materials	mechanical	operating
2	Francisco I. Limjoco III	SP	SP-11-18	6.4508	Brgy. Binubusan, Lian, Batangas	04-Feb-20	04-Aug-20	rocks and backfilling materials	mechanical	expired; Request for extension of permit on process
3	Rocky Summit Aggregates Inc.	SP	SP-08-19	10.0002	Brgy. Paraiso, Calatagan, Batangas	12-Nov-19	12-May-20	white sand and backfill materials	mechanical	expired; Request for extension of permit on process
4	Jarvill Enterprises	SP	SP-06-19	5.0000	Brgys. Palanas and Sambal ilaya, Lemery, Batangas	26-Nov-19	26-May-20	dredged (sand and silt) materials	mechanical	expired; Request for extension of permit on process

5	Topshots Construction and Dev't. Corporation	SP	SP-11-19	9.8743	Brgy. Mataas na Bayan, Lemery, Batangas	12-Feb-20	12-Aug-20	earth/ backfill materials	mechanical	expired; Request for extension of permit on process
6	Gerardo L. Villaluna	SP	SP-02-20	2.5224	Brgy. Balibago, Calatagan, Batangas	30-Jun-20	30-Dec-20	Sand and filling materials	mechanical	operating
2nd District										
1	CKU Steel Corp.	SP	SP-03-18 (E)	2.0	Brgy. Mainaga, Mabini, Batangas	4-Aug-20	04-Feb-21	rocks and filling materials	mechanical	operating
2	AZRAQ Enterprises	SP	SP-04-18 (E)	0.3993	Brgy. San Juan, Mabini, Batangas	14-Oct-20	14-Apr-21	rocks and filling materials	mechanical	operating
3	JASMIG Construction Corporation	SP	SP-10-19	NA	Brgys. San Miguel and Balatbat, Lobo, Batangas	9-Oct-20	09-Apr-21	stockpiled loose sand, soil and backfill materials	mechanical	operating
4	JC Rodriguez Construction Corporation	SP	SP-03-20	0.1000	Brgy. Biga, Lobo, Batangas	10-Aug-20	10-Feb-21	rocks and filling materials	mechanical	operating
3rd District										
1	Adventureland International Leisure Corporation	SP	SP-06-18 (E)	5.0	Brgy. Sta. Clara, Sto. Tomas, Batangas	04-Aug-20	04-Feb-21	boulders and backfill materials	mechanical	operating
2	Charlie D. Natanauan	SP	SP-15-18	1.5363	Brgy. Aya, Talisay, Batangas	09-Mar-20	09-Sep-20	sand	mechanical	expired; Request for extension of permit on process
3	Apolinario M. Cabrera	SP	SP-05-20	0.9238	Brgy. Subic Ilaya, Agoncillo, Batangas	26-Aug-20	26-Feb-21	Sand and filling materials	mechanical	operating
4th District										
1	Romatrade Realty and Development Corporation/Mrs. Jasmin B. Magadia	SP	SP-02-19 (E)	1.0	Brgy. Sto Niño, Taysan, Batangas	11-Jun-20	11-Dec-20	filling materials	mechanical	operating
2	Faustino A. Repollo	SP	SP-10-18 (E)	2.000	Brgy. Libato, San Juan, Batangas	09-Sep-20	09-Mar-21	backfill materials	mechanical	operating
3	MTL Gravel and Sand Trading	SP	SP-04-19	4.9500	Brgy. Pinagbayanan, Taysan, Batangas			aggregates and filling materials	mechanical	Special Permit extension approved/ Permit not yet issued.
4	Alexander M. Saligao	SP	SP-12-18 (E)	2.7957	Brgy. Calubcub 2.0, San Juan, Batangas	04-Aug-20	04-Feb-21	Backfilling Materials	mechanical	operating
5	Robert B. Ebreo	SP	SP-14-18 (E)	2.6682	Brgy. Sto. Niño, Taysan, Batangas	07-Sep-20	07-Mar-21	rocks and filling materials	mechanical	operating
6	Marcelino A. Manalo	SP	SP-13-18 (E)	0.03	Brgy. Coloconto, San Juan, Batangas	19-Aug-20	19-Feb-21	rocks and filling materials	mechanical	No operation

7	Alexander S. Mercado	SP	SP-06-20	0.1500	Brgy. Bulsa, San Juan, Batangas			backfill materials	mechanical	Special Permit extension approved/ Permit not yet issued.
5th District										
1	BCON General Services Inc./ Julius Joseph B. Beredo	SP	SP-04-20	2.0000	Brgy. Talahib Pandayan, Batangas City	27-Aug-20	27-Feb-21	dredged (sand and silt) materials	mechanical	operating

Data Source: PG-Environment and Natural Resources Office, Batangas Province (2020)

Table 3.7 shows permits issued by the Mine and Geosciences Bureau (MGB) CALABARZON Region. There are three (3) Industrial Sand and Gravel permits located in the Municipality of Lobo. Overall, there are sixty-nine (69) permit holders in the Province of Batangas.

Table 3.7: List of Industrial Sand and Gravel Permit in the Province of Batangas Issued by MGB-CALABARZON Region

LIST OF INDUSTRIAL SAND AND GRAVEL PERMIT IN THE PROVINCE OF BATANGAS ISSUED BY MGB-CALABARZON REGION										
No.	Permit Holder	Type of Permit	Permit Number	Area (ha.)	Location	Duration of Permit		Kind of Mineral Resources	Method of Extraction	Status of Permit/ Remarks
						Effectivity	Expiration			
2nd District										
1	Ramirez, Efren M. (formerly Tanjangco, Francisco S.)	ISAG	IP-SAG-IVA-034	9.9919	Brgy. Fabrica & Lagadlarin, Lobo, Batangas	18-Apr-17	18-Apr-22	sand and gravel	mechanical	operating
2	Ramirez, Marcelita T. (formerly Tanjangco, Pamela Ann F.)	ISAG	IP-SAG-IVA-033	11.5136	Brgy. Tayuman, Olo-Olo & Poblacion, Lobo, Batangas	18-Apr-17	18-Apr-22	sand and gravel	mechanical	operating
3	Ramirez, Kimberly T. (formerly Tanjangco, Patrick)	ISAG	IP-SAG-IVA-032	19.7628	Brgy. Tayuman & Mabilog na Bundok	18-Apr-17	18-Apr-22	sand and gravel	mechanical	operating

Data Source: PG-Environment and Natural Resources Office, Batangas Province (2020)

3.3.5 Parks, wildlife and other reservations

Wildlife conventionally refers to non-domesticated animal species that live wild in an area without being introduced by humans. Traditionally speaking wildlife encompasses animals like birds, fox, bison, frogs, coyotes and so on.

Wildlife can be found in all ecosystems. Deserts, forests, rain forests, plains, grasslands, and other areas including the most developed urban sites, all have distinct forms of wildlife. While the term in popular culture usually refers to animals that are untouched by human factors, most scientists agree that much wildlife is affected by human activities. Religions have often declared certain animals to be sacred, and in modern times concern for the natural environment has provoked activists to protest the exploitation of wildlife for human benefit or entertainment.

Table 3.8 shows the different wildlife stocks from various Wildlife Farms and facilities in the Province of Batangas. Based on the records from the Department of Environment and Natural Resources (DENR)- CALABARZON Region, there are a total of 708 registered wildlife stocks under the jurisdiction of CENRO - Calaca and CENRO - Lipa. The highest number of stocks is the Fischer's Lovebird with a 293 total headcount, followed by the African Lovebird with 232, Masked Lovebird with 114 and Peach-faced Lovebird with 28. Species of Lovebirds dominates this year's list due to the emerging Lovebird Breeding Industry resulting to a total of 667 stocks.

Table 3.8: Inventory of Registered Wildlife Stocks in Batangas, 2020

SPECIES		NUMBER OF STOCKS
COMMON NAME	SCIENTIFIC NAME	
Fischer's lovebird	*Agapornis fischeri*	293
African lovebird	*Agapornis sp.*	232
Masked lovebird	*Agapornis personatus*	114
Peach-faced lovebird	*Agapornis roseicollis*	28
Nile crocodile	*Crocodylus niloticus*	17
Green iguana	*Iguana iguana*	8
Burmese python	*Python bivvitatus*	4
Ball python	*Python regius*	3
Cornsnake	*Elaphe guttata*	3
Peacock	*Pavo cristatus*	2
Golden pheasant	*Chrypsolophus pictus*	2
African spurred tortoise	*Centrochelys sulcata*	2
	TOTAL	**708**

Note: Inventory of Registered Wildlife stocks cover those from 2020 until January 2021
Data Source: DENR - CALABARZON, 2020

Table 3.9: Newly Registered Wildlife Facilities in Batangas for the Year 2020

	NAME OF FACILITY / CWR HOLDER	PERMIT NUMBER	DATE OF ISSUANCE
1	Mr. Ruel B. Ilagan	R4A-CWR-2020-BAT-034	February 18, 2020
2	Mr. Mark IA. Brucal	R4A-CWR-2020-BAT-017	August 14, 2020
3	Mr. Archie P. Villanueva	R4A-CWR-2020-BAT-064	May 19, 2020
4	Mr. Jerico A. Comia	R4A-CWR-2020-BAT-065	July 13, 2020
5	Mr. Renmel Donne	R4A-CWR-2020-BAT-044	February 18, 2020
6	Mr. Felipe P. Malabag, Jr.	R4A-CWR-2020-BAT-035	February 18, 2020
7	Mr. Juan Gualberto Leyeza	R4A-CWR-2020-BAT-179	November 19, 2020

8	Mr. Joel M. Icaro	R4A-CWR-2020-BAT-036	February 18, 2020
9	Mr. Jaypee C. Carable	R4A-CWR-2020-BATS-046	February 18, 2020
10	Mr. Rey R. Modina	R4A-CWR-2020-BAT-024	February 10, 2020
11	Mr. Raymond V. Juntereal	R4A-CWR-2020-BAT-029	February 21, 2020
12	Mr. Mark Jayson Montenegro	R4A-CWR-2020-BAT-037	February 18, 2020
13	Mr. Ruel F. Mendoza	R4A-CWR-2020-BAT-028	February 21, 2020
14	Mr. Wilson S. Africa	R4A-CWR-2020-BAT-022	February 10, 2020
15	Mr. Albert N. Araño	R4A-CWR-2020-BAT-062	July 13, 2020
16	Mr. Mc John Lloyd S. Templo	R4A-CWR-2020-BAT-056	February 18, 2020
17	Mr. Sebastian Eryson H. Magpantay	R4A-CWR-2020-BAT-061	May 19, 2020
18	Mr. Lorenzo Elquin H. Magpantay	R4A-CWR-2020-BATS-045	February 21, 2020
19	Mr. Ivan Rey Templo	R4A-CWR-2020-BAT-090	July 13, 2020
20	Mr. John Frederick B. Asa	R4A-CWR-2020-BAT-055	February 18, 2020
21	Mr. Greg T. Custodio	R4A-CWR-2020-BAT-094	July 13, 2020
22	Mr. Renato C. Lipat, Jr.	R4A-CWR-2020-BAT-021	February 10, 2020
23	Mr. Luciano D. Dalangin	R4A-CWR-2020-BAT-063	May 19, 2020
24	Mr. Sander E. Beltran	R4A-CWR-2020-BAT-040	February 18, 2020
25	Mr. Rudylan Turica	R4A-CWR-2020-BAT-180	November 19, 2020
26	Mr. Perlito J. Barcelona, Jr.	R4A-CWR-2020-BAT-026	February 18, 2020
27	Mr. Franklin A. Roxas	R4A-CWR-2020-BAT-104	August 6, 2020
28	Mr. German F. Ambaye, Jr.	R4A-CWR-2020-BAT-115	July 31, 2020
29	Mr. Jesus King O. Yabut	R4A-2020-WFP-BAT-001	March 13, 2020
30	Jeffrey Columna	R4A-2020-WFP-BAT-002	January 5, 2021

Note: Newly registered Wildlife facilities cover those from 2020 up to January 2021
Data Source: DENR - CALABARZON Region, 2020

3.4. Forestry

Forest is a large area of land covered with trees. But a forest is much more than just trees. It also includes smaller plants, such as mosses, shrubs, and wildflowers. In addition, many kinds of birds, insects, and other animals make their home in the forest. Millions upon millions of living things that can only be seen under a microscope also live in the forest.

3.4.1. Location of Integrated Social Forestry in Batangas

Integrated social forestry is the national program designated to maximize land productivity and enhance ecological stability, and to improve the socio-economic conditions of forest occupants and communities.

Table 3.10 shows the lists of integrated social forestry areas in Batangas devolved by DENR. Lobo tops the list with an area of 506.48 hectares participated by 188 individuals/organizations, followed by the Municipality of San Juan with 423.25 hectares with 234 participants. Third largest forest area devolved by the DENR is from the Municipality of Tuy covering 138.96 hectares with a participating count of 57. Sharing the remaining 126.97 hectares are forest areas from the municipalities of Rosario, Balayan, Calaca and Laurel arranged respectively from largest to smallest.

The Municipality of San Juan, despite holding only the second largest forest area in the province, tops the list of most participants with 234 managing individuals/organizations. Shifting from its top spot possessing the largest forest land devolved by DENR; in this category, Lobo now comes second with 188 participating individuals/organizations.

Table 3.10: Integrated Social Forestry Area Devolved by Department of Environment and Natural Resources

INTEGRATED SOCIAL FORESTRY DEVOLVED BY DENR		
LOCATION	**AREA (in Hectares)**	**NO. OF PARTICIPANTS**
Lobo	506.48	188
San Juan	423.25	234
Tuy	138.96	57
Rosario	70.93	59
Balayan	39.20	22
Calaca	13.15	17
Laurel	3.69	62
TOTAL	**1195.66**	**639**

Data Source: DENR - CALABARZON, 2020

3.4.2. Forest Management in Batangas

Forest Management deals with the overall administrative, economic, legal, social, technical and scientific aspects related to natural and planted forests. It implies various degrees of deliberate human intervention, ranging from actions aimed, at safeguarding and maintaining the forest ecosystem and its functions, to favoring specific socially or economically valuable species or groups of species for the improved production of goods and services. Sustainable forest management will ensure that the values derived from the forest meet present-day needs while at the same time ensuring their continued availability and contribution to long-term development needs. *(Source: FAO. 1993. The Challenge of Sustainable Forest Management - what future for the world's forests?)*

Moreover, forest resources and forest lands should be sustainably managed to meet the social, economic, cultural and spiritual human needs of the present and. future generations.

These needs are for forest products and services, such as wood and -wood products, water, food, fodder, medicine, fuel, shelter, employment, recreation, habitats for wildlife, landscape diversity, carbon sinks and reservoirs, and for other forest products. Appropriate measures should be taken to protect forests against harmful effects of pollution, including air-borne pollution, fires, pests and diseases in order to maintain their full multiple values. *(Source: UNCED. 1992. Earth Summit - Rio Declaration & Forest Principles.)*

As shown in Table 3.11, the Province has a total of 508 hectares of forestland area that are rehabilitated and under effective management of Community Environment and Natural Resources Office (CENRO) – Calaca from the year 2018 to 2020. These forestland areas are located in the municipalities of Nasugbu, Calaca and Lian. The Municipality with the largest forestland area is Nasugbu with a total of 278 hectares while the least forestland area is the Municipality of Lian with 100 hectares, not far from the 130-hectare forest land area of Calaca which holds the second spot on the list.

Table 3.11 Area of Forestland Rehabilitated and Under Effective Management Under Community Environment and Natural Resources Office (CENRO) – Calaca from 2018-2020

MUNICIPALITY	NUMBER OF BARANGAYS	AREA (in Hectares)
NASUGBU	6	278
CALACA	6	130
LIAN	2	100
TOTAL	**14**	**508**

Data Source: DENR – CALABARZON (CENRO – Calaca), 2020

3.4.3. List of Accredited Private Forest in Batangas

Forest is a large area of land covered with trees or other woody vegetation. Forests account for 75% of the gross primary productivity of the Earth's biosphere and contain 80% of the Earth's plant biomass. Although a forest is usually defined by the presence of trees, under many definitions an area completely lacking trees may still be considered a forest if it grew trees in the past, will grow trees in the future or was legally designated as a forest regardless of vegetation type. There are three broad categories of forest definitions in use: administrative, land use, and land cover. Administrative definitions are based primarily upon the legal designations of land, and commonly bear no relationship to the vegetation growing on the land: land that is legally designated as a forest is defined as a forest even if no trees are growing on it. Land Use definitions are based upon the primary purpose that the land serves. Under such a Land Use definition, cleared roads or infrastructure within an area used for forestry, or areas within the region that have been cleared by harvesting, disease or fire are still considered forests even if they contain no trees. Land cover definitions define forests based upon the type and density of vegetation growing on the land. Such definitions typically define a forest as an area growing trees above some threshold. These thresholds are typically the number of trees per area (density), the area of ground under the tree canopy (canopy cover) or the section of land that is occupied by the cross-section of tree trunks (basal area). Under such Land Cover definitions and areas of land only be defined as forest if it is growing trees. Areas that fail to meet the Land Cover definition may be still included

under while immature trees are establishing if they are expected to meet the definition at maturity.

Forests at different latitudes form distinctly different ecozones: boreal forests near the poles tend to consist of evergreens, while tropical forests near the equator tend to be distinct from the temperate forests at mid-latitude. The amount of precipitation and the elevation of the forest also affect forest composition.

Human society and forests influence each other in both positive and negative ways. Forests provide ecosystem services to humans and serve as tourist attractions. Forests can also impose costs, affect people's health, and interfere with tourist enjoyment. Forests play a key role in the ecological system as these are also the primary producers on which all other living beings depend. In Batangas, there are is an approximate total of 302.51 hectares of Accredited Private Forest. The biggest area covered by a private forest is in the municipality of Lobo with a total area of 73.80has followed by the municipality of San Juan and San Jose with 64.85has and 23.92has, respectively. The Municipality of Tuy posted with an unknown land area due to non-declaration of land area on PENRO-Batangas' records.

Table 3.12: List of Accredited Private Forest in Batangas (from 2019 to 2020)

OWNER/MANAGER	BARANGAY	AREA (Has.)	TOTAL AREA PER MUNICIPALITY
BALAYAN			
Dennis D. Magno	Brgy. XI	0.06	**0.06**
BATANGAS CITY			
Agapito G. Delica	Talumpok Silangan	2.27	**18.55**
Armando Lubis	Bilogo	0.15	
Clarita Gomez	Maapas	0.35	
Domingo Gatdula	Maapas	0.25	
Eufemio Villena	Bilogo	0.19	
Eufrosino P. Coliat	SoroSoro Ilaya	0.25	
Francisco A. Berberabe	San Isidro	2.25	
Herminigildo A. Manalo	Banaba Center	0.57	
Joanne Gamboa	Libjo	0.30	
Juanita Tanada	Tabangao-Ambulong	0.88	
Librada Flores	Banaba	0.29	
Luz Panganiban Gatdula	Maapas	0.39	
Maria V. Noche	Banaba South	0.13	
Melinda C. Gomez	Brgy. Maapas	1.01	
Melinda Gomez	Maapas	0.31	
Milagros Macaraig	Bilogo	0.26	

Nelson C. De Villa	Brgy. Mahabang Dahilig	0.28	
Nicholas Michael Sy	Laiya Aplaya	0.07	
Pablo Candor	Talumpok Kanluran	1.20	
Pedro Bisco	Tabangao and Pinamucan	0.44	
Saturnina Alcantara	Dalig	0.12	
Sps. Benjamin & Iluminada Malabuyoc	Tulo	0.29	
Sps. Ireneo and Rowina Burog	Banaba South	0.10	
Sps. Julian & Herminia Musico	Bucal/Concepcion	1.97	
Teodoro & Hilaria de Chavez	Tulo	1.96	
		0.57	
Tito Ramirez Engay	Conde Labac	1.71	
BAUAN			
Arnel Angelo H. Banta	Cupang	0.89	**4.24**
Florante Aseron	Cupang	1.13	
Hilario Lopez	Durungao	0.79	
Lizette Palma	Cupang	0.76	
Sps. Sergio & Erlinda Masangcay	San Teodoro	0.67	
CALACA			
Sps. Teodolfo Miranda and Crisanta Mendoza	Brgy. Dila	0.97	**2.34**
St. Raphael Archangel ParishnMultipurpose Cooperative Rep. by Bacal, Mario Florante Y.	Brgy. Madalunot	1.37	
CALATAGAN			
Eugenny Saw	Brgy. Talisay	1.82	**3.93**
LANDCO Pacific Corporation rep. by Moses John B. Aragones- Project Manager	Brgy. Sta Ana	2.11	
CUENCA			
Anita D. Lim	Labac	1.07	**8.39**
Brando Chavez	Emmanuel	0.81	
Enrique Comia	Emmanuel	2.46	
Jovino M. La Rosa	Brgy. Ibabao	3.10	
Jovino M. La Rosa	Brgy. Dita	0.25	
Leonardo Cuevas	San Felipe	0.65	
Sps. Julius & Michelle Baquiran	San Felipe	0.06	
IBAAN			
Arsenio Magnaye	Brgy. Bungahan	0.80	**7.88**
Isabelo Kalalo	Sto. Niño	0.19	
Juan Maranan rep. by Amy Maranan	Pangao	1.53	
MBC Lending Investor c/o Ivan B. Castillo	Coliat	2.73	

Roberto Patulot	Tulay	0.30	
Rosalina R. Samson	Brgy. Mabalor	2.32	
LAUREL			
Ceferino M. Fortunado Jr. (Atty-In-Fact)	Brgy. Molinete	0.32	**7.90**
Ceferino M. Fortunado Jr. (Atty-In-Fact)	Brgy. Molinete	0.10	
Ceferino M. Fortunado Jr. (Atty-In-Fact)	Brgy. Molinete	4.87	
Rafael Vicente R. Calinisan	Brgy. Balakilong	2.52	
Sixto R. Ariola	Brgy. Bugaan West	0.08	
LEMERY			
Sps. Jacinto Peren and Rizalina Peren	Brgy. Bucal	0.38	**0.38**
LIAN			
Jose C. Valientes, Jr.	Brgy. Cumba	1.55	**1.55**
LIPA CITY			
Carmelita B. Mercado	Rizal	0.07	**16.75**
Crisogono R. Francisco	Tibig	1.36	
Danny Marave	Rizal	0.51	
Divina Gina S. De Castro	San Lucas	0.36	
Evan Elmo Del Castillo	Anilao	0.59	
Helen Estolano & Cynthia Biscocho	Bolbok	5.08	
Isabel Regina Flor P. Garchitorena	Talisay	1.00	
Marina M. Briones	Sabang	0.03	
Mario C. Amparo	Antipolo Del Norte	1.00	
Mr. Reynaldo Mayuga & Ms. Priscilla Mayuga-Piedad	Balintawak	0.23	
Raul Roldan Bicol	Talisay	0.33	
Rolando Rosales	Tibig	0.57	
Salvador Honrade	Halang & Pinagtong-olan	0.10	
		0.46	
		0.34	
Sps Felino & Rosalina Amo	Bulacnin	0.08	
Sps Felino & Rosalina Amo	Bulacnin	0.43	
Sps. Enrico & Victoria Bilog	Talisay	0.14	
Tarnate Realty and Holdings, Inc.	Brgy. Lumbang	4.07	
LOBO			
Albert Medrano	Tayuman	17.06	**73.30**
Belen Camo & Bueno Oliver Conti	Jaybanga	4.16	
Buenventura Aleta and Zosimo Aleta	San Miguel	1.71	
Carlos D. De Chavez	Jaybanga	0.83	
Constancio Duenas	San Miguel	1.16	

Eleuterio Zara	San Miguel	0.64	
Elias D. Borbon	San Miguel	0.61	
Emelina Ramirez	Poblacion	0.48	
Emiliano Magtibay	San Miguel	0.67	
Esteban Anyayahan	Calo	2.10	
Fernanda Gamboa Repollo & Loreta Repollo	Sawang	1.42	
		1.01	
Genara & Gerardo Andaya	Bignay	12.89	
Ichiban Farms and Commercial Corp.	Malapad na Parang	10.00	
Iluminada Duenas	San Miguel	0.85	
Joselito M. Evangelista / Ma. Theresa E. Belmes et.al	Biga	13.60	
Ramon Panganiban	Nagtoctoc	2.98	
Vicente Conti	Nagtalungtong	1.13	
MABINI			
Benjamin Dimaapi	Anilao East	1.10	**1.21**
Pedro A. Datingaling	Brgy. Mainaga	0.10	
MALVAR			
Arcadio Manalo	San Gregorio	2.73	**4.68**
Heirs of Marcela Malabanan	Bulihan	1.34	
Santiago Bauzon	Bulihan	0.61	
MATAASNAKAHOY			
Engr. Rodolfo P. Lubis	Brgy. Santol	6.34	**6.50**
Sps. Horacio G. Severino and Maria Paz G. Luna	Brgy. Kinalaglagan	0.16	
NASUGBU			
Isabel A. Tenorio	Brgy. Looc	0.93	**7.58**
Manalo, Benita B.	Brgy. Munting Indang	2.35	
Raymundo Hernandez	Brgy. Munting Indang	1.30	
Ricardo Hembrador, Sr.	Brgy. Maugat		
Virgilio A. De Torres	Brgy. Munting Indang	3.00	
PADRE GARCIA			
Angeles Jabilosa Schafer	Cawongan	0.07	**1.47**
Digna Manalo	San Miguel	0.98	
Jorens Leo G. Caraan	Bukal	0.42	
ROSARIO			
Joselito Caymo et.al	Malacamlam	0.50	**14.19**
Leonora Jaesch	San Carlos	0.23	
Luzviminda Jonsay	Pinagsibaan	0.82	
Ralph Louis C. Prado	Brgy. San Carlos	3.79	

Reynaldo & Teresita Otic	Alupay	7.01	
Sps. Homer R. Arellano and Agnes Farida S. Bagaforo-Arellano II	Sta. Cruz	1.84	
SAN JOSE			
Alfredo Iglopas	Lalayat	0.53	**23.92**
Alfredo Sinohin	Banay-Banay 2.0	0.72	
BGen Augusto D. Dela Peña, AFP	Galamay-amo	0.92	
Engr. Rogelio M. Murga	Brgy. Lapu-lapu 2	2.03	
Eric Punio	Lalayat	0.17	
Erlinda D. De Belen	Tugtug	0.90	
Gaudencio Hernandez Jr	Lapolapo 2	0.17	
Gemma C. Miguel	Natunuan	4.64	
Gemma C. Miguel	Natunuan	0.91	
Guillermo Guce	Brgy. Galamay amo	1.65	
John Manuel Caraan Medina	Natunuan	0.78	
Leon Gonzales	Natunuan		
Ma. Graciela Palintan	Banay Banay 1.0	0.46	
Melissa O. Castillo	Brgy. Taysan	0.57	
Nolasco Vergara	Balagtasin II	2.03	
Pablo Chavez	Calansayan	0.49	
Pablo Chavez	Aguila	0.78	
Rolando Javillo	Lepute	0.16	
Romeo Ambal md.to Alicia Ambal	Aya	0.85	
Spencer Marc Chiong	Balagtasin 2	0.30	
Spencer Marc Chiong	Balagtasin 2	1.65	
Sps. Anastacio Luna & Teresita Luna	Brgy. Aya	0.28	
Sps. Jeffrey & Yashila Ojeda	Bigain I	0.05	
Sps. Renato & Melissa Castillo	Calansayan	0.50	
Victoriano Irlandez	Lalayat	2.07	
		0.32	
SAN JUAN			
Alex Untalan	Calubcub 1.0	0.22	**64.85**
Benito Carag	Libato	1.21	
Catherine Sulit	Brgy. Sapangan	5.00	
Ernesto M. Javier	Palahanan II	2.00	
Jose Fortunato et.al.	Palahanan	18.82	
Maylyn M. Yoshioka md/to Atsushi Yoshioka	Buhay na Sapa	0.96	
Meynardo Maalihan	Sico I	2.56	
Ramelito Manalo	Abung	30.50	

Ramon Castillo	Sico I	3.59	
SAN LUIS			
Ceferino M. Fortunado Jr. (Atty-In-Fact)	Brgy. Tungal	0.62	**0.85**
Enoc Saliva (Atty.-in-fact)	Brgy. Luya	0.23	
SAN NICOLAS			
Atty. Bereña, Remedios M.	Brgy. Maabud South	0.50	**0.50**
SAN PASCUAL			
Gemma C. Miguel	San Mariano	3.32	**3.32**
STA. TERESITA			
Ceferino M. Fortunado Jr. (Atty-In-Fact)	Brgy. Calayaan	1.37	**1.37**
STO. TOMAS CITY			
Ariel O. Guevarra	Brgy. San Fernando	1.09	**7.13**
Bienvenido Montero	Brgy. San Agustin	0.24	
Cecilia M. Tan	Sta. Cruz		
Cecilia M. Tan	Sta. Teresita	0.61	
Cecilia M. Tan	Sta. Teresita	1.52	
Celso Malabuyoc	San Joaquin	0.43	
Cornelio R. Carandang	San Luis	0.23	
Leonardo Malanco	San Juan	0.06	
Sps Felix and Justina Esquivel Chavez	San Vicente	0.53	
Sps. Catalino & Remedios Aquino	Sta. Elena	0.99	
Sps. Jose Erwin & Lourdes Barrion	San Joaquin	0.30	
Sps. Medardo & Lucita Torres	San Jose	0.01	
Sps. Medardo & Lucita Torres	San Felix	0.61	
Sps. Medardo & Lucita Torres	San Felix	0.51	
TAAL			
Corazon L. Sandoval	Brgy. Gahol	2.53	**3.02**
Michael R. Remo	Brgy. Apacay	0.13	
Sps. Ireneo Hernandez and Sabina Hernandez	Brgy. Cawit	0.19	
Sps. Sergio Villavicencio and Eleanor Villavicencio	Brgy. Iba	0.16	
TALISAY			
Nicanor S. Pellejera	Banga	2.92	**2.92**
TANAUAN CITY			
Beatrice C. Pamplona	Bañadero	2.00	**9.21**
Fortunato Chua	Talaga	3.33	
Francisca Mercado et. al	Bilog-Bilog	3.04	
Valentin Marfa et.al	Balele	0.84	
TAYSAN			

Eduardo Capili	Mabayabas	0.51	**0.51**
TINGLOY			
Faustino Macuha	Poblacion 13	4.01	**4.01**
TUY			
Sps. Cesar Soriaga and Eufracia Soriaga	Brgy. Sabang		
	TOTAL	**302.51**	

Data Source: PENRO – Batangas, 2020

3.5 Water Resources

Water is an essential element of life. Every ecosystem depends on water for survival. There are critical links in improving water resources management, access to water supply and sanitation, poverty reduction, hunger mitigation, improved health and education, gender equality and environmental sustainability.

3.5.1 Mangrove Areas in Batangas

Mangroves are shrubs or small trees that grow in coastal saline or brackish water. Mangroves are salt-tolerant trees, also called halophytes, and are adapted to live in harsh coastal conditions. They contain a complex salt filtration system and complex root system to cope with saltwater immersion and wave action. They are adapted to the low oxygen (anoxic) conditions of waterlogged mud.

Based on records provided by the Provincial Environment and Natural Resources of the Provincial Government of Batangas (PG-ENRO) reflected on Table 3.13, there are 680.45 hectares of mangrove areas in the whole province which are declared as a Marine Protected Sanctuary which are mostly found in the Municipalities of San Juan and Lobo with 559.10 hectares and 65.19 hectares of mangrove areas respectively. The least mangrove area is in the Municipality of Lian with only 4 hectares.

Table 3.13: Mangrove Areas in Batangas Declared as a Marine Protected Area (MPA) as of Year 2020

CITY/MUNICIPALITY	TOTAL AREA PER CITY/MUNICIPALITY (in Hectares)
San Juan	559.10
Lobo	65.19
Calatagan	33.50
Nasugbu	10.66
Lemery	8.00
Lian	4.00
TOTAL	**680.45**

Data Source: PG-ENRO, 2020

3.5.2 Coral Reef Areas in Batangas

A coral reef is an accumulation of dead corals and other organisms with a limestone skeleton cemented together by some algal species and by physical processes. The reef builds slowly towards the surface of the water, at the rate of a few millimeters per year for massive corals, and a few centimeters per year for branching and staghorn corals. Once the reef reaches sea level, the corals cannot survive, and the reef grows horizontally. With the efforts of the Provincial Government of Batangas and other organizations, damaged coral reefs are replaced by artificial reefs which assists marine habitants with their reproduction, shelter and food hunting in order to sustain the marine ecosystem.

Table 3.14 shows the coral reefs in Batangas Province with an approximate area of 2,885 hectares covering 0.82% of the total area of its provincial waters. Municipality of Calatagan has the highest coral reef area in the province with an approximate total of 823 hectares covering 1.13% of its waters. Tingloy comes second with a total of 508 hectares followed by San Juan with 325 hectares with a proportion of 0.63% of the area if its municipal water. Three (3) municipalities with salt water bodies are listed to have zero coral reef mainly Calaca, Lemery and San Pascual.

Table 3.14: Coral Reef Areas in Batangas

CITY/MUNICIPALITY	AREA OF MUNICIPAL WATER (in Hectares)	CORAL REEF AREAS (in Hectares)	PERCENTAGE SHARE OF CORAL REEF AREAS TO THE TOTAL AREA OF MUNICIPAL WATER
Calatagan	72,587	**823**	**1.13%**
Tingloy	41,713	**508**	**1.22%**
San Juan	51,564	**325**	**0.63%**
Batangas City	32,209	**289**	**0.90%**
Lobo	29,927	**237**	**0.79%**
Mabini	14,610	**229**	**1.57%**
Nasugbu	56,819	**219**	**0.39%**
Lian	24,610	**116**	**0.47%**
San Luis	2,122	**53**	**2.50%**
Bauan	8,232	**42**	**0.51%**
Balayan	5,916	**25**	**0.42%**
Taal	1,239	**19**	**1.53%**
Calaca	5,198		**0.00%**
Lemery	4,273		**0.00%**
San Pascual	725		**0.00%**
TOTAL	**351,744**	**2,885**	**0.82%**

Note: The value 0.82% pertains to the Percentage Share of Coral Reef Areas to the Total Area of Provincial Waters
Data Source: NAMRIA thru PGENRO – Batangas, 2020

3.5.3 Freshwater (ground, surface)

Freshwater is naturally occurring water on Earth's surface in ponds, lakes, rivers and streams, and underground as groundwater in aquifers and underground streams. Freshwater is generally characterized by having low concentrations of dissolved salts and other total dissolved solids.

Table 3.15 shows the total number of fish cages located in Taal Lake is 9,970. Each cage has an area of 100m x 100m for Square Cages and 201.6m x 201.6m for Circular Cages completing the total area of 2,102.78 hectares of fish pens assembled in the lake area. These fish cages cover 9% of the total area of the Taal Lake which is 23,366 hectares.

Table 3.15: Area Percentage of Fresh Water Bodies Covered by Fish Cages

TOTAL NUMBER OF FISH CAGES ALLOCATION	AREA OF EACH CAGE (in Square Meters)	TOTAL AREA OF FISH CAGES (in Hectares)	TOTAL AREA OF TAAL LAKE (in Hectares)	PERCENTAGE OF AREA WITH FISH CAGES
9,970	100m x 100m (Square Cages) 201.6m x 201.6m (Circular Cages)	2,102.78	23,366	**9%**

Data Source: DENR – CALABARZON (Protected Area Management Office – Taal Volcano Protected Landscape), 2020

3.5.4. Marine Water

Batangas, known for its pristine water area is teeming with marine life, plenty of coral reefs and amazing diversity of fishes makes it a world-class scuba diving sites and tourist attractions. But this also comes with responsibilities that should be considered. One of these is the protection of marine life. Marine Protected Areas (MPAs) has been established in several municipalities in the province mainly for the protection and maintenance of the coastal areas.

Verde Island Passage (Conservation International)

3.5.4.1. Marine Protected Areas in Batangas

Marine Protected Areas (MPA) are protected areas of seas, oceans, estuaries or large lakes. MPAs restrict human activity for a conservation purpose, typically to protect natural or cultural resources. Such marine resources are protected by local, regional, national, or international authorities and differ substantially among and between nations. This variation includes different limitations on development, fishing practices, fishing seasons and catch limits, moorings and bans on removing or disrupting marine life. Quantifying the extent

to which existing reserves meet conservation objectives and identifying gaps in coverage are vital to developing systematic protected-area networks. MPAs have the following benefits:

- Maintaining biodiversity and providing refuges for endangered and commercial species
- Protecting critical habitats from damage by destructive fishing practices and other human activities and allowing them to recover
- Providing areas where fish are able to reproduce, spawn and grow to their adult size
- Increasing fish catches (both size and quantity) in surrounding fishing grounds
- Building resilience to protect against damaging external impacts, such as climate change
- Helping to maintain local cultures, economies, and livelihoods which are intricately linked to the marine environment

Map 3.1: Coastal Resource Map of Batangas Province

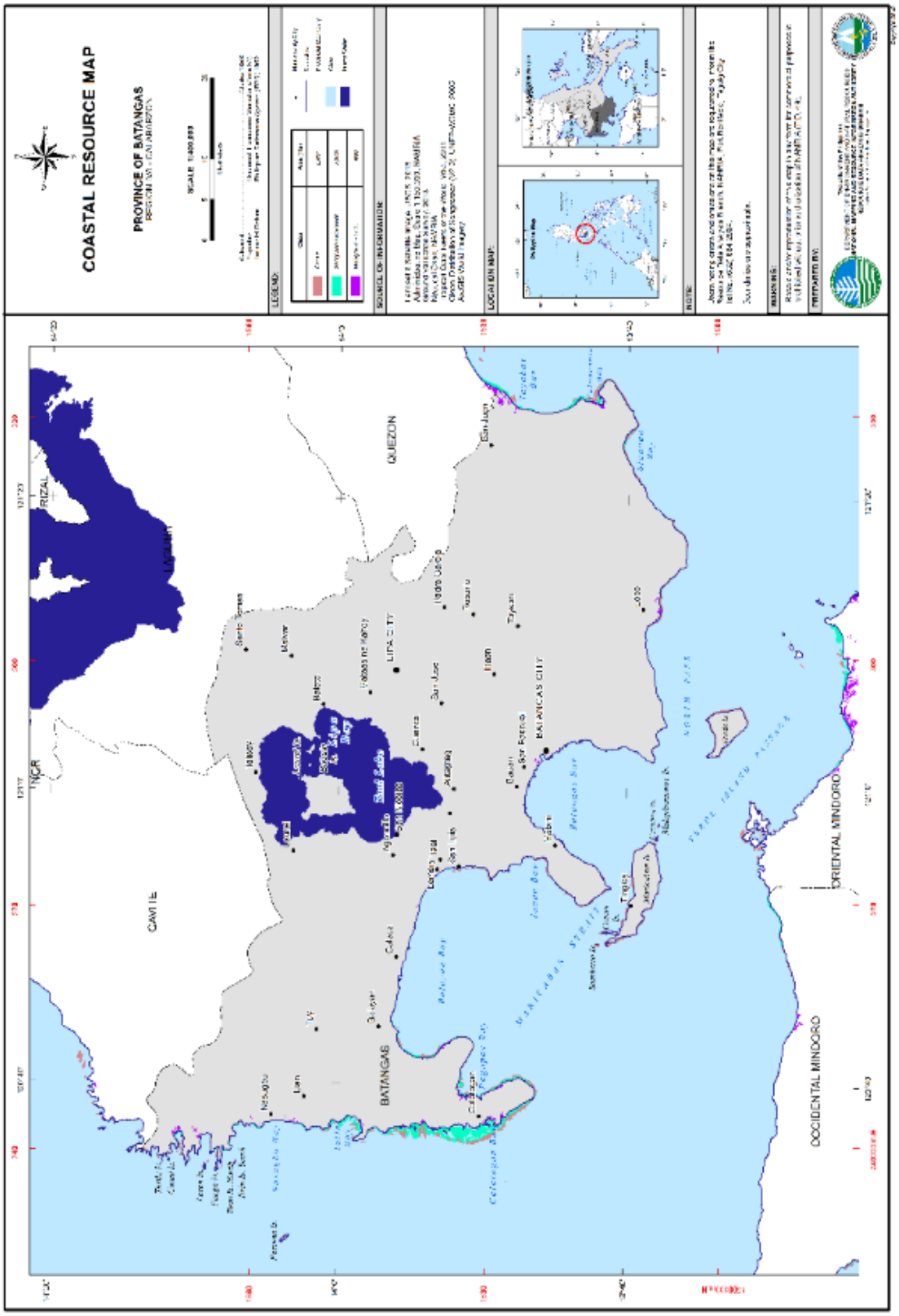


Figure 3.1 shows the Batangas Marine Protected Area Network (BMPAN) which are located in the City of Batangas and in the twelve (12) municipalities of the Province, namely: Balayan, Bauan, Calatagan. Lemery, Lian, Lobo, Mabini, Nasugbu, San Juan, San Luis, Taal and Tingloy.

As indicated in Table 3.16, there is a total of 54 marine protected areas which are about 2,579.70 hectares throughout the Province. San Juan, being one of the richest coastal municipalities in Batangas, has the largest MPA with a total of 1,127.80 hectares followed by the City of Batangas, Calatagan and Lobo with 570.02 hectares, 194.40 hectares and 128.02 hectares respectively. Coral and artificial reefs, mangrove and seagrass beds are the habitats covered by the MPA.

MPA can be categorized based on the ecosystem or habitat they protect such as Coral Reefs, Sea Grass, Mangrove, etc. It is also reflected in Table 3.16 (and summarized in Figure 3.2,) that most of the Marine Protected Areas in the Province are Coral Reef Habitat which comprises 75.98% of the total area of MPAs. Most of the coral reef and mangrove areas are found in the municipality of San Juan with a total coverage area of 631.80 hectares and 496 hectares, respectively. Mangrove areas has its total share of 23.93% making it the second largest area. Sea grass habitat is the least which comprises only 0.09% of the MPAs. A detailed list of these MPAs are declared in Table 3.17 including its locations.

Figure 3.1. City/Municipalities with Established MPAs

Source: Batangas Marine Protected Area (MPA) and Bantay Dagat (BD) Network Strategic Management Plan 2020-2030

Table 3.16. Total Area of Marine Protected Areas by City/Municipality

CITY/MUNICIPALITY	CORAL REEF		MANGROVE		SEAGRASS		TOTAL NUMBER OF MPAs	TOTAL AREA OF MPAs (in Hectares)
	NUMBER	AREA (in Hectares)	NUMBER	AREA (in Hectares)	NUMBER	AREA (in Hectares)		
San Juan	10	631.80	1	496.00			11	**1,127.80**
Batangas City	4	570.02					4	**570.02**
Calatagan	5	159.90	5	33.50	1	1.00	11	**194.40**
Nasugbu	5	113.59	2	10.66	1	1.40	8	**125.65**
Bauan	1	125.38					1	**125.38**
Lobo	3	62.83	2	65.19			5	**128.02**
Lian	2	100.51	1	4.00			3	**104.51**
Mabini	4	99.30					4	**99.30**
Taal	1	43.00					1	**43.00**
Tingloy	2	24.52					2	**24.52**
Lemery	1	6.20	1	8.00			2	**14.20**
San Luis	1	16.40					1	**16.40**
Balayan	1	6.50					1	**6.50**
							54	**2,579.70**

Source: Batangas Marine Protected Area (MPA) and Bantay Dagat (BD) Network Strategic Management Plan 2020-2030

Figure 3.2: Percentage of Marine Protected Areas per Habitat in Batangas Province as of Year 2020

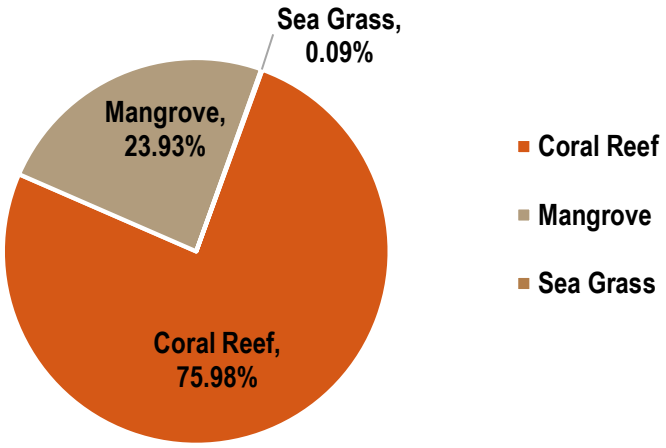


Table 3.17: Marine Sanctuaries/ Marine Protected Areas as of 2020

CITY/MUNICIPALITY	NAME OF MPA	ECOSYSTEM	LOCATION	NAME OF MANAGEMENT BODY	ESTIMATED AREA (in Hectares, including areas for different zones if available)
BATANGAS CITY	1. Pulong Bato Fishery Refuge and Sanctuary	Coral Reef	Sitio Siirin, Brgy. San Agapito, Isla Verde	Verde Island Fishery Refugee and Sanctuary	539

	2. Nalayag Point Fishery Refuge and Sanctuary	Coral Reef	Brgy. San Agustin Kanluran, Isla Verde	Management Board (VIFRSMB)	16.26
	3. Pagkilatan Fishery Reserve	Coral Reef	Brgy. Pagkilatan	Pagkilatan Fishery Reserve Management Board (PFRMB)	1.79
	4. Ilijan Fishery Refuge and Sanctuary	Coral Reef	Brgy. Ilijan	Ilijan Fishery Refuge and Sanctuary Management Board (IFRSMB)	12.97
BALAYAN	5. Carenahan Fish Sanctuary and Fish Reserve	Coral Reef	Brgy. Carenahan	Balayan Management Board (BMB)	6.50
BAUAN	6. San Pablo de Bauan MPA	Coral Reef	Brgy. San Pablo	San Pablo de Bauan MPA Management Board (SPDBMB)	125.38
CALATAGAN	7. Sta. Ana MPA	Coral Reef	Sitio Pahanday-Calambuyan, Brgy. Sta. Ana	Samahang ang Adhikain ay Pangalagaan sa Sta Ana ang Pangisdaan (SAPSAP)	11.00
	8. Tanagan MPA	Coral Reef	Sitio Bataha, Brgy. Tanagan	Bataha for Nature and Conservation association (BNCA)	9.00
	9. Calatagan Pyramid Artificial Reef MPA	Coral Reef and Artificial Reef	Brgy. Bagong Silang	Protected Artificial Reef Organization for Local Marine Water Conservation Advocacy (PAROLA)	60.30
	10. Carretunan-Quilitisan Joint MPA	Coral Reef	Brgy. Carretunan and Quilitisan	Kapisanan ng mga Mangingisda at Magsasaka sa Carretunan (KMMC)	71 (16 Has NTZ; 55 Has SUZ)
	11. Quilitisan Seagrass PA	Seagrass	Brgy. Quilitisan	Pro-Mangrove Alliance and Implementing Team and Arm as Kilitisan's Advocates of Nature (PALITAKAN)	1.00
	12. Calatagan Mangrove Forest Conservation Park "Ang Pulo"	Mangrove	Brgy. Quilitisan		7.50
	13. Calatagan Mangrove Rehabilitation and Nursery Project	Mangrove	Brgy. Balibago	Calatagan Mangrove Development Alliance (CALMADA)	20.00

	14. Bagong Silang Mangrove PA	Mangrove	Brgy. Bagong Silang	Samahan ng Mangingisdang Magproproteta saBakawan ng BagongSilang (SAMMABABA)	2.00
	15. Sta. Ana Mangrove PA	Mangrove	Sitio Pahanday-Calambuyan, Brgy. Sta. Ana	Samahangang Adhikain ay Pangalagaan sa Sta. Ana ang Pangisdaan (SAPSAP)	2.00
	16. Palobandera Mangrove PA	Mangrove	Sitio Palobandera, Brgy. Sta. Ana	Samahan ng Mangingisda at Magsasaka sa Sitio Palobandera (SMP)	2.00
	17. Palobandera MPA	Coral Reef	Brgy. Sta. Ana	Boatman Association for Natural Aquatic Conservation (BANAC)	8.60
LEMERY	18. Mataas na Bayan & Sinisian East MPA	Coral Reef	Brgy. Mataas na Bayan & Sinisian East	Sinisian East/Mataas Na Bayan MPA Management Board (SEMMB)	6.20
	19. Palanas Mangrove PA	Mangrove	Brgy. Palanas	***	8.00
LIAN	20. Kayreyna MPA	Coral Reef / Seagrass / Mangrove	Sitio Kayreyna, Brgy. Lumaniag	Lian MPA Council (LiMPAC)	53.06
	21. Binubusan MPA	Coral Reef	Sitio Matuod and Sitio Carboran, Brgy. Binubusan		47.46
	22. Kayreyna Mangrove Forest Conservation Park MPA	Mangrove	Sitio Kayreyna, Brgy. Lumaniag		4.00
LOBO	23. Biga Fish Sanctuary & Refuge	Coral Reef	Sitio Haliging Bato, Kamantigue, Brgy. Biga	Biga MPA Management Body (BMMPAB)	20.65
	24. Sawang-Olo-Olo Fish Sanctuary & Refuge	Coral Reef / Mangrove	Brgy. Sawang & Olo-Olo	Sawang – Olo-Olo MPA Management Body (SOMPAMB)	17.00
	25. Malabrigo Fish Sanctuary & Refuge	Coral Reef	Brgy. Malabrigo	Malabrigo MPA Management Body (MMPAB)	25.18
	26. Olo-Olo Mangrove Forest and Eco Park	Mangrove	Brgy. Olo-Olo	Olo-Olo Mangrove Management Body (OMMB)	21.65

	27. Lagadlarin Mangrove PA	Mangrove	Brgy. Lagadlarin	Lagadlarin Mangrove Management Body (LMMB)	43.54
MABINI	28. Twin Rocks Marine Sanctuary	Coral Reefs	Sitio Balanoy, Brgy. San Teodoro	Mabini Marine Reserve Resource Executive Committee (MR—REC)	22.92
	29. Arthur's Rocks Marine Sanctuary	Coral Reefs / Seagrass	Sitio Balagbag, Brgy. Bagalangit		17.99
	30. Cathedral Rock Marine Sanctuary	Coral Reefs	Sitio Punta, Brgy. Bagalangit		15.39
	31. Batong Buhay Marine Sanctuary	Coral Reefs	Sitio Siiran, Brgy. Ligaya		43.00
NASUGBU	32. Twin Island Marine Reserve	Coral Reef	Brgy. Balaytigue	Nasugbu MPA Management Council (NMPAMC)	0.01
	33. Fuego Point Marine Sanctuary	Coral Reef	Brgy. Balaytigue		6.54
	34. Taytayen/Etayo Marine Reserve	Coral Reef	Brgy. Papaya		40.49
	35. Pinagdakutan / Santelmo Marine Sanctuary	Coral Reef	Brgy. Papaya		13.93
	36. Cutad/Pico de Loro Cove	Coral Reef	Brgy. Papaya		52.62
	37. Brgy. Papaya Seagrass PA	Seagrass	Brgy. Papaya		1.40
	38. Brgy. Papaya Mangrove PA	Mangrove	Brgy. Papaya		10.00
	39. Brgy. Wawa Mangrove PA	Mangrove	Brgy. Wawa		0.66
SAN JUAN	40. Catmon NTZ	Coral Reef	Brgy. Catmon	MPA Management Council of San Juan, Batangas (MPAMCSJ)	58.00
	41. Ticalan NTZ	Coral Reef	Brgy. Ticalan		69.10
	42. Putingbuhangin NTZ	Coral Reef	Brgy. Putingbuhangin		55.50
	43. Abung NTZ	Coral Reef	Brgy. Abung		87.50
	44. Calubcub 1st NTZ	Coral Reef	Brgy. Calubcub		83.60
	45. Imelda NTZ and Marine Reserve	Coral Reef	Brgy. Imelda		91.00
	46. Laiya Ibabao Seascape NTZ and Marine Reserve	Coral Reef	Brgy. Laiya Ibabao		83.60
	47. Laiya Ibabao Submarine Garden Marine Reserve	Coral Reef	Brgy. Laiya Aplaya		9.00
	48. Laiya Aplaya NTZ and Marine Reserve	Coral Reef/Seagrass	Brgy. Laiya Aplaya		75.50
	49. Hugom NTZ	Coral Reef/Seagrass	Brgy. Hugom		19.00
	50. San Juan Mangrove Forest Conservation Areas and Bird Sanctuary	Mangrove	Brgys. Catmon, Pinagbayanan, Barualte, Bataan, Nagsaulay, Subukin and Imelda		496.00

SAN LUIS	51. San Luis Fish Sanctuary	Coral Reef	Area of Sitio Ligpo, Brgy. Locloc, portion of Brgy. Balite	-	16.40
TAAL	52. Taal MPA	Coral Reef	Brgy. Butong	-	43.00
TINGLOY	53. Batalang Bato Marine Sanctuary	Coral Reef	Brgy. Talahib and Sto. Tomas	Batalang Bato Management Council (BBMC)	2.50
	54. Pirasan MPA	Coral Reef	Brgy. San Juan	-	22.02
				TOTAL AREA	**2,579.70**

Data Source: Batangas Marine Protected Area (MPA) and Bantay Dagat (BD) Network Strategic Management Plan 2020-2030

Note: Total may not be equal to the sum of areas due to the rounded-off values of areas.

Table 3.18: Other Mangrove Areas Not Declared as MPA (as of 2020)

City/Municipality	Mangrove Area (in Hectares)
Balayan	16.58
Batangas City	76.09
Bauan	1.07
Calaca	47.26
Calatagan	481.50
Lemery	39.00
Lian	39.64
San Luis	2.90
Nasugbu	245.88
Taal	1.50
Tingloy	2.03
TOTAL	**953.45**

Data Source: PGENRO – Batangas, 2020

3.6 Air Quality

Air quality is the state of the air around us. Good air quality refers to clean, clear, unpolluted air. Clean air is essential to maintaining the delicate balance of life not only just for humans, but wildlife, vegetation, water and soil. Poor air quality is a result of a number of factors, including emissions from various sources, both natural and human-caused. Poor air quality occurs when pollutants reach high enough concentrations to endanger human health and the environment. Driving cars and burning wood can have a significant impact on air quality. It is also the quality of outdoor air in our surrounding environment. It is typically measured near ground level, away from direct sources of pollution.

It is the DENR's mandate to ensure good condition of air relative to the requirement of all biotic species. There are three (3) classifications of sources of air pollution: a) stationary source-any building or immobile structure, facility or installation which emits or may emit any

air pollutant; b) mobile source-any vehicle/machine propelled by or through oxidation or reduction reactions including combustion of carbon-based or other fuel, constructed and operated principally for the conveyance of persons or the transportation of property or goods that emit air pollutants as a reaction product; and c) area source-relatively large areas of specific activities that generate significant amounts of air pollutants.

Under the Linis-Hangin Program, vehicles are being tested for emission. A number of establishments/industrial firms with Air Pollution Source Equipments (APSE) are being inspected yearly.

Also, more than 30 Private Emission Testing Centers (PETCs) in the region are being monitored in close coordination with the Land Transportation Office (LTO).

Table 3.19 shows the result for Total Suspended Particulate (TSP) analysis, the sampling stations marked as Brgy. Mapulo (Taysan), Brgy. Mataas na Lupa (Lipa), Maharlika Highway (Sto. Tomas) and A. Mabini Avenue (Tanauan) are within the set guideline value of 300µg/Ncm as stipulated in the National Ambient Air Quality Standards (NAAQS) for Total Suspended Particulates. However, two (2) sampling stations marked as Brgy. Dagatan and Balagtas, Batangas City exceeded the set guideline value with result of 1442 ug/Ncm and 627ug/Ncm respectively.

On the other hand, noise monitoring conducted in all sampling stations classified as Class B or those section/area which is primarily commercial area exceeded the recommended noise standard of 65dB during daytime. Station marked as Brgy, Mapulo Taysan classified as Class D or those section primarily reserved as heavy industrial area is within the set limit of 75 dB during daytime.

Table 3.19: Air Quality Monitoring in Six (6) Stations within Batangas Province, 2020

Air Ambient Quality Monitoring (*as of 2020)*

Stations	TSP, µg/Ncm	National Ambient Air Quality Standards (NAAQS), µg/Ncm	Noise (in Decibels)	Ambient Noise Quality Standards in Sec. 78 Chapter IV, Article 1 of 1979 NPCC Rules and Regulations
Brgy. Mapulo, Taysan Batangas	117	300	69.1	70
Brgy. Dagatan, Taysan Batangas	1442		70.5	65
Brgy. Mataas na Lupa Lipa City	169		76.6	
Maharlika Highway Sto. Tomas Batangas	165		75.7	
A. Mabini Avenue, Tanauan Batangas	57		74.9	
Balagtas, Batangas City	627		72.6	

Data Source: PGENRO - Batangas

Air Ambient Monitoring in Urban Center conducted by PG-ENRO Batangas Province

3.7 Waste Management

Waste management is the precise name for the collection, transportation, disposal or recycling and monitoring of waste. This term is assigned to the material, waste material that is produced through human being activity. This material is managed to avoid its adverse effects on human health and the environment. The waste to be managed includes all forms; one of these is solid wastes management.

3.7.1 Solid Waste

It is the policy of the State to adopt a systematic, comprehensive and ecological solid waste management program. It is through this policy that, Republic Act No. 9003 or the Ecological Solid Waste Management Act of 2000 and its implementing Rules and Regulations, DENR Administrative Order No. 2001-34 was enacted.

The intent of the law is to ensure the protection of public health and the environment. Also through RA 9003, the Government intend to maximize the utilization of valuable resources and encourage resources conservation and recovery by setting guidelines and targets for solid waste avoidance and volume reduction through source reduction and waste minimization measures, including composting, recycling, re-use, recovery, and others, before collection, treatment and disposal an appropriate and environmentally-sound solid waste management facilities in accordance with ecologically sustainable development principles.

The Provincial Government of Batangas enacted Provincial Ordinance No. 007-2002 known as the Batangas Environment Code, this ordinance delineated the roles of the Provincial Government down to the barangay on proper solid waste management. This also regulates the use of plastic bags in the province.

The proper Solid Waste Management will be put into practice in the Provincial Capitol Compound, and in all offices of the Provincial Government of Batangas to be led by PG-ENRO and the General Services Office. Waste segregation at source will be strictly implemented in all offices and buildings; the collected biodegradable wastes will be composted; the collected recyclable materials will be placed in a Material Recovery Facility built within the Capitol Compound; and special wastes will be stored also within the MRF, thereby reducing the volume of wastes that will be disposed in Batangas City sanitary landfill.

The establishment of the Material Recovery Facilities / Waste Processing Center in every LGU is being enforced as an effective measure to generate resources, fund and implement projects/ activities relative to solid waste management.

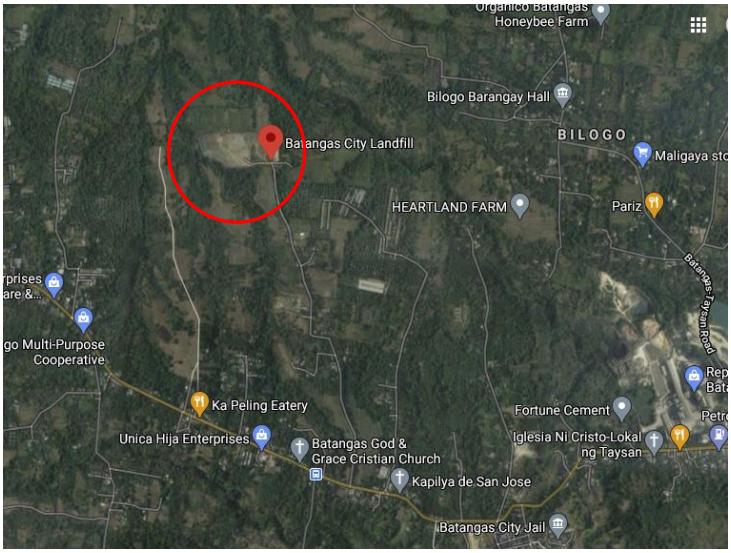
At present, the laws and regulations that govern Solid Waste Management (SWM) is through the implementation of Republic Act No. 9003, the Ecological Solid Waste Management Act of 2000 and DENR Administrative Order No. 2001-34 the Implementing Rules and Regulations (IRR) of RA 9003.

The ecological SWM is the systematic management of solid waste which provides for 1) waste reduction at source; 2) segregation at source for recovery of reusable, recyclable and compostable; 3) segregated transportation, storage, transfer, processing, treatment and disposal of solid waste; 4) all other waste management activities which do not have in the environment.

Table 3.20 shows the waste generation and disposal facility of Batangas Province for CY 2020. Among the four (4) cities in the Province of Batangas, the City of Batangas generated the highest average waste of 189,738 kg waste disposal per day which accumulates 18.62% of the total waste of the province. This is followed by Lipa City with 185,117 which is equivalent to 18.17%, then by Tanauan City and Sto. Tomas City with 46,036 kg/day or 4.52% and 44,340 kg/day or 4.35% respectively.

Meanwhile, among the thirty (30) municipalities, the Municipality of Nasugbu has generated the highest average waste generation with 61,707 kg of waste per day, followed by Calaca and Bauan with 54,433 kg and 33,887 kg of average waste disposal per day respectively. The municipalities with the least waste percentage distribution are Tingloy with 0.23% or 2,370 kg/day, followed by San Nicolas with 0.30% or 3,071 kg/day and by Sta. Teresita with 0.40% of 4,084 kg/day.

In terms of average waste generation per district, District 1 has the most number of waste generation which accumulates to 225,589 kg/day or 22.14% of the total waste generation by the Province. It is followed by District 3 with 191,608 kg/day or 18.80 percent. The district with least waste generation belongs to District 2 that only comprises 84,949 kg/day or 8.34 percent.



San Jose Sico Sanitary Landfill Facility

Table 3.20: Waste Generation per City/Municipality for CY 2020

CITY/MUNICIPALITY	AVERAGE WASTE GENERATION (kg/day)	PERCENTAGE SHARE
DISTRICT 1		
Balayan	25,551	2.51%
Calaca	54,433	5.34%
Calatagan	12,245	1.20%
Lemery	29,140	2.86%
Lian	15,907	1.56%
Nasugbu	61,707	6.06%
Taal	17,150	1.68%
Tuy	9,456	0.93%
DISTRICT 2		
Bauan	33,887	3.33%
Lobo	7,665	0.75%
Mabini	6,231	0.61%
San Luis	8,229	0.81%
San Pascual	26,567	2.61%
Tingloy	2,370	0.23%
DISTRICT 3		
Tanauan City	46,036	4.52%
Agoncillo	14,171	1.39%
Alitagtag	9,079	0.89%
Balete	5,480	0.54%
Cuenca	8,179	0.80%
Laurel	10,044	0.99%
Malvar	21,421	2.10%
Mataasnakahoy	6,085	0.60%
San Nicolas	3,071	0.30%
Sta Teresita	4,084	0.40%
Sto Tomas	44,340	4.35%
Talisay	19,618	1.93%
DISTRICT 4		
Ibaan	21,419	2.10%
Padre Garcia	28,752	2.82%
Rosario	32,705	3.21%
San Jose	27,226	2.67%
San Juan	19,813	1.94%
Taysan	12,090	1.19%
DISTRICT 5		
Batangas City	189,738	18.62%
DISTRICT 6		
Lipa City	185,117	18.17%
DISTRICT	**TOTAL AVERAGE WASTE GENERATION (kg/day)**	**DISTRICT PERCENTAGE SHARE**
1	225,589	22.14%
2	84,949	8.34%
3	191,608	18.80%
4	142,005	13.94%
5	189,738	18.62%
6	185,117	18.17%
TOTAL	**1,019,006**	**100.00%**

Data Source: PGENRO – Batangas, 2020

3.7.1.1 Industrial and Agricultural Wastes

The disposal of untreated industrial and agricultural wastes in tributaries and coastal marine waters is caused by inadequate treatment facilities in both groups of industries. Wastewater treatment facilities are poorly functioning, having inadequate capacity or simply nonexistent. This inadequacy contributes to pollutant loading in river systems, creeks and waterways that ultimately drains into the bay. This is considered serious especially among agriculture and livestock producers operating on a backyard scale and is geographically dispersed, making it difficult, expensive, and uneconomical to put up a common waste treatment facility. Residues from agricultural practices (fertilizer application and pest control), animal wastes from piggery, poultry and other livestock production activity contribute to nutrient loading of water bodies, cause sedimentation and contaminate the seafood. The weak implementation of regulations on industrial and agricultural wastes by enforcement agencies encourages polluters to be less vigilant in their waste generation and disposal activities. Oil spills and discharges from industries, whether accidental or intentional are also seen to create risks in view of the petrochemical and energy industries along Batangas Bay and Balayan Bay.

Industries along Batangas Bay and Balayan Bay

Industries along Batangas Bay and Balayan Bay

3.7.1.2 Ship and Port Wastes

Shipping activities and expansion of port facilities have generated ship and port-related wastes that eventually are dumped in the bay waters. This is considered an issue among the three bays but is more intensely felt in Batangas Bay. Related problems identified are ship collision and oil spill due to increasing vehicle traffic. Illegal discharge of wastes from shipping vessels has also been observed such as dumping of used oil and ballasting water from boats, ships and other sea vessels passing or docking in various ports located in the province. Ships and vessels generate considerable quantities of blackwater, greywater, oil bilge, ballast water, solid wastes and hazardous materials. The port authorities of Batangas recognize that one of the factors that might have encouraged the illegal discharging of wastes is the inadequate collection and disposal system of the international port.

Batangas International Port static.panoramio.com

The existing system just cannot cope with the demand of the increasing vessel and passenger traffic. There are 27 companies that deploy 68 vessels providing services in Batangas Bay. In Tayabas Bay, irresponsible disposal of garbage has been observed to be committed by vessels plying the bay especially the San Juan coastal route (Resource Combines, Inc., 2002). There is also the added risk of oil and chemical spills especially in areas where most sea vessels carrying raw materials dock and transfer their loads through jetties. Solid wastes, industrial and agricultural wastes and ship and port wastes compromise the integrity of surface and marine waters if they are not managed adequately and rationally. The result of water quality monitoring done for Batangas Bay shows that pollution status in terms of oil and grease content has worsened significantly. This parameter was recorded at 36.2 mg/l in 1997 and increased to 41.13 mg/l in 2004. Statistical comparison across years showed that the increase in pollutants is significant.

However, despite the rapid economic development occurring in the region, water quality has not deteriorated significantly in terms of nitrates and phosphates. Likewise, pollution status in terms of Dissolved Oxygen (DO) had improved. In 1997, DO was measured at an average of 6.68 mg/l and this increased to 9.93 mg/l in 2004. Balayan and Tayabas Bays are facing the same threat of pollution if economic activities around the area are not rationalized. Palico River in Lian and Nasugbu has exceeded the standard for Class C water due to pollution from households and from sugar mills and alcohol distilleries. Bambang River in Balayan is severely polluted due to the discharge of partially treated water from sugar mills. Pamintahan River in Lipa City is heavily polluted given the wastes coming from households, hog farms and the public market.

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Chapter 4 ECONOMIC

4.1 Agriculture

While it may be noted that there is a significant shift from a predominantly agricultural activity to manufacturing, commercial and industrial, economic activities in the Province through the years, endeavors involved in agriculture are still prevalent. These activities include agricultural crop production and livestock and poultry raising.

4.1.1 Crops

There is a variety of crops produced in the Province. Among the major and priority crops harvested are palay, corn, coffee, sugarcane, coconut and others. These are classified into cereals, fruit crops, non-food and industrial crops and vegetables, root crops and tubers.

4.1.1.1 Palay

According to the Department of Agriculture (DA), rice, as a food staple, is an economic commodity. It is both a major expenditure item and a source of income for many households. As food is our most basic necessity, demand for rice cuts across all social classes. Rural households also depend, in varying degrees, on the various stages of rice production for livelihood.

Rice crops are classified into two types: irrigated and rainfed palay. Irrigated palay refers to palay crop that requires standing water for its normal growth, not confined to lowland but also to high places where paddies are built for planting rice; requires irrigation water made available through artificial means (gravity, force, power pumps, etc.) Rainfed palay refers to palay crop that depends solely upon rainfall for its water supply; usually planted through transplanting or direct seeding in fields with dikes that retain water. There may be dikes in the field to hold water in the case of lowland-rain fed, or none in the case of upland palay.

As shown in Table 4.1, nation-wide palay production shows a decrease-increase trend on both production volume and area harvested for 2018 to 2020. From 19,066,093.94 metric tons of production and 4,800,406.09 hectares of harvested area in 2018, it decreased to 18,814,827.29 metric tons of production and 4,651,489.68 hectares of harvested area in 2019. The recorded decrease was at 1.32 percent or equivalent to 251,266.65 metric tons of production and 0.03 percent or 148,916.41 hectares in the harvested area. These figures then increased to 19,294,855.51 metric tons and 4,718,896.10 hectares, respectively in 2020.

On the regional level, production of palay has a decrease-increase trend both production volume and area harvested. Production had a decrease of 9.39 percent or equivalent to 39,451.51 metric tons in 2019 from its previous total production of 420,233.47 metric tons in the year 2018 and a slight increase of 1.61 percent or 6,137.97 metric tons by 2020. On the

other hand, the harvested area had decreased into only 106,265.69 hectares in 2020 from the original 108,649.63 hectares in 2018.

The Province has decreasing trend in terms of volume of production in the year 2018 to 2019 in despite the increase-decrease trend of the harvested area of palay. The overall decrease in the volume of production of palay is 30.24 percent or 14,308.29 metric tons from 47,309.79 metric tons in 2018 to 33,001.50 metric tons in 2020. While the harvested area had increased by 825.56 hectares or 6.15 percent from 2018 to 2019. However, it decreased by 10.32 percent or 1,471.41 hectares coinciding with the decrease in the volume production of palay in the same year.

The Province's volume of production of palay constitutes 8.53 percent of the CALABARZON Region and about 0.17 percent nationwide, while harvested area is 12.03 percent for the region and only 0.27 percent of the total harvested area in the country both in the year 2020.

4.1.1.2 Corn

Corn is considered second to rice as the most important crop in the Philippines. It has two variants: white corn and yellow corn. White corn is mainly used as a substitute staple food in case of rice shortage especially in rural areas while yellow corn is basically used for feeds in swine and poultry industries.

Corn production in the province had an increase-decrease trend for the past three years, from 12,725.00 metric tons in 2018, increasing to 13,876.85 metric tons in 2019 but then decreasing to 10,456.00 in 2020. In Parallel, the harvested area of corn had an increase-decrease trend as well with 5,579.00 hectares in 2018 to a slight increase to 5,985.32 hectares in 2019 then a major decrease of 33.63 percent equivalent to 2,012.90 hectares for a total of only 3,972.42 hectares in 2020.

In the CALABARZON Region, corn production had a decrease-increase trend starting from 91,418.06 metric tons in 2018 decreasing to 23.66 percent equivalent to 21,631.39 metric tons in 2019 and an increase of 8.56 percent or 5,974.44 metric tons in 2020. A continuous decreasing trend was seen in the total area harvested in 2018 to 2020. The decrease totaled to 17.86 percent equivalating to 5,832.52 hectares of land in the past three years.

On the national level, corn production as well as the area harvested are both in an increasing pattern from the year 2018 to 2020. The increase was 4.46 percent for volume of production accounting to 346,627.25 metric tons of gain and the harvested area expanded 1.69 percent or 42,344.28 hectares.

Table 4.1: Production in Metric Tons and Area Harvested in Hectares of Major and Priority Crops : 2018-2020

Year / Eco System Type	PHILIPPINES		CALABARZON		BATANGAS	
	VOLUME OF PRODUCTION	AREA HARVESTED	VOLUME OF PRODUCTION	AREA HARVESTED	VOLUME OF PRODUCTION	AREA HARVESTED
2018						
Irrigated Palay	14,347,993.41	3,286,152.92	336,835.70	80,650.63	32,390.31	8,193.00
Rainfed Palay	4,718,100.53	1,514,253.18	83,397.77	27,999.00	14,919.48	5,234.00
Total Palay	19,066,093.94	4,800,406.09	420,233.47	108,649.63	47,309.79	13,427.00
White Corn	2,145,306.33	1,153,744.07	26,662.20	15,716.52	8,107.00	4,585.00
Yellow Corn	5,626,612.30	1,357,692.20	64,755.86	16,945.00	4,618.00	994.00
Total Corn	7,771,918.63	2,511,436.27	91,418.06	32,661.52	12,725.00	5,579.00
2019						
Irrigated Palay	14,468,944.63	3,262,485.74	328,086.47	79,655.90	32,780.12	8,178.56
Rainfed Palay	4,345,882.66	1,389,003.93	52,695.49	23,550.87	12,202.50	6,074.00
Total Palay	18,814,827.29	4,651,489.68	380,781.96	103,206.77	44,982.62	14,252.56
White Corn	2,070,887.49	1,101,269.95	23,914.32	14,180.56	10,719.85	5,196.32
Yellow Corn	5,907,957.06	1,415,453.01	45,872.35	13,724.96	3,157.00	789.00
Total Corn	7,978,844.55	2,516,722.96	69,786.67	27,905.52	13,876.85	5,985.32
2020						
Irrigated Palay	14,571,765.18	3,253,454.35	305,676.54	76,199.46	24,435.00	7,792.03
Rainfed Palay	4,723,090.33	1,465,441.74	81,243.39	30,066.23	8,566.50	4,989.12
Total Palay	19,294,855.51	4,718,896.10	386,919.93	106,265.69	33,001.50	12,781.15
White Corn	2,107,499.43	1,115,272.51	23,688.32	13,124.12	7,888.00	3,372.92
Yellow Corn	6,011,046.45	1,438,508.04	52,072.78	13,705.23	2,568.00	599.50
Total Corn	8,118,545.88	2,553,780.55	75,761.11	26,829.35	10,456.00	3,972.42

Data Source: PSA, Crops Statistics Division 2021 ***Unit:*** *metric tons / hectares*

4.1.1.3 Other Crops.

Production in Metric Tons and Area Harvested in Hectares of Major and Priority Crops– Fruit Crops

When it comes to the majority of fruit produced within the region, the Province either comes first or second to Quezon Province. However, yields for banana, mango and rambutan are much better in Batangas.

Banana production in the province accounts for about 35.41 percent of the region's total harvest and about 0.38 percent of the country's produce in 2020. The national, provincial and regional production has considerably decreased by 302,635.11MT (3.23%), 17,114.73MT (14.90%) and 8,643.86MT (19.98%) respectively from 2018-2020.

The Province is recognized in producing quality mangoes. Among the provinces in CALABARZON, its all-time high production has been noted for more than two decades. Although mango yields in the Province have been reduced by over half that what it produces twenty years earlier, this fruit commodity has always been a constant top grosser.

For 2020, Volume of Mango Production accounts for about 74.47 percent of the regional production and about 4.1 percent of the country's harvest. The province was able to maintain its status in having the highest share in the regional production, despite the decrease of 6,172.09 MT from 2019 to 2020.

Table 4.2: Other Crops: Fruits - Volume of Production, 2018-2020 in MT

Other Crops : Fruits	2018			2019			2020		
	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas
Banana	9,358,784.56	114,871.15	43,263.03	9,157,676.11	109,261.19	40,919.79	9,056,149.45	97,756.42	34,619.17
Banana Cavendish	4,919,219.60	651.48	---	4,847,454.70	878.33	---	4,743,073.50	1,037.41	---
Banana Lakatan	929,541.69	7,202.28	161.84	909,717.19	6,729.69	175.71	925,515.46	6,155.77	160.19
Banana Saba	2,593,101.44	76,044.29	28,988.61	2,512,805.62	71,912.13	27,323.23	2,504,782.16	64,252.58	22,946.54
Calamansi	113,551.94	13,412.89	4,217.90	125,968.59	13,031.56	3,812.78	108,688.58	11,494.67	2,596.20
Lanzones	12,367.94	1,787.81	6.96	19,974.30	1,682.86	37.10	16,037.36	1,401.76	40.50
Mandarin	11,880.40	3,589.55	128.62	11,567.80	3,148.08	123.84	10,967.07	2,769.07	119.10
Mango	711,659.89	40,753.84	29,792.49	737,938.35	46,845.97	36,463.63	739,249.79	40,678.38	30,291.54
Mango Carabao	571,436.71	22,548.60	17,107.90	593,081.01	27,222.63	22,144.83	596,310.54	22,746.42	17,519.39
Orange	2,364.90	3.70	0.10	2,114.18	1.75	0.05	1,782.89	1.65	0.03
Papaya	169,143.03	6,674.57	387.47	166,164.08	6,411.91	344.42	163,299.41	5,931.61	281.17
Pineapple	2,730,984.64	94,033.69	102.25	2,747,856.50	84,248.24	105.87	2,702,553.81	68,648.63	75.88
Rambutan	7,207.52	2,217.07	271.95	8,733.53	2,310.86	307.00	8,312.52	2,295.97	356.00
Tamarind	6,638.31	76.82	15.00	6,377.09	67.29	9.59	6,259.04	58.57	6.64

Data Source: PSA, Crops Statistics Division 2021

Production in Metric Tons of Major and Priority Crops– Non-Food and Industrial Crops

Table 4.3 shows that the Province likewise produces non-food and industrial crops like coconut, coffee, sugarcane and other industrial crops. Industrial crops are those used as inputs to other industries.

Like banana and mango, the other prominent crops harvested in the province are sugarcane and coconut. Although minimally produced in the province as well as in the region, cacao, are grown in some municipalities like Mabini and Mataasnakahoy since it is a raw ingredient for tabliya or native chocolate, a product that they are known for.

While continuously remaining as the top producer of sugarcane in the Region, and has yielded 93.53%, 95.05% and 95.43% share for the year 2018, 2019 and 2020 respectively, its production has a decreasing trend. From its production in 2018 of 1,562,057.34 MT, it decreased to 1,075,726.83 MT in 2019 and continuously declined in 2020 to 1,055,580.21 MT.

Batangas is one of the top three provinces in the Region that contributes to coconut harvest. Quezon being first, while Laguna came second place with only 872.44 MT lead from Batangas. There is an increasing decreasing parallel trend in the the production of coconut in the national and provincial levels, while the regional level showed a decreasing trend for the year 2018-

2020. National production has increased by 38,891.63 MT (0.26%) in 2019 but decreased by 274,134.37 MT (1.86%) in 2020. The provincial level increased by 1,064.62 MT (1.07%) in 2019 then dropped in 2020 by 21,564.41 MT (21.41%).

Coffee production which was a top product of Batangas is now dominated by Cavite Province. Batangas's share in the total regional production is only about 19.19.%, 32.72% and 27.26% from the years 2018 to 2020, respectively. Of the four (4) varieties of coffee (Arabica, Excelsa, Liberica and Robusta), only Arabica did not have record of harvest in the province.

Production for Other non-food crops that dropped from 5.78 MT in 2019 to 3.28 MT in 2020 includes flowers or ornamental plants such as chrysanthemum, orchids and roses.

Table 4.3: Other Crops: Industrial and Non-Food Crops Volume of Production, 2018-2020, in MT

Industrial Crops	2018			2019			2020		
	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas
Cacao	7,983.20	20.58	1.10	8,488.60	26.00	3.40	9,340.74	26.70	3.83
Coconut (with husk)	14,726,165.43	1,679,779.34	99,645.21	14,765,057.06	1,643,478.75	100,709.83	14,490,922.69	1,493,066.65	79,145.42
Coffee (dried berries)	60,312.76	2,057.66	394.95	60,043.88	1,496.34	489.63	60,640.95	1,272.12	346.83
Coffee Arabica (dried berries)	13,706.19	---	---	14,102.30	---	---	14,657.46	---	---
Coffee Excelsa (dried berries)	4,039.32	385.05	190.40	3,907.87	387.78	222.98	3,712.31	318.29	157.68
Coffee Liberica (dried berries)	496.37	79.14	22.44	483.57	68.27	23.30	462.53	58.82	15.15
Coffee Robusta (dried berries)	42,070.88	1,593.47	182.11	41,550.14	1,040.29	243.35	41,808.65	895.01	174.00
Sugarcane	24,730,819.95	1,670,120.17	1,562,057.34	20,719,291.05	1,131,780.24	1,075,726.83	24,398,941.25	1,106,155.41	1,055,580.21
Total Industrial Crops	**39,585,594.10**	**3,354,035.41**	**1,662,493.55**	**35,612,924.47**	**2,778,277.67**	**1,177,419.32**	**39,020,486.58**	**2,601,793.00**	**1,135,423.12**
Non-Food Crops									
Chrysanthemum	2,451.64	27.99	---	2,416.63	28.49	---	2,122.15	23.90	-
Orchids	1,164.76	83.40	4.63	1,164.92	82.22	2.98	1,161.78	82.48	1.99
Roses	2,586.77	22.87	2.06	2,970.02	26.49	2.80	2,816.29	24.97	1.29
Total Non-Food Crops	**6,203.17**	**134.26**	**6.69**	**6,551.57**	**137.20**	**5.78**	**6,100.22**	**131.35**	**3.28**

Data Source: PSA, Crops Statistics Division 2021

Production in Metric Tons of Major and Priority Crops– Vegetables, Root Crops & Tubers: 2018-2020

The other crops that the Province produces are various vegetables, root crops and tubers. Ampalaya, Eggplant, Upo (gourd), Okra, Native Pechay, Squash, Stringbeans and other pinakbet vegetables are the most harvested. Among the tubers and root crops, Sweet Potato (Camote), Cassava, Taro, Garlic, Ginger, Onion, Peanut, Radish, and Greater Yam (Ubi) are the most common crops.

For the year 2020, the top three highest various vegetables, root crops and tubers produced were Cassava, Bottle Gourd (Upo) and Ampalaya Fruit with 7,221.22 MT, 7, 128.50 MT ans 5,304.91 MT, respectively. There have been no recorded production in the province for cabbage and lettuce for the past three years, while the last production of Mung bean/Monggo was recorded in 2018 with only 2.32 MT.

These are presented in Table 4.4 which shows how the Province fares in terms of production volume for the said crops.

Table 4.4: Other Crops: Vegetables, Root crops and Tubers -Volume of Production, 2018-2020 in MT

Other Crops :Vagetables, Rootcrops and Tubers	2018			2019			2020		
	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas
Ampalaya Fruit	87,395.17	20,229.86	6,379.01	89,341.04	20,747.08	5,587.67	87,804.27	19,507.55	5,304.91
Bottle gourd/Upo	79,231.06	23,931.24	13,647.05	76,644.67	21,318.88	10,909.31	73,074.53	17,437.60	7,128.50
Cabbage	120,655.67	488.31	---	128,050.06	530.85	---	129,803.39	516.21	---
Cassava	2,723,032.59	42,190.45	7,001.57	2,630,800.28	42,253.06	7,604.27	2,607,758.63	42,022.99	7,221.22
Eggplant	244,838.34	32,689.91	4,680.96	249,890.48	31,212.79	4,316.13	242,730.40	26,259.75	3,593.60
Garlic (Dried Bulb)	7,559.12	67.10	3.55	7,256.32	6.62	2.04	6,766.62	5.13	1.75
Ginger	27,926.27	4,053.15	983.14	26,929.10	3,231.91	578.00	27,126.48	3,193.71	446.84
Greater yam/Ubi	14,464.83	1,489.07	282.12	14,037.74	1,516.84	312.96	13,957.61	1,410.40	276.00
Lady's finger/Okra	31,277.23	1,595.23	470.82	31,707.97	1,544.31	431.95	32,632.12	1,443.94	398.67
Lettuce	4,083.32	363.80	---	4,302.37	366.32	---	4,360.81	320.67	---
Mung bean/Mongo	36,663.88	82.48	2.31	36,248.35	64.15	---	37,036.08	63.56	---
Onion (mature bulb)	172,665.98	155.92	85.51	222,082.28	85.88	14.56	229,539.24	46.85	7.85
Peanut	29,428.47	457.35	30.52	29,300.78	473.67	35.27	29,387.45	495.73	23.15
Pechay, Native	47,989.88	6,408.21	440.95	47,302.46	6,192.39	360.78	47,501.06	6,060.94	282.80
Radish	9,118.67	1,859.39	35.58	9,092.06	1,801.29	32.19	8,944.03	1,578.70	24.80
Squash Fruit	202,229.08	34,615.02	5,397.76	194,771.05	33,442.03	4,383.05	193,814.22	30,963.50	3,208.95
Stringbeans	114,380.39	6,160.92	2,003.25	112,311.44	5,962.04	1,850.73	109,516.46	5,758.59	1,629.71
Sweet Potato	525,634.39	29,170.44	342.89	525,861.92	29,712.79	292.34	546,891.46	29,337.98	303.99
Taro/Gabi	107,956.74	5,939.15	867.84	104,943.16	5,488.75	521.91	107,422.18	4,991.98	320.80
Tomato	220,824.68	17,323.31	2,266.84	223,294.47	16,016.93	2,608.18	222,002.24	13,902.02	1,889.32

Data Source: PSA, Crops Statistics Division 2021

Other Crops: Area Planted/Harvested by Crop

Based on Table 4.5, among the Other Crops harvested from year 2018 to 2020, coconut covered the biggest area in the country, in the region and in the province. In 2020, out of the total 86,725.39 hectares devoted to other crops in the Province, 34,500 hectares equivalent to 39.78 percent share was planted with this crop.

On the other hand, sugarcane has the second biggest area of plantation which accounts to 31.09 percent of the total harvested area of the Province. Although it has decreased to 24,290 hectares in 2019 from 26,672 hectares back in 2018 it then increased to 26,962 hectares in 2020, making it remain as second largest area of plantation next to coconut for the period of 2018-2020. It also accounted to 93.95%, 93.55% and 94.69% of the total area harvested with the crop in CALABARZON from 2018 to 2020, respectively.

As one of the most prominent crop produce of the Province, harvest area size for mango followed that of the sugarcane harvest area with 11,020 hectares 2018 and slightly decreased and remained at 10,820 hectares in 2019 and 2020. It comprised 79.66% of the total area in CALABARZON planted/harvested with that fruit. Banana is also one of the major crop produce of Batangueňos next to mango in terms of area size harvested which approximately remained at 5,530 hectares from years 2018 to 2020.

Table 4.5: Other Crops: Area Planted / Harvested by Crop and Year, in Hectares, 2018-2020 in MT

CROP TYPE	2018			2019			2020		
	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas
Cacao	27,133.11	449.69	12.00	30,256.82	458.00	12.00	31,298.51	553.50	13.00
Cashew	28,666.17	27.00	1.00	28,688.26	26.93	1.00	29,668.59	26.73	0.80
Chrysanthemum	252.34	6.14	0.09	255.11	6.05	---	241.30	3.05	---
Coconut	3,628,134.38	485,191.00	36,305.00	3,651,873.03	485,197.00	36,305.00	3,651,288.76	483,398.00	34,500.00
Coffee	113,351.88	13,296.00	3,752.00	112,023.69	13,295.40	3,752.00	113,264.89	13,196.00	3,650.00
Orchids	292.33	12.00	0.98	292.03	11.32	0.28	292.22	11.71	0.67
Roses	270.77	3.70	0.70	296.14	3.75	0.75	292.59	3.55	0.55
Sugarcane	437,506.16	28,390.00	26,672.00	379,253.27	25,965.00	24,290.00	399,086.05	28,474.00	26,962.00
Banana	447,889.39	26,982.70	5,529.50	449,030.08	27,008.54	5,530.00	451,177.70	26,993.20	5,530.00
Calamansi	19,777.58	1,656.34	614.00	19,616.59	1,655.34	614.00	19,688.81	1,702.58	614.00
Durian	16,692.84	38.00	2.00	16,677.79	38.00	2.00	16,582.92	38.00	2.00
Lanzones	21,286.90	4,385.00	550.00	21,489.79	4,384.00	550.00	21,548.63	4,384.00	550.00
Mandarin	8,594.04	2,070.00	150.00	8,566.38	2,068.00	150.00	8,565.82	2,068.00	150.00
Mango	185,858.47	13,782.00	11,020.00	186,621.07	13,582.00	10,820.00	186,798.07	13,583.00	10,820.00
Orange	1,330.59	2.00	1.00	1,309.11	1.80	0.80	1,297.98	2.00	1.00
Papaya	7,783.18	651.64	50.00	7,773.07	643.00	50.00	7,781.86	643.32	50.00
Pineapple	66,190.38	4,226.00	8.00	66,047.55	4,246.77	8.00	66,858.12	4,256.23	7.00
Rambutan	5,726.56	814.00	70.00	5,691.28	814.00	70.00	5,717.17	814.00	70.00
Tamarind	2,250.54	74.00	16.00	2,212.34	73.00	15.00	2,207.47	72.96	15.00
Ampalaya	10,679.32	2,317.45	336.00	10,676.36	2,325.23	341.00	10,687.78	2,292.99	339.50
Bottle gourd/Upo	7,194.87	2,264.01	1,408.00	6,885.65	1,947.96	1,090.00	6,861.92	1,904.37	1,051.00
Cassava	227,643.73	7,203.78	850.00	222,441.49	7,215.09	862.00	219,232.12	7,209.24	855.00
Eggplant	21,651.26	1,548.83	360.00	21,818.57	1,563.42	362.00	21,780.33	1,522.52	361.00
Garlic	2,653.97	40.00	1.00	2,612.15	2.60	1.00	2,497.22	2.00	1.00
Ginger	3,929.56	389.92	111.00	3,924.18	384.04	107.00	3,941.86	382.24	104.00
Greater yam/Ubi	2,446.45	209.77	23.00	2,447.46	208.97	24.20	2,446.73	200.62	22.50
Lady's finger/Okra	3,941.22	195.90	33.50	4,010.80	194.13	33.50	4,079.55	186.38	33.50
Lettuce	492.13	32.55	---	505.34	33.00	---	499.19	27.30	---
Mung bean/Mongo	41,581.12	128.20	2.50	41,728.40	124.00	---	41,852.81	123.00	---
Onion	17,904.81	29.00	16.50	19,948.02	11.92	3.92	18,391.37	8.92	1.92
Peanut	23,897.72	449.78	25.50	23,915.39	459.78	25.50	23,957.29	451.30	23.00
Pechay, Native	7,231.30	814.07	41.75	7,229.45	811.58	37.50	7,241.02	788.37	37.50
Radish	1,305.24	242.58	6.50	1,280.71	240.05	6.50	1,259.27	228.49	6.50
Stringbeans	13,906.65	1,489.82	243.36	13,914.83	1,484.73	240.00	13,911.50	1,423.89	238.00
Squash Fruit	13,045.56	1,938.18	377.00	12,984.86	1,935.21	377.00	12,962.54	1,916.98	377.00
Sweet Potato	84,045.05	3,920.49	46.80	83,337.64	3,930.33	47.50	83,694.39	3,900.73	49.50
Swamp cabbage/Kangkong	6,464.66	511.67	37.25	6,425.85	511.13	37.25	6,408.71	506.17	37.25
Taro/Gabi	14,922.82	767.45	130.10	14,877.10	768.80	130.50	14,992.84	760.06	130.20
Tomato	16,494.12	1,258.26	120.00	16,360.25	1,203.47	124.00	16,448.19	1,187.95	121.00

Data Source: PSA, Crops Statistics Division 2021

The number of fruit bearing trees for the year 2018-2020 is presented in Table 4.6. Posted volume of production with high records are banana (all variants), coconut and coffee which dominated the number of fruit-bearing trees; Banana with 44,338,440 in 2018 which increased to 4,487,300 in 2019 and but decreased to 4,318,900 in 2020; coconut with 3,800,000 in 2018 and 2019 which decreased to 3,754,000 in 2020; and Coffee with 2,063,602 in both 2018 to 2019 decreased to 1,989,500 in 2020.

Table 4.6: Other Crops: Number of Bearing Trees, 2018-2020 in MT

OTHER Crops: Number of bearing trees	2018			2019			2020		
	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas	PHILIPPINES	CALABARZON	Batangas
Cacao	5,676,647.00	56,752.00	2,800.00	5,750,332.00	58,799.00	3,300.00	6,239,874.00	75,519.00	3,400.00
Cashew	3,742,669.00	3,325.00	155.00	3,732,694.00	3,324.00	155.00	3,740,445.00	3,295.00	126.00
Coconut	347,009,015.00	57,316,563.00	3,800,000.00	347,952,192.00	57,316,062.00	3,800,000.00	345,623,310.00	55,452,994.00	3,754,000.00
Coffee	75,323,614.00	10,338,317.00	2,063,602.00	74,507,692.00	10,336,630.00	2,063,602.00	75,048,412.00	10,264,495.00	1,989,500.00
Banana	288,639,018.00	9,562,762.00	2,896,920.00	285,335,123.00	9,473,537.00	2,971,400.00	285,381,092.00	9,365,190.00	2,887,200.00
Banana Cavendish	123,768,908.00	51,400.00	---	122,837,408.00	51,400.00	---	120,924,541.00	56,400.00	-
Banana Lakatan	32,541,262.00	848,280.00	15,900.00	32,250,190.00	829,334.00	15,900.00	34,854,685.00	826,819.00	15,900.00
Banana Saba	81,585,184.00	5,102,135.00	1,425,620.00	80,275,323.00	5,047,660.00	1,500,000.00	80,169,837.00	4,957,381.00	1,415,800.00
Calamansi	8,355,922.00	876,814.00	362,000.00	8,329,453.00	876,437.00	362,000.00	8,253,997.00	815,646.00	300,000.00
Durian	1,343,438.00	2,110.00	400.00	1,342,881.00	2,115.00	400.00	1,341,526.00	2,125.00	410.00
Lanzones	1,954,386.00	335,339.00	100,000.00	1,993,141.00	355,214.00	120,000.00	2,009,217.00	357,214.00	122,000.00
Mandarin	969,905.00	138,871.00	41,000.00	966,386.00	135,345.00	38,000.00	964,337.00	135,345.00	38,000.00
Mango	9,472,422.00	906,909.00	797,400.00	9,560,248.00	908,349.00	798,800.00	9,584,477.00	906,949.00	797,400.00
Mango Carabao	7,117,463.00	721,975.00	680,800.00	7,208,799.00	721,975.00	680,800.00	7,231,743.00	721,975.00	680,800.00
Orange	157,025.00	300.00	100.00	153,661.00	270.00	80.00	152,598.00	267.00	80.00
Papaya	4,854,601.00	393,425.00	50,000.00	4,767,176.00	391,749.00	50,000.00	4,755,097.00	389,749.00	50,000.00
Rambutan	417,503.00	96,180.00	15,000.00	419,208.00	96,180.00	15,000.00	420,988.00	97,180.00	16,000.00
Tamarind	127,385.00	6,032.00	2,500.00	124,710.00	5,930.00	2,400.00	124,360.00	5,920.00	2,400.00

Data Source: PSA, Crops Statistics Division 2021

4.1.2 Livestock

Livestock production refers to the volume of indigenous (locally-raised) animals disposed for slaughter plus animals exported or shipped-out for slaughter both in live weight equivalent.

In Batangas, many households engaged in backyard-scale agri-business. Products are marketed to the local market not only within the province but also to other nearby provinces.

Livestock and poultry production is regarded as a key source of livelihood and sustenance to rural families fundamentally depending on agronomic yield. Raising native chicken, goat, cattle and carabao are traditionally among their preferences because these animals could provide them ready meat and eggs for their everyday protein requirement, energy and as a partner in the field, income, and urgent answer for their needs during tight and emergency situations.

With respect to livestock and poultry, Batangas Province has steadily gained prominence in quality and volume of production. The four (4) animal types raised and produced in the Province are hogs, cattle, goat and carabao. The steady increase in the volume of production for all types of animals is evidently presented in Table 4.7.

4.1.2.1 Hog: Known to rank first in swine production regionwide, Batangas hog growers produced 174,072 Metric Tons (MT) in 2018 increasing by 8.67 percent which is 189,169 MT in total in 2019, only to decrease to 161,190 MT in 2020. The sudden 14.79 percent decrease recorded in the volume of production in 2020 is due to the African Swine Fever (ASF) which was first recorded in CALABARZON last August 2019. ASF is 100% fatal for hogs, methods of depopulation is used on affected swines as well as those living within one-kilometer radius thus affecting thousand of hog growers and the volume of production from all five provinces.

4.1.2.2 Cattle: Cattle raising gained prominence among farm households because of its potential profitable livelihood activity. It gives farmer year-round work and provides extra income. Farmers can make use of cheap, plentiful farm by-products such as corn stovers, rice straw, copra meal, rice bran and sugarcane tops, which ordinarily go to waste. Most importantly, it helps meet the urgent demand for high-protein foods in the Filipino diet.

For the year 2018, cattle recorded a production of 14,490 MT. It decreased in 2019 by 8.06 percent with total production of 13,322 MT and by 2020 it continued to decrease by 4.80 percent with a total production of only 12,682 MT.

4.1.2.3 Goat: Goat production, like any other animal production enterprise, becomes popular because they require low capital investment, fit the small hold farm condition and multiply fast. Because of its economic value as an efficient converter of low quality forages into quality meat, milk and cheese products, it is thus an attractive undertaking among resource-poor families.

The volume of goat production for the year 2018 is 2,256 MT. It slightly decreased in 2019 by 0.45 percent with a total producion of of 2,246 MT and continued to decrease by 4.62 percent in 2020 with only 2,142 MT of production.

4.1.2.4 Carabao: This ingenious livestock resource is a major contributor to the total agricultural economy of the country. It is still a very important draught-animal in the rice fields. Carabaos help farmers to plow the fields to produce quantities of rice and other crops and transport these goods to the market. It is also a source of milk for sweets and cooking, meat and raw materials to design furniture.

As shown in Table 4.7, the overall volume of production of carabao is on a decreasing trend. In 2018 the production was recorded at 1,147 MT, it decline in 2019 by 2.73 percent or equivalent to 32 MT and further decreased in 2020 to only 835 MT or 25.12 percent loss from the preceeding year.

Table 4.7: Livestock: Volume of Production by Animal Type, in MT: 2018-2020

Animal Type	2018	2019	2020
Hog	174,072	189,169	161,190
Cattle	14,490	13,322	12,682
Goat	2,256	2,246	2,142
Carabao	1,147	1,115	835

Data Source: PSA, Crops Statisitcs Division 2021

Livestock: Animals Slaughtered in Slaughterhouses by Animal Type

Slaughterhouse (also, Abattoir) refers to the premises that are approved and registered by a controlling authority in which food animals are slaughtered and dressed for human consumption.

The Province of Batangas is one of the major suppliers of livestock and poultry and it's by-products in Metro Manila markets. Total produce are slaughtered and sold in the local municipalities and four cities of the Province. Others are also transported to neighboring provinces like Laguna and Cavite.

Table 4.8 shows that swine/hogs have the highest recorded number of heads slaughtered in slaughterhouses for the years 2018 to 2020 despite the outbreak of ASF in the country. From an output of 432,477 heads in 2018, it rose slightly by 3.49 percent with an output of 447,571 heads in 2019. But in 2020 it decreased significantly by 15.62 percent or equivalent to 377,652 heads slaughtered.

Aside from hogs, the numbers of other types of livestock slaughtered in abattoirs are carabao, cattle, and goat. Slaughtered cattle have increased from 10,910 in 2018 to 12,283 in 2019 whish is equivalent to 12.58 percent of increase. However, slaughtered carabao livestock is generally of the decrease-increase trend. A notable increase was recorded in 2019 with 46.06 percent increase from 2,247 in 2018 to 3,282 in 3,282 in 2019, thereafter the percentage of slaughtered carabao had a significant decrease of 37.75 percent totalled at 2,043 in 2020. The slaughtered goat livestock had increased in 2019 by 11.86 percent from 3,171 heads in 2018 but decreased a notable 36.93 percent or 2,237 heads in 2020. As a whole, there were constant decrease in the volume of other types of slaughtered livestock.

Table 4.8: Livestock: Animals Slaughtered in Slaughterhouses by Animal Type: 2018-2020 in MT

Animal Type	2018	2019	2020
Carabao	2,247	3,282	2,043
Cattle	10,910	12,283	8,880
Goat	3,171	3,547	2,237
Hog	432,477	447,571	377,652

Data Source: PSA, Crops Statisitcs Division 2021

Livestock: Farmer/Raiser is an individual or group who owns and raises animals and sells directly at the market or to the buyer who purchases them for marketing, fattening, breeding or other purposes.

There are two (2) types of Livestock Farmer/Raiser: Backyard and Commercial. Backyard Farm/Raiser refers to any farm or household raising at least one head of animal or bird and does not qualify as a commercial farm. Commercial Livestock Farm/Operator refers to any

livestock operator or farm which operation satisfies at least one of the following conditions: a) at least 21 head of adults and zero young, b) at least 41 head of young animals, c) at least 10 head of adults and 22 head of young animals. Goat and cattle backyard raisers produced more than the commercial farmers, while the entire inventory for carabao is accounted to backyard raisers only.

From 2018 to 2021, backyard and commercial livestock have been accounted as shown in Table 4.9: Inventory of Animal Type, Farm Type, Period and Year. In the said table, carabao inventory has shown yearly increases, the highest of which was posted on January 1, 2021.

For 2018 to 2021, a consistent decrease in the number of backyard and commercial farm cattle was recorded; there is a total of 7,832 heads or 5.87 percent of reduction was noted. From 2018 to 2019 there was a decrease of 2.50 percent, from 2019 to 2020 a decrease of 1.14 percent and from 2020 to 2021 there was a decrease of 2.34 percent.

The inventory of goat livestock showed an increase of 1.18 percent from 2018 to 2019 which decreased by 0.70 percent from 2019 to 2020 and further recorded a decrease in 2020 to 2021 with 0.85 percent.

As for hogs, its over-all inventory for both backyard and commercial farm type completely depicted a decreasing pattern despite the slight 0.04 percent increase from 2019 to 2020 in backyard farm production. On the average 4-year period, hog inventory was still at 691,528.75 in spite of the damages cased by ASF to the swine industry.

Table 4.9: Livestock: Inventory by Animal Type, Farm Type, Period & Year: 2018-2021 *(As of January 01, 2021)* in MT

Animal Type		2018	2019	2020	2021
Carabao	**TOTAL**	45,233.00	45,875.00	46,275.00	46,800.00
	Backyard	45,233.00	45,875.00	46,275.00	46,800.00
	Commercial	---	---	---	---
Cattle	**TOTAL**	133,467.00	130,133.00	128,647.00	125,635.00
	Backyard	130,113.00	126,868.00	125,548.00	122,550.00
	Commercial	3,354.00	3,265.00	3,099.00	3,085.00
Goat	**TOTAL**	123,842.00	125,302.00	124,425.00	123,362.00
	Backyard	123,735.00	124,864.00	123,988.00	123,052.00
	Commercial	107.00	438.00	437.00	310.00
Swine	**TOTAL**	744,987.00	739,646.00	732,610.00	548,872.00
	Backyard	165,018.00	161,988.00	162,057.00	148,845.00
	Commercial	579,969.00	577,658.00	570,553.00	400,027.00

Data Source: PSA, Crops Statisitcs Division 2021

4.1.3 Poultry

Poultry is a collective term for all domesticated avian for the purpose of food consumption or, the carcass of such avian dressed/processed for human consumption. Fowl is a term used to refer to a specific group of avian sharing common anatomical characteristics, e.g. chicken, turkey.

Chicken, chicken egg, duck and duck egg are the major poultry products produced in Batangas. Table 51 shows the province's 3-year volume of production for poultry.

Table 4.10 reveals that the productions of chicken and chicken egg dominate the productions of duck and duck egg. There is an increasing trend in the volume of production on the chicken egg, a 14.90 percent increase was recorded from 2018 to 2019 and 10.09 percent increase from 2019 to 2020. Production of chicken had a increase-decrease trend, from 2018 to 2019 there is a recorded increase of 5.77 percent however decreased by 4.87 percent from 2019 to 2020.

The majority of these products came from the Municipality of San Jose, tagged as the "Egg Basket of the Philippines". Other producers of poultry eggs are the Municipalities of Rosario, Ibaan, Cuenca, Lobo, Calatagan, Padre Garcia, and cities of Sto. Tomas and Lipa. However, noted also was the stagnant number of 19 metric ton of ducks and 21 metric ton of duck eggs produced in 2018 and 2019, decreasing by 15.28 percent and 10.67 percent respectively with a total recorded count of 16 metric ton of ducks and 19 metric ton duck eggs in 2020.

Table 4.10: Poultry: Volume of Production by Poultry Type: 2018-2020 in MT

Animal Type	2018	2019	2020
Chicken	101,847	107,721	102,480
Chicken Egg	120,072	137,963	151,878
Duck	19	19	16
Duck Egg	21	21	19

Data Source: PSA, Crops Statisitcs Division 2021

Chicken: Inventory by Farm Type: 2018-2021

Chicken is domestic poultry raised for meat, eggs and other by-products. It can be classified into three types: Broiler, Layer and Native. Broiler refers to strains of foreign breeds of chicken, especially raised for meat purposes only. It is usually for sale at five to six weeks old. Layer is a foreign strain female chicken regardless of age, raised mainly for table egg production. Native Chicken is a common backyard fowl that is a mixture of different breeds.

As shown in Table 4.11, most of the chicken are layers. As per inventory at the start of years 2018, 2019, 2020 and 2021 (January 1), it is noted that the number of layer type of chicken is far greater than the broiler and native farm type, showing an overall increase of 2,166,317 from 2018 to 2021. Through out the 4 year course the layer type of chicken showed continuous

increase trend: 7.42 percent from 2018 to 2019, 9.30 percent in 2020, and 3.52 percent in 2021.

The biggest reduction was recorded on January 1, 2021 was a massive 53.59 percent decrease for native/improved chicken which is equivalent to 603,290 less than the inventory of 1,125,755 posted on January 1, 2020.

Duck: Inventory by Farm Type: 2018-2021(As of January 01, 2021)

Duck is a type of waterfowl that are also raised through backyard and commercial farming.

As mentioned earlier in this chapter, production volume for duck and duck egg has dwindled in recent years, which is best interpreted by the reduction in its inventory for the past three years for backyard farm type. Although minimal, inventories for this fowl showed that it has been declining over the past years there was slight 0.29 percent increase in 2019. However it decreased again by 9.80 percent from 14,435 in 2019 to 13,020 in 2020, then further decreasing by 9.79 percent which is 11,745 in total in 2021. No inventory for Commercial farm type was recorded.

Table 4.11: Chicken and Duck: Inventory by Farm Type, Period and Year 2018-2021 *(As of January 01, 2021)* in MT

Farm Type	2018	2019	2020	2021
Chicken				
TOTAL	**14,064,169**	**14,378,813**	**15,157,407**	**14,323,639**
Broiler	2,795,878	2,354,300	2,228,642	1,582,495
Layer	10,052,362	10,798,568	11,803,010	12,218,679
Native/Improved	1,215,929	1,225,945	1,125,755	522,465
Duck				
TOTAL	**14,393**	**14,435**	**13,020**	**11,745**
Backyard	14,393	14,435	13,020	11,745
Commercial	---	---	---	---

Data Source: PSA, Crops Statisitcs Division 2021

4.1.4 Fisheries

Fishery is a notable sub-sector in our economy. The Province of Batangas with its vast and great bodies of water is a potential fishing ground. Its four major water bodies namely Balayan Bay, Batangas Bay, Tayabas Bay and Taal Lake, are bountiful of hundred varieties of fishes.

Table 4.12 and Table 4.13 present the volume and value of fishery production (commercial, municipal, and aquaculture). Shown therein are the quantities of fish caught, harvested/produced and is presented in metric ton and value of production in Philippine currency.

Commercial fishing is the catching of fish with the use of fishing boats with a capacity of more than three (3) gross tons for trade, business or profit beyond subsistence or sports fishing. Its operation is outside of the municipal government jurisdiction of 15 kilometers.

Municipal fishing is fishing within municipal waters using fishing vessels of three (3) gross tons or less, or fishing not requiring the use of fishing vessels. Operation is within the municipal government jurisdiction of 15 kilometers.

Municipal waters include not only streams, lakes, inland bodies of water and tidal waters within the municipality which are not included within the protected areas as defined under Republic Act No. 7586 (The NIPAS Law), public forest, timberlands, forest reserves or fishery reserves, but also marine waters included between two lines drawn perpendicular to the general coastline from points where the boundary lines of the municipality touch the sea at low tide and a third line parallel with the general coastline including offshore islands and 15 kilometers from such coastline.

Marine Municipal Fisheries operate in coastal waters within 15 kilometers from the coastline (Municipal Marine Waters) using vessels less than or equal to three (3) gross registered tons, as well as fishing without the use of vessels. Inland municipal fishing is the catching of fish, crustaceans, mollusks and all other aquatic animals and plants in inland waters like lakes, rivers, dams, marshes, etc. using simple gears and fishing boats some of which are non-motorized with a capacity of less than or equal to three (3) gross tons; or fishing not requiring the use of fishing boats.

Aquaculture is the fishery operations involving all forms of raising and culturing fish and other fishery species in fresh, brackish and marine water areas. It has the highest production among the three fisheries subsectors, where its production volume and value surpassed both the remaining fishery sub-sectors: commercial and municipal fisheries for all data years presented in the following tables. Among the species produced by this sector, tilapia and milkfish (bangus) yielded the highest volume and value.

In 2018 to 2020 the average total fisheries volume of production is 85,279.82 MT, which is valued on an average of Php 8,479,195.19. Commercial Fisheries had declined its production by 13.02 percent and 2.82 percent in 2019 and 2020 respectively. As a result, the value of commercial fisheries also dropped by 1.81 percent in 2019 and increased by 4.38 percent in 2019.

Municipal fisheries as indicated in Table 4.12 is subdivided into Marine Municipal Fisheries and Inland Municipal Fisheries. Marine Municipal Fisheries has a total average of 9,620.42 MT in terms of production from 2018 to 2020 which is valued at Php 903,062.85.

A decreasing trend is seen for Marine Municipal fisheries with 7,210.09 MT or 12.46 percent decrease in volume and Php 745,810.25 or 1.83 percent decrease in value. Further decreasing by 31.93 percent in volume and 19.29 percent in value for a total of 4,908.02 MT and Php 601,945.14 in 2020.

On the other hand, Inland Municipal Fisheries originally 3,224.89 MT in terms of volume and valued at Php 218,598.58 in 2018 have decreased by 24.70 percent equivalent to 796.62 MT and 22.36 percent or Php 48,883.29 in 2019. But in 2020 an increase of 17.53 percent and 25.73 percent was recorded in the volume and value of inland municipal fisheries, respectively.

Table 4.12: Fisheries - Volume and Value of Production by Subsector; Batangas Province 2018-2020 in MT

Fisheries Subsector	2018		2019		2020	
	Volume	Value	Volume	Value	Volume	Value
Commercial Fisheries	4,425.55	435,128.40	3,849.48	427,244.48	3,740.75	445,942.97
Municipal Fisheries	11,460.96	978,337.04	9,638.36	915,525.54	7,761.95	815,325.99
Marine Municipal Fisheries	8,236.07	759,738.46	7,210.09	745,810.25	4,908.02	601,945.14
Inland Municipal Fisheries	3,224.89	218,598.58	2,428.27	169,715.29	2,853.93	213,380.85
Aquaculture	81,005.11	7,315,688.79	79,602.85	8,156,014.95	54,354.44	5,948,377.41
Total FISHERIES	96,891.62	8,729,154.23	93,090.69	9,498,784.97	65,857.14	7,209,646.37

Data Source: PSA, Crops Statisitcs Division 2021

As mentioned earlier, and based from Table 4.13, Aquaculture production surpasses the two other sub-sectors in the fishing industry, not only at the provincial level but also at the regional and national levels. There was an increasing trend of Provincial aquaculture production during the three year period from 2018 to 2020. Batangas Province share in the regional production of fish increased by 39.39 percent in 2019 and 35.40 percent in 2020.

Table 4.13: Fisheries- Value of Production, Philippines/Region/Province/by Subsector; 2017-2020 in MT

Year / Geolocation	Commercial	Municipal Fisheries			Aquaculture	Total All Sectors
		Marine	Inland	Total Municipal		
2017						
PHILIPPINES	59,319,241.77	75,333,249.56	8,131,995.68	83,465,245.24	100,741,469.40	243,525,956.41
CALABARZON	4,388,448.69	3,970,756.54	1,237,585.63	5,208,342.17	12,580,901.56	22,177,692.42
Batangas	**448,784.93**	**722,657.44**	**228,724.22**	**951,381.66**	**6,875,966.69**	**8,276,133.28**
2018						
PHILIPPINES	61,044,889.18	84,871,810.66	9,102,646.65	93,974,457.31	110,329,337.84	265,348,684.33
CALABARZON	4,185,472.85	3,910,953.49	1,217,956.63	5,128,910.12	12,796,543.94	22,110,926.91
Batangas	**435,128.40**	**759,738.46**	**218,598.58**	**978,337.04**	**7,315,688.79**	**8,729,154.23**
2019						
PHILIPPINES	63,475,042.51	90,960,967.69	9,380,919.77	100,341,887.46	117,834,724.62	281,651,654.59
CALABARZON	3,798,076.82	4,666,615.05	1,199,912.00	5,866,527.05	14,448,269.80	24,112,873.67
Batangas	**427,244.48**	**745,810.25**	**169,715.29**	**915,525.54**	**8,156,014.95**	**9,498,784.97**
2020						
PHILIPPINES	61,093,131.60	88,533,295.66	9,478,278.28	98,011,573.94	114,383,752.99	273,488,458.53
CALABARZON	3,302,207.92	3,726,454.93	1,127,534.16	4,853,989.09	12,210,833.78	20,367,030.79
Batangas	**445,942.97**	**601,945.14**	**213,380.85**	**815,325.99**	**5,948,377.41**	**7,209,646.37**

Data Source: PSA, Crops Statisitcs Division 2021 ***Value: in thousand pesos*

4.1.5 Feed Mills

Feed Mills are the a place where animal feeds are manufactured. Its existing number complements the province's prominence in the production of farm animals, livestock and poultry. Table 4.14, shows the List of Feed Mills for 2020, out of the 106 feed mill establishments found in the Province, 47.17 percent or 50 are located in District IV specifically in the Municipalities of Rosario, Ibaan, San Jose, Taysan, and Padre Garcia. The municipality of San Jose from District IV has the most number of feed mills establishments totaling to 22, followed by District VI (Lipa City) with a total of 17 establishments. Combined numbers from these municipality and city comprises 36.79 percent or one-third (1/3) of the total number of feed mills operating in the Province, which clearly shows that where livestock production abounds, also is where concentration of support industries exist actively.

On the other hand, District III has twenty-six (26) feed mills which accounts for 24.52 percent of the total establishment of the Province. District II has four (4) feed mills that support their livestock and poultry industries, in addition to the another five (5) in Batangas City, a lone LGU for District V. Other municipalities with feed mill establishments are Lemery and Taal for District I.

Table 4.14: List of Feed Mills: 2020

District 1 (4)		
Lemery	1	Mastermix Agri-Products & Feedmills Corp.
Taal	1	San Nicolas-Taal Feedmills Corporation
	2	First District Feedmill (Fidico) Corporation
	3	Eight Knights Feedmill Corporation
District 2 (4)		
Bauan	1	ESCO Inc.
	2	Siglakas Feeds
Lobo	1	LADEMCO
San Luis	1	St. Louise Golden Harvest Feed mil
District 3 (26)		
Tanauan City	1	DVS Feeds Trading
Agoncillo	1	Almarco Feed Mills Corporation
Laurel	1	Larry and Feeds Supply
	2	JNN Feeds Supply
	3	ABC Aquaculture Supply
	4	Grobest Feeds Philippines Incorporated
	5	RDM and Agricultural and Poultry Supply
	6	DS Agojo Agricultural Products Trading
	7	GTG Feeds Supply
	8	RichEarth Aquafeeds Distribution
	9	SIDC Feeds Supply
	10	Feeds Supply
	11	Biedo's Feeds Supply

(Continuation) Table 4.14: List of Feed Mills: 2020

Laurel	12	Daniken Railey Feed Supply
	13	Weng and Edwin Farm Products
	14	Nenelyn Agricultural Supply
Malvar	1	Sunjin Philippines Corp.
	2	Ginintuan Agro Industrial Corp.
	3	Bughaw Multilites Corp.
	4	Kalaw Agro Industrial Corp.
Mataas na Kahoy	1	Agro Industrial Cooperative at Mataasnakahoy (AICOM)
	2	Highwood Feedmills
	3	Mataasnakahoy Agri-Industrial Corporation
	4	ETS Feedmils
Sto. Tomas City	1	San Miguel Foods, Inc.
	2	Welgro Phils. Inc.
Distrct 4 (50)		
Ibaan	1	Maxore Agro-Industrial Corp.
	2	Grand Trust Feedmills Corp.
	3	Great Fortune Feedmills Inc.
	4	GLL Marketing Corporation
	5	Emmanuel Feeds Production Corporation
	6	Ibaan Feedmills Corp.
	7	Sandigan Feedmills Corporation
	8	Farmers Prime Ventures Inc.
	9	Probio Feedmill, Inc.
Padre Garcia	1	Armor Milling Corp.
	2	QB Feedmills Corp.
	3	Essentialle Forte Feedmills
	4	Unified K Feedmilling
	5	LANCO Nutritech Corporation (Feedmills)
	6	Maxivite Alpha Resources
	7	PADECO Feedmills
Rosario	1	Goldstar Feeds Inc.
	2	Nutrimeal Agri-Business Inc.
	3	Bonanza Agri Industrial Resources Corp.
	4	Nutriscience Feed Innovation Corp.
	5	Powerful Dev. Ventures Corp.
	6	Vision 2000 Feedmills Corp.
	7	Victory Agri-Industrial Res. Corp.
	8	Blue Diamond Feedmills, Inc.
	9	Nutec Feeds & Solutions, Inc.
San Jose	1	Antoliano Alday Jr.
	2	Apexfeeds Agro-Industrial Corporation
	3	Bienvenido Jaen

(Continuation) Table 4.14: List of Feed Mills: 2020

San Jose	4	Busilac Feedmills
	5	Easy Bio Philippines Inc.
	6	Edwin Macasaet
	7	Edwin Mendoza
	8	Everlast Agro-Industrial Corp.
	9	Fastgro Feedmills Corp.
	10	First Golden Mix Agro Ventures (Batangas) Inc.
	11	Golden R. Asia Feedmill Corp.
	12	Grand Harvest Feedmills Corporation
	13	Imelda Hernandez
	14	Jeffrey Mendoza
	15	MCP Feed Basics Co.
	16	New Golden Mix Feeds Corp.
	17	Platinum One Feedmills Agri Development Corp.
	18	Roberto Harina
	19	Superb Value Feedmills Inc.
	20	United Victorious Feedmills Corporation
	21	Victor Neri
	22	Whitegold Feedmills Corporation
Taysan	1	Vitaful Feedmills Inc.
	2	Buklod-Unlad Multi-purpose Cooperative Feed Mills
	3	Dagatan Agri-Business Agriculture Cooperative Feed Mills
District 5 (5)		
Batangas City	1	Sorosoro Ibaba Development Cooperative (SIDC)
	2	Batangas Bestfeeds Multipurpose Cooperative
	3	Batangas Hog Producers Marketing, Inc.
	4	Batangas Excellent & Super tested Feeds Inc.
	5	Lobo San Jose Agro-Industrial Corporation
District 6 (17)		
Lipa City	1	Clarc Feedmill, Inc.
	2	Lucky 4a Corporation
	3	Qualimeal Feedmills, Inc.
	4	Rizal Poultry & Livestock Association, Inc.
	5	Lipa Agricultural Development Corp. (Ladeco)
	6	Sodel Milling Corporation
	7	Primera Agro Development Corp.
	8	Nutriscience Feed Innovation Corp.
	9	Pigchow Feedmill Corp.

(Continuation) Table 4.14: List of Feed Mills: 2020

Lipa City	10	Sunflower Agro-Industrial Corp.
	11	Gro Power Agro Industrial Corporation
	12	Tower Feeds Corporation
	13	San Miguel Food Inc. (Brgy.Pinagkawitan)
	14	Maharlika Agri-Industrial Resources Corp.
	15	San Miguel Food Inc. (Brgy.San Jose)
	16	Green Nature Feedmilling, Corp.
	17	Jetbest Animal Nutrition Center

Data Source: 34 Local Government Units

4.1.6 Meat Establishment

This refers to premises such as a slaughterhouse, poultry dressing plant, cold storage, warehouse and other meat outlets that are approved and registered by the National Meat Inspection Commission for the slaughter, preparation, processing, handling, packing or storing of food animals and meat products.

Accredited Abattoir or Slaughterhouses are the premises/facilities registered and approved by the National Meat Inspection Commission (NMIC) used in the slaughter of livestock for human consumption.

Classification and accreditation of abattoir is in accordance with the following:

AAA – abattoir with facilities and operational procedures appropriate for slaughtering livestock and fowl, making the meat suitable for sale in any domestic or international market.

AA – abattoir with facilities and operational procedures sufficiently adequate for slaughtering livestock and fowl, making the meat suitable for sale in any local or national market.

A – abattoir with facilities and procedures of minimum adequacy for making the meat of livestock and fowls slaughtered to be suitable for distribution and sale only within the city or municipality where the slaughterhouse is located.

As shown in Table 4.15, the Province has ten (10) slaughterhouses, four (4) Poultry Dressing Plant, Three (3) Meat Cutting Plant, and One (1) Meat Importer, all accredited by NMIS. Five (5) of which are classified AAA located in Lipa City, Sto.Tomas City, and San Jose, while the Eleven (11) are classified AA. Nineteen (19) are classified as Locally Registered Meat Establishments (LRME).

Table 4.15: List of National Meat Inspection Service (NMIS) Accredited Slaughterhouses: 2020

City/Municipality	Name of Slaughterhouse/ Poultry Dressing Plant (PDP)	Classification	Address
SLAUGHTERHOUSE			
Tanauan City	Tanauan City Slaughterhouse	AA	Brgy. Poblacion 4, Tanauan City, Batangas
Padre Garcia	Banaba Abattoir Complex Inc.	AA	Banaba, Padre Garcia, Batangas
Bauan	Bauan Slaughterhouse	AA	San Francisco Street, Poblacion IV, Bauan, Batangas
Ibaan	Delnor Agri-Food Inc.	AA	Brgy. Lapu-lapu, Ibaan, Batangas
Cuenca	Emmanuel Multi-Purpose Cooperative	AA	Brgy.1, Cuenca, Batangas
Lipa City	First Manhattan Integrated Management Corp.	AAA	A. Tanco Drive, Brgy.Marawon, Lipa City, Batangas
San Jose	Kabayan Slaughterhouse	AA	Brgy. Natunuan, San Jose, Batangas
Rosario	Rosario Municipal Slaughterhouse	AA	Brgy. Bagong Pook, Rosario, Batangas
San Pascual	Sam's Slaughterhouse	AA	Brgy. Laurel, San Pascual, Batangas
Ibaan	Super Magalang Slaughterhouse Corp.	AA	Brgy. Sabang, Ibaan, Batangas
POULTRY DRESSING PLANT			
Sto.Tomas	C-Joy Poultry Meats Production Incorporated	AAA	Brgy. Sta.Teresista, Sto.Tomas City, Batangas
San Jose	Cariño & Sons Agri-Dev't, Inc.	AAA	Brgy.Aya, San Jose, Batangas
Lipa City	Silangan Poultry Farm, Inc.	AAA	Brgy.Kayumanggi, Lipa City, Batangas
Padre Garcia	Pearl Poultry Dressing & Meat Processing Corporation	AA	Brgy. Tamak, Padre Garcia, Batangas
COLD STORAGE WAREHOUSE			
Malvar	Foodsphere, Inc.	AA	Brgy.Bulihan, Malvar, Batangas
Sto.Tomas	V&F Plant and Cold Storage Inc. - Batangas	AAA	No.437, San Roque, Sto.Tomas, Batangas
MEAT CUTTING PLANT			
Sto.Tomas	Asialink Comp Inc.	AA	437 V&F Compound, Brgy.San Roque, Sto.Tomas, Batangas
Sto.Tomas	Lola Loring Meat Cutting & Storage Station	AA	Brgy. San Roque, Sto.Tomas, Batangas
San Jose	Pollo Master Corporation	AA	Brgy.Aya, San Jose, Batangas
MEAT IMPORTER			
Sto.Tomas	Amangela Foods Corporation	MIT	2F #16 NDN Bldg. JP Laurel Hi-Way Brgy.San Roque, Sto.Tomas, Batangas
LOCALLY REGISTERED MEAT ESTABLISHMENTS			
Balayan	Balayan Slaughterhouse	LRME-SLH	---
Calaca	Robust Slaughterhouse	LRME-SLH	---
Lemery	Lemery Slautherhouse	LRME-SLH	---
Lian	Lian Slaughterhouse	LRME-SLH	---
Nasugbu	Nasugbu Slaughterhouse	LRME-SLH	---
Taal	Taal Slaughterhouse	LRME-SLH	---
Tuy	Tuy Slaughterhouse	LRME-SLH	---
Agoncillo	Agoncillo Slaughterhouse	LRME-SLH	---
Laurel	Laurel Slaughterhouse	LRME-SLH	---
Malvar	Malvar Slaughterhouse	LRME-SLH	---
Sto.Tomas	City of Sto.Tomas Slaughterhouse	---	---
Tanauan City	PDP-K-Four	LRME-PDP	---
	PDP-Tanang	LRME-PDP	---
Ibaan	Ibaan Slaughterhouse	LRME-SLH	---
San Jose	St.Joseph Slaughterhouse	LRME-SLH	---
San Juan	San Juan Slaughterhouse	LRME-SLH	---
Taysan	Taysan Slaughterhouse	LRME-SLH	---
Batangas	The Philippine Slaughterhouse Management & Operation Inc.	AA-SLH	---
	Baril Poultry Dressing Plant	LRME-PDP	---

Data Source: National Meat Inspection Service

4.2 Commerce and Trade

4.2.1 Commercial Establishments

A commercial establishment is defined as a location where business is conducted, goods are made or stored or processed or where services are rendered. This includes malls, supermarkets and public markets. As of 2020, there are 98 malls and supermarkets as shown in Table 4.16. Most of them can be found in the lone LGU of Districts five (5) and six (6) numbering to a total of thirty-three (33) commercial establishments. Although the Third District has twenty-eight (28) commercial establishments, these are distributed in the Municipalities of; Tanauan city (8), Agoncillo (8), Alitagtag (1) Laurel, Malvar (3) and Sto.Tomas City (3). Tanauan City in the Third District follows Lipa City as regards the number of commercial establishments with 7. Followed by the First District with Twenty-two (22) in which; Balayan (3), Lemery (10), Nasugbu (7) and Taal (2). Fourth District also added to the list with fourteen (14) commercial establishments from Padre Garcia (3), Rosario (5), San Jose (2), San Juan (2) and Taysan (2). As for the Second District on Bauan contributed with one (1) entry.

For LGUs not reflected in the table, no records or data were received as regards the existence of malls and supermarkets in their areas.

Table 4.16: Inventory of Malls and Supermarkets: 2020

Local Government Units	#	Company Name of Malls/ Supermarkets
District 1		
Balayan	1	Waltermart Supermarket, Inc.
	2	Save It Supermart
	3	Me & City Shoppers Mall, Inc.
Lemery	1	Ultra Mega Multi Sales
	2	8SM Shopping Mall - Saveway Shoppers Mall
	3	Lemery Citimart Sales
	4	Robinson's Supermarket Corporation
	5	New RC Alvarez Supermart
	6	King and Queen Supermart
	7	XRC Mall Developer Inc.
	8	SM Prime Holdings Inc.
	9	J&F Department Store
	10	Shopping Center Management Corporation
Nasugbu	1	Waltermart
	2	Sandford Marketing (SAVEMORE)
	3	Shopper's Nest
	4	Saveway (Lessor)
	5	Sunny Star dept. Store
	6	Newstar Shopping Mart
	7	SuperMac
Taal	1	EAE Family Mart Corporation
	2	Krisdale Supermarket

Data Source: 34 Local Government Units

(Continuation) Table 4.16: Inventory of Malls and Supermarkets: 2020

District 2		
Bauan	1	F-One Mart Inc.
District 3		
Tanauan City	1	Blue Basket Supermarket
	2	Puregold Price Club, Inc.
	3	Waltermart Supermarket Inc.
	4	South King Supermarket
	5	TJ Marc Sales Corp. (Citimart)
	6	Sanford Marketing Corporation (Savemore Victory Mall)
	7	Wrap and Carry Superstore, Inc.
	8	Tanauan Shoppers Mart (TSM)
Agoncillo	1	Tita Medie's Store/Groceries
	2	3 Coletz Store/Groceries
	3	Delben's Minimart
	4	VCAP Enterprises (7 Eleven)
	5	MNDJ Store
	6	El Mart Groceries
	7	Alfamart Marketing/Alfamart
	8	Yael's Sari-sari Store/Groceries
Alitagtag	1	Alfa Metro Marketing Inc.
Laurel	1	Sprutingkle Food Corporation /7-11
	2	Alfametro Marketing/Alfamart
	3	RGEE Trading
	4	Seven Eleven
	5	Robinsons Supermarket
Malvar	1	AJ Supermarket
	2	Julie G Supermarket
	3	Robinsons Supermarket
Sto.Tomas City	1	Price Commercial & Development Corporation
	2	Sanford Marketing Corporation
	3	Puregold Price Club, Inc.
Distrct 4		
Padre Garcia	1	LPT Marketing Co., Inc. (Ultra Mega Supermarket)
	2	AlfaMart Trading Phils., Inc.
	3	Southern Ongville Supermarket
Rosario	1	Puregold Price Club, Inc.
	2	SIDC Coop Supermart
	3	South Emerald Distribution Inc.
	4	Super Shopping Market Inc.
	5	RND Supermarket
San Jose	1	E.C. Supermarket (Josephine Borlasa)
	2	3 Bees General Merchandise (Jayson Tapire)

Data Source: 34 Local Government Units

(Continuation) Table 4.16: Inventory of Malls and Supermarkets: 2020

San Juan	1	Puregold Price Club, Inc.
	2	8SM Shopping Mall (Saveway)
Taysan	1	Alfametro Marketing, Inc. -2
	2	Seven Eleven Inc.
District 5		
Batangas City	1	Premier Southern Corporation (SM City Batangas)
	2	Feature Reality Holding & Dev't Corp. (Bay City Mall)
	3	Nuciti Central Properties & Dev't Corp (Nu Citi Central Mall)
	4	XRC Mall Developer, Inc. (Xentro Mall)
	5	Waltermart
	6	Batangas Citimart Shop-on Inc.
	7	Baystar Sales Inc.
	8	Formosa Commercial
	9	Pic'n SaVE Supermarket
	10	Puregold Price Club, Inc. (Calicanto Branch)
	11	Puregold Price Club, Inc. (Cuta Branch)
	12	Robinsons Supermarket Corporation
	13	Rustan Supercenters, Inc.
	14	Sanford Marketing Corporation
	15	Super Shopping Market Inc.
	16	Supervalue, Inc.
	17	T-J Marc Sales Corporation
	18	Waltermart Supermarket Inc.
District 6		
Lipa City	1	SM City Lipa
	2	Robinson Mall -Lipa
	3	Fiestaworld Mall
	4	The Outlet
	5	Big Ben
	6	South Supermarket
	7	SM Supermarket
	8	Robinsons Supermarket
	9	Puregold
	10	S&R Supermarket
	11	Sampaguita Mart
	12	Twin Supermarket
	13	MS Supermarket
	14	LDR Supermarket
	15	888 Supermarket

Data Source: 34 Local Government Units

4.2.1.1. Public Markets

The public market is a place for trade and commerce where different kinds of people used to buy daily supply of diverse food like rice, vegetable, fish, meat and other goods arranged along lines of stalls.

As of December 2020, there are 47 public markets in the province. Almost component cities/municipalities of Batangas have their own respective public market/flea market, some of which have more than two each with only the municipalities of Tingloy in the Second District and Balete of the Third District have none. Residents of Tingloy go to either to Mabini or Batangas City for their marketing needs; while residents of Balete go to MataasnaKahoy, Lipa City, Malvar, Tanauan City or other neighboring places for their needs.

Table 4.17: List of Public Markets: As of December 2020

CITY/ MUNICIPALITIES	Name of Public Markets	Address/Location
Agoncillo	Agoncillo Public Market	Brgy. Poblacion, Agoncillo, Batangas
Alitagtag	Alitagtag Public Market	Pob. East, Alitagtag, Batangas
Balayan	Balayan Mall Type Public Market	Damballelos St., Brgy. 4, Balayan, Batangas
Balete	None	
Batangas City	Batangas City Public Market 1, Old Public Market	D. Silang St., Batangas City
	Julian Pastor Memorial Market (JPMM) Market 2	Cuta, Batangas City
	Julian Pastor Memorial Market (JPMM) Market 3	Cuta, Batangas City
Bauan	Bauan Public Market	Poblacion III, Bauan, Batangas
Calaca	Calaca Public Market	Poblacion 4, Calaca, Batangas
Calatagan	Calatagan Public Market	Barangay 4, Calatagan, Batangas
	Lucsuhin Public Market	Lucsuhin, Calatagan, Batangas
Cuenca	Cuenca Public Market	Brgy. Poblacion 2, Cuenca Batangas
Ibaan	Ibaan Public Market	Talaibon, Ibaan, Batangas
Laurel	Doña Marikita Villavecencio Agoncillo Public Market	Poblacion 2, Laurel, Batangas
Lemery	Satelite Market	Brgy. Payapa Ilaya, Lemery, Batangas
	New Public Market	Brgy. Maguihan, Lemery, Batangas
Lian	Lian Public Market	Brgy. 2, Lian, Batangas
Lipa City	Candido B. Lopez Memorial Public Market	Poblacion, Lipa City, Batangas
Lobo	Lobo New Public Market	N. Babao St., Poblacion, Lobo, Batangas
Mabini	Anilao Public Market	Anilao Proper, Mabini, Batangas
	Poblacion Market	Poblacion, Mabini, Batangas
Malvar	Malvar Public Market	Poblacion Malvar, Batangas
Mataasnakahoy	Talipapa	Brgy.II-A, Mataasnakahoy, Batangas
Nasugbu	Nasugbu Public Market	Brgy.10-Brgy.3, Nasugbu, Batangas
Padre Garcia	Padre Garcia Public Market	Brgy. Poblacion, Padre Garcia, Batangas
	PJ Talipapa	Brgy. Pansol, Padre Garcia, Batangas
	MGM Talipapa	Brgy. Bawi, Padre Garcia, Batangas
	Livestock Auction Market	Brgy. Poblacion, Padre Garcia, Batangas
Rosario	Rosario Public Market	Pob. E, Rosario, Batangas
San Jose	Taysan Public Market	Brgy. taysan, San Jose, Batangas
	Natunuan Public Market	Brgy. Natunuan, San Jose, Batangas
San Juan	Francisco De Villa Marasigan San Juan, Batangas Public Market	Poblacion, San Juan, Batangas
San Luis	San Luis Public Market	Poblacion, San Luis, Batangas
San Nicolas	Pamilihang Bayan ng San Nicolas	Jose P. Laurel St. Poblacion, San Nicolas, Batangas
San Pascual	San Pascual Public Market	Poblacion, San Pascual, Batangas
	Sambat Flea Market	Sambat, San Pascual, Batangas
	Crossroad Mini Market	Poblacion, San Pascual, Batangas
Sta. Teresita	Tawilisan Public Market	Bihis Sta. Teresita Batangas

Data Source: 34 Local Government Units

4.2.2.Top 50 Company Real Estate Taxpayers

Real Property Tax (RPT) is a yearly tax levied on a real estate by the government. The legal basis of the real property tax is found in the Title II of the Local Government Code, Republic Act (R.A) No. 7160.

The RPT for any year shall accrue on the first day of January and from that date it shall constitute a lien on the property which shall be superior to any other lien, mortgage, or encumbrance of any kind whatever, and shall be extinguished only upon payment of the delinquent tax. RPT is computed at 2% of the assessed value of the property; 1% of which goes to the Basic Tax and 1% to Special Education Fund. (SEF).

The Top 50 Top Real Estate Taxpayers are found in the two (2) cities and eight (8) municipalities of the Province. The first ten slots are dominated by establishments/companies located in the Municipalities of Calaca, Balayan, and Calatagan, and City of Batangas and Sto.Tomas. Ranking first is Southwest Luzon Power Generation Corporation located in the Municipalities of Balayan and Calaca with a total assessed value of Php 16,486,377.230 followed by South Luzon Thermal Energy Corporation in second (2nd) place with Php 8,966,307,970.00 and coming in third (3rd) is SEM-Calaca Power Corporation with Php 7,869,522,420.00 assessed value, both corporation is situated in Calaca.

Occupying the fourth to tenth place is (4th) First Natgas Power Corp. - Php 6,524,511,360.00, (5th) Pilipinas Shell Petroleum Corp. - Php 5,609,880,140.00, (6th) JG Summit Olefins Corp. - Php 4,223,516,000.00, (7th) First Gas Corp. - Php 3,900,980,860.00, (8th) Solar Philippines Calatagan Corporation - Php 3,611,154,080.00, (9th) Philippine Ports Authority (Asian Terminals Inc.) - Php 2,908,001,430.00, and (10th) Maibarara geothermal Inc. - 2,139,677,890.00.

Overall, included in the Top 50 Taxpayers (See Table 4.18) are companies located in 22 LGUs that include Batangas City (12 taxpayers); Sto. Tomas City (10 taxpayers); Municipalities of Calaca (8 taypayers); Balayan (4 taxpayers); Calatagan (3 taxpayers); Taysan (1 taxpayer); Mabini (2 taxpayers); San Pascual (6 taxpayers); Malvar (12 taxpayers); Ibaan (2 taxpayers); Bauan (2 taxpayers); Nasugbu (5 taxpayers); Laurel (3 taxpayers); Lemery (2 taxpayers); Padre Garcia (2 taxpayers); San Jose (1 taxpayer); Talisay (4 taxpayers); Taal (1 taxpayer); Rosario (3 taxpayers); Lian (1 taxpayer); Balete (1 taxpayer); and Tingloy (1 taxpayer).

Municipality of Calaca remains with the highest combined amount of Php 41,433,874,223.15 which is about 43.91% of the total combined assessed value of the 50 Top Real Estate Taxpayers in the Province. While Municipality of Malvar which has the most number of taxpayers has a combined amount of Php 7,448,476,713.79. This assessed values are computed on geographic basis only, wherein one taxpayer may be situated in one or more city/municipalities.

It may be noted that there are three (3) taxpayers that is located in multiple localities namely: National Power Corporation, Bank of the Philippine Islands and National Transmission Corporation.

Table 4.18: Top 50 Corporate Real Estate Taxpayers (Based on Assessed Value of Property), 2020

No	Declared Owner	Locations	Assessed Value
1	SOUTHWEST LUZON POWER GENERATION CORPORATION	Calaca and Balayan, Batangas	16,486,377,230.00
2	SOUTH LUZON THERMAL ENERGY CORPORATION	Calaca, Batangas	8,966,307,970.00
3	SEM-Calaca POWER CORPORATION	Calaca, Batangas	7,869,522,420.00
4	FIRST NAT GAS POWER CORP.	Batangas City	6,524,511,360.00
5	PILIPINAS SHELL PETROLEUM CORP.	Batangas City	5,609,880,140.00
6	JG SUMMIT OLEFINS CORP.	Batangas City	4,223,516,000.00
7	FIRST GAS POWER CORP.	Batangas City	3,900,980,860.00
8	SOLAR PHILIPPINES CALATAGAN CORPORATION	Calaca and Calatagan, Batangas	3,611,154,080.00
9	PHILIPPINE PORTS AUTHORITY (ASIAN TERMINALS INC.)	Batangas City	2,908,001,430.00
10	MAIBARARA GEOTHERMAL INC.	Santo Tomas City	2,139,677,890.00
11	PRIME MERIDIAN POWERGEN CORP.	Batangas City	2,041,396,890.00
12	FORTUNE CEMENT CORP.	Calaca and Taysan, Batangas	1,956,041,005.15
13	FGP CORP.	Batangas City	1,749,593,430.00
14	CHEVRON PHILIPPINES INC.	Mabini and San Pascual, Batangas	1,512,003,730.00
15	MARIWASA SIAM CERAMICS INC.	Santo Tomas City	1,434,385,360.00
16	IBEDEN PHILIPPINES INC.	Santo Tomas City	1,353,669,040.00
17	PHILIPPINE PORTS AUTHORITY (ATI BATANGAS INC.)	Batangas City	1,319,722,670.00
18	LIMA LAND INC	Malvar, Batangas	1,263,403,360.00
19	STEEL CORPORATION OF THE PHILIPPINES	Balayan and Calaca, Batangas	1,147,657,440.00
20	BATANGAS LAND CO. INC. CALTEX REFINERY INC.	San Pascual, Batangas	1,139,991,300.00
21	PEPSI CO;A PRODUCTS PHILIPPINES CORP.	Santo Tomas City	1,022,504,170.00
22	SCIENCE PARK OF THE PHILIPPINES, INC. (SPPI)	Malvar, Batangas	996,560,241.90
23	CARGILL JOY POULTRY MEATS PRODUCTION INC.	Santo Tomas City	954,866,540.00
24	NATIONAL TRANSMISSION CORPORATION	Calaca, Calatagan, Ibaan, Laurel, Lemery, Malvar, P. Garcia, San Jose, San Pascual and Talisay, Batangas	888,232,100.00
25	SAKAMOTO ORIENT CHEMICALS CORPORATION	San Pascual, Batangas	888,186,430.00
26	CENTRAL AZUCARERA DON PEDRO INC,	Nasugbu, Batangas	837,939,746.35
27	NIPPON PREMIUM BAKERY INC.	Santo Tomas City	665,036,940.00
28	KINPO ELECTRONICS (PHILIPPINES) INC.	Santo Tomas City	624,405,220.00
29	KOYO MANUFACTURING PHILS., INC.	Malvar, Batangas	584,149,353.89
30	SAN MIGUEL MILLS	Batangas City	560,735,930.00
31	PREMIER SOUTHERN CORP.	Batangas City	546,396,520.00
32	CENTRAL AZUCARERA DON PEDRO,	Nasugbu, Batangas	531,615,508.55
33	SCIENCE PARK OF THE PHILIPPINES, INC.	Malvar, Batangas	517,229,690.00
34	NATIONAL POWER CORPORATION	Balayan, Bauan, Calaca, Ibaan, Laurel, Malvar, P. Garcia, Rosario, San Pascual, Taal, Talisay and Tingloy, Batangas	508,581,978.00
35	BANK OF THE PHILIPPINES ISLANDS (BPI)	Malvar, Batangas	503,251,360.00
36	JG SUMMIT PETROCHEMICALS CORP.	Batangas City	486,137,390.00
37	PUYAT STEEL CORPORATION	Rosario, Batangas	485,257,030.00
38	GININTUAN AGRO-INDUSTRIAL CORPORATION	Malvar, Batangas	478,404,830.00
39	YAMAHA MOTORS PHILIPPINES, INC.	Malvar, Batangas	463,314,280.00
40	PHIL. LONG DISTANCE TELEPHONE CO.	Nasugbu, Batangas	460,861,740.00
41	SUNJIN PHILIPPINES CORPORATION	Malvar, Batangas	460,229,810.00
42	BELLE CORPORATION	Talisay, Batangas	460,153,912.27
43	AMCOR FLEXIBLES PHILIPPINES CORP.	Santo Tomas City	443,865,710.00
44	CENTRAL AZUCARERA DON PEDRO INC.	Nasugbu, Batangas	437,816,265.24
45	AP RENEWABLES INC (APRI)	Santo Tomas City	437,507,490.00
46	SAN MIGUEL MILLS, INC.	Mabini, Batangas	418,781,170.00
47	BANK OF THE PHILIPPINE ISLANDS	Balayan, Balete, Calatagan,Laurel, Lemery, Lian, Malvar, Nasugbu, Rosario and Talisay, Batangas	418,182,750.00
48	COCOCHEM INC.	Bauan and San Pascual, Batangas	383,970,740.00
49	DYSON ELECTRONICS PTE LTD PHILIPPINES BRANCH	Santo Tomas City	371,881,570.00
50	SOUTH LUZON EXPRESSWAY EXT. PROJECT	Malvar, Batangas	366,936,960.00

Data Source: Treasury Office (Provincial,Batangas City,Lipa City, Tanauan Cityand Sto.Tomas City

4.2.3 Top Establishments per Gross Revenue 2020

Business establishments/companies are also categorized/classified as to sub-industries. These are mining and quarrying, construction (private companies) manufacturing, wholesale trade, retail trade, repair and sale of motor vehicles, motorcycles, personal and household goods, telecommunication companies, storage companies, banks, non-banks, insurance, auxiliary companies, renting and real estate.

As per Table 4.19 derived and generated from the Top 50 Establishments as to Sub-Industry and as to the Total Gross Revenue of the 34 LGUs of the Province, Honda Philippines located in Tanauan City dominated the ranks coming in first place having the biggest Gross Receipts in 2020 with about Php 33.203B. It is followed by South Pacific, Inc. with Php 12.169B. As to Sub-Industry, Honda Philippines is under the classification of Manufacture of Transport Equipment while South Pacific, Inc. is under the classification of Storage Companies.

With the combined gross revenue for these fifty (50) establishments amounting Php 126,113,330,454.52. The top five (5) sub-industries with high gross receipts for 2020 are 1) Manufacture and transport equipment representing 26.33% share or Php 33,203,489,260.38; 2) Storage Companies 16.19% share or Php 20,412,588,294.59; 3) Other Manufacturing 13.10% share or Php 16,514,973,115.34; 4) Manufacture of food products 8.59% share or Php 10,839,268,297.92 and; 5) Manufacture of coke and refined petroleum product with 6.62% share amounting to Php 8,349,962,018.62.

The top retail trade businesses are located in the three (3) cities of the province, Tanauan City with ten (10), while the cities of Batangas and Lipa have seven (7) each. The City of Sto.Tomas has three (3) which is lower than the number of establishments of the municipality of Calaca with five (5). Meanwhile, the other LGUs who have made it to the list of top 50 are: San Jose (3), Mabini (3), Malvar (2), with one (1) each are Bauan, Ibaan, Lemery, MataasnaKahoy, Nasugbu, Padre Garcia, Rosario, San Juan, Talisay, and Taysan.

But among the LGUs in the Province, Batangas City has half of number of establishments in the top 10, namely: Unioil Petroleum Philippines, Inc., JG Summit Olefins Corporation, Pilipinas Shell Petroleum Corporation, Toyota Batangas City Incorporated, and PMFTC Inc.

Combined gross receipts of establishments in the Top 50 list from the four (4) component cities of Batangas, Lipa, Sto. Tomas and Tanauan totaled to Php 79,331,031,330.95. This accounts for about 62.90% gross revenue share for establishments. Tanauan City with Php 45,401,109,066.57 or 36%, Batangas City with Php 26,381,246,951.54 or 20.92%, Lipa City with Php 4,962,531,291.07 or 3.93% and Php 2,586,114,021.77 or 2.05% for Sto. Tomas City.

Table 4.19: Top 50 Establishments - Per Sub-Industry Classification and Per Gross Revenue 2021

Rank	Company Name	City/ Municipality	Sub-Industry Classification	2020 Total Gross Revenue
1	HONDA Philippines, Inc.	Tanauan City	Manufacture of transport equipment	PHP 33,203,489,260.38
2	South Pacific, Inc.	Calaca, Batangas	Storage Companies	PHP 12,168,620,769.66
3	Unioil Petroleum Philippines, Inc.	Batangas City	Storage Companies	PHP 7,812,521,867.00
4	Foodsphere, Inc.	Malvar, Batangas	Other Manufacturing	PHP 7,605,883,939.00
5	San Miguel Mills, Inc.	Mabini, Batangas	Manufacture of food products	PHP 4,730,584,057.53
6	JG Summit Olefins Corporation	Batangas City	Manufacture of coke and refined petroleum products	PHP 4,237,027,610.00
7	Pilipinas Shell Petroleum Corporation	Batangas City	Manufacture of coke and refined petroleum products	PHP 4,112,934,408.62
8	Central Azucarera Don Pedro, Inc.	Nasugbu, Batangas	Other Manufacturing	PHP 3,491,811,373.00
9	Toyota Batangas City Incorporated	Batangas City	Sale and Repair of Motor Vehicles, Tricycles	PHP 3,281,161,458.00
10	PMFTC INC.	Batangas City	Manufacture of tobacco products	PHP 3,149,850,640.51
11	HONDA Philippines, Inc.	Tanauan City	Wholesale Trade	PHP 3,010,330,393.01
12	Republic Cement & Building Materials, Inc.	Taysan, Batangas	Other Manufacturing	PHP 2,991,407,785.60
13	PMFTC INC.	Tanauan City	Manufacture of tobacco products	PHP 2,520,943,711.88
14	First Philec, Inc.	Tanauan City	Manufacture of electrical equipment	PHP 2,351,708,575.55
15	San Miguel Mills, Inc.	Batangas City	Manufacture of food products	PHP 2,190,324,371.12
16	Michcel Corporation	Padre Garcia, Bats.	Sale and Repair of Motor Vehicles, Tricycles	PHP 1,879,977,272.73
17	Michcel Corporation	Talisay, Bats.	Sale and Repair of Motor Vehicles, Tricycles	PHP 1,879,977,272.73
18	San Miguel Brewery, Inc.	Batangas City	Manufacture of beverages	PHP 1,597,426,596.29
19	C-Joy Poultry Meats Production, Inc.	Sto. Tomas City	Manufacture of food products	PHP 1,502,746,570.00
20	Mary Mediatrix Medical Center	Lipa City	Private Hospitals	PHP 1,403,815,324.00
21	MSTM Foundation Specialist Inc.	San Juan, Batangas	Manufacture of other non-metallic mineral products	PHP 1,375,292,462.00
22	HOLCIM Philippines, Inc.	Calaca, Batangas	Manufacture of other non-metallic mineral products	PHP 1,333,191,436.00
23	San Miguel Foods, Inc. (Feeds)	Tanauan City	Other Manufacturing	PHP 1,327,130,075.15
24	Philippine Prosperity Chemical Inc.	Calaca, Batangas	Wholesale Trade	PHP 1,271,113,962.69
25	Puyat Steel Corporation	Rosario, Batangas	Manufacture of fabricated metal products, except machinery & equipment	PHP 1,197,451,353.36
26	SUPERVALUE, Inc.	Lipa City	Retail Trade	PHP 1,133,327,117.29
27	Uni-President (Phil. Corp.)	Tanauan City	Manufacture of food products	PHP 833,862,082.81
28	KUBOTA Philippines, Inc.	Ibaan, Batangas	Wholesale Trade	PHP 725,601,737.57
29	INGASCO	San Jose, Batangas	Manufacture of chemical and chemical products	PHP 715,980,360.00
30	Science Park of the Phils., Inc.	Malvar, Batangas	Real Estate Companies	PHP 642,697,421.00
31	Easy Bio Philippines Inc. (I Feed Phils. Inc.)	San Jose, Batangas	Other Manufacturing	PHP 640,803,748.59
32	Kerry Manufacturing (Philippines), Inc.	Tanauan City	Manufacture of food products	PHP 640,071,538.20
33	Presnet Cellphone Shop	Bauan, Batangas	Retail Trade	PHP 598,583,669.00
34	CKU Steel Corporation	Mabini, Batangas	Manufacture of basic metals	PHP 580,352,603.78
35	PEPSI Cola Products Philippines, Inc.	Sto. Tomas City	Manufacture of food products	PHP 578,309,101.00
36	Toyota Lipa Batangas, Inc.	Lipa City	Sale and Repair of Motor Vehicles, Tricycles	PHP 558,246,742.81
37	JT International (Philippines) Inc.	Lipa City	Wholesale Trade	PHP 564,451,478.09
38	Steel Asia Manufacturing Corporation	Calaca, Batangas	Manufacture of basic metals	PHP 560,317,650.00
39	UAM Philippines, Inc	Tanauan City	Manufacture of basic metals	PHP 530,345,654.71
40	LHK Creation Inc.	Mnkahoy, Batangas	Manufacture of food products	PHP 519,668,823.00
41	Crestec Philippines, Inc.	Sto. Tomas City	Other Services	PHP 505,088,350.77
42	Baldo Const. and Development Corp.	Mabini, Batangas	Construction	PHP 500,000,000.00
43	Daniel O. Mercado Medical Center	Tanauan City	Private Hospitals	PHP 499,454,482.42
44	Taiwan Fructose (Philippines) Inc.	Tanauan City	Manufacture of food products	PHP 483,773,292.46
45	Lemery Citimart Sales (Supermarket)	Lemery, Batangas	Wholesale Trade	PHP 483,599,574.40
46	Everlast Agro Industrial Corp.	San Jose, Batangas	Other Manufacturing	PHP 457,936,194.00
47	Suy Sing Commercial Corporation	Lipa City	Wholesale Trade	PHP 441,485,758.55
48	Royal South Marketing Corp.	Lipa City	Wholesale Trade	PHP 435,021,119.33
49	Calaca Harvest Terminal, Inc.	Calaca, Batangas	Storage Companies	PHP 431,445,657.93
50	Lipa Medix Medical Center	Lipa City	Private Hospitals	PHP 426,183,751.00
			Grand Total:	**PHP 126,113,330,454.52**

Data Source: GRDP 2021

4.2.4 Banks

Banks refer to entities engaged in the lending of funds obtained in the form of deposits. A universal bank has the same powers as a commercial bank with the following additional powers: the powers of an investment house as provided in existing laws and the power to invest in non-allied enterprises.

A commercial bank, in addition to having the powers of a thrift bank, has the power to accept drafts and issue letters of credit; discount and negotiate promissory notes, drafts, bills of exchange, and other evidences of debt; accept or create demand deposits; receive other types of deposits and deposit substitutes; buy and sell foreign exchange and gold or silver bullion; acquire marketable bonds and other debt securities; and extend credit.

A thrift bank has the power to accept savings and time deposits, act as a correspondent with other financial institutions and as a collection agent for government entities, issue mortgages, engage in real estate transactions and extend credit. In addition, thrift banks may also maintain checking accounts, act as a depository for government entities and local government units and engage in quasi-banking and money market operations subject to the approval of the Bangko Sentral. As per banker Derrick Low, thrift banks are generally smaller in scale than universal and commercial banks.

Rural and cooperative banks are the more popular type of banks in rural communities. Their role is to promote and expand the rural economy in an orderly and effective manner by providing the people in the rural communities with basic financial services. Rural and cooperative banks help farmers through the stages of production, from buying seedlings to marketing of their produce. Rural banks and cooperative banks are differentiated from each other by ownership. While rural banks are privately owned and managed, cooperative banks are organized/owned by cooperatives or federation of cooperatives.

A rural bank has the power to provide adequate credit facilities to farmers and merchants or to cooperatives of such farmers and merchants and, in general, to the people of the rural communities of which the rural bank operates in.

Based on the report submitted by the 34 LGUs, which are consolidated in Table 4.20, there is a total of 443 banks all over the Province. With this number, 177 or 39.95% are classified as Universal / Commercial, 129 or 29.12% are Thrift Banks and 137 or 30.78% are Rural / Cooperative.

Amongst all the LGUs, the 4 established cities has the most number of banks. Lipa City, has the highest count with a total of 85 or 19.19%, followed by Batangas City with 66 or 14.90%, then Sto.Tomas City with 30 or 6.77%, and Tanauan City with 29 or 6.55%.

Table 4.20: Inventory of Banks as of December 2020

City/ Municipality	Classification of Banks			
	Universal/ Commercial	Thrift/ Savings	Rural/ Cooperative	Total
Agoncillo	0	1	3	4
Alitagtag	0	0	1	1
Balayan	10	7	2	19
Balete	0	1	1	2
Batangas City	36	20	10	66
Bauan	7	7	7	21
Calaca	0	2	13	15
Calatagan	0	2	3	5
Cuenca	2	1	2	5
Ibaan	0	1	5	6
Laurel	0	1	1	2
Lemery	14	8	8	30
Lian	0	0	1	1
Lipa City	48	25	12	85
Lobo	0	0	5	5
Mabini	2	2	1	5
Malvar	4	0	4	8
Mataasnakahoy	6	3	3	12
Nasugbu	9	6	6	21
Padre Garcia	2	2	4	8
Rosario	7	5	7	19
San Jose	2	2	5	9
San Juan	4	2	5	11
San Luis	0	0	2	2
San Nicolas	0	0	0	0
San Pascual	0	1	2	3
Santa Teresita	0	0	1	1
Sto. Tomas City	9	16	5	30
Taal	0	2	1	3
Talisay	1	0	2	3
Tanauan City	14	12	3	29
Taysan	0	0	10	10
Tingloy	0	0	1	1
Tuy	0	0	1	1
GRAND TOTAL	**177**	**129**	**137**	**443**

Data Source: 34 Local Government Units

4.2.5 Cooperatives

A cooperative is an autonomous and duly registered association of persons, with a common bond of interest, who have voluntarily joined together to achieve their social, economic, and cultural needs and aspirations by making equitable contributions to the capital required, patronizing their products and services and accepting a fair share of the risks and benefits of the undertaking in accordance with universally accepted cooperative principles.

As of December 2020, Batangas Province has four hundred ninety-six (496) cooperatives. The Cities of Lipa, Batangas and Tanauan have the largest number with 74, 67 and 48, respectively. "Others" include 1 Agrarian Reform, 1 Cooperative Bank, and 1 Dairy in Alitagtag, Batangas City, and Ibaan, respectively.

Table 4.21: Types and Number of Cooperatives - Batangas Province: 2020

MUNICIPALITY NAME	Agri.	Consumers	Credit	Federation-Secondary	Labor Service	Marketing	Multi-purpose	Producers	Service	Transport	Union-Secondary	Water Service	Workers	Others	Total
Agoncillo	0	0	0	0	0	0	5	0	0	0	0	0	0		**5**
Alitagtag	1	0	1	0	0	0	1	0	0	0	0	0	0		**3**
Balayan	0	3	3	0	0	0	12	2	0	1	0	0	0		**21**
Balete	1	0	4	0	0	0	6	0	1	0	0	0	0		**12**
Batangas City	0	2	9	2	1	1	45	0	1	3	2	0	0	1	**67**
Bauan	2	3	1	0	0	0	9	0	1	0	0	2	0		**18**
Calaca	0	1	1	0	0	0	6	1	0	0	0	0	0		**9**
Calatagan	0	0	2	0	0	0	5	0	0	0	0	0	0		**7**
Cuenca	0	1	2	0	0	0	7	1	2	0	0	0	0		**13**
Ibaan	1	0	2	0	0	1	10	1	0	3	0	0	0	1	**19**
Laurel	0	1	1	0	0	0	3	0	1	0	0	0	0		**6**
Lemery	1	1	1	0	0	1	3	0	0	0	0	0	0		**7**
Lian	0	0	0	0	0	0	3	0	0	0	0	0	0		**3**
Lipa City	3	9	14	0	0	4	34	0	2	5	0	0	3		**74**
Lobo	0	1	1	0	0	0	9	0	0	1	0	0	0		**12**
Mabini	1	1	0	0	0	0	3	0	0	1	0	0	0		**6**
Malvar	1	2	5	0	1	1	4	0	0	1	0	0	0		**15**
MataasnaKahoy	0	1	2	0	0	1	3	1	0	1	0	0	0		**9**
Nasugbu	1	0	3	0	1	0	14	0	3	1	0	0	0	1	**24**
Padre Garcia	2	1	3	0	0	0	3	0	2	0	0	0	0		**11**
Rosario	2	0	2	0	0	0	17	0	2	1	0	0	0		**24**
San Jose	1	0	2	0	0	1	6	2	0	2	0	0	0		**14**
San Juan	4	0	2	0	0	0	8	1	1	1	0	0	0		**17**
San Luis	0	0	0	0	0	0	1	0	0	0	0	0	0		**1**
San Pascual	0	1	1	0	0	0	1	0	0	0	0	0	0		**3**
Santa Teresita	0	0	0	0	0	0	1	0	0	0	0	0	0		**1**
Santo Tomas City	1	5	0	0	0	0	10	2	1	1	0	0	1		**21**
Taal	0	1	2	0	0	0	1	0	0	0	0	0	0		**4**
Talisay	1	2	0	0	0	0	1	1	0	0	0	0	0		**5**
Tanauan City	3	2	7	0	0	8	21	2	3	1	0	1	0		**48**
Taysan	1	0	0	0	0	0	8	0	0	0	0	0	0		**9**
Tingloy	0	0	0	0	0	0	1	0	0	0	0	0	0		**1**
Tuy	1	1	0	0	0	0	4	0	0	1	0	0	0		**7**
Grand Total	**28**	**39**	**71**	**2**	**3**	**18**	**265**	**14**	**20**	**24**	**2**	**3**	**4**	**3**	**496**

Data Source: Provincial Cooperative Livelihood and Entrepreneurial Development Office (PCLEDO)

4.3 Industry

4.3.1 Economic Zones and Industrial Parks

Economic Zones or Ecozones refer to selected areas with highly developed or which have the potential to be developed into agro-industrial, industrial, tourist, recreational, commercial, banking, investment and financial centers whose metes and bounds are fixed or delimited by Presidential Proclamations.

The metes and bounds of each Ecozone are delineated and more particularly described in a proclamation issued by the President of the Philippines, upon the recommendation of the Philippine Economic Zone Authority (PEZA).

An Ecozone may contain any or all of the following: Industrial Estates (IEs), Export Processing Zones (EPZs), Free Trade Zones, and Tourist/Recreational Centers.

An industrial park is an area zoned and planned for the purpose of industrial development.

Tables 4.22, 4.23 and 4.24 show that Batangas Province has a total of 47 economic zones and industrial parks; classified as follows: fourteen (14) are operating, five (5) are proclaimed and twenty-eight (28) are special economic zones whose development is in progress and are not yet proclaimed.

Of the fourteen (14) Operating Economic zones and Industrial Parks, it is classified that there is one (1) operating medical tourism zones- Saint Francis Cabrini Tourism Park in Nasugbu, one (1) operating tourism economic zone- Batangas Racing Circuit Tourism Estate, two (2) Information Technology center - Fiesta World Mall IT Center & SM City Lipa, and ten (10) operating Morong Special Economic Zone namely; AG&P Special Economic Zone, Cocochem Agro-Industrial Park, First Industrial Township - SEZ, First Philippine Industrial Park, First Philippine Industrial Park II, Keppel Philippines Marine Special Economic Zone, Light Industry & Science Park IV, Lima Technology Center, and Tabangao Special Economic Zone.

Proclaimed Economic Zones and Industrial Parks includes the Batangas State University (BatStateU) which is the Philippines' first-ever Knowledge, Innovation, Science and Technology (KIST) Park, which was officially launched online on July 20, 2020. First Batangas Industrial Park, RLC Special Economic Zone, and South Coast Ecozone are the three (3) proclaimed Special economic zones from Bauan, Batangas City, and Nasugbu, respectively. Tigerland Agro-Industrial Economic Zone from Batangas City is the only registered Economic Zone with an Agro-Industrial classification from the Province of Batangas.

Table 4.22: Operating Economic Zones and Industrial Parks: 2020

NO.	NAME OF ECOZONE	LOCATION	DEVELOPER / OPERATOR	TOTAL AREA (In SqM.	GROSS FLOOR AREA (In SQ. M.)	REGION	NATURE
1	AG&P Special Economic Zone	Barangays San Roque, San Andres, Manghinao, & Sto. Domingo, Bauan, Batangas	AG&P Estate Management, Inc.	623,371.00	-	R-IV	MSEZ
2	Batangas Racing Circuit Tourism Estate	Maligaya, Rosario, Batangas	Brystol Realty Development Corp.	272,109.00	-	R-IV	TEZ
3	Cocochem Agro-Industrial Park	San Antonio, San Pascual, Batangas	Cocochem Agro-Industrial Park, Inc.	420,000.00	-	R-IV	MSEZ
4	Fiesta World Mall IT Center	Barrio Maraouy, Lipa City, Batangas	Fiesta World Mall Corporation	82,386.00	37,564.00	R-IV	IT Center
5	First Industrial Township - SEZ	Trapiche, Pagaspas & Baloc-Baloc, Tanauan, Batangas	First Industrial Township, Inc.	666,300.00	-	R-IV	MSEZ
6	First Philippine Industrial Park	Barangays Ulango and Laurel, Tanauan City and Sta. Anastacia, Sto. Tomas City, Batangas	First Philippine Industrial Park Inc.	3,438,452.00	-	R-IV	MSEZ
7	First Philippine Industrial Park II	Barangays Sta. Anastacia and San Rafael, Sto. Tomas City, Batangas	First Philippine Industrial Park Inc.	1,028,126.00	-	R-IV	MSEZ
8	Keppel Philippines Marine Special Economic Zone	Barangay San Miguel, Bauan, Batangas	Goodsoil Marine Realty, Inc.	229,186.00	-	R-IV	MSEZ
9	Light Industry & Science Park III	San Rafael & Sta Anastacia, Sto. Tomas City, Batangas	RFM-Science Park of the Phils. Inc.	1,347,951.00	-	R-IV	MSEZ
10	Light Industry & Science Park IV	Barangays Bulihan, Luta Sur, Luta Norte, San Fernando, San Pedro West, and Poblacion, Malvar, Batangas	Science Park of the Philippines, Inc.	1,118,386.00	-	R-IV	MSEZ
11	Lima Technology Center	San Lucas, Bugtong na Pulo & Inosluban, Lipa City and Santiago & Payapa, Malvar, Batangas	Lima Land Inc.	4,858,400.00	-	R-IV	MSEZ
12	Saint Frances Cabrini Medical Tourism Park	Maharlika Highway, Sto. Tomas City, Batangas	Saint Cabrini Medical Center, Inc.	12,240.00	-	R-IV	MTP
13	SM City Lipa	Ayala High, Lipa City, Batangas	Premier Southern Corporation	103,200.00	69,814.43	R-IV	IT Center
14	Tabangao Special Economic Zone	Tabangao, Batangas	Tabangao Realty, Inc.	860,000.00	-	R-IV	MSEZ

Data Source: Philippine Economic Zone Authority, As of December 31, 2020

Table 4.23: Proclaimed Economic Zones and Industrial Parks: 2020

NO.	NAME OF ECOZONE	LOCATION	DEVELOPER / OPERATOR	TOTAL AREA (In SqM.	GROSS FLOOR AREA (In SQ. M.)	REGION	NATURE
1	BatStateU Knowledge, Innovation and Science Technology Park	Barangay Alangilan, Batangas City, Batangas	Batangas State University	27,254.00	-	R-IV	IT Park
2	First Batangas Industrial Park	Mang-hinao & Balayong, Bauan, Batangas	First Batangas Industrial Inc.	538,138.00	-	R-IV	MSEZ
3	RLC Special Economic Zone	Simlong, Batangas City, Batangas	Robinsons Realty & Mgt. Corp.	874,330.00	-	R-IV	MSEZ
4	South Coast Ecozone	Papaya, Nasugbu, Batangas	Manila South Coast Development Corp.	1,955,431.00	-	R-IV	MSEZ
5	Tigerland Agro-Industrial Economic Zone	Barangay Mabacong, Batangas City	Tigerland Realty Corporation	165,600.00	-	R-IV	AIEZ

Data Source: Philippine Economic Zone Authority, As of December 31, 2020

Table 4.24: Development in Progress - Economic Zones and Industrial Parks: 2020

NO.	NAME OF ECOZONE	LOCATION	DEVELOPER / OPERATOR	TOTAL AREA (In SqM.	GROSS FLOOR AREA (In SQ. M.)	REGION	NATURE
1	8G Special Economic Zone	Barangay Inosloban, Lipa City, Batangas	8 Gifts, Inc.	75,000.00	-	R-IV	MSEZ
2	AG&P Special Economic Zone II	Phase II, Port of Batangas, Batangas City	Atlantic Gulf & Pacific Co. of Manila, Inc.	460,025.21	-	R-IV	MSEZ
3	Batangan Information Technology Center	Kumintang Ibaba, Batangas City	Batangan Plaza, Inc.	5,355.00	5,791.97	R-IV	IT Center
4	Batangas I.T. Park	Barangay Poblacion III, Tanauan City, Batangas	EMS Property Holdings, Inc.	15,903.00	-	R-IV	IT Park
5	Calaca-Balayan Industrial Park	Municipalities of Calaca and Balayan, Batangas	SEM-CAL Industrial Park Developers, Inc.	531,900.00	-	R-IV	MSEZ
6	Camp David of the East	Barangay Kayrilaw, Nasugbu, Batangas	Camp David Investment and Holdings, Inc.	520,000.00	-	R-IV	MTP
7	Club Filipiniana Resort	Kilometer 69, Tagaytay National Highway, Dayap Itaas, Laurel, Batangas	Filipiniana Tagaytay Properties, Inc.	199,415.00	-	R-IV	TEZ
8	CVG Light Industrial Park	San Pioquinto, Malvar, Batangas	Goram Development Corporation	599,294.00	-	R-IV	MSEZ
9	DIPC Tourism Economic Zone	Barangay San Pioquinto, Malvar, Batangas, and Barangay Darasa, Tanauan City, Batangas	Dolores Industrial Park Corporation	449,500.00	-	R-IV	TEZ
10	Filinvest Technology Park Tanauan	Pantay Matanda, Tanauan City, Batangas	Filinvest Land Inc.	1,007,300.00	-	R-IV	MSEZ
11	First Batangas Industrial Park II	Mang-hinao I & Balayong, Bauan, Batangas	First Batangas Industrial Park Inc.	503,156.00	-	R-IV	MSEZ
12	First Philippine Industrial Park III-Special Economic Zone	Barangays Patay Bata and Pantay Matanda, Tanauan City, Batangas	First Philippine Industrial Park, Inc.	350,335.00	-	R-IV	MSEZ
13	Geterson Agro-Industrial Economic Zone	Sta. Anastacia, Sto. Tomas City, Batangas	Geterson Realty Development Corporation	57,146.00	-	R-IV	AIEZ
14	Geterson Ecozone	Sta. Anastacia, Sto. Tomas City, Batangas	Geterson Realty Development Corporation	13,401.00	-	R-IV	IT Park
15	Guoco Industrial Estate	San Pedro & San Pablo, Sto Tomas City, Batangas	Guoco Property Devt. Inc.	324,252.00	-	R-IV	MSEZ
16	Harbour Town	Calayo, Nasugbu, Batangas	Fil-Estate Land, Inc.	1,914,000.00	-	R-IV	MSEZ
17	Ilijan Economic Zone	Barangays Ilijan and Dela Paz, Batangas City	Ilijan Primeline Holdings, Inc.	733,342.00	-	R-IV	MSEZ
18	NUCITI Central	Barangay 13, P. Burgos St., Batangas City, Batangas	Nuciti Central Properties & Development Corporation	6,026.00	19,099.05	R-IV	IT Center
19	Nusselt Agro-Industrial Ecozone	Barangay Calansayan, San Jose, Batangas	Nusselt Industries Corporation	75,131.00	-	R-IV	AIEZ
20	Rancho Montana Ecozone	Luyos, Sulpoc and Suplang, Tanauan City, Batangas	Rancho Montana Inc.	9,000,000.00	-	R-IV	MSEZ
21	Regional Food Terminal	Sta. Rita Aplaya, Batangas City	Provincial Government of Batangas	290,000.00	-	R-IV	AIEZ
22	Richmore Information Technology Center	Calicanto, Batangas City	Richmore Realty and Development Corporation	18,298.00	17,000.00	R-IV	IT Center
23	Sol Terra Tourism Economic Zone	Nasugbu, Batangas	Sol Terra Real Estate Corporation	316,000.00	-	R-IV	TEZ
24	Sto. Tomas Economic Zone	Barangays San Pablo and San Pedro, Sto. Tomas City, Batangas	Majestic Landscape Corporation	322,842.00	-	R-IV	MSEZ
25	Tagaytay Highlands - Tourism Economic Zone	Tanauan City, Batangas	Belle Corporation	2,720,000.00	-	R-IV	TEZ
26	The Forum at PonteFino Estates	Barangays Pallocon Silangan and Gulod Labac, Batangas City	Creative Hotel Concepts, Inc.	42,567.00	-	R-IV	IT Park
27	Transit Point Batangas City Grand Terminal	Batangas City Grand Terminal, Diversion Road, Brgy. Alangilan, Batangas City	Triple Deejay Realty Corporation	3,151.84	6,317.90	R-IV	IT Center
28	Xentromall Batangas	Diversion Road, Alangilan, Batangas City	XRC Mall Developer, Inc.	26,247.00	20,793.02	R-IV	IT Center

Data Source: Philippine Economic Zone Authority, As of December 31, 2020

4.4 Investments, Economic Indicators, Registered Firms and Capitalization of Registered New Business

In the CALABARZON Region, investments approved by the Board of Investments totaled to over Php184,147.39 Million which generated an estimate of 10,526 employment from a total of 72 projects in 2020. Highest recorded is for the Province of Batangas, with about 53.82% or Php99,102.80 M. Batangas also generated the highest number of estimated employment with 3,591 out of twenty-five (25) number of projects in the region.

Rizal Province's share came second with a total regional investments of about 19.19% or Php35,335.93 M. Though a big chunk of approved investments are placed in Rizal, it has generated the lowest number of estimated number of employmet generated totalling only 618 out of their nine (9) projects.

Ranking third was Quezon Province with 14.71% or Php27,089.45 M. Despite Quezon placing third, the province has the least number of projects with only four (4) which provied an estimate of 960 employment.

Table 4.25: 2020 Total BOI-Approved Investments and Estimated Employment Generation in Region IV-A (CALABARZON)

Provinces	Project Cost (Php M)	Estimated Employment Generated	No. of Projects
Batangas	99,102.80	3,591	25
Rizal	35,335.93	618	9
Quezon	27,089.45	960	4
Laguna	13,295.56	2,767	14
Cavite	9,323.65	2,580	20
TOTAL	**184,147.39**	**10,516**	**72**

Data Source: Board of Investments - May 2021

Said investments are distributed in the industry sub-sector enumerated in Table 4.26, where investments in Electricity, Gas, Steam and Air Conditioning Supply Industry Sub Sector accounts to the highest percentage share derived from only two (2) projects with 79.08% or Php78,368.42M projected cost and only 302 estimated number of employment generated. followed by Transportation and Storage with 13.05% or Php12,934.02M.

Despite lagging behind Transportation and Storage Industry Sub Sector in terms of amount of investment, Real Estate Activities has has the most number of projects among all the industry sub-sectors with twelve (12) which generated a high number employment totaling to 2,469 despite 3.22% share in investments that runs third with only Php3,193.79M.

Other industry sub-sectors included are Manufacturing with Php3,048.56M with 279 estimated employement generated from four (4) projects, and Human Health and Social Work activities which has the lowest recorded Project cost of 1,558.00M with an estimated 336 employment generated in one (1) project.

No investment for Agriculture, Forest and Fishing was recorded.

Table 4.26: 2020 BOI-Approved Investments and Estimated Employment Generation per industry in the Province of Batangas

Industry	Project Cost (Php M)	Estimated Employment Generated	No. of Projects
Electricity, gas, Steam and Air Conditioning	78,368.42	302	2
Transportation and Storage	12,934.02	205	6
Real Estate Activities	3,193.79	2,469	12
Manufacturing	3,048.56	279	4
Human Health and Social Work Activities	1,558.00	336	1
TOTAL	**99,102.80**	**3,591**	**25**

Data Source: Board of Investments - May 2021

While the Philippine Economic Zone Authority (PEZA) has registered fourteen (14) operating economic zones for 2020, the Regional Social and Economic Trends Data (RSET) 2021 reported a difference of 1 with 15 operating economic zones in the Province in 2020. It likewise disclosed that the number of operating enterprises increased by 22.75 % or 53 enterprises more from 2018 to 2020. However, approved investments have had an increase-decrease trend. From 2018 to 2019 there was an increase of 11.19% or Php 2,023.10M while from 2019 to 2020 there was a decrease of 31.76% which is equivalent to Php 6,091.37M. Although both Economic Indicators such as Exports and Employment has increased in 2018 to 2019 as seen in Table 4.27. Exports decrease by 2.14% of 127.61M in US$, while Employment increased by an average of 1.37% or 1,807 employees from 2019 to 2020.

Table 4.27: Economic Indicators, Approved Investments and Value of Exports, 2018-2020

Indicator	2018	2019	2020
Number of Operating Economic Zones	15	15	15
Number of Operating Enterprises	233	276	286
Approved Investments (in Php M)	17,158.494	19,181.599	13,090.225
Exports (in US$ M)	5,611.701	5,969.822	5,842.215
Employment (Average)	119,346.00	132,008.00	133,815.00

Data Source: Regional Social and Economic Trends 2021 / PSA IV-A

As per Table 4.28, Unfortunately when it comes to declared Approved New Bussines, 2021 RSET's latest data is only up to 2018. From which has a total of 11,775 approved new business permits. Likewise, no records were provided for the approved renewal of business permits for 2020 from the recent release of the 2021 RSET. Highest recorded approved new business permits were posted in Batangas City with (1,965); Malvar (1,458); Lipa City (1,189); Mabini (1,092) and; Sto.Tomas City (949)

When it comes to declared employees, 2021 RSET's latest data shows that in 2019 there is 39,141 generated number of employees for new business while 181,858 was recorded for business renewals.

The highest number of new employees are from Tanauan City, (17,368); followed by Batangas City, (4,822); Lipa City (3,288), Sto. Tomas City (2,916), Malvar (1,390) and Rosario (1,021).

On the other hand, the highest recorded employments for LGUs with approved business permit renewals are noted in the Cities of Lipa (42,835); Batangas (35,433); Sto.Tomas City (14,978), Tanauan (8,119); the Municipalities of San Jose (7,565), and; San Juan (7,381).

Table 4.28: Number of Approved Business Permits / and Declared Employees

CITY/ MUNICIPALITIES	Approved New Business (2018)	New Employees (2019)	Number of Employees Renewal (2019)
Agoncillo	344	154	280
Alitagtag	106	127	933
Balayan	-	440	4899
Balete	72	91	1077
Batangas City	1965	4822	35433
Bauan	495	818	6041
Calaca	183	615	4427
Calatagan	191	99	1524
Cuenca	195	373	1948
Ibaan	238	350	2597
Laurel	54	83	1296
Lemery	407	703	6296
Lian	80	56	1594
Lipa City	1189	3288	42835
Lobo	158	317	1690
Mabini	1092	300	1050
Malvar	1458	1390	5708
Mataasnakahoy	104	214	2618
Nasugbu	330	291	1207
Padre Garcia	118	270	2089
Rosario	373	1021	2547
San Jose	-	518	7565
San Juan	290	493	7381
San Luis	144	95	684
San Nicolas	-	5	62
San Pascual	199	308	5484
Sta. Teresita	0	-	226
Sto. Tomas City	949	2916	14978
Taal	165	362	1970
Talisay	-	265	3906
Tanauan City	603	17368	8119
Taysan	163	676	2027
Tingloy	-	9	535
Tuy	110	304	832

Data Source: Regional Social and Economic Trends 2021 / PSA IV-A

The succeeding table presents the number of business permits approved by most LGUs in the Province for 2020. Batangas City, has the most number of business permits approved with 1,715, followed by Bauan with 1,467, and Lipa City with 902.

However, although the Municipality of Bauan had the high number of approved business permits, the number of employment that they generated was only 7,279, comparatively lower than Lipa City with 42,733 and Batangas City with 37,482.

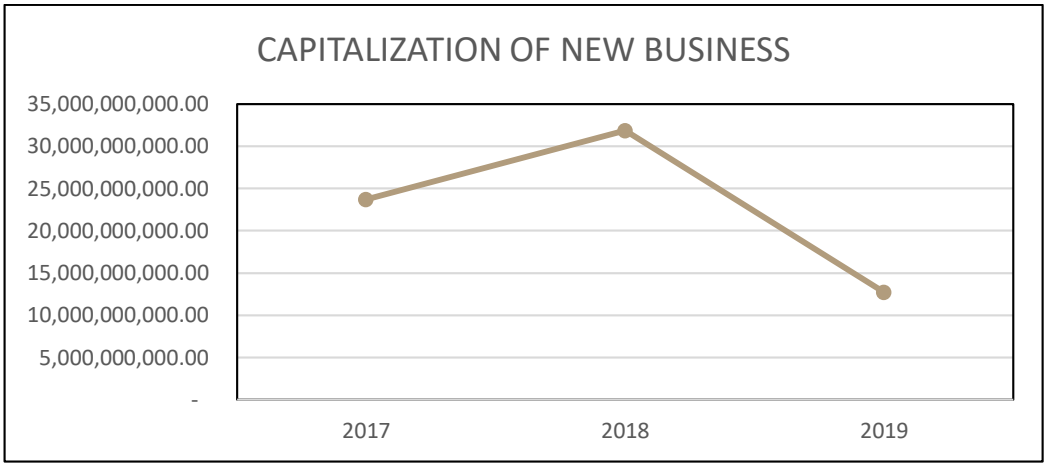
Table 4.29: Number of Approved Business Permits (New and Renewal) and Total Number of Declared Employees 2020 Business Process and Licensing Offices of LGUs

City/ Municipality	Number of Approved Business Permits		No. of Employees
	NEW	RENEWAL	
Agoncillo	90	162	NDA
Alitagtag	365	503	1,903
Balayan	96	1,182	4,721
Balete	35	146	518
Batangas City	1,715	9,262	37,482
Bauan	1,467	5,812	7,279
Calaca	222	1,050	6,395
Calatagan	142	586	1,920
Cuenca	273	1,023	2,279
Ibaan	270	1,743	2,986
Laurel	68	433	1,719
Lemery	193	1,687	6,309
Lian	288	492	276
Lipa City	902	7,937	42,733
Lobo	149	396	1,436
Mabini	96	745	3,951
Malvar	319	1,359	7,424
Mataasnakahoy	130	429	3,039
Nasugbu	306	1,176	4,759
Padre Garcia	528	2,473	3,001
Rosario	199	2,456	8,808
San Jose	340	2,452	7,565
San Juan	208	2,040	3,996
San Luis	76	451	1,005
San Nicolas	322	218	75
San Pascual	153	1,104	3,681
Santa Teresita	226	259	568
Sto. Tomas City	683	3,408	24,816
Taal	120	603	1,998
Talisay	197	619	2,495
Tanauan City	430	2,893	8,262
Taysan	254	885	2,458
Tingloy	8	132	140
Tuy	153	456	1,087

Data Source: 34 Local Government Units

An increase-decrease trend is noted when it comes capitalization of new businesses in the Province as shown on Figure 4.1. From an overall total of Php 23,695,943,996.08 in 2017, it soared to Php 31,855,702,437.79 in 2018, and plummeted to Php 12,709,020,423.00 in 2019.

Figure 4.1 New Business Capitalization Trends of Batangas Province 2017-2019



As presented in Figure 4.2, outstanding capitalization records were also noted in the Municipality of Malvar aside from the 4 Major cities of Batangas, Lipa, Sto. Tomas and Tanauan. The top three (3) with the highest new business capitalization for year 2019 are the Cities of Batangas, Tanauan and Lipa with Php 4,646,497,029.00, Php 1,491,053,941.00, and Php 1,224,120,951.00, respectively.

Please refer to Table 4.30: Total Capitalization of New Businesses 2017-2019 (Per Regional Socio-Economic Trends 2021)

Figure 4.2. Top Five Cities and Municipalities New Business Capitalization 2019

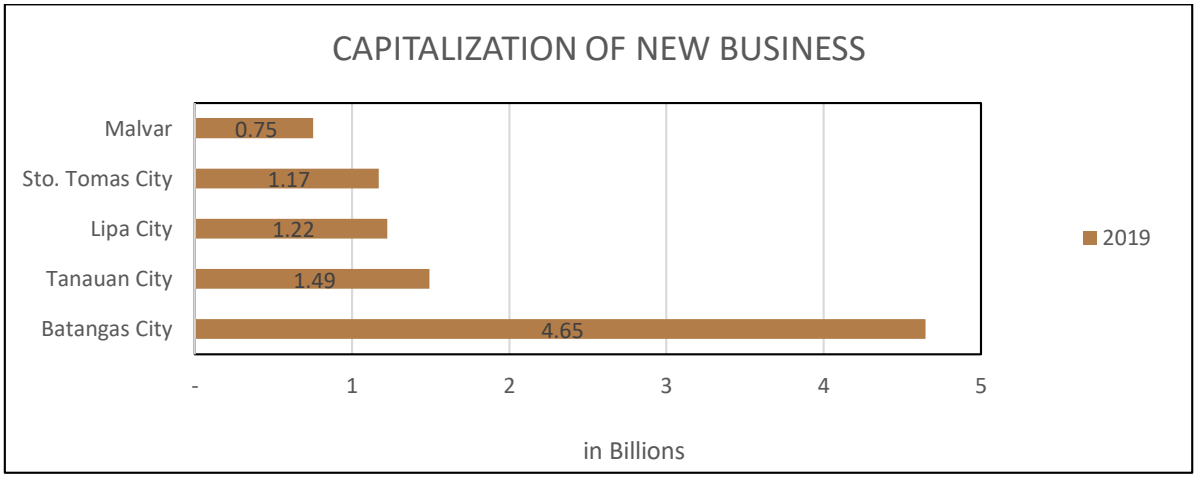


Table 4.30: Total Capitalization of New Businesses 2017-2019

CAPITALIZATION OF NEW BUSINESS BY CITIES/MUNICIPALITIES			
CITY/MUNICIPALITY	2017	2018	2019
Agoncillo	-	2,603,000.00	23,090,426.00
Alitagtag	31,488,600.00	17,303,280.00	13,173,800.00
Balayan	162,256,013.50	-	59,912,790.00
Balete	12,428,821.00	2,111,200,280.00	15,126,000.00
Batangas City	1,821,593,654.00	20,241,072,278.03	4,646,497,029.00
Bauan	127,988,851.20	146,958,859.65	140,622,009.00
Calaca	175,842,092.60	1,808,003,537.23	441,049,341.00
Calatagan	1,743,457,710.00	876,427,563.37	168,071,679.00
Cuenca	7,477,293.00	29,844,613.75	91,374,062.00
Ibaan	166,775,040.00	161,414,163.50	231,628,336.00
Laurel	779,000.00	779,000.00	24,990,000.00
Lemery	716,952,983.00	118,105,266.00	165,552,007.00
Lian	215,589,485.60	48,159,892.38	72,369,339.00
Lipa City	10,494,318,146.00	641,538,379.57	1,224,120,951.00
Lobo	2,860,000.00	24,130,500.00	77,718,000.00
Mabini	313,450,727.90	69,706,431.09	350,669,673.00
Malvar	510,896,643.00	515,690,072.37	751,419,001.00
Mataasnakahoy	32,627,893.99	20,056,675.29	42,605,524.00
Nasugbu	249,176,878.00	137,698,588.25	96,561,964.00
Padre Garcia	175,200,000.00	62,298,300.00	56,676,460.00
Rosario	90,027,528.00	26,740,045.00	42,130,645.00
San Jose	47,474,699.00	-	-
San Juan	950,670,156.00	1,284,406,201.21	261,648,528.00
San Luis	20,466,000.00	31,286,357.00	20,807,000.00
San Nicolas	4,934,150.00	-	2,039,250.00
San Pascual	95,216,366.05	90,505,900.95	50,733,091.00
Sta. Teresita	80,650.00	48,250.00	2,221,000.00
Sto. Tomas City	1,085,260,505.00	1,821,435,643.95	1,167,576,224.00
Taal	36,560,697.15	37,771,191.21	59,421,209.00
Talisay	211,381,570.00	-	27,391,909.00
Tanauan City	4,121,460,747.00	1,401,071,025.50	1,491,053,941.00
Taysan	43,784,779.96	67,057,152.28	583,501,524.00
Tingloy	-	-	-
Tuy	27,466,315.13	62,389,990.21	307,267,711.00

Data Source: Regional Social and Economic Trends 2021 / PSA IV-A

LGU-BPLO data for 2020 as reflected in Table 4.31 showed that Batangas City has the most number of newly approved business permits with 1,715 followed by Lipa City with 902 and Sto.Tomas City with 683.

With regards to the capitalization of new businesses Batangas City ranks 1st with Php 2,917,900,953.35; Municipality of Malvar at 2nd with Php1,173,064,107.14, Lipa City at 3rd with Php 966,302,109.26; Sto.Tomas City at 4th with Php 714,955,007.03 and Tanauan City at 5th with Php 357,586,497.42.

Table 4.31: Total Capitalization of New Businesses 2020

City/ Municipality	No. of Approved New Business Permits	Capitalization of New Business
Agoncillo	251	9,922,162.50
Alitagtag	365	30,227,895.71
Balayan	96	111,381,071.43
Balete	35	1,554,250.00
Batangas City	1,715	2,917,900,953.35
Bauan	359	87,162,011.72
Calaca	222	82,377,525.00
Calatagan	142	47,013,459.04
Cuenca	273	26,445,100.00
Ibaan	270	124,884,804.00
Laurel	68	7,295,000.00
Lemery	193	84,794,775.52
Lian	288	120,736,032.79
Lipa City	902	966,302,109.26
Lobo	545	11,566,000.00
Mabini	96	59,731,500.00
Malvar	319	1,173,064,107.14
Mataasnakahoy	130	42,880,524.09
Nasugbu	306	355,977,823.05
Padre Garcia	160	84,186,169.79
Rosario	199	32,041,640.00
San Jose	340	123,942,067.14
San Juan	208	77,749,025.00
San Luis	76	10,370,500.00
San Nicolas	322	3,795,000.00
San Pascual	153	163,653,318.19
Santa Teresita	226	265,000.00
Sto. Tomas City	683	714,955,007.03
Taal	120	32,422,167.62
Talisay	147	25,117,464.28
Tanauan City	430	357,586,497.42
Taysan	254	110,600,641.43
Tingloy	8	150,000.00
Tuy	153	21,258,071.43

Data Source: 34 Local Government Units

Shown in Table 4.32 is the gross sale amount of registered firms in the province for 2017-2019. The data shows and increasing trend with an 24.30% or Php89,780,371,697.04 increase form 2017-2019.

Batangas City has the most number of gross sales amounting to Php 198,718,363,677.00 which accounts to 43.28% of the total gross sales for 2019. It was followed by Cities of Lipa, Tanauan, and Sto.Tomas with Php 58,132,764,455.00, Php 55,756,685,281.00 and 20,351,968,796.00, respectively.

In the municipal level, Calaca has the highest gross sales amounting to Php 35,279,703,929.00 followed by Malvar with Php 10,542,469,260.00, Mabini with Php 10,295,134,979.00, and Nasugbu with Php 10,027,606,379.00.

Only the Municipality of Tingloy has no data provided for 3 consecutive years in the RSET.

Table 4.32: Gross Sales of Registered Firms: 2017-2019

CITIES/MUNICIPALITIES	GROSS SALES		
	2017	2018	2019
Agoncillo	-	326,570,895.00	2,823,362.00
Alitagtag	226,863,440.00	258,877,785.00	191,041,213.00
Balayan	2,567,647,833.00	-	4,385,474,445.00
Balete	55,861,173.76	91,762,014.16	127,019,640.00
Batangas City	153,761,000,000.00	156,093,243,360.75	198,718,363,667.00
Bauan	20,490,285,044.00	5,250,564,260.16	6,553,669,392.00
Calaca	24,009,273,419.00	24,169,874,609.44	35,279,703,929.00
Calatagan	283,117,863.00	4,896,501.70	1,597,906,189.00
Cuenca	648,208,293.00	383,868,742.80	351,124,253.00
Ibaan	1,246,982,939.00	1,432,866,396.19	2,755,230,915.00
Laurel	576,719,906.30	576,719,906.33	1,785,028,662.00
Lemery	3,007,508,992.00	4,249,358,689.00	5,742,433,790.00
Lian	776,023,010.10	961,210,888.07	990,914,917.00
Lipa City	55,438,154,077.00	61,474,309,619.47	58,132,764,455.00
Lobo	234,754,600.00	297,597,500.00	382,541,729.00
Mabini	9,249,381,304.00	9,798,050,513.58	10,295,134,979.00
Malvar	7,285,752,805.00	8,786,085,804.30	10,542,469,260.00
Mataasnakahoy	997,330,725.10	2,027,137,062.19	1,571,527,319.00
Nasugbu	6,816,765,991.00	9,813,199,802.26	10,027,606,379.00
Padre Garcia	2,858,066,617.00	4,424,493,433.45	2,681,332,303.00
Rosario	4,940,921,672.00	5,808,403,734.79	4,681,686,973.00
San Jose	4,393,787,988.00	-	8,952,868,734.00
San Juan	4,013,903,901.00	3,391,560,175.67	4,580,752,835.00
San Luis	243,244,530.40	390,912,099.76	4,611,401.00
San Nicolas	602,946,592.10	-	43,547,424.00
San Pascual	2,825,416,592.00	3,414,921,879.42	4,217,939,353.00
Sta. Teresita	-	-	210,778,873.00
Sto. Tomas City	14,511,443,601.00	18,793,796,290.38	20,351,968,796.00
Taal	582,745,464.00	367,745,849.20	501,619,956.00
Talisay	1,879,641,255.00	-	2,117,051,566.00
Tanauan City	40,133,355,053.00	48,701,405,153.45	55,756,685,281.00
Taysan	4,551,670,291.00	4,957,687,554.50	4,657,447,191.00
Tingloy	-	-	-
Tuy	204,075,355.20	327,794,859.95	1,002,152,843.00

Data Source: Regional Social and Economic Trends 2021 / PSA IV-A

4.5 Tourism

4.5.1 Tourism Attractions, Establishments and Facilities

The Province is a melting pot of different cultures and traditions. Its tourist destinations are loaded with lifetime opportunities to experience the natural splendor and rich heritage. Tourist destinations vary from sports and recreational facilities to historical and cultural sites, places imbedded with customs and tradition, food products and many more exquisite sceneries.

These are all present in the majority of LGUs in the province. Of the 2,195 registered tourism establishments presented in Table 4.33, there are 625 accommodation facilities, 97 natural attractions; 64 pilgrimage sites, 92 historical attractions, 581 restaurants, 352 industry, 253 leisure and wellness facilities, 101 sports and event facilities, and 30 other attractions are not among specified.

Table 4.34 presents the List of Tourism Establishments and their approximate distance or travel time from Provincial Capitol and Ninoy Aquino International Airport (NAIA) which is the main international gateway to the Philippines.

4.5.1.1 Nature

There is an abundance of natural and man-made scenic spots in the Province that offer recreation and nature activities that stimulate sensitivity to natural surroundings. Tourists can visit various mountains, falls, lakes and ponds, rivers and landscapes, coasts and landscapes (including dive sites and reefs), Marine Parks, caves, unique land formations and landscapes and volcanoes.

The Province is surrounded by mountains that are suitable for hiking and trekking. Mountains in the province range from 525m like Gulugod Baboy which traverse the peninsula of Mabini, Batangas to 1,005m like Mt. Malipunyo in Lipa City. Other notable mountain ranges are Mt. Maculot, Mt. Banoy and the traverse trail of Mt. Makiling in Sto. Tomas City, Batangas.

Aside from mountain ranges, the province is also a host to a number of waterfalls. Some of the known waterfalls are Ambon Ambon Falls and Malagaslas Spring of Laurel, Nagtuong Falls and Amatong Falls of Batangas City, Calejon Falls of Malvar and the Bulalacao Falls of Lipa City.

Among all the wonderful natural attractions, the most famous is the Taal Volcano. It is the second most active volcano in the Philippines. In January of 2020, a phreatomagmatics eruption occured that spewed ashes across CALABARZON, Metro Manila and someparts of Central Luzon up to Ilocos Region which resulted to the suspension of school classes, work schedules, and flights in the area.

4.5.1.2 History and Culture

The religiosity of the Filipino is evident in the Province with its interesting cultural and historical destinations- fort, cathedral and church, monument, museum and other historical structure and building.

In Taal, Batangas, the accepted reality of Filipino religiosity is revealed in the ruins of the old Taal Church that was built in 1575 under the supervision of the Augustinian Friars, but was destroyed by the eruption of Taal Volcano in 1754. Today, the Basilica of St. Martin de Tours stands tall atop a hill in the center of said municipality. Built in the 18th century, it is considered as the largest church in the Philippines and in Asia and a favorite shooting site for local television shows and films. The Our Lady of Caysasay Shrine which is also located in Taal is a favorite destination for locals who want to ask favors from the Virgin Mary. The Santa Lucia Well, considered miraculous, is likewise located in the Shrine.

The most popular pilgrimage site in the Province is the Parish and National Shrine of Saint Padre Pio or more popularly known as Padre Pio Shrine to most devoted Catholics and is located at Brgy.San Pedro in Sto.Tomas City. Canonized in 2002, Saint Padre Pio is known to be the Saint of Civil defense volunteers, Adolescents, and stress-relief which is part of the reason why most devotees visit the shrine to pray for healing, miracles, and peace of mind.

Lipa City is home to numerous churches, convents and seminaries; because of these, it is considered as the “Little Rome of the Philippines”. Every September, busloads of people come to the city for the Annual Marian Pilgrimage. The site of the pilgrimage is the Carmelite Monastery Chapel which is the site of the 1948 apparition of Mary Mediatrix of All Grace.

The Province also has its share of ancestral houses dating back to the Spanish period. Located along the main road in the heritage town of Taal, Batangas, most of the houses in Poblacion are declared National Historical Landmark.

4.5.1.3 Industrial Tourism

Industrial tourism is a type of tourism that involves visits to operational companies and industrial heritage; it offers visitors an experience with regard to products, production processes, applications, and historical backgrounds. Known industrial tourism sites in the province belong to the category of farm and ranch, art and craft, fishery and industrial facilities for visitors.

4.5.1.4 Sports and Recreational Facilities

The major grounds for tourist destinations are the numerous coastal areas of the province. There are hundreds of beautiful destinations that have sports and recreational facilities that offer amenities and services for sea bathing, camping, sports like beach volleyball and tennis, snorkeling, diving and boat rides. Other recreational activities that attracts many local and

foreign water sports enthusiats to the coasts of Batangas are surfing, paddle surfing, wind surfing, and many more exciting and entertaining aqua sports.

To name a few, Anilao in Mabini, Batangas has excellent sites for diving and guided snorkeling. The waters are teeming with the sights and sounds of marine life which mesmerize local and foreign divers. Laiya Aplaya in San Juan, Batangas is within the shores of Verde Island Passage. It is frequently visited by local and foreign tourists due to its long stretch of white sand beaches. The Municipality of Nasugbu not only offers its amazing shoreline but the panoramic view of Mt. Batulao as well.

For golf enthusiasts, the Province is home to 8 golf courses. These are located in Calatagan, (1); Lipa City (3), Nasugbu, (3); and Talisay, (1). Table 4.35 shows the List of Golf Courses in the Province.

4.5.1.5 Shopping/Souvenirs

Travelers keep on coming back to the Province because of its useful and unique souvenir items and local delicacies that they love to bring as gifts for their loved ones, and also as tokens of their vacation experience. Some of the famous souvenirs and delicacies are balisong, barong embroidery, bulalo, panutsa, kapeng barako, suman, tablea, honey vinegar and many more.

The presence of popular and major shopping malls and souvenir stores back-up tourism establishments all around the province.

4.5.1.6 Customs and Tradition

The Province of Batangas is noted for its many festivals as reflected in Table 4.36 - Calendar of Festivals. Almost every month, the different cities and municipalities celebrate their yearly cultural and tourism activities or festivals. Most festival showcase the City/Munipalities specialty, for example: Tawilis Festival in Agoncillo, Parada ng Lechon in Balayan, Kabakahan Festival in Padre Garcia, and Eggstravanganza Festival in San Jose. The festivals in Batangas may last for a day or whole week-long which shows the rich cultural heritage of the province and the hospitality of the Batangueños.

Table 4.33: Consolidated Tourism Attractions and Establishments: 2020, by district

City/ Municipality	Tourism Attractions and Establishments								
	Accommodations	Nature and Adventure	Pilgrimage	Historical Attractions	Restaurants	Industry	Leisure and Wellness	Sports and Event Facilities	Others
District 1									
Balayan	11	4	3	18	7	3	7	9	-
Calaca	4	-	3	4	3	1	3	2	-
Calatagan	25	3	13	2	26	1	49	-	-
Lemery	25	-	-	-	85	-	16	-	-
Lian	111	1	2	2	11	1	-	1	-
Nasugbu	47	2-	4	9	5	11	4	8	12
Taal	15	1	2	13	18	2	7	4	-
Tuy	-	-	-	-	-	-	-	-	-
District 2									
Bauan	1-	-	-	-	2-	-	37	2	-
Lobo	78	7	1	2	1-	-	2	-	-
Mabini	8-	7	-	-	13	1-	4	-	-
San Luis	9	1	1	-	5	-	-	-	-
San Pascual	1	-	-	-	5	5	-	-	5
Tingloy	-	-	-	-	-	-	-	-	-
District 3									
Tanauan City	3	-	-	5	1-	-	13	6	3
Agoncillo	1	-	2	1	11	-	-	-	-
Alitagtag	8	5	2	2	3	2	-	3	-
Balete	7	11	4	1	15	4	3	4	1
Cuenca	8	2	2	4	3	-	3	2	-
Laurel	-	-	-	-	1-	-	-	-	-
Malvar	2	4	1	3	3	1	-	3	-
Mataasnakahoy	7	-	-	-	-	-	-	-	-
San Nicolas	6	2	3	1	3	-	-	4	-
Santa Teresita	3	-	-	-	-	-	-	-	-
Sto. Tomas City	1-	8	3	3	51	3	8	5	1
Talisay	48	4	1	3	56	2	2	-	3
District 4									
Ibaan	7	-	-	-	4	-	-	-	-
Padre Garcia	6	1	2	3	3	3	2	1	-
Rosario	10	22	0	0	8	0	3	0	2
San Jose	-	3	-	1	-	-	-	-	-
San Juan	124	7	5	8	35	63	6	5	-
Taysan	2	1	-	3	1	-	4	35	-
District 5									
Batangas City	39	2	1	1	178	23	61	5	-
District 6									
Lipa City	18	1	9	3	29	227	19	2	3
Total	**296**	**73**	**35**	**37**	**403**	**328**	**253**	**69**	**10**

Data Source: 34 Local Government Units

Table 4.34: List of Some Tourism Establishments & Approximate Distance / Travel Time as of December 2020.

Location	CATEGORY	Approximate Distance (Manila)	Travel Time
	PILGRIMAGE		
Balete	Marian Orchard	83 km	1 hr 26 min
Batangas City	Montemaria Shrine	105 km	1 hr 27 min
Laurel	Lumang Simbahan	95 km	2 hr 1 min
Nasugbu	Caleruega	84 km	2 hr 2 min
Sto Tomas City	National Shrine of St. Padre Pio	71 km	1 hr 28 min
Taal	St. Martin Of Tours Minor Basilica	110 km	2 hr 11 min
	Our Lady Of Caysasay Shrine	111 km	2 hr 12 min
	NATURE		
Calatagan	Ang Pulo (Mangrove)	133 km	2 hr 52 min
Cuenca	Mt. Maculot Rockies	96 Km	1 hr 52 min
Lobo	Nalayag Rock Formation	147 km	3 hr 25 min
	Jaybanga Rice Terraces	140 km	3 hr 3 min
	Lagadlarin Mangrove Forest	129 km	2 hr 37 min
Mabini	Mt. Gulugod Baboy	130 km	2 hr 35 min
Nasugbu	Mt. Batulao	86 km	2 hr 5 min
	Mt. Talamitan	107 km	2 hr 29 min
	Fortune Island		
San Juan	Mt. Daguldol	150 Km	3 hr 25 min
Sto Tomas City	Sipit Trail	69 km	1 hr 23 min
	Mt. Malepunyo	97 km	2 hr 25 min
Talisay	Ang Pulo (Volcano Trekking)	100 Km	2 hr 14 min
	ACCOMMODATION/RESORT		
Agoncillo	Adia Montana	120 Km	2 hr 27 min
	Villa Jovita	115 Km	2 hr 17 min
Alitagtag	Nonis Resort, Inc.	100 Km	1 hr 56 min
	Villa Salome	99 Km	1 hr 50 min
Balayan	Alvez Lodge	116 Km	2 hr 31 min
Batangas City	Batangas Country Club	105 Km	1 hr 44 min
	Days Hotel	107 Km	1 hr 50 min
	Ginazel'S Hotel	107 Km	1 hr 48 min
	Playa Montaña Beach Hotel	127 Km	2 hr 27 min
	Ponte Fino Hotel	107 Km	1 hr 49 min
	Soro Soro Spring Resort & Adventure Park	108 Km	1 hr 53 min
	The Alpha Hotel	105 Km	1 hr 44 min
Balete	Cintai Coritos Garden	82 Km	1 hr 24 min
	Nayomi Resort	80 Km	1 hr 35 min
	Villa Natura Taal	83 Km	1 hr 25 min
Bauan	Bauan Plaza Hotel	111 Km	1 hr 54 min
	D' Midland Pacific Hotel	111 Km	1 hr 56 min
	Destino Beach Dive Resort and Hotel	122 Km	2 hr 25 min
	El Grego Hotel & Beach Resort	122 Km	2 hr 26 min
Calaca	Villa Lutgarda	99 Km	2 hr 21 min

source: https://www.distancesfrom.com/

(Continuation) Table 4.34: List of Some Tourism Establishments & Approximate Distance / Travel Time as of December 2020.

Location	CATEGORY	Approximate Distance (Manila)	Travel Time
ACCOMMODATION/RESORT			
Calatagan	STILTS	144 Km	3 hr 11 min
	Aquaria Waterpark	126 km	1 hr 58 min
	CRUSOE CABINS	143 Km	3 hr 5 min
	Lago De Oro	129 Km	2 hr 46 min
	Manuel Uy Beach Resort	143 Km	3 hr 7 min
	Ronco Beach Resort	150 Km	3 hr 17 min
Cuenca	Camp Pulong Gubat	96 Km	1 hr 50 min
	Tierra Mercedez Resort	95 Km	1 hr 49 min
Ibaan	The Palms Peak Resort	97 Km	1 hr 37 min
	Villa Marines	93 Km	1 hr 29 min
Laurel	Twin Lake Hotel	79 Km	1 hr 48 min
	Splendido Hotel	97 Km	1 hr 58 min
Lemery	CML Waterpartk and Resort	116 Km	2 hr 25 min
	Dreamwave Hotel	112 Km	2 hr 12 min
Lipa City	Anfa Royale Hotel	84 Km	1 hr 29 min
	Hotel 1925	86 Km	1 hr 32 min
	Mt Malarayat Suites	87 Km	1 hr 43 min
	The Farm at San Benito	91 Km	1 hr 47 min
	The Old Grove Farmstead	85 Km	1 hr 32 min
Lobo	Punta Verde Resort	141 Km	3 hr 4 min
	Lawas Seaside	131 Km	2 hr 45 min
	Punta Malabrigo Resort	137 Km	2 hr 49 min
Mabini	Camp Netanya	129 km	2 hr 24 min
	Sea's Spring	131 Km	2 hr 35 min
	Buceo Anilao Beach and Dive Resort	132 Km	2 hr 37 min
	Aiyanar Beach & Dive Resort	129 Km	2 hr 25 min
	Anilao Awari Bay Resort	124 Km	2 hr 33 min
	Carfel Vistamar Inc.	124 Km	2 hr 16 min
	Casa Escondida	129 Km	2 hr 25 min
	Eagle Point Resort	131 Km	2 hr 30 min
	La Chevrerie	128 Km	2 hr 24 min
	Pier Uno Dive Resort	125 Km	2 hr 18 min
Malvar	LIMA Park Hotel	76 Km	1 hr 25 min
Mataasnakahoy	Shercon Resort	81 Km	1 hr 39 min
	La Virginia Resort	90 Km	1 hr 41 min
Nasugbu	Bernabeach Resort	111 Km	2 hr 27 min
	Calayo Beach Resort	83 Km	2 hr 17 min
	Canyon Cove Resort	94 Km	2 hr 32 min
	Chateau Royale	82 Km	1 hr 52 min
	Johndel Beach Resort	111 Km	2 hr 28 min
	Kawayan Cove	94 Km	1 hr 34 min
	Munting Buhangin Beach Camp	92 Km	2 hr 31 min
	Pico Sands Hotel	80 Km	2 hr 16 min
	RJ Bearis Beach Resort	111 Km	2 hr 27 min
	Tali Beach	88 Km	2 hr 24 min
	Terraza de Punta Fuego	92 Km	2 hr 31 min

source: https://www.distancesfrom.com/

(Continuation) Table 4.34: List of Some Tourism Establishments & Approximate Distance / Travel Time as of December 2020.

Location	CATEGORY	Approximate Distance (Manila)	Travel Time
	ACCOMMODATION/RESORT		
Nasugbu	Bernabeach Resort	111 Km	2 hr 27 min
	Calayo Beach Resort	83 Km	2 hr 17 min
	Canyon Cove Resort	94 Km	2 hr 32 min
	Chateau Royale	82 Km	1 hr 52 min
	Johndel Beach Resort	111 Km	2 hr 28 min
	Kawayan Cove	94 Km	1 hr 34 min
	Munting Buhangin Beach Camp	92 Km	2 hr 31 min
	Pico Sands Hotel	80 Km	2 hr 16 min
	RJ Bearis Beach Resort	111 Km	2 hr 27 min
	Tali Beach	88 Km	2 hr 24 min
	Terraza de Punta Fuego	92 Km	2 hr 31 min
Rosario	Rosario Resort And Hotel	96 Km	1 hr 50 min
Sto Tomas City	Microtel Inns & Suites	58 Km	1 hr 8 min
	Mt. Makiling Re-Creation Center	72 Km	1 hr 30 min
	NDN Hotel	68 Km	1 hr 18 min
	Santomas Suites	58 Km	1 hr 8 min
San Juan	Acuatico Beach Resort	139 Km	3 hr 3 min
	Acuaverde Beach Resort	139 Km	3 hr 3 min
	Blue Coral	106 Km	1 hr 22 min
	Buracai de Laiya	143 Km	3 hr 5 min
	Calubcub Bay	127 Km	2 hr 42 min
	Kabayan Beach Resort	138 Km	2 hr 53 min
	Klub Keluarga/Parasol Beach Resort	139 Km	3 hr 3 min
	La Luz Beach Resort	141 Km	2 hr 59 min
	One Laiya Beach Resort	142 Km	3 hr 2 min
	Palm Beach	142 Km	3 hr 3 min
	Virgin Beach	140 Km	2 hr 55 min
San Pascual	La Promeesa Resort	111 Km	1 hr 54 min
	My Hometown Resort	112 Km	1 hr 53 min
	Sorrento Bay Hotel	108 Km	1 hr 48 min
Taal	Casa Cecilia Hotel	108 Km	2 hr 6 min
	Taal Imperial Resort	109 Km	2 hr 8 min
	Taal Maranan'S Farmville	113 Km	2 hr 18 min
Talisay	Club Balai Isabel Resort	79 Km	1 hr 30 min
	NDN Resort And Events Place Corp.	77 Km	1 hr 28 min
Tanauan City	Awilihan Resort	74 Km	1 hr 22 min
	Hacienda Darasa	68 Km	1 hr 20 min
	Montecillo De Leonardo Resort	72 Km	1 hr 25 min
Tingloy	Masasa Homestay Facilities	136 Km	3 hr 8 min

source: https://www.distancesfrom.com/

Table 4.35: List of Golf Courses, 2020

City/ Municipality	Golf Courses	Location	No. of Holes
Calatagan	Calatagan Golf Course, Inc.	Balitoc, Calatagan, Batangas	18
Lipa City	Malarayat Golf and Country Club	Dagatan	36
	Summit Point Golf and Country Cub	Plaridel	18
	Fernando Air Base Golf Club	Fernando Air Base	18
Nasugbu	KC Hillcrest Golf & Resort Club Inc. (EVERCREST)	Barangay Kaylaway, Nasugbu, Batangas	n/a
	Peninsula De Punta Fuego	Barangay Natipuan, Nasugbu, Batangas	n/a
	Batulao Artscapes	Barangay Kaylaway, Nasugbu, Batangas	n/a
Talisay	Tagaytay Midlands Golf Club, Inc.	Talisay, Batangas	18

Data Source: 34 Local Government Units

Table 4.36: Batangas Calendar of Festivals

City/Municipality	Festivals/ Events	Duration of Activity	Inclusive Dates
Batangas Province	**Batangas Province Foundation Day**	**Three Days**	**December 8**
Agoncillo	Grand La Paz	One day	May - Last Sunday
	Tawilis Festival	Week-long Activity	April 6-7
Alitagtag	Salubong Sa Mahal na Poon	One day	May 2
	Tapusan Festival	One day	May 31
Balayan	Parada ng Lechon	Week-long Activity	June 24
Balete	Honeybee Festival	Week-long Activity	June 21
	Pabitin Festival	Week-long Activity	May 1
Batangas City	Sublian Festival	Two Week-long Activity	July 23
	Fluvial Procession	One day	January 7
Bauan	Sublian Festival	One day	May 2
Calaca	Calacatchara Festival	Week-long Activity	October 15-24
	Carrera De Paso	One day	March or April (every Holy wed.)
Calatagan	Kinuyog Festival	Four Days	December 13-16
Cuenca	Piyestang ng Tinay	One day	May 15
	Tinapay Festival	One day	November 7
Ibaan	LES KUHLIEMBO	One day	February 11
	Dagit During Holy Week	One day	March or April
Laurel	Bay-ongan Festival	Three Days	June 21
Lemery	Sigpawan Festival	Week-long Activity	August 14
Lian	Balsa Festival	One day	April 27 /May
Lipa City	Barako Festival	Two Week-long Activity	October 21
	Lomi Festival	One day	September 23
Lobo	Anihan Festival	Week-long Activity	September 27
Mabini	Sakul Festival	One day	Apr-25
	Yamang Dagat Festival	One day	April 23
Malvar	Langka Festival	One day	December 16
	Tandang Festival	Week-long Activity	1st week of January
Mataasnakahoy	Kaluskos Festival	Week-long Activity	3rd week of December
Nasugbu	Pistahan Sa Nasugbu	Three Days	December 1-3
Padre Garcia	Kabakahan Festival	Three Days	Nov 29, 31 & Dec 1
Rosario	Sinukmani Festival	One day	June 9
San Jose	Eggstravanganza Festival	Week-long Activity	April 26-28
	Sinuam Festival	One day	25-Apr
San Juan	Lambayok Festival	Week-long Activity	December 10-12
San Luis	Kawayan Festival	One day	August 25
	Fiestang Dagat	One day	May 10
San Nicolas	Kite Festival	Week-long Activity	Summer Season
	Bancaton Festival	One day	September 10
	Maliputo Festival	One day	August 9
San Pascual	Pastulan Festival	One day	May 17
Sta. Teresita	Bilao Festival	One day	December 28
Sto. Tomas City	Malahuyog Festival	Week-long Activity	Last week of February to March 7
Taal	EL Pasubat Festival	Week-long Activity	last weef of April
	Parada ng Kabayo/ Karera ng Tiburin	One day	November 11
Talisay	Punlad Festival	Week-long Activity	February 2
Tanauan City	Parade of Lights	One day	March 10
	Regatta	One day	May 30
	Suman Yakap Festival	Week-long Activity	March 10
Taysan	Tinindag Festival	One day	November 11
Tuy	Kambingan Festival	Three Days	August 12

Data Source: Provincial Tourism and Cultural Affairs Office

4.5.2 Tourist Arrivals

The province attracts not only local tourists but also foreign travelers.

Filipinos are known for being religious; this is one of the reasons why the religious tourist attractions/establishments posted a higher number of local tourists. On the other hand, foreign tourists posted significant arrivals in the province as well. Leading tourism destinations for foreigners in the province are the scenic and natural attractions. Secondary destinations for foreigners are the cultural and heritage sites in the province.

Tourist arrivals in the Province for the last three (3) years are posted in Table 4.37; wherein visitors are classified as domestic and foreign tourists. Per data presented, local or domestic tourists comprised about 99.45% or 1,050,617 of total arrivals in the year 2020.

Summer months and Christmas Holidays, starting from the month of December extending until January of the succeeding year posted high arrival statistics for 2018 and 2019. But starting March of 2020 the number of arrivals plummeted due to the implemented Enhanced Community Quarantine (ECQ) on March 17,2021 for the whole country to combat the spread of the Corona Virus (CoVid19)

With ECQ on full implementation, it can be seen that the month of April recorded zero "0" arrivals or 100% decrease compared to previous records. In the succeeding month, we see change in the number of domestic arrivals in May 2020 as 38 provinces (including Batangas) and 12 cities were considered as "moderate risk" and were placed under General Community Quarantine (GCQ) starting May 16, 2020.

Clearly the tourism industry has been severely affected by the pandemic as seen in the result of the travel restrictions nationwide.

Table 4.37: Tourist Arrivals 2018 – 2020

Months	2018			2019			2020		
	Domestic	Foreign	Total	DOMESTIC	FOREIGN	TOTAL	DOMESTIC	FOREIGN	TOTAL
January	651,175	33,170	684,345	147,539	12,609	160,148	513,073	5,109	518,182
February	879,065	32,415	911,480	140,314	13,684	153,998	326,915	257	327,172
March	2,888,119	45,805	2,933,924	220,596	13,222	233,818	162,483	0	162,483
April	1,308,116	53,692	1,361,808	400,624	15,437	416,061	0	0	0
May	805,866	52,810	858,676	316,970	10,126	327,096	100	0	100
June	740,032	53,372	793,404	200,975	9,792	210,767	1,500	0	1,500
July	581,167	39,103	620,270	133,889	9,804	143,693	2,594	0	2,594
August	527,464	36,430	563,894	89,734	9,930	99,664	2,805	0	2,805
September	576,310	39,079	615,389	67,856	9,040	76,896	4,387	1	4,388
October	4,016,873	43,864	4,060,737	77,569	11,629	89,198	5,832	4	5,836
November	511,411	52,308	563,719	93,130	10,104	103,234	7,627	2	7,629
December	1,085,280	43,093	1,128,373	138,839	10,774	149,613	22,811	0	22,811
Total for the Year	**14,570,878**	**525,141**	**15,096,019**	**2,028,035**	**136,151**	**2,164,186**	**1,050,127**	**5,373**	**1,055,500**

Data Source: Provincial Tourism and Cultural Affairs Office 2021

Table 4.38 presents the number of foreign visitors in the province for 2020 which is categorized as overnight and day arrival of visitors. Foreign Night Arrivals tallied to 174,870 visitors, most of which are Philippine residents who has East Asian origins; China, Hongkong, Japan, Korea and Taiwan. Day Arrivals tallied at 1,056,425 from which 99.45% or 1,050,617 are domestic travellers and the remaining 0.55% or 5,808 are unspecified foreign travelers.

As a comparison, the year 2019 garnered a total of 13,089,373 foreign tourist arrival count. A very big difference from the 1,231,295 visitors count of 2020. The main cause for the 90.59% decrease can be pinpointed to the corona virus pandemic which forced a lot of countries to close their borders and enforce travel bans as safety protocols to restrain the spread of CoVid19.

Table 4.38: Overnight and Day Arrival Foreign Tourists, 2020

Country		Number of Tourists
Asean	Bruneio, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Singapore, Thailand, Vietnam	1,584
East Asia	China, Hongkong, Japan, Korea, Taiwan	13,226
South Asia	Bangladesh, India, Iran, Nepal, Pakistan, Sri Lanka	609
Middle East	Bahrain, Egypt, Israel, Jordan, Kuwait, Saudi Arabia, United Arab Emirates	100
North America	Canada, Mexico, United States of America	1,667
South America	Argentina, Brazil, Colombia, Peru, Venezuela	33
Western Europe	Austria, Belgium, France, Germany, Luxemburg, Netherlands, Switzerland	568
Northern Europe	Denmark, Finland, Ireland, Norway, Sweden, United Kingdom	1,360
Southern Europe	Greece, Italy, Portugal, Spain, Union of Servia & Montenegro	965
Eastern Europe	Poland, Russia	779
Australia / Asia Pacific	Australia, guam, New Zealand, Nauru, Papua New Guinea	263
Africa	Nigeria, South Africa	10
Others / Unspecified	No Stated Country of Residency	-
GRAND TOTAL GUEST-NIGHT ARRIVALS		**174,870**
	Total Philippine Residents	147,683
	Total Non-Philippine Residents	27,187
DAY ARRIVALS 2020		1,056,425
	Domestic Travellers	1,050,617
	Foreign Travellers (Unspecified)	5,808

Data Source: Provincial Tourism and Cultural Affairs Office 2021

Chapter 5 SOCIAL SECTOR

5.1 Education

Highly influenced by countries that colonized the country, especially that of the United States of America, education in the Philippines is offered through formal and non-formal systems. Prior to K-to12 implementation in 2015, formal education typically spans 14 years and is structured in a 6+4+4 system: 6 years of primary school education, 4 years of secondary school education, and 4 years of higher education, leading to a bachelor's degree. This is one of the shortest terms of formal education in the world. Nowadays, with the K to 12 Program, additional two (2) years of school time after the secondary years or prior to collegiate years; that is the Junior and Senior High School, make the formal education school terms at par internationally.

In the Philippines, the academic school year begins in June and concludes in March, a period that covers a total of 40 weeks, though nowadays, some have adopted the late August-early September opening of classes and ending in May.

All Higher Education Institutions (HEIs) operate on a semester or trimester system—and an optional summer term.

Although English was the sole language of instruction in the Philippines from 1935 to 1987, the new constitution prescribed that both Filipino (Tagalog) or the local dialect and English are the official languages of instruction and communication. After primary school, however, the language of instruction is usually English, especially in the country's urban areas and at most of the nation's universities.

Department of Education (DepEd) administer and oversee the education system and with reference to public primary and secondary education, the agency is assisted by the Local Government Units (LGUs) through their Local School Boards (LSB) as prescribed under Sec. 98 and Sec. 99 of the Local Government Code of 1991.

In the Province of Batangas, one of the strategic directions of the Executive Department is to ensure that the allocation and utilization of the government resources in the delivery of public services in socio-economic and human development is maximized and optimized---committing itself in strengthening the educational foundation of youths which will help pave the way for increased professional growth, betterment and upgrading of lives of Batangueňos.

With annual appropriation from the Special Education Fund (SEF), the Provincial School Board (PSB) provides support to pupils / students / schools in public elementary and secondary levels. Some of the programs / projects include: the School Building Program; support and participation to Brigada Eskuwela; School Facilities Improvement Program; Internet Accessibilities Program; Support to K to 12 Implementation; Scholarship Program (Batangas Province Science High School and Batangas Province High School for Culture and Arts); and the Teachers Augmentation Program.

With continuous improvement and construction of school buildings and classrooms in the province, as well as the continuing augmentation and professional development of teachers, primary and secondary education under the new K to 12 Program is very accessible.

In addition, the Tulong Eskuwela Program from the Executive Office (Office of the Provincial Governor), which, on the other hand, is funded through the General Fund, likewise provides support to Special Education (SpEd) students / schools and other services to public schools / pupils in its 34 LGUs.

The Batangas Provincial Scholarship Program is open to poor but deserving and qualified college and senior high school students. Likewise, for those average college students whose grades do not qualify for scholarship grants, the Provincial Government helps augment college matriculation by extending their support through its Educational Assistance Program.

As of School Year 2020-2021, as shown on Table 5.1 below, educational institutions in the province are classified as follows: kinder – 100; elementary – 75; kinder & elementary – 946; integrated school (elementary with JHS) – 58, secondary (purely JHS) – 122; secondary purely SHS – 47; all offerings (kinder, elementary, SHS & JHS) attached to a tertiary – 15, tertiary offering SHS - 10. Over-all there are 1,553 schools in Batangas province both public and private.

Table 5.1: Number of Schools by Level, by School Division in Both Public & Private: SY 2020-2021

Division	Kinder	Elementary	Kinder & Elementary	Integrated School (Elementary with JHS)	Secondary (Purely Junior High School)	Secondary (JHS with SHS)	Secondary (Purely SHS)	All Offerings (Kinder, Elementary, JHS & SHS)	All Offerings (Kinder, Elementary, JHS & SHS) Attached to Tertiary	Tertiary Offering SHS	GRAND TOTAL
Batangas Province	**100**	**75**	**946**	**58**	**122**	**93**	**47**	**87**	**15**	**10**	**1553**
Batangas*	17	0	675	36	97	55	38	58	2	0	978
Batangas City	3	0	96	9	8	15	4	8	6	4	153
Lipa City	2	1	97	12	6	16	4	12	3	4	157
Tanauan City	78	74	78	1	11	7	1	9	4	2	265

Data Source: DepEd Division Offices
**Batangas Division comprises the schools from the 31 municipalities*

5.1.1 Pre-elementary Level

Pre-school education or Pre-elementary level is the learning program given to children ages three to five or six years in preparation for their formal primary education. It is also known as nursery, day care, or kindergarten schooling.

Pre-school, or Early Childhood Education (ECEd) operates on a certain framework that includes *structural* (administration, class size, teacher-child ratio, etc.), *process* (classroom environment, teacher-child interactions, etc.), and *alignment* (standards, curriculum) components that are connected to each child involved in the preschool educational system.

Preschool education is considered suitable for children between three and five (or six) years, because it is during this stage that the children learn and take in information at a very fast rate, and they also express great fascination and curiosity with almost everything around them.

The main themes or areas present in the majority of early childhood education systems essential to the holistic development of pre-schoolers are as follows:

- Personal, social, and emotional development
- Communication (includes talking and listening)
- Knowledge and understanding of the world
- Creative and aesthetic development
- Physical development
- Analytical (mathematical) development

Although preschool education is optional before entering the elementary level, recent events and activities show a high need for young children to undergo preschool education first before stepping into formal education. Following are legal basis related to preschool education:

- **Republic Act 8980** (Early Childhood Care and Development Act) - Enacted in 2000, this law identifies the growing importance of providing preschool education and addressing young children's other needs. It also recognizes parents as the children's primary caregivers and teachers.

- **Republic Act 6972** (Barangay Level Total Protection of Children Act) – Enacted in 1990, this law requires all local government units to set up a day care center in every barangay. Day care centers are mandated not only to provide for the children's learning needs but also to attend to their health and psychosocial needs.

- Senate **Bill 3235** (An Act To Institutionalize Pre-school Education) –The bill calls for the formulation of a standard preschool curriculum which will help ensure that those entering Grade 1 are well-equipped for formal schooling.

For SY 2020 - 2021, there are 53,946 pre-school enrollees (combined public and private schools in the province of Batangas: 94.18% of which are from the public schools; 5.70% from private schools; and 0.12% from SUC/LUC. Data on Table 5.2 also shows that preschool male enrollees prevail over the female enrollees for both public and private schools – for public schools – 94.51%; private schools – 5.38%; combined – 52.05%

Table 5.2: Summary of Pre-Elementary Enrollment, by School Division in both Public and Private: SY 2020-2021

School Division	SY 2020 - 2021											
	Public			Private			SUC/LUC			Grand Totals		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Batangas*	18,214	16,654	34,868	710	751	1,461	14	15	29	18,938	17,420	36,358
Batangas City	3,005	2,766	5,771	324	320	644	18	20	38	3,347	3,106	6,453
Lipa City	3,443	3,223	6,666	324	321	645	0	0	0	3,767	3,544	7,311
Tanauan City	1,876	1,628	3,504	153	167	323	0	0	0	2,029	1,795	3,824
GRAND TOTAL	**26,538**	**24,271**	**50,809**	**1,511**	**1,559**	**3,073**	**32**	**35**	**67**	**28,081**	**25,865**	**53,946**
PERCENTAGE	**94.51%**	**93.84%**	**94.18%**	**5.38%**	**6.03%**	**5.70%**	**0.11%**	**0.14%**	**0.12%**	**52.05%**	**47.95%**	**100%**

Data Source: DepEd Division Offices
**Batangas Division comprises the schools from the 31 municipalities*

5.1.2 Elementary Level

The elementary school education system in the Philippines spans 6 years in duration and is compulsory for all students. This level of education is divided into a four-year primary cycle and a two-year intermediate cycle. In the country's public schools, Filipino children generally begin school at age 6 or 7.

Language of instruction for Grades 1 and 2 are mostly in the local dialect numbering to about 170. Dialects use depends on the school's regional location.

Once a student successfully completes each of the six grades of primary school, he or she is awarded a certificate of graduation from the school they attended.

In all six grades of primary school, there are a number of core subjects that are taught, with varying degrees of difficulty. These are:

- Language Arts (Filipino, English and Local Dialect)
- Mathematics
- Health
- Science

Table 5.3 shows a total of 322,719 elementary school enrollees for SY 2020-2021; of which 92.08% come from the public school sector and 7.70% are from the private schools while 0.22% are enrolled in SUC/LUC school. For both private and public, male enrollees comprising to 51.97% of the total enrollees is 3.94% greater than the female enrollees with 48.03%.

Table 5.3: Summary of Elementary Enrollment, by School Division in both Public and Private: SY 2020-2021

School Division	SY 2020 - 2021											
	Public			Private			SUC/LUC			Grand Totals		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Batangas*	103,856	95,598	199,454	6,083	5,883	11,966	68	77	145	110,007	101,558	211,565
Batangas City	16,905	15,639	32,544	2,463	2,383	4,846	265	300	565	19,633	18,322	37,955
Lipa City	19,593	18,121	37,714	2,860	2,712	5,572	0	0	0	22,453	20,833	43,286
Tanauan City	14,347	13,090	27,438	1272	1204	2470	0	0	0	15,619	14,294	29,913
GRAND TOTAL	**154,701**	**142,448**	**297,150**	**12,678**	**12,182**	**24,854**	**333**	**377**	**710**	**167,712**	**155,007**	**322,719**
PERCENTAGE	**92.24%**	**91.90%**	**92.08%**	**7.56%**	**7.86%**	**7.70%**	**0.20%**	**0.24%**	**0.22%**	**51.97%**	**48.03%**	**100%**

Data Source: Department of Education
**Batangas Division comprises the schools from the 31 municipalities*

5.1.3 Secondary Level

Although secondary education is not compulsory in the Philippines, it is widely attended, particularly in the more urban areas of the country.

Admission to public schools is typically automatic for those students who have successfully completed six years of primary education. However, many of the private secondary schools in the country have competitive entrance requirements, usually based on an entrance examination score. Entrance to the Science High Schools is also the result of competitive examinations.

Schooling at the secondary level spans four years in duration, grades 7-10, beginning at age 12 or 13 and culminating at age 16 or 17. The curriculum that students are exposed to depends on the type of school they attend. In the K to 12 program which was implemented in 2015, Grades 7 to 10 is classified as Junior High School; while Grades 11 to 12 is the Senior High School.

The K to 12 Program covers Kindergarten and 12 years of Basic Education: six (6) years of primary education, four (4) years of Junior High School (JHS), and two (2) years of Senior High School (SHS)] to provide sufficient time for mastery of concepts and skills, develop lifelong learners, and prepare graduates for tertiary education, middle-level skills development, employment, and entrepreneurship.

The presence of a number of public and private secondary schools in the province manifests the Batangueňos' love of learning and education. Public high schools are present in all the 34 local government units of the province. Likewise, funded by the Provincial Government are the Provincial Science High School and the Provincial High School for Culture and the Arts.

As shown on Table 5.4, there are 568 secondary schools, 285 of which are public and 283 are private.

Table 5.4: Number of Public and Private Secondary Schools, Batangas Province, 2020-2021

School Division	Public		Private		Total
	JHS	SHS	JHS	SHS	
Batangas Province	**185**	**100**	**157**	**126**	**568**
Batangas*	137	63	110	89	399
Batangas City	23	19	23	18	83
Lipa City	9	14	9	6	38
Tanauan City	16	4	15	13	48

Data Sources: 2020 Regional Social and Economic Trends CALABARZON
**Batangas Division comprises the schools from the 31 municipalities*

For SY 2020-2021, combined public and private secondary enrollment for junior high school totaled to 226,337, with almost equal male-female proportion of 51.30% male and 48.70% female students. Enrollment to public schools accounts to 79.76% while 19.56% accounts from private schools. The remaining 0.68% of enrollment was from SUCs/LUCs and DOST-Managed schools. Details are shown in Table 5.5.

With the implementation of the K-12 program, the secondary enrollment for senior high school both for public and private schools totaled to 86,830 enrollees of which female enrollees are 1,218 more than male enrollees. Among the three City District Offices, Batangas City recorded the highest number of enrollees with 11,227 enrollees.

Table 5.5: Summary of Secondary Enrollment (JHS), by School Division in both Public and Private: SY 2020-2021

School Division	SY 2020 - 2021														
	Public			Private			SUC/LUC			DOST Managed			Grand Totals		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Batangas*	64,011	59,535	123,546	13,372	13,297	26,669	88	166	254	0	0	0	77,471	72,998	150,469
Batangas City	10,565	10,146	20,711	2537	2658	5,195	353	482	835	273	174	447	13,728	13,460	27,188
Lipa City	11,372	10,666	22,038	4,494	4,610	9,104	0	0	0	0	0	0	15,866	15,276	31,142
Tanauan City	7,387	6,840	14,227	1651	1660	3311	0	0	0	0	0	0	9,038	8,500	17,538
GRAND TOTAL	**93,335**	**87,187**	**180,522**	**22,054**	**22,225**	**44,279**	**441**	**648**	**1,089**	**273**	**174**	**447**	**116,103**	**110,234**	**226,337**
PERCENTAGE	**80.39%**	**79.09%**	**79.76%**	**19.00%**	**20.16%**	**19.56%**	**0.38%**	**0.59%**	**0.48%**	**0.24%**	**0.16%**	**0.20%**	**51.30%**	**48.70%**	**100%**

Data Source: Department of Education
**Batangas Division comprises the schools from the 31 municipalities*

Table 5.6: Summary of Secondary Enrollment (SHS), by School Division in both Public and Private: SY 2020-2021

School Division	SY 2020 - 2021														
	Public			Private			SUC/LUC			DOST Managed			Grand Totals		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
*Batangas**	20,043	20,325	40,368	9,271	9,214	18,485	45	40	85	0	0	0	29,359	29,579	58,938
Batangas City	2,656	2,795	5,451	2,470	2,578	5,048	284	273	557	99	72	171	5,509	5,718	11,227
Lipa City	1,348	1,259	2,607	1,810	1,956	3,766	0	0	0	0	0	0	3,158	3,215	6,373
Tanauan City	495	524	1,019	4,189	4,893	9,082	96	95	191	0	0	0	4,780	5,512	10,292
GRAND TOTAL	**24,542**	**24,903**	**49,445**	**17,740**	**18,641**	**36,381**	**425**	**408**	**833**	**99**	**72**	**171**	**42,806**	**44,024**	**86,830**
PERCENTAGE	**57.33%**	**56.57%**	**56.94%**	**41.44%**	**42.34%**	**41.90%**	**0.99%**	**0.93%**	**0.96%**	**0.23%**	**0.16%**	**0.20%**	**49.30%**	**50.70%**	**100.00%**

Data Sources: 2020 Regional Social and Economic Trends CALABARZON
**Batangas Division comprises the schools from the 31 municipalities*

5.1.3.1 Other Statistics for Elementary and Secondary Education

Succeeding tables present the ratio or percentage from the gross enrolment, net enrolment, participation rate, cohort survival rate and gender parity ratio for both elementary and secondary schools in the province.

Gross Enrolment Ratio (GER) - The total enrolment in a given level of education, regardless of age, as a percentage of the population who according to national regulations should be enrolled at this level.

Table 5.7: Gross Enrolment Ratio, Public and Private Elementary and Secondary Schools, 2019-2020

School Division	ELEMENTARY	Secondary	
		JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
Batangas*	95.70%	100.20%	77.82%
Batangas City	96.68%	99.24%	97.12%
Lipa City	119.90%	129.62%	122.09%
Tanauan City	93.56%	139.28%	166.46%

Data Sources: DepEd Division Offices
**Batangas Division comprises the schools from the 31 municipalities*

Net Enrolment Ratio (NER) or Participation Rate is the ratio of the enrolment for the age group corresponding to the official school age in the elementary/secondary level to the population of the same age group in a given year.

Table 5.8: Net Enrolment Ratio/Participation Rate & Gender Parity Ratio, Public and Private Elementary and Secondary Schools (Junior & Senior High School), SY 2019-2020

School Division	ELEMENTARY				Secondary							
					JUNIOR HIGH SCHOOL				SENIOR HIGH SCHOOL			
	Total %	Male %	Female %	GPR	Total %	Male %	Female %	GPR	Total %	Male %	Female %	GPR
Batangas*	92.13	92.36	91.87	0.99	87.33	84.88	89.93	1.06	55.78	50.18	61.80	1.23
Batangas City	93.79	93.26	94.32	1.01	87.74	84.40	91.09	1.08	72.79	67.75	77.83	1.15
Lipa City	115.34	115.60	115.05	1.00	110.92	106.86	115.23	1.08	86.69	74.42	99.46	1.34
Tanauan City	115.18	116.53	113.77	0.96	121.78	117.77	126.12	1.03	134.53	126.63	143.18	1.09

Data Sources: DepEd Division Offices
**Batangas Division comprises the schools from the 31 municipalities*

Cohort Survival Rate (CSR) is the percentage of enrollees at the beginning grade or year in a given school year who reached the final grade or year of the elementary/secondary level.

Gender Parity Ratio (GPR) refers to the ratio of female to male values of a given indicator. Gender Parity Indicator (GPI) equal to 1 indicates parity between females and males. In general, a value less than 1 indicates a disparity in favor of boys and a value greater than 1 indicates a disparity in favor of girls. However, the interpretation should be in the other way round for indicators that should ideally approach 0% (e.g. repetition, dropout, illiteracy rates, etc). In these cases, a GPI of less than 1 indicates a disparity in favor of girls and a value greater than 1 indicates a disparity in favor of boys.

Table 5.9: Cohort Survival Rate (CSR) & Gender Parity Ratio (GPR) in Public and Private Elementary and Secondary Schools, SY 2019-2020

School Division	Elementary				Secondary			
	Total %	Male %	Female %	GPR	Total %	Male %	Female %	GPR
Batangas*	1.00	1.00	1.00	1.00	0.91	0.90	0.92	1.04
Batangas City	97.74	96.69	98.80	1.02	85.28	81.29	89.27	1.10
Lipa City	100.00	100.00	100.00	1.00	85.59	80.66	90.67	1.12
Tanauan City	100.00%	100.00%	100.00%	1.00	94.71%	91.81%	97.56%	1.08

Data Sources: 2020 Regional Social and Economic Trends CALABARZON
**Batangas Division comprises the schools from the 31 municipalities*

The standard Teacher / Student Ratio, for Philippine Education System is 1:45 for elementary and 1:40 for secondary. Preceding table indicates that the educational system in both elementary and secondary levels in the province are compliant with ideal teacher-student ratio.

Table 5.10: Government Elementary & Secondary Teacher/Student Ratio, 2019-2020/2020-2021

School Division	2019 - 2020		2020 - 2021	
	Elementary	Secondary	Elementary	Secondary
Batangas*	1:29	1:25	1:29	1:28
Batangas City	1:28	1:24	1:29	1:26
Lipa City	1:32	1:45	1:32	1:45
Tanauan City	1:37	1:45	1:40	1:45

Data Sources: 2020 Regional Social and Economic Trends CALABARZON
**Batangas Division comprises the schools from the 31 municipalities*

5.1.4 Tertiary Level

Higher education institutions in the Philippines are either colleges or universities, and are generally classified as public or private.

State Universities and Colleges, or SUCs, are public higher education institutions established by law, administered and financially subsidized by the government.

On the other hand, Local Universities and Colleges, or LUCs, are established by the Local Government Units (LGUs) through resolutions or ordinances. Financially, LUCs are supported by the local government concerned.

Special Higher Educational Institution (HEIs) is public organizations offering higher education programs related to public service. Operated and controlled in accordance with the special law that created these institutions, special HEIs are provided with special academic, research and technical assistance programs pursuant to the basic mandates of their parent agencies.

Private HEIs are established under the Corporation Code and are governed by the special laws and general provisions of this Code. Non-sectarian private HEIs are duly incorporated, owned and operated by private entities that are not affiliated to any religious organization; while sectarian private HEIs are usually non-stock, non-profit, duly incorporated, owned and operated by a religious organization.

With the passage of the Higher Education Act of 1994, an independent government agency known as the Commission on Higher Education (CHED) now provides the general supervision and control over all colleges and universities in the country, both public and private. CHED regulates the founding and/or closures of private higher education institutions, their program offerings, curricular development, building specifications and tuition fees. Private universities and colleges adhere to the regulations and orders of CHED, although a select few are granted autonomy or deregulated status in recognition of their dedicated service through quality education and research when they reach a certain level of accreditation.

The following are the four levels of accreditation:

- **Level I.** Gives applicant status to schools that have undergone a preliminary survey and are capable of acquiring accredited status within two years.
- **Level II.** Gives full administrative deregulation and partial curricular autonomy, including priority in funding assistance and subsidies for faculty development.
- **Level III.** Schools are granted full curricular deregulation, including the privilege to offer distance education programs.
- **Level IV.** Universities are eligible for grants and subsidies from the Higher Education Development Fund and are granted full autonomy from government supervision and control.

To establish a complete, adequate and integrated system for higher education in the country, Republic Act (RA) No. 8292, otherwise known as “Higher Education Modernization Act of 1997” was passed. This primarily aims to establish an adequate and integrated system of higher education by rationalizing the composition of the Governing Boards of chartered state universities and colleges (SUCs) nationwide to make it uniform and coordinated.

"Universal Access to Quality Tertiary Education Act" or Republic Act 10931 was signed into law last August 2017 to institutionalize free tuition and exemption from other fees in State Universities and Colleges, Local Universities and Colleges, and State-Run Technical-Vocational Institutions in the Philippines. This act is composed of four (4) equally important programs:

1) Free Higher Education (tuition and miscellaneous fees) in SUCs and CHED-recognized Local Universities and Colleges;
2) Free Technical-Vocational Education and Training (TVET) in public and private institutions registered with TESDA;
3) Tertiary Education Subsidy (TES) or grants-in-aid for poor students in public and private institutions; and
4) Student Loan Program (SLP) for tertiary education students

Records from Commission on Higher Education (CHED) as of March 31, 2021 showed that in Batangas Province, the distribution of Higher Education Institutions by Institutional type is as follows: twelve (12) state-run colleges and universities; three (3) local run colleges and universities and forty-one (41) private run colleges and universities. (See Table 5.11)

Table 5.11: Distribution of Higher Educational Institutions by Type, Batangas Province: March 2021

	SUC	LCU	Private	Total
Batangas Province	12	3	41	56

Data Source: Commission on Higher Education (CHED) Region IVA, as of January 2020
Note:
LCU - Local Government College *SUC - State University/College*

5.1.4.1 Public Higher Education Institutions

Per Table 5.12, enrolment in government owned tertiary schools in the province for AY 2020-2021, totalled to 64,409; comprised of 25,420 or 39.47% males and 38,989 or 60.53% females. As per discipline group, the top three groups with high records of enrollees are as follows: Engineering and Tech being the highest with 20,951 enrollees; Business Administration and related with 19,020 enrollees; and Education Science and Teacher Training with 9,453 enrollees. Discipline groups of Maritime and Religion and Theology has no recorded enrollment.

As to the number of college graduates, female graduates are 22.18% higher than male graduates. Female graduates accounts to 4,239 or 60.09% of the total graduates while male graduates totaled to 2,700 or 38.91%. Business Administration and related discipline group recorded the highest number of graduates of 2,432 of which 1,730 are females and 702 are males. Next is Engineering and Tech with 1,659 graduates. There is no record of graduates for Law and Jurisprudence, Maritime and Religion and Theology.

Table 5.12: Public Higher Educational Institution School Enrolment and Graduate by Sex, by Discipline Group, AY 2020 - 2021

DISCIPLINE GROUP	PUBLIC					
	School Enrolment			Graduates		
	Male	Female	Total	Male	Female	Total
Agriculture, Forestry, Fisheries	232	416	648	14	87	101
Architecture and Town Planning	413	502	915	9	8	17
Business Administration and Related	4,914	14,106	19,020	702	1,730	2,432
Education Science and Teacher Training	1,923	7,530	9,453	218	755	973
Engineering and Tech	11,975	8,976	20,951	1,043	616	1,659
Fine and Applied Arts	108	180	288	5	20	25
Humanities	51	135	186	0	1	1
IT-Related Disciplines	3,014	1,868	4,882	368	315	683
Law and Jurisprudence	37	51	88	0	0	0
Maritime	0	0	0	0	0	0
Mass Communication and Documentation	524	726	1,250	19	48	67
Mathematics	77	79	156	12	11	23
Medical and Allied	178	908	1,086	9	55	64
Natural Science	101	215	316	16	44	60
Other Disciplines	1,387	1,020	2,407	232	151	383
Religion and Theology	0	0	0	0	0	0
Service Trades	171	712	883	7	99	106
Social and Behavioral Sciences	315	1,565	1,880	46	299	345
TOTAL	**25,420**	**38,989**	**64,409**	**2,700**	**4,239**	**6,939**

Data Source: Commission on Higher Education (CHED) Region IV-A
Note: Data as compiled by CHEDRO IV MIS Section
Includes pre-baccalaureate up to doctoral programs
Based on the submission of higher education institutions as of March 31, 2021

5.1.4.2 Private Higher Education Institutions

Enrolment in private tertiary schools in the province for AY 2020-2021 totaled to 49,454. Female enrollees (28,051) are 13.44% higher than male enrollees (21,403). The top three (3) discipline groups with high recorded enrollments are (1) Business Administration and Related with 13,703; (2) Education Science and Teacher Training with 10,256 and (3) Engineering and Tech with 6,699. Discipline groups of Mathematics and Agriculture, Forestry, Fishery has the lowest record of enrollment with four (4) and zero (0), respectively.

With regard to college graduates, there is a total of 7,322 graduates from these private institutions. Female graduates are 29.72% higher than male graduates. There are 4,729 female graduates while there are only 2,573 male graduates. Education Science and Teacher Training recorded the highest number of graduates with 2,911 of which 2,515 are females and 396 are males. There are recorded number of graduates for discipline groups of Agriculture, Forestry, Fishery, Architecture and Town Planning, Mathematics and Natural Science. Please refer to Table 93.

Table 5.13: Private Higher Education Institutions School Enrolment and Graduates by Sex, by Discipline Group, AY 2020 - 2021

DISCIPLINE GROUP	PRIVATE					
	School Enrolment			Graduates		
	Male	Female	Total	Male	Female	Total
Agriculture, Forestry, Fisheries	0	0	0	0	0	0
Architecture and Town Planning	99	93	192	0	0	0
Business Administration and Related	5,222	8,481	13,703	565	986	1,551
Education Science and Teacher Training	1,995	8,261	10,256	396	2,515	2,911
Engineering and Tech	4,204	2,495	6,699	625	494	1,119
Fine and Applied Arts	195	167	362	11	9	20
Humanities	109	41	150	29	10	39
IT-Related Disciplines	2,732	1,170	3,902	353	183	536
Law and Jurisprudence	119	192	311	11	31	42
Maritime	1,494	22	1,516	177	13	190
Mass Communication and Documentation	112	218	330	1	3	4
Mathematics	2	2	4	0	0	0
Medical and Allied	815	2,608	3,423	42	202	244
Natural Science	31	68	99	0	0	0
Other Disciplines	3,230	1,321	4,551	247	88	335
Religion and Theology	57	0	57	18	0	18
Service Trades	567	1,573	2,140	69	118	187
Social and Behavioral Sciences	420	1,339	1,759	29	97	126
TOTAL	**21,403**	**28,051**	**49,454**	**2,573**	**4,749**	**7,322**

Data Source: Commission on Higher Education (CHED) Region IV-A
Note: Data as compiled by CHEDRO IV MIS Section
Includes pre-baccalaureate up to doctoral programs
Based on the submission of higher education institutions as of January 2020

5.2 Health

In 1991, health service delivery was devolved to the Local Government Units (LGUs) which Batangas Province effectively implements. The strong involvement of the private sector in health care providers make its delivery even more efficient. Health facilities in the province include government hospitals, private hospitals, and primary health care facilities. Hospitals are classified based on ownership as public or private hospitals.

In the Province of Batangas, the Health Sector is appropriated yearly with a big percentage out of its Annual Budget. The Health Services Program is broken down into Hospital Services, Health Services and Facility Enhancement Services (Health Care Development Services), Integrated Service Volunteer Workers Services, Nutrition Development Services, Tuberculosis Elimination Services, and Capital Investment for Health.

5.2.1 Hospitals and Other Health Facilities

Health care is accessible and readily available in the province with sixty (60) private health care facilities, eighteen (18) government health care facilities, fifty-two (52) Rural Health Units, seven hundred six (706) Barangay Health Stations, one (1) Health and Wellness Center, three (3) Social Hygiene Clinic, sixteen (16) Animal Bite and Treatment Centers, forty-one (41) Birthing Homes, one (1) City Health Office and two (2) Drug Abuse Treatment and Rehabilitation Centers strategically located within the whole province. Philhealth Accredited facilities totaled two hundred fourteen (214). However, other hospitals not listed in Table 94 and 95 are still on the process with their license in accreditation by PhilHealth.

The 18 government health facilities have a combined bed capacity of 1,024; includes one (1) medical center, one (1) provincial hospital, nine (9) district hospitals, four (4) primary care facility (infirmary/dispensary), two (2) general hospital (LGU) and one (1) military hospital.

Among the eighteen (18) Government Health facilities in the province, thirteen (13) were classified as general with Level 1 service capability: (1) Apacible Memorial District Hospital (Nasugbu); (2) Batangas Provincial Hospital (Lemery); (3) Bauan General Hospital (Bauan); (4) Don Manuel Lopez Memorial District Hospital (Balayan); (5) Fernando Airbase Hospital (Lipa City); (6) Laurel Memorial District Hospital; (7) Lipa City District Hospital (Lipa City); (8) Lobo District Hospital (Lobo); (9) Mahal na Virgen Maria Sto. Rosario District Hospital (Rosario); (10) Martin Marasigan Memorial Hospital (Cuenca); (11) Ospital ng Lipa (Lipa City); (12) San Jose District Hospital (San Jose); and (13) San Juan District Hospital (San Juan). Batangas Medical Center was classified as general with Level 3 while Laurel Memorial District Hospital, Ospital ng Nasugbu, Calatagan Medicare Center, and Dr. Ernesto H. Malabanan Memorial Hospital were primary care facility service capability. Meanwhile, Sto. Tomas Municipal Hospital still has no classification to the type of services provided.

Health, preventive, and curative medical services of these eighteen (18) government hospitals are augmented and complemented by the existence of sixty (60) private health care facilities located in different cities and municipalities in the province. Fifty (50) private hospitals with a combined bed capacity of 2,464 were classified as general with varying service capability as follows: three (3) are categorized as Level 3, seventeen (17) Level 2, twenty-three (23) Level 1, one (1) primary and six (6) infirmary. However, the seven (7) private hospitals were not yet classified. There was also three (3) private infirmary health facility with a combined bed capacity of 31. Over-all, private health facilities in the province have a combined bed capacity of 2,495.

The presence of other health care facilities such as RHUs and BHS facilitates health and medical services accessibility to Batangueňos since these facilities are located in almost all barangays of the Province.

Table 5.14: Number of Health Facilities, 2020

FACILITIES	NUMBER	
Private Health Care Facilities	**60**	
Hospitals		57
Primary Care Facility (Infirmary/Despensary)		3
Government Health Care Facilities	**18**	
Medical Center		1
Provincial Hospital		1
District Hospitals		9
Primary Care Facility (Infirmary/Despensary)		4
General Hospital (LGU)		2
Military Hospital		1
Rural Health Units	**52**	
Municipalities		37
Batangas City		7
Lipa City		5
Sto. Tomas City		1
Tanauan City		2
Barangay Health Stations	**706**	
Municipalities		483
Batangas City		83
Lipa City		65
Sto. Tomas City		30
Tanauan City		45
Health and Wellness Center	**1**	
Social Hygiene Clinic	**3**	
Animal Bite and Treatment Centers	**16**	
Birthing Home	**41**	
City Health Office	**1**	
Drug-Abuse Treatment ad Rehabilitation Center	**2**	
Philhealth Accreditation		
PCB1 (Primary Care Benefit 1)	**40**	
TBDOTS (Tuberculosis-Directly Observed Treatment, Short Course)	**34**	
MCP (Maternal Care Package)	**117**	
Animal Bite Package Provider	**6**	
Free Standing Dialysis Clinic	**8**	
Z-Benefit Package		
Acute Lymphocyctic Leukemia		1
Breast Cancer		2
Cervical Cancer		1
Prostate Cancer		1
Coronary Artery Bypass Graft (CABG)		1
Kidney Transplant (KT)		1
Ventricular Septal Defect (VSD)		1
HIV Treatment Hub	**1**	

Data Source: Provincial Health Office (PHO), 2020

Table 5.15: List of Government Facilities in Batangas: 2020

	NAME OF HOSPITAL	LGU LOCATION	BED CAPACITY	CLASSIFICATION	SERVICE CAPABILITY
1	Apacible Memorial District Hospital	Nasugbu	50	General	Level 1
2	Batangas Medical Center	Batangas City	400	General	Level 3
3	Batangas Provincial Hospital	Lemery	50	General	Level 1
4	Bauan General Hospital	Bauan	45	General	Level 1
5	Calatagan Medicare Center	Calatagan	25		Infirmary
6	Don Manuel Lopez Memorial District Hospital	Balayan	50	General	Level 1
7	Dr. Ernesto H. Malabanan Memorial Hospital	Laurel	10		Infirmary
8	Fernando Airbase Hospital	Lipa City	70	General	Level 1
9	Laurel Memorial District Hospital	Tanauan City	25	General	Primary Care Facility
10	Lipa City District Hospital	Lipa City	75	General	Level 1
11	Lobo District Hospital	Lobo	14	General	Level 1
12	Mahal na Virgen Maria Sto. Rosario District Hospital	Rosario	30	General	Level 1
13	Martin Marasigan Memorial Hospital	Cuenca	25	General	Level 1
14	Ospital ng Calaca	Calaca	35		Level 1
15	Ospital ng Lipa	Lipa City	70	General	Level 1
16	Ospital ng Nasugbu	Nasugbu			Infirmary
17	San Jose District Hospital	San Jose	25	General	Level 1
18	San Juan District Hospital	San Juan	25	General	Level 1
19	Santo Tomas Municipal Hospital	Santo Tomas			

Data Source: Provincial Health Office (PHO), 2020

Table 5.16: Private Hospitals- Batangas Province: 2020

	NAME OF HOSPITAL	LOCATION	BED CAPACITY	CLASSIFICATION	SERVICE CAPABILITY
1	Asssumpta Medical Hospital	Taal	12	General	Infimary
2	Balayan Bayview Hospital and Medical Center	Balayan	45	General	Level 1
3	Batangas Health Care Hospital, Jesus of Nazareth	Batangas City	139	General	Level 2
4	Bauan Doctors General Hospital	Bauan	100	General	Level 2
5	C. P. Reyes Hospital	Tanauan City	137	General	Level 2
6	Central Azucarera Don Pedro Hospital	Nasugbu	20	General	Level 1
7	Christ the Saviour General Hospital Inc.	Rosario	18	General	Level 1
8	Daniel O. Mercado Medical Center	Tanauan City	127	General	Level 3
9	Divine Care Hospital Multi-Services Corporation	San Juan	21	General	Level 1
10	Divine Love General Hospital	Lipa City	35	General	Level 1
11	Dr. Kison's Clinic	Lipa City			
12	Dr. Mario D. Bejasa General Hospital	Bauan	27	General	Level 1
13	Dr. Romeo I. Rosales General Hospital	Padre Garcia	16	General	Infimary
14	Dra. Araceli D. Mendoza Memorial Medical Clinic	Lipa City			
15	Duque General Hospital	San Juan	10	General	Infimary
16	Golden Gate General Hospital	Batangas City	100	General	Level 2
17	Gonzales Medical and Children Hospital	Tanauan City	38	General	Level 1
18	H.M. Corachea General Hospital	Tanauan City	38	General	Level 1
19	Holy Family Medical Clinic	Lipa City			
20	Hospital De San Juan Bautista	Lian			
21	Jabez Hospital	Nasugbu	25	General	Level 1
22	Lemery Doctors Medical Center	Lemery	40	General	Level 2
23	Lipa Medix Medical Center	Lipa City	150	General	Level 2
24	Mabini General Hospital	Mabini	35	General	Level 1
25	Mary Mediatrix Medical Center	Lipa City	200	General	Level 3
26	Medical Center Western Batangas	Balayan	40	General	Level 2
27	Metro Balayan Medical Center	Balayan	58	General	Level 2
28	Metro Lemery Medical Center	Lemery	72	General	Level 2
29	Metro Lipa Medical Center	Lipa City	48	General	Level 2
30	Metro San Jose Medical Center	San Jose	50	General	Level 2

Data Source: Provincial Health Office (PHO), 2020

(Continuation) Table 5.16: Private Hospitals- Batangas Province: 2020

	NAME OF HOSPITAL	LOCATION	BED CAPACITY	CLASSIFICATION	SERVICE CAPABILITY
31	Metropolitan Medical Center - Nasugbu	Nasugbu	50	General	Level 1
32	N. L. Villa Memorial Medical Center	Lipa City	99	General	Level 2
33	Ospital ng Calaca	Calaca	35	General	Level 1
34	Our Lady of Caysasay Medical Center	Lemery	100	General	Level 2
35	Palma-Malalaluan Medical Center	Rosario	25	General	Level 1
36	Queen Mary Hospital	Ibaan	15	General	Level 1
37	Saint James the Great Hospital	Ibaan	12	General	Level 1
38	Saint Vincent de Paul Hospital	Sto. Tomas	15	General	Level 1
39	Salazar Polyclinic	Lemery	15	General	Level 1
40	San Antonio Medical Center of Lipa, Inc.	Lipa City	25	General	Level 2
41	San Juan Doctors Hospital Inc.	San Juan	28	General	Level 1
42	Santo Tomas General Hospital	Sto. Tomas	18	General	Level 1
43	Silva's Medical Clinic	Tanauan City	10	General	Level 1
44	Solomon Hospital	San Juan	6	General	Primary
45	St. Andrew Hospital	San Juan	25	General	Level 1
46	St. Francis Cabrini Medical Center Inc.	Sto. Tomas	100	General	Level 2
47	St. Martin General Hospital	Lemery			
48	St. Nazarius Medical Clinic	Malvar	12	General	Infimary
49	St. Nicholas Doctors Hospital	San Nicolas			
50	St. Patrick's Hospital Medical Center	Batangas City	100	General	Level 3
51	Sto. Niño Medical Clinic	Cuenca			
52	Sto. Rosario Hospital	Rosario	50	General	Level 1
53	Taal Polymedic Hospital & Medical Center	Taal	40	General	Level 2
54	Tuy General Hospital	Tuy	17	General	Infimary
55	United Doctors of St. Camillus De Lellis Hospital	Batangas City	41	General	Level 2
56	Untalan General Hospital	Rosario	12	General	Level 1
57	Zigzag Hospital	Mabini	13	General	Infimary

Data Source: Provincial Health Office (PHO), 2020

Table 5.17. Private Health Care Facility – Batangas Province 2020

	NAME OF HOSPITAL	LOCATION	BED CAPACITY	CLASSIFICATION	SERVICE CAPABILITY
1	Lipa Doctors Hospital	Lipa City		Infirmary	
2	Mataasnakahoy Community Hospital	Padre Garcia	11	Infirmary	
3	Little Angels Medical Hospital	Lemery	20	Infirmary	

Data Source: Provincial Health Office (PHO), 2020

As the Provincial Government thru the Provincial Health Office (PHO) is committed to uplift the health status in the province through promotive, preventive, curative, and rehabilitative aspects of health delivery, among the Projects under the Health Services and Facilities Enhancement Program which steadfastly being implemented are as follows :

- All Life Stages Projects
- Maternal Health Projects
- Child Health Projects

- Intensification and Promotion of Adolescent Health and Development Projects
- Expanded Program on Immunization
- Gender and Development Projects
- Activities for Senior Citizens
- Prevention and Control of Infectious Diseases
- Rabies Prevention and Control Projects
- STI/HIV-AIDS Prevention and Control Projects
- Leprosy Prevention and Control Projects
- Vector-Borne Diseases Prevention and Control Projects (Dengue Prevention and Control Program)
- Projects on Non-Communicable Diseases
- Hypertension and Diabetes Prevention and Control Projects
- Renal Disease Prevention and Control Projects
- Healthy Lifestyle Projects
- Projects for Person's with Disability
- Mental Health and Psychosocial Support Projects
- Voluntary Blood Services Projects
- Oral Health Services Projects
- Integrated Disease Surveillance and Response Projects
- Health Emergency Preparedness and Response Projects
- Health Education and Promotion Projects
- Other Health Projects
- Health Services Information and Management Projects
- Health Governance, Financing and Regulation Projects
- Human Resources for Health Projects
- Environmental Health and Sanitation
- Health Facility Services and Development

5.2.2 Health Statistics as to General Health Situation

Health statistics are numbers that summarize information related to health. Health statistics and data are important because they measure a wide range of health indicators for a community. Health data provide comparisons for clinical studies, can be used to assess costs of health care, can help identify needed prevention targets, and are important for program planning and evaluation by finding a baseline against which to measure in the evaluation phase.

The following statistics presented in the foregoing tables show the general health situation in the Province of Batangas. These include the number of live births, deaths, the ten leading causes of morbidity for years 2019 and 2020; Ten Leading Causes of Mortality for 2019 and 2020; and relative data for maternal, infant, and child health. Likewise, statistics for Philhealth coverage in the Province for years 2018 and 2019 per LGU is included.

Recorded live birth figures show that for 2020 total live births decreased by 26% as compared to 2019. Only 29, 411 total livebirths were recorded in 2020 as compared to 34,764 in 2019.

Meanwhile, Cities of Lipa and Tanauan, recorded positive increase in live births with 56% and 85% increase respectively.

Table 5.18: Number of Live Births by Sex and By Province/ City, 2019 & 2020

PROVINCE/CITY	2019		2019 TOTAL	2020	2020-2019	%
	MALE	FEMALE				
*Batangas (Mun.)	13,274	12,431	25,705	19,030	**-6,675**	**-26%**
Batangas City	2,442	2,224	4,666	2,830	**-1,836**	**-39%**
Lipa City	983	1,046	2,029	3,173	**1,144**	**56%**
Tanauan City	1,235	1,129	2,364	4,378	**2,014**	**85%**
TOTAL	**17,934**	**16,830**	**34,764**	**29,411**	**-5,353**	**-15%**

** Consists of 30 Municipalities and 1 City*
Data Source: Field Health Survey Information System (FHSIS) 2020

Table 5.19 shows the number of deaths recorded in the province in 2020 totalled to 10,557 deaths. As compared to 2019 with a total of 12,377 deaths, there was a decrease by 1,820 deaths or 15%.

Batangas City and Tanauan City recorded a positive increase with 0.47% and 47% increase respectively. In both years, males recorded higher number of deaths as compared to females. In 2019, there were 1,499 more males compared to females, while in 2020 1,553 males more to females death.

Table 5.19: Number of Deaths by Province/ City/Municipality, 2019 & 2020

PROVINCE/CITY	2019		2019 TOTAL	2020		2020 TOTAL	2020-2019	%
	MALE	FEMALE		MALE	FEMALE			
*Batangas (Mun.)	4,176	3,264	7,440	3,519	2,612	6,131	**-1,309**	**-18%**
Batangas City	1,065	835	1,900	1,094	815	1,909	**9**	**0.47%**
Lipa City	1246	956	2,202	751	536	1,287	**-915**	**-42%**
Tanauan City	451	384	835	691	539	1,230	**395**	**47%**
TOTAL	**6,938**	**5,439**	**12,377**	**6,055**	**4,502**	**10,557**	**-1,820**	**-15%**

Data Source: Provincial Health Office Data (2020)

Morbidity is defined as the incidence or prevalence of a disease or all diseases in a population or a departure from a state of physical or psychological well-being, resulting from disease, illness, injury, or sickness, especially where the affected individual is aware of his or her condition, Table 98 shows the ten leading causes of morbidity.

In 2019 and 2020, acute upper respiratory infection remains the top cause of morbidity in the province. Other causes of morbidity that are common for 2019 and 2020 are Acute Lower Respiratory Infection that ranked 2nd and 4th; essential Hypertension and Hypertensive Diseases that ranked 3rd; Other disorders of Urinary System which ranked 5th and 6th; and Injuries to an unspecified part of the body region that ranked 9th and 5th, respectively.

Other recorded causes of morbidity include fever of unknown origin, Viral Infection of unspecified sites, Acute nasopharyngitis (common cold) Acute rhinitis (coryza), Cough, Certain early complication of trauma (not elsewhere classified), Mumps, Influenza and Pneumonia, Nutritional Deficiencies, Intestinal Infections Diseases and Asthma/Baiae.

According to the World Health Organization (WHO), morbidity could be measured in terms of (1) the number of persons who were ill; (2) illnesses these persons experienced; and (3) the duration of these illnesses.

Table 5.20: Ten Leading Causes of Morbidity, 2019 & 2020

2019		2020	
CAUSES OF MORBIDITY	**NO.**	**CAUSES OF MORBIDITY**	**NO.**
1. Acute Upper Respiratory Infections of Multiple and Unspecified Sites	68, 440	1.Respiratory Infections/Acute Upper Respiratory Infections	55,454
2. Unspecified Acute Lower Respiratory Infection (Acute Respiratory Infection)	13, 011	2. Viral Infections(Mumps)	11,122
3. Essential (primary) Hypertension	12, 533	3. Hypertensive Diseases	11,046
4. Fever of unknown origin	11, 510	4. Acute Lower Respiratory Infection (Ari) Bacterial	8,258
5. Other Disorders of Urinary System	10, 742	5. Injuries To Unspecified Part Of Trunk,Limb Or Body Region	8,063
6. Viral Infection of unspecifies sites	7, 882	6. Other Disorders Of Urinary System	7,630
7. Acute nasopharyngitis (common cold) Acute rhinitis (coryza)	7, 081	7. Influenza And Pneumonia	2,735
8. Cough	6, 947	8. Nutritional Dificiencies	1,580
9. Injury of Unspecified Region	4, 424	9.Intestinal Infections Diseases	1,374
10. Certain early complication of trauma (not elsewhere classified)	3, 453	10. Asthma/Baiae	1,012

Data Source: Provincial Health Office (PHO,) 2020

Mortality is a health statistic that corresponds to the total number of deaths per unit time in a population divided by the population's number or it is defined as a relative incidence of death within a particular group categorized according to age or by some other factor.

In 2020, 822 Batangueños died due to acute myocardial infraction. Acute myocardial infarction is the medical name for a heart attack. A heart attack is a life-threatening condition that occurs when blood flow to the heart is abruptly cut off, causing tissue damage. This is usually the result of a blockage in one or more of the coronary arteries. A blockage can develop due to a buildup of plaque, a substance mostly made of fat, cholesterol, and cellular waste products.

Pneumonia, organism unspecified account as the 2nd leading cause of mortality both for 2019 and 2020. Pneumonia is an infection that inflames the air sacs in one or both lungs. The air sacs may fill with fluid or pus (purulent material), causing cough with phlegm or pus, fever, chills, and difficulty breathing. A variety of organisms, including bacteria, viruses, and fungi, can cause pneumonia.

The third cause of mortality with 404 deaths is due to Hypertensive Diseases. Hypertensive Diseases is a condition caused by high blood pressure.

Type II Diabetes ranked as the fourth leading cause of mortality in the province with 250 recorded deaths. Type II Diabetes, the most common type of diabetes, is a disease that occurs when your blood glucose, also called blood sugar, is too high. This long-term (chronic) condition results in too much sugar circulating in the bloodstream. Eventually, high blood sugar levels can lead to disorders of the circulatory, nervous and immune systems.

The fifth (5th) leading cause of mortality for 2020 in the province accounts for Cardiac Arrest with recorded 218 deaths. Cardiac arrest is a sudden loss of blood flow resulting from the failure of the heart to effectively pump. Symptoms include loss of consciousness and abnormal or absent breathing.

Ranked 6th in 2020 for mortality is Chronic Renal Failure - is a condition involving a decrease in the kidneys' ability to filter waste and fluid from the blood. It is chronic, meaning that the condition develops over a long period of time and is not reversible. The condition is also commonly known as chronic kidney disease (CKD).

Ranked 7th with 149 deaths are due to Chronic obstructive pulmonary disease (COPD) is a chronic inflammatory lung disease that causes obstructed airflow from the lungs. Symptoms include breathing difficulty, cough, mucus (sputum) production, and wheezing. It is typically caused by long-term exposure to irritating gases or particulate matter, most often from cigarette smoke. People with COPD are at increased risk of developing heart disease, lung cancer, and a variety of other conditions.

Acute Upper Respiratory Infections (URI) is the 8th leading cause of mortality with 144 recorded deaths. Acute URI are short-term infections of the nose and throat caused by viruses or bacteria.

The ninth leading cause of mortality in the province for 2020 is Cerebral Infarction; (also known as a stroke) refers to damage to tissues in the brain due to a loss of oxygen to the area. This accounts to 142 deaths.

The tenth leading cause of mortality in the province for 2020 is Malignant Neoplasm of Breast. Breast cancer as commonly known, is a malignant tumor that grows in or around the breast tissue, mainly in the milk ducts and glands. A total of 135 deaths was recorded.

As shown in the Table below, common leading causes of mortality in the province both for 2019 and 2020 are Acute Myocardial Infarction, Pneumonia, Acute Respiratory Infections, Hypertension or Hypertensive diseases and Cardia Arrest.

Table 5.21: Ten Leading Causes of Mortality, 2019 & 2020

2019		2020	
CAUSES OF MORTALITY	NO.	CAUSES OF MORTALITY	NO.
1. Acute Myorcardial Infraction	921	1. Acute Myocardial Infarction	822
2. Pneumonia, Organism unspecified	642	2. Pneumonia	489
3. Other ill defined and unspecified causes of mortality	450	3. Hypertensive Diseases	404
4. Acute Upper Respiratory Infections of multiple and unspecified sites	310	4.Type II Diabetes Mellitus	250
5. Other Symptoms and signs involving the circulatory and respiratory system	295	5. Cardiac Arrest	218
6. Cardiac Arrest	232	6. Chronic Renal Failure	166
7. Complications and ill defined description of heart disease	229	7. Chronic Obstructive Pulmonary Disease	149
8. Other Chronic obstructive disease	208	8. Acute Upper Respiratory Infections	144
9. Essential (primary)hypertension	193	9. Cerebral Infarction	142
10. Respiratory failure, not elsewhere classified	174	10. Malignant Neoplasm Of Breast	135

Data Source: Provincial Health Office (PHO,) 2020

Health is always a priority in the province. The Provincial Government of Batangas always allots big sum of its Annual Budget for health services and projects.

The implementation of various health services like provision of Health Card to volunteers, which started in 2018 with a total of 30,000 volunteers (based on PSWDO record). This Health Card aims to provide medical assistance to Barangay Volunteers in accessing health services in the 12 District Hospitals extended to their immediate family.

PhilHealth is a tax-exempt Government Corporation attached to the Department of Health for policy coordination and guidance. The implementation of PhilHealth membership or health insurance coverage in all LGUs of the province from 2014 to 2019 is reflected in Table 5.22.

In recent years, PhilHealth has primarily reported “coverage rate” or the entitlement of members based on premium payments. But with the signing of the UHC Act (RA11223), all Filipinos are already automatically*** included under the National Health Insurance Program (NHIP) – making PhilHealth’s coverage rate at 100%.

PhilHealth Beneficiaries are referred to as Members plus their respective qualified Dependents

Table 5.22: Number of Local Citizens with PhilHealth Coverage per LGU, 2014 to 2019

CITY/ MUNICIPALITY	NUMBER OF CITIZENS					
	2014	2015	2016	2017	2018	2019
Agoncillo	15,925	17,174	14,949	29,535	29,535	29,535
Alitagtag	13,274	14,002	12,586	23,340	23,340	23,340
Balayan	37,136	40,665	35,356	70,410	70,410	70,410
Balete	11,658	12,263	11,208	19,216	19,216	19,216
Batangas City	181,561	187,679	-	341,911	341,911	341,911
Bauan	43,586	46,589	36,377	89,160	89,160	89,160
Calaca	32,043	33,795	33,507	59,807	59,807	59,807
Calatagan	19,121	21,706	20,420	35,326	35,326	26,564
Cuenca	14,656	15,610	14,628	29,025	29,025	29,025
Ibaan	22,065	24,796	21,690	45,227	45,227	45,227
Laurel	14,441	16,038	15,027	26,952	26,952	26,952
Lemery	38,003	40,585	32,907	71,536	71,536	71,536
Lian	18,912	20,994	19,742	33,578	33,578	33,578
Lipa City	152,891	161,495	149,969	319,531	319,531	319,531
Lobo	15,090	16,448	14,763	27,035	27,035	27,035
Mabini	22,811	24,462	18,760	44,597	45,300	45,300
Malvar	28,240	29,750	28,267	62,009	62,009	62,009
Mataas na Kahoy	13,706	14,615	13,612	27,443	27,443	27,443
Nasugbu	45,282	49,712	47,260	87,343	87,343	87,343
Padre Garcia	21,343	22,266	21,073	42,210	42,210	42,210
Rosario	48,170	50,783	47,235	95,550	95,550	95,550
San Jose	32,864	35,002	30,856	65,521	65,521	65,521
San Juan	40,245	44,688	43,426	76,747	3,580	4,451
San Luis	15,682	16,740	14,571	28,885	28,885	28,885
San Nicolas	9,655	10,190	8,558	17,639	17,639	12,354
San Pascual	29,023	31,232	24,089	62,348	62,348	62,348
Santa Teresita	8,497	9,010	7,823	15,828	15,828	15,828
Santo Tomas	68,537	72,418	69,097	147,380	147,380	68,670
Taal	26,135	27,928	23,854	48,392	48,392	48,392
Talisay	21,213	21,623	18,934	38,645	808	808
Tanauan City	95,027	99,879	86,201	179,720	179,720	179,720
Taysan	16,772	17,867	15,773	31,421	31,421	31,421
Tingloy	8,012	8,220	7,710	12,745	12,745	12,745
Tuy	17,461	19,154	17,688	32,301	32,301	32,301

Data Sources: 2021 Regional Social and Economic Trends CALABARZON

5.2.3 Child Health

The Provincial Government thru its Provincial Health Office (PHO) implements various programs and activities for child health. This includes the Expanded Program on Immunization, Integrated Child Growth Standard (CGS) Infant and Young Feeding (IYCF) Projects, New Born Screening, and Integrated Management of Childhood Illness.

The Expanded Program on Immunization (EPI) was established in 1976 to ensure that infants/children and mothers have access to routinely recommended infant/childhood vaccines. The Expanded Program on Immunization (EPI) of the Department of Health is a priority public health program aimed at reducing the morbidity and mortality among children against the seven vaccine-preventable diseases: polio, measles, neonatal tetanus, diphtheria, pertussis, hepatitis B, and extra pulmonary tuberculosis.

A Fully Immunized Child (FIC) must have completed Bacille Calmette-Guerin (BCG) Vaccine, Hepatitis (HEPA) B1, Pentavallent (PENTA) 1, PENTA 2, PENTA 3, Oral Poliovirus Vaccine (OPV) 1, OPV 2, OPV 3, Meningococcal vaccine (MCV) 1 (AMV), MCV 2 Measles-Mumps-Rubella vaccines(MMR), Rota Virus Vaccine (ROTA) 1, ROTA 2, Pneumococcal Conjugate Vaccine (PCV) 1, PCV 2 AND PCV 3 vaccines before the child is 12 months of age.

The number of fully immunized children in the province for years 2019 and 2020 are reflected in Table 5.23 where at least 47.76% in 2019 and 54.13% in 2020 of eligible children for immunization were given the complete shots.

Batangas City and Tanauan City recorded a slight decrease in percentage of fully immunized children between 2019 and 2020 with almost 1% and 13% respectively.

Table 5.23: Fully Immunized Children by Province/City, 2019 & 2020

PROVINCE/CITY	2019			2020		
	Elig. Pop.	No.	%	Elig. Pop.	No.	%
Batangas Province	55,095	27,489	49.89%	37,782	22,327	59.09%
Batangas City	9,780	4,889	49.99%	6,823	3,280	48.07%
Lipa City	9,852	2,136	21.68%	6,743	2,065	30.62%
Tanauan City	5,135	3,629	70.67%	3,584	2,061	57.51%
TOTAL	**79,862**	**38,143**	**47.76%**	**54,932**	**29,733**	**54.13%**

Data Source: Provincial Health Office (PHO,) 2020

5.2.4 *Vaccine - Preventable Diseases*

Vaccine-preventable diseases are real threats to children who are not properly protected. Each year children do get sick, and some of them die from illnesses such as influenza (flu), pertussis and meningitis. Reducing and eliminating the diseases that vaccines prevent is one of the top achievements in the history of public health.

Vaccination protects children from serious illness and complications of vaccine-preventable diseases which can include amputation of an arm or leg, paralysis of limbs, hearing loss, convulsions, brain damage and death.

Vaccination is safe and effective. All vaccines undergo long and careful review by scientists, doctors and the government to make sure they are safe.

Table 5.24: Vaccine – Preventable Diseases, BCG, HEPA B1 and PENTA: 2019-2020

Year	Bacille Calmete Guerin Vaccine (BCG)			Hepatitis B (HEPA) B1						Infanrix Vaccine (PENTA)								
				WITHIN 24 HOURS			>24 HOURS			1			2			3		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
2019	21,752	20,405	42,157	20,348	19,094	39,442	466	423	889	24,431	22,822	47,253	24,420	22,897	47,317	24,147	22,539	46,686
2020	17,053	15,802	32,855	15,657	16,389	34,046			no data			no data			no data			no data

Data Source: Provincial Health Office (PHO,) 2020

BCG stands for Bacille Calmette Guerin. It is an effective immunization against tuberculosis. BCG is a weakened (attenuated) version of bacteria called Mycobacterium bovis which is closely related to Mycobacterium tuberculosis, the agent responsible for tuberculosis. The number of children immunized with BCG dropped from 42,157 in 2019 to 32,855 in 2020.

Hepatitis B vaccine is a vaccine that prevents hepatitis B. The first dose is recommended within 24 hours of birth with either two or three more doses given after that. In the above table, there were 39,442 babies vaccinated with HEPA B within 24 hours in 2019 while there were 34,046 babies in 2020. On the other hand, only data in 2019, 889 received HEPA B after 24 hours. No data available for 2020 due to pandemic reason.

Infanrix Penta is a vaccine used in children to prevent five diseases: diphtheria, tetanus (lockjaw), pertussis (whooping cough), hepatitis B and poliomyelitis (Polio). Penta vaccine is given in three doses. In 2019, the total number of recipients of PENTA 1 is 47,253; PENTA 2 is 47,317 and PENTA 3 is 46,686. No data available for 2020.

The Oral Polio Vaccine (OPV) was developed in 1961 by Albert Sabin. Also called “Trivalent Oral Polio Vaccine” or “Sabin Vaccine”, OPV consists of a mixture of live, attenuated (weakened) poliovirus strains of all three poliovirus types. OPV produces antibodies in the blood to all three types of poliovirus. In the event of infection, these antibodies protect against paralysis by preventing the spread of wild poliovirus to the nervous system

OPV is the preferred vaccine for most children. As its name suggests, it is given by mouth. Infants and children should be given four doses of OPV. The doses are given at 2 months, 4 months, 6-18 months and 4-6 years of age.

As shown in Table 5.25, the total recipients in 2019 are as follows: 46,561 - OPV 1; 46,661 - OPV 2; and 45,988 - OPV 3. While in 2020, the total recipients are as follows: 36,252 - OPV 1; 35,953 - OPV 2; and 35,910 - OPV 3.

Meningococcal vaccine (MCV) refers to any of the vaccines used to prevent infection by Neisseria meningitidis. Different versions are effective against some or all of the following types of meningococcus: A, C, W135, and Y.

MCV 1 is the first dose of the vaccine provided during 9 months to 11 months old. Based on Table 105, there are 47,366 recipients in 2018 while there are 45, 207 recipients in 2019.

The MMR vaccine is an immunization vaccine against measles, mumps, and rubella. It is a mixture of live attenuated viruses of the three diseases, administered via injection.

MMR is a two-shot series of vaccines usually given during childhood. A child should receive the first shot between 12-15 months, and the second between 4-6 years of age. In 2019, there are 45,167 children vaccinated for MCV1-AMV while 45,880 children were vaccinated with MCV2 - MMR. In 2020, 36,267 children were vaccinated with MCV 1 – AMV of which 18,832 were males and 17,435 were females. Those vaccinated with MCV2 – MMR accounted to 34,569, of which 17,808 were males and 16,761 were females.

Table 5.25: Vaccine – Preventable Diseases, OPV and MCV: 2019 & 2020

Year	Oral Polio Vaccine (OPV)									Meningococcal Vaccine (MCV1)			Meningococcal Vaccine (MCV2)		
	1			2			3			Attenuated Measles Vaccine (AMV)			Measles, Mumps and Rubella Vaccines (MMR)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
2019	24,100	22,461	46,561	24,062	22,599	46,661	23,732	22,296	46,028	23,533	21,634	45,167	23,782	22,098	45,880
2020	19,030	17,222	36,252	18,736	17,217	35,953	18,707	17,203	35,910	18,832	17,435	36,267	17,808	16,761	34,569

Data Source: Provincial Health Office (PHO,) 2020

Rotavirus is the leading cause of severe acute gastroenteritis (vomiting and severe diarrhea among children worldwide. Rotavirus vaccine is given orally to babies between 6 and 14 weeks old. It helps prevent infection to rotavirus, which is a common cause of severe diarrhea in children under five years old. Rotavirus vaccination is provided free by the Philippine government since 2012 to curb the high mortality rate of children who die from diarrheal diseases.

As shown in Table 5.26, in 2019, there are 1,212 children who received ROTA 1 or first dose while a total of 160 children received the ROTA 2 or second dose. No data available for 2020

Pneumococcal Conjugate Vaccine (PCV) against pneumonia was introduced and included in the Expanded Program on Immunization (EPI) last July 2013. PCV was initially integrated to 333,000 infants aged between six months to 11 months old residing in the provinces and cities of Caraga and the ARMM. These infants represent the 14% of the 2.4 million target infants nationwide. This vaccine will protect children not only against pneumonia but also against other pneumococcal infections like meningitis and otitis media or hearing infection.

Introduced only in 2014, PCV is given in three doses. Total recipients in 2019 are as follows: 15,009 recipients for PCV 1; 10,325 for PCV 2 and 2,956 for PCV 3. In 2020, there are 33,850 recipients for PCV 1; 33,194 for PCV 2 and 30,211 for PCV 3.

Over-all, the Department of Health (DOH) Expanded Program on Immunization provides free vaccines that protect infants and children from the common vaccine preventable diseases. Vaccines include BCG for childhood tuberculosis, rotavirus vaccine, Measles-Mumps Rubella vaccines (MMR), polio vaccine, and pentavalent vaccine, which is a combination of Diphtheria-Pertusis-Tetanus-Hepatitis B-Haemophilus influenza vaccines.

Table 5.26: Vaccine – Preventable, ROTA and PCV; 2019 & 2020

Year	Rotavirus Vaccine (ROTA)						Pnuemococcal Conjugate Vaccine (PCV)								
	1			2			1			2			3		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
2019	607	605	1,212	79	81	160	7,698	7,311	15,009	5,242	5,083	10,325	30	2,926	2,956
2020			no data				17,818	16,032	33,850	17,308	15,886	33,194	15,629	14,582	30,211

Data Source: Provincial Health Office (PHO,) 2019

5.2.5 Malnutrition

Malnutrition is a group of conditions in children and adults generally related to poor quality or insufficient quantity of nutrient intake, absorption, or utilization.

Operation Timbang (OPT) Plus is the annual weighing of all preschoolers 0-71 months old or below six years old in a community to identify and locate the malnourished children. Data generated through OPT Plus are used for local nutrition action planning, particularly in quantifying the number of malnourished and identifying who will be given priority interventions in the community. Moreover, results of OPT Plus provide information on the nutritional status of the preschoolers and the community in general, thus, providing information on the effectiveness of the local nutrition program.

In 2019, nutritional status of children in the whole province are as follows : 566 boys and 572 girls - severely underweight; 2,462 boys and 2,144 girls – underweight; 108,041 boys and 101,100 girls - normal and 2,786 boys and 1,960 girls - overweight.

In 2020, severely underweight – 403 boys and 438 girls; underweight – 1,616 males and 1,476 girls; normal – 82,227 males and 75,860 females and for overweight, 1,661 males and 1,151 females.

Table 5.27: Nutritional Status of Children 0-71 Months by Sex and By Province/City

Province/City	2019								2020							
	Severely		Underweight		Normal		Overweight		Severely		Underweight		Normal		Overweight	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Batangas Province	297	314	1,284	1,201	79,450	74,628	1,719	1,226	276	323	1,140	1,103	68,325	63,106	1,328	893
Batangas City	99	91	478	349	11,825	11,122	340	216	92	73	324	255	10,220	9,398	254	184
Lipa City	112	107	452	375	13,621	12,490	553	407	-	-	-	-	-	-	-	-
Tanauan City	58	60	248	219	3,145	2,860	174	111	35	42	152	118	3,682	3,356	79	74
Total	**566**	**572**	**2,462**	**2,144**	**108,041**	**101,100**	**2,786**	**1,960**	**403**	**438**	**1,616**	**1,476**	**82,227**	**75,860**	**1,661**	**1,151**

Note: - no data available
Data Sources: 2021 Regional Social and Economic Trends CALABARZON

Infant mortality refers to deaths of young children, typically those less than one year of age. The Infant Mortality Rate (IMR) measures it, which is the number of deaths of children under one year of age per 1,000 live births.

Total recorded live births in the province for 2019 is 32,149; infant deaths totalled to 173 with average infant mortality rate of 5.38 for all the 34 LGUs. In 2020, recorded live births decreased to 29,411; infant deaths decreased to 111 or 3.77%, hence, average infant mortality rate for the province decreased by 1.61% from the previous recorded IMR in 2019.

Table 5.28: Infant Mortality Rate by Province/City, 2019 - 2020

Province/City	2019			2020		
	Live Births	Mortality	IMR %	Live Births	Mortality	IMR %
Batangas Province	16,843	79	4.69	19,030	43	2.26
Batangas City	4,282	25	5.84	2,830	20	7.07
Lipa City	7,383	56	7.58	3,173	44	13.87
Tanauan City	3,642	13	3.57	4,378	4	0.91
TOTAL	**32,149**	**173**	**5.38**	**29,411**	**111**	**3.77**

Data Sources: Provincial Health Office (PHO) Data 2020

Child mortality, also known as under-5 mortality or child death, refers to the death of infants and children under the age of five or between the ages of one month to four years.

For 2019 the Child Mortality Rate (CMR) for the province is posted at 8.99%%; however, this figure increased to 15.47% in 2020.

Table 5.29: Child Mortality Rate by Province/City, 2019 - 2020

Province/City	2019			2020		
	Live Births	Mortality	CMR %	Live Births	Mortality	CMR %
Batangas Province	16,843	127	7.54	19,030	68	3.57
Batangas City	4,282	100	23.36	2,830	94	33.22
Lipa City	7,383	52	7.04	3,173	41	12.92
Tanauan City	3,642	10	2.75	4,378	10	2.28
TOTAL	**32,149**	**289**	**8.99**	**13,766**	**213**	**15.47**

Data Sources: Provincial Health Office (PHO) Data 2020

5.2.6 Maternal Health

Maternal health is the health of women during pregnancy, childbirth, and the postpartum period. It encompasses the health care dimensions of family planning, preconception, prenatal, and postnatal care in order to reduce maternal morbidity and mortality.

Complications during pregnancy and childbirth are a leading cause of death and disability among women of reproductive age in developing countries. The Maternal Mortality Ratio (MMR) represents the risk associated with each pregnancy, i.e. the obstetric risk per 100,000 live births.

MMR is the ratio between the number of women who died (for reasons of pregnancy, childbirth and puerperium) to the number of reported live births in a given year, expressed as the number of maternal deaths per 100,000 live births.

As shown in the table, MMR in the province showed a remarkable increased from 12.44% in 2019 to 30.60% in 2020. There are a total of 9 deaths record in 2020. Under the Maternal, Neonatal and Child Health Nutrition (MNCHN) Program of the province, continuous efforts are implemented to address the issues on maternal and child health.

The program includes various activities like information drives, improvement of hospital facilities, establishment andoperation of Basic Emergency Obstetric and Newborn Care (BEmONC) facilities. In the province there are thirty four (34) public BEmONC facilities: 12 District Hospitals BeMONC Trained, 2 CEmONC Hospital Capable and 20 RHUs BEmONC. Facility-based deliveries refer to deliveries in a health facility to the total number of deliveries. Facility-based delivery, the utilization of proper equipment operated by trained midwife-volunteers to ensure safer delivery thereby safeguarding the life of both the child and the mother, is among the project's priority thrust.

Table 5.30: Maternal Mortality Ratio by Province/City, 2019 - 2020

Province/City	2019			2020		
	Live Births	Mortality	MMR %	Live Births	Mortality	MMR %
Batangas Province	16,843	4	23.75	19,030	3	15.76%
Batangas City	4,281	0	0.00	2,830	0	0.00%
Lipa City	7,383	0	0.00	3,173	0	0.00%
Tanauan City	3,642	0	0.00	4,378	6	137.05%
TOTAL	**32,149**	**4**	**12.44**	**29,411**	**9**	**30.60%**

Data Sources: 2020 Regional Social and Economic Trends CALABARZON

5.2.7 Community Health Team

Community Health Team (CHT) formerly known as Women's Health Team (WHT) was introduced as an essential component of the Women's Health and Safe Motherhood (WHSM) intervention framework. It is an effective community-level support system which aims to: (1) ensure that all pregnant and postpartum women and newborns in the community, particularly the poor and disadvantaged, are adequately served; and (2) lead the effort in convincing mothers to shift from home birth to facility-based delivery.

The team is composed of a Rural Health Midwife as the leader in her assigned catchment area, Barangay Health Workers (BHWs), Barangay Nutrition Scholars (BNSs) and Traditional Birth Attendants (TBAs).

The mobilization of CHTs were thru the collaborative effort of the Department of Health (DOH), with the Departments of the Interior and Local Government (DILG), Department of Social Welfare and Development (DSWD), and Department of Education (DepEd) to guarantee that every family in the community is periodically visited and attended by health providers as part of the government's efforts to achieve Kalusugan Pangkalahatan or Universal Health Care.

The CHT Mobilization teams (CHTs) will do a nationwide door-to-door visit to reach all families, especially the poorest Filipino households, identified through the DSWD's National Household Targeting System (NHTS). The CHT Mobilization aims to link these families to social service providers, provide critical social services when needed, and deliver key health messages.

5.2.8 Barangay Health Worker

A Barangay Health Worker (BHW) is one of the front-liners who provide health care services for the members of the barangay. It is an individual who went through training programs under any accredited government or non-government organization to provide basic, safe, and effective health care services to the people of the district. BHW are vital in Barangay Health Centers because they provide assistance and support to physicians, dentists, nutritionists, public health nurses, and midwives. Collectively, they are considered guardians of the nation's health. As shown in Table 5.31, there are 5,795 BHWs in the province as of 2020.

5.2.9 Barangay Nutrition Scholars

Barangay Nutrition Scholars (BNS) are volunteer community workers who are trained in implementing health and nutrition programs in a locality. Their training in food production, food fortification, maternal and child health and nutrition, nutrition information and education, and livelihood assistance helps BNS identify and monitor malnourished pregnant and lactating mothers and children, and provide them counseling on good nutrition practice. In the province, total BNS for 2020 accounts to 1,391.

Table 5.31: Number of Barangay Health Workers / Barangay Nutrition Scholars, 2019

CITIES / MUNICIPALITIES	BHW	BNS		GRAND TOTAL	CITIES / MUNICIPALITIES	BHW	BNS		GRAND TOTAL
		HIM	Non-HIM				HIM	Non-HIM	
Batangas City	208	94	34	336	Mabini	75	49	3	127
Lipa City	308	121	19	448	Malvar	152	37	0	189
Sto. Tomas City	211	38	4	253	Mataasnakahoy	58	17	0	75
Tanauan City	176	49	1	226	Nasugbu	507	47	3	557
Agoncillo	79	28	3	110	Padre Garcia	84	20	0	104
Alitagtag	76	20	0	96	Rosario	251	49	0	300
Balayan	280	49	0	329	San Jose	114	35	0	149
Balete	69	24	1	94	San Juan	486	45	0	531
Bauan	198	49	3	250	San Luis	209	27	0	236
Calaca	246	46	2	294	San Nicolas	71	23	1	95
Calatagan	111	26	0	137	San Pascual	78	39	2	119
Cuenca	170	22	1	193	Sta. Teresita	132	20	0	152
Ibaan	155	27	0	182	Taal	179	50	0	229
Laurel	127	37	0	164	Talisay	95	40	6	141
Lemery	219	47	0	266	Taysan	125	20	0	145
Lian	163	26	0	189	Tingloy	120	16	0	136
Lobo	134	30	0	164	Tuy	129	40	1	170
					Batangas Province	**5,795**	**1,307**	**84**	**7,186**

Data Source: Provincial Health Office (PHO) Data, 2020

5.2.10 Early Childhood Care and Development

Early Childhood Care and Development (ECCD) is a three-year cost-sharing program of the National and Provincial Government that provides the implementation and sustainability of projects implemented to target LGUs through National and Provincial Social Welfare and Development Offices.

In the Philippines, Republic Act (RA) 6972, “An Act Establishing a Day Care Center in Every Barangay, Instituting Therein a Total Development and Protection of Children Program, Appropriating Funds Therefore, and for Other Purposes”, was enacted in November 1990 by the Congress for the establishment of Day Care Centers in every barangay.

Day Care Center (DCC) is defined as a facility in a barangay where children who are 3 to 6 years old are cared for during part of the day.

A Child Development Worker (CDW) formerly known as Day Care Worker/ Volunteer is a child care worker in a Day Care Center providing supplemental parental care and early childhood enrichment activities.

Based on Table 5.32, Batangas Province has a total of 1,172 Day Care Centers (DCCs) and 20 OB Pagsasarili Centers serving day care services. Batangas City and Lipa City have the most number of DCCs at 107 each while San Nicolas and Sta. Teresita has the least with only 13 DCCs. According to Provincial Social Welfare and Development Officer, there are also 3 National Child Development Centers (NCDCs) in the province located in City of Lipa and Municipalities of Agoncillo and Calatagan.

With regards to the Child Development Workers, there is a total of 1,178. Lipa City has the most number with a total of 111, while Sta. Teresita has the least with only 10 CDWs.

Table 5.32:Consolidated Report for Child Development, 2020

CITIES / MUNICIPALITIES	NO. OF BARANGAYS	NO. OF DAY CARE CENTERS	NO. OF OB PAGSASARILI	NO. OF CHILD DEVT. WORKERS
Batangas Province (Total)	**1,078**	**1,172**	**20**	**1,178**
Batangas City	105	107	0	104
Lipa City	72	107	0	111
Tanauan City	48	59	0	59
Sto. Tomas City	30	34	0	35
Agoncillo	21	19	0	21
Alitagtag	19	19	1	19
Balayan	48	47	1	55
Balete	13	18	0	18
Bauan	40	31	0	32
Calaca	40	42	1	45
Calatagan	25	31	0	28
Cuenca	21	27	1	28
Ibaan	26	26	2	27
Laurel	21	27	1	27
Lemery	46	37	0	46
Lian	19	31	0	31
Lobo	26	32	1	33
Mabini	34	32	0	32
Malvar	15	22	0	22
Mataasnakahoy	16	15	0	13
Nasugbu	42	59	1	60
Padre Garcia	18	21	0	23
Rosario	48	52	0	47
San Jose	33	33	0	31
San Juan	42	60	0	52
San Luis	26	22	1	22
San Nicolas	18	13	1	14
San Pascual	29	31	5	26
Sta. Teresita	17	13	1	10
Taal	42	31	1	29
Talisay	21	19	1	19
Taysan	20	18	0	19
Tingloy	15	17	0	17
Tuy	22	20	1	23

Data Source: Provincial Social Welfare and Development (PSWDO), 2020

5.2.11 Environmental Health and Sanitation

Environmental Health and Sanitation refers to activities aimed at improving or maintaining the standard of basic environmental conditions affecting the well-being of people.

These conditions include (1) clean and safe water supply; (2) clean and safe ambient air; (3) efficient and safe animal, human, and industrial waste disposal; (4) protection of food from biological and chemical contaminants and (5) adequate housing in clean and safe surroundings. It is also called environmental hygiene.

The Joint Monitoring Programme (JMP) of World Health Organization (WHO) and United Nations Children's Fund (UNICEF) defines safe drinking water and basic sanitation as follows:

- Drinking water is water used for domestic purposes, drinking, cooking and personal hygiene;
- Access to drinking water means that the source is less than 1 kilometer away from its place of use and that it is possible to reliably obtain at least 20 litres per member of a household per day;
- Safe drinking water is water with microbial, chemical and physical characteristics that meet WHO guidelines or national standards on drinking water quality;
- Access to safe drinking water is the proportion of people using improved drinking water sources: household connection; public standpipe; borehole; protected dug well; protected spring; rainwater.

Basic sanitation is the lowest-cost technology ensuring hygienic excreta and sullage disposal and a clean and healthful living environment both at home and in the neighborhood of users. Access to basic sanitation includes safety and privacy in the use of these services. Coverage is the proportion of people using improved sanitation facilities: public sewer connection; septic system connection; pour-flush latrine; simple pit latrine; ventilated improved pit latrine.

Based on the Report on Environmental Health from Provincial Health Office (PHO), Table 5.33 shows the Trend in Environmental Health Statistics 2015-2019. It may be noted that the number of households in the province has recorded increase from 541,128 households in 2015 to 632,752 households in 2019.

The years 2015 to 2019 showed the satisfactory five year average of 91.37% of Batangueños with accesss to safe water. This is beyond the Millenium Development Goal 7 (MDG7) to halve proportion of population without access to safe water and ensuring Sustainable Development Goal 6 (SDG 6), clear water and sanitation. Nonetheless, as one of the basic and primary human needs, the Provincial Government strives and exerts efforts to attain a much higher degree; if not a full 100% coverage of safe water accessibilty through its health and sanitation projects.

Also with respect to MDG 7 and SDG 6, there are also high number of households with sanitation facilities as shown in Table 5.33. The number of household with sanitary toilet facilities from 2015 to 2019 is increasing in number from 477,107 households to 576,635 households respectively. This is also beyond the MDG target and show an increasing rate

though only minimal. Households with complete basic sanitation facility, also showed a minimal rate of increase.

Despite some problems of solid waste disposal, the report showed that one half of the number of household in the province have satisfactory disposal of solid waste; however it must be noted that the percentage for later years is higher than the rate recorded for the previous year. Please refer to the Table 5.33.

Data for 2020 not available due to pandemic reason.

Table 5.33:Trend in Environment Health Statistics, 2015-2019

Total Number of Households	2015		2016		2017		2018		2019		5 Year % Average
	541,128		571,189		577,142		613,825		632,752		
	No. of HH	%	No. of HH	%	No. of HH	%	No. of HH	%	No. of HH	%	
Household With Access to Safe Water	483,662	89.38%	524,062	91.75%	531,704	92.13%	555,606	90.52%	588,839	93.06%	91.37%
Household With Sanitary Toilet Facility	477,107	88.17%	498,767	87.32%	513,334	88.94%	548,499	89.36%	576,635	90.70%	88.90%
Household With Satisfactory Disposal of Solid Waste	370,294	68.43%	399,716	69.98%	391,601	67.85%	471,359	76.79%	472,194	77.85%	72.18%
Household With Complete Basic Sanitation Facility	362,159	66.93%	395,505	69.24%	395,288	68.49%	450,885	73.45%	483,575	76.46%	70.91%

Data Source: Provincial Health Office (PHO,) 2019

The Province Trends in Vital Health Statistics from 2016 – 2020 is presented at Table 5.34 below: :

Table 5.34: Trends in Vital Health Statistics

Year	Projected Population	Livebirths (TCL)		Livebirths (LCR)		Total Death		Infant Death		Maternal Death		Perinatal Death		Under 5 Death		Neonatal Death	
		No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
2016	2,710,816	40,141	14.81	33,491	9.44	12,487	4.6	224	6.6	39	116.4	117	0.04	225	6.71	333	9.94
2017	2,957,600	41,957	14.18	32,547	11	10,978	4.09	183	5.56	14	43.01	119	3.66	301	9.25	181	9.94
2018	2,887,957	41,017	14.2	31,426	10.88	11,880	4.11	161	5.12	7	22.27	137	0.05	268	8.53	217	6.9
2019	2,957,600	40,156	13.57	32,434	10.96	12,377	4.26	173	5.38	4	12.44	122	0.04	289	8.99	206	6.41
2020	2,776,559	no data		6,860	2.47	1,131	0.53	8	3.2	2	80	14	0.006	12	4.8	13	5.2

Data Source: Provincial Health Office (PHO) Data, 2020

5.3 Poverty Incidence

Poverty threshold refers to the minimum income/expenditure required for a family or individual to meet the basic food and non-food requirements. It is also equal to the cost of minimum basic food + non-food requirements.

Food threshold on the other hand, refers to the minimum income/expenditure required for a family or individual to meet the basic food needs, which satisfies the nutritional requirements for economically necessary and socially desirable physical activities. It is also referred to as the subsistence threshold or the food poverty line.

Data shows an increasing trend for the annual per capita food threshold and annual per capita poverty threshold both in both Batangas Province and CALABARZON Region from 2012 to 2018.

As shown in Table 5.35, Annual Per Capita Food Threshold in Batangas compared to that of the Region is higher in terms of peso and percentage subsistence incidence from CY 2012 to 2015. With respect to the subsistence percentage among families and population, it was recorded that in CY 2018, Batangas' percentage is almost the same with respect to the region's percentage.

Table 5.35: Annual Per Capita Food Threshold, Batangas & CALABARZON
CY: 2012, 2015 & 2018

YEAR	IN PESOS		SUBSISTENCE INCIDENCE AMONG FAMILIES (%)		SUBSISTENCE INCIDENCE AMONG POPULATION (%)	
	BATANGAS	CALABARZON	BATANGAS	CALABARZON	BATANGAS	CALABARZON
2012	13,538.00	13,371.00	5.8	2.3	7.4	3.2
2015	20,996.00	18,154.07	5.8	2.6	7.9	3.7
2018	23,245.00	18,963.00	1.1	1.0	1.6	1.5

Data Sources: 2021 Regional Social and Economic Trends CALABARZON

The Annual Per Capita Poverty Threshold in the province per censal years 2012, 2015 and 2018 are : ₱ 19,437; ₱ 30,086 and ₱ 33,67.59; with percentage estimates among families of 14.7; 17.4 and 8.6 and percentage estimates among population with 19; 22.3 and 11.4, respectively. It is noted that the poverty threshold of the Province for the three censal years are higher than that of the region.

Table 5.36: Annual Per Capita Poverty Threshold, Batangas & Calabarzon
CY: 2012, 2015 & 2018

YEAR	IN PESOS		POVERTY INCIDENCE AMONG FAMILIES (%)		POVERTY INCIDENCE AMONG POPULATION (%)	
	BATANGAS	CALABARZON	BATANGAS	CALABARZON	BATANGAS	CALABARZON
2012	19,437.00	19,137.00	14.7	8.3	19	10.9
2015	30,086.00	25,642.00	17.4	9.2	22.3	12.5
2018	33,068.00	27,928.00	8.6	5.1	11.4	7.1

Data Sources: 2021 Regional Social and Economic Trends CALABARZON

5.4 Housing

Housing and housing backlogs has been a growing concern in the country. For years, the Province of Batangas has initiated efforts in responding to this issue. In 2000, the Sangguniang Panlalawigan passed SP Resolution #141 S 2000 "Providing for the Creation of Poor and Urban Development Housing Board and its attached Office- the Provincial Urban Development and Housing Office for the Province of Batangas". Said Office was later renamed as "Housing and Homesite Affairs Services"; a Division under the Provincial Administrator's Office. Its task includes the support and provision of technical assistance to further strengthen the Local Housing Boards; and in the formulation of Local Shelter Plans and programs.

In 2015, the Number of Household (HH) by Tenure status of the Housing Unit/Lot has been released by the Philippine Statistics Authority which was categorized by 1) Own House Rent-Free Lot with Consent of Owner; 2) Own House Rent-Free Lot without Consent of Owner; 3) Rent-Free House and Lot with Consent of Owner; and 4) Rent-Free House and Lot without Consent of Owner. Batangas Province has a total of 99,327 HH; 9,801 HH; 35,469 HH; and 1,348 HH respectively. It can be noted that the highest number of HH on category 1, 2 and 3 is Batangas City with 12,457 HH; 2,697 HH; and 3,933. Laurel get the highest on category 4 with 292 HH. On the other note, the lowest ranks goes to the Municipalities of Malvar, Agoncillo, San Nicolas and Laurel with 518 HH; 4 HH; 201 HH; and 292 HH on categories 1 to 4 respectively.

Table 5.37: Number of Household (HH) by Tenure status of the Housing Unit/Lot, 2020

MUNICIPALITIES / CITIES		OWN HOUSE RENT-FREE LOT WITH CONSENT OF OWNER	OWN HOUSE RENT-FREE LOT WITHOUT CONSENT OF OWNER	RENT-FREE HOUSE AND LOT WITH CONSENT OF OWNER	RENT-FREE HOUSE AND LOT WITHOUT CONSENT OF OWNER
BATANGAS PROVINCE		**99,327**	**9,801**	**35,469**	**1,348**
1	Agoncillo	1,825	4	337	3
2	Alitagtag	796	31	486	4
3	Balayan	7,147	189	1,036	19
4	Balete	1,669	13	222	2
5	Batangas City	12,457	2,697	3,933	179
6	Bauan	1,352	237	1,197	17
7	Calaca	2,579	44	886	18
8	Calatagan	3,279	274	911	17
9	Cuenca	750	21	476	5
10	Ibaan	1,285	56	706	10
11	Laurel	2,764	76	383	292
12	Lemery	4,634	245	1,396	40
13	Lian	2,954	70	860	23
14	Lipa City	6,715	695	3,831	83

Data Source: PSA, 2015

Continuation of Table 5.37

MUNICIPALITIES / CITIES		OWN HOUSE RENT-FREE LOT WITH CONSENT OF OWNER	OWN HOUSE RENT-FREE LOT WITHOUT CONSENT OF OWNER	RENT-FREE HOUSE AND LOT WITH CONSENT OF OWNER	RENT-FREE HOUSE AND LOT WITHOUT CONSENT OF OWNER
15	Lobo	2,185	30	621	21
16	Mabini	1,252	46	655	4
17	Malvar	518	843	795	9
18	MataasnaKahoy	637	12	474	4
19	Nasugbu	6,944	930	1,567	54
20	Padre Garcia	2,294	68	888	14
21	Rosario	5,536	407	2,275	23
22	San Jose	2,086	516	2,178	52
23	San Juan	9,483	61	1,274	37
24	San Luis	714	24	499	2
25	San Nicolas	889	138	201	11
26	San Pascual	1,073	70	809	20
27	Santa Teresita	262	20	242	3
28	Santo Tomas City	2,803	1,473	2,092	270
29	Taal	1,132	46	501	8
30	Talisay	1,796	27	573	13
31	Tanauan City	3,241	317	1,657	70
32	Taysan	1,404	58	725	13
33	Tingloy	1,154	18	382	1
34	Tuy	3,718	45	401	7

Data Source: PSA, 2015

Out of 34 LGUs, only seven (7) have formulated and completed their Local Shelter Plans (LSP). These are Balete, Bauan, Batangas City, Cuenca, Mabini, Balayan and Lemery.

As provided by the Provincial Government of Batangas - Provincial Administrator's Office, Housing and Homesite Affairs Division (HHAD) there are a total of 1,545 Informal Settler Families (ISFs) in the province who are in the process of proper resettlement as reflected in Table 5.38.

Table 5.38: Breakdown of ISFs, Batangas Province 2020

LOCATION	NUMBER
Villa Kumintang	125
Tuy Informal Settlers Families (ISFs)	184
Batangas Medical Center (BatMC)	65
Lyceum	211
Kapitbahay Home Owners Association (HOA)	47
Tambakan HOA	23
Talaibon	588
JoWiVil Craters View Subdivision	302
TOTAL	**1,545**

Data Source: HHAD, 202

5.5 Safety and Security

5.5.1 Public Order and Safety

5.5.1.1 Police Force

As of 2020, the Province of Batangas has a total police force of 2,657 of which 134 are police commissioned officers; 2,371 are police non-commissioned officers and 152 are the non-uniformed personnel. Police to population ratio of 1:1,132 are still lower compared to the standard requirement of 1:1,500 ratio.

5.5.1.2 Index Crime

The Province of Batangas can generally be considered as a peaceful and orderly province. Peace and order always remain as one of the major priority thrusts of the government both national and local. Programs for safety and security from all levels of local government; from barangays to provincial are stringently being implemented to assure that Batangueños, their visitors , investors and the general public as a whole are safe and protected. However, crime incidents cannot always be prevented; though most can be considered as isolated cases.

A crime is an act committed or omitted in violations of a law forbidding or commanding it and for which a punishment is imposed upon conviction. In the Philippines, the Revised Penal Code Republic Act (3815) serves as the basic law that defines criminal offense and provides the penalties for the commission of such. Crimes are classified either as index or non-index crimes. Index crimes, as defined by the Philippine National Police (PNP) involve crimes against persons and crimes against property.

Crimes against persons include murder, homicide, physical injury and rape; while robbery, theft, carnapping and cattle rustling fall under crimes against property. There is also an additional category which is the special complex crime.

Crime clearance efficiency is the percentage of cleared cases out of the total number of crime incidents, while crime solution efficiency refers to the percentage of solved cases out of the total number of crime incidents for a given period of time.

In 2020, the reported index crime by type of crime in Batangas Province is presented to Table 5.39. Lipa City recorded the largest number of incidents in crime against persons and crime against property with 52 and 68, respectively. The Municipality of San Nicolas has no recorded incident in crime against persons and there is also zero incidence in crime against property in the Municipalities of Alitagtag and Tingloy. Murder has the highest number with 129 while homicide gets the lowest number with 17 in crime against persons. For crimes against property, there is more numbers for theft with 169 and no recorded incident in cattle rustling. There is an additional category of special complex crime wherein Tanauan City and the Municipality of Bauan has both two (2) reported incidents while Sto. Tomas City and the Municipalities of Calaca and Nasugbu has one (1) reported incident each. Of the 597 incidents, crime against persons comprises of 52.93% or 316; crime

against property is at 45.90% or 274 and special complex crime with 1.17% or 7. It is also shown that cleared and solved cases recorded at 563 and 364 crimes, respectively for the period of January – December 2020.

Table 5.39: Reported Index Crime by Type of Crime, Batangas Province 2020

CITIES / MUNICIPALITIES	Crime Vs. Persons					Crime Vs. Property						Index Crimes		
	Murder	Homicide	Physical Injury	Rape	Total	Robbery	Theft	Carnapping	Cattle Rustling	Total	SPECIAL COMPLEX CRIMES	Total Index Crimes	Cleared	Solved
Batangas Province	**129**	**17**	**62**	**108**	**316**	**71**	**169**	**34**	**0**	**274**	**7**	**597**	**563**	**364**
Batangas City	**18**	1	4	5	**28**	17	31	5	0	**53**	0	**81**	80	48
Lipa City	**18**	5	13	16	**52**	17	44	7	0	**68**	0	**120**	110	77
Tanauan City	**9**	0	5	9	**23**	2	19	5	0	**26**	2	**51**	45	31
Sto. Tomas City	**12**	4	3	10	**29**	2	8	3	0	**13**	1	**43**	39	20
Agoncillo	**2**	0	1	2	**5**	1	1	0	0	**2**	0	**7**	7	4
Alitagtag	**2**	0	0	1	**3**	0	0	0	0	**0**	0	**3**	3	3
Balayan	**3**	0	0	0	**3**	1	4	0	0	**5**	0	**8**	6	5
Bauan	**1**	0	2	1	**4**	0	4	1	0	**5**	2	**11**	10	8
Calaca	**2**	0	1	2	**5**	0	7	1	0	**8**	1	**14**	14	10
Calatagan	**3**	0	3	4	**10**	0	1	0	0	**1**	0	**11**	10	8
Cuenca	**4**	0	0	2	**6**	0	2	0	0	**2**	0	**8**	8	7
Ibaan	**7**	0	2	4	**13**	0	1	0	0	**1**	0	**14**	12	10
Laurel	**0**	0	1	1	**2**	0	1	0	0	**1**	0	**3**	2	2
Lemery	**2**	1	0	1	**4**	3	4	0	0	**7**	0	**11**	10	7
Lian	**2**	1	1	2	**6**	0	3	1	0	**4**	0	**10**	10	8
Lobo	**1**	1	1	1	**4**	1	0	0	0	**1**	0	**5**	5	3
Mabini	**4**	0	1	1	**6**	3	0	0	0	**3**	0	**9**	9	4
Malvar	**2**	1	1	1	**5**	5	4	0	0	**9**	0	**14**	14	9
Nasugbu	**6**	0	5	10	**21**	4	6	1	0	**11**	1	**33**	31	20
Padre Garcia	**2**	0	1	3	**6**	1	2	1	0	**4**	0	**10**	10	6
Rosario	**7**	1	4	3	**15**	6	7	2	0	**15**	0	**30**	29	12
San Jose	**4**	1	5	6	**16**	1	3	3	0	**7**	0	**23**	23	18
San Juan	**6**	0	1	3	**10**	0	5	3	0	**8**	0	**18**	18	12
San Luis	**0**	0	0	2	**2**	0	1	1	0	**2**	0	**4**	4	4
San Pascual	**2**	0	0	1	**3**	0	2	0	0	**2**	0	**5**	5	3
Taal	**1**	1	2	5	**9**	2	0	0	0	**2**	0	**11**	11	8
Talisay	**0**	0	2	4	**6**	1	1	0	0	**2**	0	**8**	8	4
Taysan	**0**	0	0	2	**2**	2	1	0	0	**3**	0	**5**	5	3
Tuy	**7**	0	2	1	**10**	0	1	0	0	**1**	0	**11**	9	3
Balete	**1**	0	1	0	**2**	1	0	0	0	**1**	0	**3**	3	2
Mataasnakahoy	**0**	0	0	1	**1**	0	3	0	0	**3**	0	**4**	4	2
San Nicolas	**0**	0	0	0	**0**	0	1	0	0	**1**	0	**1**	1	0
Sta. Teresita	**1**	0	0	1	**2**	1	2	0	0	**3**	0	**5**	5	3
Tingloy	**0**	0	0	3	**3**	0	0	0	0	**0**	0	**3**	3	0

Data Source: Philippine National Police, January-December 2020

Table 5.40, shows the Index Crime Statistics in the Province of Batangas wherein a decrease of 484 incidents or 44.77% from total of 1,081 in 2019 to 597 in 2020 was recorded. For both years 2019 and 2020, the total of 631 and 316 crimes committed against persons are higher than the total crimes perpetrated against property which are 450 and 274 crimes respectively.

A decrease of 49.92% is noted in the incidence of crimes against persons. Contributing to the over-all decrease is the significant reduction by 27.12% in murder; 43.33% in homicide; 79.26% in physical injury and 13.60% in rape.

With lesser occurrence of crimes against property compared to crimes against persons for both years, recorded incidents for crimes against property have likewise decreased by 176. Over-all percentage of decrease is posted at 39.11%. Decrease in robbery, theft and carnapping falls at 44.09%, 35% and 46.03% respectively. On the other note, cattle rustling remains the same with zero (0) occurrence. There is also an additional category in 2020 which is the special complex crime falling under both crime against person and property (e.g. robbery with homicide) with 7 reported incidence.

Despite having decrease of incidents, concerned authorities do not remain complacent. Measures to promote peace, order, safety and security, and to further reduce the perpetration if not totally eradicate crime incidence remain to be the government's major concern.

Table 5.40: Reported Index Crimes, Batangas Province 2019-2020

INDEX CRIMES	2019	2020	INCREASE / DECREASE	%
Crime vs. Person				
Murder	177	129	-48	-27.12%
Homicide	30	17	-13	-43.33%
Physical Injury	299	62	-237	-79.26%
Rape	125	108	-17	-13.60%
Total Crime vs. Person	**631**	**316**	**-315**	**-49.92%**
Crime vs. Property				
Robbery	127	71	-56	-44.09%
Theft	260	169	-91	-35.00%
Carnapping	63	34	-29	-46.03%
Cattle Rustling	0	0	0	0%
Total Crime vs. Property	**450**	**274**	**-176**	**-39.11%**
Special Complex Crime*	-	7	-	-
Total Index Crime	**1,081**	**597**	**-484**	**-44.77%**

**new category*
Data Source: Philippine National Police, January-December 2020

5.5.2 Fire Protection

As shown in Table 5.41, Fire Protection Status from 2011 to 2020, the province has incurred a total losses or damages of about ₱1,388,651,800.00 brought by 1,844 fire incidents. These fire incidents also caused the death of 55 individuals and physical injuries of 71 individuals. Noted that the number of incidence and deaths decrease from 2019 to 2020 with a decrease of 5 and 23 incidents respectively. However, there is an increase in the number of individuals who suffered from injuries from zero (0) to 20. While there is a decrease in the number of incidence, it can be seen that the cost of damages escalate amounting to an increase of 63,248,600.00.

As to the number of personnel in areas of fire protection, the highest number posted is in 2019, comprised of 376 males and 154 females or 70.94% male against that of 29.06% female. The lowest recorded number of personnel in the fire services is noted in 2013 with 234. In comparison to 2019 and 2020, it can be noted that there is a reduction in the number of personnel to both male and female with a decrease of 19 and 3 personnel respectively.

Table 5.41: Fire Protection Status, 2011-2020

Year	Member of Fire Personnel by Sex			Number of Fire Incidence / Damages			
	Male	Female	Total	Number of Incidence	Deaths	Injuries	Cost of Damages
2011	210	33	243	77	3	4	61,265,600.00
2012	205	36	241	98	0	0	67,575,700.00
2013	191	43	234	165	7	2	64,733,700.00
2014	239	73	312	341	9	10	78,262,800.00
2015	264	81	345	319	15	15	560,690,500.00
2016	288	97	385	213	4	3	170,394,000.00
2017	312	111	423	189	4	14	83,675,200.00
2018	313	113	426	127	2	3	76,167,300.00
2019	376	154	530	189	8	0	81,319,200.00
2020	357	151	508	166	3	20	144,567,800.00
			TOTAL	**1,884**	**55**	**71**	**1,388,651,800.00**

Data Source: Bureau of Fire Protection, 2020

5.5.3 Armed Forces of the Philippines' Role in the Peace and Order Program of the Provincial Government of Batangas

The Armed Forces of the Philippines (AFP) full support to the government's Peace and Order Program is a manifestation that the Filipino soldiers adhere to the principle of peace. They also share the same sentiments with the Provincial Government of Batangas that peace and order efforts are essential in resolving problems and in addressing threats to local as well as national security.

The AFP which is composed of the Philippine Army, Philippine Navy and Philippine Air Force plays a vital role in the Peace and Order Program of the government both through its traditional and non – traditional roles.

As the members of AFP took their oath, they have devoted their lives in protecting the people and the state. Given their decade of experience in ensuring internal peace and security, they can proudly say that AFP personnel have achieved substantial gains in addressing armed groups that threaten our country's peace and security. They have also learned that addressing all internal peace and security concerns cannot be done by the AFP alone.

Thus; they have brave personnel to explore new perspectives and ways to getting things done. What resulted were the new AFP Internal Peace and Security Plan (IPSP). Outlined

in this IPSP is their new strategic direction in the performance of the constitutional mandate. The AFP remains committed to addressing armed threats to our nation's peace and security. This shall be done with utmost respect and adherence to human rights, international humanitarian law, and the rule of law. These are non-negotiable because at the center of the IPSP are the Filipino people. More than just defeating the enemy, they shall perform their constitutional mandate with the end in view of winning the peace for the Filipino nation. Thus; this plan has been crafted in close consultation and cooperation with their partners in other national government agencies and the civil society. This shall remain true in the implementation and even evaluation of the plan. This network of partnership that they have established shall be further strengthened and broadened to include the entire Filipino nation.

The AFP IPSP is the Armed Forces' commitment to the attainment of a quality and progressive life for the Filipino nation and its people. The AFP, as an able partner in peace and development, believes on the importance of shared responsibility with the various peace and security stakeholders in addressing the peace and security concerns of the country

Hand and hand with the traditional role is the AFP's participation in non-traditional roles and activities. As an active conduit of the government in peace and development, the AFP is currently implementing a number of social mobilization projects with poverty eradication program as the main thrust.

5.5.4 Philippine Army

As one joins the Philippine Army, one forges a covenant with the Divine, one's country, and people. One submits oneself to a lifetime commitment and total sacrifice in defending and upholding national sovereignty. Takes as one's own the Philippine Army's core philosophy, and takes pride and satisfaction in serving the nation the army is sworn to protect. The army's guide is the fundamental law, the Constitution that establishes the basic principles that govern the country, with the military's express covenant to preserve the integrity of such principles and sovereignty of the country, both as a defender and as an agent of civil authority in nation building.

The Philippine Army and the Soldier are united in principle, one being symbolic of the other. In one's mission, the Soldier serves the country on behalf of the Philippine Army and therefore cannot be distinct from it. In understanding this relationship, the soldier's identity with the Army's core philosophy is paramount in defining the energy that guides the soldier.

The Philippine Army is totally dedicated to service to the country and carries a Code of Values that constantly reinforces and assures that, for as long as this exists in the soldier, the country will remain sovereign in its own right. Clearly, honoring the Philippine Army's core values and meeting its exacting standards of conduct are the essence of the fulfilment of the soldier's noble path of duty for love of his country. Each citizen in the service of the

Army, in whatever capacity, intuitively undertakes to follow value-based rules as the necessary backbone of the overall effectiveness of the Philippine Army.

5.5.5 Philippine Navy

Counterpart of Army's projects is the floating government centers under the Philippine Navy. Utilizing some of the naval assets in coordination with LGUs and line agencies, provide basic services to people living in the remote coastal areas or bringing the government to the people who because of distance are unable to go to government centers.

5.5.6 Philippine Air Force

Fernando Air Base or Philippine Air Force Air Education and Training Command (PAF AETC) is one of the major Commands of the Philippine Air Force in the Province.

Aside from their traditional mission of air defence and supporting the ground forces in counter insurgency operations, they now have other roles which include search and rescue, transportation, and communications for all services. They also regularly took part in relief and emergency operations in cooperation with civilian organizations and participated in national development programs.

The Air Education and Training Command (AETC) is composed of six (6) primary units:

- Air Force Officer School (responsible for preparing officers to assume positions of higher responsibility)
- Basic Military Training School (responsible for training soldier candidates)
- Non-Commissioned Officer School (responsible for conducting career courses for Enlisted Personnel)
- PAF Flying School (responsible for conducting flying training to aviation students to qualify as pilots of the Air Force)
- PAF Officer Candidate School (responsible for training officer candidates)
- PAF Technical and Specialization Training School (responsible for conducting technical courses for all Air Force personnel)

5.5.7 Provincial Disaster Risk Reduction Management

Disaster awareness and preparedness remains as one of the most notable concerns of the Provincial Government of Batangas. The province annually allocates 5% Calamity Fund and the implements programs, projects and activities that deal with related concerns. This includes institutional capability building in partnership with other Local Governmental Units (LGUs), Civil Society Organization (CSO), and line agencies.

To further reinforce the thrust and vigilance of the Provincial Government of Batangas, Provincial Ordinance No. 001, Series of 2011 called for the institutionalization of the Batangas Province Disaster Risk Reduction and Crises Management Council (PDRRCMC). This is in accordance with Republic Act No. 10121.

With the Province's vulnerability to different hazards, such as flood, landslide, tsunami and volcanic eruption, strengthening the preparedness capacity for effective response to disaster has always been given a top priority; thus, the passage of Provincial Ordinance No. 10 creating the Batangas Provincial Disaster Risk Reduction Management Office. This Office is mandated to perform Organization Management and Planning, Disaster Preparedness and Emergency Response and Operations and Warning Services. Among these functions are : Conduct of Drills, Activation of Disaster Operations Center, Communication and Early Warnings, Provision of relief assistance and Search And Rescue (SAR) and Water Search And Rescue (WASAR) Equipment.

5.5.8 Barangay Tanod

A barangay tanod, also known as a barangay police officer -- and sometimes as BPSO (which stand for Barangay Peace and Security Officer, barangay peacekeeping and security officer, or barangay police safety officer) -- is the lowest level of law enforcement officer in the Philippines, who is supervised by the barangay chairperson and performs a variety of police functions. Tanods are "front liners" in the preparation and response to any type of atrocities, public disorders, emergencies and even disasters or other calamities that threaten peace and order and public safety.

Based on Table 5.42, a total of 15,982 Barangay Tanod Volunteers serve the entire province in 2020. Among the thirty four (34) LGUs, Batangas City has the most number of volunteers with a total of 1,641. On the other hand, the Municipality of Mataasnakahoy has the least number with only 105 volunteers.

Table 5.42: Barangay Tanod Volunteer Personnel: CY 2020

CITY/MUNICIPALITY	NO. OF BRGY.	TOTAL # OF TANOD	
BATANGAS PROVINCE	**1,080**	**15,982**	
BALAYAN	48	738	**1ST DISTRICT**
CALACA	40	733	
CALATAGAN	25	283	
LEMERY	46	613	
LIAN	19	380	
NASUGBU	42	818	
TAAL	42	755	
TUY	22	375	
BAUAN	40	441	**2ND DISTRICT**
LOBO	26	390	
MABINI	34	303	
SAN LUIS	26	366	
SAN PASCUAL	29	361	
TINGLOY	15	130	
AGONCILLO	21	247	**3RD DISTRICT**
ALITAGTAG	19	353	
BALETE	13	144	
CUENCA	21	299	
LAUREL	21	194	
MALVAR	15	224	
M. KAHOY	16	105	
SAN NICOLAS	18	180	
STA. TERESITA	17	170	
STO. TOMAS CITY	30	565	
TALISAY	23	436	
TANAUAN CITY	48	954	
IBAAN	26	402	**4TH DISTRICT**
PADRE GARCIA	18	212	
ROSARIO	48	665	
SAN JOSE	33	463	
SAN JUAN	42	618	
TAYSAN	20	275	
BATANGAS CITY	105	1,641	**5th DISTRICT**
LIPA CITY	72	1,149	**6TH DISTRICT**

Data Source: Provincial Public Order and Safety Department, 2020

Chapter 6 INFRASTRUCTURE SECTOR

6.1 Transportation

6.1.1 Roads and Bridges

Based on the 2020 Road Data of the Department of Public Works and Highways (DPWH), National Roads traversing the territorial jurisdiction of the Province of Batangas reached a span of over 553.620 km. All of these roads are paved having 118.800 km or 21.38% made of concrete while 436.820 km or 78.62% made of asphalt.

Along these roads are 155 National Bridges with a total length of approximately 4,914 linear meters. All of these bridges are permanent in nature, 4,169.84 lm or 84.84% of which are made of concrete while 745.03 lm or 15.16% are made of steel.

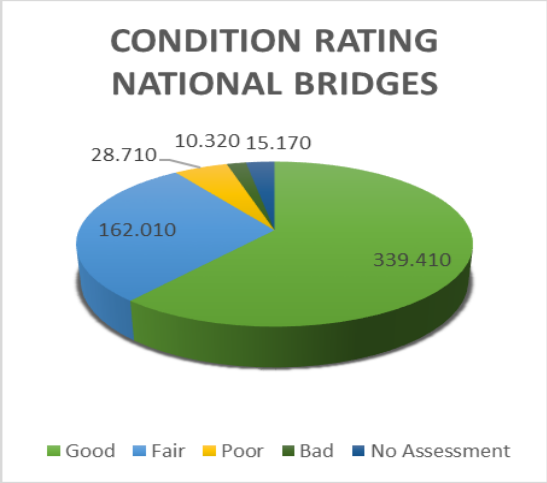
National Roads and Bridges in the Province generally have good and fair conditions based on the condition rating made by DPWH. A total of 10.320 km or 1.86% of roads and 6.00 lm or 0.12% of bridges remain in bad condition as shown in Figures 6.1 and 6.2 respectively. (Refer to Annexes 4 and 5 for the details)

Table 6.1: Batangas Permanent Roads, 2020

District Engineering Office / Functional Classification	Paved		Paved Total	Unpaved		Unpaved Total	Grand Total
	Concrete	Asphalt		Gravel	Earth		
Batangas DEO I	**23.310**	**139.730**	**163.040**	**0.000**	**0.000**	**0.000**	**163.040**
Secondary	21.940	132.120	154.06	0.000	0.000	0.000	154.060
Tertiary	1.370	7.610	8.980	0.000	0.000	0.000	8.980
Batangas DEO II	**44.700**	**101.800**	**146.500**	**0.000**	**0.000**	**0.000**	**146.500**
Primary		9.930	9.930	0.000	0.000	0.000	9.930
Secondary	32.540	68.840	101.380	0.000	0.000	0.000	101.380
Tertiary	12.160	23.030	35.190	0.000	0.000	0.000	35.190
Batangas DEO III	**33.920**	**75.300**	**109.220**	**0.000**	**0.000**	**0.000**	**109.220**
Primary	0.180	24.360	24.540	0.000	0.000	0.000	24.540
Secondary	11.970	29.380	41.350	0.000	0.000	0.000	41.350
Tertiary	21.770	21.560	43.330	0.000	0.000	0.000	43.330
Batangas DEO IV	**16.870**	**119.990**	**136.860**	**0.000**	**0.000**	**0.000**	**136.860**
Primary	0.300	23.300	23.600	0.000	0.000	0.000	23.600
Secondary	9.600	67.980	77.580	0.000	0.000	0.000	77.580
Tertiary	6.970	28.710	35.680	0.000	0.000	0.000	35.680
TOTAL	***118.800***	***436.820***	***555.620***	**-**	**-**	**-**	***555.620***

.Data Source: Department of Public Works and Highways, 2020 Road Data
Notes:
1.) The unit of measure for Road Data is kilometers.
2.) National Roads are classified into:
***Primary Roads** - A contiguous length of significant road sections extending linearly without any breaks or forks that connect major cities (At least around 100,000 population) comprising the main trunk line or the backbone of the National Road System.*
***Secondary Roads** - Directly connect cities to national primary roads (except in metropolitan areas) or those not included in the category of major cities. Likewise, said roads directly connect major ports, major ferry terminals, major airports, tourist service centers, major government infrastructure to national primary roads. They also directly connect provincial capitals within the same region.*
***Tertiary Roads** - Other existing roads under DPWH which perform a local function. (In the map, these roads are represented only by letters.)*
*3.) **No Assessment** refers to Road Sections that are either under construction and/or segments with length below the 50-meter gauging length.*

Figure 6.1: Condition Rating of National Roads



CONDITION	TOTAL LENGTH
Good	339.410
Fair	162.010
Poor	28.710
Bad	10.320
No Assessment	15.170
TOTAL	**555.620**

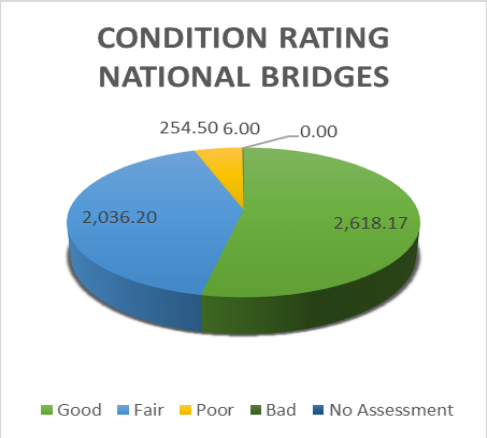
Data Source: Department of Public Works and Highways, 2020 Road Data
*Note: The unit of measure for Road Data is in **kilometers***

Table 6.2: Batangas Permanent Bridges, 2020

Distrtict Engineering Office	Permanent Bridges					
	Concrete		Steel		Total	
	Number	Length	Number	Length	Number	Length
Batangas DEO I	47	1,565.11	3	137.54	50	1,702.65
Batangas DEO II	26	1,019.39	9	346.73	35	1,366.12
Batangas DEO III	31	851.69	6	205.67	37	1,057.36
Batangas DEO IV	30	733.65	3	55.09	33	788.74
GRAND TOTAL	**134**	**4,169.84**	**21**	**745.03**	**155**	**4,914.87**
PERCENTAGE	**84.84%**		**15.16%**		**100.00%**	

Data Source: Department of Public Works and Highways, 2020 Bridge Data
Notes:
1.) The unit of measure for Bridge Data is linear meters.
2.) Further Assessment refers to Bridges that are either under the circumstances of on-going construction, under major maintenance work or washed-out.
3.) National Bridges are classified into:
***Permanent Bridges** - are bridges that are composed of concrete and steel.*
***Temporary Bridges** - are bridges consisting of timber and bailey.*

Figure 6.2: Condition Rating of National Bridges



CONDITION	TOTAL LENGTH
Good	2,618.17
Fair	2,036.20
Poor	254.50
Bad	6.00
No Assessment	0.00
TOTAL	**4,914.87**

Data Source: Department of Public Works and Highway, 2020 Bridge Data
*Note: The Unit of measure is in **Linear Meter***

Roads classified as *Provincial Roads* pursuant to Provincial Ordinance No. 002 dated 15 April 2015, has a total length of 514.001 km with width ranging from 3m – 9.4m.

This road classification remains unchanged since the promulgation of the ordinance. Based on the latest evaluation of Provincial Engineer's Office (PEO), surface conditions of provincial roads show that almost all roads are in good, fair and bad conditions. (Refer to Annex 6 for the details)

Table 6.3: Condition of Provincial Roads, 2020

SURFACE CONDITION	TOTAL LENGTH	PERCENTAGE
GOOD	266.251	51.80%
FAIR	141.384	27.51%
POOR	0.000	0.00%
BAD	104.500	20.33%
UNKNOWN	1.866	0.36%
Total	***514.001***	***100%***

Data Source: Provincial Engineering's Office, 2019

Annex 6 indicates a total of 137 provincial roads with length that ranged from 0.2 km. to 17.40 km. and width that ranged from 3 m. to 9.4 m. Along provincial roads are 140 bridges with a total length of floor deck of more or less 1,900 meters.

Table 6.4: Type of Floor Deck, 2020

TYPE OF FLOOR DECK	TOTAL LENGTH	PERCENTAGE
CONCRETE	434.317	84.50%
ASPHALT	79.485	15.46%
ROUGH ROAD	0.199	0.04%
Grand Total	***514.001***	***100%***

Data Source: Provincial Engineering's Office

There is a total of 140 provincial bridges in the Province of Batangas as of the year 2020. Around 73.57% of these are made up of Concrete, Reinforced Concrete Design Girder (RCDG), and Steel.

The minority of 26.43% are made up of: 2 baileys, 9 box culverts, 8 flat slabs, 1 Reinforced Concrete (RC) Pipes, 1 spanish arc, 4 spillways, and 12 Reinforced Concrete Pipe Culvert (RCPC).

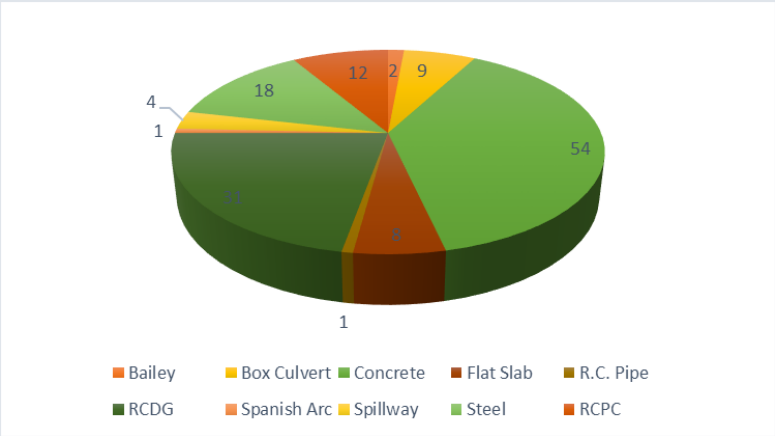
Almost all of these bridges are in good and passable conditions with the capacity ranging from 3 to 15 tons. and width varying from 2.90 to 8.48 meters. (Refer to Annex 7 for the details)

Table 6.5: Summary of Existing Provincial Bridges, 2020

TYPE OF BRIDGE STRUCTURE	NUMBER OF BRIDGE
Bailey	2
Box Culvert	9
Concrete	54
Flat Slab	8
R.C. Pipe	1
RCDG	31
Spanish Arc	1
Spillway	4
Steel	18
RCPC	12
Grand Total	***140***

Data Source: Provincial Engineering's Office

Figure 6.3: Structures of Provincial Bridges, 2020

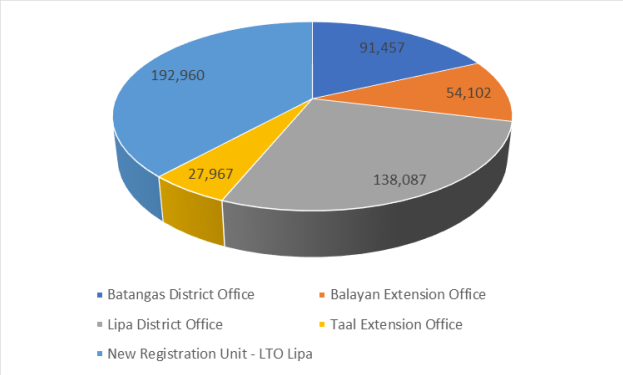


Data Source: Provincial Engineering's Office

6.1.2 Registered Vehicles

Based on records from Land Transportation Office, Planning & Management Information System (MIS) Unit for calendar year 2020, the number of motor vehicles registered totalled to 504,573. The New Registration Unit of LTO Region IV-A in Lipa City has the highest number of motor vehicles registered with 192,960 or 38%, followed by Lipa District Office with 138,087 or 27%, Batangas District Office with 91,457 or 18%, Balayan Extension Office with 54,102 or 11%, and Taal Extension Office with 27,967 or 6%.

Figure 6.4: Motor Vehicle Registration per Location, CY 2020



AGENCY NAME	NUMBER OF MV REGISTERED
Batangas District Office	91,457
Balayan Extension Office	54,102
Lipa District Office	138,087
Taal Extension Office	27,967
New Registration Unit - LTO Lipa	192,960
Total	**504,573**

Data Source: LTO RIV-A, Planning & MIS Unit

Number of Motor Vehicles by Classification and by Type of Fuel Used as presented in Table 6.6, private vehicles account the most number with 473,825, followed by "for hire" vehicles with 27,936, government vehicles with 1,822 and trailer with 990. Out of the 504,573 registered motor vehicles, 411,781 or 81.61% use gas while 91,658 or 18.17% use diesel for fuel and only 144 or 0.03% motor vehicles use electric power.

Table 6.7 shows that there are 192,960 new registered vehicles while renewal of registration for private (282,385), for hire (27,938), and government motor vehicles (1,290) summed up to 311,613.

As shown in Table 6.8, there are different types of motor vehicle registered. This includes cars, utility vehicles, service utility vehicles, trucks, buses, motorcycles or tricycles and trailers. Among these types, motorcycles or tricycles account the most number with 329,524 or 65.31%.

A total of 823,320 motor vehicle registration cases was recorded in 2020 while there were 504,573 motor vehicles registered and 325,827 were inspected as presented in Table 6.9.

Table 6.6: Number of MV by Classification & By Type of Fuel Used: 2020

AGENCY NAME	MOTOR VEHICLE CLASSIFICATION											TRAILER	GRAND TOTAL
	PRIVATE			FOR HIRE		GOVERNMENT			TOTAL				
	GAS	DIESEL	ELECT	GAS	DIESEL	GAS	DIESEL	ELECT	GAS	DIESEL	ELECT		
Batangas District Office	62,199	21,029	-	4,350	2,651	157	525	-	66,706	24,205	-	546	**91,457**
Balayan Extension Office	36,359	11,400	-	5,823	150	39	119	-	42,221	11,669	-	212	**54,102**
Lipa District Office	90,912	34,242	-	9,463	2,943	153	202	-	100,528	37,387	-	172	**138,087**
Taal Extension Office	19,275	5,985	-	2,537	19	29	66	-	21,841	6,070	-	56	**27,967**
New Registration Unit - LTO Lipa	180,369	11,918	137	-	-	116	409	7	180,485	12,327	144	4	**192,960**
TOTAL	**389,114**	**84,574**	**137**	**22,173**	**5,763**	**494**	**1,321**	**7**	**411,781**	**91,658**	**144**	**990**	**504,573**
			473,825		***27,936***			***1,822***					

Data Source: LTO RIV-A, Planning & MIS Unit

Table 6.7: Number of MV by Classification & By Mode of Registration: 2020

AGENCY NAME	MOTOR VEHICLE CLASSIFICATION						TOTAL		GRAND TOTAL
	PRIVATE		FOR HIRE		GOVERNMENT				
	NEW	RENEWAL	NEW	RENEWAL	NEW	RENEWAL	NEW	RENEWAL	
Batangas District Office	-	83,773	-	7,002	-	682	-	91,457	**91,457**
Balayan Extension Office	-	47,970	-	5,974	-	158	-	54,102	**54,102**
Lipa District Office	-	125,326	-	12,406	-	355	-	138,087	**138,087**
Taal Extension Office	-	25,316	-	2,556	-	95	-	27,967	**27,967**
New Registration Unit - LTO Lipa	192,428	-	-	-	532	-	192,960	-	**192,960**
TOTAL	**192,428**	**282,385**	**-**	**27,938**	**532**	**1,290**	**192,960**	**311,613**	**504,573**

Data Source: LTO RIV-A, Planning & MIS Unit

Table 6.8: Number of MV Registered by Type and By Agency: 2020

AGENCY NAME	TYPES OF MOTOR VEHICLE							TOTAL
	CARS	UV	SUV	TRUCKS	BUSES	MC/TC	TRAILERS	
Batangas District Office	15,215	22,060	7,067	2,442	33	44,094	546	**91,457**
Balayan Extension Office	5,590	10,126	2,243	2,307	17	33,607	212	**54,102**
Lipa District Office	21,576	34,365	8,621	3,481	150	69,722	172	**138,087**
Taal Extension Office	4,268	5,893	1,627	454	2	15,667	56	**27,967**
New Registration Unit - LTO Lipa	9,204	11,828	4,943	365	182	166,434	4	**192,960**
TOTAL	**55,853**	**84,272**	**24,501**	**9,049**	**384**	**329,524**	**990**	**504,573**

Data Source: LTO RIV-A, Planning & MIS Unit

Table 6.9: Number of MV Inspected, Registered & Registration Cases Handled: 2020

AGENCY NAME	NUMBER OF MV INSPECTED	NUMBER OF MV REGISTERED	NUMBER OF MV REGISTRATION CASES
Batangas District Office	96,088	91,457	111,220
Balayan Extension Office	60,610	54,102	86,341
Lipa District Office	139,256	138,087	199,333
Taal Extension Office	29,873	27,967	40,406
New Registration Unit - LTO Lipa	-	192,960	386,020
TOTAL	**325,827**	**504,573**	**823,320**

Data Source: LTO RIV-A, Planning & MIS Unit

6.1.3 Ports and Shipping

There are thirty-one (31) existing ports in the Province of Batangas of which five (5) are government ports and twenty- six (26) are private ports. (Refer to Tables 6.10, 6.11 and 6.12)

Among the government ports, Port of Batangas in Barangay Sta. Clara, Batangas City is the biggest and one of Batangas' major assets for development; along with coastlines suitable for industrial and commercial activities. Conversion of the Port of Batangas into an International Port of Entry is anticipated to generate massive employment and investment opportunities. The Batangas Container Terminal (BCT) which is part of the Port of Batangas Phase II, caters foreign cargo and is currently being operated by Asian Terminals Inc. (ATI).

Other government ports in the Province are the Port of Nasugbu and Port of Calatagan in First District, Port of Bauan in Second District and Port of San Juan in Fourth District.

All ports cater non-RORO ships while Port of Batangas – Phase 1, Calatagan Port and Nasugbu Port are capable to cater only RORO ships. Roll-on/Roll-off (RORO) ships are vessels that are used to carry wheeled cargo.

Table 6.10: Government Ports under Port Management Office – Batangas, 2020

	NAME OF PORT	*RORO	**NON-RORO
BASEPORT			
1	Port of Batangas - Phase 1	✓	✓
	Port of Batangas - Phase 2 (Batangas Container Terminal)	✗	✓
OTHER TERMINAL PORTS			
2	Bauan Port	✗	✓
OTHER GOVERNMENT PORTS			
3	Calatagan Port	✓	✓
4	Nasugbu Port	✓	✓
5	San Juan Port	✗	✓

Data Source: Philippine Ports Authority
**RORO - Roll-on/Roll-off **NON-RORO - Non-Roll-on/Roll-off*

Table below shows the contact details of the government ports in the province.

Table 6.11: Directory of Government Ports in Batangas, 2020

NAME OF PORT / ADDRESS	CONTACT PERSON / DESIGNATION	CONTACT NUMBER	E-MAIL ADDRESS
FIRST DISTRICT			
1. Port of Nasugbu Brgy. Wawa, Nasugbu 2. Port of Calatagan Brgy. Poblacion, Calatagan	Mr. Joselito O. Sinocruz, PhD Port Manager, PMO Batangas Mr. Joselito O. Sinocruz, PhD Port Manager, PMO Batangas	(043) 722-2429 (043) 722-2429	ppa_batangas@yahoo.com pmobatangas@ppa.com.ph
SECOND DISTRICT			
1. Port of Bauan Brgy. Aplaya, Bauan	Mr. Joselito O. Sinocruz, PhD Port Manager, PMO Batangas	(043) 722-2429	ppa_batangas@yahoo.com pmobatangas@ppa.com.ph
FOURTH DISTRICT			
1. Port of San Juan Brgy.Subukin, San Juan	Mr. Joselito O. Sinocruz, PhD Port Manager, PMO Batangas	(043) 722-2429	ppa_batangas@yahoo.com pmobatangas@ppa.com.ph
FIFTH DISTRICT			
1. Port of Batangas Brgy. Sta. Clara, Batangas City	Mr. Joselito O. Sinocruz, PhD Port Manager, PMO Batangas	(043) 722-2429	ppa_batangas@yahoo.com pmobatangas@ppa.com.ph

Data Source: Philippine Ports Authority- Port Management Office Batangas

The following is the list of registered Private Ports under PMO Batangas. Registration status that follows show the expiration dates based on the latest data.

The twenty-six (26) private ports were operated and managed by private companies and are mostly located along the Batangas Bay Area as of February 2021. Seven (7) are located in Calaca and one (1) in Balayan for a total of eight (8) in District I; one (1) in San Pascual, three (3) in Bauan and five (5) in Mabini for a total of nine (9) in District II while the remaining nine (9) are in Batangas City, the Fifth District.

Table 6.12: List of Registered Ports with Valid Permits as of February 2021

REGISTRATION STATUS		COR/PTO NO.	EFFECTIVITY DATE		COMPANY	LOCATION
			FROM	TO		
1	P/NC	5-A	April 19, 1993	April 19, 2043	Pilipinas Shell Petroleum Corp. (Jetty 4)	Tabangao, Batangas City
2	P/NC	60	March 26, 1999	December 4, 2023	Chevron Phils. Inc. (CPI) (formerly Caltex (Phils.,) Inc.)	San Pascual, Batangas
3	P/NC	262	June 16, 2008	October 23, 2031	LMG Land Development Corporation (formerly Chemphil-LMG, Inc.)	Pinamucan, Batangas City
4	P/C	291	June 6, 2019	May 3, 2021	Philippine National Oil Company (PNOC)	Mabini, Batangas
5	P/NC	344	July 28, 1999	May 25, 2023	First Gas Power Corp.	Bo. Sta. Rita, Karsada, Batangas
6	P/NC	351	July 8, 1998	June 2, 2023	Suntrak Corporation	Brgy. Mainaga, Mabini, Batangas
7	P/NC	357	May 9, 2008	May 8, 2031	PNOC Exploration Corporation (formerly PNOC Coal Corporation)	San Miguel, Bauan, Batangas
8	P/NC	370	April 6, 1999	July 22, 2022	Calaca Industrial Seaport Corporation (Bacnotan Industrial Park Corp.)	Calaca, Batangas
9	P/NC	398	January 1, 2009	July 29, 2029	Balayan Distillery, Inc.	Brgy. Talisay, Calaca, Batangas
10	P/NC	430	October 21, 2011	May 11, 2035	Tiger Land Realty Corporation	Barangay Mabacong, Batangas City

Continuation) Table 6.12: List of Registered Ports with Valid Permits as of February 2021

REGISTRATION STATUS		COR/PTO NO.	EFFECTIVITY DATE		COMPANY	LOCATION
			FROM	TO		
11	P/NC	496	April 28, 2016	September 25, 2030	Mr. Rolando M. Magsino (Landoor Pier)	Brgy. San Juan, Mabini, Batangas
12	T/NC	493	January 1, 2017	December 31, 2021	Empire East Land Holdings, Inc.	Brgy. Guimalas, Balayan, Batangas
13	T/NC	241	July 1, 2017	June 30, 2022	SEM-Calaca Power Corporation (formerly National Power Corporation)	Bo. San Rafael, Calaca, Batangas
14	T/NC	510	February 5, 2018	February 4, 2023	Stelaron Internationl Inc.	Brgy. Tabangao, Batangas City
15	P/C	205	August 28, 2017	January 17, 2033	Bauan International Port, Inc. (formerly AG & P Port Services)	San Roque, Bauan, Batangas
16	T/NC	347	November 10, 2017	November 9, 2022	J.G. Summit Petrochemical Corp.	Brgy. Simlong, Batangas City
17	T/NC	514	April 27, 2019	April 26, 2024	Atlantic Grains Inc.	Brgy. Sinisian, Calaca, Batangas
18	T/NC	202	September 30, 2018	September 29, 2023	Himmel Industries Inc.	Pinamucan, Tabangao, Batangas
19	T/NC	463	September 22, 2018	September 21, 2023	Batangas Agro-Industrial Development Corporation	Pinamucan, Batangas City
20	T/NC	457	April 1, 2019	March 31, 2024	South Bay Bulk Terminal, Inc.	Barangay San Rafael, Calaca, Batangas
21	T/NC	362	October 27, 2017	October 26, 2022	Holcim Phils. Manufacturing Corp. (formerly Alson's Cement Corporation)	Brgy. San Rafael, Calaca, Batangas
22	T/NC	13	May 5, 2019	May 4, 2024	San Miguel Mills, Inc. (formerly issued to San Miguel Foods, Inc. and originally granted to Pacific Flour Mills, Inc.)	Tabangao, Batangas City
23	T/NC	468	September 18, 2019	September 17, 2024	Calaca Industrial Seaport Corporation (Phoenix Petroterminals)	Brgy. Puting Bato West, Calaca, Batangas
24	T/NC	447	August 22, 2019	August 21, 2024	Golden Bay Grain Terminal Corporation	Brgy. Bulacan, Mabini , Batangas
25	T/NC	415	May 8, 2019	May 7, 2024	EEI Corporation	Bo. Sta. Maria, Bauan, Batangas
26	T/NC	530	June 22, 2020	June 21, 2021	MG8 Terminal, Inc.	Brgy. San Pedro, Bauan and Brgy. San Juan, Mabini, Batangas

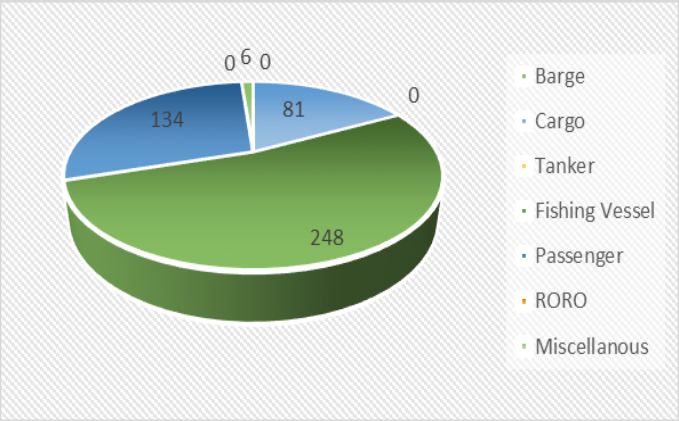
Data Source: Philippine Ports Authority
Note: T/NC-Temporary/Non-Commercial T/C-Temporary/ Commercial
P/NC-Permanent/ Non-Commercial P/C- Permanent/ Commercial

6.1.3.1 Shipping Lines

As of December 2020, there are twenty-three (23) shipping lines/shipping operators in Batangas Province with eighteen (18) routes from Batangas City to Oriental and Occidental Mindoro, and Romblon; Mabini to Tingloy; Isla Verde to Batangas City; Lobo to Oriental Mindoro; Ilijan/Lobo to Calero; Calatagan to Oriental Mindoro; and Nasugbu/Calatagan to Oriental Mindoro.

Maritime Industry Authority (MARINA) has a total of 469 vessels recorded in Batangas. From the majority of vessels registered, 248 ships are fishing vessels, 134 are passengers, and 81 are cargos. The rest are miscellaneous (6).

Figure 6.5: Type of Registered Vessel 2020



Data Source: Maritime Industry Authority-Regional Office IV

NUMBER OF REGISTERED VESSELS *as of CY 2020*	
Barge	0
Cargo	81
Tanker	0
Fishing Vessel	248
Passenger	134
RORO	0
Miscellanous	6
Total	***469***

Table 6.13: List of Routes and Shipping Operators 2020

NAME OF COMPANY/OWNER	CONTACT PERSON/ ADDRESS	NAME OF VESSEL	ROUTE
Montenegro Shipping Lines, Inc.	Capt. Ronnel Deginio SQA Manager Montenegro Corporate Center along Diversion Road, Bolbok, Batangas City (043)740-3188 0943-134-4401 sqa_msli@yahoo.com	MV Maria Wynona MV Maria Oliva MV Reina Delas Flores MV Reina Immaculada MV Reina Hosanna MV Maria Zenaida	Batangas City - Calapan City, Oriental Mindoro
		MV Reina Justisya MV Santa Soledad MV Santa Carmelita	Batangas City - Abra de llog, Occ. Mindoro
		MV Maria Xenia MV Reina Del Rosario MV Maria Diana	Batangas City - Odiongan, Romblon
		MV City of Iloilo	Batangas City - Tingloy, Island, Batangas and vice versa
		MV Maria Yasmina	Batangas - Puerto Galera, Oriental Mindoro and vice versa
Starlite Feries, Inc.	Capt. Winnie Bandong Starlite Feries, Inc. Virginia - Tan Dy Building, P. Dandan St., Corner Rizal Avenue, Batangas City (043) 723-9965 0917-820-5196	MV Starlite Jupiter MV Starlite Pacific MV Starlite Archer MV Starlite Saturn MV SWM Stella Del Mar MV SWM Salve Regina	Batangas City - Calapan City, Oriental Mindoro
		MV Starlite Saturn MV SWM Stella Del Mar MV SWM Salve Regina	Batangas - Roxas City
		MV Starlite Stella Maris	Batangas - Caticlan
		MV Starlite Pacific	Batangas - Balatero, Puerto Galera and vice versa
Besta Shipping Lines	Ms. Marixie Nikka Nilo DPA Port of Batangas 0923-603-9399 / 0943-669-0594 bestabooth@gmail.com	MV Baleno MV Baleno Five	Batangas City - Calapan City, Or. Mindoro
Orange Navigation Inc.	Ms. Marixie Nikka Nilo DPA Port of Batangas 0923-603-9399 / 0943-669-0594 bestabooth@gmail.com	MV Roro Master 5 MV Roro Master 3	Batangas City - Abra de llog

(continuation) Table 6.13: List of Routes and Shipping Operators 2020

NAME OF COMPANY/OWNER	CONTACT PERSON/ ADDRESS	NAME OF VESSEL	ROUTE
Archipelago Philippine Ferries Corp.	Atty. Rexter C. Tupas Unit 58, 5F Unioil Center Bldg., Acacia Ave., Madrigal Business Park, Ayala Alabang, Muntinlupa City (043)702-6983 0929-770-9969 atty.tupas@gmail.com naquila072880@gmail.com	MV Fastcat M5 MV Fastcat M12	Batangas City - Calapan City, Or. Mindoro
2GO Group, Inc.	Mr. Shane Arante Branch Manager 2GO Group, Inc. Sta. Clara, Batangas City (043) 288-3258 0917-826-5048 / 0908-886-5048	MV St. Ignatius of Loyola MV St. Anthony de Padua	Batangas - Odiongan, Romblon Batangas - Caticlan
Asian Marine Transport Corp.	Ms. Marivic Del Mundo Manager Asian Marine Transport Corp./ Super Shuttle RORO Corp. Port Access Road, Diversion Road, Batangas City 0945-657-2020	MV Super Shuttle Ferry 20	Batangas - Calapan City, Oriental Mindoro
Navios Shipping Lines, Inc.	Ms. Merlita de Sena PPA PTB2, Port Area, Brgy. Sta. Clara, Batangas City (043) 723-8106 / (043) 701-6108 0947-146-0409	MV Grand Venture MV Grand Unity	Batangas - Carmen (San Agustin) - Romblon (Romblon) - Cajidiocan (Sibuyan Is) and vice versa Batangas - Romblon - Cajidiocan - Romblon and vice versa
Montenegro Island Ferry Services, Inc.	Rosaleo M. Montenegro (Owner) Roderick (0961-199-2623) (Contact Person) Main Road, Brgy. 4, Poblacion, Tingloy, Batangas	MV Island Pearl-1 MV Island Star-M	Tingloy, Batangas - Mabini, Batangas (both in Batangas) and vice versa Tingloy, Batangas - Batangas City (both in Batangas) and vice versa
SuperCat Ferry Corp.	Shane Anthony G. Arante General Manager SuperCat Terminal 3, Brgy. Sta. Clara, Batangas City	MV St. Uriel MV St. Nuriel	Batangas - Calapan and vice versa
OceanJet	Mr. Francis S. Cusi President Starlite Ferries, Inc. Old PPA Bldg. Port Area, Sta. Clara, Batangas City	CPC Issued by	Batangas - Calapan and vice versa
Shogun Ships Co.	Mr. Geronimo Paringir, Jr. Documentation Officer Portavaga Ship Management, Inc. #7 JADC Compound, E. Rodriguez Jr. Ave., Brgy. Bagongllog, Pasig City	MV Island Biri	Batangas - Puerto Galera, Oriental Mindoro and vice versa
F&S Marine Transport Inc.	Santiago A. Tria 0999-884-3625 annacielito.tria@yahoo.com	MV F&S Our Mother Of Perpetual Help MV F&S Our Lady Of St. Therese	Tilik, Lubang, Occ. Mindoro - Nasugbu, Batangas & VV during northeast monsoon ("AMIHAN") OR Tilik, Lubang, Occ. Mindoro - Calatagan, Batangas & VV during southwest monsoon ("HABAGAT")
Aline G. Gadia	FB/Messenger: Aline G. Gadia (Owner)	MBca D'Angels MBca Maria Luna	Ilijan - Lobo (both in Batangas) - Calero, Calapan City, Or. Mindoro and vice versa
Isidro C. Marquez	FB/Messenger: Marilyn Marquez (Authorized Representative)	MBca San Miguel 12	Lobo, Batangas - Calero, Calapan City, Oriental Mindoro and vice versa

(continuation) Table 6.13: List of Routes and Shipping Operators 2020

NAME OF COMPANY/OWNER	CONTACT PERSON/ ADDRESS	NAME OF VESSEL	ROUTE
Santiago A. Tria Jr.	FB/Messenger: Shaine Mercado Aldovino (Authorized Representative)	MBca God's Grace - Iii	Agkawayan, Looc, Occidental Mindoro - Nasugbu / Calatagan, Batangas and vice versa
Roberto M. Gonzales, Sr.	Roberto M. Gonzales, Sr.	MBca Via-Italy	San Agapito, Isla Verde, Batangas City - Batangas City and vice versa
Buhay Jose Fatalla	Buhay Jose Fatalla	MB Saint Paul	Isla Verde, Batangas - Tabangao, Batangas City and vice versa
Leopoldo G. Villanueca Jr. doing business under the name and style on Minolo Shipping Lines	Leopoldo G. Villanueca Jr.	MV Golden Raptor Mbca Golder Hawk Mbca Golden Vulture MB Golden Buzzard MV SVEL 105 MB FUJI SUN MV Zencruiser	El Nido - Coron (both in Palawan) and vice versa Culion - Coron (both in Palawan) and vice versa) Batangas - Muelle, Puerto Galera, Or. Mindoro and vice versa
Jerson R Roy	Jerson R Roy	MBca Margielyn-IV-RM Lines	San Fernando, Romblon - Batangas and vice versa
Godualdo T. Vidal	Godualdo T. Vidal	MBca Catherine - J	1) Talaotao, Looc, Occidental Mindoro - Calatagan, Batangas and vice versa 2) Talaotao, Looc, Occidental Mindoro - Bulacan, Looc, Occidental Mindoro - Calatagan, Batangas and vice versa
Hazel E. Nical	Hazel E. Nical FB/Messenger: Shaine Mercado Aldovino (Authorized Representative)	MBca God's Grace I	Agkawayan, Looc, Occidental Mindoro Nasugbu/Calatagan, Batangas and vice versa
RDI-Genesis Shipping Inc.	FB/Messenger: Shaine Mercado Aldovino (Authorized Representative)	MV RDI Genesis I MV RDI Genesis II	Muelle, Puerto Galera, Oriental Mindoro and vice versa Muelle, Puerto Galera, Oriental Mindoro - Batangas City and vice versa White Beach, Puerto Galera, Oriental Mindoro - Batangas City and vice versa

Data Source: Maritime Industry Authority-Regional Office IV

6.1.3.2 Port Comparison

In comparison to the Port of Manila, the Port of Batangas recorded seven times more commuters in year 2020. Passenger Traffic Statistics shows that a total of 301,819 passengers embarked, disembarked and in cruise ship at Port of Manila compared to 2,072,048 passengers at Port of Batangas.

Cargo throughput reached 24,687,511 metric tons in Port of Manila compared to 2,813,145 metric tons in Batangas, however, shipcalls counted to 10,698 in Manila compared to 19,552 in Batangas. This shows that there are more shipcalls through the Batangas Port but lesser cargo and fewer container units as compared to Port of Manila.

Table 6.14: Comparative Port Statistics, Philippine Ports Authority 2020

	Port of Manila				Port of Batangas			
	Domestic	Foreign	Total		Domestic	Foreign	Total	
Cargo Throughput (in MT)	13,815,011	10,872,500	24,687,511		989,338	1,823,806	2,813,145	
Number of Shipcalls	7,708	2,990	10,698		18,818	734	19,552	
No. of Containers Handled in TEUs	1,306,683	1,042,120	2,348,803		38,143	247,033	285,176	
Passenger Traffic	Disembarked	Embarked	Cruise Ships	Total	Disembarked	Embarked	Cruise Ships	Total
Passenger Count	140,774	151,319	9,726	301,819	1,076,882	995,166	0	2,072,048

**TEUs= Twenty Equivalent Unit Container*
Data Source: Philippine Ports Authority

6.1.4 Other Modes of Transportation

Fernando Air Base (FAB), a Philippine Air Force (PAF) facility, is the only civil military-airport facility in the Province. It is located in Lipa City, Batangas, about 83 kilometer South- South East (SSE) of Manila, Philippines. It is 1,220 feet (370 m) above sea level and is situated on a plateau overlooking Taal Volcano with an area of 712 acres (288 hectares) of land which keep its climate temperature cool all day.

(Photo Souce: IG@kiev47)

6.2 Power Supply

6.2.1 Electrification Status

The power supply requirement of Batangas Province is being supplied by the National Power Corporation (NPC) through Manila Electric Company (MERALCO), Batangas Electric Cooperative (BATELEC I & II), and by private electric companies, First Bay Power Corporation and Ibaan Electric Light System.

The power needs of Batangas City, San Pascual and Sto. Tomas City are provided by MERALCO. Bauan formerly being managed by the municipal electric light system was turned over to a private provider, the First Bay Power Corporation (FBPC), in 2005 while Ibaan is serviced by Ibaan Electric Engineering Corporation (IEEC). BATELEC I which is located in Calaca, Batangas covers the Municipalities of Agoncillo, Balayan, Calaca, Calatagan, Lemery, Lian, Nasugbu, San Luis, San Nicolas, Sta. Teresita, Taal and Tuy while BATELEC II in Lipa City covers the Municipalities of Alitagtag, Balete, Cuenca, Laurel, Lobo, Mabini, Malvar, Mataasnakahoy, Padre Garcia, Rosario, San Jose, San Juan, Talisay, Taysan and Tingloy and the Cities of Lipa and Tanauan and barangays Sico and Talumpok in Batangas City.

Table 6.15: Power Distributors, 2020

POWER DISTRIBUTOR	AREA OF COVERAGE
BATELEC I	Servicing 12 Municipalities including Agoncillo, Balayan, Calaca, Calatagan, Lemery, Lian, Nasugbu, San Luis, San Nicolas, Sta. Teresita, Taal and Tuy.
BATELEC II	Servicing 2 Cities and 15 Municipalities namely Lipa City, Tanauan City, Alitagtag, Balete, Cuenca, Laurel, Lobo, Mabini, Malvar, Mataasnakahoy, Padre Garcia, Rosario, San Jose, San Juan, Talisay, Taysan, Tingloy and Brgys. Sico & Talumpok of Batangas City.
MERALCO	Servicing Cities of Batangas and Sto. Tomas, and Municipality of San Pascual
IBAAN ELECTRIC ENGINEERING CORPORATION	Servicing the Municipality of Ibaan
FIRST BAY POWER CORPORATION	Servicing the Municipality of Bauan

Data Source: Power Distributors

Power Distributors were able to energize the 1,078 barangays of the Batangas Province in the year 2020 except Barangay San Agapito in Batangas City and Barangay Calawit in Balete which are energized through solar cell/panels.

Although all barangays are energized, there are still sitios in some barangays without access to electricity. These are from the Municipalities of Cuenca, Mabini, San Jose, San Juan, and Tingloy.

Table 6.16: Electrification Status

CITY/ MUNICIPALITY	NO. OF BARANGAY	ENERGIZED	UNENERGIZE	NAME OF BRGY. ENERGIZED THROUGH SOLAR CELL/PANELS	NAME OF SITIO/PUROK WITHOUT ELECTRICITY
Batangas City	105	105	0	San Agapito	
Lipa City	72	72	0		
Tanauan City	48	48	0		
Sto. Tomas City	30	30	0		
Agoncillo	21	21	0		
Alitagtag	19	19	0		
Balayan	48	48	0		
Balete	13	13	0	Calawit	
Bauan	40	40	0		
Calaca	40	40	0		
Calatagan	25	25	0		
Cuenca	21	21	0		Brgy. Dalipit East, Sitio Guguan Brgy. San Felipe, Sitio Kawa
Ibaan	26	26	0		
Laurel	21	21	0		
Lemery	46	46	0		
Lian	19	19	0		
Lobo	26	26	0		
Mabini	34	34	0		Brgy. Santo Tomas, Sitio Silangan Brgy. Pilahan, Sitio Hulo Phase 2
Malvar	15	15	0		
Mataasnakahoy	16	16	0		
Nasugbu	42	42	0		
Padre Garcia	18	18	0		
Rosario	48	48	0		
San Jose	33	33	0		Brgy. Balagtasin, Small Tondo Brgy. Bigain I, Sitios Canal and Maralit Ponio Cmp. Brgy. Lepute, Sitio Ilaya Brgy. Lumil, Sitio Maligaya Brgy. Mojon-Tampoy, Sitio Cavite
San Juan	42	42	0		Brgy. Abung, Sitio Salak Brgy. Catmon, Sitio Ilaya Brgy. Libato, Sitio Sulok Brgy. Lipahan, Sitio Poypoy Brgy. Nagsaulay, Sitio Centro Brgy. Sampiro, Sitio Sampirong Bata Brgy. Subukin, Sitio Manggahan Brgy. Palingowak, Sitio Calihon Brgy. Buhay Na Sapa, Sitio Timbugan Brgy. Calicanto, Sitio Carnation Brgy. Pulangbato, Sitio Bokal Phase 2 Brgy. Barualte, Sitio Tanglaw Brgy. Calubcub II, Sitio Puting Uway Phase 3 Brgy. Laiya-Ibabao, Sitio Malaya 2/Silangan Brgy. Palingowak, Sitio Baybayin Phase 2 Brgy. Sapangan, Sitio Matanag Bapa 1 & 2 Brgy. Sapangan, Sitio Pinagkawaran Baba/Ibaba

(Continuation) Table 6.16: Electrification Status

CITY/ MUNICIPALITY	NO. OF BARANGAY	ENERGIZED	UNENERGIZE	NAME OF BRGY. ENERGIZED THROUGH SOLAR CELL/PANELS	NAME OF SITIO/PUROK WITHOUT ELECTRICITY
San Luis	26	26	0		
San Nicolas	18	18	0		
San Pascual	29	29	0		
Sta. Teresita	17	17	0		
Taal	42	42	0		
Talisay	21	21	0		
Taysan	20	20	0		
Tingloy	15	15	0		Brgy. 14 (Poblacion 2), Sitios Araruhan and Sampaguita Brgy. 15, Sitio Atis Brgy. San Isidro, Sitio Kamastilisan Brgy. San Pedro, Sitios Mabuhay and Bagong Sikat I and II
Tuy	22	22	0		

Data Source: Power Distributors

6.2.2 Power Plants

As shown in Table 6.17, the total installed capacity of power plants throughout Batangas reached over 4,655.9 MW (Megawatts) as of December 2020. First Gas Power Corporation (FGPC) and KEPCO (Ilijan) Corp. are the two (2) power plant that provides a total of 2,371.8 MW which accounts for more than half of the power supply throughout the province.

Meanwhile, Figure 6.6 shows that majority of power production of the Province comes from natural gas power plants representing 74% of the total power capacity while plants powered by coal represent 12%, geothermal with 10% and the remaining 1% each for oil-based, biomass, and solar power plants.

The oldest power plant operating since April 1979 is the Makban Power Plant of AP Renewable Inc. (APRI) located at Calauan and Bay Laguna and Sto. Tomas Batangas. Others are Santa Rita Units 1 and 2 Power Plants of First Gas Power Corp. located at Brgy. Sta. Rita, Batangas City operating since June 2000 and Units 3 and 4 operating since October 2001; Ilijan Power Plant of Kepco Ilijan Corporation located at Brgy. Ilijan, Batangas City operating since June 2002; San Lorenzo Power Plant of First Gen. Power (FGP) Corporation located at Brgy. Sta. Rita, Batangas City operating since September 2002; Maibarara 1 of Maibarara Geothermal Inc. located at Brgy. San Rafael, Sto. Tomas City operating since February 2014; Republic Cement and Building Material, Inc. (RCBMI) located at Brgy. Mapulo, Taysan operating since July 2014; South Luzon Thermal Energy Corp. (SLTEC) Puting Bato Units 1 and 2 located at San Rafael, Calaca, started operating since April 2015 and February 2016 respectively; Calatagan Solar Farm of Solar Philippines Calatagan Corporation located at Brgy. Paraiso, Calatagan operating since March 2016; Lian Solar of Absolut Distillers Inc. (ADI) located at Brgy. Malaruhatan, Lian operating since March 2016; Southwest Luzon Power Generation Corporation (SLPGC) Units 1 and 2 of Southwest Luzon Power Generation Corporation located at San Rafael, Calaca, both operating since July 2016; San Gabriel Combined Cycle Power Plant of First NatGas Power Corp. located at Brgy. Sta. Rita, Batangas City operating since July 2016; Avion Power Plant of Prime Meridian PowerGen Corporation (PMPC) located at Brgy. Bolbok, Batangas City operating since August 2016; Central

Azucarera Don Pedro, Inc. (CADPI) located at Nasugbu operating since February 2018; SLPGC Units 3 and 4 located at located at Brgy. San Rafael, Calaca, both operating since March 2018; and Maibarara-2 of Maibarara Geothermal Inc. located at Brgy. San Rafael, Sto. Tomas City operating since March 2018. This can be seen in Table 6.18.

Table 6.17: Power Plants in Batangas as of December 2020

POWER PLANT		CAPACITY, MW		NUMBER OF UNITS	LOCATION	OPERATOR	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUNICIPALITY/ PROVINCE		
1. COAL		**570.0**	**523.9**				
SLPGC U1	Circulating Fluidized Bed (CFB) Coal	150.0	140.0	1	Calaca, Batangas	Southwest Luzon Power Generation Corporation (SLPGC)	July 2016
SLPGC U2	Circulating Fluidized Bed (CFB) Coal	150.0	140.0	1	Calaca, Batangas		
SLTEC PUTING BATO U1	Circulating Fluidized Bed (CFB) Coal	135.0	121.0	1	Calaca, Batangas	South Luzon Thermal Energy Corporation (SLTEC)	April 2015
SLTEC PUTING BATO U2	Circulating Fluidized Bed (CFB) Coal	135.0	122.9	1	Calaca, Batangas		February 2016
2. OIL-BASED		**62.4**	**58.0**				
RCBMI	Bunker/Diesel Internal Combustion Engine	12.4	12.0	2	Taysan, Batangas	Republic Cement and Building Materials Inc. (RCBMI)	July 2014
SLPGC U3	Modular Gas Turbine	25.0	23.0	1	Calaca, Batangas	Southwest Luzon Power Generation Corporation (SLPGC)	March 2018
SLPGC U4	Modular Gas Turbine	25.0	23.0	1	Calaca, Batangas	Southwest Luzon Power Generation Corporation (SLPGC)	March 2018
3. NATURAL GAS		**3,451.5**	**3,286.1**				
AVION	Open Cycle Gas Turbine (OCGT)	100.6	97.0	2	Bolbok, Batangas City	Prime Meridian Powergen Corporation (PMPC)	August 2016
ILIJAN	Combined Cycle Gas Turbine (CCGT)	1,277.0	1,200.0	6	Ilijan, Batangas City	KEPCO Ilijan Corporation (KEILCO)	June 2002
SAN GABRIEL	Combined Cycle Gas Turbine (CCGT)	430.0	420.0	1	Sta. Rita, Batangas City	First NatGas Power Corp (FNPC)	July 2016
SAN LORENZO	Combined Cycle Gas Turbine (CCGT)	549.1	526.6	2	Sta. Rita, Batangas City	FGP Corporation	September 2002
SANTA RITA	Combined Cycle Gas Turbine (CCGT)	1,094.8	1,042.5	4	Sta. Rita, Batangas City	First Gas Power Corporation (FGPC)	Unit 1 & 2 - June 2000 Unit 3 & 4 - October 2001
4. BIOMASS		**31.9**	**2.0**				
CADPI	Bagasse-fired Cogeneration Plant	31.9	2.0	3	Nasugbu, Batangas	Central Azucarera Don Pedro, Inc. (CADPI)	February 2018
4. SOLAR		**65.3**	**52.2**				
CALATAGAN SOLAR	Ground Mounted Solar PVs	63.3	50.6		Calatagan and Balayan, Batangas	Solar Philippines Calatagan Corporation	March 2016
LIAN SOLAR	Ground Mounted Solar PVs	2.0	1.6		Lian, Batangas	Absolut Distillers Inc.	March 2016

(Continuation) Table 6.17: Power Plants in Batangas as of December 2020

POWER PLANT		CAPACITY, MW		NUMBER OF UNITS	LOCATION	OPERATOR	DATE COMMISSIONED/ COMMERCIAL OPERATION
FACILITY NAME	SUBTYPE	INSTALLED	DEPENDABLE		MUNICIPALITY/ PROVINCE		
5. GEOTHERMAL		**474.8**	**406.6**				
MAKBAN	Single Flash	442.8	374.6	10	Calauan and Bay Laguna and Sto. Tomas Batangas	AP Renewable Inc. (APRI)	April 1979
MAIBARARA 1	Single Flash	20.0	20.0	1	Sto. Tomas, Batangas	Maibarara Geothermal Inc. (MGI)	February 2014
MAIBARARA 2	Single Flash	12.0	12.0	1	Sto. Tomas, Batangas	Maibarara Geothermal Inc. (MGI)	May 2018
TOTAL		**4,655.9**	**4,328.8**				

Data Source: Department of Energy
- The dependable capacity of a generating facility or transmission system is a fluctuating value that depends upon the available energy, the demand for that energy, the capability of the system to deliver that energy at a given moment, and the facilities available to handle increased capacity should the need arise.
- Installed- Production capacity of plant based either on its rated (nameplate) capacity or actual (practically determined) capacity.
- Coal Power Plants- a thermal power station which burns coal to generate electricity.
- Oil-Based Power Plants - power plants that burn oil to produce electricity.
- Natural Gas Power Plants – power plants that generate electricity by burning natural gas as their fuel.
- Biomass Power Plants - wood waste or other waste is burned to produce steam that runs a turbine to make electricity.
- Solar Power Plants - converts sunlight either directly, like Photovoltaics, or indirectly, like Solar Thermal plants, into electricity.
- Geothermal Power Plants - used in order to generate electricity by the use of geothermal energy.
- Grid connections are unidirectional point to multipoint links. In distributed generation grids, these connections are bidirectional, and the reverse flow can raise safety and reliability concerns. Features in smart grids are designed to manage these conditions.
- Embedded generation is electricity that is obtained outside the national grid through a bilateral agreement between the generator (that is the company that generates the power) and the distribution company. They generate electricity in smaller scale.

Figure 6.6: Types of Existing Power Plant 2020

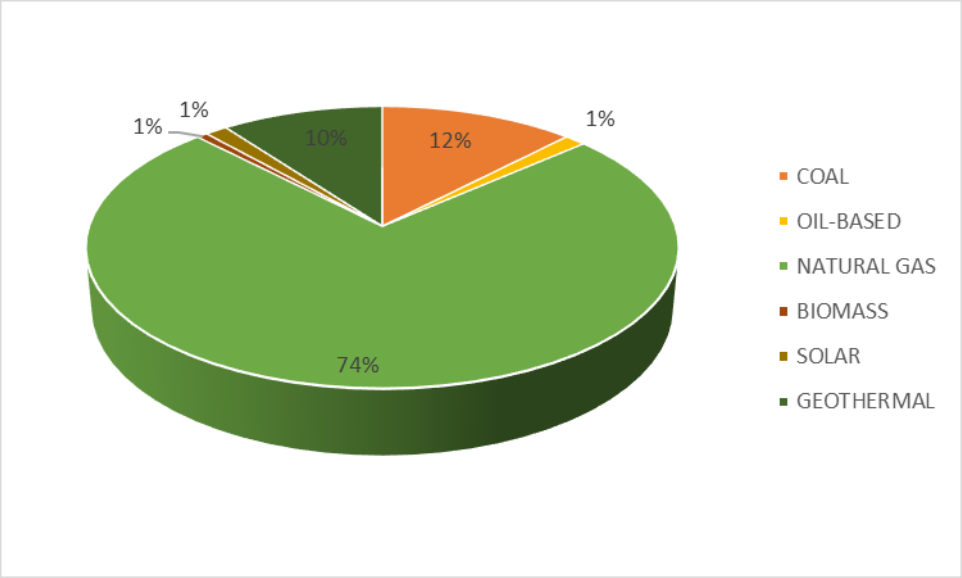


Table 6.18: Directory of Power Companies

	Name of Power Plant	Location	Year of Operation	Contact Number	Operator
1	MAKBAN	Calauan and Bay Laguna and Sto. Tomas Batangas	April 1979	+63935 352 2623	AP Renewable Inc. (APRI)
2	SANTA RITA UNIT 1 & 2	Brgy. Sta. Rita, Batangas City	June 2000	(+6343) 723-9526 to 28 449-6310	First Gas Power Corp.
3	SANTA RITA UNIT 3 & 4	Brgy. Sta. Rita, Batangas City	October 2001	(+6343) 723-9526 to 28 449-6310	First Gas Power Corp.
4	ILIJAN	Brgy. Ilijan, Batangas City	June 2002	(043) 425-6500	KEPCO Ilijan Corporation
5	SAN LORENZO	Brgy. Sta. Rita, Batangas City	September 2002	(+6343) 723-9526 to 28 449-6310	First Gen. Power (FGP) Corporation
6	MAIBARARA - 1	Brgy. San Rafael, Sto. Tomas City	February 2014	(+6343) 784-3328	Maibarara Geothermal Inc.
7	RCBMI	Brgy. Mapulo, Taysan	July 2014	(+632) 750-1713 (045) 750-1713	Republic Cement and Building Materials Inc.
8	SLTEC PUTING BATO U1	Calaca, Batangas	April 2015	(+632) 657-1570	South Luzon Thermal Energy Corporation
9	SLTEC PUTING BATO U2	Calaca, Batangas	February 2016	(+632) 657-1570	South Luzon Thermal Energy Corporation
10	CALATAGAN SOLAR FARM	Paraiso, Calatagan	March 2016	(+632) 817-2585	Solar Philippines Calatagan Corporation
11	LIAN SOLAR	Brgy. Malaruhatan, Lian	March 2016	(+6343) 215-2439	Absolut Distillers Inc. (ADI)
12	SLPGC U1	San Rafael, Calaca, Batangas	July 2016	(+632) 888-3055	Southwest Luzon Power Generation Corporation
13	SLPGC U2	San Rafael, Calaca, Batangas	July 2016	(+632) 888-3055	Southwest Luzon Power Generation Corporation
14	SAN GABRIEL COMBINED CYCLE	Brgy. Sta. Rita, Batangas City	July 2016	(+6343) 723-9526 to 28 449-6310	First NatGas Power Corp.
15	AVION	Brgy. Bolbok, Batangas City	August 2016	(+6343) 723-9526 to 28 449-6310	Prime Meridian PowerGen Corporation (PMPC)
16	CADPI	Nagsugbu, Batangas	February 2018	(043) 931 2302	Central Azucarera Don Pedro, Inc. (CADPI)
17	SLPGC U3	San Rafael, Calaca, Batangas	March 2018	(+632) 888-3055	Southwest Luzon Power Generation Corporation
18	SLPGC U4	San Rafael, Calaca, Batangas	March 2018	(+632) 888-3055	Southwest Luzon Power Generation Corporation
19	MAIBARARA - 2	Brgy. San Rafael, Sto. Tomas City	March 2018	+639067625383	Maibarara Geothermal Inc.

Data Source: Department of Energy

6.2.2.1 Committed and Indicative Power Projects

A total of nine (9) indicative power projects are expected to generate an additional 6,405 MW power capacities, some of which are expected to operate in May 2022 up to year 2026. These projects include one (1) coal, two (2) natural gas, and six (6) solar power projects. This can be seen in Table 6.19.

On the other hand, three (3) committed power projects (two (2) natural gas and one (1) geothermal power projects) with a total of 2,870 MW are predicted to operate from June 2023 to November 2025. See Table 6.20.

The difference between committed and indicative projects is financial closure. Committed refers to power projects that have secured financial closure while indicative are those with the intention to put up power plants but are yet to establish financial closure.

Table 6.19: Private Sector Initiated Indicative Power Projects, 2020

NAME OF THE PROJECT	PROJECT PROPONENT	LOCATION	RATED CAPACITY (MW)	TARGET TESTING & COMMISSIONING
COAL			**700**	
SRPGC 2x350MW Coal-Fired Power Plant	St. Raphael Power Generation Corporation	Brgy. San Rafael, Calaca, Batangas	700	October 2025
NATURAL GAS			**4,800**	
Lloyds Energy Philippines Inc. Floating Power Plant	Lloyds Energy Philippines Inc.	San Pascual, Batangas	1,200	December 2022
SMC Ilijan LNG Power Plant	SMC Global Power Holdings Corp.	Batangas	3,600	TBA
SOLAR			**905**	
Earthenergy Solar Power Plant	Earthenergy Corp.	Balayan, Batangas	30	May 2022
RGEC Solar Power Project	Roxas Green Energy Corporation	Nasugbu and Tuy, Batangas	30	December 2022
Tanauan Batangas Solar I Power Project	Solar Philippines Tanauan Corporation	Tanauan City, Batangas	100	December 2024
Bawi Solar Power Plant	Phinma Energy Corporation	Lipa City & Padre Garcia, Batangas	45	December 2024
Balayan Solar Power Project	Solar Philippines Commercial Rooftop Projects, Inc.	Balayan & Calaca, Batangas	600	December 2024
Calamba and Tanauan Solar Power Project	Solar Philippines Tanauan Corporation	Tanauan City, Batangas	100	December 2026
TOTAL	**6,405 MW**			

Data Source: Department of Energy

Table 6.20: Private Sector Initiated Committed Power Projects, 2020

NAME OF THE PROJECT	PROJECT PROPONENT	LOCATION	RATED CAPACITY (MW)	TARGET TESTING & COMMISSIONING
NATURAL GAS			**2,850**	
Ilijan LNG Power Plant	Excellent Energy Resources Inc. (EERI)	Batangas	1,750	June 2023
Natural Gas-Fired Power Plant	Batangas Clean Energy, Inc.	Pinamucan Ibaba, Batangas City	1,100	March 2025
GEOTHERMAL			**20**	
Maibarara3 Geothermal Power Project	Maibarara Geothermal, Inc.	Laguna/Batangas	20	November 2025
TOTAL	**2,870 MW**			

Data Source: Department of Energy

6.3 Water Supply

6.3.1 Water Supply Systems

The water supply needs of the different municipalities and cities of Batangas Province particularly for domestic purposes are being provided by existing water districts, municipal water systems and barangay waterworks associations.

6.3.2 Water Districts, Municipal Water Systems (MWS), Barangay Water Program-Rural Waterworks and Sanitation Associations (BWP-RWSAs), Barangays without Water System

The Local Government Units (LGUs) that have BWP-RWSA aside from existing water districts are Cities of Tanauan and Sto. Tomas, and Municipalities of Agoncillo, Balete, Lemery, Lian, Lobo, Mabini, Malvar, Mataasnakahoy and Taal. Aside from the existing municipal water system, the Municipalities of Bauan, Calaca, Calatagan, Ibaan, Padre Garcia, San Luis, San Nicolas, San Pascual and Sta. Teresita also have operating BWP-RWSA.

Table 6.21: List of Water Districts and Municipal Water Systems as of 2020

LOCAL GOVERNMENT UNIT	NO. OF BARANGAY	WATER DISTRICT	MUNICIPAL WATER SYSTEM	BWP-RWSAs	BARANGAYS WITHOUT WATER SYSTEM
Batangas City	105	LWUA			
Lipa City	72	LWUA			
Tanauan City	48	LWUA		Banjo West, Luyos-Altura Bata-San Jose, Mabini, Pagaspas, Talaga, Suplang-Sulpoc-Montaña, Montaña***, Janopol II***, Santor***	Mahabang Buhangin
Sto. Tomas City	30	LWUA		Sta. Teresita, Sta. Cruz, San Luis	
Agoncillo	21	LWUA		Pamiga-Pook-Bangin, Subic Ilaya & Ibaba,Pansipit, Brigon	Bilibinwang, Banyaga, Adia
Alitagtag	19	LWUA			
Balayan	48	LWUA			Malalay, Tactac, Tanggoy, Duhatan
Balete	13	LWUA		Malabanan	
Bauan	40		x	BLGU-Run Utility - Alagao, Bagong Silang, Baguilawa, Colvo, Durungao, Gulibay, Magalang-galang, Malindig, Orense, Pitugo, Sampaguita, San Diego, San Pablo, San Pedro, San Teodoro, San Vicente, Sinala, and Locloc Cooperative - As-is, Balayong, Bolo, Inicbulan, Manalupang, Rizal, and San Agustin Private - Aplaya, Poblacion I-IV, Cupang, Manghinao Proper, Manghinao I, New Danglayan, San Andres Proper, San Andres I, San Miguel, San Roque, Sta. Maria, Sto. Domingo	

(continuation) Table 6.21: List of Water Districts and Municipality Water Systems as of 2020

LOCAL GOVERNMENT UNIT	NO. OF BARANGAY	WATER DISTRICT	MUNICIPAL WATER SYSTEM	BWP-RWSAs	BARANGAYS WITHOUT WATER SYSTEM
Calaca	39		x	Pantay**, Cahil, and Tamayo	Munting Coral and Makina
Calatagan	25		x	Brgy. 2, Bagong Silang, Balibago, Balitoc, Biga, Carretunan, Encarnacion, Lucsuhin, Paraiso, Tanagan, Carlosa, Sambungan	Brgy. 1, Brgy. 3, Brgy. 4, Baha, Bucal, Gulod, Hukay, Luya, Quilitisan, Real, Sta. Ana, Talibayog, and Talisay
Cuenca	21		x		
Ibaan	26		x	Catandala-Mabalor-Panghayaan, Tulay-Calamias	Matala, Quilo, San Agustin, Sto. Nino
Laurel	21			Poblacion, Sta. Maria, San Gabriel, and Molinete	Dayap Itaas
Lemery	46	LWUA		Mayasang Water System	So. Bagong Paraiso, San Isidro Itaas and Niogan
Lian	19	LWUA		Brgy. Puting Kahoy, Brgy. Balibago, Brgy. Kapito, Brgy. Humayingan and Brgy. San Diego	
Lobo	26	LWUA		Fabrica-Masaguitsit	Balibago, Biga, Bignay, Calo, Calumpit, Jaybanga, Malalim na Sanog, Nagtoctoc, Pinaghawahan, and San Nicolas
Mabini	34	LWUA		Anilao East-Proper-Majuben	Sto. Tomas, Estrella, Laurel, Pilahan, Pulang Lupa, Pulong Anahaw, Sta. Mesa, Sto. Niño, Solo, Ligaya, Bagalangit, San Teodoro, Mainit, Nag-iba, Malimatoc 1 & 2
Malvar	16	LWUA		San Pedro I, San Pedro II, San Andres, San Gregorio, Bilucao, Bulihan, San Isidro	
Mataasnakahoy	16	LWUA		Brgys. Upa, Bubuyan, Kinalaglagan and Lumanglipa	
Nasugbu	42	LWUA			
Padre Garcia	18		x	Pansol, Tangob, San Felipe	
Rosario	48	LWUA			
San Jose	33			Aguila, Anus, Aya, Bagong Pook, Balagtasin, Balagtasin I, Banaybanay II, Bigain I, Bigain II, Bigain South, Calansayan, Galamay-Amo, Lalayat, Lapolapo 2.0, Lepute, Lumil, Mojon-Tampoy, Natunuan, Palanca, Pinagtung-Ulan, Sabang, Salaban, and Tugtug	
San Juan	42	LWUA			Laiya Aplaya, Laiya Ibabao
San Luis	26		x	Abiacao, Bagong Tubig, Bonliw, Locloc, San Antonio, San Isidro,Tungal (Barangay Government) Balagtasin, Boboy, Calumpang West, Calumpang East, Durungao, Luya, Mahabang Parang, Manggahan, Muzon, San Jose, San Martin, Sta Monica, Taliba, Talon & Tejero (Barangay Waterworks Association)	

(continuation) Table 6.21: List of Water Districts and Municipality Water Systems as of 2020

LOCAL GOVERNMENT UNIT	NO. OF BARANGAY	WATER DISTRICT	MUNICIPAL WATER SYSTEM	BWP-RWSAs	BARANGAYS WITHOUT WATER SYSTEM
San Nicolas	18		x	Maabud North & South, Sinturisan- Calangay	Alas-as, Pulangbato
San Pascual	29		x	Balimbing, Del Pilar, Ilat North, Laurel, Malaking Pook, Mataas na Lupa, Natunuan North, Natunuan South, Palsahingin, Pila, Pook ni Banal, Pook ni Kapitan, Resplandor, Sambat, San Antonio, and Sta. Elena	
Sta. Teresita	17		x	Calumala- Tambo Ilaya & Ibaba Saimsim, Sampa-Pacifico- San Antonio, San Vicente	
Taal	42	LWUA		Tulo, Apacay,Bagong Pook,Cubamba, Bolbok, Gahol,Halang, Iba, Ilog, Imamawo, Luntal,	
Talisay	21			Brgy. Sampaloc, Brgy. Tranca, Brgy. Miranda, Brgy. Leynes, Sitio Camantigue, Brgy. Tumaway	
Taysan	20	LWUA			Guinhawa, Laurel, Piña
Tingloy	15	LWUA			
Tuy	22	LWUA			

Data Source: Local Government Units

6.3.3 Water Districts

The Cities of Batangas, Lipa, Tanauan and Sto. Tomas have their own water districts. The Municipalities of Malvar, Mataasnakahoy and Balete are supplied by Metro Lipa Water District in Lipa City.

Data for Water Districts Connections are presented in Table 6.22. Total connections reported reached 245,831, where, almost 91.01% or 223,739 connections are residential while the remaining 8.99% are either commercial or industrial.

There are two types of water sources as reported by different Water District, the surface water source and the ground water source. Surface water and groundwater are both important sources for community water supply needs. Groundwater is a common source for single homes and small towns, rivers and lakes are the usual sources for large cities. Although approximately 98% of liquid fresh water exists as groundwater, much of it occurs very deep in the Earth. This makes pumping very expensive, preventing the full development and use of all groundwater resources.

Table 6.23 shows the water resources of different water districts in the Province. Batangas City, Lobo, and Nasugbu Water Districts use surface water while the rest are using ground water.

Meanwhile, Table 6.24 shows the estimated rate of water service in the first 30m^3 consumption. Record shows that among the seventeen (17) Water Districts, Agoncillo Water District has the highest rate for the first 10 m^3 amounting to ₱27.20 per cubic meter while Sto. Tomas Water District has the lowest water rate of ₱12.00 per cubic meter. For the next 11-20

m³, again, Balayan Water District has the highest rate of ₱33.25 while San Juan Water District has the lowest rate of ₱15.00. And for 21-30 m³, consistently, Agoncillo Water District still has the highest rate of ₱36.25 and the lowest rate is ₱18.50 of Rosario Water District.

Figure 6.7 shows graphical comparison of Water Service Rate of water districts. Non-revenue water (NRW) is water that has been produced and is "lost" before it reaches the customer. Losses can be real losses (through leaks, sometimes also referred to as physical losses) or apparent losses (for example through theft or metering inaccuracies). High levels of NRW are detrimental to the financial viability of water utilities, as well to the quality of water itself. NRW is typically measured as the volume of water "lost" as a share of comparisonnet water produced. However, it is sometimes also expressed as the volume of water "lost" per km of water distribution network per day.

Non-Revenue water and targets are shown in Table 6.25. Balayan Water District having the highest percentage of non-revenue water of 55% in 2005 and 54% in 2010 and reduced to 44% on the latest data in 2015 targets to trim it down to 20% in 2020 and 18% in 2025.

Some of the factors in water losses are due to unbilled authorized consumption, Apparent losses (water theft and metering inaccuracies), and Real losses (from transmission mains, storage facilities, distribution mains or service connections).

On the other hand, Table 6.26 shows the Water District Directory.

Table 6.22: Water District Connections 2020

Name of Water District	Total Number of Connections of Water Districts			
	Total	Residential	Commercial	Industrial
Agoncillo Water District	4,789	4,585	204	0
Alitagtag Water District	4,133	3,798	335	0
Balayan Water District	5,711	5,374	337	0
Batangas City Water District	42,356	38,575	3,557	224
Lemery Water District	12,084	10,902	960	222
Metro Lipa Water District	82,718	78,614	4,104	0
Lian Water District	2,444	2347	93	4
Lobo Water Distrct	5,351	5,214	137	0
Mabini Water District	7,770	NO DATA AVAILABLE		
Nasugbu Water District	8,031	7,442	562	27
Rosario Water District	6,949	6227	722	
San Juan Water District	7,836	7,416	420	
Sto. Tomas Water District	22,060	21,418	611	31
Taal Water District	7,475	7,239	222	14
Tanauan Water District	19,057	17,898	1,159	0
Taysan Water District	3,283	3,085	195	3
Tuy Water District	3,784	3,605	178	1
Total Connections	245,831	223,739	13,796	526
	100.00%	91.01%	5.61%	0.21%

Data Source: Water Districts in Batangas Province
** Data for Tanauan Water District as of October 2020*

Table 6.23: Water Resources 2020

	Surface Water Sources		Groundwater Sources	
Name of Water District	**Sources**	**Volume Extracted**	**Sources**	**Volume Extracted**
Agoncillo Water District	N/A	N/A	11 Deepwells	1,303,171 m³
Alitagtag Water District	N/A	N/A	Deepwells	42.98 LPS
Balayan Water District	N/A	N/A	Deepwell	1,575,158 m³
Batangas City Water District	28 Deepwells	1,511,241	N/A	N/A
Lemery Water District	N/A	N/A	16 Deepwells	4,024,680 m³
Metro Lipa Water District	N/A	N/A	47,846,009.98	29,569,984.07 m³
Lian Water District	N/A	N/A	4 Deepwelll	1,045,223 m³
Lobo Water District	1 Deepwell	32,804	8 Deepwells	1,130,039 m³
Mabini Water District	N/A	N/A	27 Pumping Stations	9,921.22 m³
Nasugbu Water District	Munting Indang Surface Water Treatment Plant (bulk)	50,700 cu.m.	Bilaran Wells (Palico 1, Bilaran 1, Victoriaville 1 & 2)	62,244 m³
			Cogonan Wells (Well Nos. 4, 7, 8 & 9)	82,844 m³
			Tuy bulk	102,200 m³
Rosario Water District	N/A	N/A	10 Deepwells	2,604,620.5 m³
San Juan Water District	N/A	N/A	13 Deepwells	3,035,750 m³
Sto. Tomas Water District	N/A	N/A	Deepwells	881,665.55 m³
Taal Water District	N/A	N/A	10 Deepwells	2,948,059 m³
Tanauan Water District	NO DATA PROVIDED			
Taysan Water District	N/A	N/A	Deepwell (IS)	1,328,950 m³
Tuy Water District	N/A	N/A	5 Deepwell	2,161,516 m³

Data Source: Water Districts in Batangas Province

Table 6.24: Estimated Rate of Water Service in terms of Peso per Cubic Meter (₱/m³) 2020

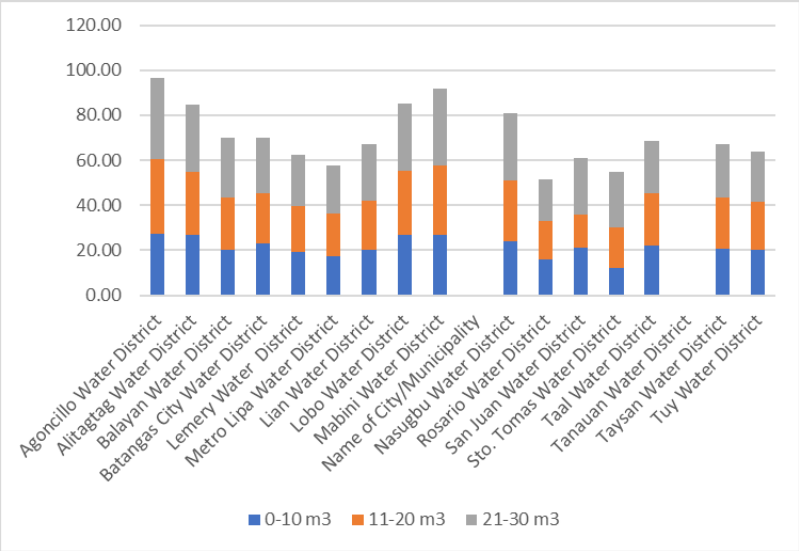
Name of City/Municipality	0-10 m^3	11-20 m^3	21-30 m^3
Agoncillo Water District	27.20	33.25	36.25
Alitagtag Water District	27.00	28.00	29.50
Balayan Water District	20.20	23.20	26.45
Batangas City Water District	22.96	22.50	24.70
Lemery Water District	19.30	20.55	22.50
Metro Lipa Water District	17.25	18.90	21.40
Lian Water District	20.00	22.00	25.00
Lobo Water District	27.00	28.30	30.00
Mabini Water District	27.04	30.40	34.25

(continuation) Table 6.24: Estimated Rate of Water Service in terms of Peso per Cubic Meter (₱/m³) 2020

Name of City/Municipality	0-10 m^3	11-20 m^3	21-30 m^3
Nasugbu Water District	24.08	27.10	29.51
Rosario Water District	16.00	17.00	18.50
San Juan Water District	21.00	15.00	25.00
Sto. Tomas Water District	12.00	18.00	25.00
Taal Water District	22.00	23.40	23.40
Tanauan Water District	NO DATA PROVIDED		
Taysan Water District	20.68	22.70	24.00
Tuy Water District	20.00	21.45	22.45

Data Source: Water Districts in Batangas Province

Figure 6.7: Comparison of Water Service Rate 2020



Data Source: Water Districts in Batangas Province

Table 6.25: Non-Revenue Water & Target

	Non-Revenue Water			Target	
Name of Water District	2005	2010	2015	2020	2025
Agoncillo Water District	21.00%	22.00%	24.00%	25-35%	20-25%
Alitagtag Water District			33.36%		
Balayan Water District	55.00%	54.00%	44.00%	20.00%	18.00%
Batangas City Water District		47.79%	34.42%		
Lemery Water District	23.60%	35.54%	36.95%	25.00%	20.00%
Metro Lipa Water District			19.84%		
Lobo Water Distrct	42.00%	37.00%	37.70%	20.00%	18.00%
Mabini Water District		24.52%	21.43%		
Nasugbu Water District	28.60%	24.69%	26.93%	20.00%	20.00%
Rosario Water District		22.00%	38.00%		
San Juan Water District	39.00%	25.00%	22.00%	22.00%	20.00%
Sto. Tomas Water Works					
Taal Water District	39.00%	35.00%	30.86%	20.00%	15.00%
Tanauan Water District	37.00%	28.98%	20.00%	20.00%	20.00%
Taysan Water District	35.00%	33.00%	30.00%	25.00%	20.00%
Tuy Water District	22.00%	25.00%	28.00%		

Data Source: Water Districts in Batangas Province

Table 6.26: Water Districts Directory

NAME OF WATER DISTRICT	CONTACT PERSON	CONTACT NUMBER	EMAIL ADDRESS
Agoncillo Water District / PrimeWater Agoncillo	Mr. Ricardo M. Cabello	0966-821-3649 0926-894-2314	ric.cabello@yahoo.com
Alitagtag Water District	Ms. Charity S. Renegado	(043) 772-0116	alitagtagwaterdistrict@gmail.com
Balayan Water District	Mr. Conrado S. Lopez	(043) 419-9201 (043) 419-9203	balayanwaterdistrict1979@gmail.com
Batangas City Water District /PrimeWater Batangas City	Ms. Yolanda B. Oyao	(043) 781-4220 (043) 980-6928 (043) 783-6537	bats.city@gmail.com pwbats.city@gmail.com
Lemery Water District	Engr. Hydee dela Luna-Ramirez	(043) 740-3792 (043) 409-3071	lemerywd@yahoo.com
Lian Water District	Engr. Sherwin Napoleon Jonson	0917-590-6463	lianwaterdistrict@yahoo.com
Lobo Water District	Mr. Danilo M. Perez	0917-570-2597 0919-540-1706 0919-597-0631	lobowd@yahoo.com
Mabini Water District	Engr. Ariel M. Villanueva	(043) 487-0203	mabiniwd@yahoo.com
Metro Lipa Water District	Mr. Edgardo L. Orense	(043) 756-1118 / 1670 / 1611 / 6972	webmaster@metrolipawd.gov.ph
Nasugbu Water District	Engr. Abelardo L. Rojales	(043) 216-2819 (043) 740-0230	nasugbuwaterdistrict@yahoo.com
Rosario Water District	Engr. Cynthia T. Luna	(043) 740-0189 (043) 321-1532	rwd_1979@yahoo.com
San Juan Water District	Ms. Edith Joyce S. Geba	(043) 575-5276 / 3512	sjwd_055@yahoo.com
Sto. Tomas Water District	Engr. Marilyn M. Boo	(043) 778-1007/ 318-0656 / 318-0224	owwstotomasbatangas@yahoo.com
Taal Water District	Engr. Gregorio V. Savadera	0917-444-0881	taalwaterdistrict@yahoo.com
Tanauan Water District	Mr. Benedicto D. Capule	(043) 778-1155 / 5778 (043) 405-2056	tanauanwaterdistrict@yahoo.com tanauanwd@gmail.com rosa.baguno@southluzonwater.com
Taysan Water District	Mr. Marianito Mendoza, Jr.	0927-486-9835 (043) 277-0910	taywd_0470@yahoo.com.ph mendoza_jr30@yahoo.com
Tuy Water District	Mrs. Maria Purificacion M. Panaligan	(043) 276-0314	tuy_waterdistrict@yahoo.com

Data Source: Water Districts in Batangas Province

6.3.4 Municipal Water System

Water supply of all municipalities in the Province of Batangas are sourced from their own municipal water systems which are classified as Level III, Residential, Residential with Commercial Activities, Commercial, Institutional and Industrial.

As seen in Annex 8, main pipelines of the water source range from 1” to 8” and the type of water treatments vary from different municipalities.

The municipalities with the highest number of pumping stations are San Pascual (93) followed by Ibaan (40) and Bauan (34). The capacity of the main pipelines and the water consumption depend on the number of population served per pumping station.

The rate of water service also varies from the location of the pumping stations.

6.3.5 Other Water Sources

Other water sources include community water system, deep well, artesian well, dug/shallow well owned and shared bottled water, river stream, lake, and other bodies of water and tanker truck/peddler.

6.3.6 Surface Water Sources

Table 6.27 shows the existing surface water sources found in different municipalities/cities. The two bays present in Batangas Province are the Batangas and Balayan Bays. Most of the creeks can be seen in Balayan. The only available falls is the Ambon-Ambon Falls located at Laurel. There are eleven (11) municipalities and two (2) cities around Taal Lake. They are Agoncillo, Alitagtag, Balete, Cuenca, Laurel, Malvar, Mataasnakahoy, San Nicolas, Sta. Teresita, Taal, Talisay, Lipa City and Tanauan City. Seven (7) springs can be found in the Municipalities of Mataasnakahoy, San Jose, Balete, Laurel, Bauan Ibaan, San Jose and in the City of Tanauan. On the other hand, there are seventy-six (78) rivers which can be found in different cities and municipalities in the Province.

Table 6.27: Existing Surface Water Sources by City/Municipality 2020

	NAME OF SURFACE WATER RESOURCES	CITY/MUNICIPALITY
Bay	Batangas Bay	Batangas City, Mabini, Bauan, San Pascual and Tingloy
	Balayan Bay	Balayan, Bauan, Calatagan, Calaca, Lemery, Taal, San Luis and Mabini
Creek	Ambulong Creek	Balayan
	Cagayan Creek	Balayan
	Caybunga Creek	Balayan
	Cayponce Creek	Balayan
	Coloong Creek	Balayan
	Dao Creek	Balayan
	Dilinquente Creek	Balayan
	Ilog Ilogan Creek	Balayan
	Impernillo Creek	Balayan
	Macucac Creek	Balayan
	Suncabanca (Sabang) Creek	Balayan
	San Piro Creek	Balayan
	Tui-Tuihan Creek	Balayan
Falls	Ambon-Ambon Falls	Laurel
Lake	Taal Lake	Agoncillo, Alitagtag, Balete, Cuenca, Laurel, Malvar, Mataasnakahoy, San Nicolas, Sta. Teresita, Taal, Talisay, Lipa City and Tanauan City
Spring	Balon ng Calingatan	Mataasnakahoy
	Banay-banay Water Spring	San Jose
	Bulihan Spring	Balete
	Malagaslas Spring	Laurel
	Mineral Water Spring	Tanauan City
	Pansol Spring	Bauan
	Quilo Spring	Ibaan
	Tanauan Spring	Tanauan City
	Uluhan Spring	San Jose
River	Alagao River	Bauan
	Alulod River	Malvar
	Angasin River	Tanauan City
	Antipolo River	Bauan
	Balatbat River	Lobo
	Balanga River	Ibaan
	Balete River	Bauan, Tanauan City
	Balibago River	San Luis
	Balimbing River	Balayan
	Bignay River	Talisay
	Binambang River	Balayan
	Bugaan River	Laurel
	Bugtong River	Taysan

(continuation) Table 6.27: Existing Surface Water Sources by City/Municipality 2020

	NAME OF SURFACE WATER RESOURCES	CITY/MUNICIPALITY
River	Bukal River	Bauan
	Bungahan River	Ibaan
	Calbangan River	Taysan
	Calaboso River	Bauan
	Callejon River	Malvar
	Caloocan River	Talisay
	Calumpang River	Batangas City, Ibaan and Rosario
	Dacanlao River	Calaca
	Dayapan River	Ibaan
	Dalig River	Balayan
	Dilao River	Balayan
	Ermitanyo River	Calatagan
	Fabrica River	Lobo
	Gimalas River	Balayan
	Gulibay River	Bauan
	Himatangan River	Balayan
	Kaytitinga River	Tuy
	Labuyao River	Bauan
	Languyin River	Bauan
	Latag River	Mataasnakahoy
	Lawaye River	Rosario and San Juan
	Lian-Palico-Lumindac River	Lian
	Lipote River	Mataasnakahoy
	Lobo River	Lobo
	Lucsuhin River	Ibaan
	Magabe River	Balayan
	Magapi River	Balete
	Malainin River	Ibaan
	Malaking Ilog	Taysan and Bauan
	Manalupang River	Bauan
	Manghinao River	Bauan
	Maricaban Strait	Tingloy
	Matala River	Ibaan
	Mataywanac River	Tuy
	Molino River	Balayan
	Munting-Tubig River	Balayan
	Munting Indang River	Nasugbu
	Nagkulayin River	Taysan
	Navotas River	Balayan
	Obispo River	Tuy
	Palico River	Nasugbu
	Palsara River	Balete
	Pangao River	Ibaan
	Pansipit River	Agoncillo, Lemery, San Nicolas and Taal
	Paghayaan River	Taysan
	Piña River	Taysan
	Quipot River	Bauan
	Sabang River	Ibaan
	Salaban River	Ibaan

(continuation) Table 6.27: Existing Surface Water Sources by City/Municipality

	NAME OF SURFACE WATER RESOURCES	CITY/MUNICIPALITY
River	Sampalocan River	Balete
	San Juan River	Malvar, San Juan, Tanauan City
	Sangalo River	Tanauan City
	Santiago River	Calatagan
	Santioquento River	Malvar
	Santol River	Balayan, Bauan
	Sinala River	Bauan
	Sipit River	Sto. Tomas City
	Tabangan River	Laurel
	Tabuk River	Bauan
	Talahib River	Lobo
	Talon River	Balayan
	Tangob River	Padre Garcia
	Tayuman River	Lobo
	Tigas River	Bauan
	Tubig ng Bayan River	Padre Garcia

Data Source: Local Government Unit

6.4 Information and Communication Technology

6.4.1 Communications Facilities

As shown in Table 6.28, eighteen (18) cities/municipalities in the Province have existing internet service providers while only five (5) municipalities have no telephone service providers namely Laurel, Lobo, San Nicolas, Taysan and Tingloy. Numerous cell sites were also constructed in different cities and municipalities accounted as 309 for Smart and 329 for Globe. The top 3 local government units (LGUs)in terms of cell site networks are Batangas City, Lipa City, and Sto. Tomas City.

Meanwhile, in terms of Broadcast Station and Network, AM radio station can only be found in Batangas City. FM radio stations are present in Batangas City, Lipa City, Sto. Tomas City, Bauan, Laurel and Lemery. Television transmitter exists in Batangas City and Lipa City.

Cable television providers are present only in fourteen (14) cities/municipalities in Batangas Province except in Agoncillo, Balayan, Balete, Calaca, Calatagan, Laurel, Lian, Lobo, Malvar, Mataasnakahoy, Nasugbu, Padre Garcia, Rosario, San Jose, San Luis, San Nicolas, Talisay, Taysan, Tingloy and Tuy.

Table 6.28: Number of Communication Services Facilities 2020

City/ Municipality	No. of Internet Service Providers	No. of Telephone Service Providers	No. of Cell Sites		Broadcast Station & Network			Cable TV Providers
			Smart	Globe	AM (Studio)	FM (Studio)	TV (Transmiter)	
TOTAL	**18**	**86**	**309**	**329**	**1**	**13**	**5**	**15**
Batangas City	1	4	54	64	1	6	4	1
Lipa City	1	4	32	59		2	1	1
Tanauan City	1	4	21	19				1
Sto. Tomas City	1	3	24	18		2		1

(continuation) Table 6.28: Number of Communication Services Facilities 2020

City/ Municipality	No. of Internet Service Providers	No. of Telephone Service Providers	No. of Cell Sites		Broadcast Station & Network			Cable TV Providers
			Smart	Globe	AM (Studio)	FM (Studio)	TV (Transmiter)	
Agoncillo		1		1				
Alitagtag	1	2	5	2				1
Balayan		4	5	8				
Balete		3	2	4				
Bauan	1	4	16	15		1		1
Calaca		3	6	3				
Calatagan	1	2	10	11				
Cuenca	1	3	6	8				1
Ibaan	1	2	5	4				1
Laurel			3	2		1		
Lemery	1	4	11	5		1		1
Lian		2	3	4				
Lobo				4				
Mabini	1	4	6	6				1
Malvar		4	6	5				
Mataasnakahoy		4	3	1				
Nasugbu		4	20	16				
Padre Garcia		2	1	9				
Rosario	1	2	17	6				
San Jose	1	2	6	14				
San Juan	1	3	13	8				1
San Luis		1	7	1				
San Nicolas			4	3				
San Pascual	1	4	6	7				1
Sta. Teresita	2	3		1				2
Taal	1	4	1	4				1
Talisay		2	4	3				
Taysan			5	6				
Tingloy			2	3				
Tuy		2	5	5				

Data Source: National Telecommunication Commission, Region IV

6.4.1.1 Cable Landing Stations

There are nine (9) cable landing stations in the Philippines. Two (2) of which are located in Batangas Province under Philippine Long Distance Telephone (PLDT) and Globe Telecom.

6.4.1.1.1 Globe Telecom Nasugbu Cable Landing Station (CLS)

Globe Telecom Nasugbu Cable Landing Station (CLS) is Globe Telecom's first landing station. Globe started construction of the Batangas cable landing station in October 2000. The actual construction of the building was finished by end-March 2001. Globe Telecom inaugurated on November 15, 2001 its US$25-million (PhP1.3-billion) cable landing station and backhaul facility in Nasugbu, Batangas which is part of the company's participation in the transnational City-to-City (C2C) Cable Network Project.

Globe is both the owner and backhaul provider of this station. Cable Systems in this facility includes SJC (Southeast Asia Japan Cable) and C2C (City-to-City Cable Network Project). Most connections to cities from other countries, provided by Globe, use this facility in Nasugbu, Batangas.
The SJC is a 8900 km (to be extended to 9700 km later) submarine cable system connecting seven (7) Asian countries and regions including Brunei, Mainland China, Hong Kong, Japan, Singapore, the Philippines and Thailand. The SJC was ready for service on June 27, 2013. It consists of six (6) fiber pairs, with an initial design capacity of 28 tbps. The SJC cable system utilizes the state-of-the-art advanced 100G SLTE and OADM Branching technologies.

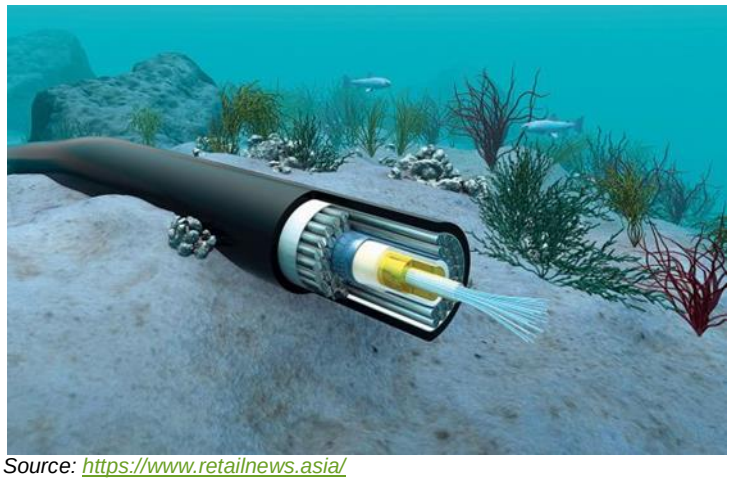
The C2C cable system stretches 17,000, linking Japan, Korea, China, Taiwan, Hong Kong, the Philippines and Singapore. The C2C network was initially constructed by SingTel in 2000-2002.

Data Source: IP Peering Perspective from a Philippine Carrier Francisco "Cocoy" Claravall, VP - Product Development & Management at Globe Telecom

6.4.1.1.2 PLDT Batangas Cable Landing Station (CLS)

Philippine Long Distance Telephone (PLDT) Batangas Cable Landing Station located in Nasugbu, Batangas and the first international cable landing station in the Philippines covers several cable systems including Asia-Pacific Cable Network (APCN), Asia-Pacific Cable Network 2(APCN-2) and South East Asia-Middle East- Western Europe 3 or SEA-ME- WE 3 (SMW3).

APCN is a Submarine Telecommunications Cable System linking nine (9) Asian countries. It has landing points in Thailand, Malaysia, Singapore, Indonesia, Hongkong, Philippines, Taiwan, Korea and Japan.



Source: https://www.retailnews.asia/

The APCN-2 is a 19,000-km optical fiber submarine cable system linking Japan, Korea, China, Taiwan, Hong Kong, Philippines, Malaysia, and Singapore in a ring configuration, with four fiber pairs connecting 10 submarine cable landing stations in Asia region.

The APCN-2 is the first submarine cable system that has a self-healing function in the Asia Region, and is capable of restoring itself instantly with its ring configuration when a failure occurs in a part of the system. It has a design capacity of 2.56 Terabytes per Second (TBps) by operating with 64x10 Gigabytes per Second (Gbps) Dense Wavelength Division Multiplexing (DWDM) technology.

In 2010, the APCN-2 cable system was upgraded with 40Gbps DWDM technology. And it was further upgraded with 100Gbps DWDM technology in 2014.

SMW3 is the longest Submarine Cable in the world led by France and China.

6.4.1.2 Service Providers

Giant companies providing services related to communications and mass media operating throughout the country have established outlets and stations across the province. There are also relatively small enterprises which only operate within the province. The following are the companies operating in Batangas:

Name of Telecommunications Service	Globe Innove, PLDT, Integranet Network Services, Batangas CatV Inc., Broadband Everywhere Corp., Globe Telecom Inc., Innove Communication Inc., New Island Media Vision Inc., Sun Telecommunication Services, Kabayan, General Telephone System (GTS), Continnental Telecommuncation Services, Inc., Aclan Cable Network Inc., Excelite Catv Batangas Inc., South Luzon Catv, JM Cable Network, Converge, Planetcable, Western Batangas Telephone System,Inc.
Name of Cellular Mobile Telephone Service	Globe Telecom, Smart Communication, Sun Cellular, Talk N Text, Touch Mobile, ABS-CBN Mobile

Name of Radio Station	99.1 DWAM-FM - Spirit FM, 104.7 Dewey-FM - Brigada News FM, DWAL-FM 95.9 - Radio Totoo Batangas, 91.9 Air 1FM, 102.3 Citi Beat FM, Radio Natin 105.7
Name of Television Station	TV 10 ABS-CBN Southern Tagalog
Name of Telegraph/Telegram Messengerial Cargo Services	LBC Express Inc., Wide-Wide World Express Corporation (DHL), JRS Business Corporation, 2Go Express, Inc., A-Best Express, Inc., PH Global Jet Express, Inc. (J&T Express), Atienza Shipping Lines Corporation (Cargo), ADSIA Logistics, Inc. (Cargo), GAC Philippines, Inc. (Cargo), ANFRANEMSE Logistics and Freight Forwarding Services (Cargo), J&R Express, M. Lhuillier, Cebuana Lhuillier, Palawan Pawnshop and Express Pera Padala, El Grande Messengerial Service Inc., DACS (Domestic Air Courier Services), Air 21, Western Union, Bascuigun Courier Delivery Services, PCI Delivery Services, Jesus Jeryll Delivery Services,
Name of Postal Services	Agoncillo Post Office, Balayan Post Office, Batangas Capitol Post Office, Batangas City Post Office, Bauan Post Office, Calaca Post Office, Calatagan Post Office, Cuenca Post Office, Fernando Air Base Post Office, Ibaan Post Office, Laurel Post Office, Lemery Post Office, Lian Post Office, Lipa City Hall Post Office, Lipa City Post Office, Lobo Post Office, Mabini Post Office, Malvar Post Office, Mataas Na Kahoy Post Office, Nasugbu Post Office, Padre Garcia Post Office, Rosario Post Office, San Jose Post Office, San Luis Post Office, San Nicolas Post Office, San Pascual Post Office, Sm City Lipa Post Office, Sto. Tomas, Batangas Post Office, Taal Post Office, Talisay Post Office Tanauan City Post Office, Taysan Post Office, Tuy Post Office

Data Source: Local Government Units

6.4.2 Print Media

Print media is an easy medium to spread awareness or advertise to any particular geographical area. Likewise, a local newspaper is the best way to spread the news about any local event of the place.

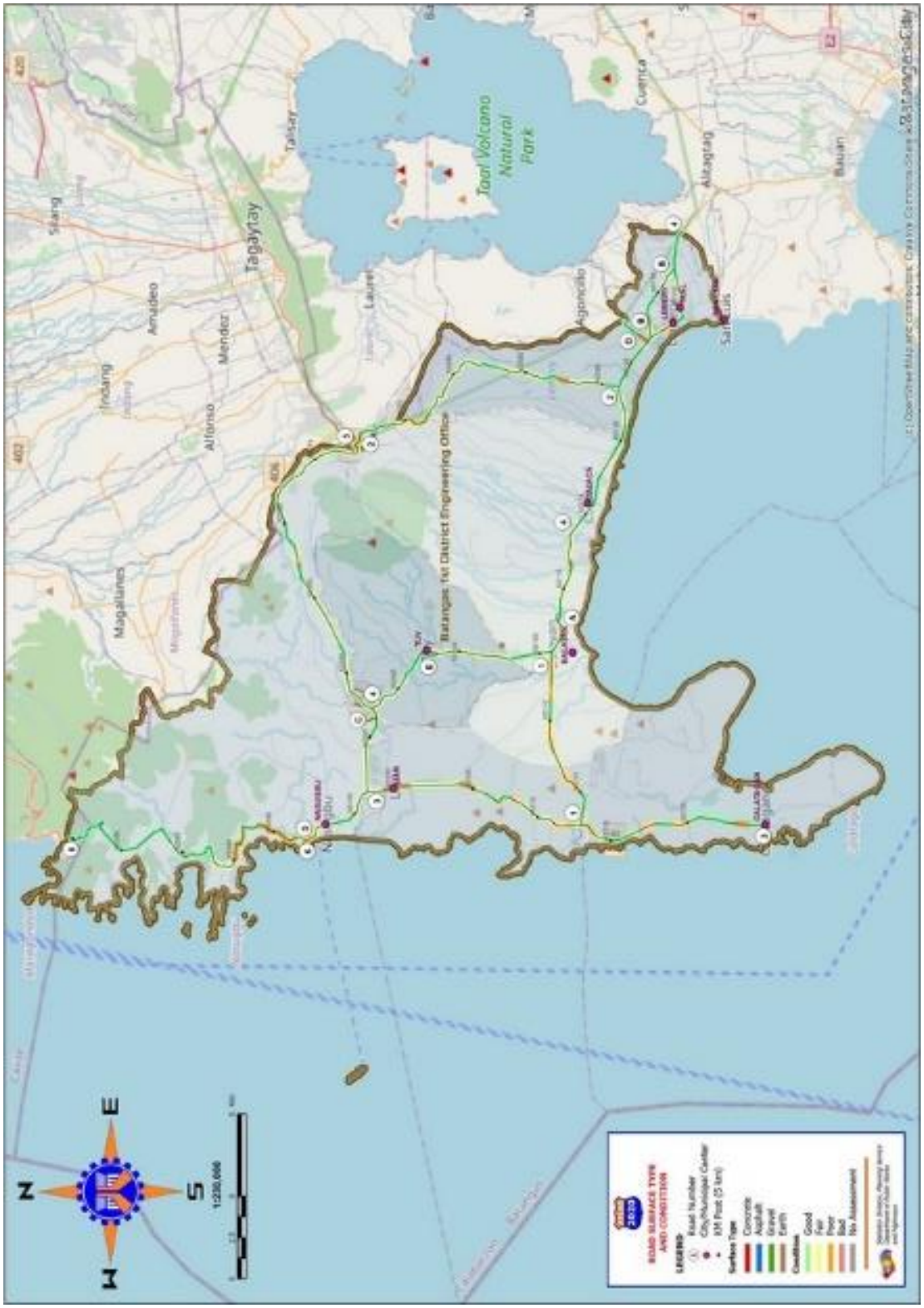
Sourced from the Philippine Information Center- Batangas, the following are some of the local newspapers in the Province of Batangas which includes Sunstar Peoples Courier, The Batangas Post, Pahayagang Balikas, Dyaryo Veritas, Dyaryo Balisong, Weekly Frontpage, The Southern Tagalog Herald, Balaraw Journal, Headlines News Today, Pantas ng Batangas, Southern Eco. and Bangon Lipa.

Table 6.29: Local Newspapers in Batangas Province 2020

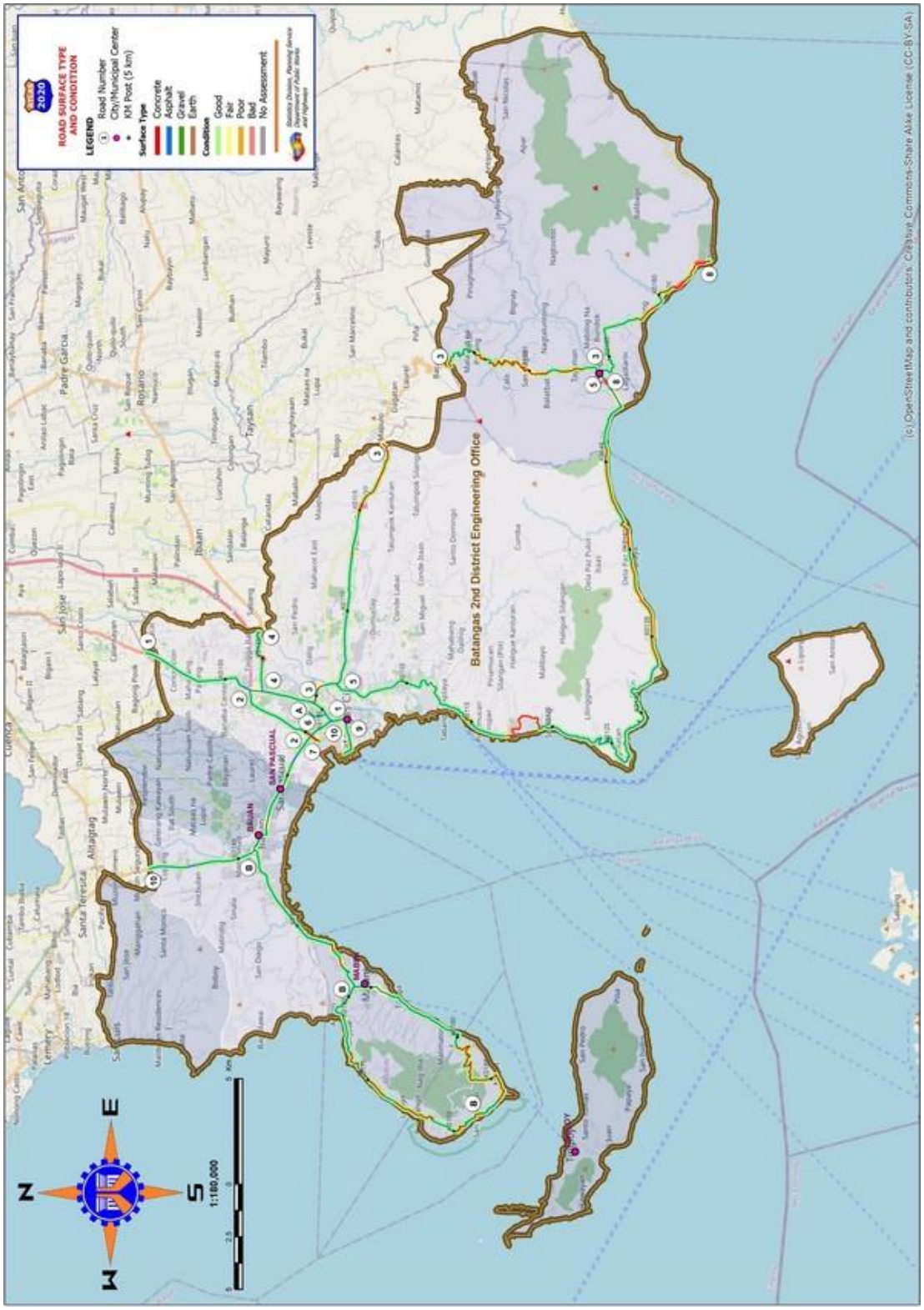
NAME OF PRINT MEDIA	COVERAGE
Sunstar Peoples Courier	All Cities and Municipalities of Batangas Province
The Batangas Post	All Cities and Municipalities of Batangas Province
Pahayagang Balikas	All Cities and Municipalities of Batangas Province
Dyaryo Veritas	All Cities and Municipalities of Batangas Province
Dyaryo Balisong	All Cities and Municipalities of Batangas Province except for Lobo, Taysan and Tingloy
Weekly Frontpage	Balayan, Balete, Bauan, Calaca, Calatagan, Cuenca, Ibaan, Lemery, Lobo, Mabini, Malvar, Mataasnakahoy, Nasugbu, Rosario, San Jose, San Pascual, Sto. Tomas City, Talisay, Lipa City, Batangas City and Tanauan City
The Southern Tagalog Herald	Batangas City, Lipa City, Taysan, San Pascual, San Jose, Mataasnakahoy, Ibaan, Alitagtag, Balayan, Nasugbu, Taal, Lemery, Sta. Teresita, and Calaca
Balaraw Journal	All Cities and Municipalities of Batangas Province
Headlines News Today	All Cities and Municipalities of Batangas Province except Tingloy
Pantas ng Batangas	Batangas City
Southern Eco	All Cities and Municipalities of Batangas Province, Cavite City, Tagaytay City, Silang, Indang, Imus, Mendez, Alfonso and Amadeo, Cavite Sta. Rosa, Calamba, Alaminos, Binan, Cabuyao, Camp Vicente Lim, Canlubang, Los Banos, San Pedro, San Pablo City, Lumban, Sta. Cruz, Laguna Lucena City, Candelaria, Dolores, Atimonan, Sariaya and Tiaong, Quezon
Bangon Lipa	Lipa City

Data Source: Philippine Information Agency- Batangas Information Center

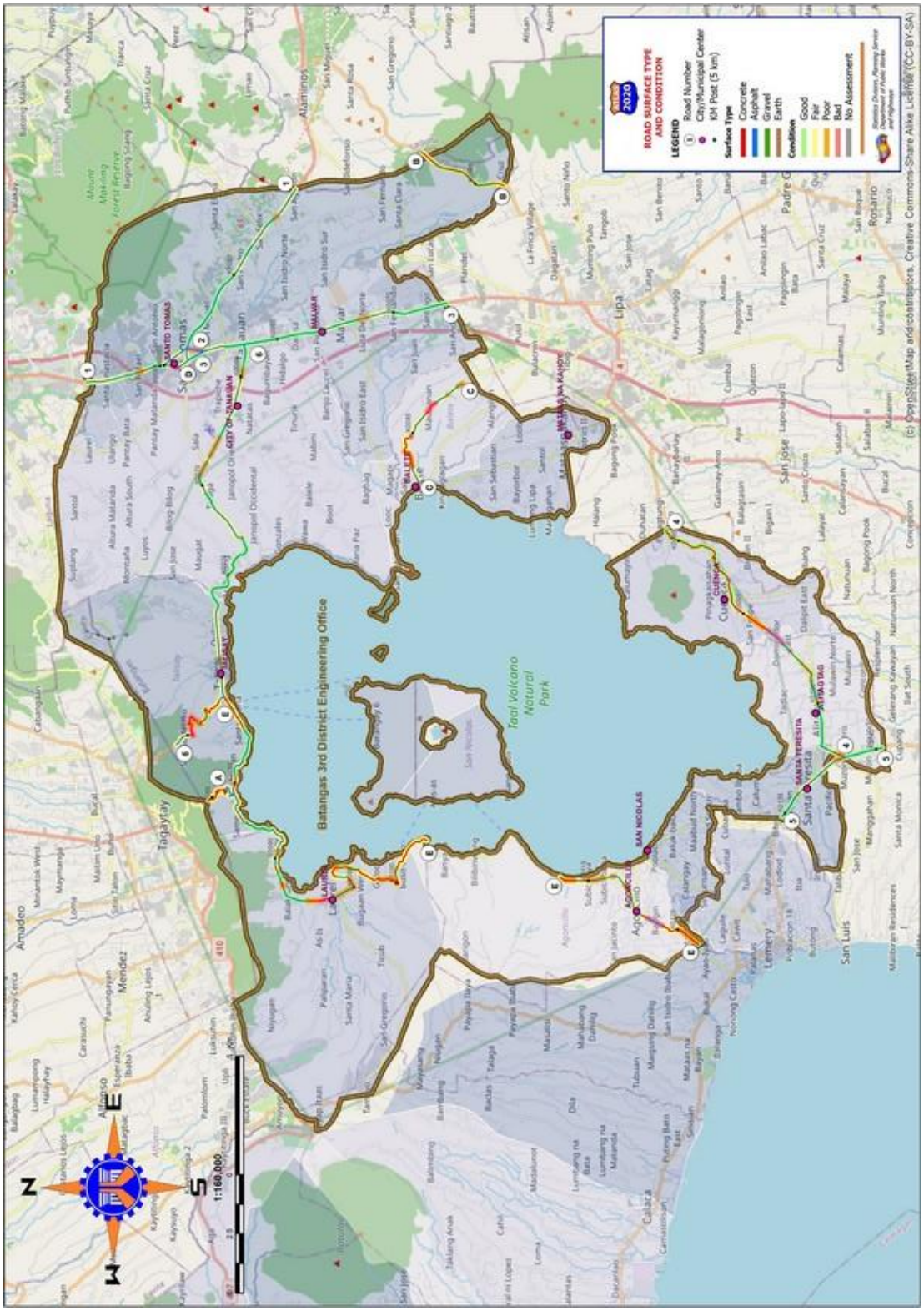
Map 6.1: Road Surface Type & Condition, 2020: District I



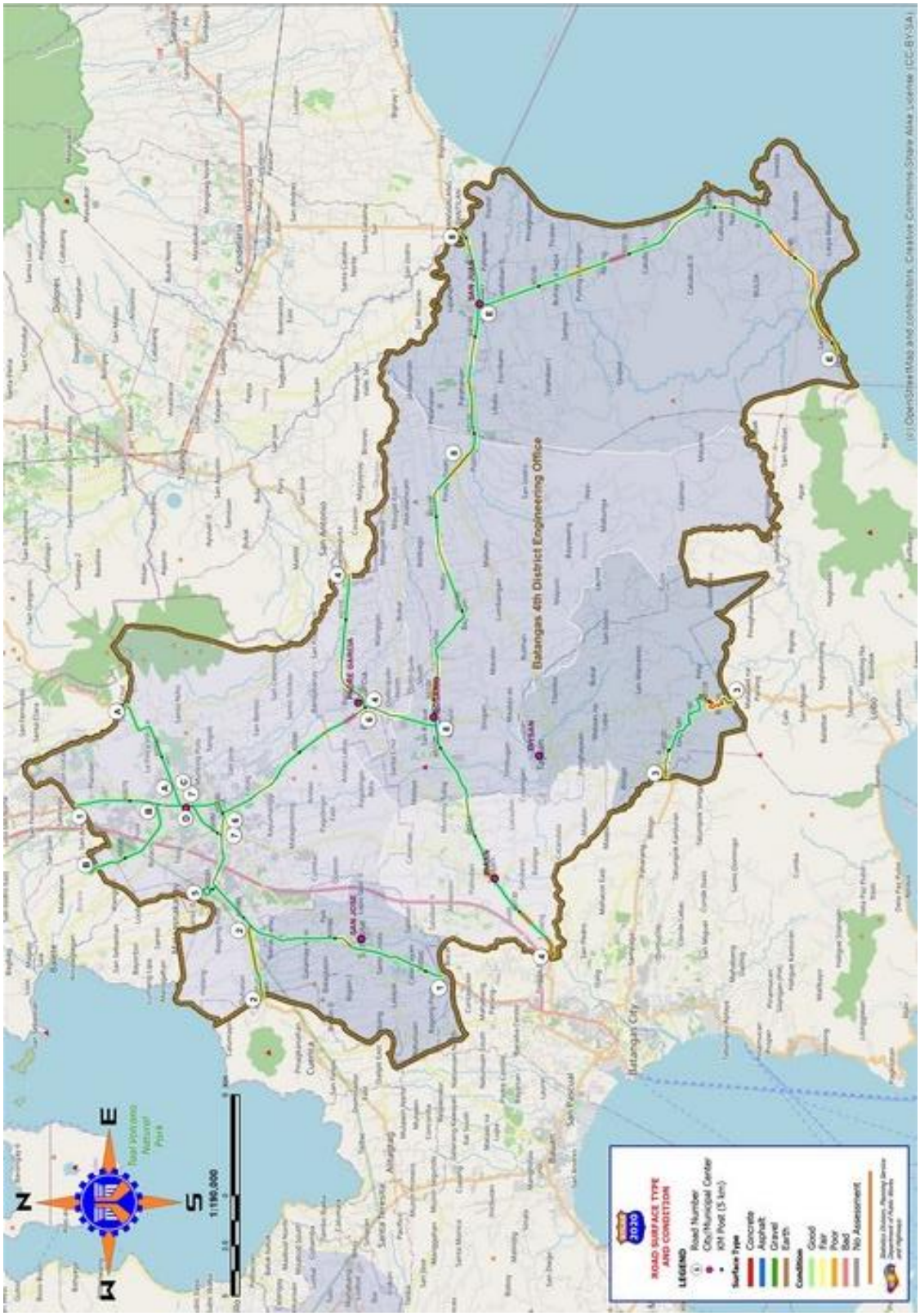
Map 6.2: Road Surface Type & Condition, 2020: District II



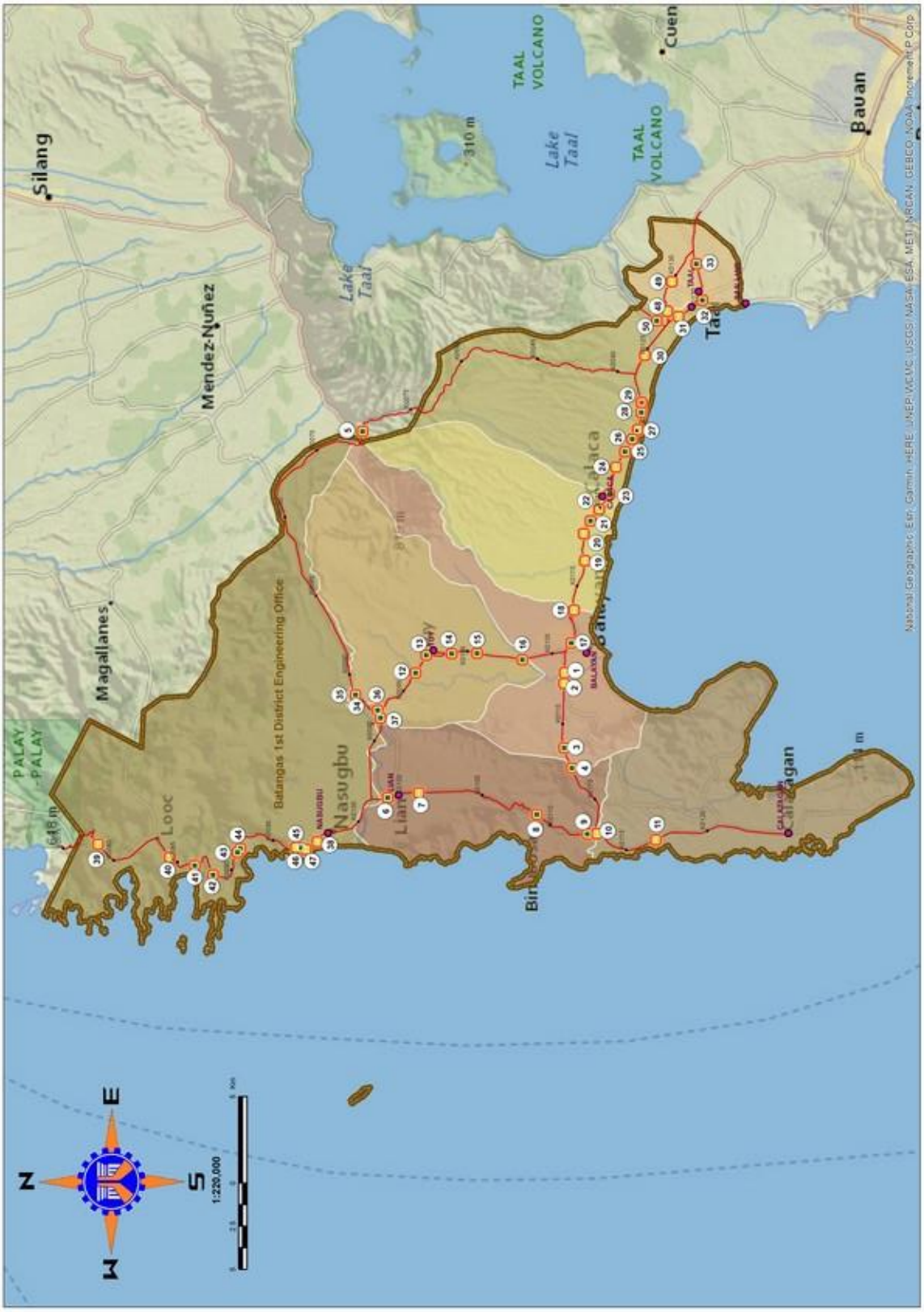
Map 6.3: Road Surface Type & Condition, 2020: District III



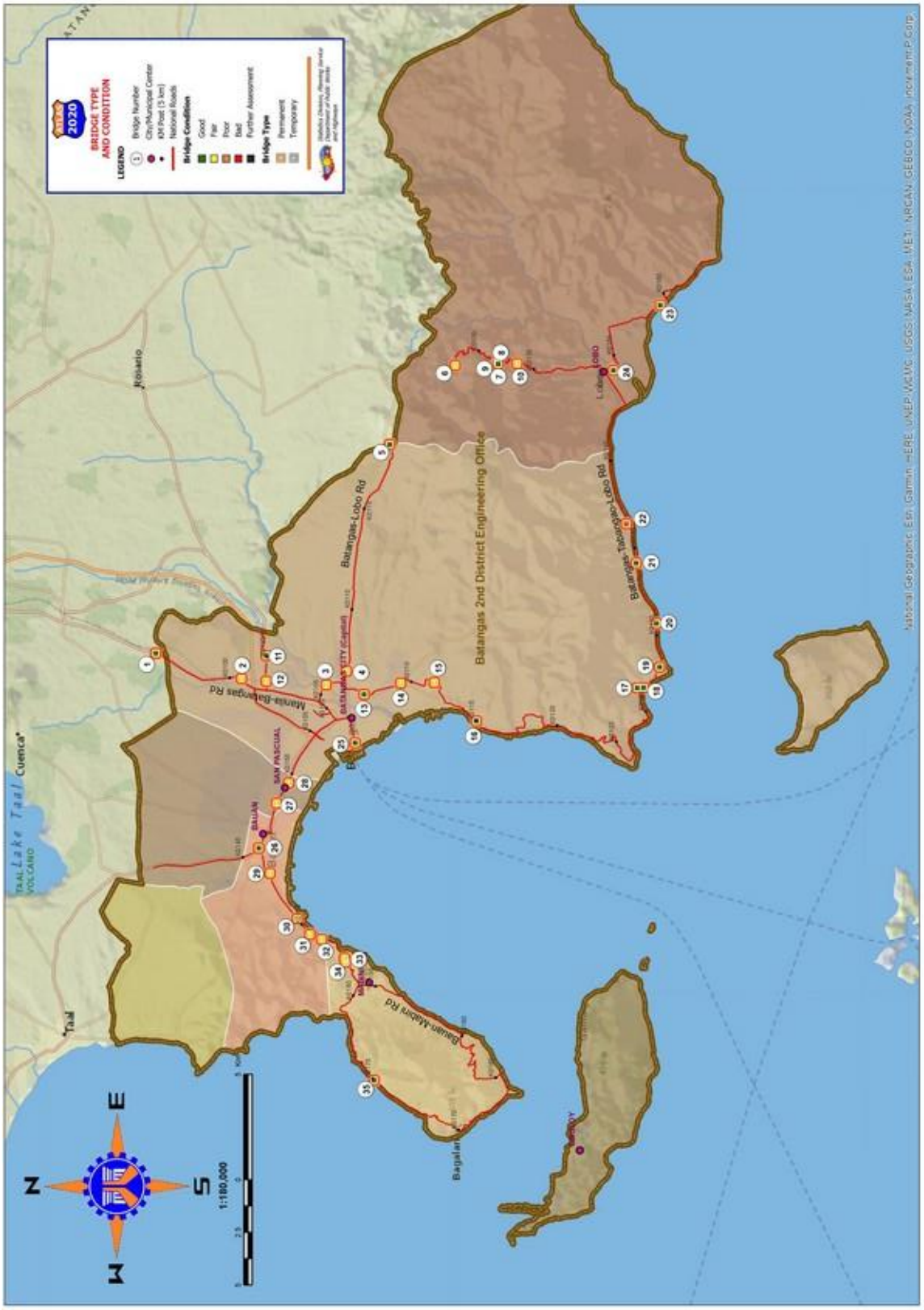
Map 6.4: Road Surface Type & Condition, 2020: District IV



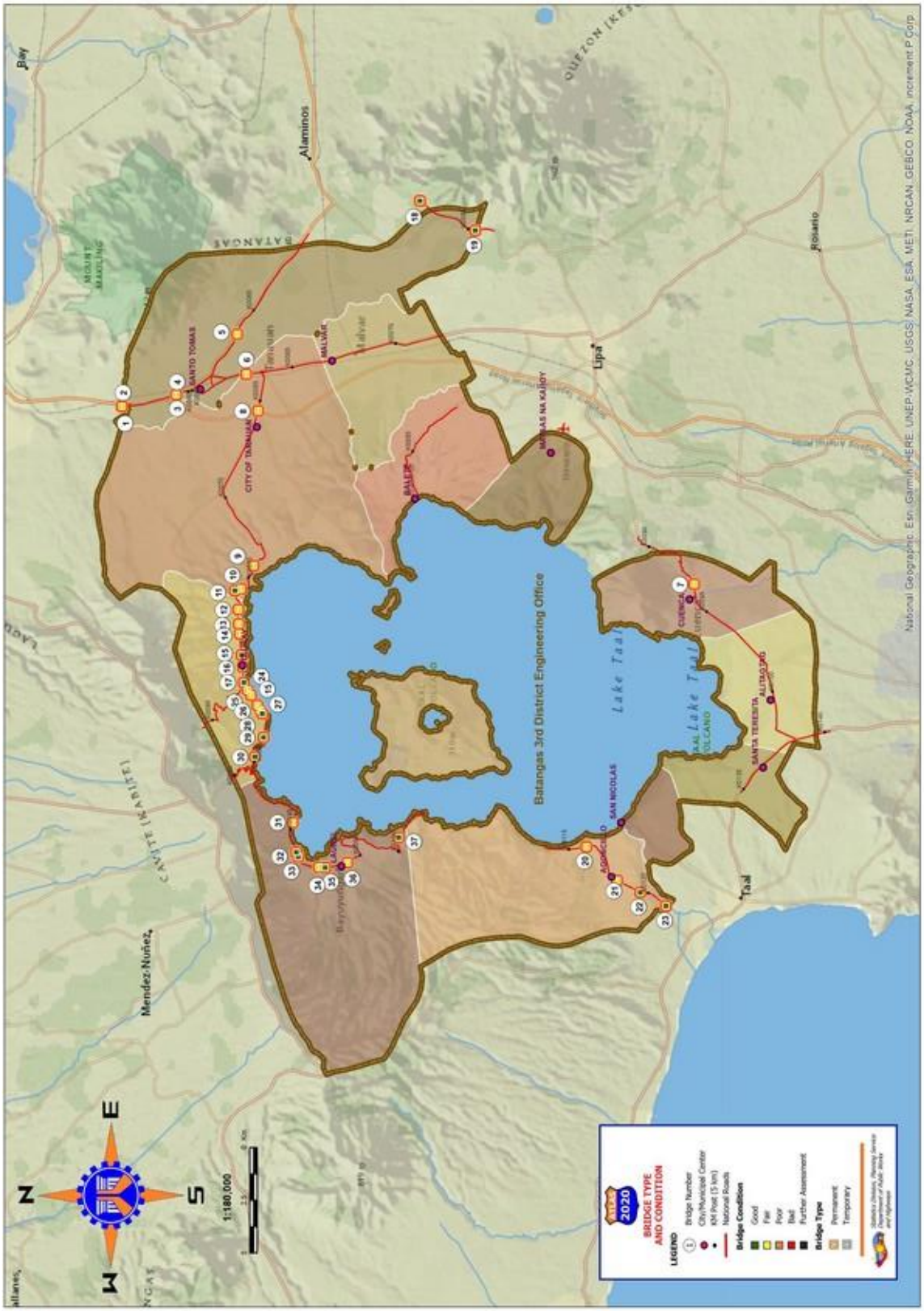
Map 6.5: Bridge Type & Condition, 2020: District I



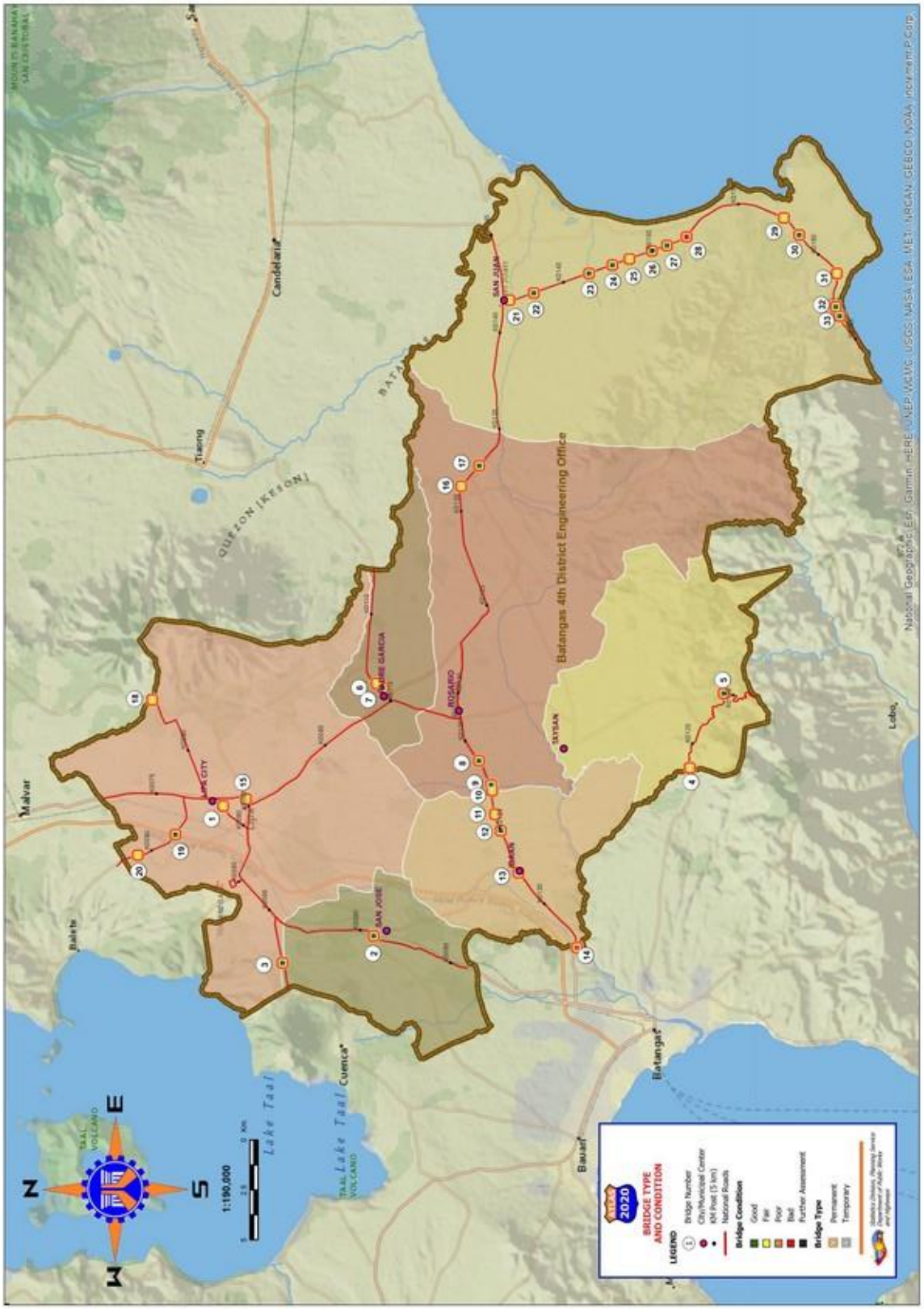
Map 6.6: Bridge Type & Condition, 2020: District II



Map 6.7: Bridge Type & Condition, 2020: District III



Map 6.8: Bridge Type & Condition, 2020: District IV



Chapter 7 INSTITUTIONAL SECTOR

ADMINISTRATIVE MACHINERY AND RELATED INSTITUTIONS

7.1. Organization and Management

The Provincial Government of Batangas is composed of the Executive and Legislative Branches with twenty-four (24) departments while two (2) offices are under the following:

- Internal Audit Service Office under the Office of the Provincial Governor; and
- The Provincial Warden or Jail under the Provincial Administrator's Office;

The Twelve (12) District Hospitals in the Province is under the Provincial Health Office.

The Office of the Governor (OPG), under the Executive Branch provides leadership, supervision, direction and control in the formulation, implementation and improvement in the projects, services, programs and activities of all activities in the Provincial Government; while the Office of the Vice Governor (OVG), along with the Sangguniang Panlalawigan (SP), both under the Legislative Branch ensure, pass resolutions and approve ordinances to assure efficient delivery of public services.

Aside from OVG and SP, all other departments and offices are operating and functioning under the Executive Branch of the Provincial Government. All these departments, from both branches which are categorized under General Public Services, Economic Services and Social Services perform vital functions for effective and efficient delivery of public service.

There are also two (2) Co-Terminus Project offices which composed of Economic Enterprise for Batangas Health Integrated Management (HIM) and Batangas Provincial Livelihood Center (BPLC).

As of December 31, 2020, the manpower pool of the Provincial Government totaled to 3,604. This number is comprised of employees whose statuses of employment are as follows: permanent – 2,236; temporary – 21; co-terminus – 135; elective-17; casual -524 and job order – 671.

Appointment in the career service is either permanent or temporary. A permanent appointment is issued to a person who meets all the requirements for the positions to which one is being appointed, including the appropriate eligibility prescribed, in accordance with the provisions of law, rules and standards promulgated in pursuance thereof.

In the absence of appropriate eligibility, and it becomes necessary in the public interest to fill a vacancy, a temporary appointment shall be issued to a person who meets all the requirements for the positions to which he/she is being appointed except the appropriate

civil service eligibility: Provided, that such temporary appointment shall not exceed twelve months, but the appointee may be replaced sooner if there is eligible civil service applicant.

Co-terminus is an employment status wherein an appointment issued to a person whose tenure is limited to a period specified by law or whose continuity in the service is based on the trust and confidence of the appointing officer/authority or of the head of the organizational unit where assigned.

Elective positions are those occupied by officials in the Provincial Government by virtue of their being proclaimed as winners in the most recent election. It may be noted that those elective positions as presented in Table 7.1 are mostly in the Sangguniang Panlalawigan (SP), consist of the 15 Board Members. The other two elective positions are the positions of the Provincial Governor, and Vice-Governor; respectively.

Likewise, the same office, as well as the Office of the Governor and Vice-Governor has employees classified as co-terminus, with SP having the most number with 88, OPG with 19, OVG-11; PPOSS -10; BPIO - 2 and Administrator's Office and Legal Office with one (1) each. Additional co-terminus employees were assigned to Economic Enterprise-Batangas Health Integrated Management (HIM) with one (1) and two (2) in Batangas Provincial Livelihood Center (BPLC).

Casual employment is where an appointment is issued only for essential and necessary services where there is not enough regular staff to meet the demands of the service.

Employees under casual appointment must meet the education, training and experience requirements of the positions as proposed by the respective Agency Heads and approved by the Civil Service Commission (CSC).

Eligibility is not required for appointment for casual employees, except those whose duties involve the practice of a profession regulated by the Philippine Bar/Board or special laws and/or require licenses such as those positions listed under Category IV of CSC MC No. 11, s. 1996, as amended. This includes lawyers, certified public accountants, engineers, veterinarians, architects, planners, medical doctors, nurses and other professionals in the medical field. Generally, preference is given to those who are CSC eligible.

Employees under contractual or casual appointment are entitled to the same benefits enjoyed by regular employees. (Presidential Decree No. 807 10/06/1975)

Contract of Services / Job Orders are employees whose services rendered are not considered government services and do not enjoy the benefits enjoyed by government employees. The job order covers piece work or intermittent job of short duration not exceeding six (6) months on a daily basis. (Omnibus Rules Implementing Book V of E.O. 292 and Other Pertinent Civil Service Laws)

The department with the most number of personnel is the Provincial Health Office, with 1,200; 822 of whom are permanent; 1-temporary; 194-casual and 183 are job orders. However, this number covers not only the PHO Main Office but also the 12 District Hospitals. Exclusive of these 12 hospitals, PHO is only seventh as regards to the number of employees. In fact, PHO Main has only a total of 137 employees.

When it comes to the department with no other offices under it, the Sangguniang Panlalawigan (SP) has the most number with 309, with 47 permanent, 88 co-terminus, 15 elective officials, 48 casual and 111 job order employees; while the least is the Provincial Tourism and Cultural Affairs Office (PTCAO), with 29; 21 of whom are permanent; 5 casual and 3 job order.

Table 7.1: Number of Provincial Employees: as of December 2020

	OFFICE	PERMANENT	TEMPORARY	CO-TERMINUS	ELECTIVE	CASUAL	JOB ORDER	TOTAL
1	Office of the Provincial Governor	34	0	19	1	56	44	154
	a. Internal Audit Service Office	5	0	0	0	0	0	5
2	Office of the Vice-Governor	7	0	11	1	11	20	50
3	Sangguniang Panlalawigan	47	0	88	15	48	111	309
4	Office of the Provincial Administrator	29	0	1	0	12	0	42
	a. Admin-JAIL	53	0	0	0	11	6	70
5	BPIO	28	7	2	0	5	5	47
6	PPOSD	137	2	10	0	15	61	225
7	PHRMO	46	2	0	0	4	0	52
8	PPDO	45	0	0	0	7	0	52
9	PGSO	111	3	0	0	37	56	207
10	Budget Office	41	0	0	0	8	2	51
11	Accounting Office	66	0	0	0	7	1	74
12	Treasurer's Office	78	0	0	0	6	3	87
13	Assessor's Office	62	0	0	0	10	12	84
14	Legal Office	33	0	1	0	0	0	34
	a. Prosecuter's Office	23	0	0	0	1	0	24
15	PACD	38	0	0	0	3	2	43
16	PSWDO	54	0	0	0	21	20	95
17	BPDRRMO	19	0	0	0	9	9	37
18	Agriculture's Office	103	0	0	0	4	0	107
19	Veterinarian Office	47	0	0	0	13	89	149
20	PG-ENRO	35	0	0	0	6	2	43
21	Engineer's Office	194	6	0	0	27	41	268
22	PCLEDO	37	0	0	0	4	1	42
23	PTCAO	21	0	0	0	5	3	29
24	PHO	128	1	0	0	6	2	137
	a. Lipa City District Hospital	114	0	0	0	49	9	172
	b. Batangas Provincial Hospital	115	0	0	0	35	28	178
	c. Apacible Memorial District Hospital	69	0	0	0	15	19	103
	d. Don Manuel Lopez Memorial District Hospital	64	0	0	0	10	14	88
	e. San Jose District Hospital	59	0	0	0	9	21	89
	f. Laurel Memorial District Hospital	54	0	0	0	13	14	81
	g. San Juan District Hospital	46	0	0	0	16	9	71
	h. MVM Sto. Rosario District Hospital	46	0	0	0	11	12	69
	i. Martin Marasigan Memorial District Hospital	35	0	0	0	11	20	66
	j. Calatagan Medicare Hospital	32	0	0	0	3	19	54
	k. Lobo Municipal Hospital	32	0	0	0	11	10	53
	l. Laurel Municipal Hospital	28	0	0	0	5	6	39
25	Provincial School Board	21	0	0	0	0	0	21
	SUB-TOTAL	**2,236**	**21**	**132**	**17**	**524**	**671**	**3,601**
26	ECONOMIC ENTERPRISE - Batangas Health Integrated Management (HIM)	0	0	1	0	0	0	**1**
27	ECONOMIC ENTERPRISE - Batangas Provincial Livelihood Center (BPLC)	0	0	2	0	0	0	**2**
	GRAND-TOTAL	**2,236**	**21**	**135**	**17**	**524**	**671**	**3,604**

Data Source: PHRMO 2020

7.2 Personnel Support

Provincial Government of Batangas ensures the satisfaction of all of its employees. It provides the employees with the opportunity for growth in order to improve performance and intellectual capacity which are catered through various in-house and outside trainings, seminars and scholarship grants. Specifically, these endeavors and initiative were done to enhance skills and talents in order to achieve a competent, efficient and effective public service delivery.

The Provincial Human Resource and Management Office (PHRMO), the primary office mandated to implement effective personnel management programs that enable employees of the Provincial Government to enhance their professionalism, be more responsive, dynamic and productive members of public service work force.

Services offered by the department are:

- Personnel Relations Services which aims to promote effectiveness in public service delivery implementation. It is also tasked to undertake policy monitoring and liaison services by facilitating updating of membership records and employee transactions with various government agencies like GSIS, PAG-IBIG, PHILHEALTH and others. Services also include agency remittance advice and notices for salary increases / adjustments (ARA / NOSI / NOSA). To better facilitate them to attend to employee / clients, an Information Counter / Frontline Desk is made available. Wellness activities were also launched in 2017.

- Recruitment, Selection and Placement Services ensures that Provincial Government employees are recruited and selected according to merit and fitness and compliance reports are promptly and regularly submitted to Civil Service Commission. The Personnel Selection Board, to which the PHRMO is the Secretariat help assure that hiring and placement of employees are in order.

- Enhancement of Career Development and Personnel Services is a function of the PHRMO that help promote professional growth, morale uplifting and skills advancement of employees of the Provincial Government. For 2019, the department has conducted in-house trainings to enhance career development; which include among others : Training on Behavioral Competencies, Seminar Workshop on PRIME – HRM, Supervisory Development Course Track I, Moral Reformation Seminar, HRD Key Players Workshop, Values Orientation Workshop, Gender Sensitivity Training, Training on Public Sector Unionism, Pre-Retirement Seminar, Financial Literacy Seminar, Leadership Training, Supervisory Development Course Track II and others. Services also include evaluations of employees requesting for study leave, succession planning and career pathing. As Secretariat to the Personnel Development Committee (PERDECOM), assistance and facilitation for the attendance of personnel of different departments to trainings and skills / capability workshops and activities

are undertaken and extended. Awards and recognition are also given to deserving employees.

Other activities that show support to employees that are offered by other departments other than PHRMO are: the celebration of Women's Month, Mothers' Day, Fathers' Day, Sports Festival, Financial and Medical Assistance, and others.

7.3 Government Fund

7.3.1 Comparative Analysis on Revenue and Receipts

The Provincial Government of Batangas derived its revenues from various sources such as Tax Revenue, Non-Tax Revenue, Share from National Collection and Extra Ordinary Receipts/other taxes.

Table 7.2 shows the Comparative Report of Revenue and Receipts of the Province from year 2016 to 2020. Total Revenues /Receipts showed progression for five (5) years with highest recorded in 2020 amounting to Php 3,980,411,422.12 and highest percentage increase in 2017 with 16.4%.

On Tax revenue, 2018 recorded the highest in 5 years with Php 504,712,290.66. However, there is a decrease from the revenue in 2019 with Php 93,657,821.98 or 18.56%. The year 2020 set a 15.21% increase from the previous year amounting to Php 73,718,533.35.

Although Non-Tax Revenue collections are unstable from 2016 to 2018, an average of Php 154,454,631.50 annual collection was recorded. It soared to Php 373,140,707.46 in 2019 recovering losses from its succeeding year 2018 with only Php 103,501,503.70 decrease by Php 75,039,571.29 or 42% from 2017. In 2020, a total of Php 258,442,543.07 or 69.27% difference from 2016, setting the lowest record for non-tax revenue for the past five years.

Total Tax and Non-Tax Revenue in year 2020 have recorded decrease in collection from 2019 with 23.56%.

On Share form National Collection, year 2017 set a 16.51% increase due to Share form National Wealth amounting to Php 2,664,124.12 in addition to IRA for a total of Php 2,556,829,540.12. It was sustained in 2018 with 7.33% gain compared to the previous year. Despite that there was no Share from National Wealth, a significant 9.13% increase was still recorded in 2019 with Share from National Collection amounting to Php 2,994,730,502.00. In 2020, another increase from the IRA and share from national wealth amounting to Php 3,380,371,046.50

Collections for Extra Ordinary Receipts / Other Tax recorded at Php 12,054,154.74 in 2017, a 29.62% increase from previous year. It showed significant and consecutive

losses annually since then and plummeted by 90.13% in 2020 for a lowest record of Php 569,209.20.

Table 7.2: Comparative Report of Revenue and Receipts, Batangas Province:2016-2020

REVENU ACCOUNTS / PARTICULARS	2016	2017	2018	2019	2020
	Actual	Actual	Actual	Actual	Actual
TAX REVENUE	**361,085,575.71**	**448,210,347.23**	**504,712,290.66**	**411,054,468.68**	**484,773,002.03**
Real Property Taxes	260,368,867.87	346,650,504.73	396,109,670.91	370,159,245.01	368,647,235.73
Tax on Printing & Publication	17,530.92	25,571.66	4,874.69	173,844.34	111,069.56
Franchise Tax	27,781,477.06	27,849,065.57	23,639,063.63	23,979,096.47	25,787,522.75
Sand & Gravel Tax	1,676,309.04	3,110,221.74	4,297,664.40	8,236,241.56	5,775,247.82
Amusement Tax	335,898.83	733,288.83	436,624.19	250,254.80	161,132.72
Annual Fixed Tax(Delivery Trucks and Vans)	6,487,500.00	6,475,500.00	6,827,500.00	6,938,250.00	5,575,500.00
Transfer Tax	63,533,211.62	62,494,104.40	72,277,187.09	-	77,574,640.59
Professional Tax	884,780.37	872,090.30	1,119,705.75	1,317,536.50	1,140,652.86
Occupation Tax					
NON-TAX REVENUE	**181,321,315.80**	**178,541,074.99**	**103,501,503.70**	**373,140,707.46**	**114,698,164.39**
Permit Fees	636,140.20	537,100.00	562,550.00	554,755.00	394,758.97
Certification Fees	215,150.00	303,880.00	382,500.00	443,195.00	1,949,681.58
Fines & Penalties	4,590,097.64	5,843,036.54	6,279,725.76	8,893,022.20	6,205,875.04
Grants & Donations	-	-	-	-	-
Rent Income	550,131.20	18,834,330.00	13,250,690.50	13,659,728.50	12,035,100.00
Hospital Fees	163,760,602.61	137,906,768.87	61,617,093.79	236,493,728.67	41,331,446.81
Sales Revenue	217,807.00	258,605.00	134,340.00	54,020.00	150,658.00
Land & Parking Fees	-	-	-	-	-
Interest Income	3,563,458.44	3,443,834.83	7,416,787.16	9,340,158.79	10,261,518.51
Miscellaneous	7,787,928.71	11,413,519.75	13,857,816.49	103,702,099.30	42,369,125.48
TOTAL TAX AND NON TAX REVENUE	**542,406,891.51**	**626,751,422.22**	**608,213,794.36**	**784,195,176.14**	**599,471,166.42**
Increase/ (Decrease) from Previous Year	33,636,303.97	84,344,530.71	-18,537,627.86	175,981,381.78	-184,724,009.72
Percentage (%) of INC (Dec)	6.61	15.55	-2.96	28.93	-23.56
Share From National Collection	**2,194,460,584.00**	**2,556,829,540.12**	**2,744,156,980.16**	**2,994,730,502.00**	**3,380,371,046.50**
Internal Revenue Allotment	2,194,460,584.00	2,554,165,416.00	2,740,779,940.00	2,994,730,502.00	3,376,672,036.00
Share from National Wealth		2,664,124.12	3,377,040.16		3,699,010.50
Extra Ordinary Receipts/Other Taxes	**8,483,688.99**	**12,054,154.74**	**11,780,000.00**	**5,766,201.61**	**569,209.20**
Share from PCSO/PAGCOR	8,483,688.99	12,054,154.74	11,780,000.00	5,766,201.61	
Share from BETS					569,209.20
TOTAL REVENUE RECEIPTS	**2,745,351,164.50**	**3,195,635,117.08**	**3,364,150,774.52**	**3,784,691,879.75**	**3,980,411,422.12**
Increase/ (Decrease) from Previous Year	230,794,689.98	450,283,952.58	168,515,657.44	420,541,105.23	195,719,542.37
Percentage (%) of INC (Dec)	9.18	16.40	5.27	12.50	5.17

Data Source: Provincial Treasurer's Office

7.3.2 Comparative Analysis on Income and Expenditure

The Yearly Statement of Financial Performance by Fund (General and Special Education Fund (SEF)), classified Income/Revenues into Tax Revenue, Share from Internal Revenue Collection, Service and Business Income, Shares, Grants and Donations and Other Income. Consequently, Expenditures are broken down into Personal Services (PS), Maintenance and Other Operating Expenses (MOOE), Non-Cash Expenses and Financial Expenses.

Personnel Services pertains to an expenditure category/expense class for the payment of salaries, wages and other compensation (e.g., merit, salary increase, cost-of-living-allowances, honoraria and commutable allowances, etc.) of permanent, temporary, contractual, and casual employees of the government. Maintenance and Other Operating Expenses (MOOE) is defined as an expenditure category/expense class for support to the operations of government agencies such as expenses for supplies and materials; transportation and travel; utilities (water, power, etc.) and the repairs, etc. A noncash expense is an expense that is reported on the income statement of the current accounting period, but there is no related cash payment during the period. A common example of a noncash expense is depreciation. Lastly, financial expenses is a new expense category which refers to management supervision/ trusteeship fees, interest expenses, guarantee fees, bank charges, commitment fees and other financial charges incurred in owning or borrowing an asset property.

Table 7.3 presents the Income and Expenditure of the Province from year 2011 to 2020.

The Total Income of the Province increased for the past eight (8) years starting in 2012. The highest amount was recorded at Php 4,542,393,637.27 in 2020 gaining 4.35 % or Php 197,433,762.71 from 2019 with Php 4,344,959,874.56.

Total Expenditures also increased for the past years. However, government spending decreased in 2018 by 6.88% or equivalent to Php 191,395,978.60 from Php 2,971,480,757.11 in 2017. In 2019, a growth of 21.96% from Php 2,780,084,778.51 in 2018 was gained with a Total Expenditure of Php 3,390,712,969.97. The highest increase since 2011 is recorded in 2020 with 422,588,227.56 or 11.08% from 2019.

Despite of the increase in spending, the Province still performed well in the last fiscal year since the total income considerably increased, thus resulting to surplus amounting to Php 729,092,439.74.

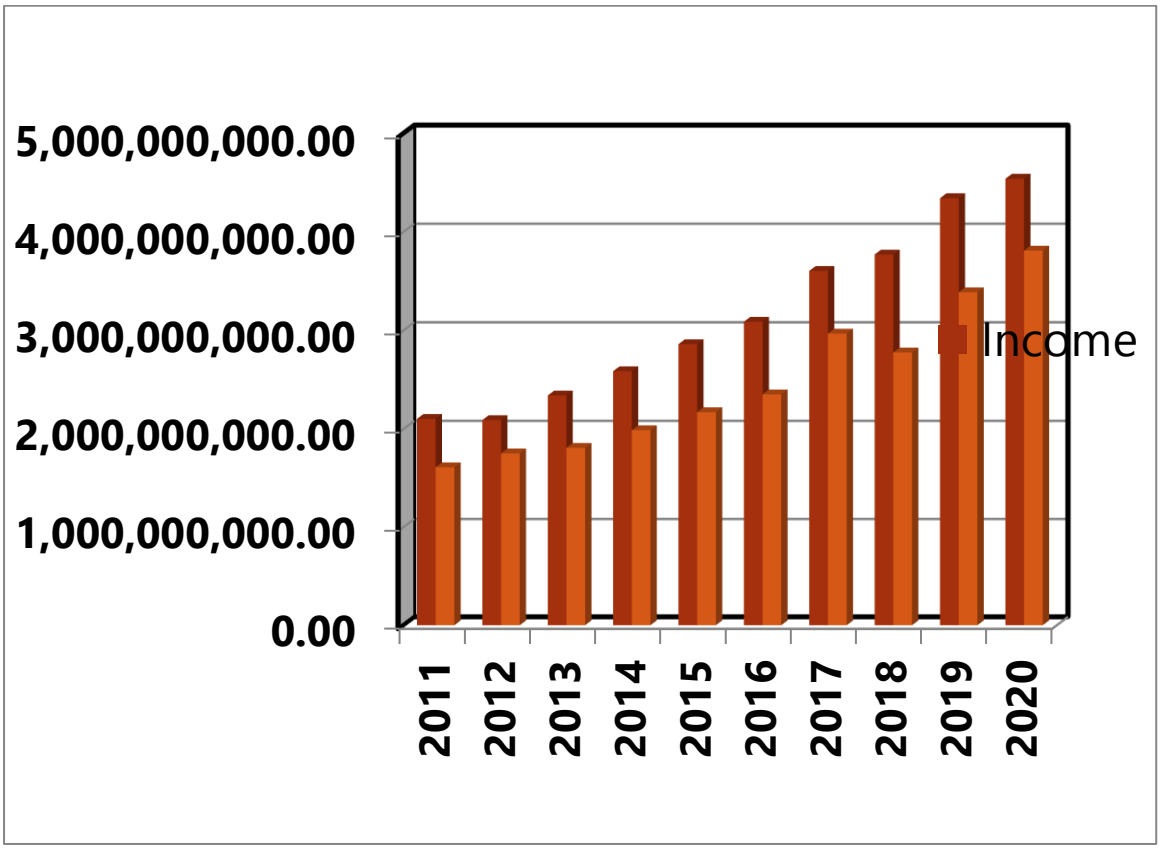
Figure 7.1 shows the graphical presentation of Income and Expenditure pattern for the same period.

Table 7.3: Income and Expenditure of the Provincial Government of Batangas: 2011-2020

CALENDAR	INCOME			EXPENDITURE		
YEAR	GENERAL	SEF	TOTAL	GENERAL	SEF	TOTAL
2011	1,824,053,629.42	282,224,192.93	2,106,277,822.35	1,475,046,552.50	140,543,099.20	1,615,589,651.70
2012	1,804,161,629.18	289,600,348.82	2,093,761,978.00	1,610,623,400.87	145,414,421.94	1,756,037,822.81
2013	1,987,189,935.58	356,890,561.43	2,344,080,497.01	1,658,266,873.11	154,178,515.68	1,812,445,388.79
2014	2,246,752,881.86	343,134,311.17	2,589,887,193.03	1,847,005,446.70	145,127,112.11	1,992,132,558.81
2015	2,490,650,889.83	373,614,879.21	2,864,265,769.04	2,017,827,183.67	156,098,014.27	2,173,925,197.94
2016	2,722,111,457.12	369,437,499.38	3,091,548,956.50	2,196,538,218.22	157,948,009.18	2,354,486,227.40
2017	3,161,557,106.74	445,411,153.37	3,606,968,260.11	2,795,684,102.56	175,796,654.55	2,971,480,757.11
2018	3,302,986,450.51	470,276,168.65	3,773,262,619.16	2,590,759,399.19	189,325,379.32	2,780,084,778.51
2019	3,869,442,982.95	475,516,891.61	4,344,959,874.56	3,116,848,397.22	273,864,572.75	3,390,712,969.97
2020	4,051,872,074.96	490,521,562.31	4,542,393,637.27	3,611,736,979.27	201,564,218.26	3,813,301,197.53

Data Source: Office of the Provincial Accountant

Figure 7.1: Income and Expenditure CY 2011-2020



Based on the Financial Profile of Batangas LGUs for 2020 reported by the Commission on Audit (COA)-Batangas, and as presented in Table 7.4, total income and expenses of all LGUs for 2020 are Php 16,767,397,796.64 and Php 13,606,664,029.81, respectively.

Combined income of the four (4) component cities for 2020 amounting to Php 9,139,470,566.26 represents 54.51% of the total income of 34 LGUs. Thus, a total of Php 7,627,927,230.38 or 45.49 % represents the rest of the 30 municipalities.

In 2020, the highest income among the four cities is Batangas City with Php 3,811,615,532.31 or 41.70% of the total income. While in the 34 LGUs, the Municipality of Calaca has the highest income with Php 781,016,445.06 or 10.24%.

On one hand, the cities' expenses in the year 2019 exceeded that of the total expenses of all municipalities by Php 765,046,295.89 which represents about 7.06% of the total expenses of all 34 LGUs of the Province. While on the other hand, in the year 2020 the cities expenditures of Php 7,413,719,395.28 represent at least 54.49 % of the total LGU expenditure of the said year.

As a whole, there is an increase in income and expenditures for the year 2020. The income of all LGUs increased by 13.60% amounting to Php 2,280,064,160.35 while expenditures also increased by 19.74% or Php 2,685,446,623.67.

Batangas City marks the highest expenditure in the four cities with Php 3,303,721,176.00 or 44.56% in 2020 while the Municipality of San Juan gets the highest expenditure from the 34 LGUs with Php 436,185,760.46 or 7.04%.

Also presented in the table is the proportion of expense to income for years 2019 and 2020 per LGU and the average for all LGUs. Among the four (4) cities, Batangas City and Lipa City have equal proportion in 2019 with 76.00%. However, Batangas City has the highest proportion in 2020 with 87.00%. On the average for all cities, there is an increase of 8.37% in expenditures from 2019 to 2020.

When it comes to municipalities, Laurel tops the 30 LGUs in 2019 with 95.00% and Lian in 2020 with 98.00% while Agoncillo gets the lowest proportion for the year 2019 with 55.00% and Malvar in year 2020 with 51.00%. Taal has no data in 2019.

Average proportion for all municipalities is 77.43% for 2019 and 81.11% for 2020, where an increase of 3.68% is noted. Overall, combined average for the 34 LGUs is placed at 75.09% for 2019 and 81.15% for 2020, with a noted increase of 6.06%.

Table 7.4: Statement of Income and Expenditure by City/Municipality: 2019-2020

CITY/MUNICIPALITY	2019			2020		
	INCOME	EXPENDITURE	PROPORTION OF EXP TO INC	INCOME	EXPENDITURE	PROPORTION OF EXP TO INC
Batangas City	3,108,676,301.62	2,354,872,967.96	76.00%	3,811,615,532.31	3,303,721,176.00	87.00%
Lipa City	2,122,100,715.39	1,622,680,643.26	76.00%	2,076,658,486.66	1,679,596,658.04	81.00%
Sto. Tomas City	941,275,446.88	677,766,044.27	72.00%	1,294,401,940.20	924,717,071.34	71.00%
Tanauan City	1,773,649,519.79	1,187,812,195.52	67.00%	1,956,794,607.09	1,505,684,489.90	77.00%
Total Cities	**7,945,701,983.68**	**5,843,131,851.01**	**72.75%**	**9,139,470,566.26**	**7,413,719,395.28**	**81.12%**
Agoncillo	169,680,642.25	94,153,794.75	55.00%	150,116,102.17	116,491,683.69	78.00%
Alitagtag	89,955,921.77	84,580,273.62	94.00%	106,966,350.47	96,833,035.33	91.00%
Balayan	315,226,955.58	240,824,107.71	76.00%	366,382,667.94	307,306,332.95	84.00%
Balete	81,188,921.35	72,890,545.24	90.00%	97,060,264.57	84,158,553.57	87.00%
Bauan	389,616,444.73	304,007,601.80	78.00%	415,142,291.93	366,890,136.93	88.00%
Calaca	736,898,656.78	486,473,193.35	66.00%	781,016,445.06	732,263,465.11	94.00%
Calatagan	201,926,156.12	183,541,371.85	91.00%	231,272,852.10	199,476,145.59	86.00%
Cuenca	117,151,912.78	100,781,201.22	86.00%	136,973,091.74	114,441,721.44	84.00%
Ibaan	178,000,756.86	154,117,076.39	87.00%	201,550,200.05	148,037,122.08	73.00%
Laurel	153,333,562.90	145,603,068.83	95.00%	195,395,176.87	154,256,636.98	79.00%
Lemery	318,169,572.31	245,780,097.89	77.00%	338,248,342.38	246,857,531.30	73.00%
Lian	167,311,799.11	146,293,328.64	87.00%	186,991,245.64	182,997,676.90	98.00%
Lobo	150,187,320.84	109,474,655.99	73.00%	182,600,009.21	135,235,241.06	74.00%
Mabini	233,242,178.21	174,133,364.18	75.00%	250,227,330.22	214,698,398.26	86.00%
Malvar	306,452,563.72	187,929,402.34	61.00%	400,368,064.59	205,010,811.58	51.00%
MataasnaKahoy	103,437,866.37	82,454,991.61	80.00%	127,539,950.76	99,021,880.94	78.00%
Nasugbu	474,974,053.35	361,618,495.62	76.00%	523,696,105.81	416,229,209.59	79.00%
Padre Garcia	200,490,956.40	172,577,839.97	86.00%	235,804,509.05	188,424,010.19	80.00%
Rosario	378,239,817.23	290,105,153.52	77.00%	420,733,888.49	327,642,089.24	78.00%
San Jose	261,284,905.97	179,841,096.14	69.00%	298,407,869.76	258,790,202.55	87.00%
San Juan	359,577,041.16	318,126,256.46	88.00%	527,484,244.43	436,185,760.46	83.00%
San Luis	112,716,054.57	94,122,482.20	84.00%	117,360,006.77	107,052,933.14	91.00%
San Nicolas	120,680,359.21	84,824,314.25	70.00%	118,634,193.43	84,838,214.75	72.00%
San Pascual	271,275,532.43	216,505,110.76	80.00%	308,867,512.87	238,248,208.63	77.00%
Sta. Teresita	80,315,870.55	68,785,484.20	86.00%	97,189,166.12	76,899,300.87	79.00%
Taal	-	-	-	184,994,562.05	142,190,745.83	77.00%
Talisay	183,455,544.52	143,357,384.69	78.00%	189,252,690.02	144,466,139.55	76.00%
Taysan	160,285,937.69	147,832,123.47	92.00%	187,545,905.50	166,230,858.12	89.00%
Tingloy	70,692,700.57	58,715,905.36	83.00%	77,625,144.77	64,850,452.09	84.00%
Tuy	155,861,647.24	128,635,833.07	83.00%	172,481,045.61	136,920,135.81	79.00%
Total Municipalities	**6,541,631,652.57**	**5,078,085,555.12**	**77.43%**	**7,627,927,230.38**	**6,192,944,634.53**	**81.11%**
Total-All LGUs	**14,487,333,636.25**	**10,921,217,406.13**	**75.09%**	**16,767,397,796.64**	**13,606,664,029.81**	**81.15%**

Data Source: Commission on Audit / Province

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SUMMARY OF BARANGAYS PRONE TO TAAL BALLISTIC PROJECTILE

(As of 21 January 2020)

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	AGONCILLO	Bilibinwang	Largely (97%)	Small portion
BATANGAS	AGONCILLO	Barigon	Small portion (1%)	Largely
BATANGAS	AGONCILLO	Subic Ilaya	Largely (65%)	Partly
BATANGAS	AGONCILLO	Banyaga	Largely (80%)	Small portion
BATANGAS	BALETE	Calawit	Total	-
BATANGAS	CUENCA	Calumayin	Small portion (0.6%)	Largely
BATANGAS	CUENCA	Don Juan	Small portion (4%)	Largely
BATANGAS	LAUREL	Balakilong	Small portion (6%)	Largely
BATANGAS	LAUREL	Berinayan	Partly (37%)	Largely
BATANGAS	LAUREL	Bugaan East	Total	-
BATANGAS	LAUREL	Bugaan West	Partly (34%)	Largely
BATANGAS	LAUREL	Buso-buso	Largely (59%)	Partly
BATANGAS	LAUREL	Gulod	Total	-
BATANGAS	LAUREL	J. Leviste	Small portion (12%)	Largely
BATANGAS	LAUREL	Molinete	Small portion (0.04%)	Largely
BATANGAS	LAUREL	Barangay 1 (Pob.)	Partly (23%)	Largely
BATANGAS	LAUREL	Barangay 2 (Pob)	Partly (43%)	Partly
BATANGAS	LAUREL	Barangay 3 (Pob)	Total	-
BATANGAS	LAUREL	Barangay 4 (Pob)	Largely (99%)	Small portion
BATANGAS	LAUREL	Barangay 5 (Pob)	Largely (54%)	Partly
BATANGAS	LAUREL	Ticub	Small portion (0.3%)	Large portion
BATANGAS	SAN NICOLAS	Alas-as	Total	-
BATANGAS	SAN NICOLAS	Pulang-Bato	Total	-
BATANGAS	TALISAY	Balas	Small portion (11%)	Largely
BATANGAS	TALISAY	Poblacion Barangay 6	Total	-
BATANGAS	TALISAY	Sampaloc	Small portion (5%)	Largely
BATANGAS	TALISAY	Santa Maria	Small portion (11%)	Largely
BATANGAS	CITY OF TANAUAN	Maria Paz	Small portion (18%)	Largely

NOTE: Hazard Data, PHIVOLCS 2011
Administrative boundaries (PSA, 2016) are approximate and not authoritative.
**Percentage of area prone to ballistic projectiles*

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SUMMARY OF BARANGAYS PRONE TO TAAL VOLCANO BASE SURGE

(As of 21 January 2020)

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	AGONCILLO	Adia	Total	-
BATANGAS	AGONCILLO	Bagong Sikat	Total	-
BATANGAS	AGONCILLO	Balangon	Total	-
BATANGAS	AGONCILLO	Banyaga	Total	-
BATANGAS	AGONCILLO	Bilibinwang	Total	-
BATANGAS	AGONCILLO	Bangin	Total	-
BATANGAS	AGONCILLO	Barigon	Largely (86%)	Small portion
BATANGAS	AGONCILLO	Coral Na Munti	Total	-
BATANGAS	AGONCILLO	Guitna	Total	-
BATANGAS	AGONCILLO	Mabini	Total	-
BATANGAS	AGONCILLO	Pamiga	Total	-
BATANGAS	AGONCILLO	Panhulan	Total	-
BATANGAS	AGONCILLO	Pansipit	Total	-
BATANGAS	AGONCILLO	Poblacion	Total	-
BATANGAS	AGONCILLO	Pook	Total	-
BATANGAS	AGONCILLO	San Jacinto	Largely (66%)	Partly
BATANGAS	AGONCILLO	San Teodoro	Total	-
BATANGAS	AGONCILLO	Santa Cruz	Total	-
BATANGAS	AGONCILLO	Santo Tomas	Total	-
BATANGAS	AGONCILLO	Subic Ibaba	Total	-
BATANGAS	AGONCILLO	Subic Ilaya	Total	-
BATANGAS	ALITAGTAG	Dominador West	Small portion (0.8%)	Largely
BATANGAS	ALITAGTAG	Pinagkurusan	Small portion (3%)	Largely
BATANGAS	ALITAGTAG	Ping-As	Largely (86%)	Small portion
BATANGAS	ALITAGTAG	Poblacion East	Partly (37%)	Largely
BATANGAS	ALITAGTAG	Poblacion West	Largely (52%)	Partly
BATANGAS	ALITAGTAG	San Jose	Small portion (3%)	Largely
BATANGAS	ALITAGTAG	Santa Cruz	Largely (73%)	Partly
BATANGAS	ALITAGTAG	Tadlac	Largely (88%)	Small portion
BATANGAS	BALETE	Alangilan	Partly (45%)	Partly
BATANGAS	BALETE	Calawit	Total	-
BATANGAS	BALETE	Looc	Total	-
BATANGAS	BALETE	Magapi	Total	-
BATANGAS	BALETE	Makina	Total	-

NOTE: Hazard Data, PHIVOLCS 2011;
Administrative boundaries (PSA, 2016) are approximate and not authoritative
**Percentage of area prone to base surge*

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	BALETE	Malabanan	Largely (77%)	Partly
BATANGAS	BALETE	Palsara	Total	-
BATANGAS	BALETE	Poblacion	Total	-
BATANGAS	BALETE	Sala	Total	-
BATANGAS	BALETE	Sampalocan	Total	-
BATANGAS	BALETE	Solis	Total	-
BATANGAS	BALETE	San Sebastian	Total	-
BATANGAS	CUENCA	Balagbag	Largely (73%)	Partly
BATANGAS	CUENCA	Calumayin	Total	-
BATANGAS	CUENCA	Don Juan	Largely (95%)	Small portion
BATANGAS	CUENCA	Pinagkaisahan	Small portion (0.65%)	Largely
BATANGAS	CUENCA	San Felipe	Partly (41%)	Partly
BATANGAS	CUENCA	Barangay 7 (Pob.)	Partly (36%)	Largely
BATANGAS	CUENCA	Barangay 8 (Pob.)	Largely (61%)	Partly
BATANGAS	LAUREL	As-Is	Total	-
BATANGAS	LAUREL	Balakilong	Total	-
BATANGAS	LAUREL	Berinayan	Largely (99%)	Small portion
BATANGAS	LAUREL	Bugaan East	Total	-
BATANGAS	LAUREL	Bugaan West	Total	-
BATANGAS	LAUREL	Buso-buso	Total	-
BATANGAS	LAUREL	Gulod	Total	-
BATANGAS	LAUREL	J. Leviste	Total	-
BATANGAS	LAUREL	Molinete	Largely (76%)	Partly
BATANGAS	LAUREL	Niyugan	Small portion (13%)	Largely
BATANGAS	LAUREL	Paliparan	Partly (44%)	Partly
BATANGAS	LAUREL	Barangay 1 (Pob)	Total	-
BATANGAS	LAUREL	Barangay 2 (Pob	Total	-
BATANGAS	LAUREL	Barangay 3 (Pob	Total	-
BATANGAS	LAUREL	Barangay 4 (Pob	Total	-
BATANGAS	LAUREL	Barangay 5 (Pob	Total	-
BATANGAS	LAUREL	San Gabriel	Total	-
BATANGAS	LAUREL	San Gregorio	Partly	Largely
BATANGAS	LAUREL	Santa Maria	Largely (64%)	Partly
BATANGAS	LAUREL	Ticub	Largely (83%)	Small portion
BATANGAS	LEMERY	Anak-Dagat	Total	-
BATANGAS	LEMERY	Arumahan	Small portion (0.15%)	Largely
BATANGAS	LEMERY	Ayao-iyao	Total	-
BATANGAS	LEMERY	Bagong Pook	Largely (81%)	Small portion
BATANGAS	LEMERY	Bagong Sikat	Total	-

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**Percentage of area prone to base surge*

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	LEMERY	Balanga	Total	-
BATANGAS	LEMERY	Bukal	Total	-
BATANGAS	LEMERY	Cahilan I	Total	-
BATANGAS	LEMERY	Cahilan II	Total	-
BATANGAS	LEMERY	Dayapan	Largely (65%)	Partly
BATANGAS	LEMERY	Dita	Total	-
BATANGAS	LEMERY	Gulod	Small portion (19%)	Largely
BATANGAS	LEMERY	Lucky	Total	-
BATANGAS	LEMERY	Mahabang Dahilig	Partly (40%)	Largely
BATANGAS	LEMERY	Maguihan	Total	-
BATANGAS	LEMERY	Mahayahay	Total	-
BATANGAS	LEMERY	Maigsing Dahilig	Total	-
BATANGAS	LEMERY	Maligaya	Total	-
BATANGAS	LEMERY	Malinis	Total	-
BATANGAS	LEMERY	Mataas Na Bayan	Total	-
BATANGAS	LEMERY	Matingain I	Total	-
BATANGAS	LEMERY	Matingain II	Total	-
BATANGAS	LEMERY	Niugan	Partly (33%)	Largely
BATANGAS	LEMERY	Nonong Casto	Total	-
BATANGAS	LEMERY	Palanas	Total	-
BATANGAS	LEMERY	Payapa Ilaya	Small portion (10%)	Largely
BATANGAS	LEMERY	District I (Pob)	Total	-
BATANGAS	LEMERY	District II (Pob)	Total	-
BATANGAS	LEMERY	District III (Pob)	Total	-
BATANGAS	LEMERY	District IV (Pob)	Total	-
BATANGAS	LEMERY	Rizal	Total	-
BATANGAS	LEMERY	Sambal Ilaya	Total	-
BATANGAS	LEMERY	Sambal Ibaba	Total	-
BATANGAS	LEMERY	San Isidro Ibaba	Total	-
BATANGAS	LEMERY	San Isidro Itaas	Largely (61%)	Partly
BATANGAS	LEMERY	Sangalang	Total	-
BATANGAS	LEMERY	Sinisian East	Total	-
BATANGAS	LEMERY	Sinisian West	Partly (30%)	Largely
BATANGAS	LEMERY	Tubigan	Total	-
BATANGAS	LEMERY	Wawa Ibaba	Total	-
BATANGAS	LEMERY	Wawa Ilaya	Total	-
BATANGAS	LIPA CITY	Bagong Pook	Partly	Largely
BATANGAS	LIPA CITY	Bulaklakan	Largely (55%)	Partly
BATANGAS	LIPA CITY	Duhatan	Partly (39%)	Largely
BATANGAS	LIPA CITY	Halang	Total	-

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**Percentage of area prone to base surge*

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	MALVAR	Bilucao (San Isidro Western)	Total	-
BATANGAS	MALVAR	Bulihan	Partly (28%)	Largely
BATANGAS	MALVAR	San Gregorio	Total	-
BATANGAS	MALVAR	San Isidro East	Total	-
BATANGAS	MALVAR	San Juan	Partly (30%)	Largely
BATANGAS	MALVAR	San Pedro II (Western)	Largely (51%)	Partly
BATANGAS	MATAASNAKAHOY	Bayorbor	Largely (86%)	Small portion
BATANGAS	MATAASNAKAHOY	Bubuyan	Partly (42%)	Partly
BATANGAS	MATAASNAKAHOY	Kinalaglagan	Total	-
BATANGAS	MATAASNAKAHOY	Loob	Small portion (12%)	Largely
BATANGAS	MATAASNAKAHOY	Lumang Lipa	Total	-
BATANGAS	MATAASNAKAHOY	Manggahan	Largely (93%)	Small portion
BATANGAS	MATAASNAKAHOY	Nangkaan	Total	-
BATANGAS	MATAASNAKAHOY	San Sebastian	Largely (63%)	Partly
BATANGAS	MATAASNAKAHOY	Santol	Small portion (15%)	Largely
BATANGAS	SAN NICOLAS	Abelo	Total	-
BATANGAS	SAN NICOLAS	Balete	Total	-
BATANGAS	SAN NICOLAS	Baluk-baluk	Total	-
BATANGAS	SAN NICOLAS	Bancoro	Total	-
BATANGAS	SAN NICOLAS	Bangin	Total	-
BATANGAS	SAN NICOLAS	Calangay	Total	-
BATANGAS	SAN NICOLAS	Hipit	Total	-
BATANGAS	SAN NICOLAS	Maabud North	Total	-
BATANGAS	SAN NICOLAS	Maabud South	Total	-
BATANGAS	SAN NICOLAS	Munlawin	Total	-
BATANGAS	SAN NICOLAS	Pansipit	Total	-
BATANGAS	SAN NICOLAS	Poblacion	Total	-
BATANGAS	SAN NICOLAS	Santo Niño	Total	-
BATANGAS	SAN NICOLAS	Sinturisan	Total	-
BATANGAS	SAN NICOLAS	Tagudtod	Total	-
BATANGAS	SAN NICOLAS	Talang	Total	-
BATANGAS	SAN NICOLAS	Alas-as	Total	-
BATANGAS	SAN NICOLAS	Pulang-Bato	Total	-
BATANGAS	SANTA TERESITA	Antipolo	Total	-
BATANGAS	SANTA TERESITA	Bihis	Largely (98%)	Small portion
BATANGAS	SANTA TERESITA	Burol	Total	-
BATANGAS	SANTA TERESITA	Calayaan	Small portion (3%)	Largely
BATANGAS	SANTA TERESITA	Calumala	Total	-

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**Percentage of area prone to base surge*

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	SANTA TERESITA	Cuta East	Largely (57%)	Partly
BATANGAS	SANTA TERESITA	Cutang Cawayan	Largely (74%)	Partly
BATANGAS	SANTA TERESITA	Poblacion I	Largely (81%)	Small portion
BATANGAS	SANTA TERESITA	Saimsim	Total	-
BATANGAS	SANTA TERESITA	Sinipian	Total	-
BATANGAS	SANTA TERESITA	Tambo Ibaba	Total	-
BATANGAS	SANTA TERESITA	Tambo Ilaya	Total	-
BATANGAS	SANTA TERESITA	Poblacion II	Small portion (12%)	Largely
BATANGAS	SANTA TERESITA	Poblacion III	Partial (21%)	Largely
BATANGAS	TAAL	Apacay	Total	-
BATANGAS	TAAL	Balisong	Total	-
BATANGAS	TAAL	Bihis	Partly (30%)	Largely
BATANGAS	TAAL	Bolbok	Total	-
BATANGAS	TAAL	Buli	Largely (74%)	Partly
BATANGAS	TAAL	Butong	Largely (77%)	Partly
BATANGAS	TAAL	Carasuche	Total	-
BATANGAS	TAAL	Cawit	Total	-
BATANGAS	TAAL	Caysasay	Total	-
BATANGAS	TAAL	Cubamba	Total	-
BATANGAS	TAAL	Cultihan	Total	-
BATANGAS	TAAL	Gahol	Total	-
BATANGAS	TAAL	Halang	Total	
BATANGAS	TAAL	Iba	Largely (66%)	Partly
BATANGAS	TAAL	Ilog	Partly (43)	Partly
BATANGAS	TAAL	Imamawo	Partly (36%)	Largely
BATANGAS	TAAL	Ipil	Total	-
BATANGAS	TAAL	Luntal	Total	-
BATANGAS	TAAL	Mahabang Lodlod	Total	-
BATANGAS	TAAL	Niogan	Total	-
BATANGAS	TAAL	Poblacion 1	Total	-
BATANGAS	TAAL	Poblacion 2	Total	-
BATANGAS	TAAL	Poblacion 3	Total	-
BATANGAS	TAAL	Poblacion 4	Total	-
BATANGAS	TAAL	Poblacion 5	Total	-
BATANGAS	TAAL	Poblacion 6	Total	-
BATANGAS	TAAL	Poblacion 7	Total	-
BATANGAS	TAAL	Poblacion 8	Total	-
BATANGAS	TAAL	Poblacion 9	Total	-
BATANGAS	TAAL	Poblacion 10	Total	-
BATANGAS	TAAL	Poblacion 11	Total	-
BATANGAS	TAAL	Poblacion 12	Total	-

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**Percentage of area prone to base surge*

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	TAAL	Poblacion 13	Total	-
BATANGAS	TAAL	Poblacion 14	Total	-
BATANGAS	TAAL	Pook	Total	-
BATANGAS	TAAL	Seiran	Total	-
BATANGAS	TAAL	Laguile	Total	-
BATANGAS	TAAL	Latag	Total	-
BATANGAS	TAAL	Tierra ALta	Total	-
BATANGAS	TAAL	Tulo	Total	-
BATANGAS	TAAL	Tatlong Maria	Total	-
BATANGAS	TAAL	Pansol	Partly (0.05%)	Largely safe
BATANGAS	TALISAY	Aya	Largely (66%)	Partly
BATANGAS	TALISAY	Balas	Total	-
BATANGAS	TALISAY	Banga	Total	-
BATANGAS	TALISAY	Buco	Total	-
BATANGAS	TALISAY	Caloocan	Largely (97%)	Small portion
BATANGAS	TALISAY	Leynes	Total	-
BATANGAS	TALISAY	Miranda	Largely (93%)	Small portion
BATANGAS	TALISAY	Poblacion Barangay 1	Total	-
BATANGAS	TALISAY	Poblacion Barangay 2	Total	-
BATANGAS	TALISAY	Poblacion Barangay 3	Total	-
BATANGAS	TALISAY	Poblacion Barangay 4	Total	-
BATANGAS	TALISAY	Poblacion Barangay 5	Total	-
BATANGAS	TALISAY	Poblacion Barangay 6	Total	-
BATANGAS	TALISAY	Poblacion Barangay 7	Total	-
BATANGAS	TALISAY	Poblacion Barangay 8	Total	-
BATANGAS	TALISAY	Quiling	Largely (71%)	Partly
BATANGAS	TALISAY	Sampaloc	Total	-
BATANGAS	TALISAY	San Guillermo	Largely (77%)	Partly
BATANGAS	TALISAY	Santa Maria	Total	-
BATANGAS	TALISAY	Tranca	Partly (46%)	Partly
BATANGAS	TALISAY	Tumaway	Largely (89%)	Small portion
BATANGAS	CITY OF TANAUAN	Ambulong	Total	-
BATANGAS	CITY OF TANAUAN	Banadero	Total	-
BATANGAS	CITY OF TANAUAN	Bagbag	Total	-
BATANGAS	CITY OF TANAUAN	Balele	Total	-

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**Percentage of area prone to base surge*

BATANGAS	CITY OF TANAUAN	Banjo Laurel (Banjo West)	Largely (86%)	Small portion
PROVINCE	**MUNICIPALITY**	**BARANGAYS**	**PRONE***	**SAFE**
BATANGAS	CITY OF TANAUAN	Bilog-bilog	Largely (75%)	Partly
BATANGAS	CITY OF TANAUAN	Boot	Total	-
BATANGAS	CITY OF TANAUAN	Gonzales	Total	-
BATANGAS	CITY OF TANAUAN	Janopol	Total	-
BATANGAS	CITY OF TANAUAN	Janopol Oriental	Largely (90%)	Small portion
BATANGAS	CITY OF TANAUAN	Luyos	Partly (44%)	Partly
BATANGAS	CITY OF TANAUAN	Mabini	Total	-
BATANGAS	CITY OF TANAUAN	Maria Paz	Total	-
BATANGAS	CITY OF TANAUAN	Maugat	Total	-
BATANGAS	CITY OF TANAUAN	Montaña (Ik-ik)	Small portion (13%)	Largely
BATANGAS	CITY OF TANAUAN	Natatas	Partly (39%)	Largely
BATANGAS	CITY OF TANAUAN	San Jose	Total	-
BATANGAS	CITY OF TANAUAN	Santor	Small portion (0.4%)	Largely
BATANGAS	CITY OF TANAUAN	Talaga	Largely (79%)	Small portion
BATANGAS	CITY OF TANAUAN	Tinurik	Largely (76%)	Partly
BATANGAS	CITY OF TANAUAN	Wawa	Total	-
CAVITE	TAGAYTAY CITY	Bagong Tubig	Small portion (3%)	Largely
CAVITE	TAGAYTAY CITY	Kaybagal South (Pob.)	Partly (23%)	Largely
CAVITE	TAGAYTAY CITY	Maharlika West	Small portion (16%)	Largely
CAVITE	TAGAYTAY CITY	Sambong	Partly (49%)	Partly
CAVITE	TAGAYTAY CITY	San Jose	Partly (32%)	Largely
CAVITE	TAGAYTAY CITY	Silang Junction South	Partly (39%)	Largely
CAVITE	TAGAYTAY CITY	Maharlika East	Largely (63%)	Partly
CAVITE	TAGAYTAY CITY	Tolentino East	Small portion (2%)	Largely

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Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
PHILIPPINE INSTITUTE OF VOLCANOLOGY AND SEISMOLOGY

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SUMMARY OF BARANGAYS PRONE TO TAAL VOLCANIC TSUNAMI

(As of 21 January 2020)

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	AGONCILLO	Adia	Small portion (4%)	Largely
BATANGAS	AGONCILLO	Bagong Sikat	Small portion (3%)	Largely
BATANGAS	AGONCILLO	Bilibinwang	Partly (37%)	Partly
BATANGAS	AGONCILLO	Bangin	Small portion (2%)	Largely
BATANGAS	AGONCILLO	Guitna	Small portion (2%)	Largely
BATANGAS	AGONCILLO	Panhulan	Largely (86%)	Small
BATANGAS	AGONCILLO	Pansipit	Partly (36%)	Partly
BATANGAS	AGONCILLO	Pook	Small portion (13%)	Largely
BATANGAS	AGONCILLO	San Teodoro	Largely (77%)	Partly
BATANGAS	AGONCILLO	Santa Cruz	Small portion (7%)	Largely
BATANGAS	AGONCILLO	Santo Tomas	Largely (62%)	Partly
BATANGAS	AGONCILLO	Subic Ibaba	Partly (21%)	Largely
BATANGAS	AGONCILLO	Subic Ilaya	Small portion (19%)	Largely
BATANGAS	AGONCILLO	Banyaga	Small portion (17%)	Largely
BATANGAS	ALITAGTAG	Ping-As	Small portion (4%)	Largely
BATANGAS	ALITAGTAG	Poblacion East	Small portion (0.7%)	Largely
BATANGAS	ALITAGTAG	Poblacion West	Small portion (0.7%)	Largely
BATANGAS	ALITAGTAG	Santa Cruz	Small portion (3%)	Largely
BATANGAS	ALITAGTAG	Tadlac	Small portion (3%)	Largely
BATANGAS	BALETE	Calawit	Small portion (13%)	Largely
BATANGAS	BALETE	Looc	Partly (50%)	Partly
BATANGAS	BALETE	Magapi	Partly (50%)	Partly
BATANGAS	BALETE	Makina	Small portion (5%)	Largely
BATANGAS	BALETE	Malabanan	Small portion (0.2%)	Largely
BATANGAS	BALETE	Palsara	Small portion (8%)	Largely
BATANGAS	BALETE	Poblacion	Largely (68%)	Partly
BATANGAS	BALETE	Sala	Largely (90%)	Small portion
BATANGAS	BALETE	Sampalocan	Largely (89%)	Small portion
BATANGAS	BALETE	Solis	Partly (44%)	Partly
BATANGAS	BALETE	San Sebastian	Partly (50%)	Partly
BATANGAS	CUENCA	Calumayin	Small portion (7%)	Largely
BATANGAS	CUENCA	Don Juan	Small portion (6%)	Largely

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**Percentage of area prone to volcanic tsunami.*

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	CUENCA	San Felipe	Small portion (1%)	Largely
BATANGAS	LAUREL	As-Is	Small portion (5%)	Largely
BATANGAS	LAUREL	Balakilong	Small portion (17%)	Largely
BATANGAS	LAUREL	Berinayan	Small portion (7%)	Largely
BATANGAS	LAUREL	Bugaan East	Largely (82%)	Small portion
BATANGAS	LAUREL	Bugaan West	Small portion (8%)	Largely
BATANGAS	LAUREL	Buso-buso	Small portion (9%)	Largely
BATANGAS	LAUREL	Gulod	Small portion (11%)	Largely
BATANGAS	LAUREL	J. Leviste	Small portion (13%)	Largely
BATANGAS	LAUREL	Molinete	Small portion (5%)	Largely
BATANGAS	LAUREL	Paliparan	Small portion (0.4%)	Largely
BATANGAS	LAUREL	Barangay 1 (Pob.)	Partly (36%)	Partly
BATANGAS	LAUREL	Barangay 2 (Pob.)	Partly (33%)	Partly
BATANGAS	LAUREL	Barangay 3 (Pob.)	Total	-
BATANGAS	LAUREL	Barangay 4 (Pob.)	Total	-
BATANGAS	LAUREL	Barangay 5 (Pob.)	Largely (59%)	Partly
BATANGAS	LAUREL	San Gabriel	Small portion (10%)	Largely
BATANGAS	LAUREL	Ticub	Small portion (0.7%)	Largely
BATANGAS	LEMERY	Ayao-iyao	Small portion (14%)	Largely
BATANGAS	LEMERY	Malinis	Partly (23%)	Largely
BATANGAS	LEMERY	Palanas	Largely (92%)	Small portion
BATANGAS	LEMERY	District IV (Pob.)	Small portion (1%)	Largely
BATANGAS	LEMERY	Sambal Ilaya	Largely (52%)	Partly
BATANGAS	LEMERY	Sangalang	Small portion (12%)	Partly
BATANGAS	LIPA CITY	Duhatan	Very small portion (0.01%)	Almost Total
BATANGAS	LIPA CITY	Halang	Small portion (6%)	Largely
BATANGAS	LIPA CITY	Bagong Pook	Very small portion (less than 0.01%)	Almost Total
BATANGAS	LIPA CITY	Bulaklakan	Very small portion (less than 0.01%)	Almost Total

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**Percentage of area prone to volcanic tsunami.*

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	MALVAR	Bilucao (San Isidro Western)	Small portion (4%)	Largely
BATANGAS	MALVAR	San Gregorio	Small portion (4%)	Largely
BATANGAS	MATAASNAKAHOY	Kinalaglagan	Small portion (18%)	Partly
BATANGAS	MATAASNAKAHOY	Lumang Lipa	Small portion (9%)	Largely
BATANGAS	MATAASNAKAHOY	Manggahan	Small portion (6%)	Largely
BATANGAS	MATAASNAKAHOY	Nangkaan	Small portion (8%)	Largely
BATANGAS	SAN NICOLAS	Abelo	Partly (29%)	Partly
BATANGAS	SAN NICOLAS	Balete	Partly (48%)	Partly
BATANGAS	SAN NICOLAS	Baluk-baluk	Partly (41%)	Partly
BATANGAS	SAN NICOLAS	Bancoro	Partly (50%)	Partly
BATANGAS	SAN NICOLAS	Bangin	Small portion (1%)	Largely
BATANGAS	SAN NICOLAS	Calangay	Small portion (13%)	Largely
BATANGAS	SAN NICOLAS	Maabud North	Partly (23%)	Partly
BATANGAS	SAN NICOLAS	Pansipit	Partly (50%)	Partly
BATANGAS	SAN NICOLAS	Poblacion	Largely (86%)	Small portion
BATANGAS	SAN NICOLAS	Tagudtod	Partly (26%)	Partly
BATANGAS	SAN NICOLAS	Talang	Small portion (0.2%)	Largely
BATANGAS	SAN NICOLAS	Alas-as	Small portion (3%)	Largely
BATANGAS	SAN NICOLAS	Pulang-Bato	Small portion (17%)	Largely
BATANGAS	SANTA TERESITA	Antipolo	Small portion (3%)	Largely
BATANGAS	SANTA TERESITA	Calumala	Small portion (6%)	Largely
BATANGAS	SANTA TERESITA	Cuta East	Small portion (2%)	Largely
BATANGAS	SANTA TERESITA	Cutang Cawayan	Small portion (4%)	Largely
BATANGAS	SANTA TERESITA	Poblacion I	Small portion (1%)	Largely
BATANGAS	SANTA TERESITA	Saimsim	Small portion (17%)	Largely
BATANGAS	SANTA TERESITA	Tambo Ibaba	Small portion (4%)	Largely
BATANGAS	SANTA TERESITA	Tambo Ilaya	Small portion (14%)	Largely
BATANGAS	TAAL	Apacay	Small portion (0.3%)	Largely
BATANGAS	TAAL	Cawit	Small portion (0.3%)	Largely
BATANGAS	TAAL	Laguile	Small portion (1%)	Largely
BATANGAS	TALISAY	Aya	Small portion (13%)	Largely
BATANGAS	TALISAY	Balas	Partly (21%)	Largely
BATANGAS	TALISAY	Banga	Small portion (19%)	Largely

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**Percentage of area prone to volcanic tsunami.*

PROVINCE	MUNICIPALITY	BARANGAYS	PRONE*	SAFE
BATANGAS	TALISAY	Buco	Small portion (12%)	Largely
BATANGAS	TALISAY	Caloocan	Small portion (10%)	Largely
BATANGAS	TALISAY	Leynes	Partly (32%)	Largely
BATANGAS	TALISAY	Poblacion Barangay 1	Largely (57%)	Partly
BATANGAS	TALISAY	Poblacion Barangay 2	Total	-
BATANGAS	TALISAY	Poblacion Barangay 3	Largely (52%)	Partly
BATANGAS	TALISAY	Poblacion Barangay 4	Total	-
BATANGAS	TALISAY	Poblacion Barangay 5	Partly (48%)	Largely
BATANGAS	TALISAY	Poblacion Barangay 6	Small portion (11%)	Largely
BATANGAS	TALISAY	Poblacion Barangay 7	Total	-
BATANGAS	TALISAY	Poblacion Barangay 8	Total	-
BATANGAS	TALISAY	Quiling	Small portion (8%)	Largely
BATANGAS	TALISAY	Sampaloc	Small portion (18%)	Largely
BATANGAS	TALISAY	Santa Maria	Partly (26%)	Largely
BATANGAS	TALISAY	Tumaway	Small portion (15%)	Largely
BATANGAS	CITY OF TANAUAN	Ambulong	Largely (77%)	Partly
BATANGAS	CITY OF TANAUAN	Banadero	Largely (78%)	Partly
BATANGAS	CITY OF TANAUAN	Bagbag	Small portion (12%)	Largely
BATANGAS	CITY OF TANAUAN	Balele	Small portion (0.6%)	Largely
BATANGAS	CITY OF TANAUAN	Banjo Laurel (Banjo West)	Small portion (0.2%)	Largely
BATANGAS	CITY OF TANAUAN	Boot	Small portion (4%)	Largely
BATANGAS	CITY OF TANAUAN	Gonzales	Partly (43%)	Partly
BATANGAS	CITY OF TANAUAN	Janopol	Small portion (1%)	Total
BATANGAS	CITY OF TANAUAN	Maria Paz	Partly (32%)	Partly
BATANGAS	CITY OF TANAUAN	Maugat	Small portion (5%)	Largely
BATANGAS	CITY OF TANAUAN	Talaga	Small portion (0.6%)	Largely
BATANGAS	CITY OF TANAUAN	Wawa	Partly (39%)	Partly

NOTE: Hazard Data, PHIVOLCS 2011
Administrative boundaries (PSA, 2016) are approximate and not authoritative.
**Percentage of area prone to volcanic tsunami.*

Annex 4

NATIONAL ROADS 2020

DISTRICT I

Road Name / Section ID	Route Numbering	Start KM	End KM
Balayan Diversion Rd			
S05786LZ		K0108 + (-174)	K0108 + 343
Balayan-Balibago Rd			
S05016LZ	409	K0106 + (-216)	K0117 + 073
Diokno Highway			
S05796LZ	410	K0072 + (-995)	K0091 + 073
S05797LZ	410		
Lemery-Taal Diversion Rd			
S05019LZ		K0128 + (-1045)	K0131 + 765
Nasugbu-Lian-Calatagan Rd			
S05012LZ	408	K0099 + (-600)	K0124 + 746
Palico Cadre Rd			
S01855LZ		K0094 + (-149)	K0094 + 460
Palico-Balayan-Batangas Rd			
S01854LZ	436	K0094 + (-960)	K0134 + 790
Tagaytay-Nasugbu Rd			
S05790LZ	407	K0072 + (-240)	K0103 + 682
Talisay-Laurel-Agoncillo Rd			
S00515LZ		K0122 + (-974)	K0122 + 954
Ternate-Nasugbu Rd			
S01859LZ	407	K0075 + (-378)	K0096 + 1229
Tuy Diversion Rd			
S01858LZ		K0098 + (-786)	K0098 + 334

NATIONAL ROADS 2020
DISTRICT II

Road Name / Section ID	Route Numbering	Start KM	End KM
Batangas Cadre Rd			
S05002LZ		K0106 + (-672)	K0106 + 233
Batangas Port Diversion Rd			
S06066LZ	434	K0102 + (-600)	K0105 + 056
Batangas-Lobo Rd			
S05003LZ	438	K0105 + (-469)	K0118 + 607
S05004LZ	438	K0128 + (-504)	K0138 + 849
Batangas-Quezon Rd			
S05011LZ	435	K0134 + (-664)	K0136 + 909
Batangas-Tabangao-Lobo Rd			
S05009LZ	439	K0107 + (-898)	K0150 + 207
Bauan-Mabini Rd			
S01947LZ		K0146 + (-072)	K0180 + 532
Bolboc Access Road			
S01938LZ	434		
S01939LZ	434		
Bolboc Flyover and Approaches			
S01937LZ	434		
Lobo-Malabrigo-Sn Juan Rd			
S05760LZ	439	K0157 + (-320)	K0166 + 719
Manila-Batangas Pier Rd			
S01948LZ	437	K0106 + (-255)	K0108 + 208
Manila-Batangas Rd			
S01936LZ	4	K0096 + (-120)	K0105 + 754
Palico-Balayan-Batangas Rd			
S01946LZ	436	K0141 + (-735)	K0153 + 410

NATIONAL ROADS 2020

DISTRICT III

Road Name / Section ID	Route Numbering	Start KM	End KM
Banay-Banay-Mojon-Cuenca Rd			
S05800LZ	433	K0090 + (-861)	K0102 + 895
Daang Maharlika (LZ)			
S01911LZ	1	K0057 + (-340)	K0069 + 395
Lake Taal-Tagaytay Rd			
S01931LZ		K0065 + (-288)	K0069 + 422
Lipa City - Alaminos Rd			
S01633LZ		K0083 + (-737)	K0086 + 287
Lipa-Balete Rd			
S01932LZ		K0082 + (-219)	K0088 + 000
Manila South Rd via Sto Tomas Pob			
S01914LZ		K0060 + (-054)	K0061 + 643
Manila-Batangas Div Rd			
S01916LZ	4		
Manila-Batangas Rd			
S01917LZ	4	K0061 + (-051)	K0072 + 283
Palico-Balayan-Batangas Rd			
S01857LZ	436	K0135 + (-213)	K0140 + 271
Talisay-Laurel-Agoncillo Rd			
S00517LZ		K0114 + (-254)	K0121 + 106
S01928LZ		K0081 + (-227)	K0102 + 803
Tanauan-Talisay-Tagaytay Rd			
S05804LZ	421	K0064 + (-399)	K0085 + 672

NATIONAL ROADS 2020
DISTRICT IV

Road Name / Section ID	Route Numbering	Start KM	End KM
Banay-Banay-Mojon-Cuenca Rd			
S01952LZ	433	K0086 + (-510)	K0089 + 147
Batangas-Lobo Rd			
S01922LZ	438	K0119 + (-454)	K0127 + 190
Batangas-Quezon Rd			
S01923LZ	435	K0108 + (-378)	K0133 + 148
S01979LZ	435		
Fernando Airbase Rd			
S01964LZ	432	K0084 + (-931)	K0085 + 206
Lipa City - Alaminos Rd			
S01978LZ		K0087 + (-668)	K0091 + 102
Lipa-Balete Rd			
S05029LZ		K0077 + (-538)	K0081 + 930
Lipa-Rosario Rd			
S01925LZ	431	K0081 + (-999)	K0088 + 954
Manila-Batangas Poblacion Rd			
S01963LZ	431	K0079 + (-963)	K0081 + 186
Manila-Batangas Rd			
S01927LZ	4	K0073 + (-700)	K0095 + 858
Marawoy-Dagatan Rd			
S01980LZ		K0092 + (-930)	K0092 + 592
New Lipa City Hall Rd			
S01965LZ			
Rosario-Sn Juan Rd			
S01926LZ	422	K0119 + (-339)	K0145 + 427
Sn Juan-Laiya Rd			
S01977LZ		K0142 + (-290)	K0165 + 530

NATIONAL BRIDGES 2020
DISTRICT I

Bridge No.	Bridge ID	Bridge Name	Bridge Type		Overall Condition	Length
1	B03048LZ	Binambang Br.	Permanent	Steel	Fair	72.6
2	B04473LZ	Canda Br.	Permanent	Concrete	Fair	30.6
3	B03050LZ	Tanggoy Br.	Permanent	Concrete	Good	14.5
4	B03051LZ	Duhatan Br.	Permanent	Concrete	Good	10.96
5	B04921LZ	Diokno Br.	Permanent	Concrete	Good	90
6	B03176LZ	Lian Br.	Permanent	Concrete	Good	112.6
7	B00056LZ	Bagbag Br.	Permanent	Concrete	Fair	24.45
8	B03178LZ	Cuaco Br.	Permanent	Concrete	Good	15.55
9	B03179LZ	Matala Br.	Permanent	Concrete	Good	12.55
10	B03180LZ	Balibago Br.	Permanent	Concrete	Fair	12.6
11	B00051LZ	Talisay Br.	Permanent	Concrete	Fair	29.3
12	B00095LZ	Kaytitinga Br.	Permanent	Concrete	Good	37.6
13	B00039LZ	Mataywanak Br.	Permanent	Concrete	Good	45.6
14	B00036LZ	Obispo Br.	Permanent	Concrete	Good	39
15	B01265LZ	Atga Br.	Permanent	Concrete	Good	12
16	B00103LZ	Munting Tubig Br.	Permanent	Concrete	Good	32.2
17	B00011LZ	Cayponse Br.	Permanent	Concrete	Good	10.5
18	B00010LZ	Gimalas Br.	Permanent	Steel	Fair	19.8
19	B00003LZ	Dacanlao Br.	Permanent	Steel	Fair	45.14
20	B00002LZ	Cawong Br.	Permanent	Concrete	Fair	24.6
21	B00001LZ	Bagong Tubig Br.	Permanent	Concrete	Good	48.8
22	B01278LZ	Madalunot Br.	Permanent	Concrete	Fair	30.6
23	B00044LZ	Calaca Br.	Permanent	Concrete	Good	56.6
24	B00006LZ	Kasuyan Br.	Permanent	Concrete	Fair	75.5
25	B00004LZ	Puting Bato Br.	Permanent	Concrete	Good	15.5
26	B00005LZ	Colong Colong Br.	Permanent	Concrete	Good	44
27	B00012LZ	Sinisian Br.	Permanent	Concrete	Fair	36.6
28	B00009LZ	Calauang Br.	Permanent	Concrete	Good	22.6
29	B00053LZ	Calbangan Br.	Permanent	Concrete	Poor	91.2
30	B00048LZ	Matingain Br.	Permanent	Concrete	Fair	15.6
31	B04715LZ	Palanas Br.	Permanent	Concrete	Fair	22.7
32	B01294LZ	Pansipit Br.	Permanent	Concrete	Good	31.8
33	B01327LZ	Balisong Br.	Permanent	Concrete	Good	5.2
34	B00099LZ	Bayudbud Br.	Permanent	Concrete	Good	50.6
35	B04718LZ	Bayudbud Br. 2	Permanent	Concrete	Good	51.6
36	B04472LZ	Cacauan Br.	Permanent	Concrete	Good	30.6
37	B00050LZ	Palico Br.	Permanent	Concrete	Good	100.6
38	B03175LZ	Wawa Br.	Permanent	Concrete	Fair	6.7

39	B04371LZ	Hamilo Br.	Permanent	Concrete	Fair	15
40	B04372LZ	Looc Br.	Permanent	Concrete	Fair	31
41	B04373LZ	Calayo Br.	Permanent	Concrete	Good	15
42	B04374LZ	Tali Br.	Permanent	Concrete	Good	17
43	B04375LZ	Natipuan Br. 1	Permanent	Concrete	Good	12
44	B04376LZ	Natipuan Br. 2	Permanent	Concrete	Good	15
45	B04377LZ	Wawa Br. 2	Permanent	Concrete	Fair	48
46	B04378LZ	Wawa Br. 3	Permanent	Concrete	Good	36
47	B04379LZ	Wawa Br. 4	Permanent	Concrete	Fair	12
48	B04714LZ	Laguile Br.	Permanent	Concrete	Fair	36
49	B04713LZ	Seiran Br.	Permanent	Concrete	Fair	30.4
50	B00035LZ	Ayao-Iyao Br.	Permanent	Concrete	Good	6.3

PROVINCIAL ROADS 2020						
ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
BAT 001	Coral Na Munti - Pamiga - Poblacion Road Agoncillo	0.0000	1.0370	5	GOOD	CONCRETE
		1.0370	1.1070	5	BAD	CONCRETE
		1.1070	1.4980	5	GOOD	CONCRETE
		1.4980	1.5160	5	FAIR	CONCRETE
		1.5160	2.0000	5	GOOD	CONCRETE
		TOTAL	**2.0000**			
BAT 002	San Teodoro - Pansipit Road, Agoncillo	0.0000	0.1090	6	FAIR	CONCRETE
		0.1090	0.7610	6	GOOD	CONCRETE
		0.7610	0.7700	6	BAD	CONCRETE
		0.7700	1.8450	5	GOOD	CONCRETE
		1.8450	1.8630	5	FAIR	CONCRETE
		1.8630	2.1880	5	GOOD	CONCRETE
		2.1880	2.2040	5	BAD	CONCRETE
		2.2040	2.2290	5	GOOD	CONCRETE
		2.2290	2.2530	5	FAIR	CONCRETE
		2.2530	2.4860	5	GOOD	CONCRETE
		2.4860	2.4950	5	BAD	CONCRETE
		2.4950	2.5260	5	GOOD	CONCRETE
		2.5260	2.5450	5	FAIR	CONCRETE
		2.5450	2.7320	6	GOOD	CONCRETE
		2.7320	2.7770	5	FAIR	CONCRETE
		2.7770	2.8030	5	GOOD	CONCRETE
		2.8030	2.8210	5	FAIR	CONCRETE
		2.8210	2.8420	5	GOOD	CONCRETE
		2.8420	2.8650	5	FAIR	CONCRETE
		2.8650	2.9600	5	GOOD	CONCRETE
		2.9600	2.9700	5	FAIR	CONCRETE
		2.9700	3.3000	5	GOOD	CONCRETE
		TOTAL	**3.3000**			
BAT 003	Poblacion - Pook Road, Agoncillo	0.0000	0.0050	6	GOOD	CONCRETE
		0.0050	0.0210	5	BAD	CONCRETE
		0.0210	0.1320	5	GOOD	CONCRETE
		0.1320	0.1480	5	BAD	CONCRETE
		0.1480	0.1860	5	FAIR	CONCRETE
		0.1860	0.2520	5	GOOD	CONCRETE
		0.2520	0.2810	5	FAIR	CONCRETE
		0.2810	0.5390	5	FAIR	CONCRETE
		0.5390	0.5620	3	FAIR	CONCRETE
		0.5620	0.5770	3	BAD	CONCRETE
		0.5770	0.8010	5	GOOD	CONCRETE
		0.8010	0.9000	4	BAD	CONCRETE
		TOTAL	**0.9000**			

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
BAT 004	Poblacion - Pook Road, Agoncillo	0.0000	0.0260	5	FAIR	CONCRETE
		0.0260	0.1370	5	GOOD	CONCRETE
		0.1370	0.1820	5	BAD	CONCRETE
BAT 004	Poblacion - Pook Road, Agoncillo	0.1820	0.3040	5	GOOD	CONCRETE
		0.3040	0.3190	5	BAD	CONCRETE
		0.3190	0.3240	5	GOOD	CONCRETE
		0.3240	0.3370	5	FAIR	CONCRETE
		0.3370	0.4090	5	BAD	CONCRETE
		0.4090	0.6650	5	BAD	CONCRETE
		TOTAL	**0.6650**			
BAT 005	Pinagkrusan, Alangilan - Geleran kawayan, San Pascual - Poblacion, Bauan Road	0.0000	0.4600	6.1	GOOD	CONCRETE
		0.4600	0.6560	6	FAIR	CONCRETE
		0.6560	0.8000	6	GOOD	CONCRETE
		0.8000	0.9990	6	FAIR	CONCRETE
		0.9990	1.3320	6	GOOD	CONCRETE
		1.3320	1.3760	6	BAD	CONCRETE
		1.3760	1.5750	6	GOOD	CONCRETE
		1.5750	1.6090	6	BAD	CONCRETE
		1.6090	2.7220	6	GOOD	CONCRETE
		2.7220	2.8040	5	BAD	CONCRETE
		2.8040	2.9020	5	FAIR	CONCRETE
		2.9020	2.9370	5	BAD	CONCRETE
		2.9370	3.0360	5	GOOD	CONCRETE
		3.0360	3.0660	5	BAD	CONCRETE
		3.0660	3.1180	5	FAIR	CONCRETE
		3.1180	3.5010	5	BAD	CONCRETE
		3.5010	3.5850	5	FAIR	CONCRETE
		3.5850	3.8190	5	BAD	CONCRETE
		3.8190	4.0700	5	FAIR	CONCRETE
		4.0700	4.1650	5	BAD	CONCRETE
		4.1650	5.0040	5	FAIR	CONCRETE
		5.0040	5.1690	5	BAD	CONCRETE
		5.1690	5.2320	5	FAIR	CONCRETE
		5.2320	5.2770	5	BAD	CONCRETE
		5.2770	6.0440	5	FAIR	CONCRETE
		6.0440	6.3740	6	GOOD	CONCRETE
		6.3740	6.4140	6	BAD	CONCRETE
		6.4140	6.5850	6	GOOD	CONCRETE
		6.5850	6.6680	5	FAIR	CONCRETE
		6.6680	6.7000	5	GOOD	CONCRETE
		6.7000	6.7570	5	FAIR	CONCRETE
		6.7570	6.7890	5	BAD	CONCRETE
		6.7890	6.9420	5	GOOD	CONCRETE
		6.9420	6.9900	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		6.9900	7.1170	5	GOOD	CONCRETE
		7.1170	7.4080	5	FAIR	CONCRETE
		7.4080	7.5480	5	BAD	CONCRETE
		7.5480	9.0050	6	GOOD	ASPHALT
		TOTAL	**9.0050**			
BAT 006	Brgy. 4 - Brgy. 9 Rd (Tolentino Blvd. St.) (2019)	0.0000	0.1560	6	GOOD	CONCRETE
		0.1560	0.6770	6	FAIR	CONCRETE
		TOTAL	**0.6770**			
BAT 007	Brgy.9 - Brgy .6 Rd. (Burgos Progreso Street) (2019)	0.0000	0.1370	5	GOOD	CONCRETE
		0.1370	0.6000	5	FAIR	CONCRETE
		TOTAL	**0.6000**			
BAT 008	Brgy. 4 Road (Dam Vallelos St.) (2019)	0.0000	0.1520	5	GOOD	ASPHALT
		0.1520	0.6700	5	GOOD	CONCRETE
		TOTAL	**0.6700**			
BAT 009	Cayponce-Bgry 4 Rd. (Antorcha-Constancia St.) (2019)	0.0000	0.2690	6	GOOD	ASPHALT
		0.2690	0.9570	6	FAIR	CONCRETE
		0.9570	1.0800	6	GOOD	ASPHALT
		1.0800	1.3190	6	GOOD	CONCRETE
		1.3190	1.5800	6	GOOD	ASPHALT
		TOTAL	**1.5800**			
BAT 010	Ermita Calzada - Bgry. 11 Rd. (2019)	0.0000	0.8170	5	GOOD	ASPHALT
		0.8170	1.2170	5	FAIR	CONCRETE
		1.2170	1.3150	5	GOOD	CONCRETE
		1.3150	1.9350	5	FAIR	CONCRETE
		TOTAL	**1.9350**			
BAT 011	Manghinao - Inicbulan Road, Bauan	0.0000	2.6070	5	GOOD	ASPHALT
		2.6070	2.6570	5	GOOD	CONCRETE
		2.6570	2.7490	5	FAIR	CONCRETE
		2.7490	2.8130	5	GOOD	CONCRETE
		2.8130	3.2280	5	FAIR	CONCRETE
		3.2280	3.2890	5	GOOD	CONCRETE
		3.2890	3.4300	5	FAIR	CONCRETE
		3.4300	3.4990	5	GOOD	CONCRETE
		3.4990	4.5050	5	FAIR	CONCRETE
		4.5050	4.6500	5	GOOD	CONCRETE
		TOTAL	**4.6500**			
BAT 012	BAT 012 - SINALA - ALAGAO ROAD, BAUAN	0.0000	2.5160	5	GOOD	ASPHALT
		2.5160	2.5740	4.5	GOOD	ASPHALT
		2.5740	2.9450	4.5	FAIR	CONCRETE
		2.9450	3.0180	4.5	GOOD	CONCRETE
		TOTAL	**3.0180**			
BAT 013	MARIA - MANALUPANG RD., BAUAN	0.0000	0.5850	4	BAD	CONCRETE
		0.5850	0.6220	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.6220	0.8000	5	BAD	CONCRETE
		0.8000	0.8920	5	FAIR	CONCRETE
		0.8920	1.0180	5	GOOD	CONCRETE
		1.0180	1.4780	5	FAIR	CONCRETE
		1.4780	1.5000	5	BAD	CONCRETE
		1.5000	2.2700	5	FAIR	CONCRETE
		2.2700	2.2830	5	BAD	CONCRETE
		2.2830	2.3140	5	FAIR	CONCRETE
		2.3140	2.3700	5	BAD	CONCRETE
		2.3700	2.4140	5	FAIR	CONCRETE
		2.4140	2.4800	6	GOOD	CONCRETE
		2.4800	2.6000	4	FAIR	CONCRETE
		2.6000	2.7010	4	GOOD	CONCRETE
		2.7010	2.8520	4	GOOD	CONCRETE
		2.8520	3.0000	4	BAD	CONCRETE
		3.0000	3.2120	4	FAIR	CONCRETE
		3.2120	3.3000	4	BAD	CONCRETE
		3.3000	3.5780	4	FAIR	CONCRETE
		3.5780	3.6960	4	BAD	CONCRETE
		3.6960	3.7740	4	FAIR	CONCRETE
		3.7740	3.8000	6	BAD	CONCRETE
		3.8000	3.8450	4	FAIR	CONCRETE
		3.8450	3.9760	4	BAD	CONCRETE
		3.9760	4.1000	4	GOOD	CONCRETE
		4.1000	4.1020	4	BAD	CONCRETE
		4.1020	4.2000	4	GOOD	CONCRETE
		4.2000	4.2560	4	BAD	CONCRETE
		4.2560	4.5000	4	FAIR	CONCRETE
		4.5000	4.7000	4	GOOD	CONCRETE
		4.7000	4.9000	4	FAIR	CONCRETE
		4.9000	4.9040	4	BAD	CONCRETE
		4.9040	5.0000	5	GOOD	CONCRETE
		5.0000	5.4000	6	FAIR	CONCRETE
		TOTAL	**5.4000**			
BAT 014	Aplaya East - West Road, Bauan	0.0000	0.2280	6	FAIR	CONCRETE
		0.2280	0.2600	6	BAD	CONCRETE
		0.2600	0.2900	6	GOOD	CONCRETE
		0.2900	0.4160	6	FAIR	CONCRETE
		0.4160	0.4500	6	GOOD	CONCRETE
		TOTAL	**0.4500**			
BAT 015	Poblacion - Aplaya RD. Bauan	0.0000	0.0180	6	FAIR	ASPHALT
		0.0180	0.0730	6	GOOD	CONCRETE
		0.0730	0.2670	6	FAIR	CONCRETE
		0.2670	0.3090	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.3090	0.4630	6	FAIR	CONCRETE
		0.4630	0.4710	6	BAD	CONCRETE
		0.4710	0.4770	6	GOOD	CONCRETE
		0.4770	0.4970	6	BAD	CONCRETE
		0.4970	0.5920	5	GOOD	CONCRETE
		0.5920	0.8470	5	FAIR	CONCRETE
		0.8470	0.9180	5	GOOD	ASPHALT
		0.9180	1.0000	5	FAIR	CONCRETE
		1.0000	1.1200	5	FAIR	ASPHALT
		TOTAL	**1.1200**			
BAT 016	Brgy. Poblacion 3 Road - Market Road, Bauan, Batangas	0.0000	0.0310	5	BAD	CONCRETE
		0.0310	0.0620	5	FAIR	CONCRETE
		0.0620	0.1270	5	BAD	CONCRETE
		0.1270	0.1660	5	GOOD	CONCRETE
		0.1660	0.1970	5	BAD	CONCRETE
		0.1970	0.2180	5	GOOD	CONCRETE
		0.2180	0.2240	5	FAIR	CONCRETE
		TOTAL	**0.2240**			
BAT 017	Salong Road (2019)	0.0000	0.2740	5	GOOD	ASPHALT
		0.2740	0.7840	5	GOOD	CONCRETE
		0.7840	1.4500	5	GOOD	CONCRETE
		TOTAL	**1.4500**			
BAT 018	Talisay Road (2019)	0.0000	0.5000	4	FAIR	CONCRETE
		TOTAL	**0.5000**			
BAT 019	Brgy. 4 - Bagong Tubig Rd. (2019)	0.0000	0.3240	6	GOOD	CONCRETE
		0.3240	0.5950	5	GOOD	CONCRETE
		0.5950	0.7710	5	GOOD	CONCRETE
		0.7710	0.9110	6	GOOD	CONCRETE
		0.9110	1.5700	5	GOOD	CONCRETE
		TOTAL	**1.5700**			
BAT 020	Brgy. 2 Rd. Vizconde St. (2019)	0.0000	0.2000	5	GOOD	CONCRETE
		TOTAL	**0.2000**			
BAT 021	Brgy. 4 Rd. Municipal Road (2019)	0.0000	0.1980	5	GOOD	CONCRETE
		0.1980	0.3260	5	FAIR	CONCRETE
		0.3260	0.6000	5	GOOD	CONCRETE
		TOTAL	**0.6000**			
BAT 022	Brgy. 6 - Madalunot Rd. (2019)	0.0000	0.5260	5	FAIR	CONCRETE
		0.5260	1.6500	5	GOOD	CONCRETE
		1.6500	1.9040	5	BAD	CONCRETE
		1.9040	1.9680	5	FAIR	CONCRETE
		1.9680	4.6310	5	GOOD	CONCRETE
		4.6310	4.6710	5	BAD	CONCRETE
		4.6710	7.0390	5	GOOD	CONCRETE
		TOTAL	**7.0390**			

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
BAT 023	Madalunot - Puting Kahoy Rd. (2019)	0.0000	0.1110	6	GOOD	CONCRETE
		0.1110	0.2920	4	FAIR	CONCRETE
		0.2920	0.5630	4	GOOD	CONCRETE
		0.5630	0.8650	4	FAIR	CONCRETE
		0.8650	1.3420	4	GOOD	CONCRETE
		1.3420	1.3620	4	BAD	CONCRETE
		1.3620	3.0300	4	GOOD	CONCRETE
		TOTAL	**3.0300**			
BAT 024	Brgy.3 - Bagong Silang Road(2019)	0.0000	0.3910	6	FAIR	CONCRETE
		0.3910	1.9430	6	GOOD	CONCRETE
		1.9430	3.9550	6	FAIR	CONCRETE
		3.9550	4.2990	6	BAD	CONCRETE
		4.2990	5.3200	6	GOOD	CONCRETE
		5.3200	5.8850	6	BAD	CONCRETE
		5.8850	6.2230	5	BAD	CONCRETE
		6.2230	6.5350	6	BAD	CONCRETE
		6.5350	6.6560	6	GOOD	CONCRETE
		6.6560	6.8600	6	FAIR	CONCRETE
		6.8600	7.1190	6	BAD	CONCRETE
		7.1190	7.2090	6	FAIR	CONCRETE
		7.2090	9.6560	6	GOOD	CONCRETE
		9.6560	9.7940	3	BAD	CONCRETE
		9.7940	10.4760	4	BAD	CONCRETE
		10.4760	10.6930	4	GOOD	CONCRETE
		10.6930	11.1000	6	GOOD	CONCRETE
		TOTAL	**11.1000**			
BAT 025	Lucsuhin - Carlosa Rd. (2019)	0.0000	0.8250	6	GOOD	CONCRETE
		0.8250	0.9110	4	FAIR	CONCRETE
		0.9110	3.6810	4	GOOD	CONCRETE
		3.6810	3.7570	4	BAD	CONCRETE
		3.7570	4.1490	4	GOOD	CONCRETE
		4.1490	4.2000	4	BAD	ROUGH ROAD
		TOTAL	**4.2000**			
BAT 026	Gulod - Paraiso Rd. (2019)	0.0000	0.2340	6	GOOD	CONCRETE
		0.2340	1.0340	4	FAIR	CONCRETE
		1.0340	1.1750	6	GOOD	CONCRETE
		1.1750	2.1770	4	GOOD	CONCRETE
		2.1770	2.3120	6	GOOD	CONCRETE
		2.3120	2.3830	5	GOOD	CONCRETE
		2.3830	2.4670	6	GOOD	CONCRETE
		2.4670	4.2030	4	FAIR	CONCRETE
		4.2030	4.2980	6	GOOD	CONCRETE
		4.2980	5.3000	5	GOOD	CONCRETE
		5.3000	5.5890	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		5.5890	6.3180	5	GOOD	CONCRETE
		6.3180	7.7520	6	GOOD	CONCRETE
		7.7520	7.8650	5	BAD	CONCRETE
		7.8650	7.8870	6	GOOD	CONCRETE
		7.8870	7.9260	5	GOOD	CONCRETE
		7.9260	7.9610	5	GOOD	CONCRETE
		7.9610	8.0620	5	FAIR	CONCRETE
		8.0620	8.1180	6	GOOD	CONCRETE
		8.1180	8.2940	5	GOOD	CONCRETE
		8.2940	9.2540	6	GOOD	CONCRETE
		9.2540	9.4060	5	BAD	CONCRETE
		TOTAL	**9.4060**			
BAT 027	Labac Road (Acacia St.) Cuenca	0.0000	0.1080	5	GOOD	ASPHALT
		0.1080	0.1940	5	FAIR	CONCRETE
		0.1940	0.2000	5	BAD	CONCRETE
		TOTAL	**0.2000**			
BAT 028	Laqui St. Cuenca	0.0000	0.0960	5	FAIR	CONCRETE
		0.0960	0.1890	5	BAD	CONCRETE
		0.1890	0.4220	5	FAIR	CONCRETE
		0.4220	0.5890	5	GOOD	CONCRETE
		TOTAL	**0.5890**	5		
BAT 029	Poblacion I Cuenca - Natunuan, San Jose Road	0.0000	0.2340	5	GOOD	CONCRETE
		0.2340	0.2870	5	GOOD	CONCRETE
		0.2870	0.3480	5	FAIR	CONCRETE
		0.3480	0.3620	5	GOOD	CONCRETE
		0.3620	0.5360	5	FAIR	CONCRETE
		0.5360	0.7030	5	GOOD	CONCRETE
		0.7030	0.9190	5	GOOD	ASPHALT
		0.9190	1.0000	5	FAIR	CONCRETE
		1.0000	1.4140	5	GOOD	CONCRETE
		1.4140	1.4500	5	FAIR	CONCRETE
		1.4500	1.4620	5	GOOD	CONCRETE
		1.4620	1.5290	5	GOOD	CONCRETE
		1.5290	1.5440	5	GOOD	CONCRETE
		1.5440	1.6300	5	GOOD	CONCRETE
		1.6300	1.7370	5	FAIR	CONCRETE
		1.7370	1.8080	5	GOOD	CONCRETE
		1.8080	2.0450	5	FAIR	CONCRETE
		2.0450	2.1210	5	GOOD	CONCRETE
		2.1210	2.1340	5	GOOD	CONCRETE
		2.1340	2.2680	5	GOOD	CONCRETE
		2.2680	2.2910	5	BAD	CONCRETE
		2.2910	2.7330	5	GOOD	CONCRETE
		2.7330	2.7640	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		2.7640	2.8000	5	GOOD	CONCRETE
		2.8000	2.8090	5	GOOD	CONCRETE
		2.8090	3.0060	5	GOOD	CONCRETE
		3.0060	3.1530	5	FAIR	CONCRETE
		3.1530	3.2100	5	GOOD	CONCRETE
		3.2100	3.2520	5	GOOD	CONCRETE
		3.2520	3.2930	5	GOOD	CONCRETE
		3.2930	3.3290	5	GOOD	CONCRETE
		3.3290	3.3650	5	GOOD	CONCRETE
		3.3650	3.4610	5	GOOD	CONCRETE
		3.4610	3.6950	5	GOOD	CONCRETE
		3.6950	3.7970	5	GOOD	CONCRETE
		3.7970	3.8290	5	GOOD	CONCRETE
		3.8290	3.9580	5	GOOD	CONCRETE
		3.9580	4.0740	5	FAIR	CONCRETE
		4.0740	4.0890	6	GOOD	CONCRETE
		4.0890	4.2900	5	FAIR	CONCRETE
		4.2900	4.4140	5	GOOD	CONCRETE
		4.4140	4.6000	6	GOOD	CONCRETE
		4.6000	4.9130	6	GOOD	CONCRETE
		4.9130	5.0060	6	FAIR	CONCRETE
		5.0060	5.8370	6	GOOD	CONCRETE
		5.8370	5.8590	6	FAIR	CONCRETE
		5.8590	6.2660	6	GOOD	CONCRETE
		6.2660	6.2970	6	GOOD	CONCRETE
		6.2970	6.4920	6	GOOD	CONCRETE
		TOTAL	**6.4920**			
BAT 030	Pinagkrusan, Alitagtag-Bungahan, Cuenca-Lalayat, San Jose Rd.	0.0000	0.0800	6	GOOD	CONCRETE
		0.0800	0.1030	6	GOOD	CONCRETE
		0.1030	0.1250	6	GOOD	CONCRETE
		0.1250	0.2150	6	GOOD	CONCRETE
		0.2150	0.2370	6	GOOD	CONCRETE
		0.2370	0.2600	6	GOOD	CONCRETE
		0.2600	0.2690	6	GOOD	CONCRETE
		0.2690	0.2960	6	GOOD	CONCRETE
		0.2960	0.4400	6	GOOD	CONCRETE
		0.4400	0.6240	6	GOOD	CONCRETE
		0.6240	0.6330	6	GOOD	CONCRETE
		0.6330	0.6830	6	FAIR	CONCRETE
		0.6830	0.7860	6	GOOD	CONCRETE
		0.7860	0.8170	6	BAD	CONCRETE
		0.8170	1.1360	6	GOOD	CONCRETE
		1.1360	1.1450	6	BAD	CONCRETE
		1.1450	1.2040	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.2040	1.2220	6	BAD	CONCRETE
		1.2220	1.2490	6	GOOD	CONCRETE
		1.2490	1.3160	6	FAIR	CONCRETE
		1.3160	1.3430	6	BAD	CONCRETE
		1.3430	1.5720	6	GOOD	CONCRETE
		1.5720	1.5900	6	FAIR	CONCRETE
		1.5900	1.6040	6	BAD	CONCRETE
		1.6040	1.6440	6	GOOD	CONCRETE
		1.6440	1.6570	6	BAD	CONCRETE
		1.6570	1.8460	6	GOOD	CONCRETE
		1.8460	1.8640	6	BAD	CONCRETE
		1.8640	2.1030	6	GOOD	CONCRETE
		2.1030	2.2120	6	BAD	CONCRETE
		2.2120	2.2560	6	GOOD	CONCRETE
		2.2560	2.2650	6	BAD	CONCRETE
		2.2650	2.9520	6	GOOD	CONCRETE
		2.9520	3.0240	6	BAD	CONCRETE
		3.0240	3.0600	6	GOOD	CONCRETE
		3.0600	3.0780	6	FAIR	CONCRETE
		3.0780	3.1360	6	BAD	CONCRETE
		3.1360	3.1940	6	GOOD	CONCRETE
		3.1940	3.3300	6	FAIR	CONCRETE
		3.3300	3.4100	6	GOOD	CONCRETE
		3.4100	3.4460	6	BAD	CONCRETE
		3.4460	3.5370	6	FAIR	CONCRETE
		3.5370	3.5530	6	BAD	CONCRETE
		3.5530	3.5580	6	GOOD	CONCRETE
		3.5580	3.7140	4.6	BAD	CONCRETE
		3.7140	3.8220	4	GOOD	CONCRETE
		3.8220	3.8390	4	BAD	CONCRETE
		3.8390	3.9640	4	FAIR	CONCRETE
		3.9640	5.1410	5	GOOD	CONCRETE
		5.1410	5.1780	5	FAIR	CONCRETE
		5.1780	5.9600	5	GOOD	CONCRETE
		5.9600	5.9690	5	BAD	CONCRETE
		5.9690	6.0230	5	GOOD	CONCRETE
		6.0230	6.0360	5	BAD	CONCRETE
		6.0360	6.1140	5	GOOD	CONCRETE
		6.1140	6.6550	5	GOOD	ASPHALT
		TOTAL	**6.6550**			
BAT 031	Bago- Quilo Road, Ibaa	0.0000	0.1660	5	BAD	CONCRETE
		0.1660	0.3790	5	FAIR	CONCRETE
		0.3790	0.4030	5	GOOD	CONCRETE
		0.4030	0.4330	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.4330	0.5010	5	BAD	CONCRETE
		0.5010	0.9180	5	FAIR	CONCRETE
		0.9180	0.9490	4	FAIR	CONCRETE
		0.9490	1.2170	6	GOOD	CONCRETE
		1.2170	1.4320	4	FAIR	CONCRETE
		1.4320	1.6050	4	BAD	CONCRETE
		1.6050	1.7020	4	FAIR	CONCRETE
		1.7020	1.7480	4	GOOD	CONCRETE
		1.7480	2.0150	3.35	GOOD	CONCRETE
		TOTAL	**2.0150**			
BAT 032	Balanga-Dayapan-Colongan, Ibaan	0.0000	0.2610	4	FAIR	CONCRETE
		0.2610	0.2710	4	BAD	CONCRETE
		0.2710	0.2880	4	GOOD	CONCRETE
		0.2880	0.4590	4	FAIR	CONCRETE
		0.4590	0.5230	4	GOOD	CONCRETE
		0.5230	0.6260	4	FAIR	CONCRETE
		0.6260	0.6530	4	BAD	CONCRETE
		0.6530	0.7210	4	FAIR	CONCRETE
		0.7210	0.8110	4	BAD	CONCRETE
		0.8110	1.0990	4	FAIR	CONCRETE
		1.0990	1.2760	4	GOOD	CONCRETE
		1.2760	1.3800	4.5	FAIR	CONCRETE
		1.3800	1.4590	4.2	FAIR	CONCRETE
		1.4590	1.6470	5.74	GOOD	CONCRETE
		1.6470	1.7390	4.3	FAIR	CONCRETE
		1.7390	1.7760	5	GOOD	CONCRETE
		1.7760	1.8440	5	BAD	CONCRETE
		1.8440	1.8710	5	GOOD	CONCRETE
		1.8710	2.0370	4.3	BAD	CONCRETE
		2.0370	2.1600	4.3	FAIR	CONCRETE
		2.1600	2.2050	4.3	GOOD	CONCRETE
		2.2050	2.3390	4.3	FAIR	CONCRETE
		2.3390	2.4460	4	BAD	CONCRETE
		2.4460	2.5040	4.5	FAIR	CONCRETE
		2.5040	2.5890	4.5	BAD	CONCRETE
		2.5890	2.7150	5	FAIR	CONCRETE
		2.7150	2.7700	5	BAD	CONCRETE
		2.7700	3.0000	4.56	FAIR	CONCRETE
		3.0000	3.1650	5.4	FAIR	CONCRETE
		3.1650	3.2790	5.4	GOOD	CONCRETE
		3.2790	3.3610	3	FAIR	CONCRETE
		3.3610	4.7340	3	GOOD	CONCRETE
		TOTAL	**4.7340**			
BAT 033	(Lipa City Bdry.) Calamias- Talaibon	0.0000	0.4720	6	FAIR	ASPHALT

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
	Rd.	0.4720	0.9810	6	GOOD	ASPHALT
		0.9810	1.0000	6	FAIR	ASPHALT
		1.0000	1.0740	6	GOOD	ASPHALT
		1.0740	1.2000	6	FAIR	ASPHALT
		1.2000	1.4420	6	GOOD	ASPHALT
		1.4420	1.4730	6	FAIR	ASPHALT
		1.4730	1.8090	6	GOOD	CONCRETE
		1.8090	1.8200	6	BAD	CONCRETE
		1.8200	1.8920	6	FAIR	CONCRETE
		1.8920	2.1730	6	GOOD	CONCRETE
		2.1730	2.4490	6	FAIR	CONCRETE
		2.4490	2.4960	6	GOOD	CONCRETE
		2.4960	2.5890	6	FAIR	CONCRETE
		2.5890	2.6220	6	FAIR	ASPHALT
		2.6220	2.7200	6	GOOD	ASPHALT
		2.7200	2.8280	6	FAIR	ASPHALT
		2.8280	3.5350	6	GOOD	ASPHALT
		3.5350	3.5630	6	FAIR	ASPHALT
		3.5630	4.1620	6	GOOD	ASPHALT
		4.1620	4.2110	6	FAIR	ASPHALT
		4.2110	4.4450	6	GOOD	ASPHALT
		4.4450	4.5870	6	FAIR	ASPHALT
		4.5870	4.8610	6	GOOD	ASPHALT
		4.8610	4.9100	6	FAIR	ASPHALT
		4.9100	5.2260	6	GOOD	ASPHALT
		5.2260	5.4230	6	FAIR	ASPHALT
		TOTAL	**5.4230**			
BAT 034	Poblacion, Ibaan - Pag-asa Road, Taysan	0.0000	0.4100	5.3	GOOD	ASPHALT
		0.4100	0.5410	5.1	GOOD	CONCRETE
		0.5410	1.1890	5.1	FAIR	CONCRETE
		1.1890	1.3700	6	GOOD	CONCRETE
		1.3700	1.4590	5	GOOD	ASPHALT
		1.4590	2.0020	5	FAIR	CONCRETE
		2.0020	2.2050	5	GOOD	CONCRETE
		2.2050	2.3920	5	FAIR	CONCRETE
		2.3920	2.4280	5	BAD	CONCRETE
		2.4280	2.4500	5	FAIR	CONCRETE
		2.4500	2.5450	5	BAD	CONCRETE
		2.5450	2.5790	5	FAIR	CONCRETE
BAT 034	Poblacion, Ibaan - Pag-asa Road, Taysan	2.5790	2.8000	5	BAD	CONCRETE
		2.8000	3.0240	4	FAIR	CONCRETE
		3.0240	3.0400	4	BAD	CONCRETE
		3.0400	3.1640	4	FAIR	CONCRETE
		3.1640	3.1880	4	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		3.1880	3.6610	4	FAIR	CONCRETE
		3.6610	3.7940	4	GOOD	CONCRETE
		3.7940	3.8180	5	BAD	CONCRETE
		3.8180	3.9130	5	GOOD	CONCRETE
		3.9130	3.9410	5	BAD	CONCRETE
		3.9410	4.0000	5	FAIR	CONCRETE
		4.0000	4.2820	5	GOOD	CONCRETE
		4.2820	4.3470	5	FAIR	CONCRETE
		4.3470	4.3920	5	BAD	CONCRETE
		4.3920	4.4660	5	GOOD	CONCRETE
		4.4660	4.4790	5	FAIR	CONCRETE
		4.4790	4.7130	5	BAD	CONCRETE
		4.7130	4.7680	5	FAIR	CONCRETE
		4.7680	4.9630	5	GOOD	CONCRETE
		4.9630	5.1940	5	BAD	CONCRETE
		5.1940	5.5040	5	FAIR	CONCRETE
		5.5040	5.5690	5	BAD	CONCRETE
		5.5690	5.6250	5	GOOD	CONCRETE
		5.6250	5.9350	5	FAIR	CONCRETE
		5.9350	6.1240	5	BAD	CONCRETE
		6.1240	6.2810	5	GOOD	CONCRETE
		6.2810	6.3270	5	BAD	CONCRETE
		6.3270	6.4250	5	GOOD	CONCRETE
		6.4250	6.5780	5	BAD	CONCRETE
		6.5780	6.6020	5	FAIR	CONCRETE
		6.6020	6.9340	5	BAD	CONCRETE
		6.9340	7.0000	5	GOOD	CONCRETE
		7.0000	7.0220	5	BAD	CONCRETE
		7.0220	7.1190	5	GOOD	CONCRETE
		7.1190	7.1820	5	FAIR	CONCRETE
		7.1820	7.2260	5	BAD	CONCRETE
		7.2260	7.2750	5	GOOD	CONCRETE
		7.2750	7.3280	5	FAIR	CONCRETE
		7.3280	7.3710	5	BAD	CONCRETE
		7.3710	7.5300	5	GOOD	CONCRETE
		7.5300	7.7150	5	FAIR	CONCRETE
		7.7150	7.7640	5	GOOD	CONCRETE
		7.7640	7.7870	5	BAD	CONCRETE
		7.7870	7.7930	5	FAIR	CONCRETE
		7.7930	7.9330	5	GOOD	CONCRETE
		7.9330	7.9950	5	BAD	CONCRETE
		7.9950	8.0280	5	GOOD	CONCRETE
		8.0280	8.1100	5	BAD	CONCRETE
BAT 034	Poblacion, Ibaan - Pag-asa Road,	8.1100	8.4350	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
	Taysan	**TOTAL**	**8.4350**			
BAT 035	Poblacion 2-San Gregorio Road	0.0000	0.0110	4	GOOD	ASPHALT
		0.0110	0.1320	4	FAIR	ASPHALT
		0.1320	0.1630	5	GOOD	CONCRETE
		0.1630	0.1760	5	FAIR	CONCRETE
		0.1760	0.3270	5	FAIR	CONCRETE
		0.3270	0.4130	5	BAD	CONCRETE
		0.4130	0.7450	4	FAIR	CONCRETE
		0.7450	0.8850	5	GOOD	CONCRETE
		0.8850	0.9120	5	GOOD	CONCRETE
		0.9120	1.1370	5	GOOD	CONCRETE
		1.1370	1.3100	5	FAIR	CONCRETE
		1.3100	1.6360	5	GOOD	CONCRETE
		1.6360	1.8310	5	FAIR	CONCRETE
		1.8310	2.0000	5	BAD	CONCRETE
		2.0000	2.6210	5	FAIR	CONCRETE
		2.6210	2.7660	5	GOOD	CONCRETE
		2.7660	2.8970	5	FAIR	CONCRETE
		2.8970	3.0850	5	GOOD	CONCRETE
		3.0850	3.1490	5	FAIR	CONCRETE
		3.1490	3.4000	5	GOOD	CONCRETE
		3.4000	3.6660	5	FAIR	CONCRETE
		3.6660	3.6870	5	BAD	CONCRETE
		3.6870	3.8040	5	GOOD	CONCRETE
		3.8040	3.8590	5	BAD	CONCRETE
		3.8590	4.2130	5	GOOD	CONCRETE
		4.2130	4.3810	5	FAIR	CONCRETE
		4.3810	4.4500	5	GOOD	CONCRETE
		4.4500	4.4880	5	BAD	CONCRETE
		4.4880	4.6780	5	GOOD	CONCRETE
		4.6780	4.7000	5	FAIR	CONCRETE
		4.7000	5.1800	5	GOOD	CONCRETE
		5.1800	5.2790	5	FAIR	CONCRETE
		5.2790	6.0940	5	GOOD	CONCRETE
		6.0940	6.1720	5	BAD	CONCRETE
		6.1720	6.2620	5	GOOD	CONCRETE
		6.2620	6.2970	5	FAIR	CONCRETE
		6.2970	6.4570	5	GOOD	CONCRETE
		6.4570	6.4830	5	FAIR	CONCRETE
		6.4830	6.5220	5	GOOD	CONCRETE
		6.5220	6.7350	5	FAIR	CONCRETE
		6.7350	6.8250	5	GOOD	CONCRETE
		6.8250	6.8440	5	BAD	CONCRETE
		6.8440	6.8850	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		6.8850	6.9800	5	GOOD	CONCRETE
		6.9800	7.4040	5	FAIR	CONCRETE
		7.4040	7.6380	5	GOOD	CONCRETE
		7.6380	7.8560	5	GOOD	CONCRETE
		7.8560	7.8740	5	FAIR	CONCRETE
		7.8740	8.1280	5	GOOD	CONCRETE
		8.1280	8.1980	5	FAIR	CONCRETE
		8.1980	8.4490	5	GOOD	CONCRETE
		8.4490	8.4670	5	FAIR	CONCRETE
		8.4670	8.5480	4	BAD	CONCRETE
		8.5480	8.8020	5	GOOD	CONCRETE
		8.8020	8.8800	4.5	BAD	CONCRETE
		8.8800	9.1520	5	FAIR	CONCRETE
		9.1520	9.1650	5	BAD	CONCRETE
		9.1650	9.2140	5	FAIR	CONCRETE
		9.2140	9.2610	5	BAD	CONCRETE
		9.2610	9.3110	5	FAIR	CONCRETE
		9.3110	9.4750	6	FAIR	CONCRETE
		9.4750	9.6400	8	GOOD	CONCRETE
		9.6400	10.4140	5	GOOD	CONCRETE
		10.4140	10.4280	8	BAD	CONCRETE
		10.4280	10.5310	8	GOOD	CONCRETE
		10.5310	10.7000	8	FAIR	CONCRETE
		10.7000	11.2000	8	GOOD	CONCRETE
		TOTAL	**11.2000**			
BAT 036	R.diokno Road Lemery	0.0000	0.0780	5	FAIR	CONCRETE
		0.0780	0.1150	5	GOOD	CONCRETE
		0.1150	0.3330	5	FAIR	CONCRETE
		0.3330	0.4970	5	GOOD	CONCRETE
		0.4970	0.5060	5	BAD	CONCRETE
		0.5060	0.5420	6	GOOD	CONCRETE
		0.5420	0.5770	6	FAIR	CONCRETE
		0.5770	0.6830	6	GOOD	CONCRETE
		0.6830	0.7410	6	FAIR	CONCRETE
		0.7410	0.8510	6	GOOD	CONCRETE
		0.8510	1.0000	6	FAIR	CONCRETE
		TOTAL	**1.0000**			
BAT 037	Atienza ST. Road, Lemery	0.0000	0.0880	6	FAIR	CONCRETE
		0.0880	0.2440	6	GOOD	CONCRETE
		0.2440	0.2890	6	FAIR	CONCRETE
		0.2890	0.3320	6	GOOD	CONCRETE
		0.3320	0.3860	6	FAIR	CONCRETE
		0.3860	0.4280	6	GOOD	CONCRETE
		0.4280	0.6410	6	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.6410	0.6630	6	BAD	CONCRETE
		0.6630	0.7330	6	FAIR	CONCRETE
		0.7330	0.7730	6	BAD	CONCRETE
		0.7730	0.8070	6	GOOD	CONCRETE
		0.8070	0.8110	6	BAD	CONCRETE
		0.8110	1.0000	6	GOOD	CONCRETE
		TOTAL	**1.0000**	6		
BAT 038	Sanggalang Street, Lemery	0.0000	0.0660	6	GOOD	CONCRETE
		0.0660	0.0820	6	FAIR	CONCRETE
		0.0820	0.1580	6	GOOD	CONCRETE
		0.1580	0.2000	6	FAIR	CONCRETE
		0.2000	0.2230	6	GOOD	CONCRETE
		0.2230	0.3350	6	FAIR	CONCRETE
		0.3350	0.3670	6	BAD	CONCRETE
		0.3670	0.5330	6	FAIR	CONCRETE
		0.5330	0.6180	6	GOOD	CONCRETE
		0.6180	0.7320	6	FAIR	CONCRETE
		0.7320	0.8100	6	GOOD	CONCRETE
		0.8100	0.9470	6	BAD	CONCRETE
		0.9470	1.0500	6	FAIR	CONCRETE
		TOTAL	**1.0500**			
BAT 039	Nonong Casto Road, Lemery	0.0000	1.3500	6	GOOD	CONCRETE
		TOTAL	**1.3500**			
BAT 040	Sinisian - Arumahan	0.0000	0.5350	6	GOOD	CONCRETE
		0.5350	1.5860	6	FAIR	CONCRETE
		1.5860	1.6280	4	BAD	CONCRETE
		1.6280	1.7310	4	FAIR	CONCRETE
		1.7310	1.8900	4	BAD	CONCRETE
		1.8900	1.9340	4	FAIR	CONCRETE
		1.9340	1.9880	4	BAD	CONCRETE
		1.9880	2.0000	4	FAIR	CONCRETE
		2.0000	2.0680	4	GOOD	CONCRETE
		2.0680	2.0980	4	BAD	CONCRETE
		2.0980	2.2140	4	FAIR	CONCRETE
		2.2140	2.2770	4	GOOD	CONCRETE
		2.2770	2.5000	4	FAIR	CONCRETE
		2.5000	2.5860	4	GOOD	CONCRETE
		2.5860	2.7900	4	BAD	CONCRETE
		2.7900	2.8980	4	FAIR	CONCRETE
		2.8980	2.9660	4	GOOD	CONCRETE
		2.9660	3.0240	4	BAD	CONCRETE
		3.0240	3.0710	4	GOOD	CONCRETE
		3.0710	3.1410	4	BAD	CONCRETE
		3.1410	3.2620	4	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		3.2620	3.4210	4	GOOD	CONCRETE
		3.4210	3.5450	4	FAIR	CONCRETE
		3.5450	3.9030	4	FAIR	CONCRETE
		3.9030	4.0220	4	GOOD	CONCRETE
		4.0220	4.0720	4	BAD	CONCRETE
		4.0720	4.3220	4	GOOD	CONCRETE
		4.3220	4.4440	4	BAD	CONCRETE
		4.4440	4.5000	4	FAIR	CONCRETE
		4.5000	4.7340	4	GOOD	CONCRETE
		4.7340	5.1310	3	FAIR	CONCRETE
		5.1310	5.4000	4	GOOD	CONCRETE
		TOTAL	**5.4000**			
BAT 041	Matabungkay Road(2019)	0.0000	0.5559	6	GOOD	ASPHALT
		0.5559	0.7990	5	GOOD	CONCRETE
		0.7990	1.2360	5	FAIR	CONCRETE
		1.2360	1.4710	6	FAIR	CONCRETE
		1.4710	1.8970	5	GOOD	CONCRETE
		1.8970	2.0500	5	FAIR	CONCRETE
		TOTAL	**2.0500**			
BAT 042	Binubusan Road (Sito Matuod)(2019)	0.0000	0.3000	5	BAD	CONCRETE
		0.3000	0.3950	5	GOOD	CONCRETE
		0.3950	0.5850	5	BAD	CONCRETE
		0.5850	0.8250	4	GOOD	CONCRETE
		0.8250	0.9240	4	BAD	CONCRETE
		0.9240	1.3240	6	GOOD	CONCRETE
		1.3240	1.6550	5	GOOD	CONCRETE
		1.6550	2.0000	5	FAIR	CONCRETE
		TOTAL	**2.0000**			
BAT 043	Binubusan - Luyahan Road(2019)	0.0000	0.4890	5	FAIR	CONCRETE
		0.4890	0.7150	6	GOOD	CONCRETE
		0.7150	0.8260	4	BAD	CONCRETE
		0.8260	1.0610	6	GOOD	CONCRETE
		1.0610	1.5500	4	BAD	CONCRETE
		TOTAL	**1.5500**			
BAT 044	Lian Market Road	0.0000	0.0540	5	BAD	CONCRETE
		0.0540	0.1300	5	GOOD	ASPHALT
		0.1300	0.2240	5	GOOD	ASPHALT
		0.2240	0.3140	5	GOOD	ASPHALT
		0.3140	0.4000	5	BAD	CONCRETE
		TOTAL	**0.4000**			
BAT 045	Luntal - Tuy - Brgy. 4 , Lian Road(2019)	0.0000	0.0910	6	GOOD	CONCRETE
		0.0910	0.2670	5	GOOD	CONCRETE
		0.2670	0.2830	5	BAD	CONCRETE
		0.2830	0.3910	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.3910	0.4720	6	GOOD	CONCRETE
		0.4720	0.7310	5	GOOD	CONCRETE
		0.7310	0.9560	5	GOOD	ASPHALT
		0.9560	1.1310	5	GOOD	ASPHALT
		1.1310	1.1630	5	BAD	CONCRETE
		1.1630	1.5000	5	GOOD	CONCRETE
		1.5000	1.6820	5	FAIR	CONCRETE
		1.6820	1.7000	5	BAD	CONCRETE
		1.7000	2.0800	6	GOOD	CONCRETE
		2.0800	2.1560	6	FAIR	CONCRETE
		2.1560	2.2380	6	BAD	CONCRETE
		2.2380	2.2620	6	FAIR	CONCRETE
		2.2620	2.3890	5	FAIR	CONCRETE
		2.3890	2.5570	5	BAD	CONCRETE
		2.5570	2.6020	5	FAIR	CONCRETE
		2.6020	2.7790	6	FAIR	CONCRETE
		2.7790	3.0680	6	BAD	CONCRETE
		3.0680	3.4810	6	GOOD	CONCRETE
		3.4810	4.0540	6	BAD	CONCRETE
		4.0540	4.0940	6	FAIR	CONCRETE
		4.0940	4.3570	6	BAD	CONCRETE
		4.3570	4.5220	6	BAD	CONCRETE
		4.5220	5.0000	6	FAIR	CONCRETE
		TOTAL	**5.0000**			
BAT 046	(Lipa City bdry.) Brgy. II - Brgy. IIA Rd. (2019)	0.0000	1.4000	6.2	GOOD	ASPHALT
		TOTAL	**1.4000**			
BAT 047	Brgy. II Cemetery Rd. (2019)	0.0000	0.4000	4.7	BAD	CONCRETE
		TOTAL	**0.4000**			
BAT 048	Brgy . II - Brgy. I - Brgy. III (Longos) - Brgy. IIA Rd. (2019)	0.0000	0.7700	6.5	GOOD	ASPHALT
		TOTAL	**0.7700**			
BAT 049	Brgy II. Calingatan Rd. (2019)	0.0000	0.7000	6	GOOD	ASPHALT
		0.7000	1.1040	4	FAIR	CONCRETE
		1.1040	1.1230	4	BAD	CONCRETE
		TOTAL	**1.1230**			
BAT 050	Brgy. IV - Loob Rd. (2019)	0.0000	2.4110	4.5	GOOD	ASPHALT
		2.4110	2.5890	4.5	FAIR	CONCRETE
		2.5890	2.8230	4.5	GOOD	CONCRETE
		2.8230	3.2130	5	GOOD	CONCRETE
		3.2130	3.4300	5	FAIR	CONCRETE
		3.4300	3.7900	5	GOOD	CONCRETE
		TOTAL	**3.7900**			
BAT 051	Brgy. II-A Bubuyan Rd. (2019)	0.0000	0.9100	5	GOOD	ASPHALT
		0.9100	2.1000	5	BAD	CONCRETE
		2.1000	2.6200	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		2.6200	3.0210	4	FAIR	CONCRETE
		3.0210	3.1710	4	GOOD	ASPHALT
		3.1710	3.3120	4	FAIR	CONCRETE
		3.3120	3.3730	4	GOOD	ASPHALT
		3.3730	3.6900	5	FAIR	CONCRETE
		3.6900	3.8560	4	FAIR	CONCRETE
		3.8560	4.3540	5	FAIR	CONCRETE
		TOTAL	**4.3540**			
BAT 052	Santol - Lumang Lipa Road(2019)	0.0000	1.6540	5	GOOD	ASPHALT
		1.6540	1.7000	5	FAIR	CONCRETE
		TOTAL	**1.7000**			
BAT 053	Brgy. III (Longos) - Nangkaan Rd. (2019)	0.0000	0.0400	6.5	BAD	CONCRETE
		0.0400	0.6810	6.5	GOOD	CONCRETE
		0.6810	0.7650	6	GOOD	CONCRETE
		0.7650	0.8780	6.5	GOOD	CONCRETE
		0.8780	0.9310	6	GOOD	CONCRETE
		0.9310	2.8620	5	BAD	CONCRETE
		2.8620	3.3060	4	GOOD	ASPHALT
		3.3060	4.6840	4	BAD	CONCRETE
		4.6840	5.9300	5	GOOD	ASPHALT
		TOTAL	**5.9300**			
BAT 054	Santol- Kinalaglagan Rd. (2019)	0.0000	3.3710	5	GOOD	ASPHALT
		3.3710	4.4080	5	FAIR	CONCRETE
		4.4080	4.4610	4	FAIR	CONCRETE
		4.4610	5.0700	5	GOOD	CONCRETE
		TOTAL	**5.0700**			
BAT 055	Mabini Plaza Road(J.Panopio St.-Calangit St.)(2019)	0.0000	0.2700	6	GOOD	ASPHALT
		TOTAL	**0.2700**			
BAT 056	Santiago - San Andres - San Juan Road, Malvar	0.0000	0.1000	5	GOOD	CONCRETE
		0.1000	0.1750	5	FAIR	CONCRETE
		0.1750	0.2000	5	GOOD	CONCRETE
		0.2000	0.2520	5	FAIR	CONCRETE
		0.2520	0.2590	5	GOOD	CONCRETE
		0.2590	0.2760	5	GOOD	ASPHALT
		0.2760	0.3000	5	FAIR	CONCRETE
		0.3000	0.6420	5	GOOD	CONCRETE
		0.6420	0.6880	5	FAIR	CONCRETE
		0.6880	0.7640	5	GOOD	CONCRETE
		0.7640	0.8000	5	FAIR	CONCRETE
		0.8000	0.8570	5	GOOD	CONCRETE
		0.8570	0.9750	5	FAIR	CONCRETE
		0.9750	1.0250	5	GOOD	CONCRETE
		1.0250	1.0500	5	FAIR	CONCRETE
		1.0500	1.0950	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.0950	1.1260	5	FAIR	CONCRETE
		1.1260	1.1820	5	GOOD	CONCRETE
		1.1820	1.2210	5	FAIR	CONCRETE
		1.2210	1.3080	5	FAIR	CONCRETE
		1.3080	1.3480	5	GOOD	CONCRETE
		1.3480	1.4000	5	FAIR	CONCRETE
		1.4000	1.4350	5	GOOD	CONCRETE
		1.4350	1.4780	5	FAIR	CONCRETE
		1.4780	1.5050	4	GOOD	CONCRETE
		1.5050	1.5590	5	FAIR	CONCRETE
		1.5590	1.5750	5	GOOD	CONCRETE
		1.5750	1.5800	5	BAD	CONCRETE
		1.5800	1.6730	4	GOOD	ASPHALT
		1.6730	1.6890	5	GOOD	CONCRETE
		1.6890	2.0830	4	FAIR	CONCRETE
		2.0830	2.1540	4	GOOD	CONCRETE
		2.1540	2.2250	4	FAIR	CONCRETE
		2.2250	2.2950	4	GOOD	CONCRETE
		2.2950	2.4630	5	FAIR	CONCRETE
		2.4630	2.4990	5	GOOD	CONCRETE
		2.4990	2.5000	5	FAIR	CONCRETE
		2.5000	2.6480	5	GOOD	CONCRETE
		2.6480	2.7330	5	FAIR	CONCRETE
		2.7330	2.8950	5	GOOD	CONCRETE
		2.8950	2.9290	5	FAIR	CONCRETE
		2.9290	3.4300	5	GOOD	CONCRETE
		3.4300	3.5460	6	FAIR	CONCRETE
		3.5460	3.7150	6	FAIR	CONCRETE
		3.7150	3.8440	6	GOOD	CONCRETE
		3.8440	4.0000	6	FAIR	CONCRETE
		4.0000	4.2620	6	GOOD	CONCRETE
		TOTAL	**4.2620**			
BAT 057	San Juan - San Ferisando, Malvar	0.0000	0.1000	6	FAIR	CONCRETE
		0.1000	0.1240	6	GOOD	CONCRETE
		0.1240	0.3320	6	FAIR	CONCRETE
		0.3320	0.4940	6	GOOD	CONCRETE
		0.4940	0.4990	6	FAIR	CONCRETE
		0.4990	0.5670	6	GOOD	CONCRETE
		0.5670	0.6970	6	BAD	CONCRETE
		0.6970	1.2000	5	FAIR	CONCRETE
		1.2000	1.7180	6	BAD	CONCRETE
		TOTAL	**1.7180**			
BAT 058	Poblacion - Bagong Pook, Malvar	0.0000	0.4350	6	FAIR	CONCRETE
		0.4350	0.5020	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.5020	0.5550	5	FAIR	CONCRETE
		0.5550	0.8110	5	GOOD	CONCRETE
		0.8110	0.8610	5	FAIR	CONCRETE
		0.8610	0.8840	5	BAD	CONCRETE
		0.8840	2.8590	5	FAIR	CONCRETE
		TOTAL	**2.8590**			
BAT 059	Poblacion, Malvar - Magapi , Balete Road	0.0000	0.0860	6	GOOD	CONCRETE
		0.0860	0.4000	6	BAD	CONCRETE
		0.4000	0.8000	6	FAIR	CONCRETE
		0.8000	0.8780	6	GOOD	CONCRETE
		0.8780	1.1630	6	FAIR	CONCRETE
		1.1630	1.1850	5	GOOD	CONCRETE
		1.1850	1.2200	5	FAIR	CONCRETE
		1.2200	1.2430	5	GOOD	CONCRETE
		1.2430	1.5050	5	FAIR	CONCRETE
		1.5050	1.6270	5	GOOD	CONCRETE
		1.6270	1.6760	5	FAIR	CONCRETE
		1.6760	1.6940	5	GOOD	CONCRETE
		1.6940	1.7350	5	FAIR	CONCRETE
		1.7350	1.7540	5	GOOD	CONCRETE
		1.7540	1.9000	5	FAIR	CONCRETE
		1.9000	2.1120	5	GOOD	CONCRETE
		2.1120	2.6180	5	FAIR	CONCRETE
		2.6180	2.6860	4.5	BAD	CONCRETE
		2.6860	2.8580	4	GOOD	ASPHALT
		2.8580	3.5320	4	GOOD	CONCRETE
		3.5320	3.6330	5	FAIR	CONCRETE
		3.6330	4.0270	5	GOOD	CONCRETE
		4.0270	4.1000	5	GOOD	ASPHALT
		4.1000	4.2000	5	FAIR	CONCRETE
		4.2000	4.2650	5	GOOD	CONCRETE
		4.2650	5.0000	5	FAIR	CONCRETE
		5.0000	5.5160	4	FAIR	CONCRETE
		5.5160	5.7450	5	GOOD	ASPHALT
		5.7450	5.9300	5	FAIR	CONCRETE
		TOTAL	**5.9300**			
BAT 060	San Pioquinto - San Isidro Rd	0.0000	0.1770	5	FAIR	ASPHALT
		0.1770	0.3430	5	GOOD	ASPHALT
		0.3430	0.6910	5	FAIR	ASPHALT
		0.6910	0.7790	5	GOOD	ASPHALT
		0.7790	1.1430	6.1	FAIR	CONCRETE
		1.1430	1.2580	5	GOOD	CONCRETE
		1.2580	1.3840	6.1	FAIR	CONCRETE
		1.3840	1.4570	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.4570	1.5050	5	FAIR	CONCRETE
		1.5050	1.5450	5	GOOD	CONCRETE
		1.5450	1.8920	5	FAIR	CONCRETE
		1.8920	2.0000	5	GOOD	CONCRETE
		2.0000	2.0800	5	FAIR	CONCRETE
		2.0800	2.2800	5	GOOD	CONCRETE
		2.2800	2.3280	5	FAIR	CONCRETE
		2.3280	2.3910	5	GOOD	CONCRETE
		2.3910	2.6080	5	FAIR	CONCRETE
		2.6080	2.6500	5	GOOD	CONCRETE
		2.6500	2.7610	5	FAIR	CONCRETE
		2.7610	2.8050	5	GOOD	CONCRETE
		2.8050	2.8740	5	FAIR	CONCRETE
		2.8740	2.9040	5	GOOD	CONCRETE
		2.9040	2.9170	5	FAIR	CONCRETE
		2.9170	2.9530	5	GOOD	CONCRETE
		2.9530	3.1150	5	FAIR	CONCRETE
		3.1150	3.1870	4	GOOD	CONCRETE
		3.1870	3.2790	5	FAIR	CONCRETE
		3.2790	3.9770	5	GOOD	CONCRETE
		TOTAL	**3.9770**			
BAT 061	Poblacion Road, Malvar	0.0000	0.1250	5	FAIR	CONCRETE
		0.1250	0.2000	5	GOOD	CONCRETE
		0.2000	0.2390	5	FAIR	CONCRETE
		0.2390	0.2930	5	GOOD	CONCRETE
		0.2930	0.5320	5	FAIR	CONCRETE
		0.5320	0.7000	5	GOOD	CONCRETE
		0.7000	1.6650	5	FAIR	CONCRETE
		TOTAL	**1.6650**			
BAT 062	Bucana Road(2019)	0.0000	0.0960	6	GOOD	ASPHALT
		0.0960	0.2860	5	GOOD	ASPHALT
		0.2860	0.4110	4.8	GOOD	ASPHALT
		0.4110	0.7000	5	GOOD	CONCRETE
		0.7000	0.7390	5	GOOD	CONCRETE
		0.7390	0.8000	5	BAD	ROUGH ROAD
		TOTAL	**0.8000**			
BAT 063	Brgy.10 - Wawa Road (Maritez St.)(2019)	0.0000	0.2880	5	GOOD	ASPHALT
		0.2880	0.4890	5	FAIR	CONCRETE
		0.4890	1.1540	5	FAIR	CONCRETE
		1.1540	1.5000	6	GOOD	ASPHALT
		TOTAL	**1.5000**			
BAT 064	Brgy.2 - Brgy.9 Road (F.Alix St.)(2019)	0.0000	0.1300	5	GOOD	ASPHALT
		0.1300	0.1430	NATIONAL HI - WAY		
		0.1430	0.3550	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.3550	0.4400	6	FAIR	CONCRETE
		0.4400	0.6620	6	GOOD	CONCRETE
		0.6620	0.7080	6	FAIR	CONCRETE
		0.7080	0.8140	6	GOOD	CONCRETE
		0.8140	0.8500	5.8	GOOD	ASPHALT
		TOTAL	**0.8500**			
BAT 065	Brgy. 11 Road (2019)	0.0000	0.1650	4	GOOD	ASPHALT
		0.1650	0.2000	4	GOOD	ASPHALT
		TOTAL	**0.2000**			
BAT 066	Bucana - Pantalan Road(2019)	0.0000	0.4040	6	BAD	CONCRETE
		0.4040	0.5030	6	FAIR	CONCRETE
		0.5030	0.6940	6	GOOD	ASPHALT
		0.6940	0.7110	NATIONAL HI - WAY		
		0.7110	0.8350	5	GOOD	ASPHALT
		0.8350	0.8690	5	GOOD	CONCRETE
		0.8690	0.9320	5	BAD	CONCRETE
		0.9320	1.1000	5	FAIR	CONCRETE
		1.1000	1.1560	5.6	GOOD	ASPHALT
		1.1560	1.3420	4	GOOD	ASPHALT
		1.3420	1.7310	5	FAIR	CONCRETE
		1.7310	1.9950	5	GOOD	ASPHALT
		1.9950	2.0680	5	GOOD	CONCRETE
		2.0680	2.0760	4.3	GOOD	ASPHALT
		2.0760	2.3320	6	GOOD	ASPHALT
		2.3320	2.4110	5	BAD	CONCRETE
		2.4110	2.5280	5	GOOD	CONCRETE
		2.5280	2.7780	5	GOOD	ASPHALT
		2.7780	3.3000	5	BAD	CONCRETE
		TOTAL	**3.3000**			
BAT 067	Putat - Papaya Road (Caviter Bndry)(2019)	0.0000	0.0450	4	GOOD	ASPHALT
		0.0450	0.0649	5	GOOD	CONCRETE
		0.0649	0.7440	5	BAD	CONCRETE
		0.7440	0.9800	5	GOOD	CONCRETE
		0.9800	1.0310	5	BAD	CONCRETE
		1.0310	1.3810	5	GOOD	CONCRETE
		1.3810	1.4620	5	BAD	CONCRETE
		1.4620	1.6330	5	BAD	CONCRETE
		1.6330	2.1900	5	GOOD	CONCRETE
		2.1900	2.2190	6	GOOD	CONCRETE
		2.2190	2.2700	6	GOOD	CONCRETE
		2.2700	2.7010	5	GOOD	CONCRETE
		2.7010	2.7310	5	BAD	CONCRETE
		2.7310	2.9040	5	GOOD	CONCRETE
		2.9040	3.0610	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		3.0610	3.3640	5	BAD	CONCRETE
		3.3640	3.6390	5	GOOD	CONCRETE
		3.6390	3.7230	5	FAIR	CONCRETE
		3.7230	4.1240	5	BAD	CONCRETE
		4.1240	5.0500	6	GOOD	CONCRETE
		5.0500	5.1900	6	FAIR	CONCRETE
		5.1900	5.2690	5	BAD	CONCRETE
		5.2690	5.7870	5	GOOD	CONCRETE
		5.7870	5.8980	6	BAD	CONCRETE
		5.8980	5.9270	6	GOOD	CONCRETE
		5.9270	5.9720	6	BAD	CONCRETE
		5.9720	6.1710	6	GOOD	CONCRETE
		6.1710	6.5000	6	BAD	CONCRETE
		6.5000	7.2970	6	BAD	CONCRETE
		7.2970	7.4310	6	GOOD	CONCRETE
		7.4310	7.8650	6	GOOD	CONCRETE
		7.8650	8.0000	6	BAD	CONCRETE
		8.0000	8.0940	6	GOOD	CONCRETE
		8.0940	8.1700	6	BAD	CONCRETE
		8.1700	8.2660	6	GOOD	CONCRETE
		8.2660	8.3000	6	FAIR	CONCRETE
		8.3000	8.3790	6	GOOD	CONCRETE
		8.3790	8.4120	6	BAD	CONCRETE
		8.4120	8.6460	6	GOOD	CONCRETE
		8.6460	8.6850	6	BAD	CONCRETE
		8.6850	8.7500	6	GOOD	CONCRETE
		8.7500	8.7740	6	BAD	CONCRETE
		8.7740	9.1640	6	GOOD	CONCRETE
		9.1640	9.1930	6	BAD	CONCRETE
		9.1930	9.2230	6	GOOD	CONCRETE
		9.2230	9.2990	6	BAD	CONCRETE
		9.2990	9.5770	6	FAIR	CONCRETE
		9.5770	9.7640	6	GOOD	CONCRETE
		9.7640	9.8500	6	BAD	CONCRETE
		9.8500	9.9120	6.1	GOOD	CONCRETE
		9.9120	9.9830	6.1	GOOD	CONCRETE
		9.9830	10.0000	6.1	GOOD	CONCRETE
		10.0000	10.0410	6.1	GOOD	CONCRETE
		10.0410	10.1700	6	BAD	CONCRETE
		10.1700	10.2650	6	GOOD	CONCRETE
		10.2650	10.3420	6	BAD	CONCRETE
		10.3420	10.5080	6	GOOD	CONCRETE
		10.5080	10.5650	6	BAD	CONCRETE
		10.5650	10.8960	6	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		10.8960	10.9340	6	GOOD	CONCRETE
		10.9340	11.0140	6	BAD	CONCRETE
		11.0140	11.3400	6	GOOD	CONCRETE
		11.3400	11.3730	6	BAD	CONCRETE
		11.3730	11.4860	6	GOOD	CONCRETE
		11.4860	11.5590	6	BAD	CONCRETE
		11.5590	11.6080	6	GOOD	CONCRETE
		11.6080	11.6640	6	BAD	CONCRETE
		11.6640	12.2290	6	GOOD	CONCRETE
		12.2290	12.2700	6	BAD	CONCRETE
		12.2700	12.4430	6	GOOD	CONCRETE
		12.4430	12.5170	6	BAD	CONCRETE
		12.5170	15.3140	6	GOOD	CONCRETE
		15.3140	15.3610	6	GOOD	CONCRETE
		15.3610	16.2520	6.5	GOOD	ASPHALT
		16.2520	17.4000	6.5	GOOD	ASPHALT
		TOTAL	**17.4000**			
BAT 068	Bilaran - Munting Indang Road(2019)	0.0000	1.2490	5	GOOD	ASPHALT
		1.2490	2.1490	5	FAIR	CONCRETE
		2.1490	3.1540	5	BAD	CONCRETE
		3.1540	3.6350	5	FAIR	CONCRETE
		3.6350	5.9720	5	GOOD	CONCRETE
		5.9720	6.3000	4	FAIR	CONCRETE
		6.3000	6.4680	4	BAD	CONCRETE
		6.4680	6.8430	4	BAD	CONCRETE
		6.8430	7.0090	4	GOOD	CONCRETE
		7.0090	7.4000	4	FAIR	CONCRETE
		7.4000	7.8000	3	BAD	CONCRETE
		TOTAL	**7.8000**			
BAT 069	Banilad - Tumalim Road (2019)	0.0000	0.0530	5	FAIR	CONCRETE
		0.0530	0.2060	5	BAD	CONCRETE
		0.2060	0.3380	6	GOOD	CONCRETE
		0.3380	0.6770	5	FAIR	CONCRETE
		0.6770	0.9570	5	GOOD	CONCRETE
		0.9570	1.2970	5	GOOD	ASPHALT
		1.2970	1.4330	6	GOOD	CONCRETE
		1.4330	1.4930	4	GOOD	ASPHALT
		1.4930	1.8130	4	FAIR	CONCRETE
		1.8130	2.0090	4	GOOD	ASPHALT
		2.0090	2.4660	4	FAIR	CONCRETE
		2.4660	2.5300	4	GOOD	ASPHALT
		2.5300	2.6100	4	FAIR	CONCRETE
		2.6100	2.9200	4	GOOD	ASPHALT
		2.9200	2.9810	4	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		2.9810	3.0820	6	GOOD	CONCRETE
		3.0820	3.5000	4	FAIR	CONCRETE
		TOTAL	**3.5000**			
BAT 070	Banaba - Bukal Road (2019)	0.0000	0.0460	9	GOOD	CONCRETE
		0.0460	0.1150	7	GOOD	CONCRETE
		0.1150	0.2090	5	GOOD	CONCRETE
		0.2090	0.2230	5	FAIR	CONCRETE
		0.2230	2.0280	6	GOOD	CONCRETE
		2.0280	2.1260	5	BAD	CONCRETE
		2.1260	2.2390	5	GOOD	CONCRETE
		2.2390	2.3680	5	FAIR	CONCRETE
		2.3680	2.4000	4.6	BAD	CONCRETE
		2.4000	2.5740	4.5	BAD	CONCRETE
		2.5740	2.6400	5	FAIR	CONCRETE
		2.6400	2.6780	5	GOOD	CONCRETE
		2.6780	2.7270	5	FAIR	CONCRETE
		2.7270	2.8310	5	GOOD	CONCRETE
		2.8310	2.8540	5	FAIR	CONCRETE
		2.8540	2.9120	5	GOOD	CONCRETE
		2.9120	3.1110	5	BAD	CONCRETE
		3.1110	3.1610	5	BAD	CONCRETE
		3.1610	3.1950	5	FAIR	CONCRETE
		3.1950	3.4350	5	GOOD	CONCRETE
		3.4350	3.4870	5	BAD	CONCRETE
		3.4870	3.5810	5	FAIR	CONCRETE
		TOTAL	**3.5810**			
BAT 071	Payapa - Maugat East Road	0.0000	0.3430	4	FAIR	CONCRETE
		0.3430	0.4000	4.5	BAD	CONCRETE
		0.4000	1.0690	4	FAIR	CONCRETE
		1.0690	1.1550	5	BAD	CONCRETE
		1.1550	1.2000	5	GOOD	CONCRETE
		1.2000	1.4000	5	FAIR	CONCRETE
		1.4000	1.4250	5	GOOD	CONCRETE
		1.4250	1.7460	5	FAIR	CONCRETE
		1.7460	1.8580	5	GOOD	CONCRETE
		1.8580	1.9600	5	FAIR	CONCRETE
		1.9600	2.0170	5	FAIR	CONCRETE
		2.0170	2.1000	5	FAIR	CONCRETE
		2.1000	2.1730	5	GOOD	CONCRETE
		2.1730	2.1850	5	FAIR	CONCRETE
		2.1850	2.2070	5	GOOD	CONCRETE
		2.2070	2.2830	5	FAIR	CONCRETE
		2.2830	2.5000	5	GOOD	CONCRETE
		2.5000	2.7050	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		2.7050	2.9130	5	GOOD	CONCRETE
		2.9130	2.9560	5	FAIR	CONCRETE
		2.9560	3.1270	5	GOOD	CONCRETE
		3.1270	3.3230	5	FAIR	CONCRETE
		3.3230	3.5520	5	BAD	CONCRETE
		3.5520	3.6680	5	FAIR	CONCRETE
		3.6680	4.3560	5	GOOD	CONCRETE
		4.3560	4.5000	5	FAIR	CONCRETE
		4.5000	4.5350	5	BAD	CONCRETE
		4.5350	4.5480	5	GOOD	CONCRETE
		4.5480	4.5750	5	BAD	CONCRETE
		4.5750	5.2620	5	GOOD	CONCRETE
		5.2620	5.3070	5	FAIR	CONCRETE
		5.3070	5.5570	5	GOOD	CONCRETE
		5.5570	5.5840	5	FAIR	CONCRETE
		5.5840	6.2350	5	GOOD	CONCRETE
		6.2350	6.3000	5	BAD	CONCRETE
		6.3000	6.3080	5	FAIR	CONCRETE
		6.3080	6.4000	5	BAD	CONCRETE
		6.4000	6.4340	5	FAIR	CONCRETE
		6.4340	6.4420	5	GOOD	CONCRETE
		6.4420	6.5450	5	BAD	CONCRETE
		6.5450	6.5600	5	GOOD	CONCRETE
		6.5600	6.5940	5	BAD	CONCRETE
		6.5940	6.6000	5	FAIR	CONCRETE
		6.6000	6.6580	5	GOOD	CONCRETE
		6.6580	6.6620	5	BAD	CONCRETE
		6.6620	6.7000	5	FAIR	CONCRETE
		6.7000	6.7660	5	BAD	CONCRETE
		6.7660	6.7980	5	FAIR	CONCRETE
		6.7980	6.8470	5	GOOD	CONCRETE
		6.8470	6.8700	5	FAIR	CONCRETE
		6.8700	7.4650	5	GOOD	CONCRETE
		7.4650	7.5090	5	FAIR	CONCRETE
		7.5090	7.7330	5	GOOD	CONCRETE
		7.7330	7.8000	5	BAD	CONCRETE
		7.8000	7.8340	5	GOOD	CONCRETE
		7.8340	7.8580	5	FAIR	CONCRETE
		7.8580	7.9690	5	GOOD	CONCRETE
		7.9690	7.9790	5	BAD	CONCRETE
		7.9790	8.0340	5	GOOD	CONCRETE
		8.0340	8.1140	5	FAIR	CONCRETE
		8.1140	8.1690	5	GOOD	CONCRETE
		8.1690	9.0030	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		TOTAL	**9.0030**			
BAT 072	Poblacion, Padre Garcia-Marilag, Rosario Rd.	0.0000	0.1160	5	FAIR	CONCRETE
		0.1160	0.1300	5	BAD	CONCRETE
		0.1300	0.1980	5	FAIR	CONCRETE
		0.1980	0.2200	5	BAD	CONCRETE
		0.2200	0.2650	5	FAIR	CONCRETE
		0.2650	0.3090	5	GOOD	CONCRETE
		0.3090	0.4200	5	FAIR	CONCRETE
		0.4200	0.4860	5	GOOD	CONCRETE
		0.4860	0.5400	6.1	GOOD	CONCRETE
		0.5400	0.6800	5	FAIR	CONCRETE
		0.6800	0.7030	5	BAD	CONCRETE
		0.7030	0.7910	5	FAIR	CONCRETE
		0.7910	0.8770	6.1	GOOD	CONCRETE
		0.8770	1.0970	5	FAIR	CONCRETE
		1.0970	1.3070	5	GOOD	CONCRETE
		1.3070	1.3210	5	FAIR	CONCRETE
		1.3210	1.5650	6.1	GOOD	CONCRETE
		1.5650	1.6490	5	FAIR	CONCRETE
		1.6490	1.8080	5	BAD	CONCRETE
		1.8080	1.9000	5	FAIR	CONCRETE
		1.9000	1.9920	4	FAIR	CONCRETE
		1.9920	2.0010	4	BAD	CONCRETE
		2.0010	2.1570	4	FAIR	CONCRETE
		2.1570	2.1850	4	GOOD	CONCRETE
		2.1850	2.2570	4	FAIR	CONCRETE
		2.2570	2.4440	4	GOOD	CONCRETE
		2.4440	2.5820	5	BAD	CONCRETE
		2.5820	3.2000	5	GOOD	ASPHALT
		3.2000	3.3370	5	BAD	ASPHALT
		3.3370	3.4000	5	FAIR	ASPHALT
		3.4000	3.9750	5	GOOD	ASPHALT
		3.9750	4.1290	5	FAIR	CONCRETE
		4.1290	4.1500	5	GOOD	CONCRETE
		4.1500	4.2100	5	FAIR	CONCRETE
		4.2100	4.2390	5	BAD	CONCRETE
		4.2390	4.2600	5	FAIR	CONCRETE
		TOTAL	**4.2600**			
BAT 073	Calle Plaza Road	0.0000	0.2480	6	GOOD	ASPHALT
		0.2480	0.5000	6	FAIR	CONCRETE
		TOTAL	**0.5000**			
BAT 074	Poblacion,P.Garcia-San Carlos,Rosario Rd. (new)	0.0000	0.6040	6	GOOD	CONCRETE
		0.6040	1.1320	6	GOOD	ASPHALT
		1.1320	1.3410	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.3410	1.4130	5	FAIR	CONCRETE
		1.4130	1.6740	5	GOOD	CONCRETE
		1.6740	1.6870	5	BAD	CONCRETE
		1.6870	1.7970	5	GOOD	CONCRETE
		1.7970	1.8580	5	FAIR	CONCRETE
		1.8580	1.9770	5	GOOD	CONCRETE
		1.9770	2.1930	5	FAIR	CONCRETE
		2.1930	2.2110	5	GOOD	CONCRETE
		2.2110	2.3960	5	FAIR	CONCRETE
		2.3960	2.6440	5	GOOD	CONCRETE
		2.6440	2.7610	5	FAIR	CONCRETE
		2.7610	2.8400	5	GOOD	CONCRETE
		2.8400	3.0660	5	ON GOING ROAD REBLOCKING	CONCRETE
		3.0660	3.1290	5	BAD	CONCRETE
		3.1290	3.2480	5	FAIR	CONCRETE
		3.2480	3.5330	5	FAIR	CONCRETE
		3.5330	3.6560	5	FAIR	CONCRETE
		3.6560	3.6840	5	GOOD	CONCRETE
		3.6840	3.9500	5	FAIR	CONCRETE
		3.9500	4.0090	5	BAD	CONCRETE
		4.0090	4.1720	5	FAIR	CONCRETE
		4.1720	4.1910	5	BAD	CONCRETE
		4.1910	4.2830	5	FAIR	CONCRETE
		4.2830	4.3200	5	GOOD	CONCRETE
		4.3200	4.5400	5	BAD	CONCRETE
		TOTAL	**4.5400**			
BAT 075	San Carlos - Sitio Pulo Road	0.0000	0.0660	5	FAIR	CONCRETE
		0.0660	0.2200	5	BAD	CONCRETE
		0.2200	0.3050	5	GOOD	CONCRETE
		0.3050	0.5980	5	FAIR	CONCRETE
		0.5980	0.6910	5	GOOD	CONCRETE
		0.6910	0.9190	5	FAIR	CONCRETE
		0.9190	0.9970	5	BAD	CONCRETE
		0.9970	1.1240	5	FAIR	CONCRETE
		1.1240	3.7340	5	GOOD	CONCRETE
		3.7340	3.8300	3	GOOD	CONCRETE
		3.8300	3.9030	4	GOOD	CONCRETE
		TOTAL	**3.9030**			
BAT 076	Bagong Pook - Bulihan Road	0.0000	0.2450	3.5	BAD	CONCRETE
		0.2450	0.4280	4	BAD	CONCRETE
		0.4280	0.4900	4	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.4900	0.6960	4	BAD	CONCRETE
		0.6960	0.9440	4	GOOD	CONCRETE
		0.9440	1.0000	4	BAD	CONCRETE
		1.0000	1.2700	3	BAD	CONCRETE
		1.2700	1.3690	4	FAIR	CONCRETE
		1.3690	1.4640	4	GOOD	CONCRETE
		1.4640	1.4850	4	FAIR	CONCRETE
		1.4850	1.6930	4	GOOD	CONCRETE
		1.6930	1.7670	3	BAD	CONCRETE
		1.7670	1.8150	4	FAIR	CONCRETE
		1.8150	1.9950	4	GOOD	CONCRETE
		1.9950	2.0000	4	BAD	CONCRETE
		2.0000	2.3500	3.5	BAD	CONCRETE
		2.3500	2.6440	4	BAD	CONCRETE
		2.6440	2.7220	4	GOOD	CONCRETE
		2.7220	2.8260	3	FAIR	CONCRETE
		2.8260	2.9530	3	BAD	CONCRETE
		2.9530	3.0400	4	BAD	CONCRETE
		3.0400	3.0890	4	GOOD	CONCRETE
		3.0890	3.2250	4	BAD	CONCRETE
		3.2250	3.2710	4	GOOD	CONCRETE
		3.2710	3.3330	4	FAIR	CONCRETE
		3.3330	3.4220	4	BAD	CONCRETE
		3.4220	3.8700	4	GOOD	CONCRETE
		3.8700	3.9280	4	BAD	CONCRETE
		3.9280	4.0500	4	GOOD	CONCRETE
		4.0500	4.0680	4	BAD	CONCRETE
		4.0680	4.2120	4	FAIR	CONCRETE
		4.2120	4.3040	4	BAD	CONCRETE
		4.3040	4.3850	4	FAIR	CONCRETE
		4.3850	4.4570	4	GOOD	CONCRETE
		4.4570	4.5110	4	BAD	CONCRETE
		4.5110	4.5330	4	GOOD	CONCRETE
		4.5330	4.6770	4	FAIR	CONCRETE
		4.6770	4.7300	4	GOOD	CONCRETE
		TOTAL	**4.7300**			
BAT 077	Poblacion B - Poblacion E Road	0.0000	0.1000	5	BAD	CONCRETE
		0.1000	1.0000	5	GOOD	ASPHALT
		TOTAL	**1.0000**			
BAT 078	Calle Marquez Road	0.0000	0.2000	5	GOOD	ASPHALT
		TOTAL	**0.2000**			
BAT 079	Masaya - Timbugan Road	0.0000	0.0130	6	BAD	CONCRETE
		0.0130	0.1050	6	GOOD	CONCRETE
		0.1050	0.4920	4	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.4920	1.1980	6	GOOD	CONCRETE
		1.1980	1.3850	4	BAD	CONCRETE
		1.3850	1.7480	5	FAIR	CONCRETE
		1.7480	1.7970	5	GOOD	CONCRETE
		1.7970	1.8280	5	FAIR	CONCRETE
		1.8280	1.8570	5	GOOD	CONCRETE
		1.8570	1.8940	5	FAIR	CONCRETE
		1.8940	2.4440	4	BAD	CONCRETE
		2.4440	2.4810	5	GOOD	CONCRETE
		2.4810	2.6180	5	BAD	CONCRETE
		2.6180	2.7100	5	FAIR	CONCRETE
		2.7100	2.7800	5	BAD	CONCRETE
		2.7800	2.8530	5	GOOD	CONCRETE
		2.8530	2.9270	5	FAIR	CONCRETE
		2.9270	3.0000	5	BAD	CONCRETE
		3.0000	3.0950	4	FAIR	CONCRETE
		TOTAL	**3.0950**			
BAT 080	Mabayabas, Taysan -Baybayin, Rosario Road	0.0000	0.0640	5	GOOD	ASPHALT
		0.0640	0.1000	4	GOOD	ASPHALT
		0.1000	0.5850	5	GOOD	ASPHALT
		0.5850	0.6920	5	BAD	ASPHALT
		0.6920	0.8840	5	GOOD	ASPHALT
		0.8840	0.9670	5	BAD	ASPHALT
		0.9670	1.0000	5	GOOD	ASPHALT
		1.0000	1.1400	4	BAD	ASPHALT
		1.1400	1.1960	5	GOOD	ASPHALT
		1.1960	1.2540	5	BAD	CONCRETE
		1.2540	1.3470	5	GOOD	ASPHALT
		1.3470	1.4420	5	GOOD	CONCRETE
		1.4420	1.4600	5	FAIR	CONCRETE
		1.4600	1.9550	5	GOOD	CONCRETE
		1.9550	2.0000	5	FAIR	CONCRETE
		2.0000	2.0280	5	GOOD	CONCRETE
		2.0280	2.1220	5	GOOD	ASPHALT
		2.1220	2.4590	5	GOOD	CONCRETE
		2.4590	2.4720	5	FAIR	CONCRETE
		2.4720	2.5930	5	GOOD	CONCRETE
		2.5930	2.6360	5	BAD	CONCRETE
		2.6360	2.6750	5	GOOD	CONCRETE
		2.6750	2.7410	5	FAIR	CONCRETE
		2.7410	2.7910	4	BAD	CONCRETE
		2.7910	2.8620	5	GOOD	CONCRETE
		2.8620	2.8980	5	FAIR	CONCRETE
		2.8980	2.9150	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		2.9150	3.1550	5	FAIR	CONCRETE
		3.1550	3.2040	4	BAD	CONCRETE
		3.2040	3.2080	4	FAIR	CONCRETE
		3.2080	3.4800	4	BAD	CONCRETE
		3.4800	3.4860	4	FAIR	CONCRETE
		3.4860	3.5090	5	BAD	CONCRETE
		3.5090	3.5690	5	GOOD	CONCRETE
		3.5690	3.6160	5	BAD	CONCRETE
		3.6160	3.6580	5	GOOD	CONCRETE
		3.6580	3.7020	5	BAD	CONCRETE
		3.7020	3.7230	5	GOOD	CONCRETE
		3.7230	3.7860	5	BAD	CONCRETE
		3.7860	3.8100	5	GOOD	CONCRETE
		3.8100	3.8570	5	FAIR	CONCRETE
		3.8570	3.8790	5	BAD	CONCRETE
		3.8790	3.9590	5	FAIR	CONCRETE
		3.9590	3.9900	5	GOOD	CONCRETE
		3.9900	4.3070	5	BAD	CONCRETE
		4.3070	4.3210	5	FAIR	CONCRETE
		4.3210	4.3750	5	GOOD	CONCRETE
		4.3750	4.3880	5	BAD	CONCRETE
		4.3880	4.5490	5	GOOD	CONCRETE
		4.5490	4.6150	5	FAIR	CONCRETE
		4.6150	4.7100	5	BAD	CONCRETE
		4.7100	4.7300	5	GOOD	CONCRETE
		4.7300	4.8100	5	FAIR	CONCRETE
		4.8100	4.8670	5	BAD	CONCRETE
		4.8670	4.9160	5	FAIR	CONCRETE
		4.9160	4.9790	4.4	BAD	CONCRETE
		4.9790	5.0000	4.4	FAIR	CONCRETE
		5.0000	5.1230	4.4	BAD	CONCRETE
		5.1230	5.1660	4.4	FAIR	CONCRETE
		5.1660	5.2750	4.4	FAIR	CONCRETE
		5.2750	5.3360	4.4	BAD	CONCRETE
		5.3360	5.4170	4.4	FAIR	CONCRETE
		5.4170	5.5010	4.4	BAD	CONCRETE
		5.5010	5.5600	5	FAIR	CONCRETE
		5.5600	5.6540	6	BAD	CONCRETE
		5.6540	5.7360	6	GOOD	CONCRETE
		5.7360	5.7750	6	BAD	CONCRETE
		5.7750	6.0230	6	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		6.0230	6.5010	5	ON GOING ROAD REBLOCKING	
		6.5010	6.6900	5	BAD	CONCRETE
		6.6900	6.8500	5	FAIR	CONCRETE
		6.8500	7.3890	6	GOOD	CONCRETE
		7.3890	7.4140	5	FAIR	CONCRETE
		7.4140	7.6250	5	GOOD	CONCRETE
		7.6250	7.7300	6	GOOD	CONCRETE
		7.7300	7.8040	5	GOOD	CONCRETE
		7.8040	7.8630	6	GOOD	CONCRETE
		TOTAL	**7.8630**			
BAT 081	Lumbangan - Leviste Road(2019)	0.0000	0.0290	6	GOOD	CONCRETE
		0.0290	0.1060	5	GOOD	CONCRETE
		0.1060	0.2110	6	GOOD	CONCRETE
		0.2110	0.4490	5	GOOD	CONCRETE
		0.4490	0.8250	6	GOOD	CONCRETE
		0.8250	0.9450	5	FAIR	CONCRETE
		0.9450	1.0510	6	GOOD	CONCRETE
		1.0510	2.1070	5	FAIR	CONCRETE
		2.1070	2.1740	5	GOOD	ASPHALT
		2.1740	2.7200	5	FAIR	CONCRETE
		2.7200	2.8580	6	GOOD	CONCRETE
		2.8580	3.2540	5	FAIR	CONCRETE
		3.2540	3.4290	6	GOOD	CONCRETE
		3.4290	3.5740	5	FAIR	CONCRETE
		3.5740	3.7870	5	GOOD	ASPHALT
		3.7870	3.9130	5	GOOD	CONCRETE
		3.9130	4.1770	5	BAD	CONCRETE
		4.1770	5.2490	5	GOOD	CONCRETE
		5.2490	5.9690	5	FAIR	CONCRETE
		5.9690	6.0310	5	BAD	CONCRETE
		6.0310	6.4190	5	FAIR	CONCRETE
		6.4190	6.4260	5	FAIR	CONCRETE
		6.4260	6.5000	5	FAIR	CONCRETE
		TOTAL	**6.5000**			
BAT 082	Mayuro - Bayawang Road	0.0000	0.0090	5	GOOD	CONCRETE
		0.0090	0.1130	5	BAD	CONCRETE
		0.1130	0.2180	5	FAIR	CONCRETE
		0.2180	0.4860	5	BAD	CONCRETE
		0.4860	0.5350	5	GOOD	CONCRETE
		0.5350	0.6690	5	BAD	CONCRETE
		0.6690	0.7140	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.7140	1.5690	6	GOOD	CONCRETE
		1.5690	1.5880	6	BAD	CONCRETE
		1.5880	1.6170	6	GOOD	CONCRETE
		1.6170	1.7690	6	BAD	CONCRETE
		1.7690	2.6890	6	GOOD	CONCRETE
		2.6890	3.0070	4	BAD	CONCRETE
		3.0070	3.2570	4	GOOD	CONCRETE
		TOTAL	**3.2570**			
BAT 083	Baybayin - Pinagsibaan	0.0000	0.0160	6	GOOD	CONCRETE
		0.0160	0.4700	5	GOOD	ASPHALT
		0.4700	0.5000	5	BAD	ASPHALT
		0.5000	1.0000	5	GOOD	ASPHALT
		1.0000	1.3660	6	GOOD	ASPHALT
		1.3660	1.4380	6	FAIR	CONCRETE
		1.4380	1.5430	5	GOOD	CONCRETE
		1.5430	1.6580	5	BAD	CONCRETE
		1.6580	2.1800	5	FAIR	CONCRETE
		2.1800	2.2280	5	BAD	CONCRETE
		2.2280	2.6260	5	FAIR	CONCRETE
		2.6260	2.7090	5	GOOD	CONCRETE
		2.7090	2.7770	5	FAIR	CONCRETE
		2.7770	2.8220	5	GOOD	CONCRETE
		2.8220	2.8860	6	FAIR	CONCRETE
		2.8860	2.9500	6	BAD	CONCRETE
		2.9500	2.9950	6	FAIR	CONCRETE
		2.9950	3.0950	6	BAD	CONCRETE
		3.0950	3.3500	5	BAD	CONCRETE
		3.3500	3.4540	5	FAIR	CONCRETE
		3.4540	3.4950	5	GOOD	CONCRETE
		3.4950	3.6120	5	BAD	CONCRETE
		3.6120	3.7000	5	GOOD	CONCRETE
		3.7000	3.8490	5	FAIR	CONCRETE
		3.8490	3.8800	5	GOOD	CONCRETE
		3.8800	3.9300	5	FAIR	CONCRETE
		3.9300	3.9520	5	GOOD	CONCRETE
		3.9520	4.2850	5	BAD	CONCRETE
		4.2850	4.3000	5	GOOD	CONCRETE
		4.3000	4.3820	6	BAD	CONCRETE
		4.3820	4.5030	6	GOOD	CONCRETE
		4.5030	4.9120	5	BAD	CONCRETE
		4.9120	5.0850	6	GOOD	CONCRETE
		5.0850	5.1340	5	BAD	CONCRETE
		5.1340	5.4940	5	FAIR	CONCRETE
		5.4940	5.5120	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		5.5120	6.0050	5	FAIR	CONCRETE
		6.0050	6.4950	5	GOOD	CONCRETE
		6.4950	7.7360	6	GOOD	CONCRETE
		7.7360	7.7840	5	BAD	CONCRETE
		7.7840	7.8000	5	GOOD	CONCRETE
		7.8000	8.1210	6	BAD	CONCRETE
		8.1210	8.4120	6	GOOD	CONCRETE
		TOTAL	**8.4120**			
BAT 084	San Carlos -Natu Road	0.0000	0.3500	4	BAD	CONCRETE
		0.3500	0.3810	4	GOOD	CONCRETE
		0.3810	0.4830	4	BAD	CONCRETE
		0.4830	0.5040	4	FAIR	CONCRETE
		0.5040	0.5540	4	GOOD	CONCRETE
		0.5540	0.5850	4	FAIR	CONCRETE
		0.5850	0.6000	4	GOOD	CONCRETE
		0.6000	0.7000	4	FAIR	CONCRETE
		0.7000	0.7360	4	BAD	CONCRETE
		0.7360	0.8270	4	FAIR	CONCRETE
		0.8270	0.9130	4	BAD	CONCRETE
		0.9130	1.0500	4	GOOD	CONCRETE
		1.0500	1.0940	4	FAIR	CONCRETE
		1.0940	1.1140	4	GOOD	CONCRETE
		1.1140	1.1640	4	FAIR	CONCRETE
		1.1640	1.2560	4	GOOD	CONCRETE
		1.2560	1.2650	4	BAD	CONCRETE
		1.2650	1.6760	4	GOOD	CONCRETE
		1.6760	1.7310	4	BAD	CONCRETE
		1.7310	1.7600	4	FAIR	CONCRETE
		1.7600	1.8250	4	GOOD	CONCRETE
		1.8250	1.8600	4	BAD	CONCRETE
		1.8600	1.9350	4	GOOD	CONCRETE
		1.9350	2.0000	4	BAD	CONCRETE
		2.0000	2.5700	4	GOOD	CONCRETE
		2.5700	2.6120	4	BAD	CONCRETE
		2.6120	2.6770	4	FAIR	CONCRETE
		2.6770	2.6800	4	GOOD	CONCRETE
		2.6800	2.8760	4	BAD	CONCRETE
		TOTAL	**2.8760**			
BAT 085	Alupay - Macalamclam A Road	0.0000	0.1920	4	GOOD	CONCRETE
		0.1920	0.5630	4	BAD	CONCRETE
		0.5630	1.1790	5	BAD	CONCRETE
		1.1790	1.2200	5	GOOD	CONCRETE
		1.2200	1.2650	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.2650	1.5020	6.1	ON GOING ROAD REBLOCKING	
		1.5020	1.6420	6.1	BAD	CONCRETE
		1.6420	1.7040	6.1	GOOD	CONCRETE
		TOTAL	**1.7040**			
BAT 086	Pinagsibaan-Salao Road	0.0000	0.0360	5	FAIR	CONCRETE
		0.0360	0.4450	5	BAD	CONCRETE
		0.4450	0.4780	5	GOOD	CONCRETE
		0.4780	0.5410	5	FAIR	CONCRETE
		0.5410	0.5680	5	GOOD	CONCRETE
		0.5680	0.6000	5	BAD	CONCRETE
		0.6000	0.6640	5	FAIR	CONCRETE
		0.6640	0.6950	5	GOOD	CONCRETE
		0.6950	0.7230	5	FAIR	CONCRETE
		0.7230	0.7450	5	GOOD	CONCRETE
		0.7450	1.1450	5	BAD	CONCRETE
		1.1450	1.1720	5	GOOD	CONCRETE
		1.1720	1.4200	5	BAD	CONCRETE
		1.4200	1.5230	5	GOOD	CONCRETE
		1.5230	1.6130	5	BAD	CONCRETE
		1.6130	1.6530	5	GOOD	CONCRETE
		1.6530	1.7550	5	BAD	CONCRETE
		1.7550	1.8220	5	GOOD	CONCRETE
		1.8220	2.2150	5	BAD	CONCRETE
		2.2150	2.2620	5	FAIR	CONCRETE
		2.2620	2.3200	5	BAD	CONCRETE
		2.3200	2.4380	5	GOOD	CONCRETE
		2.4380	2.4670	5	BAD	CONCRETE
		2.4670	2.5520	5	GOOD	CONCRETE
		2.5520	2.8430	5	BAD	CONCRETE
		2.8430	3.1840	6	GOOD	CONCRETE
		3.1840	3.8600	4	BAD	CONCRETE
		3.8600	3.8870	4	GOOD	CONCRETE
		3.8870	5.0110	4	BAD	CONCRETE
		TOTAL	**5.0110**			
BAT 087	Puting Kahoy - Nasi Road	0.0000	0.1250	5	BAD	CONCRETE
		0.1250	0.1610	6	FAIR	CONCRETE
		0.1610	0.1970	6	GOOD	CONCRETE
		0.1970	0.2650	5	FAIR	CONCRETE
		0.2650	0.4310	5	GOOD	CONCRETE
		0.4310	0.4850	5	BAD	CONCRETE
		0.4850	0.5210	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.5210	0.5800	5	GOOD	CONCRETE
		0.5800	0.6020	5	FAIR	CONCRETE
		0.6020	0.7220	5	GOOD	CONCRETE
		0.7220	1.0640	5	BAD	CONCRETE
		1.0640	1.2010	5	GOOD	CONCRETE
		1.2010	1.2260	5	FAIR	CONCRETE
		1.2260	1.5630	5	BAD	CONCRETE
		1.5630	1.6700	5	GOOD	CONCRETE
		1.6700	1.6990	5	BAD	CONCRETE
		1.6990	1.7440	5	GOOD	CONCRETE
		1.7440	1.7760	5	BAD	CONCRETE
		1.7760	1.8410	5	GOOD	CONCRETE
		1.8410	1.8740	5	FAIR	CONCRETE
		1.8740	1.9210	5	GOOD	CONCRETE
		1.9210	1.9600	5	FAIR	CONCRETE
		1.9600	2.1160	5	BAD	CONCRETE
		2.1160	2.1480	5	GOOD	CONCRETE
		2.1480	2.2530	5	BAD	CONCRETE
		2.2530	2.3290	5	GOOD	CONCRETE
		2.3290	2.7300	5	BAD	CONCRETE
		2.7300	2.7310	5	GOOD	CONCRETE
		2.7310	2.9260	6	BAD	CONCRETE
		2.9260	2.9970	5	GOOD	CONCRETE
		2.9970	3.3570	5	BAD	CONCRETE
		3.3570	3.4240	5	GOOD	CONCRETE
		3.4240	3.4560	5	BAD	CONCRETE
		3.4560	3.5080	5	GOOD	CONCRETE
		3.5080	3.6260	5	FAIR	CONCRETE
		3.6260	3.7330	5	BAD	CONCRETE
		3.7330	3.7680	5	GOOD	CONCRETE
		3.7680	3.7860	5	BAD	CONCRETE
		3.7860	3.8090	5	GOOD	CONCRETE
		3.8090	3.8670	5	BAD	CONCRETE
		3.8670	4.1400	6	GOOD	CONCRETE
		4.1400	4.1480	5	BAD	CONCRETE
		4.1480	4.1710	5	GOOD	CONCRETE
		4.1710	4.2630	5	BAD	CONCRETE
		4.2630	4.3090	5	GOOD	CONCRETE
		4.3090	4.9910	5	BAD	CONCRETE
		4.9910	5.1590	5	FAIR	CONCRETE
		5.1590	5.1770	5	GOOD	CONCRETE
		5.1770	5.2050	5	FAIR	CONCRETE
		5.2050	5.2540	5	BAD	CONCRETE
		5.2540	5.3330	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		5.3330	5.4210	8	GOOD	CONCRETE
		5.4210	5.5720	6	GOOD	CONCRETE
		5.5720	5.6730	5	GOOD	CONCRETE
		5.6730	5.7670	4	BAD	CONCRETE
		5.7670	5.9390	5	GOOD	CONCRETE
		5.9390	6.0040	5	FAIR	CONCRETE
		6.0040	6.0170	5	BAD	CONCRETE
		6.0170	6.4390	4	BAD	CONCRETE
		6.4390	6.5700	4	FAIR	CONCRETE
		6.5700	6.7840	3.8	BAD	CONCRETE
		6.7840	6.9600	6	GOOD	CONCRETE
		6.9600	7.0050	3	FAIR	CONCRETE
		7.0050	7.1010	6	GOOD	CONCRETE
		7.1010	7.1560	2.5	BAD	CONCRETE
		7.1560	7.2000	4	BAD	CONCRETE
		7.2000	7.2050	4	GOOD	CONCRETE
		7.2050	7.2690	2.6	BAD	CONCRETE
		7.2690	7.5660	5.2	BAD	CONCRETE
		7.5660	8.2020	5	GOOD	CONCRETE
		8.2020	8.2290	5	FAIR	CONCRETE
		8.2290	8.3770	5	GOOD	CONCRETE
		8.3770	8.4000	5	FAIR	CONCRETE
		8.4000	8.6660	5	GOOD	CONCRETE
		8.6660	9.5330	5	BAD	CONCRETE
		TOTAL	**9.5330**			
BAT 088	Palanca - Pinagtongulan Road San Jose	0.0000	0.9350	6	GOOD	CONCRETE
		0.9350	0.9800	6	FAIR	CONCRETE
		0.9800	1.8470	6	GOOD	CONCRETE
		1.8470	2.0300	6	FAIR	CONCRETE
		2.0300	2.1260	6	GOOD	CONCRETE
		2.1260	2.2090	6	FAIR	CONCRETE
		2.2090	2.3090	6	GOOD	CONCRETE
		2.3090	2.4740	6	FAIR	CONCRETE
		2.4740	2.5580	6	GOOD	CONCRETE
		2.5580	3.0610	6	FAIR	CONCRETE
		3.0610	3.2280	6	GOOD	CONCRETE
		3.2280	3.3860	6	FAIR	CONCRETE
		3.3860	3.4540	6	GOOD	CONCRETE
		3.4540	3.6740	6	FAIR	CONCRETE
		3.6740	3.6880	6	GOOD	CONCRETE
		3.6880	3.8470	6	FAIR	CONCRETE
		3.8470	3.9560	6	GOOD	CONCRETE
		3.9560	3.9920	6	FAIR	CONCRETE
		3.9920	4.8230	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		4.8230	5.1900	6	FAIR	CONCRETE
		5.1900	5.2860	6	GOOD	CONCRETE
		5.2860	5.4450	6	FAIR	CONCRETE
		TOTAL	**5.4450**			
BAT 089	Banay-Banay I - Sto. Cristo RD	0.0000	0.5000	6	GOOD	ASPHALT
		0.5000	0.6000	6	GOOD	CONCRETE
		0.6000	0.9250	6	GOOD	ASPHALT
		0.9250	0.9630	6	BAD	ASPHALT
		0.9630	2.0710	6	GOOD	ASPHALT
		TOTAL	**2.0710**			
BAT 090	Lapu-Lapu I, San Jose - Aya Road (Lipa City Bounday)	0.0000	0.2320	6	GOOD	CONCRETE
		0.2320	0.2660	6	BAD	CONCRETE
		0.2660	0.5490	6	GOOD	CONCRETE
		0.5490	0.5710	6	GOOD	CONCRETE
		0.5710	2.1900	6	GOOD	CONCRETE
		2.1900	2.1910	6	BAD	CONCRETE
		2.1910	2.5660	6	GOOD	CONCRETE
		2.5660	2.6120	6	FAIR	CONCRETE
		2.6120	2.8380	6	GOOD	CONCRETE
		2.8380	2.8680	6	FAIR	CONCRETE
		2.8680	3.3190	6	GOOD	CONCRETE
		3.3190	3.3750	6	FAIR	CONCRETE
		3.3750	4.1000	6	GOOD	CONCRETE
		TOTAL	**4.1000**			
BAT 091	Poblacion 3 San Jose - Poblacion Ibaan RD	0.0000	1.8110	6	GOOD	ASPHALT
		1.8110	1.8210	6	FAIR	ASPHALT
		1.8210	2.4170	6	GOOD	ASPHALT
		2.4170	2.4260	6	FAIR	ASPHALT
		2.4260	2.6850	6	GOOD	ASPHALT
		2.6850	2.6910	6	FAIR	ASPHALT
		2.6910	2.9710	6	GOOD	ASPHALT
		2.9710	2.9760	6	FAIR	ASPHALT
		2.9760	3.0930	5	GOOD	ASPHALT
		3.0930	3.1170	5	FAIR	ASPHALT
		3.1170	3.2230	5	GOOD	ASPHALT
		3.2230	3.2630	5	FAIR	ASPHALT
		3.2630	3.4630	5	GOOD	ASPHALT
		3.4630	3.4880	5	FAIR	ASPHALT
		3.4880	3.7730	5	GOOD	ASPHALT
		3.7730	3.8130	5	FAIR	ASPHALT
		3.8130	3.9130	5	GOOD	ASPHALT
		3.9130	3.9250	5	FAIR	ASPHALT
		3.9250	4.1370	5	GOOD	ASPHALT
		4.1370	4.2070	5	FAIR	ASPHALT

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		4.2070	4.8120	5	GOOD	ASPHALT
		4.8120	5.1960	6.6	GOOD	CONCRETE
		5.1960	5.2220	5	GOOD	CONCRETE
		5.2220	5.2410	5	GOOD	CONCRETE
		5.2410	5.2510	5	BAD	CONCRETE
		5.2510	5.2930	5	FAIR	CONCRETE
		5.2930	5.4230	5	GOOD	CONCRETE
		5.4230	5.5240	6.6	BAD	CONCRETE
		5.5240	6.0840	6.6	GOOD	CONCRETE
		6.0840	6.2620	5	BAD	CONCRETE
		6.2620	6.4690	6.6	GOOD	CONCRETE
		6.4690	6.5590	6.6	BAD	CONCRETE
		6.5590	6.7280	5	GOOD	CONCRETE
		6.7280	6.7840	5	BAD	CONCRETE
		6.7840	6.9370	6.6	GOOD	CONCRETE
		6.9370	6.9730	5	BAD	CONCRETE
		6.9730	7.1430	6.6	GOOD	CONCRETE
		7.1430	7.2970	6.6	BAD	CONCRETE
		7.2970	7.3330	6.6	FAIR	CONCRETE
		7.3330	7.3780	6.6	GOOD	CONCRETE
		7.3780	7.4100	6.6	BAD	CONCRETE
		7.4100	7.4420	6.6	GOOD	CONCRETE
		7.4420	7.4550	6.6	BAD	CONCRETE
		7.4550	7.5640	6.6	GOOD	CONCRETE
		TOTAL	**7.5640**			
BAT 092	San Juan Market Rd (Bgry. Poblacion)	0.0000	0.6000	5	GOOD	ASPHALT
		TOTAL	**0.6000**			
BAT 093	Sico - Janao Rd. (2019)	138.4810	138.8270	5	BAD	CONCRETE
		138.8270	138.9930	5	GOOD	CONCRETE
		138.9930	139.0300	5	GOOD	CONCRETE
		139.0300	139.3910	5	BAD	CONCRETE
		139.3910	139.4070	5	GOOD	CONCRETE
		139.4070	139.5620	5	BAD	CONCRETE
		139.5620	140.2920	5	GOOD	CONCRETE
		140.2920	140.4880	5	BAD	CONCRETE
		140.4880	140.6250	5	GOOD	CONCRETE
		140.6250	140.7890	5	BAD	CONCRETE
		140.7890	140.9380	5	GOOD	CONCRETE
		140.9380	141.0690	5	BAD	CONCRETE
		141.0690	141.6300	5	GOOD	CONCRETE
		141.6300	142.4810	4	BAD	CONCRETE
		TOTAL	**4.0000**			
BAT 094	Buhay na Sapa - Sapangan Road(2019)	0.0000	0.8940	5	FAIR	CONCRETE
		0.8940	1.2430	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.2430	1.4340	5	GOOD	CONCRETE
		1.4340	1.5030	5	BAD	CONCRETE
		1.5030	1.5890	5	FAIR	CONCRETE
		1.5890	1.6210	5	BAD	CONCRETE
		1.6210	2.0080	5	FAIR	CONCRETE
		2.0080	2.1610	5	BAD	CONCRETE
		2.1610	2.3890	5	FAIR	CONCRETE
		2.3890	2.5330	5	BAD	CONCRETE
		2.5330	2.5950	6	FAIR	CONCRETE
		2.5950	2.9260	5	BAD	CONCRETE
		2.9260	2.9740	6	GOOD	CONCRETE
		2.9740	3.0140	5	BAD	CONCRETE
		3.0140	3.6690	6	GOOD	CONCRETE
		3.6690	3.8370	5	BAD	CONCRETE
		3.8370	4.4780	6	FAIR	CONCRETE
		TOTAL	**4.4780**			
BAT 095	Puting Buhangin-Quipot Rd.	0.0000	0.3000	5	BAD	CONCRETE
		0.3000	0.3770	5	FAIR	CONCRETE
		0.3770	0.4090	5	GOOD	CONCRETE
		0.4090	0.4220	5	FAIR	CONCRETE
		0.4220	0.5800	5	GOOD	CONCRETE
		0.5800	0.6500	5	FAIR	CONCRETE
		0.6500	1.1900	5	BAD	CONCRETE
		1.1900	1.2250	5	GOOD	CONCRETE
		1.2250	1.2840	5	BAD	CONCRETE
		1.2840	1.3100	5	FAIR	CONCRETE
		1.3100	1.4440	5	BAD	CONCRETE
		1.4440	1.5000	5	GOOD	CONCRETE
		1.5000	1.6750	4	GOOD	CONCRETE
		1.6750	1.7270	4	BAD	CONCRETE
		1.7270	1.7430	4	GOOD	CONCRETE
		1.7430	1.7950	4	FAIR	CONCRETE
		1.7950	1.8000	4	BAD	CONCRETE
		1.8000	1.9000	4	FAIR	CONCRETE
		1.9000	2.0910	4	BAD	CONCRETE
		2.0910	2.3180	5	FAIR	CONCRETE
		2.3180	2.4610	5	BAD	CONCRETE
		2.4610	2.4790	5	FAIR	CONCRETE
		2.4790	2.5580	5	GOOD	CONCRETE
		2.5580	2.6400	5	FAIR	CONCRETE
		2.6400	2.7000	5	BAD	CONCRETE
		2.7000	2.7750	5	FAIR	CONCRETE
		2.7750	3.0690	5	BAD	CONCRETE
		3.0690	3.1190	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		3.1190	3.2060	5	BAD	CONCRETE
		3.2060	3.4240	5	GOOD	CONCRETE
		3.4240	3.5000	4	BAD	CONCRETE
		3.5000	3.5420	5	BAD	CONCRETE
		3.5420	3.6700	5	GOOD	CONCRETE
		TOTAL	**3.6700**			
BAT 096	Tipaz - Pinagbayanan Road	0.0000	0.1810	5	GOOD	CONCRETE
		0.1810	0.4690	5	FAIR	CONCRETE
		0.4690	0.5000	5	BAD	CONCRETE
		0.5000	1.0790	4.6	BAD	CONCRETE
		1.0790	1.2420	5	FAIR	CONCRETE
		1.2420	1.3920	4	GOOD	CONCRETE
		1.3920	1.4160	4	FAIR	CONCRETE
		1.4160	1.9860	4	BAD	CONCRETE
		1.9860	2.1300	4	FAIR	CONCRETE
		2.1300	2.1470	4	BAD	CONCRETE
		2.1470	2.1750	4	FAIR	CONCRETE
		2.1750	2.3850	4	BAD	CONCRETE
		2.3850	2.4000	4	FAIR	CONCRETE
		2.4000	2.6130	4.6	FAIR	CONCRETE
		2.6130	2.8200	4	FAIR	CONCRETE
		2.8200	2.8790	5	GOOD	CONCRETE
		2.8790	2.9870	4	BAD	CONCRETE
		2.9870	3.0070	5	GOOD	CONCRETE
		3.0070	3.1690	4	BAD	CONCRETE
		3.1690	3.1980	4	GOOD	CONCRETE
		3.1980	3.3990	4	FAIR	CONCRETE
		3.3990	4.0510	4	GOOD	ASPHALT
		4.0510	4.0830	4	GOOD	CONCRETE
		TOTAL	**4.0830**			
BAT 097	Poblacion, Taal - Poblacion, San Luis	0.0000	0.2530	5	FAIR	CONCRETE
		0.2530	0.3460	5	GOOD	CONCRETE
		0.3460	0.4810	5	FAIR	CONCRETE
		0.4810	0.5300	5	GOOD	CONCRETE
		0.5300	0.5530	5	FAIR	CONCRETE
		0.5530	0.5770	5	GOOD	CONCRETE
		0.5770	0.6830	5	FAIR	CONCRETE
		0.6830	0.7150	5	GOOD	CONCRETE
		0.7150	0.7730	5	FAIR	CONCRETE
		0.7730	0.8000	5	GOOD	CONCRETE
		0.8000	1.0000	5	FAIR	CONCRETE
		1.0000	1.0160	5	GOOD	CONCRETE
		1.0160	1.1620	5	FAIR	CONCRETE
		1.1620	1.2170	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.2170	2.1170	5	FAIR	CONCRETE
		2.1170	2.1940	5	GOOD	ASPHALT
		2.1940	2.2370	5	FAIR	CONCRETE
		2.2370	2.3470	5	GOOD	CONCRETE
		2.3470	2.4180	5	GOOD	ASPHALT
		2.4180	2.6200	5	FAIR	CONCRETE
		TOTAL	**2.6200**			
BAT 098	Poblacion, San Luis - Muzon, Alitagtag	0.0000	1.4540	5	GOOD	ASPHALT
		1.4540	1.5000	5	FAIR	CONCRETE
		1.5000	1.9360	5	GOOD	CONCRETE
		1.9360	1.9850	5	FAIR	ASPHALT
		1.9850	2.4630	5	GOOD	CONCRETE
		2.4630	2.5500	5	FAIR	CONCRETE
		2.5500	2.8500	5	GOOD	CONCRETE
		2.8500	3.0300	5	BAD	CONCRETE
		3.0300	3.3490	5	GOOD	CONCRETE
		3.3490	3.3720	5	FAIR	CONCRETE
		3.3720	3.4830	5	GOOD	CONCRETE
		3.4830	3.5690	5	BAD	CONCRETE
		3.5690	3.8900	5	GOOD	CONCRETE
		3.8900	3.9300	5	BAD	CONCRETE
		3.9300	4.0710	5	FAIR	CONCRETE
		4.0710	4.1320	5	BAD	CONCRETE
		4.1320	4.1610	5	GOOD	CONCRETE
		4.1610	4.2040	5	BAD	CONCRETE
		4.2040	4.3580	5	FAIR	CONCRETE
		4.3580	4.4020	5	BAD	CONCRETE
		4.4020	4.4820	5	FAIR	CONCRETE
		4.4820	4.5130	5	FAIR	CONCRETE
		4.5130	4.5520	5	GOOD	CONCRETE
		4.5520	4.6000	5	FAIR	CONCRETE
		4.6000	4.8620	5	GOOD	CONCRETE
		4.8620	4.9470	5	FAIR	CONCRETE
		4.9470	5.0000	5	FAIR	CONCRETE
		5.0000	5.1280	5	GOOD	CONCRETE
		5.1280	5.1380	5	BAD	CONCRETE
		5.1380	5.2330	5	FAIR	CONCRETE
		5.2330	5.2890	5	FAIR	CONCRETE
		5.2890	5.4050	5	FAIR	ASPHALT
		5.4050	5.4540	5	BAD	CONCRETE
		5.4540	5.4830	5	GOOD	CONCRETE
		5.4830	5.5890	5	FAIR	CONCRETE
		5.5890	5.6160	5	BAD	CONCRETE
		5.6160	5.7030	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		5.7030	5.9740	5	FAIR	CONCRETE
		5.9740	6.0680	5	GOOD	CONCRETE
		6.0680	9.1670	5	FAIR	ASPHALT
		TOTAL	**9.1670**			
BAT 099	Bagong - Balagtasin Road	0.0000	0.1270	5	GOOD	CONCRETE
		0.1270	0.1810	5	FAIR	CONCRETE
		0.1810	0.2260	5	GOOD	CONCRETE
		0.2260	0.2820	5	FAIR	CONCRETE
		0.2820	0.3330	5	GOOD	CONCRETE
		0.3330	0.4750	5	FAIR	CONCRETE
		0.4750	0.5770	5	GOOD	CONCRETE
		0.5770	0.6390	5	FAIR	CONCRETE
		0.6390	0.8920	5	GOOD	CONCRETE
		0.8920	0.9930	5	GOOD	ASPHALT
		0.9930	1.0810	5	GOOD	CONCRETE
		1.0810	1.2710	5	GOOD	ASPHALT
		1.2710	1.2960	5	BAD	CONCRETE
		1.2960	1.3220	5	FAIR	CONCRETE
		1.3220	1.3880	5	GOOD	CONCRETE
		1.3880	1.4840	5	FAIR	CONCRETE
		1.4840	1.5340	5	BAD	CONCRETE
		1.5340	1.5630	5	GOOD	CONCRETE
		1.5630	1.5860	5	FAIR	CONCRETE
		1.5860	1.6070	5	GOOD	CONCRETE
		1.6070	1.6340	5	FAIR	CONCRETE
		1.6340	1.6920	5	GOOD	CONCRETE
		1.6920	1.7100	5	FAIR	CONCRETE
		1.7100	1.8020	5	GOOD	CONCRETE
		1.8020	1.8320	5	FAIR	CONCRETE
		1.8320	1.9160	5	FAIR	CONCRETE
		1.9160	2.1820	5	GOOD	CONCRETE
		2.1820	2.2390	5	FAIR	CONCRETE
		2.2390	2.5610	5	GOOD	CONCRETE
		2.5610	2.6000	5	FAIR	CONCRETE
		2.6000	2.6720	5	BAD	CONCRETE
		2.6720	2.8330	5	GOOD	CONCRETE
		2.8330	2.8680	5	BAD	CONCRETE
		2.8680	2.9640	5	GOOD	CONCRETE
		2.9640	2.9950	5	BAD	CONCRETE
		2.9950	3.0000	5	FAIR	CONCRETE
		3.0000	3.3360	5	GOOD	CONCRETE
		3.3360	3.3550	5	FAIR	CONCRETE
		3.3550	3.4050	5	BAD	CONCRETE
		3.4050	3.4790	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		3.4790	3.6400	5	FAIR	CONCRETE
		3.6400	3.7020	5	GOOD	CONCRETE
		3.7020	3.7060	5	BAD	CONCRETE
		3.7060	3.8240	5	GOOD	CONCRETE
		3.8240	3.8290	5	FAIR	CONCRETE
		3.8290	3.8690	5	GOOD	CONCRETE
		3.8690	3.9750	5	FAIR	CONCRETE
		3.9750	4.0190	5	BAD	CONCRETE
		4.0190	4.2590	5	GOOD	CONCRETE
		4.2590	4.2920	5	FAIR	CONCRETE
		4.2920	4.4500	5	GOOD	CONCRETE
		4.4500	4.5130	5	FAIR	CONCRETE
		4.5130	4.5770	5	GOOD	CONCRETE
		4.5770	4.6130	5	FAIR	CONCRETE
		4.6130	5.1000	5	GOOD	CONCRETE
		TOTAL	**5.1000**			
BAT 100	Poblacion - Balete, San Luis	0.0000	0.2400	5	GOOD	ASPHALT
		0.2400	0.3280	5	GOOD	CONCRETE
		0.3280	1.6670	5	GOOD	ASPHALT
		1.6670	1.7120	5	BAD	CONCRETE
		1.7120	1.7220	5	FAIR	CONCRETE
		1.7220	1.8000	5	GOOD	ASPHALT
		1.8000	1.8240	5	GOOD	CONCRETE
		1.8240	2.2120	5	GOOD	ASPHALT
		2.2120	2.2820	5	FAIR	CONCRETE
		2.2820	2.3900	5	GOOD	CONCRETE
		2.3900	2.4210	5	FAIR	CONCRETE
		2.4210	2.5260	5	GOOD	CONCRETE
		2.5260	2.6310	5	FAIR	CONCRETE
		2.6310	2.6670	5	BAD	CONCRETE
		2.6670	2.7030	5	FAIR	CONCRETE
		2.7030	2.7530	5	GOOD	CONCRETE
		2.7530	2.7620	5	FAIR	CONCRETE
		2.7620	2.8520	5	GOOD	CONCRETE
		2.8520	2.9110	5	FAIR	CONCRETE
		2.9110	3.0730	5	BAD	CONCRETE
		3.0730	3.1000	5	FAIR	CONCRETE
		3.1000	3.1210	5	GOOD	CONCRETE
		3.1210	3.1770	5	FAIR	CONCRETE
		3.1770	3.4760	5	GOOD	CONCRETE
		3.4760	3.5140	5	FAIR	CONCRETE
		3.5140	3.7310	5	GOOD	CONCRETE
		3.7310	3.7440	5	FAIR	CONCRETE
		3.7440	3.7880	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		3.7880	3.8590	5	BAD	CONCRETE
		3.8590	3.9430	5	FAIR	CONCRETE
		3.9430	4.0260	5	GOOD	CONCRETE
		4.0260	4.0480	5	FAIR	CONCRETE
		4.0480	4.1370	5	BAD	CONCRETE
		TOTAL	**4.1370**			
BAT 101	Brgy. Banoyo-Boboy Road, San Luis	0.0000	0.0720	5	GOOD	CONCRETE
		0.0720	0.0910	5	FAIR	CONCRETE
		0.0910	0.1580	5	GOOD	CONCRETE
		0.1580	0.2020	5	BAD	CONCRETE
		0.2020	0.2520	5	GOOD	CONCRETE
		0.2520	0.2740	5	FAIR	CONCRETE
		0.2740	0.3830	5	GOOD	CONCRETE
		0.3830	0.5290	5	BAD	CONCRETE
		0.5290	0.7030	5	GOOD	CONCRETE
		0.7030	0.7310	5	BAD	CONCRETE
		0.7310	0.7750	5	GOOD	CONCRETE
		0.7750	0.9370	5	FAIR	CONCRETE
		0.9370	0.9710	5	GOOD	CONCRETE
		0.9710	1.0600	5	FAIR	CONCRETE
		1.0600	1.1480	5	BAD	CONCRETE
		1.1480	1.2090	5	GOOD	CONCRETE
		1.2090	1.2420	5	BAD	CONCRETE
		1.2420	1.2960	5	GOOD	CONCRETE
		1.2960	1.3330	5	BAD	CONCRETE
		1.3330	1.3560	5	GOOD	CONCRETE
		1.3560	1.4000	5	FAIR	CONCRETE
		1.4000	1.4370	5	BAD	CONCRETE
		1.4370	1.5480	5	FAIR	CONCRETE
		1.5480	1.6650	5	GOOD	CONCRETE
		1.6650	1.7040	5	FAIR	CONCRETE
		1.7040	2.0000	5	GOOD	CONCRETE
		2.0000	2.0650	5	FAIR	CONCRETE
		2.0650	2.1750	5	GOOD	CONCRETE
		2.1750	2.4210	5	FAIR	CONCRETE
		2.4210	2.4470	5	BAD	CONCRETE
		2.4470	2.5000	5	FAIR	CONCRETE
		2.5000	3.2090	5	GOOD	CONCRETE
		3.2090	3.3300	5	FAIR	CONCRETE
		3.3300	3.3670	5	GOOD	CONCRETE
		3.3670	3.4650	5	BAD	CONCRETE
		3.4650	4.0900	5	GOOD	CONCRETE
		TOTAL	**4.0900**			
BAT 102	Brgy. Boboy, San Luis - Manalupang,	0.0000	0.1160	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
	Bauan Road	0.1160	0.1970	5	BAD	CONCRETE
		0.1970	0.2260	5	GOOD	CONCRETE
		0.2260	0.2950	5	FAIR	CONCRETE
		0.2950	0.3330	5	BAD	CONCRETE
		0.3330	0.3550	5	FAIR	CONCRETE
		0.3550	0.4670	5	GOOD	CONCRETE
		0.4670	0.5000	5	FAIR	CONCRETE
		0.5000	0.5150	5	GOOD	CONCRETE
		0.5150	0.5460	5	FAIR	CONCRETE
		0.5460	0.5750	5	GOOD	CONCRETE
		0.5750	0.6420	5	FAIR	CONCRETE
		0.6420	0.9590	5	GOOD	CONCRETE
		0.9590	1.2760	5	FAIR	CONCRETE
		1.2760	1.3300	5	GOOD	CONCRETE
		1.3300	1.4560	5	FAIR	CONCRETE
		1.4560	1.7540	5	GOOD	CONCRETE
		1.7540	1.8000	5	FAIR	CONCRETE
		1.8000	2.0610	5	GOOD	CONCRETE
		2.0610	2.1520	5	FAIR	CONCRETE
		2.1520	2.4040	5	GOOD	CONCRETE
		2.4040	2.5530	5	FAIR	CONCRETE
		2.5530	2.6200	5	GOOD	CONCRETE
		2.6200	2.6660	5	BAD	CONCRETE
		2.6660	2.8070	5	FAIR	CONCRETE
		2.8070	3.3500	5	GOOD	CONCRETE
		TOTAL	**3.3500**			
BAT 103	Zone 4, Taal - Poblacion, San Nicolas	0.0000	0.2000	5	FAIR	CONCRETE
		0.2000	0.2230	5	GOOD	CONCRETE
		0.2230	0.5000	5	FAIR	CONCRETE
		0.5000	0.5070	5	GOOD	CONCRETE
		0.5070	0.7040	5	FAIR	CONCRETE
		0.7040	0.8730	5	GOOD	CONCRETE
		0.8730	1.0530	5	FAIR	CONCRETE
		1.0530	1.1000	5	GOOD	CONCRETE
		1.1000	1.7670	5	FAIR	CONCRETE
		1.7670	1.7910	5	GOOD	CONCRETE
		1.7910	1.8000	5	FAIR	CONCRETE
		1.8000	1.8050	5	BAD	CONCRETE
		1.8050	1.8760	5	GOOD	CONCRETE
		1.8760	1.9060	5	FAIR	CONCRETE
		1.9060	2.1060	5	GOOD	CONCRETE
		2.1060	2.1420	5	FAIR	CONCRETE
		2.1420	2.3830	5	GOOD	CONCRETE
		2.3830	2.5260	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		2.5260	2.5510	5	BAD	CONCRETE
		2.5510	3.4720	5	GOOD	CONCRETE
		3.4720	3.5000	5	FAIR	CONCRETE
		3.5000	3.9600	5	GOOD	CONCRETE
		3.9600	4.0800	5	BAD	CONCRETE
		4.0800	4.1410	5	GOOD	CONCRETE
		4.1410	4.2970	5	FAIR	CONCRETE
		4.2970	4.5030	5	GOOD	CONCRETE
		4.5030	4.5730	5	FAIR	CONCRETE
		4.5730	4.6580	5	GOOD	CONCRETE
		4.6580	4.8530	5	FAIR	CONCRETE
		4.8530	5.0450	5	GOOD	CONCRETE
		5.0450	5.1720	5	FAIR	CONCRETE
		5.1720	5.1920	5	GOOD	CONCRETE
		5.1920	5.3540	5	FAIR	CONCRETE
		5.3540	5.4610	5	GOOD	CONCRETE
		5.4610	5.5520	5	FAIR	CONCRETE
		5.5520	5.5650	5	GOOD	CONCRETE
		5.5650	5.6280	5	BAD	CONCRETE
		5.6280	5.7000	5	GOOD	CONCRETE
		5.7000	5.7070	5	FAIR	CONCRETE
		5.7070	6.0000	5	GOOD	CONCRETE
		6.0000	6.1310	5	FAIR	CONCRETE
		6.1310	6.1800	5	GOOD	CONCRETE
		6.1800	6.2230	5	FAIR	CONCRETE
		6.2230	6.2610	5	BAD	CONCRETE
		6.2610	6.6120	5	FAIR	CONCRETE
		6.6120	6.6210	5	BAD	CONCRETE
		6.6210	6.7660	5	GOOD	CONCRETE
		6.7660	6.7810	5	BAD	CONCRETE
		6.7810	6.8080	5	GOOD	CONCRETE
		6.8080	7.2000	5	FAIR	CONCRETE
		7.2000	7.5850	5	GOOD	CONCRETE
		TOTAL	**7.5850**			
BAT 104	Poblacion - Calangasy RD	0.0000	0.0100	5	BAD	CONCRETE
		0.0100	0.0640	5	GOOD	CONCRETE
		0.0640	0.1270	5	FAIR	CONCRETE
		0.1270	0.4280	5	FAIR	CONCRETE
		0.4280	0.5520	5	GOOD	CONCRETE
		0.5520	0.6780	5	FAIR	CONCRETE
		0.6780	0.8950	5	BAD	CONCRETE
		0.8950	0.9180	5	GOOD	CONCRETE
		0.9180	0.9450	5	FAIR	CONCRETE
		0.9450	1.0910	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.0910	1.1460	5	FAIR	CONCRETE
		1.1460	1.1970	5	BAD	CONCRETE
		1.1970	1.7820	5	FAIR	CONCRETE
		TOTAL	**1.7820**			
BAT 105	Bihis, Taal - Poblacion RD	0.0000	0.1130	5	GOOD	ASPHALT
		0.1130	0.1720	5	GOOD	CONCRETE
		0.1720	0.4230	5	BAD	CONCRETE
		0.4230	0.5330	5	FAIR	CONCRETE
		0.5330	0.5780	5	BAD	CONCRETE
		0.5780	0.7280	5	GOOD	ASPHALT
		0.7280	0.8030	5	FAIR	CONCRETE
		0.8030	0.9740	5	GOOD	CONCRETE
		0.9740	1.0180	5	FAIR	CONCRETE
		1.0180	1.1000	5	GOOD	CONCRETE
		1.1000	1.1990	5	FAIR	CONCRETE
		1.1990	1.2220	5	BAD	CONCRETE
		1.2220	1.2850	5	GOOD	CONCRETE
		1.2850	1.3000	5	FAIR	CONCRETE
		1.3000	1.4630	5	GOOD	CONCRETE
		1.4630	1.5000	5	FAIR	CONCRETE
		1.5000	1.5630	5	BAD	CONCRETE
		1.5630	1.6380	5	GOOD	CONCRETE
		1.6380	1.7000	5	BAD	CONCRETE
		1.7000	1.8990	5	GOOD	CONCRETE
		1.8990	1.9700	5	FAIR	CONCRETE
		1.9700	2.0420	5	GOOD	CONCRETE
		2.0420	2.3010	5	FAIR	CONCRETE
		2.3010	2.5030	5	GOOD	CONCRETE
		2.5030	2.6290	5	FAIR	CONCRETE
		2.6290	2.6740	5	GOOD	CONCRETE
		2.6740	2.8560	5	FAIR	CONCRETE
		2.8560	3.0000	5	GOOD	CONCRETE
		3.0000	3.5180	5	FAIR	CONCRETE
		3.5180	3.6500	5	GOOD	CONCRETE
		3.6500	4.5650	5	FAIR	CONCRETE
		4.5650	4.6240	5	GOOD	CONCRETE
		4.6240	5.2210	5	FAIR	CONCRETE
		5.2210	5.2480	5	GOOD	CONCRETE
		5.2480	5.2900	5	FAIR	CONCRETE
		5.2900	5.5080	5	GOOD	CONCRETE
		5.5080	5.7630	5	BAD	CONCRETE
		5.7630	5.8530	5	GOOD	CONCRETE
		5.8530	5.9560	5	FAIR	CONCRETE
		5.9560	5.9690	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		5.9690	6.0360	5	FAIR	CONCRETE
		TOTAL	**6.0360**	5		
BAT 106	Poblacion - Pook Na Banal Road, San Pascual	0.0000	0.5000	6	GOOD	ASPHALT
		0.5000	0.5210	6.6	GOOD	ASPHALT
		0.5210	2.5570	6	GOOD	ASPHALT
		2.5570	3.0600	5	FAIR	CONCRETE
		3.0600	3.1970	5	BAD	CONCRETE
		3.1970	3.3760	5	GOOD	CONCRETE
		3.3760	3.4510	5	BAD	CONCRETE
		3.4510	3.4760	5	FAIR	CONCRETE
		3.4760	3.5000	5	BAD	CONCRETE
		3.5000	3.5710	5	FAIR	CONCRETE
		3.5710	3.6050	5	BAD	CONCRETE
		3.6050	3.6450	5	GOOD	CONCRETE
		3.6450	3.7000	5	GOOD	CONCRETE
		3.7000	4.2000	5	FAIR	CONCRETE
		4.2000	4.3980	5	GOOD	CONCRETE
		4.3980	4.5000	5	FAIR	CONCRETE
		4.5000	4.5910	5	GOOD	CONCRETE
		4.5910	4.6360	5	FAIR	CONCRETE
		4.6360	4.6770	5	GOOD	CONCRETE
		4.6770	4.7400	5	FAIR	CONCRETE
		4.7400	4.7860	5	BAD	CONCRETE
		4.7860	4.9290	5	FAIR	CONCRETE
		4.9290	5.0000	5	BAD	CONCRETE
		5.0000	5.1080	5	GOOD	CONCRETE
		5.1080	5.2340	5	BAD	CONCRETE
		5.2340	5.2700	5	GOOD	CONCRETE
		5.2700	5.2900	5	BAD	CONCRETE
		5.2900	5.4000	5	FAIR	CONCRETE
		TOTAL	**5.4000**			
BAT 107	Taysan, San Jose - Sambat, San Pascual	0.0000	0.1530	6	FAIR	CONCRETE
		0.1530	0.2320	6	GOOD	CONCRETE
		0.2320	0.2670	6	BAD	CONCRETE
		0.2670	0.5610	6	FAIR	CONCRETE
		0.5610	0.6230	5	FAIR	CONCRETE
		0.6230	0.6580	5	BAD	CONCRETE
		0.6580	0.7200	6	FAIR	CONCRETE
		0.7200	0.7570	6	GOOD	CONCRETE
		0.7570	1.1000	5	FAIR	CONCRETE
		1.1000	1.1470	5	BAD	CONCRETE
		1.1470	1.3770	6	BAD	CONCRETE
		1.3770	1.9400	6	GOOD	CONCRETE
		1.9400	2.0580	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		2.0580	2.2390	5	FAIR	CONCRETE
		2.2390	2.8840	6	GOOD	CONCRETE
		2.8840	2.9220	7	GOOD	CONCRETE
		2.9220	3.1890	6	GOOD	CONCRETE
		3.1890	3.3660	7	GOOD	CONCRETE
		3.3660	4.6790	6	GOOD	CONCRETE
		4.6790	5.0200	5	GOOD	CONCRETE
		5.0200	5.0530	6	FAIR	CONCRETE
		5.0530	5.1520	5	BAD	CONCRETE
		5.1520	5.2620	6	FAIR	CONCRETE
		5.2620	5.6410	5	FAIR	CONCRETE
		5.6410	5.7550	6	GOOD	CONCRETE
		5.7550	5.7660	5	BAD	CONCRETE
		5.7660	5.8810	7	GOOD	CONCRETE
		5.8810	6.0070	5	FAIR	CONCRETE
		6.0070	6.0780	5	BAD	CONCRETE
		6.0780	6.4730	5	FAIR	CONCRETE
		6.4730	6.6050	5	BAD	CONCRETE
		6.6050	6.7350	5	FAIR	CONCRETE
		6.7350	6.8340	6	FAIR	CONCRETE
		6.8340	6.9240	6	GOOD	CONCRETE
		6.9240	7.1250	6	FAIR	CONCRETE
		7.1250	7.3220	6	BAD	CONCRETE
		7.3220	7.4140	6	FAIR	CONCRETE
		7.4140	7.6240	6	BAD	CONCRETE
		7.6240	7.7400	6	GOOD	CONCRETE
		7.7400	7.7700	9.4	GOOD	CONCRETE
		7.7700	7.8240	6	GOOD	CONCRETE
		7.8240	7.9250	6	BAD	CONCRETE
		7.9250	8.0480	5	FAIR	CONCRETE
		8.0480	8.1380	6	GOOD	CONCRETE
		8.1380	8.2000	6	FAIR	CONCRETE
		8.2000	8.4910	6	BAD	CONCRETE
		8.4910	8.6130	5	BAD	CONCRETE
		8.6130	8.6820	5	FAIR	CONCRETE
		8.6820	9.2940	6	FAIR	CONCRETE
		9.2940	9.4480	6	BAD	CONCRETE
		9.4480	9.5760	6	FAIR	CONCRETE
		9.5760	9.6090	6	BAD	CONCRETE
		9.6090	9.8590	6	FAIR	CONCRETE
		9.8590	10.0400	6	GOOD	CONCRETE
		10.0400	10.1000	6	FAIR	CONCRETE
		10.1000	10.1550	6	BAD	CONCRETE
		10.1550	11.9000	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		11.9000	12.0080	5	BAD	CONCRETE
		12.0080	12.3110	6	FAIR	CONCRETE
		12.3110	12.5150	5	BAD	CONCRETE
		12.5150	12.8850	5	FAIR	CONCRETE
		12.8850	12.9300	5	GOOD	CONCRETE
		12.9300	12.9540	5	BAD	CONCRETE
		12.9540	12.9940	5	GOOD	CONCRETE
		12.9940	13.0390	5	BAD	CONCRETE
		13.0390	13.0840	5	FAIR	CONCRETE
		13.0840	13.1220	5	BAD	CONCRETE
		13.1220	13.5640	5	FAIR	CONCRETE
		TOTAL	**13.5640**			
BAT 108	Poblacion I - Irukan Road, Sta. Teresita	0.0000	0.0820	7.8	GOOD	CONCRETE
		0.0820	0.1090	8	GOOD	CONCRETE
		0.1090	0.2130	6.5	GOOD	CONCRETE
		0.2130	0.3000	7.8	BAD	ROUGH ROAD
		0.3000	0.3750	7.8	BAD	CONCRETE
		0.3750	0.5000	7.8	FAIR	CONCRETE
		0.5000	0.6000	4.5	BAD	CONCRETE
		0.6000	0.6190	4.5	GOOD	CONCRETE
		0.6190	0.8490	4.6	FAIR	CONCRETE
		0.8490	0.9010	5	GOOD	CONCRETE
		0.9010	0.9560	5	BAD	CONCRETE
		0.9560	1.0050	5	GOOD	CONCRETE
		1.0050	1.1000	5	BAD	CONCRETE
		1.1000	1.1460	5	FAIR	CONCRETE
		1.1460	1.2150	5	GOOD	CONCRETE
		1.2150	1.2370	5	BAD	CONCRETE
		1.2370	1.3000	5	GOOD	CONCRETE
		1.3000	1.3800	5	BAD	CONCRETE
		1.3800	1.4470	5	GOOD	CONCRETE
		1.4470	1.5320	5	FAIR	CONCRETE
		1.5320	1.5540	5	GOOD	CONCRETE
		1.5540	1.6260	5	FAIR	CONCRETE
		1.6260	1.6370	5	GOOD	CONCRETE
		1.6370	2.0000	5	FAIR	CONCRETE
		2.0000	2.1820	4	FAIR	CONCRETE
		2.1820	2.1840	4	BAD	CONCRETE
		2.1840	2.4090	4	FAIR	CONCRETE
		2.4090	2.5100	4	BAD	CONCRETE
		2.5100	2.7320	5	FAIR	CONCRETE
		2.7320	2.9590	5	BAD	CONCRETE
		2.9590	3.1920	5	FAIR	CONCRETE
		3.1920	3.2550	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		3.2550	3.3180	5	BAD	CONCRETE
		3.3180	3.6700	5	FAIR	CONCRETE
		TOTAL	**3.6700**			
BAT 109	Muzon, San Luis - Pacifico, Sta. Teresita Road	0.0000	0.0230	6.1	GOOD	CONCRETE
		0.0230	0.2000	6.1	FAIR	CONCRETE
		0.2000	0.3380	6.1	BAD	CONCRETE
		0.3380	0.3690	6.2	FAIR	CONCRETE
		0.3690	0.3920	4	FAIR	CONCRETE
		0.3920	0.4100	6	FAIR	CONCRETE
		0.4100	0.5170	6.1	BAD	CONCRETE
		0.5170	0.5940	6.1	GOOD	CONCRETE
		0.5940	0.6040	6.1	BAD	CONCRETE
		0.6040	0.6290	6.1	GOOD	CONCRETE
		0.6290	0.7000	6.1	BAD	CONCRETE
		0.7000	0.7350	6.1	FAIR	CONCRETE
		0.7350	0.7500	4	BAD	CONCRETE
		0.7500	1.4620	4	FAIR	CONCRETE
		1.4620	1.5670	6	BAD	CONCRETE
		1.5670	1.5900	6	FAIR	CONCRETE
		1.5900	1.6000	4	BAD	CONCRETE
		1.6000	1.6900	6	ON GOING ROAD REBLOCKING	CONCRETE
		TOTAL	**1.6900**			
BAT 110	Calle Bonifacio Rd., Taal	0.0000	0.0380	5	FAIR	CONCRETE
		0.0380	0.4300	5	GOOD	CONCRETE
		0.4300	0.4630	5	BAD	CONCRETE
		0.4630	0.6870	5	GOOD	ASPHALT
		0.6870	0.8500	5	FAIR	CONCRETE
		TOTAL	**0.8500**			
BAT 111	Balisong, Taal - Munlawin, San Nicola	0.0000	0.1760	5	FAIR	CONCRETE
		0.1760	0.4000	5	GOOD	ASPHALT
		0.4000	0.4130	5	FAIR	CONCRETE
		0.4130	0.7110	5	GOOD	CONCRETE
		0.7110	0.8050	4	GOOD	CONCRETE
		0.8050	1.4820	4	FAIR	CONCRETE
		1.4820	1.5000	5	FAIR	CONCRETE
		1.5000	1.7000	5	FAIR	CONCRETE
		1.7000	1.8000	6	FAIR	CONCRETE
		1.8000	2.0000	5	FAIR	CONCRETE
		2.0000	2.2000	4	FAIR	CONCRETE
		2.2000	2.4970	5	FAIR	CONCRETE
		2.4970	2.5770	4.5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		2.5770	2.6530	5	FAIR	CONCRETE
		2.6530	2.7000	5	GOOD	CONCRETE
		2.7000	2.8560	5	FAIR	CONCRETE
		2.8560	2.9570	4	GOOD	ASPHALT
		2.9570	3.1210	4	FAIR	CONCRETE
		3.1210	3.2590	5	GOOD	CONCRETE
		3.2590	3.3690	5	FAIR	CONCRETE
		3.3690	3.5380	4	GOOD	CONCRETE
		3.5380	3.8200	4	FAIR	CONCRETE
		TOTAL	**3.8200**			
BAT 112	Carsuche, Taal - Calumala, Sta. Teresita	0.0000	0.0260	4	BAD	CONCRETE
		0.0260	0.1000	6.2	FAIR	CONCRETE
		0.1000	0.7610	6.2	GOOD	CONCRETE
		0.7610	0.9940	4	FAIR	CONCRETE
		0.9940	1.0260	6.2	GOOD	CONCRETE
		1.0260	1.5870	4	FAIR	CONCRETE
		1.5870	1.6220	5	GOOD	CONCRETE
		1.6220	1.8030	5	FAIR	CONCRETE
		1.8030	1.8580	5	BAD	CONCRETE
		1.8580	1.9550	5	FAIR	CONCRETE
		1.9550	2.1000	4	GOOD	CONCRETE
		2.1000	2.2220	4	FAIR	CONCRETE
		2.2220	2.2620	4	BAD	CONCRETE
		2.2620	2.9510	4	FAIR	CONCRETE
		2.9510	3.0000	4	GOOD	CONCRETE
		3.0000	3.1410	4	FAIR	CONCRETE
		3.1410	3.1710	4	BAD	CONCRETE
		3.1710	3.5140	4	FAIR	CONCRETE
		3.5140	4.0000	4	GOOD	CONCRETE
		4.0000	4.0640	5	GOOD	CONCRETE
		4.0640	4.4080	4	FAIR	CONCRETE
		4.4080	4.5900	6	GOOD	CONCRETE
		TOTAL	**4.5900**			
BAT 113	Cuta East - Poblacion II, Sta. Teresita	0.0000	0.2000	6.2	GOOD	CONCRETE
		0.2000	0.3000	3.2	FAIR	CONCRETE
		0.3000	0.8380	6.1	BAD	CONCRETE
		0.8380	1.6540	6.1	GOOD	CONCRETE
		TOTAL	**1.6540**			
BAT 114	Calle Rizal, Taal	0.0000	0.0480	5	BAD	CONCRETE
		0.0480	0.6450	5	FAIR	CONCRETE
		0.6450	0.6620	5	BAD	CONCRETE
		0.6620	1.0000	5	FAIR	CONCRETE
		TOTAL	**1.0000**			
BAT 115	Aya - Tranca Road	0.0000	0.1630	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.1630	0.2660	6.1	GOOD	CONCRETE
		0.2660	0.5210	5	FAIR	CONCRETE
		0.5210	0.8090	5	GOOD	CONCRETE
		0.8090	1.1900	5	FAIR	CONCRETE
		1.1900	1.2170	5	GOOD	CONCRETE
		1.2170	1.2700	5	BAD	CONCRETE
		1.2700	1.3150	5	GOOD	CONCRETE
		1.3150	1.4030	5	FAIR	CONCRETE
		1.4030	1.5230	5	GOOD	CONCRETE
		1.5230	1.6480	5	FAIR	CONCRETE
		1.6480	2.3540	5	GOOD	CONCRETE
		2.3540	2.4420	5	FAIR	CONCRETE
		2.4420	2.9220	5	GOOD	CONCRETE
		2.9220	3.0160	5	GOOD	CONCRETE
		3.0160	3.1690	5	GOOD	ASPHALT
		3.1690	3.9340	5	FAIR	CONCRETE
		TOTAL	**3.9340**			
BAT 116	Poblacion, Rosario - Mahanadiong, Taysan Road	0.0000	1.1980	6	GOOD	ASPHALT
		1.1980	1.2970	6	GOOD	ASPHALT
		1.2970	1.3870	6	GOOD	ASPHALT
		1.3870	1.4350	6	GOOD	ASPHALT
		1.4350	2.4570	5.6	GOOD	ASPHALT
		2.4570	2.6930	5.6	GOOD	ASPHALT
		2.6930	2.7760	5.6	GOOD	CONCRETE
		2.7760	2.8040	5.6	GOOD	ASPHALT
		2.8040	2.8280	5.6	GOOD	CONCRETE
		2.8280	2.8530	5.6	BAD	CONCRETE
		2.8530	2.9150	5.6	GOOD	ASPHALT
		2.9150	2.9270	5.6	BAD	CONCRETE
		2.9270	2.9960	5.6	GOOD	CONCRETE
		2.9960	3.0090	5.6	BAD	CONCRETE
		3.0090	3.0350	5.6	GOOD	ASPHALT
		3.0350	3.0470	5.6	BAD	CONCRETE
		3.0470	3.0880	5.6	GOOD	CONCRETE
		3.0880	3.2230	5.6	GOOD	ASPHALT
		3.2230	3.2700	5.6	BAD	ASPHALT
		3.2700	3.6220	5	GOOD	ASPHALT
		3.6220	3.8790	5	BAD	ASPHALT
		3.8790	4.1820	5	GOOD	ASPHALT
		4.1820	4.2260	5	BAD	ASPHALT
		4.2260	4.3680	5	GOOD	ASPHALT
		4.3680	4.5360	5	GOOD	CONCRETE
		4.5360	4.6160	5	BAD	CONCRETE
		4.6160	4.7450	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		4.7450	4.9980	6	GOOD	CONCRETE
		4.9980	5.0660	6	GOOD	ASPHALT
		5.0660	5.3760	6	BAD	CONCRETE
		5.3760	5.4990	6	BAD	CONCRETE
		5.4990	5.8700	6	GOOD	CONCRETE
		5.8700	6.0550	6	GOOD	ASPHALT
		6.0550	6.1770	6	BAD	CONCRETE
		6.1770	6.6310	6	GOOD	CONCRETE
		6.6310	6.7460	6	BAD	CONCRETE
		6.7460	7.1050	6	FAIR	CONCRETE
		7.1050	7.1960	6	BAD	CONCRETE
		TOTAL	**7.1960**			
BAT 117	Poblacion - Dagatan Road	0.0000	0.1490	6	GOOD	CONCRETE
		0.1490	0.1550	5.5	BAD	CONCRETE
		0.1550	0.2000	5	GOOD	CONCRETE
		0.2000	0.2990	5	BAD	CONCRETE
		0.2990	0.4300	6	GOOD	CONCRETE
		0.4300	0.5070	6	GOOD	
		0.5070	0.6170	6	GOOD	
		0.6170	0.7060	6	BAD	CONCRETE
		0.7060	0.8380	6	GOOD	CONCRETE
		0.8380	1.0240	6	GOOD	
		1.0240	1.1610	6	BAD	CONCRETE
		1.1610	1.2000	6	GOOD	CONCRETE
		1.2000	1.5750	6	GOOD	CONCRETE
		1.5750	2.0360	5	BAD	CONCRETE
		2.0360	2.1650	5	GOOD	CONCRETE
		2.1650	2.6100	5	BAD	CONCRETE
		2.6100	2.6820	5	GOOD	CONCRETE
		2.6820	2.9440	5	BAD	CONCRETE
		2.9440	3.2100	5	GOOD	CONCRETE
		3.2100	3.5720	5	BAD	CONCRETE
		3.5720	3.6530	5	GOOD	CONCRETE
		3.6530	4.5140	5	BAD	CONCRETE
		4.5140	4.6630	5	GOOD	CONCRETE
		4.6630	5.1570	5	BAD	CONCRETE
		5.1570	5.2050	5	GOOD	CONCRETE
		5.2050	5.7000	5	BAD	CONCRETE
		5.7000	5.8740	5	GOOD	CONCRETE
		5.8740	8.7000	5	BAD	CONCRETE
		TOTAL	**8.7000**			
BAT 118	Poblacion-Bilogo Rd.	0.0000	0.4790	5	GOOD	ASPHALT
		0.4790	0.6360	5	BAD	CONCRETE
		0.6360	1.1080	5	GOOD	ASPHALT

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.1080	1.2970	5	BAD	CONCRETE
		1.2970	1.3590	5	GOOD	ASPHALT
		1.3590	1.5270	5	FAIR	ASPHALT
		1.5270	1.5610	5	GOOD	ASPHALT
		1.5610	1.9840	5	BAD	ASPHALT
		1.9840	2.2060	5	FAIR	ASPHALT
		2.2060	2.2270	5	BAD	ASPHALT
		2.2270	2.5160	5	FAIR	ASPHALT
		2.5160	2.6220	5	BAD	ASPHALT
		2.6220	2.6950	5	FAIR	ASPHALT
		2.6950	2.9450	5	GOOD	ASPHALT
		2.9450	3.1000	5	FAIR	ASPHALT
		3.1000	3.1190	5	GOOD	ASPHALT
		3.1190	3.3290	5	BAD	ASPHALT
		3.3290	3.4080	5	FAIR	ASPHALT
		3.4080	3.9410	5	BAD	ASPHALT
		3.9410	3.9880	5	GOOD	ASPHALT
		3.9880	4.0930	5	FAIR	ASPHALT
		4.0930	4.1970	5	GOOD	ASPHALT
		4.1970	4.4530	5	BAD	ASPHALT
		4.4530	4.5590	5	FAIR	ASPHALT
		4.5590	4.6650	5	BAD	ASPHALT
		4.6650	5.6380	5	FAIR	ASPHALT
		5.6380	6.0700	5	GOOD	ASPHALT
		6.0700	6.4700	5	FAIR	ASPHALT
		6.4700	6.9420	5	BAD	ASPHALT
		TOTAL	**6.9420**			
BAT 119	Mahanadiong - Panghayaan Rd.	0.0000	0.2600	5	BAD	CONCRETE
		0.2600	0.5050	5	FAIR	CONCRETE
		0.5050	0.6920	5	BAD	CONCRETE
		0.6920	1.0520	5	FAIR	CONCRETE
		1.0520	1.2610	5	BAD	CONCRETE
		1.2610	1.5890	5	FAIR	CONCRETE
		1.5890	1.7550	5	GOOD	CONCRETE
		1.7550	2.1670	5	FAIR	CONCRETE
		2.1670	2.3170	5	BAD	CONCRETE
		2.3170	2.8500	5	FAIR	CONCRETE
		TOTAL	**2.8500**			
BAT 120	Mabayabas - Tilambo road	0.0000	0.1110	3	BAD	CONCRETE
		0.1110	0.1290	4	GOOD	CONCRETE
		0.1290	0.1960	3	BAD	CONCRETE
		0.1960	0.2340	3	BAD	CONCRETE
		0.2340	0.2510	4	FAIR	CONCRETE
		0.2510	0.5100	4	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		0.5100	0.5500	4	BAD	CONCRETE
		0.5500	0.5670	4	GOOD	CONCRETE
		0.5670	0.7110	4	BAD	CONCRETE
		0.7110	0.7410	4	GOOD	CONCRETE
		0.7410	0.7970	4	FAIR	CONCRETE
		0.7970	0.9220	4	FAIR	CONCRETE
		0.9220	0.9370	4	FAIR	CONCRETE
		0.9370	0.9590	4	GOOD	CONCRETE
		0.9590	1.0270	4	FAIR	CONCRETE
		1.0270	1.4740	4	BAD	CONCRETE
		1.4740	1.9920	4	GOOD	ASPHALT
		1.9920	2.0320	4	BAD	ASPHALT
		2.0320	2.1100	4	GOOD	ASPHALT
		2.1100	2.1980	4	BAD	ASPHALT
		2.1980	2.2970	4	GOOD	ASPHALT
		2.2970	2.3150	4	BAD	ASPHALT
		2.3150	2.3460	4	GOOD	ASPHALT
		2.3460	2.4650	4	BAD	ASPHALT
		2.4650	2.7680	4	GOOD	ASPHALT
		2.7680	5.9690	4	BAD	ASPHALT
		TOTAL	**5.9690**			
BAT 121	Sto. Niño Diversion Road	0.0000	0.7640	5	BAD	CONCRETE
		0.7640	0.8400	6	BAD	CONCRETE
		0.8400	2.0920	5	BAD	CONCRETE
		2.0920	2.3750	6	BAD	CONCRETE
		2.3750	4.2450	5	BAD	CONCRETE
		TOTAL	**4.2450**			
BAT 122	Bukal - Pinagbayanan Road(2019)	0.0000	0.6970	5	GOOD	CONCRETE
		0.6970	1.0340	5	BAD	CONCRETE
		1.0340	1.2020	5	FAIR	CONCRETE
		1.2020	1.2500	4	BAD	CONCRETE
		1.2500	1.2660	5	GOOD	CONCRETE
		1.2660	1.4000	5	BAD	CONCRETE
		1.4000	2.1900	5	GOOD	CONCRETE
		2.1900	2.2300	5	BAD	CONCRETE
		2.2300	2.5500	5	GOOD	CONCRETE
		2.5500	2.6250	5	BAD	CONCRETE
		2.6250	2.6700	5	GOOD	CONCRETE
		2.6700	2.8820	5	GOOD	CONCRETE
		2.8820	3.0320	5	BAD	CONCRETE
		3.0320	3.1490	5	GOOD	CONCRETE
		3.1490	3.3810	5	BAD	CONCRETE
		3.3810	3.4970	4	BAD	CONCRETE
		3.4970	3.8300	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		3.8300	3.8930	5	BAD	CONCRETE
		3.8930	4.0800	5	GOOD	CONCRETE
		TOTAL	**4.0800**			
BAT 123	Sto.Nino - Diversion Road(2019)	0.0000	0.1370	4	FAIR	CONCRETE
		0.1370	0.1670	4	BAD	CONCRETE
		0.1670	0.2230	4	GOOD	CONCRETE
		0.2230	0.2420	4	BAD	CONCRETE
		0.2420	0.3270	4	GOOD	CONCRETE
		0.3270	0.3730	4	BAD	CONCRETE
		0.3730	0.6110	4	GOOD	CONCRETE
		0.6110	0.7920	4	FAIR	CONCRETE
		0.7920	1.1278	4	BAD	CONCRETE
		1.1278	1.2530	4	GOOD	CONCRETE
		1.2530	1.5360	4	BAD	CONCRETE
		TOTAL	**1.5360**			
BAT 124	Luna - Burgos - Rizal Road (2019)	0.0000	0.3250	5	FAIR	CONCRETE
		0.3250	0.4280	5	GOOD	ASPHALT
		0.4280	0.6330	5	GOOD	CONCRETE
		0.6330	1.1700	5	FAIR	CONCRETE
		TOTAL	**1.1700**			
BAT 125	Lumbangan Road (2019)	0.0000	0.3410	5	GOOD	CONCRETE
		0.3410	0.5000	5	BAD	CONCRETE
		TOTAL	**0.5000**			
BAT 126	Luna - Tuong Road(2019)	0.0000	0.1340	5	GOOD	CONCRETE
		0.1340	0.3840	5	GOOD	CONCRETE
		0.3840	0.4850	5	BAD	CONCRETE
		0.4850	0.8410	5	GOOD	CONCRETE
		0.8410	1.1300	5	FAIR	CONCRETE
		1.1300	1.4750	6	GOOD	CONCRETE
		1.4750	1.5330	6	ON GOING ROAD REBLOCKING	CONCRETE
		1.5330	1.6710	6	GOOD	CONCRETE
		1.6710	4.1850	5	GOOD	CONCRETE
		4.1850	4.2220	6	GOOD	CONCRETE
		4.2220	4.7530	5	GOOD	CONCRETE
		4.7530	4.8600	6	GOOD	CONCRETE
		4.8600	5.2760	5	GOOD	CONCRETE
		5.2760	5.3520	6	GOOD	CONCRETE
		5.3520	5.5260	5	GOOD	CONCRETE
		5.5260	5.6590	6	GOOD	CONCRETE
		5.6590	5.7200	5	GOOD	CONCRETE
		5.7200	6.5600	6	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		6.5600	6.6260	5	GOOD	CONCRETE
		6.6260	6.6710	6	GOOD	CONCRETE
		6.6710	9.4200	5	GOOD	CONCRETE
		TOTAL	**9.4200**			
BAT 127	Rillo Bolbok Road(2019)	0.0000	0.1200	6	GOOD	CONCRETE
		0.1200	0.3270	4	FAIR	CONCRETE
		0.3270	0.5370	4	BAD	CONCRETE
		0.5370	0.8490	4	GOOD	CONCRETE
		0.8490	1.2030	4	BAD	CONCRETE
		1.2030	1.4100	5	GOOD	CONCRETE
		1.4100	1.6430	5	GOOD	CONCRETE
		1.6430	1.6540	5	BAD	CONCRETE
		1.6540	2.2070	5	GOOD	CONCRETE
		2.2070	2.4460	4	FAIR	CONCRETE
		2.4460	3.0170	5	GOOD	CONCRETE
		3.0170	3.2290	4	BAD	CONCRETE
		3.2290	3.9580	4	GOOD	CONCRETE
		3.9580	4.0240	4	BAD	CONCRETE
		4.0240	4.5500	4	GOOD	CONCRETE
		TOTAL	**4.5500**			
BAT 128	Brgy.14 Rd. (Rizal St.)	0	0.5	4.5	GOOD	CONCRETE
		TOTAL	**0.5000**			
BAT 129	San Roque Road	0.0000	0.1050	6	GOOD	CONCRETE
		0.1050	0.3920	5	BAD	CONCRETE
		0.3920	0.5660	5	GOOD	CONCRETE
		0.5660	0.9060	5	BAD	CONCRETE
		0.9060	0.9350	5	GOOD	CONCRETE
		0.9350	0.9690	5	BAD	CONCRETE
		0.9690	1.0670	4	FAIR	CONCRETE
		1.0670	1.1390	6	BAD	CONCRETE
		1.1390	1.1980	6	FAIR	CONCRETE
		1.1980	1.2070	6	BAD	CONCRETE
		1.2070	1.5200	5	FAIR	CONCRETE
		TOTAL	**1.5200**			
BAT 130	Brgy. 2 - San Antonio Road	0.0000	0.2430	6	BAD	CONCRETE
		0.2430	0.4070	5	BAD	CONCRETE
		0.4070	0.4900	5	ON GOING ROAD REBLOCKING	
		0.4900	0.5440	5	GOOD	CONCRETE
		0.5440	0.8650	5	BAD	CONCRETE
		0.8650	1.0240	5	GOOD	CONCRETE
		1.0240	1.3450	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.3450	1.3990	5	GOOD	CONCRETE
		1.3990	1.4840	5	FAIR	CONCRETE
		1.4840	1.5600	5	BAD	CONCRETE
		1.5600	1.5970	5	FAIR	CONCRETE
		1.5970	1.8990	5	BAD	CONCRETE
		1.8990	1.9600	5	FAIR	CONCRETE
		1.9600	2.0640	5	BAD	CONCRETE
		2.0640	2.1040	5	FAIR	CONCRETE
		2.1040	2.4450	5	BAD	CONCRETE
		2.4450	2.4740	5	FAIR	CONCRETE
		2.4740	2.8250	5	GOOD	CONCRETE
		2.8250	2.8770	5	FAIR	CONCRETE
		2.8770	2.9000	5	GOOD	CONCRETE
		2.9000	2.9420	5	BAD	CONCRETE
		2.9420	3.0200	5	GOOD	CONCRETE
		TOTAL	**3.0200**			
BAT 131	San Bartolome Road	0.0000	0.1680	5	GOOD	ASPHALT
		0.1680	0.2670	4	FAIR	CONCRETE
		0.2670	0.3340	5	GOOD	CONCRETE
		0.3340	0.5000	4	BAD	CONCRETE
		0.5000	0.6720	4	FAIR	CONCRETE
		0.6720	0.7790	4	BAD	CONCRETE
		0.7790	0.8260	4	FAIR	CONCRETE
		0.8260	0.8820	4	BAD	CONCRETE
		0.8820	0.9220	4	FAIR	CONCRETE
		0.9220	0.9800	5	BAD	CONCRETE
		0.9800	1.1600	5	FAIR	CONCRETE
		1.1600	1.2000	5	BAD	CONCRETE
		1.2000	1.2240	5	FAIR	CONCRETE
		1.2240	1.2860	6	GOOD	CONCRETE
		1.2860	1.3030	5	BAD	CONCRETE
		1.3030	1.5790	5	FAIR	CONCRETE
		1.5790	1.6210	4	BAD	CONCRETE
		1.6210	1.6520	4	FAIR	CONCRETE
		1.6520	1.7120	4	BAD	CONCRETE
		1.7120	1.7620	4	FAIR	CONCRETE
		1.7620	1.8000	4	BAD	CONCRETE
		1.8000	1.8200	5	FAIR	CONCRETE
		1.8200	1.8560	5	FAIR	CONCRETE
		1.8560	1.8740	5	GOOD	CONCRETE
		1.8740	1.8950	5	FAIR	CONCRETE
		1.8950	1.9280	5	GOOD	CONCRETE
		1.9280	2.2520	5	FAIR	CONCRETE
		2.2520	2.4290	5	GOOD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		2.4290	2.4520	5	FAIR	CONCRETE
		2.4520	2.4830	5	GOOD	CONCRETE
		2.4830	2.5320	5	BAD	CONCRETE
		2.5320	2.5520	5	GOOD	CONCRETE
		2.5520	2.5730	5	BAD	CONCRETE
		2.5730	2.6510	5	GOOD	CONCRETE
		2.6510	2.6860	5	FAIR	CONCRETE
		2.6860	2.7110	5	GOOD	CONCRETE
		TOTAL	**2.7110**			
BAT 132	San Miguel Road	0.0000	0.0550	6	FAIR	CONCRETE
		0.0550	0.1950	6	BAD	CONCRETE
		0.1950	0.3740	6	GOOD	CONCRETE
		0.3740	0.5490	6	BAD	CONCRETE
		0.5490	0.6700	4	FAIR	CONCRETE
		0.6700	0.6870	6	BAD	CONCRETE
		0.6870	0.7290	6	GOOD	CONCRETE
		0.7290	0.7820	6	BAD	CONCRETE
		0.7820	0.9170	6	GOOD	CONCRETE
		0.9170	0.9300	6	BAD	CONCRETE
		0.9300	1.0830	6	GOOD	CONCRETE
		1.0830	1.3730	6	BAD	CONCRETE
		1.3730	1.5220	5	FAIR	CONCRETE
		1.5220	1.5410	5	BAD	CONCRETE
		1.5410	1.7700	5	GOOD	CONCRETE
		1.7700	1.8980	4	BAD	CONCRETE
		1.8980	2.0200	5	GOOD	CONCRETE
		TOTAL	**2.0200**			
BAT133	San Vicente Road	0.0000	0.1430	4	FAIR	CONCRETE
		0.1430	0.2250	5	GOOD	CONCRETE
		0.2250	0.4680	5	FAIR	CONCRETE
		0.4680	0.4980	5	BAD	CONCRETE
		0.4980	0.5830	5	FAIR	CONCRETE
		0.5830	0.6170	5	BAD	CONCRETE
		0.6170	0.7370	5	FAIR	CONCRETE
		0.7370	0.7640	5	BAD	CONCRETE
		0.7640	0.9360	5	FAIR	CONCRETE
		0.9360	0.9910	5	GOOD	CONCRETE
		0.9910	1.1910	5	FAIR	CONCRETE
		TOTAL	**1.1910**			
BAT 134	San Pedro- Sta. Cruz, Sto. Tomas	0.0000	0.2690	5	BAD	CONCRETE
		0.2690	0.8880	5	FAIR	CONCRETE
		0.8880	0.9440	5	BAD	CONCRETE
		0.9440	1.0260	5	FAIR	CONCRETE
		1.0260	1.1880	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.1880	1.2500	5	GOOD	CONCRETE
		1.2500	1.3980	5	BAD	CONCRETE
		1.3980	1.4650	5	FAIR	CONCRETE
		1.4650	1.8600	5	BAD	CONCRETE
		1.8600	1.9310	5	FAIR	CONCRETE
		1.9310	2.3690	5	BAD	CONCRETE
		2.3690	2.7430	5	FAIR	CONCRETE
		2.7430	2.8320	5	BAD	CONCRETE
		2.8320	3.0000	5	GOOD	CONCRETE
		3.0000	3.1950	5	BAD	CONCRETE
		3.1950	3.2730	5	GOOD	CONCRETE
		3.2730	3.7460	5	FAIR	CONCRETE
		3.7460	3.8700	5	GOOD	CONCRETE
		3.8700	4.0200	5	FAIR	CONCRETE
		4.0200	4.4180	5	GOOD	CONCRETE
		4.4180	4.4440	5	FAIR	CONCRETE
		4.4440	5.0360	5	GOOD	CONCRETE
		5.0360	5.0430	5	BAD	CONCRETE
		5.0430	5.0800	5	GOOD	CONCRETE
		5.0800	5.1950	5	BAD	CONCRETE
		5.1950	5.3040	5	FAIR	CONCRETE
		5.3040	5.3480	5	BAD	CONCRETE
		5.3480	5.4130	5	FAIR	CONCRETE
		5.4130	5.5380	5	GOOD	CONCRETE
		5.5380	5.7240	5	FAIR	CONCRETE
		5.7240	5.7890	5	BAD	CONCRETE
		5.7890	5.9680	5	FAIR	CONCRETE
		5.9680	6.2130	5	GOOD	CONCRETE
		6.2130	6.5510	5	FAIR	CONCRETE
		6.5510	6.7500	5	GOOD	CONCRETE
		6.7500	6.7730	5	FAIR	CONCRETE
		6.7730	6.7950	5	GOOD	CONCRETE
		6.7950	6.8190	5	FAIR	CONCRETE
		6.8190	6.8500	5	GOOD	CONCRETE
		6.8500	6.8830	5	FAIR	CONCRETE
		6.8830	6.9910	5	GOOD	CONCRETE
		6.9910	7.0470	5	FAIR	CONCRETE
		7.0470	7.1020	5	GOOD	CONCRETE
		7.1020	7.1310	5	BAD	CONCRETE
		7.1310	7.1750	5	GOOD	CONCRETE
		7.1750	7.2250	5	BAD	CONCRETE
		7.2250	7.2610	5	GOOD	CONCRETE
		7.2610	7.3630	5	BAD	CONCRETE
		7.3630	7.5090	5	FAIR	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		7.5090	7.7090	5	GOOD	CONCRETE
		7.7090	7.8170	5	FAIR	CONCRETE
		7.8170	8.0950	5	GOOD	CONCRETE
		8.0950	8.1390	5	BAD	CONCRETE
		8.1390	8.2040	5	GOOD	CONCRETE
		8.2040	8.2650	5	BAD	CONCRETE
		8.2650	8.3590	6	GOOD	CONCRETE
		8.3590	8.4000	5	BAD	CONCRETE
		8.4000	8.4470	6	GOOD	CONCRETE
		8.4470	8.5680	6	BAD	CONCRETE
		8.5680	8.6530	5	GOOD	CONCRETE
		8.6530	8.7310	5	BAD	CONCRETE
		8.7310	8.7700	5	FAIR	CONCRETE
		8.7700	8.8160	5	BAD	CONCRETE
		8.8160	8.8890	5	FAIR	CONCRETE
		8.8890	9.0400	5	BAD	CONCRETE
		9.0400	9.0550	5	GOOD	CONCRETE
		9.0550	9.1890	5	BAD	CONCRETE
		9.1890	9.2300	6	GOOD	CONCRETE
		9.2300	9.3060	5	BAD	CONCRETE
		9.3060	9.3770	5	FAIR	CONCRETE
		9.3770	9.4670	5	GOOD	CONCRETE
		9.4670	9.4820	5	BAD	CONCRETE
		9.4820	9.5390	5	GOOD	CONCRETE
		9.5390	9.5580	5	BAD	CONCRETE
		9.5580	9.6340	5	BAD	CONCRETE
		9.6340	9.6770	5	BAD	CONCRETE
		9.6770	9.8070	5	GOOD	CONCRETE
		9.8070	9.8230	5	FAIR	CONCRETE
		9.8230	10.0940	5	GOOD	CONCRETE
		10.0940	10.2750	5	BAD	CONCRETE
		10.2750	10.3250	5	GOOD	CONCRETE
		10.3250	10.4480	5	BAD	CONCRETE
		10.4480	10.5000	5	GOOD	CONCRETE
		10.5000	10.6770	5	BAD	CONCRETE
		10.6770	10.7530	5	GOOD	CONCRETE
		10.7530	11.0800	5	BAD	CONCRETE
		11.0800	11.1080	5	GOOD	CONCRETE
		11.1080	11.1250	5	BAD	CONCRETE
		11.1250	11.1380	6	GOOD	CONCRETE
		11.1380	11.2370	5	BAD	CONCRETE
		11.2370	11.4830	6	GOOD	CONCRETE
		11.4830	11.8170	5	GOOD	CONCRETE
		11.8170	11.8550	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		11.8550	11.9230	4	GOOD	CONCRETE
		11.9230	12.2130	4	BAD	CONCRETE
		12.2130	12.3430	4	FAIR	CONCRETE
		12.3430	12.8180	4	BAD	CONCRETE
		TOTAL	**12.8180**			
BAT 135	San Felix - San Joaquin Road	0.0000	0.0460	4	FAIR	CONCRETE
		0.0460	0.0900	4	GOOD	CONCRETE
		0.0900	0.1930	4	BAD	CONCRETE
		0.1930	0.2030	4	GOOD	CONCRETE
		0.2030	0.2340	4	BAD	CONCRETE
		0.2340	0.3420	4	FAIR	CONCRETE
		0.3420	0.3720	4	GOOD	CONCRETE
		0.3720	0.4210	4	BAD	CONCRETE
		0.4210	0.7448	4	GOOD	CONCRETE
		0.7448	0.9770	4	BAD	CONCRETE
		0.9770	1.0200	4	GOOD	CONCRETE
		1.0200	1.1000	4	BAD	CONCRETE
		1.1000	1.1540	4	GOOD	CONCRETE
		1.1540	1.2670	4	BAD	CONCRETE
		1.2670	1.3870		ON GOING ROAD REBLOCKING	
		1.3870	1.4110	4	GOOD	CONCRETE
		1.4110	1.5210		ON GOING ROAD REBLOCKING	
		1.5210	2.0910	4	BAD	CONCRETE
		2.0910	2.1870	5	GOOD	CONCRETE
		2.1870	2.3370	5	BAD	CONCRETE
		2.3370	2.3790	5	GOOD	CONCRETE
		2.3790	2.6090	5	GOOD	CONCRETE
		2.6090	2.8010	4	BAD	CONCRETE
		2.8010	2.8200	4	BAD	CONCRETE
		TOTAL	**2.8200**			
BAT 136	San Agustin - Sta. Clara Road	0.0000	0.0210	6	GOOD	CONCRETE
		0.0210	0.5000	6	BAD	CONCRETE
		0.5000	1.2140	5	BAD	CONCRETE
		1.2140	1.3720		ON GOING ROAD REBLOCKING	
		1.3720	1.5190	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.5190	1.7000	5	FAIR	CONCRETE
		1.7000	1.8050		ON GOING ROAD REBLOCKING	
		1.8050	2.0330	5	BAD	CONCRETE
		2.0330	2.0850		ON GOING ROAD REBLOCKING	
		2.0850	2.2160	5	BAD	CONCRETE
		2.2160	2.2480		ON GOING ROAD REBLOCKING	
		2.2480	2.3290	4	BAD	CONCRETE
		2.3290	2.4310	4	FAIR	CONCRETE
		2.4310	2.5200	5	BAD	CONCRETE
		2.5200	2.5490	5	FAIR	CONCRETE
		2.5490	2.6790	5	BAD	CONCRETE
		2.6790	2.7080	5	FAIR	CONCRETE
		2.7080	2.7580	5	BAD	CONCRETE
		2.7580	2.8140	5	FAIR	CONCRETE
		2.8140	3.0000	5	BAD	CONCRETE
		3.0000	3.1390	4	BAD	CONCRETE
		3.1390	3.2090	4	GOOD	ASPHALT
		3.2090	3.2740	4	FAIR	CONCRETE
		3.2740	3.3750	4	BAD	CONCRETE
		3.3750	3.5000	4	FAIR	CONCRETE
		3.5000	3.5380	4	GOOD	CONCRETE
		3.5380	3.5640	4	BAD	CONCRETE
		3.5640	3.6200	4	GOOD	CONCRETE
		3.6200	3.6510	4	BAD	CONCRETE
		3.6510	3.7040	4	GOOD	CONCRETE
		3.7040	3.7180	4	BAD	CONCRETE
		3.7180	3.8390	4	FAIR	CONCRETE
		3.8390	3.9570	6	GOOD	CONCRETE
		3.9570	4.0000	6	FAIR	CONCRETE
		4.0000	4.6550	6	GOOD	CONCRETE
		TOTAL	**4.6550**			
BAT 137	San Fernando - San Luis Road, Sto. Tomas - San Lucas, Lipa City	0.0000	1.0100	5	GOOD	ASPHALT
		1.0100	1.1008	5	FAIR	CONCRETE
		1.1008	1.2000	5	GOOD	ASPHALT
		1.2000	1.4960	5	BAD	CONCRETE

ROAD ID.	ROAD NAME	MUNICIPALITY		WIDTH	CONDITON	SURFACE
		FROM	TO			
		1.4960	1.5730	5	FAIR	CONCRETE
		1.5730	1.6570	5	GOOD	CONCRETE
		1.6570	1.8480	5	FAIR	CONCRETE
		1.8480	1.8850	5	GOOD	CONCRETE
		1.8850	2.0000	5	FAIR	CONCRETE
		2.0000	2.2910	5	GOOD	CONCRETE
		2.2910	3.1700	5	FAIR	CONCRETE
		TOTAL	**3.1700**			

PROVINCIAL BRIDGES 2020

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
BAT001 Coral na Munti - Pamiga - Poblacion Road, Agoncillo 133+120-135+040	1. Coral na Munti Br. 134+700	Steel	1	12	a. 3.85 /b. Steel	10	Passable
BAT002 Poblacion - San Teodoro - Pansipit Road, Agoncillo 132+120-136+420	1. San Teodoro Br. 132+420	Box Culvert	1	4.2	a. 8 /b. Concrete	15	Passable
	2. Pansipit Br. 135+900	Steel	1	12	a. 3.85 /b. Steel	10	Passable
BAT003 Poblacion - Pook Road, Agoncillo 132+950-133+850	1. Poblacion Br. 133+050	RCDG	1	7.1	a. 5 /b. Concrete	10	Passable
BAT 011 Manghinao - Inicbulan Road, Bauan 145+320-150+920	1. Manghinao Br. 146+330	Flat Slab	1	6.6	a. 4.30 b. Concrete	15	Passable
BAT 012 Sinala -Alagao Road, Bauan 146+590-149+590	1. Sinala Br. 146+780	Concrete	1	9.7	a. 4.30 b. Concrete	15	Passable
BAT 017 Salong Road, Calaca / (116+950-118+400)	1. Salong Br. 118+000	Concrete	1	5.85	a. 4.20 / b. Concrete	10	Passable
BAT 023 Madalunot - Puting Kahoy Rd.Calaca /117+700- 120+730	1. Putting Kahoy Br. 117+ 810	Concrete	1	16.8	a. 7.40 /b. Concrete	15	Passable
BAT 025 Lucsuhin - Carlosa Road, Calatagan	1. Lucsuhin Br. 212+550	RCDG	1	14.4	a. 6.80 /b. Concrete	10	Passable
	2. Lucsuhin 212+670	Box Culvert	1	4.8	a. 7.70/b. Concrete	15	Passable
	3. Lucsuhin 122-520	Box Culvert	1	4	a. 7.67 /b. Concrete	15	Passable
	4. Sambungan 122+590	RCDG	1	14.4	a.6.75 /b. Concrete	15	Passable
	5. Real Br. 123+270	RCDG	1	10	a.4.10 /b. Concrete	10	Passable
	6. Carlosa Bailey 124+620	Bailey	1	9	a.2.90 /b. Timber	3	Passable
BAT 026	1. Duhatan Br. 116+610	RCDG	1	39.3	a.6.70 /b. Concrete	15	Passable

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
Gulod - Paraiso Road Calatagan /115+460-125+460	2. Biga Br. 122+210	RCDG	1	4.5	a.6.70 /b. Concrete	15	Passable
BAT030 Pinagkrusan, Alitagtag - Bungahan, Cuenca - Lalayat, San Jose Road, Alitagtag, Cuenca & San Jose 98+680-105+335	1. Dalipit East (Box Culvert) 102+272.50	Concrete	1	2	a. 4 /b. Concrete	15	Passable
	2. Bungahan (Box culvert) 102+592.5	Concrete	1	6.2	a. 6.65 /b. Concrete	15	Passable
BAT031 Bago - Quilo Road, Ibaan 137+000-103+360	1. Quilo Br. 138+260	Spillway	1	10.6	a. 4 /b. Concrete	15	Passable
BAT032 Dayapan-Colongan Road, Ibaan 136+200-141+300	1. Dayapan 136+600	Concrete	1		a. 4.20 /b. Concrete	15	Passable
	2. Lucsuhin	Concrete	1		a. 4.20 /b. Concrete	15	Passable
	3. Lucsuhin 137+600	Concrete	1		a. 4.20 /b. Concrete	15	Passable
BAT034 Poblacion, Ibaan - Pagasa, Taysan Road, Ibaan & Taysan 135+280-143+780	1. Sandalan 140+550	Concrete	1	4	a. 6 /b. Concrete	15	Passable
	2. Balanga 141+370	Concrete	1	4	a. 6 /b. Concrete	15	Passable
	3. Mabalor	Spillway	1	54	a. 4 /b. Concrete	10	Passable
BAT035 Poblacion 2 - San Gregorio Road, Laurel 95+240-104+900	1. Alas-as 0+750	RCDG	1	39	a. 6.70 /b. Concrete	15	Passable
BAT 040 Sinisian East - Arumahan Road, Lemery / 128+480-135+880	1. Calawang Br. 129+500	Concrete	1	6.6	a.5.08 /b. Concrete	15	Passable
	2. Bagong Pook 130+980	Steel	1	28.8	a.6.40 /b. Steel w/ Asphalt	5	Passable
	3. Arumahan Br. 131+430	Concrete	1	36	a.8 /b. Steel	15	Passable
BAT 042	1. Binubusan Br. 111+600	Concrete	1	6.7	a.4.20 /b. Concrete	10	Passable

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
Binubusan Road (Sitio Matuod) Lian /110+600-125+460							
BAT 045	1. Dalima Br. 94+130	Concrete	1	33	a.3.15 /b. Concrete	15	Passable
Luntal, Tuy - Brgy. 4, Lian Road, Tuy & Lian /94+030-99+230	2. Bagong Pook Br. 95+050	Concrete	1	24.4	a.6.70 /b. Concrete	15	Passable
	3. Tolentino Br. 95+960	Concrete	1	40	a.7.32 /b. Concrete	5	Passable
	4. Malaruhatan 96+ 960	Concrete	1	27	a.3.15 /b. Steel	15	Passable
BAT056 Santiago - San Juan Road Malvar 76+180-81+280	1. Manik 76+790	Concrete	1	7	a. 4.20 /b. Concrete	15	Passable
BAT057 San Juan - San Fernando Road, Malvar 74+470-66+070	1. San Juan 75+090	Concrete	1	9	a. 4.10 /b. Concrete	15	Passable
BAT058 Poblacion - Bagong Pook Road, Malvar 72+220-75+430	1. Bagong Pook 72+600	Concrete	1	8.45	a. 4.20 /b. Concrete	15	Passable
	2. Bagong Pook 73+080	Concrete	1	6.6	a. 4.20 /b. Concrete	15	Passable
BAT059 Poblacion, Malvar - Magapi, Balete Road, Malvar & Balete 72+240-77+000	1. Poblacion 72+540	Concrete	1	5.6	a. 4.20 /b. Concrete	15	Passable
BAT061 Poblacion Road, Malvar 72+000-74+400	1. Poblacion 72+350	Spanish arc	1	5.6	a. 4 /b. Concrete	15	Passable
BAT 063 Brgy. 10 - Wawa Road (R. Martinez St.) Nasugbu / 104+540-106+040	1. Blvd. 105+440	Concrete	1	7.9	a.6 /b. Concrete	15	Passable
BAT 067 Putat - Papaya Road (Cavite Bdry.) Nasugbu / 102+290-119+690	1. Putat Br. 1 102+400	Concrete	1	12	a.4.20 /b. Concrete	8	Passable
	2. Dayap Br. 1 106+621	RCDG	1	16	a.7.32 /b. Concrete	15	Passable
	3. Putat Br. 3 105+306	Box Culvert	1	13.6	a.5 /b. Concrete	5	Passable

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
	4. Dayap Br. 2 105+774	Steel	1	33	a.7.60 /b. Concrete	15	Passable
	5. Butucan Br. 1 108+003	RCPC	1	4	a.8 /b. Concrete	15	Passable
	6. Butucan Br. 2 108+124	RCPC	1	4	a.8 /b. Concrete	15	Passable
	7. Butucan Br. 3 109+890	RCPC	1	4	a.6 /b. Concrete	15	Passable
	8. Butucan Br. 4 110+113	RCPC	1	4	a.8 /b. Concrete	15	Passable
	9. Butucan Br. 5 110+875.5	Box Culvert	1	4	a.8 /b. Concrete	15	Passable
	10. Butucan Br. 6 111+924	RCPC	1	4	a.8 /b. Concrete	5	Passable
	11. Butucan Br. 7 112+443.5	RCPC	1	4	a.8 /b. Concrete	8	Passable
	12. Butucan Br. 8 112+907.5	Box Culvert	1	4	a.8 /b. Concrete	8	Passable
	13. Butucan Br. 9 113+406.5	Box Culvert	1	4	a.8 /b. Concrete	15	Passable
	14. Bulihan Br.1 113+898.5	RCPC	1	4	a.8 /b. Concrete	15	Passable
	15.Bulihan Br.2 114+189.1	RCPC	1	4	a.8 /b. Concrete	15	Passable
	16. Bulihan Br.3 114+595.5	RCPC	1	4	a.8 /b. Concrete	15	Passable
	17. Bulihan Br.4 114+903.9	RCPC	1	4	a.8 /b. Concrete	15	Passable
	18. Bulihan Br.5 115+092.5	RCPC	1	4	a.8 /b. Concrete	3	Passable
	19. Bulihan Br.6 115+567.5	RCPC	1	16	a.7.32 /b. Concrete	15	Passable
	20. Looc Br.1 117 +448.5	Box Culvert	1	4	a.8 /b. Concrete	5	Passable
	21. Looc Br.2 118+452.3	Concrete	1	19.47	a.7 /b. Concrete	8	Passable
BAT 069 Banilad - Tumalim Road, Nasugbu / 91+740-95+240	1. Tumalim Br. 93+000	Concrete	1	60	a.8.48 /b. Concrete	15	Passable
BAT071							
Payapa - Maugat East Road, Padre Garcia 124+920-133+070	1. Payapa 126+230	Concrete	1	7.4	a. 5 /b. Concrete	15	Passable
	2. Payapa	Concrete	1	14.5	a. 5.10 /b. Concrete		Passable
	2. Maugat 0+250	Steel	1		a. /b. Steel	15	Passable
BAT076							

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
Bagong Pook - Bulihan Road, Rosario 98+800-103+740	1. Mabalor 100+400	Steel	1	24	a. 7 /b. Steel	15	Passable
BAT080 Mabayabas, Taysan - Baybayin, Rosario Road, Taysan & Rosario 102+760-110+500	1. Mabayabas 104+060	Flat Slab	1	12	a. 5 /b. Concrete	15	Passable
	2. Tilambo 105+530	Flat Slab	1	12	a. 5 /b. Concrete	15	Passable
	3. Bulihan 106+000	Steel	1	12	a. 3.85 /b. Steel	15	Passable
	4. Bulihan 106+100	Flat Slab	1	6	a. 5 /b. Concrete	15	Passable
	5. Cahigam 107+460	Flat Slab	1	9	a. 5 /b. Concrete	15	Passable
	6. Cahigam 107+760	Steel	1	12	a. 3.85 /b. Steel	15	Passable
BAT 081 Lumbangan - Leviste Road, Rosario 109+900-116+400	1. Tubuhan 115+100	Spillway	1	8	a. 4.20 /b. Concrete	10	Passable
BAT082 Mayuro - Baywang Road, Rosario 130+400-133+900	1. Bayawang 133+500	Concrete	1	7.5	a. 4.20 /b. Concrete	15	Passable
	2. Bayawang	BoX Culvert	1	3.5	a. 4.30/b. Concrete		Passable
BAT085 Alupay - Macalamcam Road, Rosario 108+080-112+130	1. Macalamcam 108+740	Concrete	1	8.25	a. 4.20 /b. Concrete	10	Passable
BAT087 Puting Kahoy - Nasi Road Rosario 111+960-119+780	1. Lawaye 112+280	Concrete	1	42	a. 4.20 /b. Concrete	15	Passable
	2. Buho 116+150	RCDG	1	27	a. 4.20 /b. Concrete	5	Passable
	3. Nasi	Box Culvert	1	8.1	a. 9.20 /b. Concrete		Passable
BAT089 Banay Banay I - Sto. Cristo Road, San Jose 95+310-97+450	1.Poblacion 96+690	RCDG	1	18	a. 6.70 /b. Concrete	15	Passable
BAT090							

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
Lapu Lapu I- Aya Road (Lipa City Bdry.), San Jose 97+160-101+260	1. Aya Br. 98+000	Steel	1	12	a. 4.20 /b. Steel	15	Passable
BAT091 Poblacion 3, San Jose - Poblacion, Ibaan Road, San Jose & Ibaan, 69+530-104+930	1. Salaban 99+360	RCDG	1	24	a. 6.70 /b. Concrete	15	Passable
	2. Malainin 101+010	RCDG	1	8	a. 6.70 /b. Concrete	15	Passable
	3. Lapu - Lapu 101+730	RCDG	1	21	a. 7.35 /b. Steel	15	Passable
BAT093 Sico - Janao Janao Road San Juan 116 +600-120+600	1. Janao-Janao 117+000	Concrete	1	5.48	a. 4.20 /b. Concrete	10	Passable
BAT 096 Tipaz - Pinagbayanan Road 120+500-126+000	1. Poctol 123+700	Concrete	1	7.3	a. 4.20 /b. Concrete	10	Passable
	2. Pinagbayanan (Bancoro) 121+600	Steel	1	12	a. 7 /b. Steel	15	Passable
	3. Pinagbayanan (Balagbag)	Steel	1	42	a. 7 /b. Steel	15	Passable
BAT 097 Poblacion, Taal - Poblacion, San Luis Road, San Luis Road, Taal & San Luis / 129+368-131+988	1. Maugat 129+958	RCDG	1	14.1	a.7.35 /b. Concrete	15	Passable
	2. Botong 131+302	Box culvert	1	6.6	a.6.20 /b. Concrete	15	Passable
	3. Balibago 131+658.10	RCDG	2	24	a.7.35 /b. Concrete	15	Passable
BAT098 Poblacion, San Luis - Muzon, Alitagtag Road, San Luis & Alitagtag 131+678-140+845	1. Bibingkahan 132+813	Steel	1	24.4	a. 7.35 /b. Steel	10	Passable
BAT100 Poblacion - Balite Road, San Luis	1. Balungay Br. 131+925	RCDG	1	18	a. 6.10 /b. Concrete		Passable
131-678-135+815	2. Dulangan Br. 132+405	R.C Pipe	1	3.5	a. 5 /b. R.C Pipe	15	Passable

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
	3. Lintiw Br. 132-842	Flat Slab	1	16	a. 4.50 / b. Concrete	15	Passable
	4. Bagong Tubig 133+412 (Irrigation)	Steel	1	12.5	a. 3.15 b. Steel	15	Passable
	5. Banoyo 134+132	RCDG	1	35	a. 4 / b. Concrete	15	Passable
	6. Balite 3 135+607	RCDG	1	6	a. 3.80 b. Concrete	5	Passable
	7. Balite 2 135+649.50	Flat Slab	1	4.13	a. 5 / b. Concrete	15	Passable
	8. Balite 1	Flat Slab	1	4.35	a. 4.26 / b. Concrete	15	Passable
BAT101 Banoyo- Boboy Road 132+510-137+410	1. Luya 135+844	Concrete (on going)	1	9	a. 3.90 / b. Timber	5	Passable
BAT 103	1. Zone 4. Br. 130+540	Concrete	1	6.85	a.6.10 /b. Concrete	15	Passable
Zone 4 , Taal - Poblacion , San Nicolas Road, Taal & San Nicolas /	2. Tatlong Maria 130+740	Concrete	1	8.6	a.4.20 /b. Concrete	15	Passable
	3. Seiran 131+840	Concrete	1	9.1	a.6 /b. Concrete	15	Passable
BAT105 Bihis Taal-Poblacion, San Nicholas Road, Taal & San Nicolas 135+250-142+150	1. Barrion Br. 140+880	RCDG	1	15	a. 6.70 /b. Concrete	15	Passable
BAT106 Poblacion - Pook na Banal Road, San Pascual 148+550-153+950	1. Bayanan Br. 151+120	Concrete	1	15	a. 4.75 / b. Concrete	15	Passable
BAT107 Taysan, San Jose - Sambat, San Pascual Road, San Jose & San Pascual 111+060-124+138	1. Lalayat 99+120	RCDG	1	28	a. 6.10 / b. Concrete	5	Passable
	2. Lumil 99+120	RCDG	1	4	a. 4 / b. Concrete	15	Passable
	3. Palanca 97+270	Concrete	1	15	a. 6.7 / b. Concrete	10	Passable
	4. Putol	RCDG	1	12	a. 6.10 / b. Concrete	15	Passable
	5. Palsahingin 103+517	RCDG	1	33.5	a. 7.50 / b. Concrete	15	Passable
	6. Alalum 101+472.50	Concrete (completed)	1	12.5	a. 7.40 / b. Steel	15	Passable

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
	7. San Mariano 99+208.50	Concrete (completed)	1	12.5	a. 3.20 / b. Steel	15	Passable
BAT116 Poblacion, Rosario - Mahanadiong, Taysan Road, Rosario & Taysan 6+660-104+200	1. Itlugan 98+000	RCDG	1	10	a. 6.70 /b. Concrete	15	Passable
	2. Maalas-as 99+960	RCDG	1	48	a. 6.70 /b. Concrete	15	Passable
	3. Maalas-as 100+760	Concrete	1	8	a. 6 /b. Concrete	15	Passable
	4. Calbang 101+020	RCDG	1	15	a. 6.70 /b. Concrete	15	Passable
	5. Calbang 101+940	Concrete	1	9	a. 6 /b. Concrete	15	Passable
	6. Mahanadiong 102+850	Concrete (on going)	1	24	a. 7 / b. Steel	15	Passable
BAT 117 Poblacion - Dagatan Road, Taysan 104+200-113+270	1. Sto. Nino	RCDG	1	18	a. 6.70 /b. Concrete	10	Passable
	2. Maugat 109+980	Concrete	1	36	a. 4.20/b. Concrete	10	Passable
BAT 118 Poblacion - Bilogo Road, Taysan 104+400	1. Pag-asa (Nagkulayin)0+001	Steel	1	30	a. 7 / b. Steel	15	Passable
	2. Kibkiban	RCDG	1	15	a. 4.30 / b. Concrete		Passable
BAT 119 Mahanadiong - Panghayaan Road, Taysan 105+050-107+900	1. Mapulo	RCDG	1	18	a. 6.70 /b. Concrete	10	Passable
BAT 120 Mabayabas-Tilambo Road, Taysan 105+500-111+720	1. Tilambo 109+400	Spillway	1	4	a. 4 /b. Concrete	10	Passable
BAT121 Sto. Nino Jct. - Pinagbayanan Road Taysan 109+900-114+500	1. Tala 111+040	RCDG	1	15	a. 6.70 /b. Concrete	15	Passable
BAT122 Bukal - Pinagbayanan Road, Taysan 114+000-118+080	1. Bucal 114+820	Concrete	1	4	a. 4.20 /b. Concrete	10	Passable

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
	2.San Isidro 117+800	Concrete	1	6.5	a. 5 /b. Concrete	10	Passable
	3.Pinagbayanan	Spillway	1	7.8	a. 6 /b. Concrete		Passable
	4. San Isidro	Spillway	1	6.8	a. 5.5 /b. Concrete		Passable
BAT 126 Luna - Tuong Road, Tuy / 98+800-113+200	1. Mataywanak Br. 100+000	Concrete	1	14.5	a.6.70 /b. Concrete	15	Passable
BAT 127 Rillo - Bolbok Road, Tuy / 98+910-103+460	1. Bolbok 99+210	Steel	1	36	a.7 /b. Concrete	15	Passable
BAT134 San Pedro - Sta. Cruz Road, St. Tomas 69+460-84+170	1. San Pedro 70+350	Concrete	1	7	a.5.20 /b. Concrete	10	Passable
	2. San Pedro 70+720	Concrete	1	27.6	a. 7.60 /b. Concrete	15	Passable
	3. San Isidro 72+390	Concrete	1	21.9	a. 7.20 /b. Concrete	10	Passable
	4.Camballao 72+590	RCDG	1	24	a. 6.70 /b. Concrete	15	Passable
	5.Petchong Manok 80+460	Steel	1		a. 7 /b. Steel	15	Passable
	6. Sta. Cruz	Bailey	1	12	a. 4 /b. Timber	5	Passable
BAT135 San Felix - San Joaquin Road, Sto. Tomas 71+700-74+700	1. San Felix 72+000	Concrete	1	6.6	a.4.20 /b. Concrete	10	Passable
	2. Sta. Ana 72+150	Concrete	1	6.6	a.4.20 /b. Concrete	10	Passable
BAT136 San Agustin - Sta. Clara Road, Sto. Tomas 71+920-77+400	1. San Agustin 74+040	Concrete	1	3.5	a.4 /b. Concrete	15	Passable
	2. San Joaquin 74+740	Steel	1	16	a.4 /b. Concrete	15	Passable
BAT137 (Alaminos Bdry.) San Fernando - San Luis Road (Lipa City Bdry.) Sto. Tomas	1. San Fernando 79+630	Concrete	1	5.8	a.4.20 /b. Concrete	15	Passable

Name of Road/ Street Road Section (Station Limit)	Name of Bridge Location	Type of Structure	No. of Span	Total Length of Floor Deck	Bridge: a - Width / b - Type of floor deck	Cap. In Ton	Condition
	2. Cocok 9+110	RCDG	1	15.2	a.7.50 /b. Concrete	15	Passable
	3. San Luis	Steel	1		a.7 /b. Steel	15	Passable

Municipal Water System 2020

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
Agoncillo	Pumping Station (12)	1" to 6"	7,400,000	23,575	Residential, Commercial A/B/C	1/2" to 3/4"							Chlorination,Filtration	2490 cu.m
					Domestic/ Government		272.00	33.25	36.25	39.50	43.50			
					Commercial/ Industrial		544.00	66.50	72.50	79.00	87.00			
					Commercial A		476.00	58.15	63.40	69.10	76.10			
					Commercial B		408.00	49.85	54.35	59.25	65.25			
					Commercial C		340.00	41.55	45.30	49.35	54.35			
	POBAPA Water Works (Pumping Station 1 & 2)	4"	10,000	516	Residential	1/2" to 3/4"	215	28	31	34	37	40	Micro Test	10 cu.m.
	Barigon Water Works Association (Deep Well)	1 " to 1 1/2"	6,000	850	Residential	1" & 3/4"	360	N/A	N/A	N/A	N/A	N/A	Micro Test	6 cu.m.
	Barigon RWSA (Deep Well)	1 " to 1 1/2"	6,000	850	Residential	1" & 3/4"	360	N/A	N/A	N/A	N/A	N/A	Pytho Chem	6 cu.m.
	Pansipit RWSA (Pumping Station (2))	1 " to 2"	91,500	325	Residential	1" & 3/4"	200	16	17	18	19	20	Pytho Chem	91 cu.m
	Subic Ilaya Waterworks II (Pumping Station (2))	2"	86,400	10000	Residential	4"	180	N/A	N/A	N/A	N/A	N/A	Lab. Test - Physical & Chemical Test	7 cu.m.
	Bilibinwang Multi-Purpose Cooperative (Water Tank 1)	2"	50,000	358	Residential	2"	8 cu.m.	20	N/A	N/A	N/A	N/A	Lab. Test- Pytho chem	95 cu.m.
	Bilibinwang Multi-Purpose Cooperative (Water Tank 2)	2"	10,000	110	Residential	2"	8 cu.m.	20	N/A	N/A	N/A	N/A	Lab. Test- Pytho chem	30 cu.m.
Alitagtag				23,976	Residential		270.00	28.00	29.50	31.75	34.00		Chlorination	
					Commercial		337.50	35.00	36.85	39.65	42.50			
	Dominador West PS. 1	4"	293,760			8"								
	Dominador West PS. 2	4"	250,560			8"								
	Glomarie PS. 15	3"	184,032			4"								
	Glomarie PS. 16	2"	246,240			4"								
	A. Agapito PS. 13	4"	708,480			4"								
	Pinagkurusan PS. 14	4"	610,848			4"								
Alitagtag	Poblaion West PS. 17	4"	863,136			4"								
	Muzon PS. 9	4"	760,320			4"								
Balayan														
	Barangay 9 Water System	5 HP		170 HH	Level III	1/2"	120.00	20.00					Chlorination / boiling	
	Calan Waterworks	5 HP/2"		231 HH/1,100 pop	Level III		150.00	15.00	15.00	15.00	15.00	15.00	Chlorination / boiling	120 cu.m./day

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
	Caybunga Watersystem	5 HP		227 HH	Level III	2"	120.00	12.00	12.00	12.00	12.00		Chlorination / boiling	15.17 cu.m/day
	Dalig Rural Watersystem & Sanitation Assn. Inc.	5 HP/ 4"		292 HH	Level III		150.00	5.00					Chlorination / boiling	
	Dao Waterworks System	5 HP	500	246 HH	Level III	2"	120.00	12.00	12.00	12.00	12.00	12.00	Chlorination / boiling	80 cu.m/day
	Dilao Watersystem	5 HP	513,000.00	33 HH/383	Level III	6 x 20	150.00	15.00					Chlorination / boiling	513 cu.m/day
	Langgangan Watersystem	5 HP		65 HH/ 441 pop	Level III		120.00	12.00					Chlorination / boiling	25 cu.m/day
	Lucban Water System	7.5 HP	248,000.00	360 HH	Level III	1/2"	100.00	12.00					Chlorination / boiling	248 cu.m/day
	Magabe Watersystem	2 HP		53 HH	Level III	1 1/2"	170.00						Chlorination / boiling	24 cu.m/day
	Palikpikan Watersystem	5 HP/ 2"		220 HH	Level III		150.00	10.00					Chlorination / boiling	
	Patugo Watersystem	7.5	250	280 HH	Level III	1/2"	140.00	14.00					Chlorination / boiling	4,500 cu.m.
	Pooc Rural Waterworks Ass. Inc.	7.5	344	450 HH /2,850 pop	Level III		150.00	305.00	465.00	630.00	800.00	1,725.00	Chlorination / boiling	344 cu.m.
	Sitio Sales Waterworks System	2 HP	11,200	70 HH/350	Level III		120.00	12.00	12.00	12.00	12.00	12.00	Chlorination / boiling	
	Putol Watersystem	5 HP		250 HH	Level III	2"	130.00	10.00	10.00	10.00	10.00	10.00	Chlorination / boiling	
	Sampaga Rural Waterworks Sanitation Ass. Inc.	2 diameter	10,000	800 HH/1,400	Level III	2"	140.00	14.00	14.00	14.00	14.00	14.00	Chlorination / boiling	140 cu.m/day
	Sucol Watersystem	2",11/2",1",1/2"	70	230 HH/1200	Level III	2",11/2",1",1/2"	160.00	12.00	15.00	18.00			Chlorination / boiling	70 cu.m/day
	Taludtod Rural Watersystem Ass.	5 HP	151,000.00	330 HH	Level III	1/2"	100.00	12.00	12.00	12.00	12.00	12.00	Chlorination / boiling	151 cu.m/day
Balete														
	Malabanan (2 units) Deepwell	4 & 6 "dia.		5,198	Potable water								chlorination	
	San Sebastian Deepwell	6"		1141	Potable water								chlorination	
	Makina Deepwell	6"		800	Potable water								chlorination	
Balete	Palsara/ Alangilan Deepwell	6"		480	Potable water								chlorination	
	Sampalocan Deepwell	6"		1217	Potable water									
	Looc Deepwell	6"		2352	Potable water									
	Magapi Deepwell	6"		598	Potable water									
	MLWD Deepwell	6"		13,616	Potable water		172.50	18.90	21.40	24.65	28.80	28.80	chlorination	

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
Bauan	Aquadata Inc.			57,458	Residential & Government	½“, ¾“, 1”, 1 ½“, 2“ & 3”	310.00	32.00	33.10	34.20	35.80	35.80	YES	NDA
	Location of Water Sources of Aquadata:			NDA	Commercial & Bulk Sales	½“, ¾“, 1”, 1 ½“, 2“ & 3”	(0-25) 1,550.00	(0-25) 1,550.00	(0-25) 1,550.00 (26-1000) 66.10	66.10	66.10	(26-1000) 66.10 (over 1000) 71.60	YES	NDA
	1) San Fermin, Manghinao Proper	6"	4,905,894											
	2) Cumba, Poblacion IV	8"	817,649											
	3) La Paz St., Poblacion I	6"	817,649											
	4) Bauan East Central School	6"	1,090,199											
	5) Manghinao I	6"	572,354											
	6) Mangoville Subd., Manghinao Proper	6"	572,354											
	7) San Roque Elementary School	6"	1,090,199											
	8) Bolo	6"	572,354											
	9) Gulibay	6"	163,530											
	10) Sta. Maria	6"	1,090,199											
	Barangay Alagao Waterworks System	4"	381,570 272,550	2,496	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	No Data Available							
	As-is - Balayong Waterworks Association	4"	817,649	5,090	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	140.00	15.00	16.00	17.00	18.00	20.00	YES	NDA
	Bagong Silang Waterworks System	4"	272,550	457	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	150.00	20.00	20.00	20.00	20.00	20.00	YES	NDA
Bauan	Barangay Baguilawa Waterworks System	4"		1,535	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	(0-8) 110.00	(9-15) 25.00 (16-20) 30.00	50.00	50.00	50.00	50.00	YES	NDA
	Barangay Colvo Waterworks System	4"	272,550	545	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	220.00	20.00	20.00	20.00	20.00	20.00	YES	NDA
	Durungao – Barangay Waterworks	4"		1,776	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	No Data Available							
	Barangay Gulibay Waterworks System	4"	163,530	1,352	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	120.00	18.00	18.00	18.00	18.00	18.00	YES	NDA
	Inicbulan Waterworks Multi-purpose Cooperative	4"	817,649	3,674	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	180.00	20.00	20.00	20.00	20.00	20.00	YES	NDA
	Barangay Locloc Waterworks System	4"		1,517	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	No Data Available							
	Barangay Magalang-galang Water Service	4"	272,550	340	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	No Data Available							
	Barangay Malindig Waterworks System	4"	272,550	358	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	(0-8) 80.00	(9-up) 20.00	20.00	20.00	20.00	20.00	YES	NDA
	Manalupang Waterworks Service Cooperative	4"	545,099	2,398	Residential	½“, ¾“, 1”, 1 ½“, 2“ & 3”	No Data Available							

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
	Barangay Orense Waterworks System	4"	272,550	742	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	200.00	20.00	20.00	20.00	20.00	20.00	YES	NDA
	Pitugo - Barangay Waterworks	4"	272,550	801	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	No Data Available							
	Barangay Rizal Waterworks System	4"		745	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	150.00	30.00	30.00	30.00	30.00	30.00	YES	NDA
	Sampaguita - Barangay Waterworks	4"	272,550	522	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	No Data Available							
	San Andres I – Barangay Waterworks	4"		654	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	No Data Available							
	Barangay San Diego Waterworks System	4"	190,785	521	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	(0-5) 100.00	(6-up) 22.00	22.00	22.00	22.00	22.00	YES	NDA
Bauan	San Pablo – Barangay Waterworks	4"		838	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	No Data Available							
	San Pedro - Barangay Waterworks	4"	1,090,199	2,327	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	No Data Available							
	Barangay San Teodoro Waterworks Cooperative	4"	272,550	1,788	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	120.00	5.00	5.00	5.00	5.00	5.00	YES	NDA
	San Vicente – Barangay Waterworks	4"	436,079	778	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	No Data Available							
	Sinala Barangay Waterworks	4"	817,649 572,354	2,585	Residential	½ “, ¾ “, 1”, 1 ½ “, 2“ & 3”	10.00	15.00	15.00	15.00	15.00	15.00	YES	NDA
Calaca	31													
Baclas	Deepwell	2 1/2	77,750 L	311	LEVEL 3	3/4	₱270.00						NONE	77.75 m³
Balimbing	Deepwell	2 1/2	26,750 L	107	LEVEL 3	3/4	₱120.00						NONE	26.75 m³
Bambang	Deepwell	2 1/2	75,000 L	300	LEVEL 3	3/4	₱200.00						NONE	75 m³
Bisaya	Deepwell	2 1/2	39,000 L	156	LEVEL 3	3/4	₱130.00						NONE	39 m³
Cahil	Deepwell	2 1/2	59,500 L	238	LEVEL 3	3/4	₱125.00						NONE	59.5 m³
Calantas	Deepwell	2 1/2	87,500 L	350	LEVEL 3	3/4	₱80.00						NONE	87.5 m³
Caluangan	Deepwell	2 1/2	77,500 L	310	LEVEL 3	3/4	₱100.00						NONE	77.5 m³
Coral ni Bacal	Deepwell	2 1/2	41,750 L	167	LEVEL 3	3/4	₱150.00						NONE	41.75 m³
Coral ni Lopez	Deepwell	2 1/2	101,000 L	404	LEVEL 3	3/4	₱60.00						NONE	101 m³
Dacanlao	Deepwell	3	80,000 L	320	LEVEL 3	3/4	₱100.00						NONE	80 m³
Dila	Deepwell	2 1/2	43,500 L	174	LEVEL 3	3/4	₱150.00						NONE	43.5 m³
Loma	Deepwell	2 1/2	36,750 L	147	LEVEL 3	3/4	₱150.00						NONE	36.75 m³
Lumbang na Matanda	Deepwell	2 1/2	32,500 L	130	LEVEL 3	3/4	₱130.00						NONE	32.5 m³

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
Lumbang Calzada	Deepwell	2 1/2	121,750 L	487	LEVEL 3	3/4	₱150.00						NONE	121.75 m³
Lumbang na Bata	Deepwell	2 1/2	75,500 L	300	LEVEL 3	3/4	₱130.00						NONE	75.5 m³
Madalunot	Deepwell	2 1/2	75,500 L	300	LEVEL 3	3/4	₱110.00						NONE	75.5 m³
Makina	Deepwell	2 1/2	58,500 L	234	LEVEL 3	3/4	₱125.00						NONE	58.5 m³
Matipok	Deepwell	2 1/2	76,500 L	306	LEVEL 3	3/4	₱155.00						NONE	76.5 m³
Niyugan	Deepwell	2 1/2	57,500 L	230	LEVEL 3	3/4	₱150.00						NONE	57.5 m³
Pantay	Deepwell	2 1/2	90,500 L	362	LEVEL 3	3/4	₱150.00						NONE	90.5 m³
Poblacion 1	Deepwell	3	31,250 L	125	LEVEL 3	3/4	₱125.00						NONE	31.2 m³
Poblacion 6	Deepwell	2	25,000 L	100	LEVEL 3	3/4	₱130.00						NONE	25.0 m³
Puting Bato East	Deepwell	2 1/2	81,750 L	327	LEVEL 3	3/4	₱100.00						NONE	81.7 m³
Puting Bato West	Deepwell	2 1/2	130,750 L	523	LEVEL 3	3/4	₱120.00						NONE	130.7 m³
Puting Kahoy	Deepwell	2 1/2	69,000 L	276	LEVEL 3	3/4	₱160.00						NONE	69.0 m³
Salong	Deepwell	2 1/2	75,500 L	300	LEVEL 3	3/4	₱120.00						NONE	75.5 m³
San Rafael	Deepwell	2 1/2	37,750 L	151	LEVEL 3	3/4	₱150.00						NONE	37.7 m³
Sinisian	Deepwell	2	94,500 L	378	LEVEL 3	3/4	₱140.00						NONE	94.5 m³
Taklang Anak	Deepwell	2	47,500 L	190	LEVEL 3	3/4	₱150.00						NONE	47.5 m³
Tamayo	Deepwell	2 1/2	40,750 L	163	LEVEL 3	3/4	₱250.00						NONE	40.7 m³
Timbain	Deepwell	2 1/2	80,000 L	320	LEVEL 3	3/4	₱90.00						NONE	80.0 m³
Calatagan	NO DATA AVAILABLE													
Cuenca	Cuenca Rural Waterworks and Sanitation Association Inc.	4"	2"		Level 4	2"	224.00	29	31	36	36	36	Micro & Phyco Chemical analysis	367 cu.m/day
	Emmanuel Water Service Cooperative				Level 3	2" & 3"	120.00	23	27	27	27	27	Cleaning of Water Tank (Quarterly)	379 cu.m/day
Ibaan	Spring with two (2) Intake boxes at Barangay Talaibon	150mm and 100mm	45 gpm = 245295.36		Level 1	12.5mm-62.5mm								
	Pumping Station No. 1 located at Ibaan Central School	100mm	1,930.00		Level 3	12.5mm-62.5mm	R – Php 10.00 C – Php 12.00	R – Php 12.00 C – Php 20.00	R – Php 7.00 C – Php 15.00	R – Php 5.00 C – Php 10.00			Chlorination	
	Pumping Station No..2 loctated at Palindan	100mm	1,600.00		Level 3	12.5mm-62.5mm	R – Php 10.00 C – Php 12.00	R – Php 12.00 C – Php 20.00	R – Php 7.00 C – Php 15.00	R – Php 5.00 C – Php 10.00			Chlorination	
	Pumping Station No. 3 located at Recto Gym	100mm	2,000.00	1,127	Level 3	12.5mm-62.5mm	R – Php 10.00 C – Php 12.00	R – Php 12.00 C – Php 20.00	R – Php 7.00 C – Php 15.00	R – Php 5.00 C – Php 10.00			Chlorination	20,000.00
	Public Market	100mm	18,927.06		Level 3	12.5mm-62.5mm	R – Php 10.00 C – Php 12.00	R – Php 12.00 C – Php 20.00	R – Php 7.00 C – Php 15.00	R – Php 5.00 C – Php 10.00			Chlorination	
	Coliat (2)	50mm	18,927.06		Level 3	12.5mm-62.5mm	R – Php 10.00 C – Php 12.00	R – Php 12.00 C – Php 20.00	R – Php 7.00 C – Php 15.00	R – Php 5.00 C – Php 10.00			Chlorination	
	Bago (3)	50mm	400.00	1,920	Level 3	12.5mm-62.5mm	R – Php 6.25	R – Php 10.75	R – Php 16.75	R – Php 21.75			Chlorination	244.09
	Balanga (4)	50mm	18,927.06	2,320	Level 3	12.5mm-62.5mm	R – Php 10.00	R – Php 10.00	R – Php 10.00	R – Php 10.00			Chlorination	881.60
	Pangao (3)	50mm	18,927.06	825	Level 3	12.5mm-62.5mm	R – Php 10.00	R – Php 10.00	R – Php 10.00	R – Php 10.00			Chlorination	313.50
	Sandalan (3)	50mm	18,927.06	1,200	Level 3	12.5mm-62.5mm	R – Php 11.00	R – Php 12.00					Chlorination	456.00

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
Ibaan	Talaibon	50mm	18,927.06	1,000	Level 3	12.5mm-62.5mm	R – Php 12.00	R – Php 12.00	R – Php 12.00	R – Php 12.00			Chlorination	380.00
	Bungahan (3)	50mm	18,927.06	1,425	Level 3	12.5mm-62.5mm	R – Php 11.00	R – Php 15.00					Chlorination	541.50
	Calamias***	50mm	18,927.06	2,750	Level 3	12.5mm-62.5mm	R – Php 12.50	R – Php 15.00	R – Php 15.00	R – Php 15.00			Chlorination	1,045.00
	Dayapan (2)	50mm	18,927.06	740	Level 3	12.5mm-62.5mm	R – Php 10.00	R – Php 10.00	R – Php 10.00	R – Php 10.00			Chlorination	281.20
	Munting Tubig I	50mm	18,927.06	690	Level 3	12.5mm-62.5mm	R – Php 10.00	R – Php 10.00	R – Php 10.00	R – Php 10.00			Chlorination	262.20
	Camapa (3)	50mm	18,927.06	3,400	Level 3	12.5mm-62.5mm	R – Php 15.00	R – Php 15.00	R – Php 15.00	R – Php 15.00			Chlorination	1292
	Sabang (4)	50mm	18,927.06	2,000	Level 3	12.5mm-62.5mm	R – Php 15.00 C – Php 20.00	R – Php 15.00 C – Php 20.00	R – Php 15.00 C – Php 20.00	R – Php 15.00 C – Php 20.00			Chlorination	760
	(Salaban II, Salaban I, Malainin, Lapu-Lapu)* (2)	50mm	70,976.00	2,520	Level 3	12.5mm-62.5mm	R – Php 10.00	R – Php 17.00					Chlorination	957.6
	Tulay (2)**	50mm	18,927.06	1,600	Level 3	12.5mm-62.5mm	R – Php 12.50	R – Php 15.00	R – Php 15.00	R – Php 15.00			Chlorination	608
Laurel	San Gregorio Tamayo Water System			376	Residential	1 1/4"	300/5cu.m.	30.00						50
	Ticub BWSA Coop	2"		2,427	Residential	1/2"	200.00	25.00						
	Ticub BWSA by Romualdo Humarang	2"		390	Residential/ Commercial	1 1/2"	45/cu.m.							
Lemery	16	6"	21,451,392.00	60,420									Chlorination	8491.866667
					Residential/ Government	1/2"	216.16	23.016	25.2	27.272	29.512	29.512		
						3/4"	345.856	23.016	25.2	27.272	29.512	29.512		
						1"	691.712	23.016	25.2	27.272	29.512	29.512		
						1 1/2"	1729.28	23.016	25.2	27.272	29.512	29.512		
						2"	4323.2	23.016	25.2	27.272	29.512	29.512		
						3"	7781.76	23.016	25.2	27.272	29.512	29.512		
						4"	15563.52	23.016	25.2	27.272	29.512	29.512		
					Commercial/ Industrial	1/2"	432.32	46.032	50.4	54.544	59.024	59.024		
						3/4"	691.712	46.032	50.4	54.544	59.024	59.024		
						1"	1383.424	46.032	50.4	54.544	59.024	59.024		
						1 1/2"	3458.56	46.032	50.4	54.544	59.024	59.024		
						2"	8646.4	46.032	50.4	54.544	59.024	59.024		
						3"	15563.52	46.032	50.4	54.544	59.024	59.024		
						4"	31127.04	46.032	50.4	54.544	59.024	59.024		
					Commercial A	1/2"	378.28	40.264	44.072	47.712	51.632	51.632		
						3/4"	605.248	40.264	44.072	47.712	51.632	51.632		
						1"	1210.496	40.264	44.072	47.712	51.632	51.632		
						1 1/2"	3026.24	40.264	44.072	47.712	51.632	51.632		
						2"	7565.6	40.264	44.072	47.712	51.632	51.632		
						3"	13618.08	40.264	44.072	47.712	51.632	51.632		
						4"	27236.16	40.264	44.072	47.712	51.632	51.632		

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
Lemery					Commercial B	1/2"	324.24	34.496	37.8	40.88	44.24	44.24		
						3/4"	518.784	34.496	37.8	40.88	44.24	44.24		
						1"	1037.568	34.496	37.8	40.88	44.24	44.24		
						1 1/2"	2593.92	34.496	37.8	40.88	44.24	44.24		
						2"	6484.8	34.496	37.8	40.88	44.24	44.24		
						3"	11672.64	34.496	37.8	40.88	44.24	44.24		
						4"	23345.28	34.496	37.8	40.88	44.24	44.24		
					Commercial C	1/2"	270.2	28.728	31.472	34.048	36.848	36.848		
						3/4"	432.32	28.728	31.472	34.048	36.848	36.848		
						1"	864.64	28.728	31.472	34.048	36.848	36.848		
						1 1/2"	2161.6	28.728	31.472	34.048	36.848	36.848		
						2"	5404	28.728	31.472	34.048	36.848	36.848		
						3"	9.0148	28.728	31.472	34.048	36.848	36.848		
						4"	19454.4	28.728	31.472	34.048	36.848	36.848		
					Bulk / wholesale	1/2"	648.48	69.048	75.6	81.816	88.536	88.536		
						3/4"	1037.568	69.048	75.6	81.816	88.536	88.536		
						1"	2075.136	69.048	75.6	81.816	88.536	88.536		
						1 1/2"	5187.84	69.048	75.6	81.816	88.536	88.536		
						2"	12969.6	69.048	75.6	81.816	88.536	88.536		
						3"	23345.28	69.048	75.6	81.816	88.536	88.536		
						4"	46690.56	69.048	75.6	81.816	88.536	88.536		
Lian	5	6"	42 lps	10,420	RES/Comm	4"	200.00	22.00	25.00	29.00	34.00	34.00	filtration/ chlorination	19.80
Lobo	PS 1	6"	20	2,315	Deep Well	4", 3", 2"	270.00	28.30	30.00	32.00		34.75	Chlorination	0.5843
	PS 2	4"	11	2,420	Deep Well	4", 3", 2"	270.00	28.30	30.00	32.00		34.75	Chlorination	0.5193
Lobo	PS 3 PS 10	3" 3"	1.5 3.7	815	Spring Deep Well	3', 2", 2" 1", 3/4"	310	35.00	35.00	35.00		35.00	Chlorination	0.5023
	PS 4	3"	8	1,995	Deep Well	4", 3", 2"	270.00	28.30	30.00	32.00		34.75	Chlorination	0.5333
	PS 5	4"	17	5,730	Deep Well	4", 3", 2"	270.00	28.30	30.00	32.00		34.75	Chlorination	0.5200
	PS 6	4"	11	4,120	Deep Well	6", 4", 3", 2"	270.00	28.30	30.00	32.00		34.75	Chlorination	0.6077
	PS 8	4"	14	2,285	Deep Well	4", 3"	270.00	28.30	30.00	32.00		34.75	Chlorination	0.5357
	PS 9	3"	10	1,955	Deep Well	4", 3", 2"	270.00	28.30	30.00	32.00		34.75	Chlorination	0.5623
Mabini	MABINI WATER DISTRICT PUMPING STATION (27)	10 .16 CM	1.5 Million Liters	49, 695		1.27 CM	270.40	30.40	34.25	38.45	43.10	43.10	Filtration	1,500
Malvar	Bliss San Andres (1)	3"		163		2"	115.00							
	San Andres Waterworks (2)	3"		569		2"	120.00							
	San Pedro Barangay Waterworks Inc.	3"		613		2"	120.00							
	Kassel Vista and Kassel Pacific (1)	3"		753		2"								
	Tsarina Grand Villas (2)	3"		69		2"								
	Big B Inc. (4)	3"		2,017		2"								

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
Mataasnakahoy	17	6", 4", 2"	3,438,215	23,056			172.50	18.90	21.40	24.65	28.50		Chlorination	33,438.22
Nasugbu	Deepwell	2" to 8"	1,200,000	39,400	Residential	1/2"	215.00	24.20	26.35	30.10	31.80		Chlorination	27
	Cogunan Water Treatment Plan		4,000,000		Commercial	1/2"	292.50	33.00	35.90	40.95	43.35		Yamilt Filtration System	
	Bulk		4,600,000		Bulk		62.00/cu.m						Treatment Plant and Chlorination	
Padre Garcia	23	2" and 3"	3,000,000	20,000	LEVEL III	1/2"	Residential 120.00 Commercial 150.00	14.00	16.00	18.00	20.00		NONE	3,000
Rosario	10	3" to 6"	7,001,856	35,090	Residential	1/2" to 1"	160.00	17.00	18.50	20.50	23.00	26.00	Chlorination	4,897.79
San Jose	7	8"/2"	NDA	6,450	-	8"/2"							Chloriwater	NDA
San Juan														
San Juan (San Juan Water District)	PS 1,2,and 3 Sico 1st; PS 4 Muzon ; Ps 5 Buhaynasapa; PS 6 Libato ; PS 7 Abung ; PS 8 Laiya ; PS 9 Balagbag ; PS 10 Lipahan	2"; 3"; 4"; 6"; 8"	8,327,232	40,620		1/2							Chlorination	5,123
				Domestic/Government			210.00	22.50	25.00	28.50	33.00	33.00		
				Commercial/Industrial			420.00	45.00	50.00	57.00	66.00	66.00		
				Commercial A			367.50	39.35	43.75	49.85	57.75	57.75		
				Commercial B			315.00	33.75	37.50	42.75	49.50	49.50		
				Commercial C			262.50	28.10	31.25	35.60	41.25	41.25		
				Bulk Sales			630.00	67.50	75.00	85.50	99.00	99.00		
BAWASA in various barangays	Imelda, Barualte, Bataan, Subukin, Coloconto, Calubcub 1, Sapangan, Pulangbato, Bulsa, Libato, Putingbuhangin	3"	814,000	6,900		1/2	150.00	18.00	18.00	18.00	18.00	18.00	Chlorination	425
San Luis	San Luis Water District	6'	15 LP/S	12,078	D	2'	198.00	20:80	22:30	24:30	26:80	26:80	Chlorine	738 cu.m
	Municipal Waterworks System	4'	100 LP/D	250	Level III	2'	None						None	0.1 cu.m
San Nicolas	Abelo	2"		100	Level II	1/2"	NDA						None	NDA
	Hipit	2"		100	Level II	1/2"							None	
	Talang	2"		150	Level II	1/2"							None	
	Munlawin	2"		200	Level II	1/2"							None	
	Bangin	2"		300	Level II	1/2"							None	
	Sinturisan	2"		510	Level II	1/2"							None	

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
	Balete	2"		229	Level II	1/2"							None	N/A
	Bancoro	2"		305	Level II	1/2"							None	
	Poblacion	2"		559	Level II	1/2"							None	
	Baluk-Baluk	2"		167	Level II	1/2"							None	
	Maabud North & South	2"		300	Level II	1/2"							None	
	Pansipit	2"		50	Level II	1/2"							None	
San Pascual														
Alalum														
Antipolo	Municipal Waterworks	(3") (2") (1/2")		92	Level 3	3" 2" 1/2"	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Antipolo	Municipal Waterworks	(3") (2") (1/2")		79	Level 3	3" 2" 1/2"	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Municipal Waterworks	(3") (2") (1/2")		71	Level 3	3" 2" 1/2"	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Balimbing	2 Municipal Waterworks	(3") (2") (1/2")		97	Level 3	3" 2" 1/2"	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Banaba	Barangay Waterworks	2"	3,600 liters	68	Level 3	1 1/2"	200.00						Natural	36 cu. m/day
	Private	1 & 1/4"	3,000 liters	200	Level 3	1/2	120.00	addtl. 13pesos/cu.m					Micro Biological analysis	30 cu. m/day
	Municipal Waterworks 1			370	Level 3	1/2	130.00	addtl. 13pesos/cu.m					Micro Biological analysis	
	Municipal Waterworks 2			410	Level 3	1/3	130.00	addtl. 13pesos/cu.m					Micro Biological analysis	
	Municipal Waterworks 3	1 & 1/2"		320	Level 3	1/2	130.00	addtl. 13pesos/cu.m					Micro Biological analysis	35 cu. m/day
	Municipal Waterworks 4	1 & 1/2"		550	Level 3	1/2	130.00	addtl. 13pesos/cu.m					Micro Biological analysis	55 cu. m/day
Bayanan	Municipal Waterworks 5	1 & 1/2"		715	Level 3	1/2	130.00	addtl. 13pesos/cu.m					Micro Biological analysis	71 cu. m/day
Danglayan	4 Municipal Waterworks	(3") (2") (1/2")		689	Level 3	3" 2" 1/2"	130.00						Micro Biological analysis	
	Municipal Waterworks	(3") (2") (1/2")			Level 3	3" 2" 1/2"	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Del Pilar	Prime Water	4"	3,000 liters	240	Level 3	1/2"	205.00	addtl. 9-20 pesos/cu.m					Micro Biological analysis	40 cu.m/day
Gelerang Kawayan	Submersible Pump	2"	68,500 liters	160	Level 3	2"	180.00	addtl. 18pesos/cu.m					Micro Biological analysis	68.5 cu.m/day
	Municipal Waterworks	(3") (2") (1/2")		55	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Gelerang Kawayan	Municipal Waterworks	(3") (2") (1/2")		88	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Ilat North	Municipal Waterworks	(3") (2") (1/2")		69	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
	1-Submersible Pump	1 1/5"	75,000 liters / day	1,100	Level 3	2"	130.00	300.00	470.00	640.00	810.00	+17/cu.m	Micro Biological analysis	80 cu. m/day
Ilat South	Municipal Waterworks	(3") (2") (1/2")		147	Level 3	(3") (2") (1/2")		addtl. 17pesos/cu.m					Micro Biological analysis	
Kaingin	Municipal Waterworks	(3") (2") (1/2")		170	Level 3	(3") (2") (1/2")		addtl. 17pesos/cu.m					Micro Biological analysis	
	1- Kaingin Waterworks 1	1"	1,600 liters	48	Level 3	1"	130.00	addtl. 9-20 pesos/cu.m					Micro Biological analysis	24 cu. m/day
	1- Kaingin Waterworks 2	1"	1,600 liters	43	Level 3	1"	180.00	addtl. 9-20 pesos/cu.m					Micro Biological analysis	21.5 cu. m/day
	1- Kaingin Waterworks 3	1/2"	300 liters	25	Level 3	1/2"	180.00	addtl. 9-20 pesos/cu.m					Micro Biological analysis	12.5 cu. m/day
Laurel	1- Kaingin Waterworks 4	2"	1000 liters	72	Level 3	2"	150.00	addtl. 9-20 pesos/cu.m					Micro Biological analysis	36 cu. m/day
	3-Barangay Waterworks	(2") (1 1/2)"	136,866.67 liters	309	Level 3	1/2"	130.00	300.00	470.00	640.00	810.00	+17/cu.m	Natural	136.9 cu. m/day
	1-Aquadata	6"	20,230 liters	64	Level 3	1/2"	130.00	300.00	470.00	640.00	810.00	+15/cu.m	Micro Biological analysis	20.23 cu. m/day
Malaking Pook	1-Municipal Waterworks	4"		126	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Mataas na Lupa	Barangay Waterworks	(2") (1 1/2)" (1")	1,600 liters	46	Level 3	1/2"	15/cu.m						Micro Biological analysis	24 cu. m/day
	Digna Claridad	2"	800 liters	20	Level 3	3/4"							Micro Biological analysis	
	Vicente Abrahan	2"	600 liters	15	Level 3	3/4"							Micro Biological analysis	
Mataas na Lupa	Mataas na Lupa South	2"	3,600 liters	60	Level 3	1/2"	150.00	addtl. 15 pesos/cu.m					Micro Biological analysis	220cu. m/day
	Mataas na Lupa North	2"	3,600 liters	900 persons	Level 3	1/2"	150.00	addtl. 15 pesos/cu.m					Micro Biological analysis	110cu. m/day
	Presnet	2"	80 liters	2	Level 3	2"							Micro Biological analysis	
	Joan Austria	1 1/4"	4,000 liters	950 persons	Level 3	2 1/2"							Micro Biological analysis	
Natunuan North	Mederico Aranza	1 1/4"	800 liters	7 persons	Level 3	1"							Micro Biological analysis	
	Barangay Waterworks 1	3"	2,000 liters	50	Level 3	3"	120.00	addtl. 11-17 pesos/cu.m					Micro Biological analysis	25 cu. m/day
	Barangay Waterworks 2	2"	1,500 liters	45	Level 3	2"	120.00	addtl. 10-15 pesos/cu.m					Micro Biological analysis	23.5 cu. m/day
Natunuan South	Barangay Waterworks 3	5"	2,000 liters	80	Level 3	5"	120.00	addtl. 9-10 pesos/cu.m					Micro Biological analysis	36 cu. m/day
	Waterworks 1	2"	2000 liters	69	Level 3	2"	150.00	addtl. 15 pesos/cu.m					Micro Biological analysis	25 cu. m/day
	Waterworks 2	2"	2500 liters	66	Level 3	2"	150.00	addtl. 15 pesos/cu.m					Micro Biological analysis	23.5 cu. m/day
	Waterworks 3	2"	3000 liters	92	Level 3	2"	150.00	addtl. 15 pesos/cu.m					Micro Biological analysis	36 cu. m/day

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
Padre Castillo	Waterworks 4	2"	3000 liters	73	Level 3	2"	150.00	addtl. 15 pesos/cu.m					Micro Biological analysis	36 cu. m/day
	Municipal Waterworks	(3") (2") (1/2")		165	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Palsahingin	Municipal Waterworks	(3") (2") (1/2")		73	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Pila	2 Barangay Waterworks	2"	545,090 liter	1,265	Level 3	1/2"	120.00	+20/cu.m	+23/cu.m	+26/cu.m	+30/cu.m	+35/cu.m	Micro Biological analysis	169 cu. m/day
Poblacion	2 Barangay Waterworks	2 1/2"	67,000 liters	285	Level 3	1 1/2"	200.00	addtl. 20 pesos/cu.m					Micro Biological analysis	67 cu.m/ day
	Central School Waterpump	(3") (2") (1/2")		213	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Ayala Waterpump	(3") (2") (1/2")		150	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Ayala	(3") (2") (1/2")		150	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Nangkaan Waterpump	(3") (2") (1/2")		230	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Nangkaan Waterpump II	(3") (2") (1/2")		182	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Pook ni Banal	Aquadata	6"	1,429 liters	220	Level 3	6"	116.00	addtl. 15pesos/cu.m					Chlorination Process	20 cu.m/ day
Pook ni Kapitan	3 Barangay Waterworks	1.5"		1,662	Level 3	1.5" 2"	100.00	addtl. 20 pesos/cu.m					Natural	240 cu. m/day
	1- Sitio Mindanao 5hp	2 1/2"	187,200 liters	65	Level 3	2 1/2"	300.00	470	640	810	980	997	Micro Biological analysis	30.12 cu. m/day
	1- Sitio Luzon 3hp	2 1/2"	175,300 liters	50	Level 3	2 1/2"	300.00	400	500	600	700	710	Micro Biological analysis	29.93 cu. m/day
	1- Sitio Luzon 5hp	2		51	Level 3	2	300.00	400	500	600	700	710	Micro Biological analysis	
Resplandor	Municipal Waterworks	(3") (2") (1/2")		351	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Sambat	4 Barangay Water Works	3"		278	Level 3	2	150.00	addtl.10pesos/cu.m						
	1- Sitio Narra 5hp	1 1/4"	288,000 liters	128	Level 3	1 1/4"	190.00	340	490	640	790	805	Micro Biological analysis	71.4 cu. m/day
	1- Sitio Kamagong 5hp	2	288,000 liters	96	Level 3	2	174.00	244	314	384	454	461	Micro Biological analysis	61.7 cu. m/day
	1- Sitio Mulawin 3hp	2	172,800 liters	113	Level 3	2	180.00	280	380	480	580	590	Micro Biological analysis	58.06 cu. m/day
Sambat	1- Sitio Acacia 3hp	1 1/4"	172,800 liters	45	Level 3	1 1/4"	180.00	280	380	480	580	590	Micro Biological analysis	29.87 cu. m/day
San Antonio	1- Aquadata	6"	204 liters	30	Level 3	6"	116.00	addtl. 15pesos/cu.m					Chlorination Process	20 cu.m/ day
	Barangay Waterworks	2"	500 liters	45	Level 3	2"	130.00	addtl. 26 pesos/cu.m						70.87 cu. m/day
	F. Sebastian	(3") (2") (1/2")		330	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Sitio Casual	(3") (2") (1/2")		450	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Sitio Tramo	(3") (2") (1/2")		316	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	

MUNICIPALITY	SOURCE OF WATER+33:271			Population Served	Classification	Size of Pipe	Rate of water service						Treatment of Water	Water Consumption cu.m/day
	Water Systems (pumping stations)	Main Pipelines					Minimum Charge 1-10	Commodity Charge						
		Size	Capacity liters/day					11-20	21-30	31-40	41-50	51-up		
San Mariano	Aquadata	6"	1,224 liters	180	Level 3	6"	116.00	addtl. 15pesos/cu.m					Chlorination Process	20 cu.m/ day
San Mateo	2 San Mariano Waterpumps	(3") (2") (1/2")		141	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Municipal Waterworks	(3") (2") (1/2")		117	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Sta. Elena	2 Municipal Waterworks II	(3") (2") (1/2")		142	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
Sto. Nino	2 Submersible Pump	2"	68,500 liters	168	Level 3	2"	200.00	+20/cu.m	+100/cu.m	+100/cu.m	+100/cu.m		Micro Biological analysis	68.5 cu. m/day
	Municipal Waterworks	(3") (2") (1/2")		128	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Municipal Waterworks II	(3") (2") (1/2")		194	Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Municipal Waterworks III	(3") (2") (1/2")			Level 3	(3") (2") (1/2")	130.00	addtl. 17pesos/cu.m					Micro Biological analysis	
	Aquadata	6"	680 liters	100	Level 3	6"	116.00	addtl. 15pesos/cu.m					Chlorination Process	20 cu.m/ day
Sta. Teresita	5 Pumping Stations	2", 3", 4"	615	902	Deep Well	2", 3", 4"	150.00						Chlorination	
Taal	1- Spring 11- Deep well	10"~ 4"	8,444.000 L	37,375	Residential	1/2"~1"	220.00	23.4	25.2	27.2	29.4		Chlorination	5,223,000 L
					Commercial		440.00	46.8	50.4	54.4	58.8			
					Commercial A		385.00	40.95	44.1	47.6	51.45			
Taal					Commercial B		330.00	35.1	37.8	40.8	44.1			
					Commercial C		275.00	29.25	31.5	34	36.75			
					Bulk		660.00	70.2	75.6	81.6	88.2			
					Institutional		150.00	17.45	17.75	18.65	20.45			
Talisay	Balibago Waterworks	6"	2,900	19,925	Level III	1/2"	284.20	29.72	31.08	32.38	33.68		Chlorination	0.63 cum.
Taysan	Taysan Water District	6"		3,771 HH	Level I, II, and Spring Development		206.80	22.70	24.00				Chlorination	0.77 cum
Tingloy	3 Pumping Stations	2 1/2",3",4"	No data	534	Residential/Gov"t	1/2"	270.40	30.4	34.25	38.45	43.1		None	No data
Tuy	5 Pumping Stations	1"-6"	78	22,032	C	1/2"	200.00	21.45	22.45	23.75	25.2	25.2	Chlorination	2874

Data Sources: Municipal Water System of LGUs

Notes: IBAAN *semi-private **connected to Calamias (currently not operational) ***Private

Sta. Teresita - Data as of 2019

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Batangas

SOCIO-ECONOMIC & PHYSICAL PROFILE

2021