Chapter 2: Geophysical Environment

Geographical Location

The Province of Cavite is situated in Luzon's southern part, the largest island in the Philippines. It belongs to Region IV-A or the CALABARZON region. It is bounded by the provinces of Batangas in the south, Laguna on the east, Rizal on the northeast, Metro Manila and Manila Bay on the north, and the West Philippine Sea on the west.

It is geographically located at latitude (14.2803°) 14° 16' 49" north of the equator and longitude (120.8664°) 120° 51' 59" east of the prime meridian.

Political Subdivisions

The province of Cavite has well-defined political subdivisions. Considering the rising population of the province, the addition of new legislative districts is a good move to ensure the befitting representation of the province in Congress. Republic Act 11069, effective in the year 2018, reapportioned the province into eight legislative districts and declared 6th District as the lone District of City of Gen. Trias; 7th District is now comprised of Amadeo, Indang, Tanza, and Trece Martires City, and 8th District is the then municipalities and city in the 7th District except Indang. Further, the province is composed of 16 municipalities and seven cities with 829 barangays (Table 2.1). The seven cities include the seat of the Provincial Government – Trece Martires City, the defense frontier – Cavite City, the provincial summer capital – Tagaytay City, the City of Dasmariñas under RA 9723, the City of Bacoor under RA 10160, the City of Imus by RA 10161, and the City of Gen. Trias through RA 10675.

Presidential Decree 1163 declared the City of Imus as the de jure provincial capital and Trece Martires City as the provincial government's de facto seat.

Furthermore, in 1909, during the American regime, Governor-General W. Cameron Forbes issued Executive Order No. 124, declaring Act No. 1748 that annexed Corregidor and the Islands of Caballo (Fort Hughes), La Monja, El Fraile (Fort Drum), Sta. Amalia, Carabao (Fort Frank), and Limbones and all waters and detached rocks surrounding them to the City of Cavite. The municipality of Ternate also has Balut Island. These are now major tourist attractions of the province.

Land Area

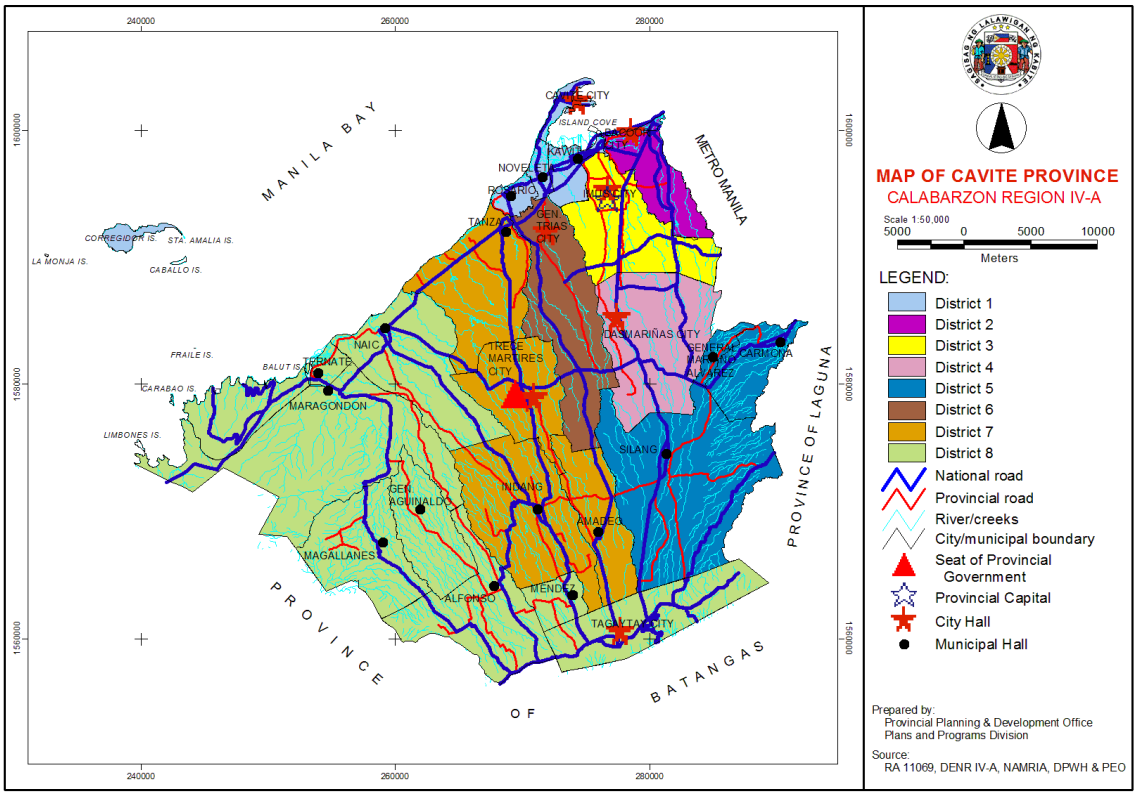
The land is an important resource that is a basis of many governance-related decisions such as budget, cityhood, and programming, among others. Land, referred to as dry land, is the solid surface of the Earth that is not permanently covered by water. It is an area of ground that is being used for a particular purpose. It excludes the area below inland water bodies. The proper usage of land is a major determinant or guiding force on the progress of a province.

Cavite has a total land area of 142,706 hectares or 1,427.06 square kilometers, representing 8.66 percent of the region's total land area and 0.42 percent of the country's total land area. Among the eight districts of the province, the 8th District has the largest land area of 57,204 hectares, which covers 40.09 percent of the total land area, and District I has the smallest land area with 3,631 hectares or 2.54 percent of the total provincial land area. The municipalities of Maragondon and Silang have the largest land area of 16,549 and 15,641 hectares, respectively, while the municipality of Noveleta has the smallest with 567 hectares (Table 1.1).

Table 2.1 ***Land Area and Number of Barangays by District/City/Municipality, Province of Cavite: 2019***

City/Municipality	Land Area (sq. km.)	Land Distribution (%)	Number of Barangays
1st District	**36.31**	**2.54**	**143**
Cavite City	11.83	0.83	84
Kawit	13.40	0.94	23
Noveleta	5.41	0.38	16
Rosario	5.67	0.4	20
2nd District	**52.40**	**3.67**	**73**
City of Bacoor	52.40	3.67	73
3rd District	**97.01**	**6.80**	**97**
City of Imus	97.01	6.80	97
4th District	**82.34**	**5.77**	**75**
City of Dasmarinas	82.34	5.77	75
5th District	**196.71**	**13.78**	**105**
Carmona	30.92	2.17	14
General Mariano Alvarez	9.38	0.66	27
Silang	156.41	10.96	64
6th District	**117.68**	**8.25**	**33**
City of General Trias	117.68	8.25	33
7th District	**272.57**	**19.10**	**116**
Amadeo	47.90	3.36	26
Indang	89.20	6.25	36
Tanza	96.30	6.75	41
Trece Martires City	39.17	2.74	13
8th District	**572.04**	**40.09**	**187**
Alfonso	64.60	4.53	32
General Emilio Aguinaldo	51.03	3.58	14
Magallanes	78.60	5.51	16
Maragondon	165.49	11.6	27
Mendez	16.67	1.17	24
Naic	86.00	6.03	30
Tagaytay City	66.15	4.64	34
Ternate	43.50	3.05	10
Total	**1,427.06**		**829**

Source: Provincial Planning and Development Office



Map 2.1 ***Legislative Map, Province of Cavite***

Topography

Physiological Areas

Situated at the entrance of Manila Bay, Cavite is characterized by rolling hinterlands punctuated by hills, shoreline fronting Manila Bay at sea level, and the rugged portion at the boundary with Batangas.

Cavite is divided into four (4) physiographical areas: the lowest lowland area, lowland area, central hilly area, and upland mountainous area.

The lowest lowland area is the coastal plain. These areas have a shallow ground level of zero to two meters elevation than the high tide level of about 0.8-meter elevation from the mean sea level (MSL). These are the cities of Bacoor and Cavite and Kawit, Noveleta, and Rosario.

Coastal and alluvial plains are considered lowland areas. These areas have a flat ground slope of less than 0.5 percent and a low ground elevation of 2 meters to 30 meters. The alluvial plain can be found in the City of Imus and the southern part of the City of Gen. Trias. Into these cities forms the transition area between the coastal plain and the central hilly area. It also covers some areas of the City of Bacoor and the municipalities of Carmona, Kawit, Noveleta, Rosario, and Tanza.

The third topography type is the central hilly area, found on the mountain foot slope, and forms the rolling tuffaceous plateau. This topography includes steep hills, ridges, and elevated inland valleys. The plateau has a ground elevation ranging from 30 meters to nearly 400 meters and a ground slope ranging from 0.5 percent to 2 percent. The cities of Trece Martires and Dasmariñas, and the municipalities of Gen. E. Aguinaldo, Gen. M. Alvarez, the western part of Ternate, northern parts of Amadeo, Indang, Silang, Magallanes, and Maragondon have this kind of topography.

The last topography type is the upland mountainous area situated at a very high elevation above 400 meters with slopes of more than 2 percent found in the city of Tagaytay and municipalities of Alfonso, Mendez, southern parts of Amadeo, Indang, Silang, Magallanes, and Maragondon. Mt. Sungay, the highest elevation in Cavite, is about 700 meters above sea level located east of Tagaytay City. It is characterized by flat to rugged topography. From Tagaytay ridge northward, the areas adjoin Silang, Amadeo, and Mendez-Nunez, exhibiting flat to rolling topography with gently sloping surfaces while eastern and southern Tagaytay City including Alfonso show moderate to rugged topography. Portions of Ternate, Maragondon, General Mariano Alvarez, and Magallanes are fairly rugged with 100 to 200 meters above sea level. At Mounts Palay-Palay and Mataas na Gulod, both about 650 meters above sea level, the steepest climb from the creek to the top of the ridge is about 300 meters or about 50 percent average slope.

Corregidor Island is about 177 meters above sea level.

Slope

The slope is the degree of inclination of a given area. It is the number of feet the land rises or falls over 100 feet and written in terms of percentage. The degree of slope affects soil moisture, which influences species selection. It also

estimates the erosion potential of the place and helps in selecting the most appropriate planting techniques.

Cavite's slope range is divided into six categories, as prescribed by the National Land Use Committee: level to nearly level, gently sloping to undulating, undulating to rolling, rolling to moderately steep, steep, and very steep (Table 2.2).

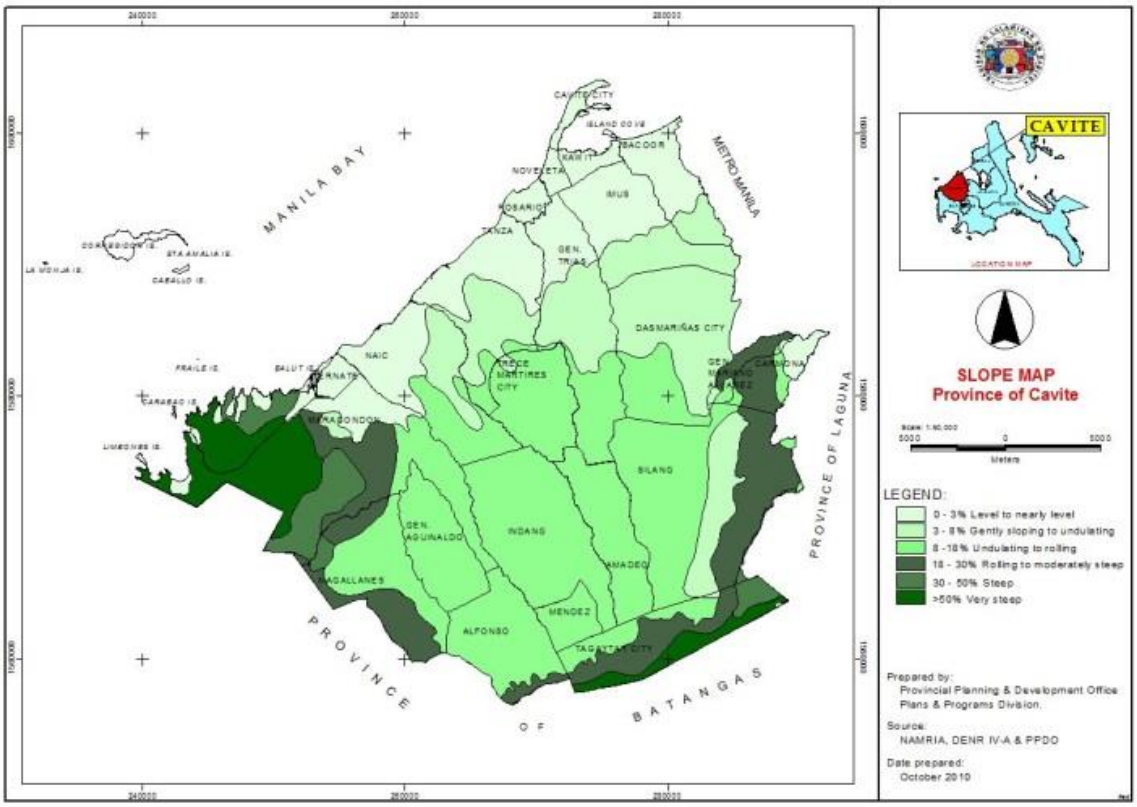
Table 2.2 ***Slope Classification, Province of Cavite: 2019***

Description	Slope (%)	Area (hectares)	Percentage Share
Level to nearly level	0 - 3	28,319.80	19.84
Gently sloping to undulating	3 - 8	26,778.66	18.76
Undulating to rolling	8 - 18	58,620.41	41.08
Rolling to moderately steep	18 - 30	15,467.83	10.84
Steep	30 - 50	5,202.80	3.65
Very steep	≥ 50	8,316.50	5.83
Total		**142,706.00**	**100.00**

The northern part of the province is flat or level. It is consists of the sections of the municipalities of Ternate, Maragondon, Naic, Tanza, Rosario, Noveleta, Kawit, and cities of Cavite, Bacoor, and Imus. These municipalities serve as municipal fishing grounds of the province. Abound with beaches, heritage sites, and historical markers, these areas are also known as tourist destinations for local and international tourists.

The westmost part of the province, most sections of Maragondon, Ternate, and Magallanes, is ranging from moderately steep to very steep as well as the eastmost part covering the municipalities of General Mariano Alvarez and a small portion of Carmona and Silang, including the city of Tagaytay. The areas with a slope of 18 to 30 percent are ideal for crop production and areas with a 30 to 50 percent slope are ideal for pasture and perennial trees. The southwestern tip with 50 percent and above slope is the province's forest areas. These areas are the most prone to erosion in the province of Cavite.

Lastly, the remaining cities and municipalities are gently sloping to undulating to rolling. These areas are the central transition area and are utilized for commercial, industrial, and tourism purposes. The commercial and industrial areas can also be found in the areas with 0-3 percent and 3-8 percent slope.



Map 2.2 ***Slope Map, Province of Cavite***

Geology

Geology is the study of Earth, the materials from which it is made, the structure of those materials, and the processes acting upon them. Physical geology is made important in this sub-chapter. Physical geology deals with the study of the physical features of the earth and the processes acting on them. This includes volcanoes, earthquakes, rocks, mountains, and the oceans; just about any feature of the earth.

Landforms

According to the National Geographic Society, landforms are features on the Earth's surface that are part of the terrain. The four major types of landforms are mountains, hills, plateaus, and plains. Buttes, canyons, valleys, and basins are considered minor types of landforms.

The Philippines, fondly called the "Pearl of the Orient Seas", has its diverse environment, well known for its different landforms. Some of it can be found in the province of Cavite.

The province of Cavite has its share in the mesmerizing beauty of nature that every Filipinos can enjoy. Pico de Loro, also known as the Parrot's Beak, is one of the most popular mountains in the Philippines. The wide plains of Cavite, the West Philippine Sea, and the coves and beaches of Nasugbu can be seen at the peak due to its elevation of 688 meters. Mt. Pico de Loro is part of the Mt. Palay-Palay-Mataas-na-Gulod Protected Landscape, the remaining lowland rainforest in Cavite, covering particularly Maragondon and Ternate, and Batangas. Mount Marami, one of the ancient volcanic features of Bataan Arc, Mount Buntis, and Mount Nagpatong, home to Andres Bonifacio Shrine and claim to be the execution site of the said hero, are other notable mountains in Cavite. Another peak in Cavite is Mt. Sungay (Mt. Gonzales) in Tagaytay. The inactive stratovolcano is the highest point in Cavite at 709 meters.

Another notable landform in Cavite is the Lucsuhin National Bridge, locally called Cabag Cave or Lucsuhin Cave, which is a national bridge connecting Barangay Lucsuhin and Barangay Kalubkob in Silang, Cavite. The bridge crosses the Ylang-ylang River and the first national bridge reported in the country.

Mt. Nagpatong in Maragondon, Cavite
Image Source: https://goo.gl/vmv6M2

Soil Types and Classification

Identification of soil characteristics, most importantly, the soil type, is a vital activity in area profiling. It is beneficial in recommending the best land-use for that area. Moreover, if intended for agriculture, knowing the soil type will also aid in identifying the most suitable crops to be planted in the area. It will contribute to the achievement of optimized land productivity.

The soil surveys conducted by the Bureau of Soils and Water Management (BSWM) revealed that Cavite is composed of ten (10) soil types.

The lowland area of Cavite is generally composed of Guadalupe clay and clay loam. This soil type is characterized as coarse and granular when dry but sticky and plastic when wet. Its substratum is solid volcanic tuff. These types of soils are suited to lowland rice and corn while those in the upland are suited for orchards and pasture.

Guadalupe clay adobes are abundant in the southern part of the cities of Bacoor and Imus bordering the city of Dasmariñas. The soil is hard and compact and difficult to cultivate which makes it generally unsuitable for diverse cropping. It is very sticky when wet and granular when dry. Forage grass is advised for this type of soil.

Hydrosol and Obando sand are found along Bacoor Bay. The shoreline of Rosario, Tanza, Naic, and Ternate are lined with Guadalupe sand.

The central area principally consists of Magallanes loam with streaks of Magallanes clay loam of sandy texture. This is recommended for diversified farming such as the cultivation of upland rice, corn, sugarcane, vegetables, coconut, coffee, mangoes, and other fruit trees. The steep phase should be forested or planted to root crops.

The eastern side of Cavite is consist of Carmona clay loam with streaks of Carmona clay loam steep phase and Carmona sandy clay loam. This type of soil is granular with tuffaceous material and concretions. It is hard and compact when dry; sticky and plastic when wet. This type of soil is planted to rice with irrigation or sugarcane without irrigation. Fruit trees such as mango, avocado, and citrus are also grown in this type of soil.

Guingua fine sandy loam is found along the lower part of Malabon and Ylang-ylang River at Noveleta.

The type of soils that dominate the upland areas is Tagaytay loam and Tagaytay sandy loam with mountain soil undifferentiated found on the south-eastern side bordering Laguna province. Also, on the southern tip are Magallanes clay and Mountain soil undifferentiated with an interlacing of Magallanes clay loam steep phase.

The Tagaytay loam contains fine sandy materials, moderately friable, and easy to work on when moist. In an undisturbed condition, it bakes and becomes hard when dry. About one-half of this soil type is devoted to upland rice and upland crops. On the other hand, Tagaytay sandy loam is friable and granular with a considerable amount of volcanic sand and underlain by adobe clay. Mountain soil undifferentiated is forested with bamboos found on the sea coast. Cavite also has the Patungan sand characterized by pale gray to almost white sand with a substratum of marine conglomerates. It is found at Sta. Mercedes in Maragondon and some coastlines of Ternate.

Land Suitability

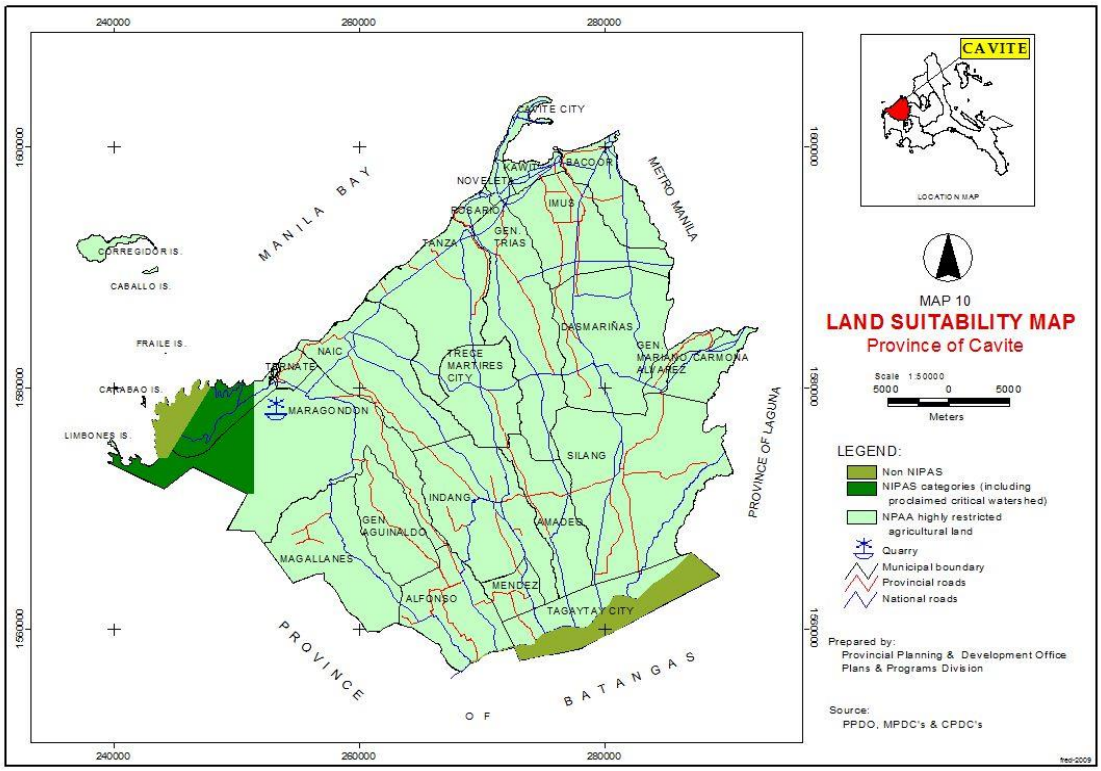
Land suitability is the fitness of a given type of land for a defined use. The process of land suitability classification is the appraisal and grouping of specific areas of land concerning their suitability for defined uses.

The majority of Cavite's area is for highly restricted agricultural use. The lowland areas covering the cities of Imus, Bacoor, and General Trias, portions of the

municipalities of Tanza, Naic, and Rosario are primarily suitable for irrigated rice/freshwater fishponds. The central part of the Province covering mainly the city of Dasmariñas, large portions of Tanza, Naic, Gen. Aguinaldo, and Trece Martires City are primarily suitable for cultivated annual crops. Cavite's upland area covering the municipalities of Silang, Amadeo, Indang, Alfonso, Magallanes, and a small portion of Gen. Aguinaldo and Maragondon and the City of Tagaytay is principally suitable for perennial tree and vine crop production.

The mountainous portions of the Province found at the western side and the area along the Tagaytay Ridge is considered as National Integrated Protected Areas System (NIPAS) land which cannot be altered from its natural habitat.

The land suitability information was from the Land Management Unit (LMU) map from the Bureau of Soils and Water Management (BSWM). This information will be used to determine whether the present land use is in congruence with the suitability of the land for that use.



Map 2.3 ***Land Suitability Map, Province of Cavite***

Land Resources

Land Classification

Land classification ensures the proper location of various land uses, especially of business, residential, and utility areas. This is executed by highly trained urban planners to ensure the harmonious movement of people and their activities. Land classifications and adherence to them by the public promote balanced development.

The land resource of the province is at 142,706 hectares. This is categorized into Alienable and Disposable (A&D) Land and Forest Land. The Alienable and Disposable Land accounts for 129,391 hectares or 90.67 percent share to a total land resource where economic activities (Agriculture – 55.24 percent share to A&D) and human settlements (44.76 percent share to A&D) occur. On the other hand, forestland, the land covered with forest or reserved for the growth of forests, is 9.33 percent or 13,315 hectares shared to the total. It is assumed that land resource is preserved to maintain the ecological balance in the province (Table 2.3).

Table 2.3 ***Land Classification, Province of Cavite: 2011-2020***

Land Classification	Area (ha)	Percentage Share	Percentage Share to Classification
Alienable and Disposable Lands	**129,391.00**	**90.67**	
Production Land	71,474.91	50.09	55.24
Built-up Area	57,916.09	40.58	44.76
Forest Lands	**13,315.00**	**9.33**	
Classified	5,357.36	3.75	40.24
Protected Areas /Natural Parks	3,928.00	2.75	
Military Reservation	808.99	0.57	
Islands	620.37	0.43	
Unclassified	7,957.64	5.58	59.76
Total	**142,706**		

Source: Cavite Provincial Development and Physical Framework

Alienable and Disposable Lands

As defined by the Philippine Statistics Authority (PSA), alienable and disposable lands refer to those lands of the public domain which have been the subject of the present

system of classification and declared as not needed for forest purposes. It is further classified into production land and built-up areas.

The production land is the area where agricultural activities and food production take place. Most of the areas in Cavite are of this classification (50.09%). Cavite's fertile and alluvial soil types and favorable climatic conditions make it highly suitable for agricultural production. The lowland areas are suited for rice, corn, and vegetable production. The central area is recommended for diversified farming. However, according to the Office of the Provincial Agriculturist, Cavite's agricultural lands are decreasing due to the conversion of these lands to residential/subdivision development and industrial areas.

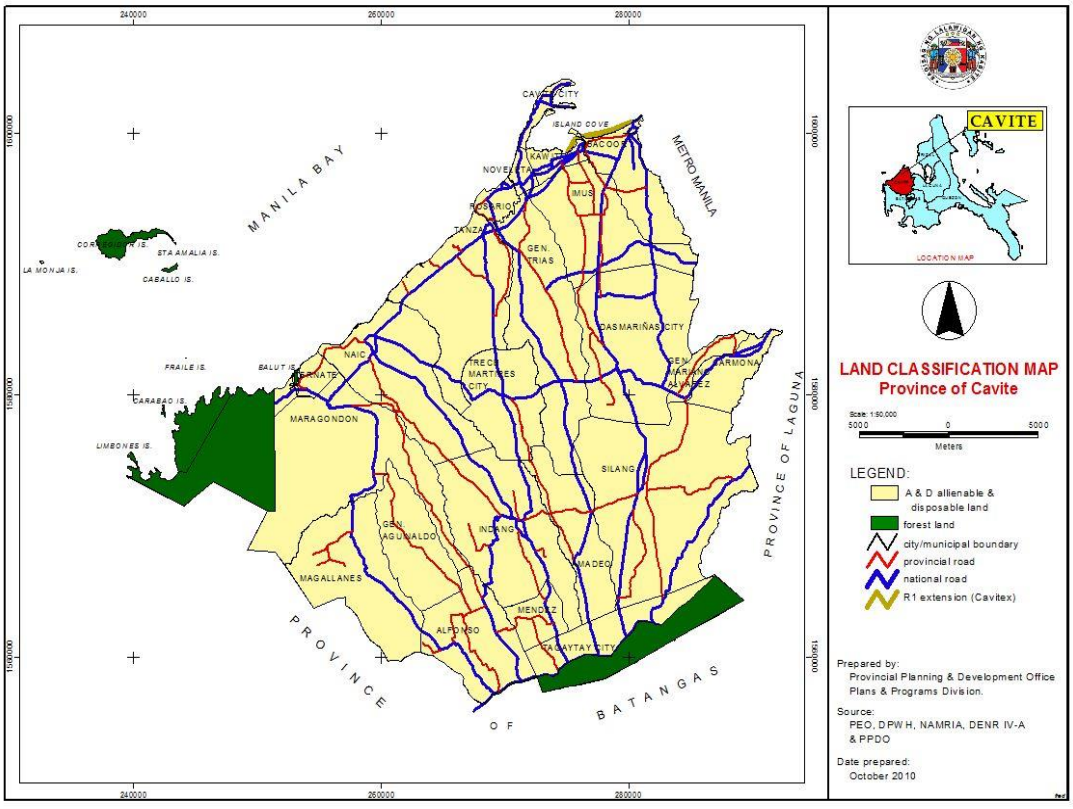
The built-up areas, on the other hand, are comprised of settlements, industrial, commercial, and tourism areas. This area is mainly for the conduct of economic activities as well as for human habitations. It covers up to 40.58 percent of the total land area of Cavite.

Forest Lands

The forest lands are those that have either national proclamation to become forest reservations or those lands that are not suitable for any particular use. It may be a factor of topography and elevation. Forest lands are divided into two kinds the classified land, which includes protected areas/natural parks, military reservations and islands, and unclassified land, also known as the public forest.

Under classified lands, Mounts Palay-Palay and Mataas na Gulod Protected Landscape located in Ternate and Maragondon are proclaimed as natural parks, part of Ternate are military reservation, and Corregidor, Caballo (Fort Hughes), Carabao, Limbones, Sta. Amalia, El Fraile (Fort Drum), La Monja, Balot Island, and Island Cove (PuloniBurunggoy) are named islands in Cavite. Unclassified land includes the Tagaytay ridges with a slope greater than 50 percent, Magallanes forest land, and parts of Maragondon.

The national park has the potential for eco-tourism due to its vast diversity of flora and fauna and accessibility. Its development as an eco-tourism destination would enhance its value as a biodiversity conservation area, open laboratory of scientific, biological, other research studies, and venue for recreation and public pleasure. However, despite its bright potential, there are still issues and concerns that need to be resolved to balance the exploration and preservation of the park's rich features.



Map 2.4 ***Land Classification Map, Province of Cavite***

Mineral Resources

The upland part of Cavite contains volcanic materials, tuff, cinders, basalt, breccias, agglomerate and interbeddings of shales, and sandstones in the soil. The dormant and active volcanoes (Taal) are within this volcanic area and have been the sources of volcanic materials that form the Tagaytay Cuesta. The drainage systems are deeply entrenched in the tuffs, eroding thin interbedded sandstones and conglomerate, which are the source of little resources of sand and gravel in the larger stream. Adobe stone quarries also flourish in tuff areas. Meanwhile, in the lower part of Cavite, mostly coastal, marl, and

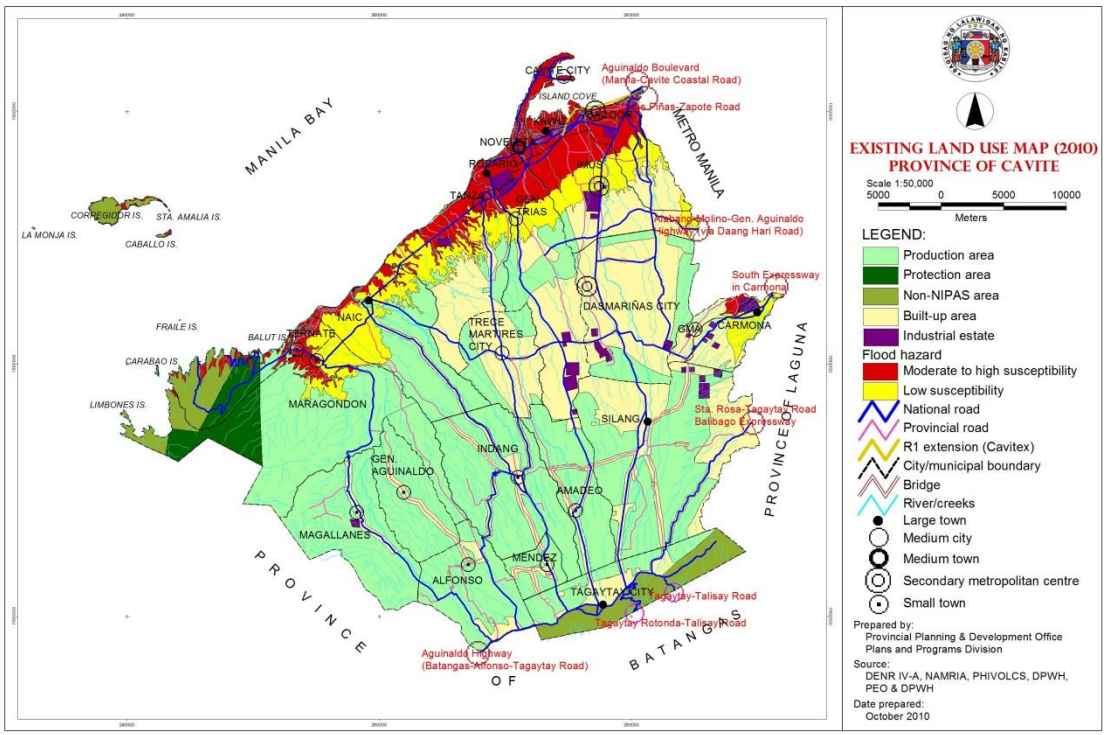
conglomerate can be found. Igneous rocks are prominent in the high, mountainous regions of western Cavite.

Specifically, the City of Bacoor and municipalities of General Mariano Alvarez, Tanza and Ternate have andesite and basalt; Cities of Dasmariñas and General Trias and municipalities of Indang, Maragondon, and Naic have sand and gravel; and Magallanes has clay.

Table 2.4 ***Mineral Resources, Province of Cavite: 2018***

City/Municipality	Mineral Resources
City of Bacoor	Andesite, Basalt
City of Dasmariñas	Sand and Gravel
City of General Trias	Sand and Gravel
General Mariano Alvarez	Andesite, Basalt
Indang	Sand and Gravel
Magallanes	Clay
Maragondon	Sand and Gravel
Naic	Sand and Gravel
Tanza	Andesite, Basalt
Ternate	Andesite, Basalt

Source: CALABARZON Mining and Minerals Industry Profile – Mines and Geosciences Bureau IV-A



Map 2.5 ***Existing Land Use Map, Province of Cavite***

Coastal Resources

Cavite boasts a stretch of about 122.574 kilometers of shoreline. It is found along Cavite City, City of Bacoor, Kawit, Noveleta, Rosario, Tanza, Naic, Maragondon, and Ternate. The richness of Cavite's coastal resources paved the way for our recognition as a major producer of oysters and mussels. The fisherfolks are also active producers of sugpo and bangus. On the western coastlines lie the breathtaking beaches with pale gray sand. Thus, the coastal resource of the province contributes to the economic activities related to fishery and tourism.

Coral Reefs

Coral reefs are colonies of tiny living animals found in marine waters that contain few nutrients. It is commonly found at shallow depths in tropical waters and grows best in warm, shallow, clear, sunny, and agitated waters. It delivers ecosystem services to tourism, fisheries, and shoreline protection. It also serves as home to marine life.

As of 2013, the Department of Environment and Natural Resources Region 4A – CALABARZON had mapped a total of 19.26 hectares of coral reef areas in Sitio Pinagkainan and Patungan, Barangay Sta. Mercedes, Maragondon, Cavite. Sitio Pinagkaingan, located in the eastern part of Limbones cove opposite Carabao Island, has a 34 percent live coral cover dominated by non-Acropora corals (32.60%) and a small population of Acropora corals (1.40%).

In Sitio Patungan Munti, slightly sloping ground and good water visibility at 30 feet depth, has about 32.76 percent live coral cover where the "staghorn" corals (20%) are mostly seen. About 40 percent of the species were members of the two largest families, the Pomacentridae and Labridae. A school of fusiliers (Caesio spp.) were also observed.

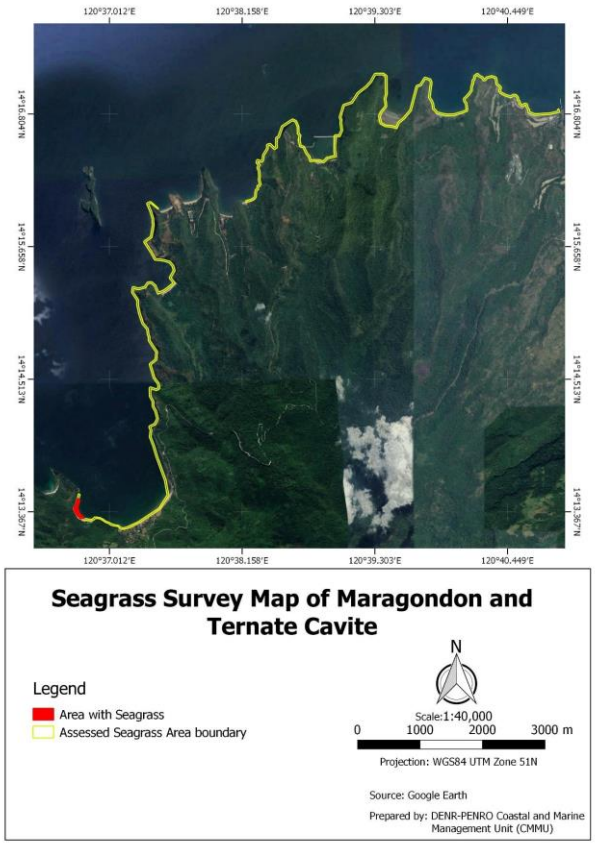
In Santa Mercedes Fish Sanctuary, coral reefs found are of families Acroporidae, Alcyoniina, Agariciidae, Caryophyllidae, Euphylliidae, Paviidae, Fungiidae,

Meandrinidae, Montraeidae, Mussidae, Pectiniidae, Pocilloporidae, Poritidae.

Coral Reefs in Limbones Cove
Image source: www.choosephilippines.com (Photos by: Mike Ajero)

Seagrass Communities

Based on the assessment conducted last February 17, 2020, two species of sea grass were observed namely *Thalassia hemprichii* and *Halophila sp.*. The map below shows the location of the conducted assessment as well as the area where the sea grass was seen.



Source: PENRO Cavite
Map 2.6 ***Seagrass Map, Province of Cavite***

Mangroves

Mangroves are trees or shrubs that grow in the tropical coastal swamps that are flooded at high tide. Mangroves typically have numerous tangled roots above ground and form dense thickets.

Mangroves provide ecological and socio-economic importance in terms of protection of shoreline and coral reefs, a nursery for fishes, shrimps, crustaceans and mud crabs, food and sanctuary for marine life, potential eco-tourism sites, protection for reclaimed land, and windbreaker during typhoons.

As of May 2015, Cavite has a total of 195.893 hectares of mangrove areas. These mangrove areas are based on the bio-ecological assessment of the Department of Environment and Natural Resources – Manila Bay Coordinating Office (DENR-MBCO) Region IV-A conducted in November 2010. It is about 88.47 hectares located in the City of Bacoor, Noveleta, Cavite City, Kawit, and Rosario. The mangrove rehabilitation project is established from 2001 to 2015. Around 102.086 hectares of mangrove areas are planted in the last ten (10) years.

The species of Mangroves found in the province are:

1. Bakawan Babae (R. mucronata)
2. Bakawan Lalake (Rhizophora apiculata)
3. Bakawan bato (R. stylosa)
4. Api-api (Avicennia officinales)
5. Bungalon (A. marina)
6. Piapi (A. lanata)
7. Pagatpat (Sonneratia Alba)
8. Pagatpat baye (S. ovata)
9. Pedada (S. caeolaris)

Freshwater Resources

Freshwater is one of the most valued natural resources. Effective management to ensure its sustainable source is essential and is a primary concern of the government.

Surface Runoff

Surface runoff is water from rain or other sources that flows over the land surface and is a principal component of the water cycle. Runoff that occurs on surfaces before reaching a channel is also called overland flow. A land area that produces runoff draining to a common point is called a watershed.

There are six major river watersheds in Cavite such as:

1. Bacoor River Watershed
2. Imus River Watershed
3. San Juan River Watershed
4. Cañas River Watershed
5. Labac River Watershed
6. Maragondon River Watershed

These rivers are known to have various tributaries passing through the different municipalities of the province. These rivers and tributaries generally have a flowing direction from the highlands of Tagaytay City going to Manila Bay with stretches from the City of Bacoor up to Municipality of Ternate.

Water sources, especially in the upland areas, are abundant due to numerous natural springs, waterfalls, and rivers. These have become beneficial among domestic, tourism, and industrial users. These include Balite Spring (Amadeo), Saluysoy Spring (Alfonso), Matang Tubig Spring

(Tagaytay City), Malakas Spring (General Aguinaldo), and Ulo Spring (Mendez).

The province is also endowed with waterfalls such as Palsajingin Falls (Indang), Balite Falls (Amadeo), Malibiclibic Falls (Gen. Aguinaldo), Talon-Butas Falls (Gen. Aguinaldo), Saluysoy Falls (Alfonso), and Tala River (Gen. Aguinaldo). Nowadays, these God-given natural wonders are being utilized for recreational and leisure activities like picnics and gatherings.

Table 2.5 ***Major Rivers, Province of Cavite***

Name	Length (km)	Point of Origin	Drainage Location
1. Bacoor River	12.3	Pintong Gubat, Molino passing Tanzang Luma, Salinas and Panapaan	Bacoor Bay
2. Imus River	38.4	North of Tagaytay passing Balite, Sabutan, Biga, Silang, Palapala, City of Dasmariñas, Pasong Bayog, San Agustin and connects to Pasong Bayog passing Salitran, Baluctot, Anabu II & Anabu I going to Tanzang Luma, Palico, Imus down to Salinas and Mabolo, Bacoor toward drainage. Tributaries which started from Bucal going to San Agustin join/connect Imus River in Pasong Bayog. Tributaries found in Baluctot also drain at Imus River.	Bacoor Bay
3a. San Juan River	39.0	Maitim, Amadeo passing Maitim, Lalaan I, Silang, Dagatan, Banaybanay, Calubcob, Panungyanan, Javalera, Biclatan, Manggahan, Jaime Baker; Buenavista, Pasong Kawayan, Bacao, Gen. Trias; Sta. Rosa, Noveleta and Putol, Kawit. Tributaries are at Bucandala and Panamitan.	Bacoor Bay Kawit
3b. Alang-Ilang River		Pasong Camachile River which started from Santiago passing San Gabriel connects with San Juan River; San Jose, City of Dasmariñas converging with San Juan River at Bacao, Gen. Trias	
4. Cañas River	38.9	From Kaybagal, Tagaytay City passing Loma, Amadeo going to Polanan River, San Agustin, Gregorio, Osorio, Lucbanan, Conchu, Inocencio, Trece Martires City; Alingaro, Gen. Trias passing Lubluban River, Santol, Bucal to Julugan, Tanza. Also, from Tagaytay City going to Salaban, Amadeo; Balagbag, Mahabang Kahoy, Limbon, Alulod, Indang and connects to Paradahan, Tanza. Other tributaries are found in Buna Lejos, Limbon connecting in Alulod.	Manila Bay Julugan, Tanza
5. Labac River	30.5	Two contributory rivers are located in the upland area. Starting from Buna Lejos, Indang passing Buna Cerca to Calumpang River going to Palangue, Naic to Kay-alamang River passing San Roque down to Labac River. Patutong Malaki, Tagaytay City passing Habulin River, Barangays II & III, Mendez going to Kayquit, Indang straight to Banaba Cerca going to Malainen Bago, Naic	Manila Bay
6.Maragondon River	35.6	Multi-sources Banaba Lejos passing Pantihan I & II. Tributaries are: Habulin River passing East Tambo to Banaba Lejos; From Palocpoc passing Lumampong and Banaba Lejos; Magay River to Maragondon River; Narvaez River passing Tabora to Maragondon River; Matagbak Buruhan River passing Sinaliw na Munti and Sinaliw na Malaki; Aliang River in Magallanes starting from Kaytitinga joined Narvaez River passing Tabora. Another river (unnamed) from west of Kaytitinga and Aliang River passing Magallanes and joined Tabora to Maragondon River	Manila Bay Ternate

Groundwater Resources

The groundwater is one of the best sources of fresh water for human and animal consumption. By definition, groundwater is the water found underground in the cracks and spaces in soil, sand, and rock. It is stored in and moves slowly through geologic formations of soil, sand, and rocks called aquifers.

The natural ground elevation or terrain affects the amount of groundwater in an area, as well as the water extraction demand depending on industrial and residential demand.

The vast number of deep wells in the province has become a major source of concern about the decreasing amount of groundwater resources in Cavite. The towns of Naic, Tanza, and Ternate and the cities of Dasmariñas, Bacoor, Imus, and Gen. Trias highly depend on artesian wells. These have become their major source of water. These have caused saltwater intrusion in the aquifers due to over-extraction of water. In a study made by the Japan International Cooperation Agency (JICA), the groundwater in Cavite is depleting at a rate of 1-meter water level decrease per year. In the upland areas of the province, groundwater is tapped mainly for domestic use through local water supply systems.

Based on the geological studies in Cavite, most of the groundwater is stored in the pyroclastic rock reservoir and little in the volcano and clastic rock. Potable water is not reported in the nearshore due to the presence of alluvium deposits, which may be brackish and saline and are not safe for drinking and other domestic use. Another source of groundwater is called infiltrated rainfall, which serves as the direct source of most near-surface aquifers. Inflow from the surface water reservoir and irrigation water also contributes to the groundwater.

Freely-flowing wells occur in the 30-meter elevation of Southern Tanza and the lower portions of nearshore Naic and Ternate, while in the City of Imus, it is at an elevation of about 15 meters.

Climate

Cavite has two pronounced seasons, dry from November to April and wet for the rest of the year. The hottest temperature is observed in May while it is coldest in January. Heaviest rains are experienced in July and there is almost no rain at the onset of the year in April.

Natural Hazards and Constraints

There are eight identified hydro-meteorological and geological hazards in Cavite. These are:

1. Flooding (river overflow and inland)
2. Storm surge
3. Rainfall induced landslide
4. Earthquake-induced landslide
5. Ground shaking
6. Liquefaction
7. Tsunami
8. Ground rupture

The entire province is generally susceptible to ground shaking. A total of 125,756 hectares of Cavite's total land area covering around 90 percent of the barangays are highly susceptible. There are towns in Cavite that are more susceptible to hazards than the others, vulnerable at around seven of the eight hazards are the towns of Naic and Tanza. It can also be observed that the town of Magallanes is generally the least susceptible to hazards among all towns in the province.

Around 298 barangays of Cavite, 35.9 percent of all barangays, are considered highly susceptible to flooding and storm surge, 231 of them are located along the coastal areas. The more than 320,000 inhabitants of those areas are considered living in disaster prone areas.

Table 2.6 ***Number of barangays by type of hazards, Province of Cavite***

City/Municipality	Flooding	Storm Surge	Rainfall Induced Landslide	Earthquake Induced Landslide	Ground Shaking	Liquefaction	Tsunami	Ground Rupture
1st District								
Cavite City	All	11			All	All	All	
Kawit	All				All	17	16	
Noveleta	All	5			All	9	5	
Rosario	All	8			All	18	10	
2nd District								
City of Bacoor	55				All	32	21	
3rd District								
City of Imus	38				All	2		
4th District								
City of Dasmariñas	11				All			
5th District								
Carmona	1				All			3
Gen. Mariano Alvarez					All			
Silang			6		All			4
6th District								
City of Gen. Trias	7				All			
7th District								
Amadeo					All			
Indang					All			
Tanza	26	9			All	10	14	
Trece Martires City					All			
8th District								
Alfonso					30			
Gen. E. Aguinaldo					5			
Magallanes								
Maragondon	3				13			
Mendez			4		All			
Naic	8	3			3	5	7	
Tagaytay City			11		31			
Ternate	8	2	1		9	4		

Environmental Management

Cavite has the Cavite Environment Code (Provincial Ordinance No. 001-S-2008) that guides the province in formulating and implementing programs with the ultimate goal of safeguarding and conserving the land, mineral, marine, forest and other natural resources of the province. In each aspect of environmental management, Cavite also enacted specific ordinances in support of the Environment Code.

Table 2.7 ***Legislation on environmental management, Province of Cavite: 2002 – 2017***

Ordinance/ Resolution No.	Year	Title
004	2002	An Ordinance prohibiting the smoking and selling of cigarettes in all public and private primary and secondary schools and within a radius of 100 meters from the school compound, premises and providing penalties for violations thereof

Table 2.7 continued…

Ordinance/ Resolution No.	Year	Title
001	2003	An Ordinance prohibiting the improper disposal of used oil generated from automotive and industrial lube oil and petroleum sludge, providing penalties for violation thereon and for other purposes
004	2005	An ordinance to curtail illegal activities of professional and illegal squatters in the province of Cavite
007	2005	An Ordinance prescribing safety measures in the refueling at any gasoline satiation within the territorial jurisdiction of the Province of Cavite and providing penalties for violation thereof
005	2006	An Ordinance regulating the operation of all junkshops and other similar business establishments and individuals engaged in buying and selling of metals with monetary value within the province of Cavite and for other purposes
004	2007	An Ordinance on the establishment of animal quarantine checkpoints for foot and mouth disease and other zoonotic diseases at strategic entry points in the Province of Cavite and imposing fees thereof
001	2008	Cavite Environment Code
005	2011	An Ordinance adopting the National Code on Sanitation in the Province of Cavite
001	2012	An Ordinance for the implementation of anti-dengue campaign at the barangay level
003	2012	An Ordinance adopting the Manila Bay Oil Spill Contingency Plan
007	2012	An Ordinance prohibiting, regulating, prescribing certain uses of plastics for goods and commodities that end up as residual wastes and promoting the use of eco-bags and other environment-friendly practices as an alternative and providing penalties for violations thereof
026	2012	An Ordinance regulating cigarette smoking within the Provincial Capitol compound of Cavite and providing penalties thereof
2013-007	2013	An ordinance establishing the "Greening Program" within the province of Cavite
2013-008	2013	Water Consumers Protection Ordinance of Cavite
2013-015	2013	An ordinance creating the Water Quality Management Are (WQMA) Governing Board for Imus-Ylang-ylang-Rio Grande River pursuant to DENR Administrative Order no. o2, Series 2013
2013-021	2013	An ordinance amending certain Provisions of Provincial Ordinance No. 007-2012 otherwise known as an Ordinance Prohibiting, Regulating and Prescribing certain uses of Plastics for Goods and Commodities that end up as Residual Wastes and promoting the use of Eco Bags and other environment friendly practices as an alternative and providing penalties for violation thereof
061	2014	An ordinance establishing the Provincial Clean Air and Anti-Smoke Belching Program and appropriating funds and providing fines and penalties thereof
129	2015	An ordinance requiring all car wash facilities operating within the territorial jurisdiction of the province of Cavite to install septic tanks in their respective premises and providing penalties for violations thereof
167	2017	An ordinance prohibiting the littering of solid wastes in the province of Cavite and providing penalties for violation thereof

Solid Waste Management

Management of solid waste is a major environmental concern of the government. The Republic Act 9003 stipulates the law on proper ecological disposal of solid waste, which is doing the least harm to the environment. In support of this, the provincial government has enacted Executive Order No. 29, which requires all cities and municipalities of the province to establish waste reduction and recovery schemes and to convert their open dumpsites to controlled ones. It is complemented by Provincial Ordinance No. 007-2012 that regulates the use of plastics and promotes the use of environmentally friendly packaging and practices.

The Republic Act No. 9003 or the Ecological Solid Waste Management Act created the Provincial Solid Waste Management Board.

Solid wastes are collected and disposed to sanitary landfills or managed open dumpsites. At present, the province owns and uses 147 units of operational garbage trucks, compactors, and mini dump trucks for its garbage collection system with capacities of 10/8 cu.m. and four cu.m., respectively. The disposal activities also employ around 529 people acting as garbage collectors, street cleaners, and office support staff.

The following table shows the status of solid waste management compliance in the province. As of June 2020, all the cities and municipalities in Cavite, except for Trece Martires City and General Emilio Aguinaldo, have its solid waste management plan approved.

Table 2.8 ***Status of Solid Waste Management Plan Compliance by City/Municipality, Province of Cavite***

City/ Municipality	Year Covered	NSWMC Resolution No.	Status (June 2020)	
1st District				
Cavite City	2015-2025	847 Series of 2016	Approved	Currently Updating
Kawit	2015-2024	316 B Series of 2017	Approved	Currently Updating
Noveleta	2015-2025	844 A Series of 2017	Approved	Currently Updating
Rosario	2015-2026	836 Series of 2016	Approved	Currently Updating

Table 2.8 continued…

City/ Municipality	Year Covered	NSWMC Resolution No.	Status (June 2020)	
2nd District				
City of Bacoor	2014-2023	111 Series of 2014	Approved	Currently Updating
3rd District				
City of Imus	2015-2024	692 B Series of 2017	Approved	Currently Updating
4th District				
City of Dasmariñas	2015-2025	538 A Series of 2016	Approved	Currently Updating
5th District				
Carmona	2018-2027	182 Series of 2015	Approved	Updated
Gen. Mariano Alvarez	2019-2028	846 Series of 2016	Approved	Updated
Silang	2015-2025	837 Series of 2016	Approved	Currently Updating
6th District				
City of Gen. Trias	2015-2024	833 Series of 2016	Approved	Currently Updating
7th District				
Trece Martires City	2019-2028	N/A	Submitted (Under Review - NSWMC)	Currently Updating
Indang	2016-2025	834 Series of 2016	Approved	Currently Updating
Tanza	2015-2025	838 Series of 2016	Approved	Currently Updating
Amadeo	2017-2026	537 B Series of 2017	Approved	Currently Updating

Table 2.8 continued…

City/ Municipality	Year Covered	NSWMC Resolution No.	Status (June 2020)	
8th District				
Alfonso	2015-2025	845 B Series of 2017	Approved	Currently Updating
Gen. E. Aguinaldo				
Magallanes	2015-2024	314 B Series of 2017	Approved	Currently Updating
Maragondon	2015-2024	835 Series of 2016	Approved	Currently Updating
Mendez	2016-2025	722 B Series of 2017	Approved	Currently Updating
Naic	2016-2025	840 A Series of 2017	Approved	Currently Updating
Tagaytay City	2016-2025	848 A Series of 2017	Approved	Currently Updating
Ternate	2015-2025	843 Series of 2016	Approved	Currently Updating

Source: Provincial Government-Environment and Natural Resources Office Cavite

The next table shows the projected daily waste generation, solid waste disposal system, waste disposal equipment, and frequency of garbage collection in the province of Cavite. The solid waste disposal system in Cavite is by contract or sanitary landfill. All cities and municipalities in the province also have their centralized material recovery facilities (MRF).

Table 2.9 ***Solid Waste Management by City/Municipality, Province of Cavite: 2019***

City/Municipality	Projected Waste Generation[a] (kg/day)	Waste Disposal Equipment			Frequency of Garbage Collection	Solid Waste Disposal Location[b]
		Compactors	Big Garbage Trucks	Small Garbage Trucks		
1st District						
Cavite City	48,141.53		1	1	Main Roads/Market – Daily City Streets – twice a week	San Mateo, Rizal
Kawit	42,824.94		1	3	Daily	Suri Waste Management and Disposal Services, Calamba City, Laguna
Noveleta	16,493.84		3	0	Daily	Navotas Sanitary Landfill
Rosario	36,202.01		0	5	Daily	Suri Waste Management and Disposal Services, Calamba City
2nd District						
City of Bacoor	36,3548.2				Daily (by the contractor)	Rizal Provincial Sanitary Landfill and San Mateo Sanitary Landfill
3rd District						
City of Imus	183,383.9		3	0	Barangay – Once a week Market – Daily	Rizal
4th District						
City of Dasmarinas	231,673.7	8	12	3	Daily	Brgy. Salawag, Dasmariñas City
5th District						
Carmona	38,579.79		3	10	Twice a week	San Pedro, Laguna
General M. Alvarez	60,323.45				Thrice a week	Calamba City, Laguna
Silang	136,452.3	5	1	7	Once a Week Public market - Daily	Bauan, Batangas
6th District						
City of General Trias	126,910.1		2	16	Twice a week	Calamba City, Laguna
7th District						
Amadeo	16,086.22		1	0	Thrice a week	Sta, Cruz, Laguna
Indang	32,302.4		4	0	Daily (except Saturday)	SB Hain, Calamba City, Laguna
Tanza	88,903.93		6	18	Twice a Week	Pilotage Sanitary Landfill, San Pedro, Laguna
Trece Martires City	74,265.62	2	3	0	Daily	San Pedro, Laguna
8th District						
Alfonso	26,763.91		1	1	Twice a week	Brgy. Piña, Taysan, Batangas
General E. Aguinaldo	11,315.37		1	1	10 trips / week	Sta. Cruz, Laguna
Magallanes	10,256.66		1	0	Twice a week	Bauan and Taysan, Batangas

Table 2.9 continued…

City/Municipality	Projected Waste Generation[a] (kg/day)	Waste Disposal Equipment			Frequency of Garbage Collection	Solid Waste Disposal Location[b]
		Compactors	Big Garbage Trucks	Small Garbage Trucks		
Maragondon	22,183		1	3	Twice a week	Pilotage Sanitary Landfill, San Pedro, Laguna
Mendez	12,799.56		1	3	Five times a week	Suri Waste Management and Disposal Services, Calamba City, Laguna
Naic	42,032.27		6	0	Once or twice a week	Pilotage Sanitary Landfill, San Pedro, Laguna
Tagaytay City	27,464.57		6	5	Daily	San Pedro, Laguna
Ternate	11,703.3		0	2	Daily	Pilotage, San Pedro, Laguna
Total	**1,660,611**					

[a]projected daily waste generation from 2019-2028 [b]type of solid waste disposal in all cities and municipalities is by contract or sanitary landfill
Source: Provincial Government-Environment and Natural Resources Office Cavite

Moreover, the list below shows the special wastes treatment companies within the province.

Table 2.10 ***Special Wastes Treatment Companies, Province of Cavite***

Company Name	Address	Types of Special Waste Treated
Agility Solutions, Inc.	Block 1 Lot 7 People's Technology Complex, Carmona, Cavite	Waste with inorganic chemicals (D499)
Asia Metal Trading Corp.	Lot 28, New Cavite Industrial City, Stateland, Brgy. Manggahan, Gen. Trias City	Waste with inorganic chemicals (D406 & D407) and miscellaneous wastes (M506 & M507)
Asia Recycling Solutions Technology Corp. (ARTSC)	6G Southcoast Industrial Estate, Brgy. Bancal, Carmona, Cavite	Waste with inorganic chemicals (D405, D406, D407, D499)
Azzions Recycling Solutions, Inc.	B12 L8 Golden Mile Business Park, Brgy. Maduya, Carmona, Cavite	Waste with cyanide (A101), acid wastes (B201-B299), alkali waste (C301-C399), waste with inorganic chemicals (D401-D499), inks, dyes, pigments, paints, latex, adhesives, organic sludge (F601F699), waste organic solvents (G703-G704), waste oil/bunker sludge (I101), contaminated containers (J201) and organic chemicals (L401)
Clean Echo Techwin, Inc.	184-185 Mindanao Ave., Brgy. Maderan, GMA, Cavite	Waste with cyanide (A101), acid wastes (B201-B208, B299), alkali wastes (C301-C399), waste with inorganic chemicals (D404, D405, D406, D407, D499), inks, dyes, latex, adhesives (F601-F699), waste organic solvents (G704), organic wastes (H802), waste oil/bunker sludge (I101-I104), containers previously containing toxic chemical substances (J201) and miscellaneous wastes [pathogenic and infectious wastes, pharmaceuticals and drugs and pesticides] (M501, M503, M504 & M506)
Cleanway Environmental Management solutions, Inc. (Formerly Cleanway Technology Corporation)	Meridian Industrial Complex II, Brgy. Maguyam, Maguyam Road, Silang, Cavite	Waste with cyanide (A101), acid wastes (B201-B299), alkali wastes (C301-C399), waste with inorganic chemicals (D401-D499), reactive chemical wastes (E501-E502), inks, dyes, pigments, paints, latex, adhesives, organic sludge (F601-F699), wastes organic solvents (G703-G704), putrescible/organic wastes (H802), waste oil (I101), contaminated containers (J201), immobilized wastes (K301-K303), organic chemicals (L401) and miscellaneous wastes (M501-M505)
E-Technology Philippines, Inc. (ETPI)	Lot 2 Blk. 4, Phase II, PEZA, Rosario, Cavite	Waste with inorganic chemicals (D406)
Fujihiro Philippines, Inc.	SEPZ Gateway Business Park, Brgy. Javalera, Gen. Trias, Cavite	Waste with cyanide (A101), stabilized wastes [chemically fixed wastes/silver sludge] (K302) and waste with inorganic chemicals [copper compounds] (D499)
Green Eco Techwin Inc.	Block 2 Lot 8 Phase 2, Golden gate Business park, Brgy. Buenavista II, Gen. Trias, Cavite	Waste with cyanide (A101), acid wastes (B201, B208, B299), Waste with cyanide (C301, C305, C399), wastes with inorganic chemicals [Ni-Cd and used lead acid batteries] (D404, D406), waste oil (I101), and miscellaneous wastes [waste electrical and electronic equipment] (M506, M507)
Green Horizon Environmental Management, Inc. (Formerly Dome Consolidated Chemical Corporation)	223 Brgy. Niog II, Bacoor, Cavite	Waste with cyanide (A101), acid wastes (B201-B299), alkali wastes (C301-C399), waste with inorganic chemicals (D401-D499), inks, dyes, pigments, paints, latex, adhesives, organic sludge (F601F699), waste organic solvents (G703-G704), contaminated empty containers (J201), waste oil (I101-I104), stabilized wastes (K301K303) and miscellaneous wastes [pharmaceutical wastes] (M503)

Table 2.10 continued…

Company Name	Address	Types of Special Waste Treated
Integrated Waste Management, Inc. (IWMI)	Sitio Pag-asa, Brgy. Aguado, Trece Martires City, Cavite	*Pyrolisis - Inks, dyes, pigments, paints, latex, adhesives, organic sludge (F601-F699), waste organic solvent (G703-G704), organic wastes (H802), waste oil/bunker sludge (I101), miscellaneous wastes (M501, M503 and M504); *Autoclave - Miscellaneous wastes [pathogenic and infectious wastes] (M501) and Storage: Wastes with inorganic chemicals [busted fluorescent lamps] (D407/M507)
JORM Environmental Services, Inc	Brgy. Tapia, Gen. Trias, Cavite	Waste with inorganic chemicals (D401-D499), inks, dyes, pigments, paints, resins, latex, adhesives, organic sludge (F601-F699), oil-contaminated materials (I104), contaminated containers (J201), stabilized wastes (K301-K303), asbestos wastes (M502), pharmaceuticals and drugs (M503), waste electrical and electronic equipment [WEEE] (M506)
JORM Trading Corporation	595 Gen. Trias Drive, Brgy. Tejero, General Trias, Cavite	Waste with inorganic chemicals [Glass/glass-related materials/metal grinding dust, busted fluorescent lamps, bulbs, printed circuits boards] (D401-D407), inks, dyes, pigments, paints, latex, adhesives, organic sludge (F601-F699), contaminated containers (J201), solvent and oil-contaminated materials (G703/G704/I101), and miscellaneous wastes [pharmaceutical and drugs] (M503) and waste oil (to be reused in the solidification process) (I101)
Matsuda Sangyo (Philippines) Corporation	Lot 7 Blk. 1 Peoples Technology Complex, Carmona Cavite	Waste with cyanide (A101), inks, dyes, pigments, paint, latex, adhesives, organic sludge [epoxy (F699)], waste organic solvent [Non-halogenated organic solvents] (G704)], waste with inorganic chemicals [metal scraps/cutting wastes, defective diodes, copper frames], (D406/D499)
MEGA Manila G.N.B. Motors Corporation	Governor's Drive, Brgy. Sabang, Naic, Cavite	Waste with inorganic chemicals [used lead acid batteries (ULABs)] (D406) and copper waste (D499), used oil (I101) as fuel of the furnace
O.M. Manufacturing Philippines, Inc.	Phase III, Blk. 15-A Lot 1, CEPZ, Rosario, Cavite	Waste with inorganic chemicals [lead dross and copper dross] [D406D499)
RMM Trading & Waste Management Services (RTWMS)	E. Aguinaldo Highway, Brgy. Lalan 1st, Silang, Cavite	Alkali wastes (C301-C399), waste with inorganic chemicals [busted fluorescent lamps] (D407), inks, dyes, pigments, paints, latex, adhesives, organic sludge (F601-F699), waste oil (I101), contaminated empty containers (J201)
Sardido Industries, Inc.	Remulla Drive, Brgy. Sahud-Ulan, Tanza, Cavite	For treatment: Waste with inorganic chemicals [busted fluorescent lamps/bulbs] (D407) For storage prior for export: Waste with inorganic chemicals [printed circuit board with components, lead compounds (D401-D499) and E-Wastes (M506)] For storage prior for treatment to other registered TSD facility: Used oil (I101), used lea acid batteries (D406), used solvents (G703G704), metal sludge, paint sludge, inks, dyes, paints, toners (D405, F601, F610, F699) and contaminated containers (J201)
Solvtech Consultancy Resources	Block 11 Lot 6-A Mart One Street, Sterling Technopark, Maguyam Road, Silang, Cavite	Acid wastes (B201-B299), alkali wastes (C301-C399), waste with inorganic chemicals(D401-D409), inks, dyes, pigments, paints, resins, latex, adhesives, organic sludge (F601-F699), waste organic solvents (G703-G704), waste oil (I101-I104), contaminated containers (J201), stabilized wastes (K301-K303) and miscellaneous wastes (M503 & M506)
South Wing Enterprises	Lot 13 New Cavite Industrial City, Brgy. Manggahan, Gen. Trias, Cavite	Used oil or waste oil (I101)
Southcoast Metal Enterprise, Inc.	Block 7B, Phase II, CEZIA Road, Cavite Economic Zone, Rosario, Cavite	Waste with inorganic chemicals (D407 & D499), inks, dyes, pigments, paint, resins, latex, adhesives, organic sludge (F602 & F699) and miscellaneous wastes (M506 & M507)
Waste and Resource Management Inc. (WRMI)	Pineapple St., Sitio Pag-asa, Aguado, Trece Martires City, Cavite	Resinous Materials [mould runners] (F604

Source: DENR-Environmental Management Bureau 4A