Chapter 8. Environmental Management

Natural Hazards and Constraints

There are eight identified hydrometeorological 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% of the barangays are highly susceptible. There are towns in Cavite that are more susceptible to hazards than the others, vulnerable at around 7 of the 8 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 (Table 8.1).

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 8.1 Number of Barangays by Type of Hazards, Province of Cavite

				pe or mazar				
City/Municipality	Flooding	Storm Surge	Rainfall Induced Landslide	Earthquake Induced Landslide	Ground Shaking	Liquefaction	Tsunami	Ground Rupture
1st District								
Cavite City	All	11			Αll	All	ΑII	
Kawit	Αll				Αll	17	16	
Noveleta	Αll	5			Αll	9	5	
Rosario	All	8			Αll	18	10	
2 nd District								
City of Bacoor	55				Αll	32	21	
3 rd District								
City of Imus	38				Αll	2		
4 th District								
City of Dasmariñas	11				Αll			
5 th District								
Carmona	1				All			3
Gen. Mariano					ΑII			
Silang			6		Αll			4
6 th District								
Trece Martires City					All			
Amadeo	_				ΑII			
City of General Trias	7				ΑII	4.0		
Tanza	26	9			ΑII	10	14	
7 th District					20			
Alfonso			4.4		30			
Tagaytay City			11		31			
General E.					5			
Indang					ΑII			
Magallanes					4.5			
Maragondon	3				13			
Mendez	0	_	4		All	_	_	
Naic	8	3		100 NA 700	3	5 4	7	
Ternate	8	2	1	m ^m	9	4	79	

Environmental Management in Cavite

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 8.2).

Table 8.2 Legislations on Environmental Management in Cavite Province (2002-2012)

	2 2012)			
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		
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		
1	m ^m	individuals engaged in buying and selling of metals with monetary value within the province of Cavite and for other purposes		

Ordinance/ Resolution No.	Year	Title
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

Source: State of the Coast of the Province of Cavite

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. This is complemented by Provincial Ordinance No. 007-2012 that regulates the use of plastics and promotes the use of environmental friendly packaging and practices.

Pursuant to Republic Act No. 9003 or the Ecological Solid Waste Management Act, the Provincial Solid Waste Management Board was also created.

Solid wastes are collected and disposed to either 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 sqm. and 4 sqm., respectively. The disposal activities also employ around 529 people acting as garbage collectors, street cleaners and office support staff.

Table 8.3 shows the frequency of collection of solid wastes in each town as well as the corresponding budget being spent to sustain the activities in dollars. Imus City has the highest spending among all towns for solid waste management. Some towns did not submit their report.

Table 8.3 Budget for Solid Waste Collection and Disposal, Province of Cavite: 2012

City/Municipality	Frequency of Collection	Annual Budget (USD)	
1st District			
Cavite City			
Kawit	Daily	101,304.71	
Noveleta	Two trips/truck/day	55,364.20	
Rosario	Daily	1,177,961.75	
2 nd District			
City of Bacoor	Daily	54,186.24	
3 rd District			
City of Imus	Barangay- Weekly; Market- Daily	1,413,554.10	
4 th District			
City Of Dasmariñas			
5 th District			
Carmona	Twice a week	4,440.30	
Gen. Mariano Alvarez			
Silang	Once a week; Market-daily	50,887.95	
6 th District			
Trece Martires City	Daily	44,762.55	
Amadeo	Thrice a week	2,205.14	
City of General Trias	Twice a week	82,457.32	
Tanza	Twice a week	259,151.58	
7 th District		20.440.04	
Alfonso	Twice a week	29,449.04	
Tagaytay City	Daily	194,899.36	
General E. Aguinaldo	Ten trips/week	13,546.56	
Indang	Daily excluding Saturdays	47,118.47	
Magallanes Maragondon	Daily	11,779.61	
Maragoridori Mendez	Daily Five times a week	18,847.39 8,245.73	
Naic	Once or twice a week	12,957.58	
Ternate	Office of twice a week	12,337.30	
Temate		l	

Source: Cavite Solid Waste Management Plan 2013-2022