

7.6 Future Development Potential of Water Sources

(1) Groundwater

A well inventory covering all the municipalities shows that there are 43,864 existing wells in the province, while 2,750 wells are recorded in the inventory prepared by PSPT (refer to Table 7.1.1 and 7.3.1, Data Report). Despite the smaller number of wells included in the PSPT data, these were used in the analysis in provision of technical information. Of the total 2,750 wells, 2,723 wells have complete information: depth, static water level and specific capacity. Data are summarized in Table 7.6.1 Existing Well Sources.

Considering the well information, the most productive wells are those with the depth ranging from 12m to 19m and from 22m to 74m. The good yielding wells have static water level varying from about 2.0m to 7.4mbgs and specific capacity of about 2 lpsm to 8 lpsm.

Table 7.6.1 Existing Well Sources

Municipality/ City	Type	No.	Depth (m)		SWL (mbgs)		Sp. Cap. (lpsm)		
			Ave	Range	Ave	Range	Ave	Range	
Ajuy	DW	1	23.0	23.0 - 23.0	8.3	8.3 - 8.3	0.55	0.55 - 0.55	
	SW	58	10.7	2.0 - 12.0	3.0	2.0 - 3.5	0.20	0.20 - 0.20	
Alimodian	DW	3	24.0	23.0 - 25.0	6.8	5.8 - 8.5	0.33	0.20 - 0.60	
	SW	46	9.3	1.0 - 18.0	2.9	0.9 - 6.0	0.21	0.20 - 0.33	
Anilao	DW	5	72.0	72.0 - 72.0	5.0	5.0 - 5.0	2.81	2.81 - 2.81	
	SW	25	9.7	1.0 - 19.0	2.3	1.0 - 3.0	0.20	0.20 - 0.20	
Badiangan	DW	41	29.0	22.0 - 66.0	5.6	1.0 - 15.0	0.21	0.20 - 0.50	
	SW	19	3.6	2.0 - 6.0	2.7	2.0 - 3.0	0.20	0.20 - 0.20	
Balasan	DW	4	26.8	23.0 - 31.0	6.7	5.8 - 7.8	0.20	0.20 - 0.20	
	SW	24	8.7	1.0 - 19.0	2.7	1.0 - 4.8	0.20	0.20 - 0.20	
Banate	DW	3	24.0	22.0 - 25.0	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
	SW	25	14.7	2.0 - 18.0	2.9	2.0 - 3.0	0.20	0.20 - 0.20	
Barotac Nuevo	DW	46	22.0	21.0 - 25.0	5.7	5.3 - 6.3	0.20	0.20 - 0.20	
	SW	18	3.2	2.0 - 5.0	2.4	2.0 - 3.0	2.65	0.20 - 6.50	
Barotac Viejo	DW	2	43.0	43.0 - 43.0	3.0	3.0 - 3.0	0.31	0.31 - 0.31	
	SW	52	8.8	1.0 - 18.0	2.2	1.0 - 3.0	0.20	0.20 - 0.20	
Batad	DW	0	-	-	-	-	-	-	
	SW	45	9.5	4.9 - 18.3	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
Bingawan	DW	1	25.0	25.0 - 25.0	6.3	6.3 - 6.3	0.20	0.20 - 0.20	
	SW	18	5.4	3.0 - 8.0	3.0	3.0 - 3.0	0.20	0.20 - 0.20	

Table 7.6.1 Existing Well Sources

(cont'd)

Municipality/ City	Type	No.	Depth (m)		SWI. (mbgs)		Sp. Cap. (lpsm)		
			Ave	Range	Ave	Range	Ave	Range	
Cabatuan	DW	28	35.9	22.9 - 45.8	9.0	5.7 - 11.4	0.20	0.20 - 0.20	
	SW	97	11.3	3.5 - 18.3	3.6	2.1 - 6.1	0.20	0.20 - 0.55	
Calinog	DW	0	-	-	-	-	-	-	
	SW	110	4.9	4.0 - 6.0	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
Carles	DW	0	-	-	-	-	-	-	
	SW	25	1.6	1.0 - 12.2	1.3	1.0 - 6.0	0.22	0.20 - 0.75	
Concepcion	DW	1	30.5	30.5 - 30.5	0.9	0.9 - 0.9	0.80	0.80 - 0.80	
	SW	46	12.0	12.0 - 12.0	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
Dingle	DW	0	-	-	-	-	-	-	
	SW	64	17.1	15.2 - 18.3	3.8	3.0 - 15.0	0.20	0.20 - 0.20	
Duenas	DW	39	23.8	22.0 - 25.0	4.0	2.0 - 6.3	0.71	0.20 - 4.21	
	SW	59	17.3	15.0 - 18.0	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
Dumangas	DW	78	52.6	21.9 - 118.4	7.7	3.0 - 13.7	0.20	0.20 - 0.20	
	SW	1	13.9	13.9 - 13.9	8.5	8.5 - 8.5	0.20	0.20 - 0.20	
Estancia	DW	0	-	-	-	-	-	-	
	SW	35	6.6	1.0 - 12.0	2.7	1.0 - 3.0	0.20	0.20 - 0.20	
Guimbal	DW	0	-	-	-	-	-	-	
	SW	63	6.5	1.0 - 14.0	2.9	1.0 - 3.0	0.20	0.20 - 0.20	
Igbaras	DW	0	-	-	-	-	-	-	
	SW	67	5.3	0.9 - 13.0	2.9	0.9 - 6.0	0.20	0.20 - 0.20	
Janiuay	DW	0	-	-	-	-	-	-	
	SW	75	7.8	1.8 - 13.5	2.9	1.8 - 3.0	0.20	0.20 - 0.20	
Lambunao	DW	0	-	-	-	-	-	-	
	SW	144	4.2	2.0 - 9.0	2.8	2.0 - 3.0	0.20	0.20 - 0.20	
Leganes	DW	1	21.0	21.0 - 21.0	6.0	6.0 - 6.0	0.80	0.80 - 0.80	
	SW	38	5.0	2.7 - 12.2	3.0	1.0 - 4.3	0.20	0.20 - 0.30	
Lemery	DW	0	-	-	-	-	-	-	
	SW	40	17.5	15.0 - 19.0	3.5	3.0 - 4.8	0.20	0.20 - 0.20	
Leon	DW	1	25.0	25.0 - 25.0	6.3	6.3 - 6.3	0.20	0.20 - 0.20	
	SW	80	13.1	1.5 - 19.6	2.9	1.5 - 4.9	0.20	0.20 - 0.20	
Maasin	DW	3	23.0	22.0 - 25.0	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
	SW	91	9.5	1.0 - 16.0	2.4	1.0 - 3.0	0.20	0.20 - 0.20	
Miagao	DW	2	22.0	21.0 - 23.0	5.5	5.3 - 5.8	0.20	0.20 - 0.20	
	SW	68	8.5	1.0 - 17.0	4.6	1.0 - 6.0	0.20	0.20 - 0.20	

Table 7.6.1 Existing Well Sources

(cont'd)

Municipality/ City	Type	No.	Depth (m)		SWL (mbgs)			Sp. Cap. (lpsm)	
			Ave	Range	Ave	Range	Ave	Range	
Mina	DW	0	-	-	-	-	-	-	-
	SW	0	-	-	-	-	-	-	-
New Washington	DW	18	44.6	23.0 - 76.0	5.6	3.0 - 9.5	0.23	0.20 - 0.70	
	SW	23	5.8	1.0 - 19.0	2.6	1.0 - 4.8	0.20	0.20 - 0.20	
Oton	DW	0	-	-	-	-	-	-	
	SW	74	3.3	1.0 - 15.0	2.3	1.0 - 3.0	0.20	0.20 - 0.20	
Passi City	DW	8	23.4	21.0 - 25.0	3.1	3.0 - 3.5	2.35	0.20 - 8.00	
	SW	97	3.7	1.5 - 9.0	2.7	1.5 - 3.0	0.20	0.20 - 0.20	
Pavia	DW	1	27.4	27.4 - 27.4	6.0	6.0 - 6.0	1.90	1.90 - 1.90	
	SW	35	6.9	1.0 - 9.0	2.9	1.0 - 3.0	0.20	0.20 - 0.20	
Pototan	DW	1	24.0	24.0 - 24.0	1.0	1.0 - 1.0	0.20	0.20 - 0.20	
	SW	100	14.5	12.0 - 18.0	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
San Dionisio	DW	0	-	-	-	-	-	-	
	SW	38	12.0	6.1 - 12.2	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
San Enrique	DW	1	25.0	25.0 - 25.0	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
	SW	49	16.0	3.0 - 19.0	3.1	3.0 - 4.8	0.20	0.20 - 0.20	
San Joaquin	DW	0	-	-	-	-	-	-	
	SW	132	6.6	4.0 - 9.5	3.0	3.0 - 3.0	0.20	0.20 - 0.20	
San Miguel	DW	0	-	-	-	-	-	-	
	SW	50	6.6	1.0 - 13.0	2.4	1.0 - 7.0	0.21	0.20 - 0.65	
San Rafael	DW	3	35.0	25.0 - 45.0	8.8	6.3 - 11.3	0.20	0.20 - 0.20	
	SW	13	3.5	2.0 - 4.0	2.8	2.0 - 3.0	0.20	0.20 - 0.20	
Santa Barbara	DW	21	30.1	22.9 - 31.9	6.3	3.0 - 9.8	0.20	0.20 - 0.20	
	SW	57	10.9	1.0 - 19.0	2.6	1.0 - 3.0	0.20	0.20 - 0.20	
Sara	DW	0	-	-	-	-	-	-	
	SW	84	10.6	1.7 - 18.3	2.9	1.7 - 4.6	0.20	0.20 - 0.20	
Tigbauan	DW	3	24.0	22.0 - 25.0	6.0	5.5 - 6.3	0.20	0.20 - 0.20	
	SW	101	13.4	2.0 - 18.0	3.0	2.0 - 4.5	0.21	0.11 - 1.00	
Tubungan	DW	8	21.5	21.0 - 23.0	5.4	5.3 - 5.8	0.20	0.20 - 0.20	
	SW	89	8.9	1.0 - 18.0	2.8	1.0 - 6.0	0.20	0.20 - 0.45	
Zarraga	DW	0	-	-	-	-	-	-	
	SW	42	15.5	11.0 - 19.0	3.0	3.0 - 3.0	0.20	0.20 - 0.20	

Notes: The values of "Ave. depth, SWL and Sp.Cap." by municipality are estimated using the weighted average based on 1995 census population in respective barangays at well location.

SWL=static water level, Sp.Cap.=specific capacity, Ave.=average, SW=shallow well, DW=deep well

Based on the hydrogeologic characteristics and location of wells in Iloilo, aquifers are widely distributed along Jalaur, Jaro and Sibalom Rivers that originate from the western Cordillera and flow to Panay Gulf or Guimaras Strait. Solo shallow well areas are distributed only in the eastern islets of Concepcion. The Miocene and older rock units are distributed in the western Cordillera and the eastern rolling hills that are classified as difficult area for ground-water development.

As indicated in Figure 7.3.1 Main Report, the fluvial terraces, the river bottom plains and the alluvial plains along Jalaur, Jaro and Sibalom Rivers are high yielding potential areas covering the central half part of the province. Water levels in unconfined aquifers are shallow in these areas, while the static water levels of confined aquifers have various ranges from 1.0 mbgs to 30 mbgs or deeper probably depending on the elevation and distance from the coast. On the other hand, the upstream areas of Jalaur River, and the low-hill and small basin areas in the eastern part of the province fall on low yielding areas, because such areas are made up of calcareous mudstone to siltstone and silty sediments.

Along the watershed of Jalaur River and in the eastern small plains, existence of high iron contents in groundwater is confirmed. Groundwater characteristics show slightly low pH value (acidic groundwater) in the eastern slope areas of the western Cordillera including the municipalities of Calinog, Lambunao, Badiangan, Janiuay, Cabatuan and Maasin. In the same area, groundwater with high chloride is also developed that is believed to originate from the fossil water. Saline water intrusion is reported along the central to western coast. Especially in the municipalities of Barotac Nuevo and Dumangas as well as Iloilo City, saline water intrusion is serious, and it can even be found at deep wells 10km away from the coast.

As an alternative water source, the untapped spring can be developed for future use. This is the most reliable source for rural water supply in the province because groundwater quality has a serious problem in terms of iron/acidic groundwater and saline water intrusion. Existing spring sources (900 springs) are utilized for water supply. Most of them originate from the Cordillera and the rolling hills in the western and eastern parts of the province. The untapped springs (36 springs) are proposed as future water sources in the subject areas.

The detailed hydrogeological characteristics of each municipality are summarized in Table 7.6.2, while individual well locations with technical information are shown in Figure 7.6.1 Individual Well Location and Specification Map, Data Report.

Table 7.6.2 Hydrogeological Descriptions by Municipality

Municipality	Ground Information				Geology				Well Information				Groundwater Information											
	Topography		Lithofacies (Major Aquifers)		Stratigraphy of Geological Age*				Depth		SWL		Sp.Cap.		Availability		Potential		Quality					
	Area Proportion (%)	Area Proportion (%)	Area Proportion (%)	Area Proportion (%)	Q	Neo.	Paleo.	C	mini.	max.	mini.	max.	mbgs	lpsm	Area Proportion (%)	Area Proportion (%)	DW	Diff.	Wells	Springs	Problem	Area Feature	Pollutants	
Ajuy	38%	62%	0%	recent deposits & volcanics	X	X	X	X	2	23	2.0	8.3	0.2	0	0%	38%	62%	poor	few	ironic				
Alimedian	7%	61%	32%	recent deposits & limestone	X	X	X	X	1	24	0.8	8.5	0.2	0	0%	68%	32%	good	few	acidic				
Anilao	56%	44%	0%	recent deposits & limestone	X	X	X	X	1	72	1.0	5.0	0.6	1	0%	100%	0%	good	few	acidic & brackish				
Badiangan	31%	69%	0%	recent deposits & limestone	X	X	X	X	2	66	1.0	15.0	0.2	0	0%	100%	0%	good	few	acidic & brackish				
Balasan	81%	11%	8%	recent deposits	X	X	X	X	1	31	1.0	7.8	0.2	0	0%	92%	8%	poor	few	ironic				
Banate	52%	48%	0%	recent deposits & limestone	X	X	X	X	2	25	2.0	3.0	0.2	0	0%	100%	0%	good	few	ironic				
Barotac Nuevo	96%	4%	0%	recent deposits & limestone	X	X	X	X	2	25	2.0	6.3	0.9	1	0%	100%	0%	good	poor	saline				
Barotac Viejo	28%	72%	0%	recent deposits	X	X	X	X	1	43	1.0	3.0	0.2	0	0%	28%	72%	poor	few	ironic				
Basud	12%	88%	0%	recent deposits & volcanics	X	X	X	X	5	18	3.0	3.0	0.2	1	0%	12%	88%	poor	few	ironic				
Bingawan	4%	96%	0%	recent deposits & limestone	X	X	X	X	3	25	3.0	6.3	0.2	0	0%	100%	0%	poor	few	ironic & acidic				
Cabatuan	18%	82%	0%	recent deposits & limestone	X	X	X	X	4	46	2.1	11.4	0.2	0	0%	100%	0%	good	poor	acidic & brackish				
Calinog	-2%	74%	28%	recent deposits & limestone	X	X	X	X	4	6	3.0	3.0	0.2	0	0%	72%	28%	fair	few	acidic				
Carles	84%	16%	0%	recent deposits	X	X	X	X	1	12	1.0	6.0	0.2	0	0%	84%	16%	poor	poor	ironic				
Concepcion	4%	96%	0%	recent deposits & weathered volcanics	X	X	X	X	12	31	0.9	3.0	0.2	0	5%	4%	91%	risky	few	ironic & acidic				
Dingle	79%	21%	0%	recent deposits & limestone	X	X	X	X	15	18	3.0	15.0	0.2	0	0%	100%	0%	good	few	ironic & acidic				
Duenas	12%	88%	0%	recent deposits & limestone	X	X	X	X	15	25	2.0	6.3	0.4	1	0%	100%	0%	fair	poor	ironic & acidic				
Dumangas	100%	0%	0%	recent deposits	X	X	X	X	14	118	3.0	13.7	0.2	0	0%	100%	0%	good	poor	ironic & saline				
Estancia	22%	78%	0%	recent deposits	X	X	X	X	1	12	1.0	3.0	0.2	1	0%	22%	78%	poor	few	ironic				
Guimbal	92%	8%	0%	recent deposits & limestone	X	X	X	X	1	14	1.0	3.0	0.2	2	0%	100%	0%	good	few	saline				
Igaras	7%	75%	18%	recent deposits & limestone	X	X	X	X	1	13	0.9	6.0	0.2	0	0%	82%	18%	good	few	ironic & saline				
Iloilo City	100%	0%	0%	recent deposits	X	X	X	X	-	-	-	-	-	0	0%	100%	0%	good	poor	ironic & saline				
Janauay	11%	56%	33%	recent deposits & limestone	X	X	X	X	2	14	1.8	3.0	0.2	1	0%	67%	33%	good	few	acidic & brackish				

Legend; Geological Age, Q=Quaternary, Neo.=Neogene, Paleo.=Paleogene, C=Cretaceous

Well Information, SWL=static water level, Sp.Cap.=specific capacity, L-III=wells operated for L-III service

Groundwater Information, SW=shallow well area, Diff.=difficult area

Table 7.6.2 Hydrogeological Descriptions by Municipality

Municipality	Ground Information										Well Information					Groundwater Information							
	Topography			Geology			Depth				SWL			L-III			Availability			Potential		Quality	
	Area Proportion (%)			Stratigraphy of Geological Age*			m		mbs		m		mbs		L-III		Area Proportion (%)			Comparative		Area Feature	
	Plain-Plateau	Hilly-Piedmont	Mountain	Lithofacies (Major Aquifers)	Q	Neo.	Tertiary	C	minL	max.	minL	max.	ave.	well	SW	DW	Diff.	Wells	Spring	Problem	Pollutants		
Lambanao	3%	56%	41%	recent deposits & limestone	X	X	X	2	9	2.0	3.0	0.2	0	0%	59%	41%	fair	few	acidic & brackish				
Leganes	100%	0%	0%	recent deposits	X			3	21	1.0	6.0	0.2	0	0%	100%	0%	good	poor	ironic & saline				
Lemery	0%	100%	0%	pyroclastics	X	X	X	15	19	3.0	4.8	0.2	0	0%	19%	81%	poor	few	ironic				
Leon	6%	53%	41%	recent deposits & limestone	X	X	X	2	25	1.5	6.3	0.2	2	0%	59%	41%	good	few	acidic & brackish				
Maasin	3%	58%	39%	recent deposits & limestone	X	X	X	1	25	1.0	3.0	0.2	8	0%	61%	39%	good	few	acidic & brackish				
Miagao	13%	61%	26%	recent deposits & limestone	X	X	X	1	23	1.0	6.0	0.2	0	0%	74%	26%	good	few	saline				
Mina	75%	25%	0%	recent deposits & limestone	X	X		-	-	-	-	-	0	0%	100%	0%	good	poor	ironic & acidic				
New Lucena	6%	94%	0%	recent deposits & limestone	X	X		1	76	1.0	9.5	0.2	1	0%	100%	0%	good	poor	ironic & acidic				
Oton	100%	0%	0%	recent deposits	X			1	15	1.0	3.0	0.2	0	0%	100%	0%	good	poor	saline				
Passi City	6%	94%	0%	recent deposits & limestone	X	X		2	25	1.5	3.5	0.4	0	0%	100%	0%	poor	few	ironic & acidic				
Pavia	100%	0%	0%	recent deposits	X			1	27	1.0	6.0	0.3	0	0%	100%	0%	good	poor	ironic & acidic				
Pototan	86%	14%	0%	recent deposits & limestone	X	X		12	24	1.0	3.0	0.2	1	0%	100%	0%	good	poor	ironic & acidic				
San Dionisio	28%	72%	0%	recent deposits & sandshales	X	X	X	6	12	3.0	3.0	0.2	0	0%	44%	56%	poor	few	ironic & acidic				
San Enrique	12%	88%	0%	recent deposits & limestone	X	X	X	3	25	3.0	4.8	0.2	0	0%	76%	24%	fair	few	ironic				
San Joaquin	9%	80%	11%	recent deposits & limestone	X	X	X	4	10	3.0	3.0	0.2	0	0%	89%	11%	fair	few	saline				
San Miguel	76%	24%	0%	recent deposits & limestone	X	X		1	13	1.0	7.0	0.2	3	0%	100%	0%	good	few	ironic				
San Rafael	4%	96%	0%	recent deposits & sandshales	X	X	X	2	45	2.0	11.3	0.2	0	0%	26%	74%	poor	few	ironic				
Santa Barbara	56%	44%	0%	recent deposits & limestone	X	X		1	39	1.0	9.8	0.2	0	0%	100%	0%	good	poor	acidic				
Sara	36%	64%	0%	recent deposits & limestone	X	X	X	2	18	1.7	4.6	0.2	0	0%	88%	12%	poor	few	ironic				
Tigbagan	68%	32%	0%	recent deposits & limestone	X	X		2	25	2.0	6.3	0.2	0	0%	100%	0%	good	poor	saline				
Tubungan	0%	71%	29%	limestone		X	X	1	23	1.0	6.0	0.2	0	0%	71%	29%	good	few					
Zarraga	78%	22%	0%	recent deposits & limestone	X	X		11	19	3.0	3.0	0.2	0	0%	100%	0%	good	poor	ironic				

Legend: Geological Age, Q=Quaternary, Neo=Neogene, Paleo=Paleogene, C=Cretaceous
 Well Information, SWL=static water level, Sp.Cap=specific capacity, L-III=wells operated for L-III service
 Groundwater Information, SW=solo shallow well area, DW=deep well area, Diff=difficult area

Additional wells shall be designed employing "gravel packed well" with a gravel thickness of about 50mm or more depending on the grain sizes of aquifers and pumping capacity. While, natural gravel packed well may be adopted within the areas where well-sorted natural gravel formation is distributed at the expected aquifer. Such areas are usually the upstream areas of alluvial fans or plains in the province. The application of such method for Level-I well is also justifiable, since inflow velocity of groundwater through the screen is very low because of minimal pumping rate by means of hand-pump operation.

Generally, shallower well has a higher possibility to be constructed applying the natural gravel packed method than the deeper one in areas formed by recent deposits. This is because the layers at different depths of alluvial plain or fan deposits had been formed by different situations of transportation and sedimentation between varied grain sizes.

However, the area where the natural gravel packed well is applicable for the future plan could not be identified at present due to lack of information available on the sieve analysis and no construction experiences of this method by concerned agencies in the province. Nevertheless, the expected municipality areas, in which there is a possibility to encounter suitable gravel formation for the natural gravel packed wells, are projected as shown in Table 7.6.3 for the future reference.

Table 7.6.3 Expected Location for the Natural Gravel Packed Wells

Municipality (only potential area)	Proposed Well Depth	Expected Natural Gravel Packed Well Field	
		Area	Topographic Feature
Leon	40 m	Urban & Rural	Fluvial Terrace & River Bottom Plain
Tubungan	40 m	Rural	Fluvial Terrace
Igbaras	40 to 80 m	Urban & Rural	Fluvial Terrace & River Bottom Plain
Miagao	40 m	Rural	Fluvial Terrace
San Joaquin	40 m	Rural	Fluvial Terrace

Examination on the effective grain sizes and uniformity coefficient by sieve analysis at the influential aquifers (composed of coarse sand and/or fine gravel) should be conducted during the implementation period. Such analysis and actual well construction results are very helpful in application of the natural gravel packed method in future planning.

In the watershed of Jalaur River (Passi City and 10 municipalities) and in the municipalities of San Dionisio, Sara, Ajuy, Lemery and San Rafael, it is reported by DPWH/DEO that nu-

merous deep wells present high Fe contents (PNSDW; Fe<1.0ppm). The results of groundwater quality examination, conducted by the PSPT, show their characteristics with slightly higher Fe and acidic water. Iron water pumped from deep wells is caused by groundwater itself, well materials eluded in acid water, or combination of groundwater and well materials. There are four cases on water quality problem in terms of Fe and pH value as shown below.

- (1) Iron concentration is less than the PNSDW (1 ppm) and the pH value of groundwater indicates neutral or alkaline. There is a low possibility of iron contamination through the future.
- (2) Although iron concentration is within the PNSDW, groundwater shows an acid pH value. There is a possibility of iron contamination from steel materials.
- (3) Iron concentration exceeds the PNSDW and the groundwater shows neutral or alkaline. There is iron contamination caused by groundwater itself.
- (4) Iron concentration exceeds the PNSDW and groundwater shows acid pH side. There is a possibility of iron contamination caused by groundwater and/or well materials.

Where groundwater has high Fe contents, the Iron Removal Facility shall be additionally installed. Such countermeasures are recommended especially for the Passi City and the municipalities of San Dionisio, Sara, Lemery, San Rafael, Bingawan, San Enrique, Duenas, Dingle, Pototan, Mina, New Lucena, Zarraga, Leganes and Dumangas. The ratio of deep wells equipped with Iron Removal Facility to the total requirements of the province is assumed at about 40%.

Where the parameter of groundwater indicates acid pH side, the well casing pipe and screen shall be designed to use anti-corrosive materials, such as anti-metallic (polyvinyl chloride; PVC) or anti-corrosive metal (stainless steel; SUS) materials. Generally, shallower well presents water quality with alkalinity parameter. This is because the shallow wells are usually constructed in alluvial plain or fan deposits. The well materials of the said anti-corrosive shall be used for deep wells. The development of deep wells using anti-corrosive materials in the province is experimentally assumed referring to the limited information such as results of water quality examination, geology, etc., as shown in Table 7.6.4.

Water quality examination on Fe and pH parameters should be conducted during the implementation period. Such groundwater quality analysis is very helpful to design well materials in future planning.

Table 7.6.4 Proportion of Wells to be Constructed by Different Materials

Municipality (only potential area)	Proposed Well Depth	Proportion (%) of Level-I Deep Wells	
		GI Casing Pipes	PVC Casing Pipes
Bingawan	80 m	50 %	50 %
Passi City	80 m	50 %	50 %
Calinog	80 m	40 %	60 %
Ducnas	80 m	50 %	50 %
Dingle	40 m	60 %	40 %
Lambunao	80 m	40 %	60 %
Badiangan	80 m	50 %	50 %
Janiuay	80 m	40 %	60 %
Mina	80 m	60 %	40 %
Pototan	40 m	70 %	30 %
New Lucena	80 m	60 %	40 %
Santa Barbara	40 m	60 %	40 %
Cabatuan	80 m	50 %	50 %
Maasin	80 m	40 %	60 %

(2) Spring

Untapped spring sources identified are shown in Table 7.6.5. These data were collected and tabulated using the questionnaire sheet-untapped spring information format, Data Report. Data also include the parameters of barangay name, owner, discharge, transmission pipeline length and relative elevation.

Table 7.6.5 Untapped Spring Sources Identified

Location		Untapped Spring			
Municipality/City	Barangay	Owner	Discharge (lps)	T.L.L.* (km)	Relative Elevation (m)
Ajuy	Central	Public	2.0	2.0	65
	Progreso	Public	2.0	1.2	NA
	Punta Buri	Public	2.0	0.5	NA
Alimodian	Agsing	Private	4.0	0.2	NA
	Atabay	Private	0.5	0.6	NA
	Ba-ong	Public	0.5	0.1	70
	Cagay	Private	5.0	1.5	15
	Dalid	Public	3.0	2.0	2,000
	Pajo	Private	4.0	0.5	2

Table 7.6.5 Untapped Spring Sources Identified

(cont'd)

Location		Untapped Spring			
Municipality/City	Barangay	Owner	Discharge (lps)	T.L.L.* (km)	Relative Elevation (m)
Alimodian	Tarug	Public	2.0	1.0	15
	Ubodan	Public	2.0	1.0	5
	Ulay-Bugang	Private	NA	2.0	3
Barotac Viejo	Lipata	Public	NA	0.5	100
	Rizal	Public	NA	2.0	200
Carles	Asluman	Public	0.5	5.0	25
	Bancal	Private	0.5	1.5	NA
	Gabi	Public	2.0	5.0	NA
	Granada	Private	0.5	3.0	NA
Dingle	Tulatula-an	Private	3.0	NA	NA
Igaras	Barasan	Private	<0.1	1.5	NA
	Buenavista	Private	<0.1	0.3	NA
	Igtalongon	Public	0.1	1.5	NA
	Mantangon	Private	<0.1	0.5	NA
	Passi	Private	<0.1	0.5	NA
	Tabiac	Private	<0.1	0.5	NA
Lemery	Alcantara	Public	1.0	*10.0	15
	Almenana	Public	1.0	3.0	20
	Sepanton	Private	0.5	1.5	18
	Velasco	Public	1.0	1.0	8
	Tawyawan	Public	0.5	1.8	10
Leon	Malublub	Public	0.1	1.5	50
	Tina-an Norte	Public	0.1	1.6	45
San Dionisio	Sua	Private	2.0	6.0	250
San Joaquin	Igbinangon	Private	0.5	0.5	NA
	Siwaragan	Private	1.0	0.8	NA
Sara	Del Castillo	Public	1.5	0.5	NA

Notes: T.L.L.; Transmission line length, NA; Data not available and UK; Unknown Data, In the column of "Discharge", <0.1 means that discharge rate is measured at less than 0.1 lps. While of "Distance", *10.0 means that spring eye is located in expected barangay proper.

7.7 Water Source Development for Medium-Term Development Plan

7.7.1 Detailed Groundwater Investigation Required

- (1) Prospecting & Test Well required in the eastern rolling hills

There are numerous shallow wells in this district. While, some deep wells have been constructed, but about half of them were abandoned due to poor productivity.

Most of the shallow wells utilize groundwater from recent deposits with thickness of less than 10m. During dry season, the decline of groundwater level affects these shallow wells.

Major confined aquifers in this area are pyroclastic sediments formed by the weathered and eroded volcanic rocks that originated from the northwestern rolling hill area and limestone rocks. Low yielding or non-productivity of deep wells may be caused by inadequate well design and/or poor construction technology, because unconsolidated formation in this area is expected enough specific capacity for Level-I water supply.

Prior to the implementation of the project the following groundwater investigation shall be conducted.

1) Physical Prospecting

a) Field

Ten (10) municipalities to cover Carles, Estancia, Balasan, Batad, San Dionisio, Sara, Concepcion, Ajuy, Lemery and San Rafael.

b) Method

Type of Prospecting; electric resistivity

Alignment; Schlumberger or Wenner

Sounding depth; 100m

Sounding points; 100 points

c) Study

Hydrogeologic section with information of quality and permeability shall be analyzed for the test well construction.

2) Test Deep Wells

a) Construction Site

One test well each in Balasan, San Dionisio, Ajuy and Lemery

b) Specification of Test Deep Well

Number; 4 test wells

Well design; well depth of 40m to 80m (depending on the results of prospecting) with well diameter of 100mm and well screen (SUS) length of 10m

c) Installed Tests

Geophysical Logging; Resistivity (short & long) and Spontaneous Potential

Pumping Test; Time draw-down by maximum discharge of 20 lpm with 4 hours or more and Recovery test

Water Quality Examination; to include Fe, Mn, Cl, pH, Color, Turbidity, etc.

(2) Water sources assessment required in the central Iloilo plain

The decline of groundwater level with about 1.0 m/year was observed, in the last 10 years, at the well fields in Oton and San Miguel according to the Water Resources Master Plan for the MIWD (Metro Iloilo Water District) prepared by LWUA in 1997. The ground subsidence is critical issues in this plain especially along the coast.

Although the study covers only the southeastern part of Central Iloilo Plain, there seems to be a groundwater imbalance problem in the entire Iloilo Plain. In terms of groundwater quality, high Fe/Mn/Ca/Mg contents, low pH value and saline water intrusion are reported.

Presently, combined water sources; groundwater and surface water is used by the MIWD. With regard to river water use, gauging stations were installed in 1956 by the DPWH, mainly for irrigation water management, at Jalaur, Jaro and Sibalom (measurement is done three times a day). New auto recording systems at existing gauging stations are required to establish for the projection of different flow return period.

The following are requirements for the water source assessment in the future covering the entire Iloilo Plain. Aside from these, the observation wells for the monitoring of subsidence shall be considered by the LGUs together with DENR and NWRB.

1) Preparation of Groundwater Database

a) Study Area

Two (2) cities of Passi and Iloilo, and twenty two (22) municipalities; Calinog, Lambunao, Duenas, San Enrique, Anilao, Dingle, Badiangan, Janiuay, Maasin, Cabatuan, Mina, Pototan, Barotac Nuevo, Dumangas, Zarraga, New Lucena, Santa Barbara, Alimodian, San Miguel, Pavia, Leganes and Oton

b) Database Parameters

well location, geologic log, well structures, static groundwater level, production (periodic monitoring) and water quality (especially from privately owned deep wells)

2) Physical Prospecting

a) Field

same area in item 1)

b) Method

Type of Prospecting; electric resistivity

Alignment; Schlumberger or Wenner

Sounding depth; 300m

Sounding points; 40 points (interval distance between neighboring sounding points will be about 10 km)

c) Study

Hydrogeologic section with information of quality and permeability shall be analyzed for the test well construction.

3) Test Deep Wells

a) Construction Site

Sites shall be pointed out after the study on groundwater database and geologic survey.

b) Specification of Test Deep Well

Number; at least 5 test wells

Well design; well depth of 50m to 200m (depending on the results of prospecting) with well diameter of 250mm and well screen (SUS) length of 30m

c) Installed Tests

Geophysical Logging; Resistivity (short & long) and Spontaneous Potential

Pumping Test; Time draw-down by maximum discharge of 2,000 m³/day with 24 hours and Recovery test

Water Quality Examination; to include Fe, Mn, Cl, pH, Color, Turbidity, etc.

Monthly monitoring; static water level

4) Preparation of Hydraulic Database

a) Study Area

Three (3) watersheds covering the Jalaur, Jaro and Sibalom Rivers

b) Database Parameters

rainfall record, river flow measurement by auto recorder (periodical measurements of river section are also required), regular river water quality examination (to include pH, N, P, Hg, Turbidity, Color, etc.)

(3) Alternative water sources in the western Cordillera & the eastern islets

Water sources in the difficult area are mainly replenished by way of the secondary permeability of various rocks. This means that groundwater movement occurs only through fissures, cracks and crevices, which predominantly exist in places where there are faults

and other geologic disconnection.

In this regard, the development of groundwater through deep well construction is very risky in the western Cordillera and the eastern islets of Concepcion. Spring inventories prepared by the PSPT for this study and those by the DPWH indicate that there are few untapped spring sources in this area.

Presently, many rural people are using unsafe surface water or rainwater collector. The favorable way to provide rural people in this mountain area with safe water is to develop new untapped springs and/or to improve the facility of rainwater collector. If aquifers with potable groundwater can not be found, the improved rainwater collector shall be promoted with due consideration on roof materials, reservoir with sand filtration and chlorination system.

7.7.2 Spacing Allocation for Level II and III Wells

The pumping rates required for Level I facilities are fairly lower than that for Level II and III systems. The well interference in Level I facilities need not to be studied in terms of spacing of wells and production rate, since most formations in shallow and deep well areas generally have enough groundwater development potential. As Level II and III wells are usually expected to produce larger discharge to meet the water demand, the spacing of wells to avoid well interference has to be considered. Spacing allocation for Level II and III wells was examined considering specific capacity, pumping rate, and assumed drawdown of 1cm at the interference radius for a pumping duration of 16 hours.

(1) Specific Capacity

According to the existing well source information, specific capacity was considered with ranges from 0.5 lpsm to 6.5 lpsm. To simplify the calculation, an average value in each range is adopted in the calculation of interference radius.

(2) Pumping Rate

The pumping rate was estimated by assuming a drawdown of 10m with the average value of specific capacity and pump operation of 16 hours/day. The formula used to determine proper well spacing is the Jacob modified equation. Drawdown at the interference boundary is assumed at 1cm after a pumping duration of 16 hours.

Table 7.7.1 presents the estimated spacing requirements and number of wells to be con-

structed within a well field of one km². The spacing interval between adjacent wells to avoid well interference is planned to be more than twice the distances of the calculated interference radius.

Table 7.7.1 Spacing Arrangements for Planned Wells

Range of Specific Capacity (lpsm)	Estimated Pumping Rate (m ³ /day)	Estimated Interference Radius (m)	Estimated Number of Wells/km ²
0.5 - 1.5	500	80	45
1.5 - 3.0	1,000	120	20
3.0 - 4.5	2,000	160	11
4.5 - 6.0	2,500	200	7
> 6.0	>2,500	>200	>7

**FUTURE REQUIREMENTS
AND DEVELOPMENT PLAN**

B

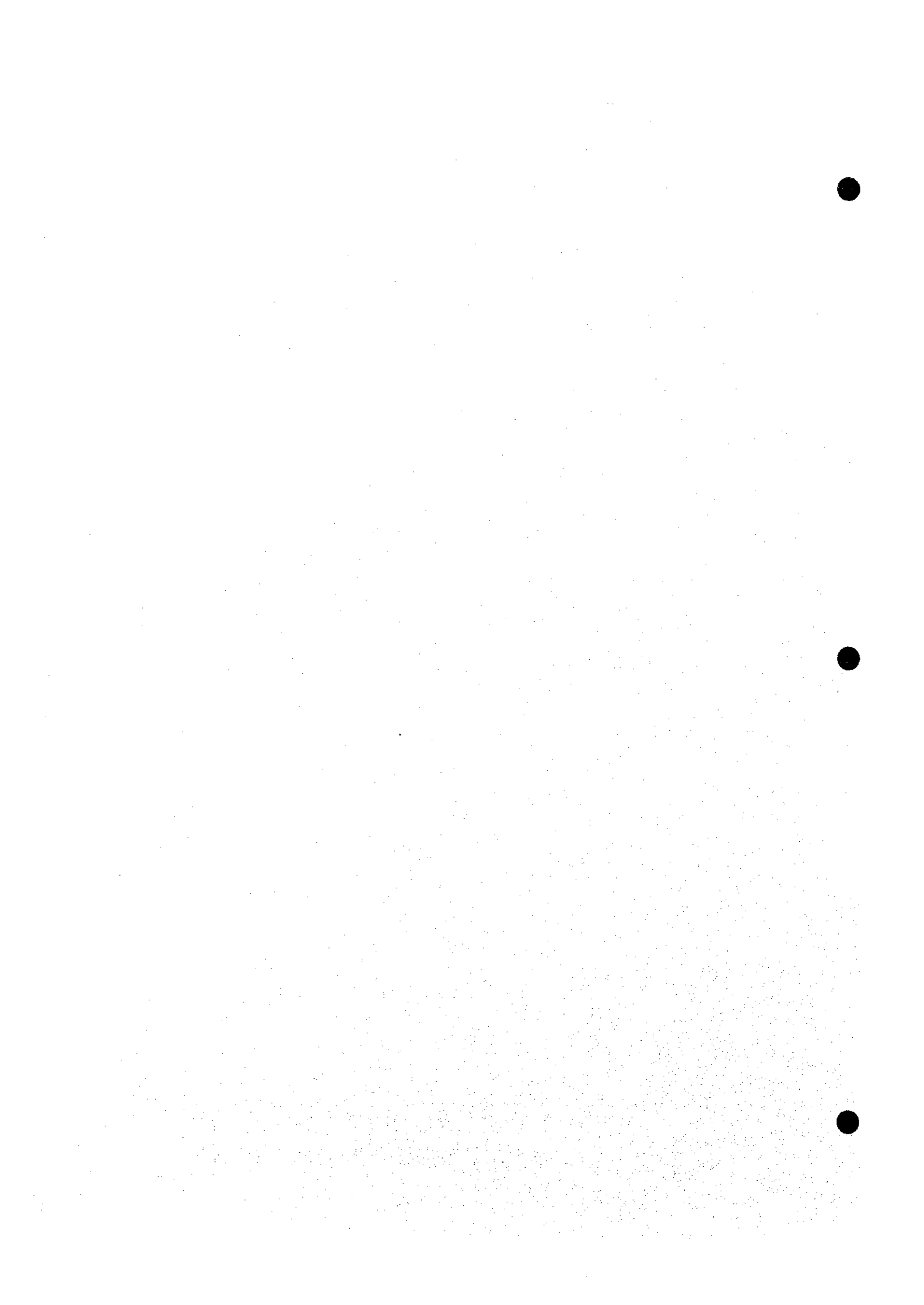


Table 8.2.1 Estimation of Base Year Service Coverage of Water Supply (Cont'd)

Name of Municipality/City	Area	Population (1998)	Population Served by 1998 Facilities			Population Served by Planned/On-going Projects			Population Served in the Base Year (1998)			Percentage Coverage		
			Level III	Level II	Level I	Level III	Level II	Level I	Level III	Level II	Level I		Total	
			Total	Total	Total	Total	Total	Total	Total	Total	Total		Total	
Carles	Urban	2,349		909	909						909	909	39	
	Rural	46,979		11,712	14,137						2,425	11,712	14,137	30
	Total	49,328		12,621	15,046						2,425	12,621	15,046	31
Concepcion	Urban	4,455		2,154	2,154							2,154	2,154	48
	Rural	27,296		12,558	12,743						185	12,558	12,743	47
	Total	31,751		14,712	14,897						185	14,712	14,897	47
Dingle	Urban	5,917	1,960	2,770	4,730						1,960	2,770	4,730	80
	Rural	30,470	6,758	18,737	26,895						6,758	18,737	26,895	88
	Total	36,387	8,718	21,507	31,625						8,718	21,507	31,625	87
Duenas	Urban	4,982	1,950	2,128	4,078						1,950	2,128	4,078	82
	Rural	24,784		16,712	16,712							16,712	16,712	67
	Total	29,766	1,950	18,840	20,790						1,950	18,840	20,790	70
Dumangas	Urban	1,884	1,165	184	1,349						1,165	184	1,349	72
	Rural	50,816	6,215	16,464	22,834						6,215	175	16,464	45
	Total	52,700	7,380	16,648	24,203						7,380	175	16,648	46
Estancia	Urban	7,965	3,270	2,616	5,886						3,270	2,616	5,886	74
	Rural	25,547		12,696	12,696							12,696	12,696	50
	Total	33,512	3,270	15,312	18,582						3,270	15,312	18,582	55
Guimbal	Urban	7,192	3,708	2,399	6,107						3,708	2,399	6,107	85
	Rural	21,473		13,689	13,964						275	13,689	13,964	65
	Total	28,665	3,708	16,088	20,071						3,708	275	16,088	70
Ilgbaras	Urban	5,332		3,165	3,165							3,165	3,165	59
	Rural	21,499		10,162	11,112						950	10,162	11,112	52
	Total	26,831		13,327	14,277						950	13,327	14,277	53
Januay	Urban	8,557	2,406	3,926	6,332						2,406	3,926	6,332	74
	Rural	44,163	168	26,896	27,064						168	26,896	27,064	61
	Total	52,720	2,574	30,822	33,396						2,574	30,822	33,396	63
Lambunao	Urban	4,484		1,261	1,261							1,261	1,261	28
	Rural	57,531		24,193	24,193							24,193	24,193	42
	Total	62,015		25,454	25,454							25,454	25,454	41
Leganes	Urban	6,921	300	3,660	3,960						300	3,660	3,960	57
	Rural	13,102	150	8,149	8,974						150	8,149	8,974	68
	Total	20,023	450	11,809	12,934						450	11,809	12,934	65
Lemery	Urban	2,729		2,168	2,168							2,168	2,168	79
	Rural	19,099		200	14,667						200	14,667	14,867	78
	Total	21,828		200	16,835						200	16,835	17,035	78

Table 8.2.1 Estimation of Base Year Service Coverage of Water Supply (Cont'd)

Name of Municipality/City	Area	Population (1998)	Population Served by 1998 Facilities				Population Served by Planned/On-going Projects				Population Served in the Base Year (1998)			
			Level III	Level II	Level I	Total	Level III	Level II	Level I	Total	Level III	Level II	Level I	Total
Leon	Urban	4,830	1,758	1,808	3,566					1,758	1,808	3,566	74	
	Rural	39,667	1,350	23,774	26,474					1,350	23,774	26,474	67	
	Total	44,497	3,108	25,582	30,040					3,108	25,582	30,040	68	
Maasin	Urban	3,200	585	1,596	2,181					585	1,596	2,181	68	
	Rural	26,869	730	15,236	15,991					730	15,236	15,991	60	
	Total	30,069	1,315	16,832	18,172					1,315	16,832	18,172	60	
Miangao	Urban	8,137	2,112	2,597	4,709					2,112	2,597	4,709	58	
	Rural	45,369	875	25,826	26,701					875	25,826	26,701	59	
	Total	53,506	2,112	28,423	31,410					2,112	28,423	31,410	59	
Mina	Urban	2,319		1,404	1,404						1,404	1,404	61	
	Rural	14,763		8,605	8,605						8,605	8,605	58	
	Total	17,082		10,009	10,009						10,009	10,009	59	
New Lucena	Urban	2,641		1,678	1,678						1,678	1,678	64	
	Rural	14,498	270	9,984	10,254					270	9,984	10,254	71	
	Total	17,139	270	11,662	11,932					270	11,662	11,932	70	
Oton	Urban	60,873	2,625	21,787	24,412					2,625	21,787	24,412	40	
	Rural													
	Total	60,873	2,625	21,787	24,412					2,625	21,787	24,412	40	
Passi City	Urban	8,625	8,550	75	8,625					8,550	75	8,625	100	
	Rural	53,085	2,466	37,129	39,720					2,466	37,129	39,720	75	
	Total	61,710	11,016	200	48,345					11,016	200	48,345	78	
Pavia	Urban	8,296	5,845	1,957	7,802					5,845	1,957	7,802	94	
	Rural	20,904	7,964	1,025	18,615					7,964	1,025	18,615	89	
	Total	29,200	13,809	1,025	26,417					13,809	1,025	26,417	90	
Pototan	Urban	16,790	6,360	7,916	14,276					6,360	7,916	14,276	85	
	Rural	42,002	435	27,968	28,503					435	27,968	28,503	68	
	Total	58,792	6,795	100	42,779					6,795	100	42,779	73	
San Dionisio	Urban	4,711	2,754	767	3,521					2,754	767	3,521	75	
	Rural	21,843		1,925	11,178					1,925	9,253	11,178	51	
	Total	26,554	2,754	10,020	14,699					2,754	10,020	14,699	55	
San Enrique	Urban	2,112		1,243	1,243						1,243	1,243	59	
	Rural	24,449		13,918	13,918						13,918	13,918	57	
	Total	26,561		15,161	15,161						15,161	15,161	57	
San Joaquin	Urban	4,484	1,303	1,960	3,263					1,303	1,960	3,263	73	
	Rural	43,573	2,422	13,822	22,939					2,422	13,822	22,939	53	
	Total	48,057	3,725	15,782	26,202					3,725	15,782	26,202	55	

Table 8.2.1 Estimation of Base Year Service Coverage of Water Supply (Cont'd)

Name of Municipality/City	Area	Population (1998)	Population Served by 1998 Facilities				Population Served by Planned/On-going Projects				Population Served in the Base Year (1998)				Percentage Coverage	
			Level III	Level II	Level I	Total	Level III	Level II	Level I	Total	Level III	Level II	Level I	Total		
San Miguel	Urban	13,749	815	425	5,661	12,753			13,568	815				12,753	13,568	99
	Rural	6,170		425	5,661				6,086				425	5,661	6,086	99
	Total	19,919	815	425	18,414	19,654			19,654	815			425	18,414	19,654	99
San Rafael	Urban	3,144		2,782	2,782				2,782					2,782	2,782	88
	Rural	9,579		6,989	6,989				6,989					6,989	6,989	73
	Total	12,723		9,771	9,771				9,771					9,771	9,771	77
Santa Barbara	Urban	7,920	1,130	5,240	6,370				6,370	1,130				5,240	6,370	80
	Rural	33,801	1,315	150	26,017	27,482			27,482	1,315	150		150	26,017	27,482	81
	Total	41,721	2,445	150	31,257	33,852			33,852	2,445	150		150	31,257	33,852	81
Sara	Urban	3,852	582	2,792	3,374				3,374	582				2,792	3,374	88
	Rural	36,699	434	1,400	33,213	35,047			35,047	434	1,400		1,400	33,213	35,047	95
	Total	40,551	1,016	1,400	36,005	38,421			38,421	1,016	1,400		1,400	36,005	38,421	95
Tigbauan	Urban	8,335		5,618	5,618				5,618					5,618	5,618	67
	Rural	41,726		1,625	16,616	18,241			18,241				1,625	16,616	18,241	44
	Total	50,061		1,625	22,234	23,859			23,859				1,625	22,234	23,859	48
Tubungan	Urban	1,411		1,25	1,001	1,126			1,126				125	1,001	1,126	80
	Rural	19,075		1,300	12,981	14,281			14,281				1,300	12,981	14,281	75
	Total	20,486		1,425	13,982	15,407			15,407				1,425	13,982	15,407	75
Zamaga	Urban	3,134		2,093	2,093				2,093					2,093	2,093	67
	Rural	16,062		10,615	10,615				10,615					10,615	10,615	66
	Total	19,196		12,708	12,708				12,708					12,708	12,708	66
Provincial Total	Urban	310,998	63,946	650	149,224	213,820			213,820	63,946	650		650	149,224	213,820	69
	Rural	1,178,558	42,737	31,230	657,183	731,150			731,150	42,737	31,230		31,230	657,183	731,150	62
	Total	1,489,556	106,683	31,880	806,407	944,970			944,970	106,683	31,880		31,880	806,407	944,970	63

Table 8.2.2 Population Coverage in Phase I Provided by Served Population in the Base Year (Water Supply)

Name of Municipality/City	Area	Population Served by 1998 Facilities					1998		2005	
		Level III	Level II	Level I	Total	Total Population	Coverage (%)	Total Population	Coverage (%)	
Ajuy	Urban	2,890			2,890	3,107	93	3,247	89	
	Rural	4,490	2,300	17,788	24,578	36,148	68	37,776	65	
	Total	7,380	2,300	17,788	27,468	39,255	70	41,023	67	
Alimodian	Urban	3,240		1,926	5,166	6,776	76	7,726	67	
	Rural		2,175	14,068	16,243	24,175	67	27,565	59	
	Total	3,240	2,175	15,994	21,409	30,951	69	35,291	61	
Anilao	Urban	1,104		152	1,256	1,806	70	2,024	62	
	Rural	330		8,271	8,601	19,997	43	22,400	38	
	Total	1,434		8,423	9,857	21,803	45	24,424	40	
Badiangan	Urban	490		991	1,481	1,680	88	1,826	81	
	Rural		250	20,771	21,021	22,011	96	23,929	88	
	Total	490	250	21,762	22,502	23,691	95	25,755	87	
Balasan	Urban			2,512	2,512	3,602	70	3,946	64	
	Rural			14,190	14,190	20,328	70	22,272	64	
	Total			16,702	16,702	23,930	70	26,218	64	
Banate	Urban			1,214	1,214	1,517	80	1,721	71	
	Rural			14,388	14,388	24,923	58	28,283	51	
	Total			15,602	15,602	26,440	59	30,004	52	
Barotac Nuevo	Urban	2,010		1,727	3,737	3,844	97	4,151	90	
	Rural	4,210		33,544	37,754	38,608	98	41,682	91	
	Total	6,220		35,271	41,491	42,452	98	45,833	91	
Barotac Viejo	Urban			2,026	2,026	3,945	51	4,442	46	
	Rural	2,880	1,575	15,667	20,122	31,560	64	35,535	57	
	Total	2,880	1,575	17,693	22,148	35,505	62	39,977	55	
Barad	Urban	780	75	74	929	1,168	80	1,328	70	
	Rural		1,625	8,249	9,874	15,093	65	17,171	58	
	Total	780	1,700	8,323	10,803	16,261	66	18,499	58	
Bingawan	Urban			3,094	3,094	3,357	92	3,752	82	
	Rural			3,009	3,009	8,731	34	9,758	31	
	Total			6,103	6,103	12,088	50	13,510	45	

Table 8.2.2 Population Coverage in Phase I Provided by Served Population in the Base Year (Water Supply)
(Cont'd)

Name of Municipality/City	Area	Population Served by 1998 Facilities					1998		2005	
		Level III	Level II	Level I	Total	Total Population	Coverage (%)	Total Population	Coverage (%)	
Cabatuan	Urban	2,490	375	29,974	32,839	43,852	75	47,489	69	
	Rural									
	Total	2,490	375	29,974	32,839	43,852	75	47,489	69	
Calinog	Urban	1,764		1,202	2,966	5,014	59	5,967	50	
	Rural	150		13,370	13,520	44,091	31	52,468	26	
	Total	1,914		14,572	16,486	49,105	34	58,435	28	
Carles	Urban			909	909	2,349	39	2,717	33	
	Rural		2,425	11,712	14,137	46,979	30	54,338	26	
	Total		2,425	12,621	15,046	49,328	31	57,055	26	
Concepcion	Urban			2,154	2,154	4,455	48	5,010	43	
	Rural		185	12,558	12,743	27,296	47	30,694	42	
	Total		185	14,712	14,897	31,751	47	35,704	42	
Dingle	Urban	1,960		2,770	4,730	5,917	80	6,171	77	
	Rural	6,758	1,400	18,737	26,895	30,470	88	31,778	85	
	Total	8,718	1,400	21,507	31,625	36,387	87	37,949	83	
Duenas	Urban	1,950		2,128	4,078	4,982	82	5,280	77	
	Rural			16,712	16,712	24,784	67	26,268	64	
	Total	1,950		18,840	20,790	29,766	70	31,548	66	
Dumangas	Urban	1,165		184	1,349	1,884	72	2,013	67	
	Rural	6,215	175	16,464	22,854	50,816	45	54,277	42	
	Total	7,380	175	16,648	24,203	52,700	46	56,290	43	
Estancia	Urban	3,270		2,616	5,886	7,965	74	9,730	60	
	Rural			12,696	12,696	25,547	50	31,209	41	
	Total	3,270		15,312	18,582	33,512	55	40,939	45	
Guimbal	Urban	3,708		2,399	6,107	7,192	85	8,724	70	
	Rural		275	13,689	13,964	21,473	65	26,045	54	
	Total	3,708	275	16,088	20,071	28,665	70	34,769	58	
Igbaras	Urban			3,165	3,165	5,332	59	5,722	55	
	Rural		950	10,162	11,112	21,499	52	23,071	48	
	Total		950	13,327	14,277	26,831	53	28,793	50	

Table 8.2.2 Population Coverage in Phase I Provided by Served Population in the Base Year (Water Supply)
(Cont'd)

Name of Municipality/City	Area	Population Served by 1998 Facilities					1998		2005	
		Level III	Level II	Level I	Total	Total Population	Coverage (%)	Total Population	Coverage (%)	
Januay	Urban	2,406		3,926	6,332	8,557	74	9,591	66	
	Rural	168		26,896	27,064	44,163	61	49,501	55	
	Total	2,574		30,822	33,396	52,720	63	59,092	57	
Lambunao	Urban			1,261	1,261	4,484	28	5,046	25	
	Rural			24,193	24,193	57,531	42	64,744	37	
	Total			25,454	25,454	62,015	41	69,790	36	
Leganes	Urban	300		3,660	3,960	6,921	57	7,553	52	
	Rural	150	675	8,149	8,974	13,102	68	14,296	63	
	Total	450	675	11,809	12,934	20,023	65	21,849	59	
Lemery	Urban			2,168	2,168	2,729	79	3,013	72	
	Rural		200	14,667	14,867	19,099	78	21,087	71	
	Total		200	16,835	17,035	21,828	78	24,100	71	
Leon	Urban	1,758		1,808	3,566	4,830	74	5,795	62	
	Rural	1,350	1,350	23,774	26,474	39,667	67	47,591	56	
	Total	3,108	1,350	25,582	30,040	44,497	68	53,386	56	
Maasin	Urban	585		1,596	2,181	3,200	68	3,360	65	
	Rural	730	25	15,236	15,991	26,869	60	28,217	57	
	Total	1,315	25	16,832	18,172	30,069	60	31,577	58	
Miagao	Urban	2,112		2,597	4,709	8,137	58	8,536	55	
	Rural		875	25,826	26,701	45,369	59	47,594	56	
	Total	2,112	875	28,423	31,410	53,506	59	56,130	56	
Mina	Urban			1,404	1,404	2,319	61	2,527	56	
	Rural			8,605	8,605	14,763	58	16,089	53	
	Total			10,009	10,009	17,082	59	18,616	54	
New Lucena	Urban			1,678	1,678	2,641	64	2,722	62	
	Rural	270		9,984	10,254	14,498	71	14,940	69	
	Total	270		11,662	11,932	17,139	70	17,662	68	
Oton	Urban	2,625		21,787	24,412	60,873	40	71,032	34	
	Rural									
	Total	2,625		21,787	24,412	60,873	40	71,032	34	

Table 8.2.2 Population Coverage in Phase I Provided by Served Population in the Base Year (Water Supply)
(Cont'd)

Name of Municipality/City	Area	Population Served by 1998 Facilities				1998		2005	
		Level III	Level II	Level I	Total	Total Population	Coverage (%)	Total Population	Coverage (%)
Passi City	Urban	8,550	75		8,625	8,625	100	9,317	93
	Rural	2,466	125	37,129	39,720	53,085	75	57,343	69
	Total	11,016	200	37,129	48,345	61,710	78	66,660	73
Pavia	Urban	5,845		1,957	7,802	8,296	94	10,108	77
	Rural	7,964	1,025	9,626	18,615	20,904	89	25,469	73
	Total	13,809	1,025	11,583	26,417	29,200	90	35,577	74
Pototan	Urban	6,360		7,916	14,276	16,790	85	18,426	77
	Rural	435	100	27,968	28,503	42,002	68	46,095	62
	Total	6,795	100	35,884	42,779	58,792	73	64,521	66
San Dionisio	Urban	2,754		767	3,521	4,711	75	5,258	67
	Rural		1,925	9,253	11,178	21,843	51	24,380	46
	Total	2,754	1,925	10,020	14,699	26,554	55	29,638	50
San Enrique	Urban			1,243	1,243	2,112	59	2,292	54
	Rural			13,918	13,918	24,449	57	26,533	52
	Total			15,161	15,161	26,561	57	28,825	53
San Joaquin	Urban	1,303		1,960	3,263	4,484	73	5,368	61
	Rural	2,422	6,695	13,822	22,939	43,573	53	52,163	44
	Total	3,725	6,695	15,782	26,202	48,057	55	57,531	46
San Miguel	Urban	815		12,753	13,568	13,749	99	15,599	87
	Rural		425	5,661	6,086	6,170	99	6,999	87
	Total	815	425	18,414	19,654	19,919	99	22,598	87
San Rafael	Urban			2,782	2,782	3,144	88	3,580	78
	Rural			6,989	6,989	9,579	73	10,909	64
	Total			9,771	9,771	12,723	77	14,489	67
Santa Barbara	Urban	1,130		5,240	6,370	7,920	80	8,853	72
	Rural	1,315	150	26,017	27,482	33,801	81	37,784	73
	Total	2,445	150	31,257	33,852	41,721	81	46,637	73
Sara	Urban	582		2,792	3,374	3,852	88	4,281	79
	Rural	434	1,400	33,213	35,047	36,699	95	40,781	86
	Total	1,016	1,400	36,005	38,421	40,551	95	45,062	85

Table 8.2.2 Population Coverage in Phase I Provided by Served Population in the Base Year (Water Supply)
(Cont'd)

Name of Municipality/City	Area	Population Served by 1998 Facilities					1998		2005	
		Level III	Level II	Level I	Total	Total Population	Coverage (%)	Total Population	Coverage (%)	
Tigbauan	Urban			5,618	5,618	8,335	67	9,521	59	
	Rural		1,625	16,616	18,241	41,726	44	47,660	38	
	Total		1,625	22,234	23,859	50,061	48	57,181	42	
Tubungan	Urban		125	1,001	1,126	1,411	80	1,790	63	
	Rural		1,300	12,981	14,281	19,075	75	24,199	59	
	Total		1,425	13,982	15,407	20,486	75	25,989	59	
Zarraga	Urban			2,093	2,093	3,134	67	3,854	54	
	Rural			10,615	10,615	16,062	66	19,753	54	
	Total			12,708	12,708	19,196	66	23,607	54	
Provincial Total	Urban	63,946	650	149,224	213,820	310,998	69	350,408	61	
	Rural	42,737	31,230	657,183	731,150	1,178,558	62	1,320,646	55	
	Total	106,683	31,880	806,407	944,970	1,489,556	63	1,671,054	57	

Table 8.2.3 Number of Households Served by Sanitary Toilets in the Base Year (1998)

Name of Municipality/City	Area	Population (1998)	Number of Households (1998)	Households Using Sanitary Toilets in 1998				Recipient HHs of Planned/On-going Projects				Households Using Sanitary Toilets in the Base Year (1998)							
				Flush Toilets	Pour Flush	VIP/Dry	Total	Flush	Pour Flush	VIP/Dry	Total	Flush	VIP/Dry	Total	Coverage (%)				
															Pour Flush	VIP/Dry			
Ajoy	Urban	3,107	591	10	353	26	389					10	353	26	389	2	60	4	65
	Rural	36,148	6,978		2,194	1,565	3,759						2,194	1,565	3,759		31	22	54
	Total	39,255	7,569	10	2,547	1,591	4,148						10	2,547	1,591	4,148	34	21	55
Alimodian	Urban	6,776	1,353	56	1,180		1,336					56	1,180		1,236	4	87		91
	Rural	24,175	4,356	373	2,340	607	3,320					373	2,340	607	3,320	9	54	14	76
	Total	30,951	5,711	429	3,520	607	4,556					429	3,520	607	4,556	8	62	11	80
Anitao	Urban	1,806	349	19	142		161					19	142		161	5	41		46
	Rural	19,997	3,731		922		922						922		922		25		25
	Total	21,803	4,080	19	1,064		1,083					19	1,064		1,083		26		27
Badliangan	Urban	1,880	327	38	262		300					38	262		300	12	80		92
	Rural	22,011	4,257	23	1,810	1,320	3,153					23	1,810	1,320	3,153	1	43	31	74
	Total	23,891	4,584	61	2,072	1,320	3,453					61	2,072	1,320	3,453	1	45	29	75
Balasan	Urban	3,602	694	40	337	155	532					40	337	155	532	6	49	22	77
	Rural	20,328	3,994	25	495	335	855					25	495	335	855	1	12	8	21
	Total	23,930	4,688	65	832	490	1,387					65	832	490	1,387	1	18	10	30
Banale	Urban	1,517	286		166		166						166		166		58		58
	Rural	24,923	4,624		1,672		1,672						1,672		1,672		36		36
	Total	26,440	4,910		1,838		1,838						1,838		1,838		37		37
Barotac Nuevo	Urban	3,844	723	219	409		628					219	409		628	30	57		87
	Rural	38,608	7,354	183	4,060	115	4,558					183	4,060	115	4,558	2	55	2	59
	Total	42,452	8,077	402	4,469	115	4,986					402	4,469	115	4,986	5	55	1	62
Barotac Viejo	Urban	3,945	756	8	118	471	597					8	118	471	597	1	16	62	79
	Rural	31,560	5,770	2	291	1,278	1,571					2	291	1,278	1,571		5	22	27
	Total	35,505	6,526	10	409	1,749	2,168					10	409	1,749	2,168	6	27	33	33
Batad	Urban	1,168	247	26	22	27	75					26	22	27	75	11	9	11	30
	Rural	15,093	2,897	60	634	1,118	1,812					60	634	1,118	1,812	2	22	29	63
	Total	16,261	3,144	86	656	1,145	1,887					86	656	1,145	1,887	3	21	36	66
Bungawan	Urban	3,357	698	28	603		631					28	603		631	4	86		90
	Rural	8,731	1,712		1,038		1,038						1,038		1,038		61		61
	Total	12,088	2,410	28	1,641		1,669					28	1,641		1,669	1	68		69
Cabatuan	Urban	43,852	8,274		3,326	4,013	7,339								4,013		40	49	89
	Rural																		
	Total	43,852	8,274		3,326	4,013	7,339								4,013		40	49	89
Calingog	Urban	5,014	962	194	244	438	876					194	244	438	876	20	25	46	91
	Rural	44,091	8,288	1,645	2,791	768	5,204					1,645	2,791	768	5,204	20	34	9	63
	Total	49,105	9,250	1,839	3,035	1,206	6,080					1,839	3,035	1,206	6,080	20	33	13	66
Carles	Urban	2,349	464	3	264		267					3	264		267	1	57		58
	Rural	46,979	8,781	1	3,369		3,370					1	3,369		3,370		38		38
	Total	49,328	9,245	4	3,633		3,637					4	3,633		3,637	1	39		39
Concepcion	Urban	4,455	800	4	671		671					4	671		671		84		84
	Rural	27,298	5,259		1,693		1,693						1,693		1,693		32		32
	Total	31,753	6,059		2,364		2,364						2,364		2,364		39		39
Dingle	Urban	5,917	1,198	59	1,130		1,189					59	1,130		1,189	5	94		99
	Rural	30,470	5,903		5,255		5,255						5,255		5,255		89		89
	Total	36,387	7,103	59	6,385		6,444					59	6,385		6,444	1	90		91

Table 8.2.3 Number of Households Served by Sanitary Toilets in the Base Year (1998) (Cont'd)

Name of Municipality/City	Area	Population (1998)	Number of Households (1998)	Households Using Sanitary Toilets in 1998				Recipient HHs of Planned/On-going Projects				Households Using Sanitary Toilets in the Base Year (1998)					
				Flush Toilets	Pour Flush	VIP/Dry	Total	Flush	Pour Flush	VIP/Dry	Total	Number		Coverage (%)			
												Flush	VIP/Dry	Pour Flush	Total		
Pamali City	Urban	8,625	1,621	1,264		1,275				11	1,204		1,275	1	78		79
	Rural	53,085	10,054	3,957		3,963				6	3,957		3,963		39		39
	Total	61,710	11,675	5,221		5,238				17	5,221		5,238		45		45
Pavia	Urban	8,296	1,559	513	585	278	1,376			513	585	278	1,376	33	36	18	88
	Rural	20,904	4,028	634	2,073	1,017	3,724			634	2,073	1,017	3,724	16	51	25	92
	Total	29,200	5,587	1,147	2,658	1,295	5,100			1,147	2,658	1,295	5,100	21	48	23	91
Pototan	Urban	16,790	3,115	269	1,991	730	2,990			269	1,991	730	2,990	9	64	33	96
	Rural	42,002	8,016	689	2,626	2,724	6,039			689	2,626	2,724	6,039	9	53	34	75
	Total	58,792	11,131	958	4,617	3,454	9,029			958	4,617	3,454	9,029	9	41	31	81
San Dionisio	Urban	4,711	920	17	204	22	243			17	204	22	243	2	22	2	26
	Rural	21,843	4,176	27	738	897	1,662			27	738	897	1,662	1	18	21	40
	Total	26,554	5,096	44	942	919	1,905			44	942	919	1,905	1	18	18	37
San Enrique	Urban	2,112	396	145	223	368			145	223	368	37	56				93
	Rural	24,449	4,596	363	980	725	2,068			363	980	725	2,068	8	21	16	45
	Total	26,561	4,992	508	1,203	725	2,436			508	1,203	725	2,436	10	24	15	49
San Joaquin	Urban	4,484	812	52	602	10	664			52	602	10	664	6	74	1	82
	Rural	43,573	7,712	54	4,156	43	4,253			54	4,156	43	4,253	1	54	1	55
	Total	48,057	8,524	106	4,758	53	4,917			106	4,758	53	4,917	1	56	1	58
San Miguel	Urban	13,749	2,634	2,422		2,422											92
	Rural	6,170	1,205	1,042		1,042											86
	Total	19,919	3,839	3,464		3,464											90
San Rafael	Urban	3,144	601	251		251											42
	Rural	9,579	1,717	467		467											27
	Total	12,723	2,318	718		718											31
Santa Barbara	Urban	7,920	1,506	882	521	1,403			882	521	1,403	59	35				93
	Rural	33,801	6,589	2,238	2,215	6,111	5,064			2,238	2,215	6,111	5,064	34	34	9	77
	Total	41,721	8,095	3,120	2,736	6,111	6,467			3,120	2,736	6,111	6,467	39	34	8	80
Sara	Urban	3,852	761	2	337	137	476			2	337	137	476				63
	Rural	36,699	7,168		1,647	2,067	3,714										52
	Total	40,551	7,929	2	1,984	2,204	4,190			2	1,984	2,204	4,190				53
Tigbauan	Urban	8,335	1,490	135	1,218	1,353			135	1,218		1,353	9	81			68
	Rural	41,726	7,829	160	5,186	5,346			160	5,186		5,346	2	66			72
	Total	50,061	9,328	295	6,404	6,699			295	6,404		6,699	3	69			99
Tubugan	Urban	1,411	269	55	208	3	269			55	208	3	269	20	77	1	99
	Rural	19,075	3,462	2,254	820	3,074			2,254	820	3,074		3,074		65		89
	Total	20,486	3,731	55	2,462	823	3,340			55	2,462	823	3,340	1	66	22	90
Zarraga	Urban	3,134	604	152	368	38	558			152	368	38	558	25	61	6	92
	Rural	16,062	2,969	41	1,818	945	2,804			41	1,818	945	2,804	1	61	32	94
	Total	19,196	3,573	193	2,186	983	3,362			193	2,186	983	3,362	5	61	28	94
Provincial Total	Urban	310,098	59,120	3,680	39,852	7,225	50,757			3,680	39,852	7,225	50,757	6	67	12	86
	Rural	1,178,558	221,563	7,047	1,015,555	28,093	136,695			7,047	1,015,555	28,093	136,695	3	46	13	62
	Total	1,489,556	280,683	10,727	141,407	35,318	187,452			10,727	141,407	35,318	187,452	4	50	13	67

Table 8.2.4 Number of Public School Student Served by School Toilets in Base Year (1998)

Name of Municipality/City	1998 Total Number of Public School Student	Standard No. of Student that can be Served by 1998	No. of Student to be Served by Planned /On-going Projects	Standard No. of Students that can be Served by Toilets in Base Year (1998)	Coverage (%)
Ajuy	9,749	4,040		4,040	41
Alimodian	5,271	80		80	2
Anilao	5,408	2,080		2,080	38
Badiangan	4,420	4,420		4,420	100
Balasan	6,065	1,640		1,640	27
Banate	7,083	3,960		3,960	56
Barotac Nuevo	7,049				
Barotac Viejo	8,149	2,920		2,920	36
Batad	2,707	2,707		2,707	100
Bingawan	3,008	80		80	3
Cabatuan	7,790	5,120		5,120	66
Calinog	11,029	5,560		5,560	50
Carles	11,821	5,600		5,600	47
Concepcion	7,137	3,920		3,920	55
Dingle	7,493	3,840		3,840	51
Dueñas	7,209	4,920		4,920	68
Dumangas	8,569	6,720		6,720	78
Estancia	8,104	8,104		8,104	100
Guimbal	6,565	920		920	14
Igbaras	6,202	80		80	1
Janiuay	11,476	4,480		4,480	39
Lambunao	13,033	6,960		6,960	53
Leganes	6,070	2,680		2,680	44
Lemery	5,292	3,360		3,360	63
Leon	10,415	6,160		6,160	59
Maasin	7,241	4,720		4,720	65
Miagao	11,281	9,120		9,120	81
Mina	3,768	3,120		3,120	83
New Lucena	4,780	2,560		2,560	54
Oton	12,723	2,760		2,760	22
Passi City	15,663	8,760		8,760	56
Pavia	6,167	2,760		2,760	45
Pototan	11,532	240		240	2
San Dionisio	7,072	3,800		3,800	54
San Enrique	5,209	1,560		1,560	30
San Joaquin	9,571	1,800		1,800	19
San Miguel	5,332	2,920		2,920	55
San Rafael	3,588	1,480		1,480	41
Santa Barbara	7,070	7,070		7,070	100
Sara	9,107	3,240		3,240	36
Tigbauan	6,409	1,480		1,480	23
Tubungan	3,718	2,280		2,280	61
Zarraga	1,800	440		440	24
Provincial Total	319,145	150,461		150,461	47

Table 8.2.5 Number of Public Utilities with Sanitary Toilets in the Base Year (1998)

Name of Municipality/City	Type	No. of PU with Toilets in 1998	No. of PU with Sanitary Toilets in 1998	No. of PU with Toilets in Planned/Ongoing Project	No. of PU with Sanitary Toilets in Planned/Ongoing Projects	No. of PU with Toilets in Base Year 1998	No. of PU with Sanitary Toilets in Base year 1998	Coverage (%)
Ajuy	Public Market							
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total							
Atimodian	Public Market	4	4			4	4	100
	Bus/Jeepney Terminal	2	2			2	2	100
	Parks/Playground	2	2			2	2	100
	Total	8	8			8	8	100
Anilao	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	4	4			4	4	100
Dadiangan	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	3	3			3	3	100
	Total	5	5			5	5	100
Balasan	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	4	4			4	4	100
Banate	Public Market	6	6			6	6	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	6	6			6	6	100
Barotac Nuevo	Public Market	4	4			4	4	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	6	6			6	6	100
Barotac Viejo	Public Market	6	6			6	6	100
	Bus/Jeepney Terminal	7	7			7	7	100
	Parks/Playground	2	2			2	2	100
	Total	15	15			15	15	100
Batac	Public Market	8	8			8	8	100
	Bus/Jeepney Terminal							
	Parks/Playground	6	6			6	6	100
	Total	14	14			14	14	100
Bingawan	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	4	4			4	4	100
Cabatuan	Public Market	6	6			6	6	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	8	8			8	8	100
Calinog	Public Market	6	6			6	6	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	6	6			6	6	100
Carles	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	4	4			4	4	100
Concepcion	Public Market	6	6			6	6	100
	Bus/Jeepney Terminal							
	Parks/Playground	4	4			4	4	100
	Total	10	10			10	10	100
Dingle	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	4	4			4	4	100
Duenas	Public Market	3	3			3	3	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	3	3			3	3	100
Dumangas	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal	1	1			1	1	100
	Parks/Playground	4	4			4	4	100
	Total	7	7			7	7	100
Estancia	Public Market	4	4			4	4	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	4	4			4	4	100
Guimbal	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	4	4			4	4	100
	Total	6	6			6	6	100

Table 8.2.5 Number of Public Utilities with Sanitary Toilets in the Base Year (1998) (Cont'd)

Name of Municipality/City	Type	No. of PU with Toilets in 1998	No. of PU with Sanitary Toilets in 1998	No. of PU with Toilets in Planned/Ongoing Project	No. of PU with Sanitary Toilets in Planned/Ongoing Projects	No. of PU with Toilets in Base Year 1998	No. of PU with Sanitary Toilets in Base year 1998	Coverage (%)
Igbaras	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	2	2			2	2	100
Janinuy	Public Market	10	10			10	10	100
	Bus/Jeepney Terminal	2	2			2	2	100
	Parks/Playground	7	7			7	7	100
	Total	19	19			19	19	100
Lambunao	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	2	2			2	2	100
Leganes	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal	2	2			2	2	100
	Parks/Playground							
	Total	4	4			4	4	100
Lemery	Public Market							
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total							
Leon	Public Market	4	4			4	4	100
	Bus/Jeepney Terminal							
	Parks/Playground	4	4			4	4	100
	Total	8	8			8	8	100
Maasin	Public Market	8	8			8	8	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	8	8			8	8	100
Miagao	Public Market	6	6			6	6	100
	Bus/Jeepney Terminal	2	2			2	2	100
	Parks/Playground	2	2			2	2	100
	Total	10	10			10	10	100
Mina	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	2	2			2	2	100
New Lucena	Public Market	6	6			6	6	100
	Bus/Jeepney Terminal							
	Parks/Playground	6	6			6	6	100
	Total	12	12			12	12	100
Oton	Public Market	4	4			4	4	100
	Bus/Jeepney Terminal	2	2			2	2	100
	Parks/Playground	4	4			4	4	100
	Total	10	10			10	10	100
Passi City	Public Market	16	10			16	10	63
	Bus/Jeepney Terminal	7	7			7	7	100
	Parks/Playground	16	16			16	16	100
	Total	39	33			39	33	85
Pavia	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	4	4			4	4	100
Pototan	Public Market	4	4			4	4	100
	Bus/Jeepney Terminal	2	2			2	2	100
	Parks/Playground	2	2			2	2	100
	Total	8	8			8	8	100
San Dionisio	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	4	4			4	4	100
San Enrique	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	2	2			2	2	100
San Joaquin	Public Market	4	4			4	4	100
	Bus/Jeepney Terminal	2	2			2	2	100
	Parks/Playground	4	4			4	4	100
	Total	10	10			10	10	100
San Miguel	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground	2	2			2	2	100
	Total	4	4			4	4	100
San Rafael	Public Market	2	2			2	2	100
	Bus/Jeepney Terminal							
	Parks/Playground							
	Total	2	2			2	2	100

Table 8.2.5 Number of Public Utilities with Sanitary Toilets in the Base Year (1998) (Cont'd)

Name of Municipality/City	Type	No. of PU with Toilets in 1998	No. of PU with Sanitary Toilets in 1998	No. of PU with Toilets in Planned/On-going Project	No. of PU with Sanitary Toilets in Planned/On-going Projects	No. of PU with Toilets in Base Year 1998	No. of PU with Sanitary Toilets in Base year 1998	Coverage (%)
Santa Barbara	Public Market	2	2			2	2	100
	Bus/JEEPNEY Terminal							
	Parks/Playground	10	10			10	10	100
	Total	12	12			12	12	100
Sara	Public Market	2	2			2	2	100
	Bus/JEEPNEY Terminal	2	2			2	2	100
	Parks/Playground	4	4			4	4	100
	Total	8	8			8	8	100
Igbauan	Public Market	2	2			2	2	100
	Bus/JEEPNEY Terminal							
	Parks/Playground	2	2			2	2	100
	Total	4	4			4	4	100
Tubungan	Public Market	4	4			4	4	100
	Bus/JEEPNEY Terminal							
	Parks/Playground	2	2			2	2	100
	Total	6	6			6	6	100
Zanaga	Public Market	2	2			2	2	100
	Bus/JEEPNEY Terminal							
	Parks/Playground	1	1			1	1	100
	Total	3	3			3	3	100
Provincial Total	Public Market	161	153			161	153	95
	Bus/JEEPNEY Terminal	31	31			31	31	100
	Parks/Playground	109	107			109	107	98
	Total	301	291			301	291	97

Table 8.2.6 Households Coverage in Phase I Provided by Existing Facilities in the Base Year (Household Toilets)

Name of Municipality/City	Area	No. of Household Served by Existing Facilities					Coverage in 1998										Coverage in 2005															
		Flush		VIP/Dry		Total	No. of HHs		Percentage of Served Households			Served Population		No. of HHs		Percentage of Served Households			Served Population		No. of HHs		Percentage of Served Households			Served Population						
		Flush	Pour Flush	VIP/Dry	VIP/Dry	Total	Flush	Total	Flush	Pour Flush	VIP/Dry	Total	Number	%	Flush	Total	Flush	Pour Flush	VIP/Dry	Total	Number	%	Flush	Total	Flush	Pour Flush	VIP/Dry	Total	Number	%		
Ajuy	Urban	10	353	26	389	591	2	60	4	66	2,051	66	4	617	2	57	4	63	2,199	63												
	Rural		2,194	1,565	3,759	6,978	31	1,678	54	7,293	30	21	52	20,762	30	21	52	20,762	52													
	Total	10	2,547	1,591	4,148	7,569	34	21	55	3,729	55	7,910	32	20	52	22,961	32	20	52	22,961	52											
Alimodian	Urban	56	1,180		1,236	1,355	4	87	91	1,545	91	6,166	4	76	30	6,552	80															
	Rural	373	2,340	607	3,320	4,356	9	54	14	76	5,150	76	4,967	8	47	12	19,604	67														
	Total	429	3,520	607	4,556	5,711	8	62	11	80	11,316	80	6,512	7	54	9	26,156	70														
Anilao	Urban	19	142		161	349	5	41	46	831	46	391	5	36	41	910	41															
	Rural		922		922	3,731	25	25	25	452	25	4,179	22	22	22	5,270	22															
	Total	19	1,064		1,083	4,080	26	27	27	1,283	27	4,570	23	24	24	6,180	24															
Badiangan	Urban	38	262		300	327	12	80	92	1,546	92	356	11	74	84	1,693	84															
	Rural	23	1,810	1,320	3,153	4,257	1	43	31	74	1,243	74	4,628	39	29	68	16,771	68														
	Total	61	2,072	1,320	3,453	4,584	1	45	29	75	2,789	75	4,984	1	42	26	18,464	69														
Balasan	Urban	40	337	155	532	694	6	49	22	77	2,774	77	760	5	44	20	2,780	70														
	Rural	25	495	335	855	3,994	1	12	8	21	756	21	4,376	1	11	8	4,774	20														
	Total	65	832	490	1,387	4,688	1	18	10	30	3,530	30	5,136	1	16	10	7,554	27														
Banate	Urban		166		166	286	58	58	58	880	58	324	51	922	51	922	51															
	Rural		1,672		1,672	4,624	36	36	36	546	36	5,247	32	32	32	9,962	32															
	Total		1,838		1,838	4,910	37	37	37	1,426	37	5,571	33	33	33	10,884	33															
Barotac Nuevo	Urban	219	409		628	723	30	57	87	3,344	87	780	28	52	81	3,362	81															
	Rural	183	4,060	115	4,358	7,354	2	55	2	59	2,268	59	7,939	2	51	1	23,903	55														
	Total	402	4,469	115	4,986	8,077	5	55	1	62	5,612	62	8,719	5	51	1	27,267	57														
Barotac Viejo	Urban	8	118	471	597	756	1	16	62	79	3,117	79	851	1	14	55	70	3,357	70													
	Rural	2	291	1,278	1,571	5,770	5	22	27	1,065	27	6,496	4	20	24	9,342	24															
	Total	10	409	1,749	2,168	6,526	6	27	33	4,182	33	7,347	6	24	30	12,699	30															
Batad	Urban	26	22	27	75	247	11	9	11	30	350	30	281	9	8	369	27															
	Rural	60	634	1,118	1,812	2,897	2	22	39	63	736	63	3,296	2	19	34	10,122	55														
	Total	86	656	1,145	1,887	3,144	3	21	36	60	1,086	60	3,577	2	18	32	10,491	53														
Bingawan	Urban	28	603		631	698	4	86	90	3,021	90	780	4	77	81	3,340	81															
	Rural		1,038		1,038	1,712	61	61	61	2,048	61	1,913	54	54	54	5,457	54															
	Total	28	1,641		1,669	2,410	1	68	69	5,069	69	2,693	1	61	62	8,797	62															
Cabatuan	Urban		3,326	4,013	7,339	8,274	40	49	89	39,028	89	8,960	37	45	82	40,801	82															
	Rural		3,326	4,013	7,339	8,274	40	49	89	39,028	89	8,960	37	45	82	40,801	82															
	Total		6,652	8,026	14,678	16,548	80	98	178	78,056	178	17,920	74	90	164	81,602	164															
Calinog	Urban	194	344	438	876	962	20	25	46	91	4,563	91	1,145	17	21	4,981	77															
	Rural	1,645	2,791	768	5,204	8,288	20	34	9	63	3,159	63	9,862	17	28	53	30,339	53														
	Total	1,839	3,035	1,206	6,080	9,250	20	33	13	66	7,722	66	11,007	17	28	11	35,320	55														
Carles	Urban	3	264		267	464	1	57	58	1,362	58	537	1	49	50	1,461	50															
	Rural	1	3,369		3,370	8,781	38	38	38	893	38	10,157	33	33	33	19,830	33															
	Total	4	3,633		3,637	9,245	39	39	39	2,255	39	10,694	34	34	34	21,291	34															

Table 8.2.6 Households Covered in Phase I Provided by Existing Facilities in the Base Year (Household Toilets) (Cont'd)

Name of Municipality/City	Coverage in 1998										Coverage in 2005														
	No. of Household Served by Existing Facilities					Percentage of Served Households					Served Population					Percentage of Served Households					Served Population				
	Flush	Pour Flush	VIP/Dry	Total	No. of HHs	Flush	Pour Flush	VIP/ Dry	Total	%	Number	%	Number	%	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total	Number	%	
Concepcion	Urban		671		800				84	3,742	84							75				75	4,499	75	
	Rural	1,693			5,259				32	1,426	32							29				29	9,668	29	
	Total	2,364			6,059				39	5,168	39							35				35	14,167	35	
Dingle	Urban	59	1,130		1,189	5			99	5,858	99							85				85	28,265	85	
	Rural	5,255			5,905				89	5,266	89							85				85	28,265	85	
	Total	6,385			7,103				91	11,124	91							87				87	34,399	87	
Duenas	Urban	40	537	249	826	4	57	26	88	4,384	88							54	25			54	4,851	83	
	Rural	4	1,296	1,451	2,751	4,685	28	31	59	2,939	59							26	29			26	14,878	55	
	Total	44	1,833	1,700	3,577	5,627	1	33	30	64	7,323	64						60	29			60	19,729	60	
Dumangas	Urban	22	330		352	383	6	86	92	1,733	92							81				81	1,753	86	
	Rural	8	6,341		6,349	9,906	64	64	64	1,206	64							60				60	34,286	60	
	Total	30	6,671		6,701	10,289	65	65	65	2,939	65							61				61	36,039	61	
Estancia	Urban	193	534	249	976	1,806	13	35	17	65	5,177	65						29	14			29	5,706	53	
	Rural	148	1,965	602	2,715	4,951	3	40	12	55	4,381	55						32	10			32	16,016	45	
	Total	341	2,499	851	3,691	6,457	5	39	13	57	9,558	57						47	11			47	21,722	47	
Guimbal	Urban	49	1,142	56	1,247	1,289	4	89	4	97	6,976	97						73	4			73	7,634	80	
	Rural	68	3,084	387	3,539	3,897	2	79	10	91	6,545	91						65	8			65	21,051	75	
	Total	117	4,226	443	4,786	5,186	2	81	9	92	13,521	92						67	7			67	28,685	76	
Igbaras	Urban		1,002		1,002	1,045	96	96	96	5,119	96							89				89	5,585	89	
	Rural		2,319		2,319	4,266	54	54	54	2,879	54							51				51	11,950	51	
	Total		3,321		3,321	5,311	63	63	63	7,998	63							58				58	17,535	58	
Janjauy	Urban	83	1,598		1,681	1,681	5	95	100	8,557	100							85				85	8,977	89	
	Rural		3,199	3,843	7,042	8,178	39	47	86	7,359	86							35	42			35	40,187	77	
	Total	83	4,797	3,843	8,723	9,859	1	49	39	88	15,916	88						43	35			43	49,164	79	
Lambunao	Urban		745		745	794	94	94	94	4,215	94							83				83	4,480	83	
	Rural		7,655	800	8,455	10,164	75	8	83	3,722	83							67	7			67	51,096	74	
	Total		8,400	800	9,200	10,958	77	7	84	7,937	84							68	6			68	55,576	75	
Leganes	Urban	285	804	181	1,270	1,346	21	60	13	6,506	94							55	12			55	7,021	86	
	Rural	42	1,635	353	2,030	2,440	2	67	14	83	5,744	83						61	13			61	11,746	76	
	Total	327	2,439	534	3,300	3,786	9	64	14	87	12,250	87						59	13			59	18,767	80	
Lemery	Urban	18	398	128	444	581	3	51	22	76	2,074	76						46	20			46	2,343	69	
	Rural	41	530	1,879	2,450	3,812	1	14	49	64	4,209	64						13	45			13	13,071	58	
	Total	59	828	2,007	2,894	4,393	1	19	46	66	3,821	66						17	41			17	15,414	60	
Leon	Urban	39	839	14	892	906	4	93	2	98	4,733	98						77	1			77	5,037	82	
	Rural	28	4,286	58	4,372	7,058	61	61	62	2,995	62							51	1			51	26,471	52	
	Total	67	5,125	72	5,264	7,964	1	64	1	66	7,728	66						54	1			54	31,508	55	
Maasin	Urban	184	1,582	1,765	3,531	4,577	4	35	39	77	2,464	77						33	37			33	20,728	73	
	Rural	184	2,122	1,765	4,071	5,117	4	41	34	80	5,664	80						39	33			39	23,966	76	
	Total	368	3,704	3,530	7,602	9,694	8	76	73	158	8,128	73						72	70			72	44,694	74	

Table 8.2.6 Households Coverage in Phase I Provided by Existing Facilities in the Base Year (Household Toilets) (Cont'd)

Name of Municipality/City	Area	No. of Household Served by Existing Facilities					Coverage in 1998										Coverage in 2005										
		Facilities					No. of HHs			Percentage of Served Households			Served Population			No. of HHs			Percentage of Served Households			Served Population					
		Flush	Pour Flush	VIP/Dry	Total		Flush	Pour Flush	VIP/Dry	Total	Number	%		Flush	Pour Flush	VIP/Dry	Total	Number	%		Flush	Pour Flush	VIP/Dry	Total	Number	%	
Miagao	Urban		1,303		1,303	1,477	88		88	7,161	88	1,549	84			84	7,626	84						84	7,626	84	
	Rural		6,015		6,015	8,758	69		69	5,615	69	9,188	65			65	31,419	65						65	31,419	65	
	Total		7,318		7,318	10,235	71		71	12,776	71	10,737	68			68	39,045	68						68	39,045	68	
Mina	Urban	1	358		359	432	83		83	1,925	83	471	76			76	2,161	76						76	2,161	76	
	Rural		1,683		1,683	2,709	62		62	1,438	62	2,952	57			57	9,820	57						57	9,820	57	
	Total	1	2,041		2,042	3,141	65		65	3,363	65	3,423	60			60	11,981	60						60	11,981	60	
New Lucena	Urban		400		400	516	78		78	2,060	78	532	75			75	2,206	75						75	2,206	75	
	Rural		2,242		2,242	2,735	82		82	2,166	82	2,819	80			80	12,562	80						80	12,562	80	
	Total		2,642		2,642	3,251	81		81	4,226	81	3,351	79			79	14,768	79						79	14,768	79	
Oton	Urban	17	10,001		10,018	11,661	86		86	52,351	86	13,608	74			74	57,348	74						74	57,348	74	
	Rural		10,001		10,018	11,661	86		86	52,351	86	13,608	74			74	57,348	74						74	57,348	74	
	Total	17	20,002		20,036	23,322	86		86	104,702	86	27,216	74			74	114,696	74						74	114,696	74	
Passi City	Urban	11	1,264		1,275	1,621	78		79	6,814	79	1,751	72			73	7,361	73						73	7,361	73	
	Rural	6	3,957		3,963	10,054	39		39	3,364	39	10,860	36			36	21,612	36						36	21,612	36	
	Total	17	5,221		5,238	11,675	45		45	10,178	45	12,611	41			42	28,973	42						42	28,973	42	
Pavia	Urban	513	585	278	1,376	1,559	33	18	38	18	18	1,900	27	31	15	72	8,235	72						72	8,235	72	
	Rural	634	2,073	1,017	3,724	4,028	16	51	23	92	7,632	92	4,907	13	42	21	21,899	76						76	21,899	76	
	Total	1,147	2,658	1,295	5,100	5,587	21	48	23	91	14,932	91	6,807	17	39	19	30,134	75						75	30,134	75	
Pototan	Urban	269	1,991	730	2,990	3,115	9	64	23	34	16,118	96	3,419	8	58	21	16,961	87						87	16,961	87	
	Rural	689	2,626	2,724	6,039	8,016	9	33	34	75	12,593	75	8,797	8	30	31	33,651	69						69	33,651	69	
	Total	958	4,617	3,454	9,029	11,131	9	41	31	81	28,711	81	12,216	8	38	28	50,612	74						74	50,612	74	
San Dionisio	Urban	17	204	22	243	920	2	22	2	26	1,225	26	1,027	2	20	2	1,533	24						24	1,533	24	
	Rural	27	738	897	1,662	4,176	1	18	21	40	1,884	40	4,662	1	16	19	9,104	36						36	9,104	36	
	Total	44	942	919	1,905	5,096	1	18	18	37	3,109	37	5,689	1	17	16	10,637	33						33	10,637	33	
San Enrique	Urban	145	223		368	396	37	56	93	1,964	93	429	52			86	2,030	86						86	2,030	86	
	Rural	363	980	725	2,068	4,596	8	21	16	45	950	45	4,987	7	20	15	11,661	41						41	11,661	41	
	Total	508	1,203	725	2,436	4,992	10	24	15	49	2,914	49	5,416	9	22	13	13,691	45						45	13,691	45	
San Joaquin	Urban	52	602	10	664	812	6	74	1	82	3,677	82	972	5	62	1	3,907	68						68	3,907	68	
	Rural	54	4,156	43	4,253	7,712	1	54	1	55	2,466	55	9,232	1	45	1	25,523	46						46	25,523	46	
	Total	106	4,758	53	4,917	8,524	1	56	1	58	6,143	58	10,204	1	47	1	29,430	48						48	29,430	48	
San Miguel	Urban		2,422		2,422	2,634	92		92	12,649	92	2,988	81			81	14,263	81						81	14,263	81	
	Rural		1,042		1,042	1,205	90		90	11,824	90	1,367	76			76	6,006	76						76	6,006	76	
	Total		3,464		3,464	3,839	90		90	24,473	90	4,355	80			80	20,269	80						80	20,269	80	
San Rafael	Urban		251		251	601	42		42	1,320	42	685	37			37	1,375	37						37	1,375	37	
	Rural		467		467	1,717	27		27	849	27	1,955	24			24	3,084	24						24	3,084	24	
	Total		718		718	2,318	31		31	2,169	31	2,640	27			27	4,459	27						27	4,459	27	
Santa Barbara	Urban	882	521		1,403	1,506	59	35	93	7,366	93	1,683	52	31	83	7,641	83								83	7,641	83
	Rural	2,238	2,215	611	5,064	6,889	34	34	77	6,098	77	7,365	30	8	8	69	28,956	69						69	28,956	69	
	Total	3,120	2,736	611	6,467	8,095	39	34	80	13,464	80	9,048	34	30	7	71	36,597	71						71	36,597	71	

Table 8.2.6 Households Coverage in Phase I Provided by Existing Facilities in the Base Year (Household Toilets) (Cont'd)

Name of Municipality/City	No. of Household Served by Existing Facilities						Coverage in 1998										Coverage in 2005										
	Flush		VIP/Dry		Total		Percentage of Served Households			Served Population			No. of HHs				Percentage of Served Households			Served Population							
	Flush	VIP/Dry	Total	Flush	VIP/Dry	Total	Flush	Pour Flush	VIP/Drv	Total	Number	%	No. of HHs	Flush	Pour Flush	VIP/Drv	Total	Number	%	No. of HHs	Flush	Pour Flush	VIP/Drv	Total	Number	%	
Sara	Urban	2	337	137	476	761	44	18	63	2,427	63	846	40	16	56	2,420	56	846	63	846	40	16	56	2,420	56	846	
	Rural		1,647	2,067	3,714	7,168	23	29	52	2,003	52	7,965	21	26	47	21,991	47	7,965	52	7,965	21	26	47	21,991	47	7,965	
	Total		2	1,984	2,204	4,190	7,929	25	28	53	4,430	53	8,811	23	25	48	24,411	48	8,811	53	8,811	23	25	48	24,411	48	8,811
Tigbauan	Urban	135	1,218		1,353	1,499	9	81	90	7,502	90	1,712	8	71	79	8,264	79	1,712	90	1,712	8	71	79	8,264	79	1,712	
	Rural	160	5,186		5,346	7,829	2	66	68	5,668	68	8,942	2	58	60	32,878	60	8,942	68	8,942	2	58	60	32,878	60	8,942	
	Total	295	6,404		6,699	9,328	3	69	72	13,170	72	10,654	3	60	63	41,142	63	10,654	72	10,654	3	60	63	41,142	63	10,654	
Tubungan	Urban	55	208	3	266	269	77	1	99	1,397	99	341	61	1	78	1,593	78	341	99	341	61	1	78	1,593	78	341	
	Rural		2,254	820	3,074	3,462	65	24	89	1,256	89	4,392	51	19	70	18,845	70	4,392	89	4,392	51	19	70	18,845	70	4,392	
	Total	55	2,462	823	3,340	3,731	1	66	22	90	2,653	90	4,733	1	52	17	71	20,438	90	4,733	1	52	17	71	20,438	71	4,733
Zarraga	Urban	152	368	38	558	604	25	61	92	2,883	92	743	20	50	75	3,168	75	743	92	743	20	50	75	3,168	75	743	
	Rural	41	1,818	945	2,804	2,969	1	61	32	94	2,946	94	3,651	1	50	26	77	17,578	94	3,651	1	50	26	77	17,578	77	3,651
	Total	193	2,186	983	3,362	3,573	5	61	28	94	5,829	94	4,394	4	50	22	77	20,746	94	4,394	4	50	22	77	20,746	77	4,394
Provincial Total	Urban	3,680	39,852	7,225	50,757	59,120	6	67	86	267,446	86	66,603	6	60	76	288,077	76	66,603	86	66,603	6	60	76	288,077	76	66,603	
	Rural	7,047	101,555	28,093	136,695	221,563	3	46	62	137,419	62	248,118	3	41	55	782,140	55	248,118	62	248,118	3	41	55	782,140	55	248,118	
	Total	10,727	141,407	35,318	187,452	280,683	4	50	67	404,865	67	314,721	3	45	60	1,070,217	60	314,721	67	314,721	3	45	60	1,070,217	60	314,721	

Table 8.2.7 Public School Students and Public Utilities Coverage in Phase I by Existing Facilities in the Base Year

Name of Municipality/City	Public School Toilets				Public Toilets			
	Coverage in 1998		Coverage in 2005		Coverage in 1998		Coverage in 2005	
	Total No. of Public School Students	%	Total No. of Public School Student	%	No. of PU with Toilets in Base Year	%	No. of PU with Sanitary Toilets in Base Year	%
Ajuy	4,040	9,749	41	10,566	38		5	
Almadian	80	5,271	2	6,451	1	3	8	8
Amilao	2,080	5,408	38	6,350	33	4	4	4
Badiangan	4,420	4,420	100	5,233	84	5	5	5
Balasan	1,640	6,065	27	6,852	24	4	4	4
Binat	3,960	7,083	56	8,142	49	6	6	6
Barotac Nuevo	7,049	9,126	36	10,018	29	15	15	15
Barotac Viejo	2,920	2,707	100	3,200	85	14	14	14
Batad	80	3,008	3	3,598	2	4	4	4
Bungawan	5,120	7,790	66	8,989	57	8	8	8
Cabatuan	5,560	11,029	50	13,825	40	6	6	6
Calmog	5,600	11,821	47	15,090	37	4	4	4
Carles	3,920	7,137	55	8,078	49	10	10	10
Concepcion	3,840	7,493	51	7,983	48	4	4	4
Donsig	4,920	7,209	68	6,561	75	3	3	3
Duehas	6,720	8,569	78	10,287	65	7	7	7
Dumangas	8,104	8,104	100	9,959	81	4	4	4
Estancia	920	6,565	14	8,098	11	6	6	6
Guimbal	80	6,202	1	6,851	1	2	2	2
Igbaras	4,480	11,476	39	14,873	30	19	19	19
January	6,960	13,033	53	15,092	46	2	2	2
Lambunao	2,680	6,070	44	5,814	46	4	4	4
Leganes	3,360	5,292	63	5,950	56			
Lemery	6,160	10,415	59	12,223	50	8	8	8
Leon	4,720	7,241	65	7,553	62	8	8	8
Maasin	9,120	11,281	81	12,460	73	10	10	10
Majiao	3,120	3,768	83	4,520	69	2	2	2
Mina	2,560	4,780	54	4,218	61	12	12	12
New Lucena	2,760	12,723	22	15,395	18	10	10	10
Oton	8,760	15,663	56	17,327	51	39	33	33
Passi City	2,760	6,167	45	7,692	36	4	4	4
Pavia	240	11,532	2	12,586	2	8	8	8
Poitan	3,800	7,072	54	8,332	46	4	4	4
San Dionisio	1,560	5,209	30	6,036	26	2	2	2
San Enrique	1,800	9,571	19	11,091	16	10	10	10
San Joaquin	2,920	5,332	55	5,602	52	4	4	4
San Miguel	1,480	3,588	41	3,892	38	2	2	2
San Rafael	7,070	7,070	100	8,658	82	12	12	12
Santa Barbara	3,240	9,107	36	10,902	30	8	8	8
Sara	1,480	6,409	23	9,918	15	4	4	4
Tigbauan	2,280	3,718	61	5,016	45	6	6	6
Tubungan	440	1,800	24	2,734	16	3	3	3
Zarraga	150,461	319,145	47	374,141	40	301	291	291
Provincial Total						302	302	291
						97	97	96

8.3 Projection of Frame Values

8.3.1 Review of Past Population Development and Population Projection

The future population of the region and the province has been projected by the NSO. However, the NSO does not prepare municipal population. With regard to this, the municipal population for the years 1998 (planning base year), 2005 (medium-term target year) and 2010 (long-term target year) was projected in this study. Available information for the study at present is as follows:

- NSO population census results from 1980 to 1995
- 1995 Census-based Regional and Provincial Population Projection prepared by the NSO
- Provincial Physical Framework Plan/Comprehensive Provincial Land Use Plan (1993-2002) prepared by the Provincial Office (hereafter referred to as "the Land Use Plan")

(1) 1995 Census-Based Regional and Provincial Population Projections: NSO

The NSO conducted regional and provincial projections for the period 1995-2020. The assumptions take into account future trends in the demographic processes of fertility, mortality and migration required by the cohort-component method for projecting population. The 1995 Population Census was used as the basis for the projection.

In the regional population projection, the subject region for this study; Region VI is classified as the medium-sized region (at least 5 million but less than 10 million by year 2000). The following are the result of projection for the region and the province of Iloilo in 2000, 2005 and 2010.

Table 8.3.1 Regional and Provincial Population Projection by NSO

Year		1980	1990	1995	2000	2005	2010
Region VI	Population	4,525,615	5,393,333	5,756,623	6,328,671	6,890,447	7,428,329
	Growth Rate	-	1.77%	1.31%	1.91%	1.72%	1.51%
Iloilo	Population	1,341,259	1,647,486	1,743,302	1,916,707	2,086,833	2,249,494
	Growth Rate	-	2.07%	1.14%	1.91%	1.72%	1.51%

Note: Average annual growth rates: geometric growth rate

Provincial population in 1980: referred to Land Use Plan (excluding the population in Guimaras)

Provincial population in 1995 as of Sep. 1, 1995 was 1,749,561 (1995 Census)

In the past development, annual growth rates of the region and province between 1990 and 1995 decreased compared with those of previous census period. The growth rate of the province, in particular, decreased to almost half (1.14%) of that between 1980 and 1990 (2.07%). However, the NSO adopted the same growth rates through the future for the region and the province of Iloilo considering the previous development for its projection.

Thus, the growth rates of the region and province with 5-year interval between 1995 and 2010 are assumed at 1.91%, 1.72% and 1.51%, respectively.

(2) The Land Use Plan: Province of Iloilo (Planning period 1993-2002)

The population projection on the provincial total and component municipalities together with the regional population was made with a base year 1990. The population for the year 2002 was projected using a uniform growth rate between 1990 and 2002 referring to the experience from 1980 to 1990 (census years). The regional and provincial growth rate between 1980 and 1990 were 1.77% and 2.07%, respectively.

The following are comparison of the projected population for year 2002 between the Land Use Plan and NSO.

	<u>Land Use Plan</u>	<u>NSO</u>	<u>Comparison</u>
Regional Population	6,669,000	6,890,447	3.2% lower than NSO
Provincial Population	2,106,040	1,984,718	6.1% higher than NSO

In comparison between Land Use Plan and NSO's projection for year 2002, the projected population of the province in Land Use Plan is 6% higher than that in NSO's projection.

While Table 8.3.2 shows past population developments in census years (1980-1995) and projections for the years 1995 and 2002 by municipality as a base year 1990 in application of assumed annual growth rates for the period 1990 to 2002 in the said Land Use Plan.

Regarding the projected municipal population in 1995, that of thirty-six (36) out of 43 municipalities/city is higher than that of NSO with a range of 2% to 15%, while that of remaining seven (7) municipalities is lower with a range of -0.3% to -9%.

Thus, future projection shall be made using 1995 census results as a base year. While, the regional and provincial population projected by the NSO may be adopted in this PW4SP, since the difference from the population projected in the Land Use Plan is less than 10%.

(3) Population Projection of the Province

The following conditions are considered in the population projection.

Regional and Provincial Population

For the regional and provincial population in the study, the projection conducted by NSO shall be adopted. Table 8.3.3 shows the projected population of the region VI and component provinces.

Table 8.3.2 Census Population and Projected Population in Land Use Plan

Municipality/ City	Census Population					Land Use Plan			
	1980	1990	Growth Rate (1980-1990)	1995	Growth Rate (1990-1995)	1995*	Compariso w/ Census (%)	2002	Growth Rate (1980-2005)
Ajuy	30,397	38,108	2.29%	38,415	0.16%	42,090	9.6%	48,373	2.01%
Alimodian	22,906	27,199	1.73%	29,179	1.42%	29,643	1.6%	33,438	1.74%
Anilao	15,782	19,551	2.16%	20,711	1.16%	21,905	5.8%	25,684	2.36%
Badjangan	19,239	21,984	1.34%	22,795	0.73%	23,504	3.1%	25,810	1.35%
Bafasan	17,979	22,010	2.04%	22,949	0.84%	22,863	-0.4%	24,114	0.76%
Banate	17,710	23,360	2.81%	24,976	1.35%	26,281	5.2%	30,995	2.38%
Barotac Nuevo	34,276	39,706	1.48%	40,968	0.63%	43,123	5.3%	48,407	1.66%
Barotac Viejo	24,135	31,651	2.75%	33,652	1.23%	36,246	7.7%	43,821	2.75%
Batad	11,790	14,327	1.97%	15,345	1.38%	15,794	2.9%	18,104	1.97%
Bingawan	9,229	10,868	1.65%	11,494	1.13%	11,797	2.6%	13,233	1.65%
Cabatuan	34,468	40,873	1.72%	42,264	0.67%	44,509	5.3%	50,149	1.72%
Calmog	32,897	41,093	2.25%	45,452	2.04%	44,354	-2.4%	49,360	1.54%
Carles	32,184	42,643	2.85%	46,218	1.62%	48,053	4.0%	56,798	2.42%
Concepcion	21,121	28,347	2.99%	30,111	1.21%	31,464	4.5%	36,413	2.11%
Dingle	29,179	35,405	1.95%	35,639	0.13%	39,003	9.4%	44,663	1.95%
Dueñas	23,962	28,435	1.73%	28,954	0.36%	30,976	7.0%	34,919	1.73%
Dumangas	41,241	49,899	1.92%	51,092	0.47%	55,260	8.2%	63,746	2.06%
Estancia	19,817	27,217	3.22%	30,673	2.42%	35,261	15.0%	50,666	5.31%
Guimbal	19,502	23,470	1.87%	26,316	2.32%	26,111	-0.8%	30,314	2.16%
Igbaras	22,173	25,269	1.32%	25,960	0.54%	27,004	4.0%	29,636	1.34%
Iloilo city (capital)	244,827	307,620	2.31%	334,539	1.69%	344,820	3.1%	404,577	2.31%
Janiuay	49,120	47,242	1.65%	50,066	1.17%	51,264	2.4%	57,476	1.65%
Lambunao	45,435	55,317	1.99%	58,792	1.23%	59,935	1.9%	67,056	1.62%
Leganes	14,285	18,501	2.62%	19,235	0.78%	21,055	9.5%	25,233	2.62%
Lemery	15,707	19,899	2.39%	20,863	0.95%	22,437	7.5%	26,544	2.43%
Leon	31,552	36,891	1.58%	41,043	2.16%	39,891	-2.8%	44,506	1.58%
Maasin	26,962	29,028	0.74%	29,364	0.23%	30,517	3.9%	32,731	1.01%
Miagao	45,816	51,717	1.22%	52,276	0.22%	55,705	6.6%	61,811	1.56%
Mina	12,290	15,807	2.55%	16,419	0.76%	17,214	4.8%	19,398	1.72%
New Lucena	13,457	16,906	2.31%	16,873	-0.04%	19,309	14.4%	23,257	2.69%
Oton	41,044	52,097	2.41%	56,821	1.75%	58,564	3.1%	68,989	2.37%
Passi	47,938	57,683	1.86%	59,539	0.64%	64,358	8.1%	75,021	2.21%
Pavia	17,330	23,786	3.22%	26,756	2.38%	27,637	3.3%	34,098	3.05%
Pototan	44,624	53,970	1.92%	56,340	0.86%	60,056	6.6%	69,746	2.16%
San Dionisio	19,410	23,910	2.11%	25,263	1.11%	26,655	5.5%	31,036	2.20%
San Enrique	19,663	24,697	2.31%	25,576	0.70%	26,786	4.7%	30,011	1.64%
San Joaquin	34,525	39,942	1.47%	44,368	2.12%	42,962	-3.2%	47,577	1.47%
San Miguel	14,241	17,605	2.14%	18,819	1.34%	20,423	8.5%	25,142	3.01%
San Rafael	8,742	11,195	2.50%	12,000	1.40%	11,945	-0.5%	13,060	1.31%
Santa Barbara	32,693	37,502	1.38%	39,667	1.13%	40,938	3.2%	46,283	1.77%
Sara	28,838	36,697	2.44%	38,652	1.04%	41,980	8.6%	50,678	2.73%
Tigbauan	34,540	43,902	2.43%	47,158	1.44%	48,064	1.9%	54,563	1.83%
Tubungan	14,510	15,936	0.94%	18,450	2.97%	16,716	-9.4%	17,873	0.96%
Zarraga	12,673	15,471	2.01%	17,519	2.52%	17,470	-0.3%	20,711	2.46%
Province	1,341,259	1,644,736	2.06%	1,749,561	1.24%	1,821,945	4.1%	2,106,040	2.08%

Note: * Population in 1995 was estimated using average annual growth rate (1990-2002) employed in Land Use Plan

Table 8.3.3 Projected Population by the NSO

Province	Census	Projected Population/Growth Rate					
	Population	Population			Average Annual Growth Rate		
	1995	1998	2005	2010	1995-2000	2000-2005	2005-2010
Aklan	408,949	432,359	487,839	528,072	1.84%	1.72%	1.60%
Antique	430,363	455,051	512,755	554,797	1.84%	1.69%	1.59%
Capiz	622,034	657,975	742,312	801,742	1.86%	1.71%	1.55%
Guimaras	126,034	133,422	150,680	162,774	1.88%	1.72%	1.56%
Iloilo	1,743,302	1,847,328	2,086,833	2,249,494	1.91%	1.72%	1.51%
Negros Occidental	2,425,941	2,573,658	2,910,028	3,131,450	1.95%	1.72%	1.48%
Region VI	5,756,623	6,099,793	6,890,447	7,428,329	1.91%	1.72%	1.51%

(Source) NSO. (Note) Provincial population in 1995 as of Sep. 1, 1995 was 1,749,561 (1995 Census)

Municipal Population

1) The total population of the province in 1998, 2005 and 2010 was fixed.

Municipal population for short/medium-term target years (1998 and 2005) is estimated using the recorded growth rates between 1990 and 1995. The municipal population estimated initially is adjusted in proportion to the population size of each municipality to the total provincial population, to meet the above mentioned provincial population fixed for the years 1998 and 2005.

For the year 2010 in the long-term, it is assumed that the tendency of population growth of respective municipalities will be stable reflecting the experiences in the past period between 1980 and 1995. Thus, experienced growth rate between 1980 and 1995 by municipality is firstly applied to project 2010 population from the year 2005. Then, the municipal population initially estimated is adjusted in the same manner mentioned above.

Table 8.3.4 presents census results (1980, 1990 and 1995) and projected population of the municipalities.

Population by Urban and Rural Area

1) Past population development

Table 8.3.5 (a) and (b) show the urban and rural population with growth rates in census years (1980-1995) by municipality. With regards to the ratio of the urban population of the study area to the total population, the averages in 1980 and 1990 were 13.2% and 15.1%. Likewise, it increased to 20.8% in 1995. The average growth rate of 3.39% (1980 - 1990) increased to 7.85% in 1995. With regard to rural population, the growth rates as provincial average were 1.78% (1980 - 1990) and - 0.26% (1990 - 1995).

2) Projection of urban and rural population for the years 1998, 2005 and 2010

Urban population by municipality for the target years was at first projected and rural

population was calculated to meet aforementioned total population fixing the urban population.

In the projection of urban population by municipality/city, the following are assumed for short/medium-term and long-term period.

Short/Medium-term target: 1998 and 2005

The shares of urban population in 1995 to total population by municipality were basically adopted, assuming that the latest profile will be maintained in short/medium-term period.

Table 8.3.4 Census Results and Projected Population of Municipalities

Municipality /City	Census Result					Projected Population/Growth Rate								
	1980	1990	1995	Growth Rate		1998			2005			2010		
				'90-'95	'80-'95	Initial	Adjust.	Rate	Initial	Adjust.	Rate	Initial	Adjust.	Rate
Ajuy	30,397	38,108	38,415	0.16%	1.57%	38,600	39,255	0.72%	39,036	41,023	0.66%	42,205	43,417	1.14%
Alimodian	22,906	27,199	29,179	1.42%	1.63%	30,436	30,951	1.99%	33,582	35,291	1.92%	36,404	37,449	1.19%
Anilao	15,782	19,551	20,711	1.16%	1.83%	21,440	21,803	1.73%	23,242	24,424	1.66%	25,446	26,176	1.40%
Badianan	19,239	21,984	22,795	0.73%	1.14%	23,296	23,691	1.29%	24,508	25,755	1.23%	25,933	26,578	0.71%
Balasan	17,979	22,010	22,949	0.84%	1.64%	23,532	23,930	1.41%	24,949	26,218	1.34%	27,063	27,841	1.21%
Banate	17,710	23,360	24,976	1.35%	2.32%	25,999	26,440	1.92%	28,551	30,004	1.85%	32,018	32,937	1.88%
Barotac Nuevo	34,276	39,706	40,968	0.63%	1.20%	41,744	42,452	1.19%	43,614	45,833	1.13%	46,285	47,614	0.77%
Barotac Viejo	24,135	31,651	33,652	1.23%	2.24%	34,913	35,505	1.80%	38,042	39,977	1.74%	42,499	43,720	1.81%
Batad	11,790	14,327	15,345	1.38%	1.77%	15,990	16,261	1.95%	17,603	18,499	1.89%	19,219	19,771	1.34%
Bingawan	9,229	10,868	11,494	1.13%	1.47%	11,887	12,088	1.69%	12,856	13,510	1.63%	13,832	14,229	1.04%
Cabatuan	34,468	40,873	42,264	0.67%	1.37%	43,121	43,852	1.24%	45,190	47,489	1.17%	48,368	49,757	0.94%
Calinog	32,897	41,093	45,452	2.04%	2.18%	48,286	49,105	2.61%	55,606	58,435	2.54%	61,933	63,712	1.74%
Carles	32,184	42,643	46,218	1.62%	2.44%	48,505	49,328	2.19%	54,292	57,055	2.13%	61,253	63,012	2.01%
Concepcion	21,121	28,347	30,111	1.21%	2.39%	31,222	31,751	1.78%	33,975	35,704	1.72%	38,238	39,337	1.96%
Dingle	29,179	35,405	35,639	0.13%	1.34%	35,780	36,387	0.69%	36,112	37,949	0.63%	38,601	39,710	0.91%
Dueñas	23,962	28,435	28,954	0.36%	1.27%	29,270	29,766	0.93%	30,021	31,548	0.86%	31,975	32,894	0.84%
Dumangas	41,241	49,899	51,092	0.47%	1.44%	51,821	52,700	1.04%	53,564	56,290	0.97%	57,528	59,181	1.01%
Estancia	19,817	27,217	30,673	2.42%	2.96%	32,954	33,512	3.00%	38,957	40,939	2.93%	45,064	46,358	2.52%
Guimbal	19,502	23,470	26,316	2.32%	2.02%	28,187	28,665	2.89%	33,085	34,769	2.82%	36,561	37,611	1.58%
Igbaras	22,173	25,269	25,960	0.54%	1.06%	26,384	26,831	1.11%	27,399	28,793	1.04%	28,878	29,707	0.63%
Janiuy	40,120	47,242	50,066	1.17%	1.49%	51,841	52,720	1.74%	56,231	59,092	1.67%	60,539	62,277	1.06%
Lambunao	45,435	55,317	58,792	1.23%	1.73%	60,981	62,015	1.79%	66,411	69,790	1.73%	72,368	74,447	1.30%
Leganes	14,285	18,501	19,235	0.78%	2.00%	19,689	20,023	1.35%	20,792	21,849	1.28%	22,959	23,619	1.57%
Lemery	15,707	19,899	20,863	0.95%	1.91%	21,464	21,828	1.52%	22,933	24,100	1.45%	25,209	25,933	1.48%
Leon	31,552	36,891	41,043	2.16%	1.77%	43,755	44,497	2.73%	50,801	53,386	2.66%	55,456	57,049	1.34%
Maasin	26,962	29,028	29,364	0.23%	0.57%	29,567	30,069	0.79%	30,048	31,577	0.73%	30,915	31,803	0.14%
Miagao	45,816	51,717	52,276	0.22%	0.88%	52,614	53,506	0.78%	53,412	56,130	0.71%	55,813	57,416	0.45%
Mina	12,290	15,807	16,419	0.76%	1.95%	16,798	17,082	1.33%	17,715	18,616	1.26%	19,511	20,071	1.52%
New Lucena	13,457	16,906	16,873	-0.04%	1.52%	16,853	17,139	0.52%	16,807	17,662	0.46%	18,124	18,644	1.09%
Oton	41,044	52,097	56,821	1.75%	2.19%	59,859	60,873	2.32%	67,593	71,032	2.26%	75,333	77,497	1.76%
Passi	47,988	57,683	59,539	0.64%	1.45%	60,681	61,710	1.20%	63,432	66,660	1.14%	68,160	70,118	1.02%
Pavia	17,330	23,786	26,756	2.38%	2.94%	28,713	29,200	2.96%	33,855	35,577	2.89%	39,129	40,252	2.50%
Pototan	44,624	53,970	56,340	0.86%	1.57%	57,812	58,792	1.43%	61,397	64,521	1.37%	66,358	68,264	1.13%
San Dionisio	19,410	23,910	25,263	1.11%	1.77%	26,111	26,554	1.68%	28,203	29,638	1.61%	30,793	31,677	1.34%
San Enrique	19,663	24,697	25,576	0.70%	1.77%	26,111	26,561	1.27%	27,429	28,825	1.20%	29,941	30,801	1.34%
San Joaquin	34,525	39,942	44,368	2.12%	1.69%	47,256	48,057	2.70%	54,746	57,531	2.63%	59,520	61,229	1.25%
San Miguel	14,241	17,605	18,819	1.34%	1.88%	19,587	19,919	1.91%	21,504	22,598	1.85%	24,798	25,511	2.45%
San Rafael	8,742	11,195	12,000	1.40%	2.13%	12,511	12,723	1.97%	13,788	14,489	1.90%	16,103	16,565	2.71%
Santa Barbara	32,693	37,502	39,667	1.13%	1.30%	41,026	41,721	1.70%	44,379	46,637	1.63%	49,742	51,171	1.87%
Sara	28,838	36,697	38,652	1.04%	1.97%	39,875	40,551	1.61%	42,850	45,062	1.55%	49,683	51,110	2.55%
Figbauan	34,540	43,902	47,158	1.44%	2.10%	49,226	50,061	2.01%	54,412	57,181	1.95%	63,435	65,257	2.68%
Tubungan	14,510	15,936	18,450	2.97%	1.61%	20,145	20,486	3.55%	24,730	25,989	3.49%	28,155	28,964	2.19%
Zarraga	12,673	15,471	17,519	2.52%	2.18%	18,876	19,196	3.09%	22,464	23,607	3.03%	26,298	27,053	2.76%
Study Area	1,096,432	1,337,116	1,415,022	1.14%	1.72%	1,464,724	1,489,555	1.73%	1,590,145	1,671,052	1.68%	1,747,646	1,797,841	1.47%
Iloilo City	244,827	307,620	334,539	1.69%	2.10%	351,808	357,722	2.26%	395,650	415,781	2.20%	439,043	451,653	1.67%
Province	1,341,259	1,644,736	1,749,561	1.24%	1.79%	1,816,532	1,847,327	1.83%	1,985,795	2,086,833	1.78%	2,186,689	2,249,494	1.51%

Table 8.3.5(a) Past Population Development by Urban and Rural Area

Municipality/City	1980			1990				1995				
	Total	Urban/ Rural	Share (%)	Total	Urban/ Rural	Growth Rate '80-'90 (%)	Share (%)	Total	Urban/ Rural	Growth Rate '90-'95 (%)	Growth Rate '80-'95 (%)	Share (%)
Ajuy	30,397	2,448	8.10%	38,108	3,142	2.53%	8.20%	38,415	3,041	-0.65%	1.46%	7.90%
Alimodian	22,906	5,362	23.40%	27,199	6,171	1.42%	22.70%	29,179	6,388	0.69%	1.17%	21.90%
Anilao	15,782	1,299	8.20%	19,551	1,555	1.82%	8.00%	20,711	1,716	1.99%	1.87%	8.30%
Badiangan	19,239	1,203	6.30%	21,984	1,465	1.99%	6.70%	22,795	1,616	1.98%	1.99%	7.10%
Balasan	17,979	3,387	18.80%	22,010	6,577	6.86%	29.90%	22,949	3,454	-12.09%	0.13%	15.10%
Banate	17,710	1,238	7.00%	23,360	1,305	0.53%	5.60%	24,976	1,433	1.89%	0.98%	5.70%
Barotac Nuevo	34,276	3,728	10.90%	39,706	4,008	0.73%	10.10%	40,968	3,710	-1.53%	-0.03%	9.10%
Barotac Viejo	24,135	2,972	12.30%	31,651	3,934	2.84%	12.40%	33,652	3,739	-1.01%	1.54%	11.10%
Batad	11,790	1,011	8.60%	14,327	1,197	1.70%	8.40%	15,345	1,102	-1.64%	0.58%	7.20%
Bingawan	9,229	2,405	26.10%	10,868	2,946	2.05%	27.10%	11,494	3,192	1.62%	1.91%	27.80%
Cabatuan	34,468	4,249	12.30%	40,873	5,032	1.71%	12.30%	42,264	42,264	53.05%	16.55%	100.00%
Calinog	32,897	3,642	11.10%	41,093	4,462	2.05%	10.90%	45,452	4,641	0.79%	1.63%	10.20%
Carles	32,184	1,772	5.50%	42,643	2,169	2.04%	5.10%	46,218	2,201	0.29%	1.46%	4.80%
Concepcion	21,121	2,461	11.70%	28,347	3,611	3.91%	12.70%	30,111	4,225	3.19%	3.67%	14.00%
Dingle	29,179	1,860	6.40%	35,405	2,148	1.45%	6.10%	35,639	5,795	21.96%	7.87%	16.30%
Dueñas	23,962	3,575	14.90%	28,435	4,283	1.82%	15.10%	28,954	4,846	2.50%	2.05%	16.70%
Dumangas	41,241	1,759	4.30%	49,899	1,947	1.02%	3.90%	51,092	1,827	-1.26%	0.25%	3.60%
Estancia	19,817	5,382	27.20%	27,217	18,937	13.41%	69.60%	30,673	7,290	-17.38%	2.04%	23.80%
Guimbal	19,502	5,045	25.90%	23,470	5,985	1.72%	25.50%	26,316	6,603	1.98%	1.81%	25.10%
Igbaras	22,173	3,911	17.60%	25,269	4,882	2.24%	19.30%	25,960	5,159	1.11%	1.86%	19.90%
Janiuay	40,120	6,988	17.40%	47,242	8,212	1.63%	17.40%	50,066	8,126	-0.21%	1.01%	16.20%
Lambunao	45,435	3,472	7.60%	55,317	4,297	2.15%	7.80%	58,792	4,251	-0.22%	1.36%	7.20%
Leganes	14,285	1,612	11.30%	18,501	2,097	2.67%	11.30%	19,235	6,649	25.96%	9.91%	34.60%
Lemery	15,707	1,821	11.60%	19,899	2,598	3.62%	13.10%	20,863	2,608	0.08%	2.42%	12.50%
Leon	31,552	3,740	11.90%	36,891	4,453	1.76%	12.10%	41,043	4,455	0.01%	1.17%	10.90%
Maasin	26,962	2,995	11.10%	29,028	3,058	0.21%	10.50%	29,364	3,125	0.43%	0.28%	10.60%
Miagao	45,816	6,607	14.40%	51,717	7,395	1.13%	14.30%	52,276	7,950	1.46%	1.24%	15.20%
Mina	12,290	1,566	12.70%	15,807	2,146	3.20%	13.60%	16,419	2,229	0.76%	2.38%	13.60%
New Lucena	13,457	2,060	15.30%	16,906	2,404	1.56%	14.20%	16,873	2,600	1.58%	1.56%	15.40%
Oton	41,044	7,703	18.80%	52,097	14,304	6.38%	27.50%	56,821	56,821	31.77%	14.25%	100.00%
Passi	47,988	6,565	13.70%	57,683	7,306	1.08%	12.70%	59,539	8,322	2.64%	1.59%	14.00%
Pavia	17,330	3,014	17.40%	23,786	7,898	10.11%	33.20%	26,756	7,602	-0.76%	6.36%	28.40%
Pototan	44,624	7,492	16.80%	53,970	7,740	0.33%	14.30%	56,340	16,090	15.76%	5.23%	28.60%
San Dionisio	19,410	2,499	12.90%	23,910	2,472	-0.11%	10.30%	25,263	4,482	12.64%	3.97%	17.70%
San Enrique	19,663	0	0.00%	24,697	1,976	-	8.00%	25,576	2,034	0.58%	-	8.00%
San Joaquin	34,525	3,378	9.80%	39,942	3,962	1.61%	9.90%	44,368	4,140	0.88%	1.37%	9.30%
San Miguel	14,241	5,290	37.10%	17,605	9,375	5.89%	53.30%	18,819	12,990	6.74%	6.17%	69.00%
San Rafael	8,742	0	0.00%	11,195	2,857	-	25.50%	12,000	2,965	0.74%	-	24.70%
Santa Barbara	32,693	6,697	20.50%	37,502	7,166	0.68%	19.10%	39,667	7,530	1.00%	0.78%	19.00%
Sara	28,838	3,571	12.40%	36,697	3,865	0.79%	10.50%	38,652	3,672	-1.02%	0.19%	9.50%
Tigbauan	34,540	5,919	17.10%	43,902	7,259	2.06%	16.50%	47,158	7,852	1.58%	1.90%	16.70%
Tubungan	14,510	857	5.90%	15,936	1,095	2.48%	6.90%	18,450	1,271	3.03%	2.66%	6.90%
Zarraga	12,673	2,172	17.10%	15,471	2,382	0.93%	15.40%	17,519	2,860	3.73%	1.85%	16.30%
Study Area	1,096,432	144,727	13.20%	1,337,116	202,073	3.39%	15.10%	1,415,022	294,866	7.85%	4.86%	20.80%

Table 8.3.5 (b) Past Population Development by Urban and Rural Area

Municipality/City	1980			1990				1995				
	Total	Urban / Rural	Share (%)	Total	Urban / Rural	G.R. 1980-1990 (%)	Share (%)	Total	Urban / Rural	G.R. 1990-1995 (%)	G.R. 1980-1995 (%)	Share (%)
Ajuy	30,397	27,949	91.9%	38,108	34,966	2.27%	91.8%	38,415	35,374	0.23%	1.58%	92.1%
Alimodian	22,906	17,544	76.6%	27,199	21,028	1.83%	77.3%	29,179	22,791	1.62%	1.76%	78.1%
Anilao	15,782	14,483	91.8%	19,551	17,996	2.20%	92.0%	20,711	18,995	1.09%	1.82%	91.7%
Badianan	19,239	18,036	93.7%	21,984	20,519	1.30%	93.3%	22,795	21,179	0.64%	1.08%	92.9%
Balasan	17,979	14,592	81.2%	22,010	15,433	0.56%	70.1%	22,949	19,495	4.78%	1.95%	84.9%
Banate	17,710	16,472	93.0%	23,360	22,055	2.96%	94.4%	24,976	23,543	1.31%	2.41%	94.3%
Barotac	34,276	30,548	89.1%	39,706	35,698	1.57%	89.9%	40,968	37,258	0.86%	1.33%	90.9%
Barotac	24,135	21,163	87.7%	31,651	27,717	2.73%	87.6%	33,652	29,913	1.54%	2.33%	88.9%
Batad	11,790	10,779	91.4%	14,327	13,130	1.99%	91.6%	15,345	14,243	1.64%	1.88%	92.8%
Bingawan	9,229	6,824	73.9%	10,868	7,922	1.50%	72.9%	11,494	8,302	0.94%	1.32%	72.2%
Cabatuan	34,468	30,219	87.7%	40,873	35,841	1.72%	87.7%	42,264	0	-	-	0.0%
Calinog	32,897	29,255	88.9%	41,093	36,631	2.27%	89.1%	45,452	40,811	2.18%	2.24%	89.8%
Carles	32,184	30,412	94.5%	42,643	40,474	2.90%	94.9%	46,218	44,017	1.69%	2.50%	95.2%
Concepcion	21,121	18,660	88.3%	28,347	24,736	2.86%	87.3%	30,111	25,886	0.91%	2.21%	86.0%
Dingle	29,179	27,319	93.6%	35,405	33,257	1.99%	93.9%	35,639	29,844	-2.14%	0.59%	83.7%
Dueñas	23,962	20,387	85.1%	28,435	24,152	1.71%	84.9%	28,954	24,108	-0.04%	1.12%	83.3%
Dumangas	41,241	39,482	95.7%	49,899	47,952	1.96%	96.1%	51,092	49,265	0.54%	1.49%	96.4%
Estancia	19,817	14,435	72.8%	27,217	8,280	-5.41%	30.4%	30,673	23,383	23.08%	3.27%	76.2%
Guimbal	19,502	14,457	74.1%	23,470	17,485	1.92%	74.5%	26,316	19,713	2.43%	2.09%	74.9%
Igbaras	22,173	18,262	82.4%	25,269	20,387	1.11%	80.7%	25,960	20,801	0.40%	0.87%	80.1%
Janiuay	40,120	33,132	82.6%	47,242	39,030	1.65%	82.6%	50,066	41,940	1.45%	1.58%	83.8%
Lambunao	45,435	41,963	92.4%	55,317	51,020	1.97%	92.2%	58,792	54,541	1.34%	1.76%	92.8%
Leganes	14,285	12,673	88.7%	18,501	16,404	2.61%	88.7%	19,235	12,586	-5.16%	-0.05%	65.4%
Lemery	15,707	13,886	88.4%	19,899	17,301	2.22%	86.9%	20,863	18,255	1.05%	1.84%	87.5%
Leon	31,552	27,812	88.1%	36,891	32,438	1.55%	87.9%	41,043	36,588	2.44%	1.85%	89.1%
Maasin	26,962	23,967	88.9%	29,028	25,970	0.81%	89.5%	29,364	26,239	0.21%	0.61%	89.4%
Miagao	45,816	39,209	85.6%	51,717	44,322	1.23%	85.7%	52,276	44,326	0.00%	0.82%	84.8%
Mina	12,290	10,724	87.3%	15,897	13,661	2.45%	86.4%	16,419	14,190	0.76%	1.88%	86.4%
New Lucena	13,457	11,397	84.7%	16,906	14,502	2.44%	85.8%	16,873	14,273	-0.32%	1.51%	84.6%
Oton	41,044	33,341	81.2%	52,097	37,793	1.26%	72.5%	56,821	0	-	-	0.0%
Passi	47,988	41,423	86.3%	57,683	50,377	1.98%	87.3%	59,539	51,217	0.33%	1.42%	86.0%
Pavia	17,330	14,316	82.6%	23,786	15,888	1.05%	66.8%	26,756	19,154	3.81%	1.96%	71.6%
Pototan	44,624	37,132	83.2%	53,970	46,230	2.22%	85.7%	56,340	40,250	-2.73%	0.54%	71.4%
San Dionisio	19,410	16,911	87.1%	23,910	21,438	2.40%	89.7%	25,263	20,781	-0.62%	1.38%	82.3%
San Enrique	19,663	19,663	100.0%	24,697	22,721	1.46%	92.0%	25,576	23,542	0.71%	1.21%	92.0%
San Joaquin	34,525	31,147	90.2%	39,942	35,980	1.45%	90.1%	44,368	40,228	2.26%	1.72%	90.7%
San Miguel	14,241	8,951	62.9%	17,605	8,230	-0.84%	46.7%	18,819	5,829	-6.67%	-2.82%	31.0%
San Rafael	8,742	8,742	100.0%	11,195	8,338	-0.47%	74.5%	12,000	9,035	1.62%	0.22%	75.3%
Santa	32,693	25,996	79.5%	37,502	30,336	1.56%	80.9%	39,667	32,137	1.16%	1.42%	81.0%
Sara	28,838	25,267	87.6%	36,697	32,832	2.65%	89.5%	38,652	34,980	1.28%	2.19%	90.5%
Tigbauan	34,540	28,621	82.9%	43,902	36,643	2.50%	83.5%	47,158	39,306	1.41%	2.14%	83.3%
Tubungan	14,510	13,653	94.1%	15,936	14,841	0.84%	93.1%	18,450	17,179	2.97%	1.54%	93.1%
Zarraga	12,673	10,501	82.9%	15,471	13,089	2.23%	84.6%	17,519	14,659	2.29%	2.25%	83.7%
Study Area	1,096,432	951,705	86.8%	1,337,116	1,135,043	1.78%	84.9%	1,415,022	1,120,156	-0.16%	1.09%	79.1%

Long-term target: 2010

For the long-term projection, the recorded growth rates of urban population between 1980 and 1995 may be applied for the municipal population in 2010, assuming that the tendency of urban population will be stable reflecting the experiences in the past long term.

However, for the municipality of Borotac Nuevo, the urban population in 2005 was fixed to avoid negative growth of the population in 2010.

In addition, some modifications were made as follows:

- Dingle, Leganes, Pavia, Pototan and San Miguel; Shares of the urban population in 2005 were applied, since the growth rates of urban population between 1980 and 1995 were considerably high (more than 5%).
- San Enrique and San Rafael; Growth rates between 1990 and 1995 were applied, since the growth rates between 1980 and 1990 were not available due to no urban population in 1980 Census time.

Under the above assumptions, provincial average share of urban population for the year 2010 arrived at 21.0% which is almost same as the figure (20.9%) in 1995. Table 8.3.6 (a) and (b) present projected urban and rural population. The growth rates and shares on rural population are calculated using estimated rural population.

Table 8.3.6 (a) Population Projection by Urban and Rural Area:1998, 2005 and 2010

Municipality	1998		2005			2010			
	Total	Urban/ Rural	Total	Urban/ Rural	Share (%)	Total	Urban/ Rural	G.R. (%)	Share (%)
Ajuy	39,255	3,107	41,023	3,247	7.9%	43,417	3,491	1.46%	8.0%
Alimodian	30,951	6,776	35,291	7,726	21.9%	37,449	8,190	1.17%	21.9%
Anilao	21,803	1,806	24,424	2,024	8.3%	26,176	2,220	1.87%	8.5%
Badiangan	23,691	1,680	25,755	1,826	7.1%	26,678	2,015	1.99%	7.6%
Balasan	23,930	3,602	26,218	3,946	15.1%	27,841	3,972	0.43%	14.3%
Banate	26,440	1,517	30,004	1,721	5.7%	32,937	1,807	0.98%	5.5%
Barotac	42,432	3,844	45,833	4,151	9.1%	47,614	4,151	0.00%	8.7%
Barotac Viejo	35,505	3,945	39,977	4,442	11.1%	43,720	4,795	1.54%	11.0%
Batac	16,261	1,168	18,499	1,328	7.2%	19,771	1,367	0.58%	6.9%
Bingawan	12,088	3,357	13,510	3,752	27.8%	14,229	4,123	1.91%	29.0%
Cabatuan	43,852	43,852	47,489	47,489	100.0%	49,757	49,757	0.94%	100.0%
Calinog	49,105	5,014	58,435	5,967	10.2%	63,712	6,469	1.63%	10.2%
Cartes	49,328	2,349	57,055	2,717	4.8%	63,012	2,921	1.46%	4.6%
Concepcion	31,751	4,455	35,704	5,010	14.0%	39,337	5,999	3.67%	15.2%
Dingle	36,387	5,917	37,949	6,171	16.3%	39,710	6,457	0.91%	16.3%
Dueñas	29,766	4,982	31,548	5,280	16.7%	32,894	5,844	2.05%	17.8%
Dumangas	52,700	1,884	56,290	2,013	3.6%	59,181	2,038	0.25%	3.4%
Estancia	33,512	7,965	40,939	9,730	23.8%	46,358	10,766	2.04%	23.2%
Guimbal	28,665	7,192	34,769	8,724	25.1%	37,611	9,543	1.81%	25.4%
Igbaras	26,831	5,332	28,793	5,722	19.9%	29,707	6,275	1.86%	21.1%
Jenituy	52,720	8,557	59,092	9,591	16.2%	62,277	10,086	1.01%	16.2%
Lambunao	62,015	4,484	69,790	5,046	7.2%	74,447	5,398	1.36%	7.3%
Leganes	20,023	6,921	21,849	7,553	34.6%	23,619	8,164	1.57%	34.6%
Lemery	21,828	2,729	24,100	3,013	12.5%	25,933	3,396	2.42%	13.1%
Leon	44,497	4,830	53,386	5,795	10.9%	57,049	6,143	1.17%	10.8%
Maasin	30,069	3,200	31,577	3,360	10.6%	31,803	3,408	0.28%	10.7%
Miagao	53,506	8,137	56,130	8,536	15.2%	57,416	9,079	1.24%	15.8%
Mina	17,082	2,319	18,616	2,527	13.6%	20,071	2,843	2.38%	14.2%
New Lucena	17,139	2,641	17,662	2,722	15.4%	18,644	2,941	1.56%	15.8%
Oton	60,873	60,873	71,032	71,032	100.0%	77,497	77,497	1.76%	100.0%
Passi	61,710	8,625	66,660	9,317	14.0%	70,118	10,084	1.59%	14.4%
Pavia	29,200	8,296	35,577	10,108	28.4%	40,252	11,137	2.50%	28.4%
Pototan	58,792	16,790	64,521	18,426	28.6%	68,264	19,495	1.13%	28.6%
San Dionisio	26,554	4,711	29,638	5,258	17.7%	31,677	6,389	3.97%	20.2%
San Enrique	26,561	2,112	28,825	2,292	8.0%	30,801	2,360	0.58%	7.7%
San Joaquin	48,057	4,484	57,531	5,368	9.3%	61,229	5,745	1.37%	9.4%
San Miguel	19,919	13,749	22,598	15,599	69.0%	25,511	17,609	2.45%	69.0%
San Rafael	12,723	3,144	14,489	3,580	24.7%	16,565	3,715	0.74%	22.4%
Santa Barbara	41,721	7,920	46,637	8,853	19.0%	51,171	9,206	0.78%	18.0%
Sara	40,551	3,852	45,062	4,281	9.5%	51,110	4,321	0.19%	8.5%
Tigbauan	50,061	8,335	57,181	9,521	16.7%	65,257	10,461	1.90%	16.0%
Tubungan	20,486	1,411	25,989	1,790	6.9%	28,964	2,042	2.66%	7.0%
Zarraga	19,196	3,134	23,607	3,854	16.3%	27,053	4,224	1.85%	15.6%
Study Area	1,489,555	311,001	1,671,052	350,408	21.0%	1,797,841	378,243	1.54%	21.0%

Table 8.3.6 (b) Population Projection by Urban and Rural Area:1998, 2005 and 2010

Municipality	1998		2005			2010			
	Total	Urban/ Rural	Total	Urban/ Rural	Share (%)	Total	Urban/ Rural	G.R. (%)	Share (%)
Ajuy	39,255	36,147	41,023	37,775	92.1%	43,417	39,926	1.11%	92.0%
Alimodian	30,951	24,175	35,291	27,565	78.1%	37,449	29,239	1.20%	78.1%
Anilao	21,803	19,997	24,424	22,400	91.7%	26,176	23,956	1.35%	91.5%
Badiangan	23,691	22,011	25,755	23,929	92.9%	26,678	24,664	0.61%	92.4%
Balasan	23,930	20,329	26,218	22,272	84.9%	27,841	23,869	1.39%	85.7%
Banate	26,440	24,923	30,004	28,282	94.3%	32,937	31,130	1.94%	94.5%
Barotac	42,452	38,608	45,833	41,682	90.9%	47,614	43,464	0.84%	91.3%
Barotac Viejo	35,505	31,560	39,977	35,535	88.9%	43,720	38,925	1.84%	89.0%
Batad	16,261	15,093	18,499	17,170	92.8%	19,771	18,404	1.40%	93.1%
Bingawan	12,088	8,731	13,510	9,758	72.2%	14,229	10,106	0.70%	71.0%
Cabatuan	43,852	0	47,489	0	0.0%	49,757	0	-	0.0%
Calinog	49,105	44,091	58,435	52,469	89.8%	63,712	57,243	1.76%	89.5%
Carles	49,328	46,979	57,055	54,338	95.2%	63,012	60,092	2.03%	95.4%
Concepcion	31,751	27,296	35,704	30,694	86.0%	39,337	33,338	1.67%	84.8%
Dingle	36,387	30,470	37,949	31,778	83.7%	39,710	33,253	0.91%	83.7%
Dueñas	29,766	24,784	31,548	26,268	83.3%	32,894	27,050	0.59%	82.2%
Dumangas	52,700	50,815	56,290	54,277	96.4%	59,181	57,142	1.03%	96.0%
Estancia	33,512	25,548	40,939	31,209	76.2%	46,358	35,592	2.66%	76.8%
Guimbal	28,665	21,472	34,769	26,045	74.9%	37,611	28,068	1.51%	74.6%
Igaras	26,831	21,499	28,793	23,071	80.1%	29,707	23,432	0.31%	78.9%
Janiuay	52,720	44,163	59,092	49,501	83.8%	62,277	52,192	1.06%	83.9%
Lambunao	62,015	57,531	69,790	64,743	92.8%	74,447	69,048	1.30%	92.7%
Leganes	20,023	13,102	21,849	14,297	65.4%	23,619	15,454	1.57%	65.4%
Lemery	21,828	19,099	24,100	21,088	87.5%	25,933	22,538	1.34%	86.9%
Leon	44,497	39,667	53,386	47,591	89.1%	57,049	50,906	1.36%	89.2%
Maasin	30,069	26,869	31,577	28,216	89.4%	31,803	28,394	0.13%	89.3%
Miagao	53,506	45,369	56,130	47,594	84.8%	57,416	48,337	0.31%	84.2%
Mina	17,082	14,763	18,616	16,089	86.4%	20,071	17,228	1.38%	85.8%
New Lucena	17,139	14,498	17,662	14,941	84.6%	18,644	15,703	1.00%	84.2%
Oton	60,873	0	71,032	0	0.0%	77,497	0	-	0.0%
Passi	61,710	53,084	66,660	57,342	86.0%	70,118	60,034	0.92%	85.6%
Pavia	29,200	20,904	35,577	25,469	71.6%	40,252	28,816	2.50%	71.6%
Pototan	58,792	42,002	64,521	46,094	71.4%	68,264	48,769	1.13%	71.4%
San Dionisio	26,554	21,843	29,638	24,380	82.3%	31,677	25,289	0.73%	79.8%
San Enrique	26,561	24,449	28,825	26,532	92.0%	30,801	28,442	1.40%	92.3%
San Joaquin	48,057	43,573	57,531	52,163	90.7%	61,229	55,435	1.24%	90.6%
San Miguel	19,919	6,170	22,598	7,000	31.0%	25,511	7,902	2.45%	31.0%
San Rafael	12,723	9,579	14,489	10,909	75.3%	16,565	12,850	3.33%	77.6%
Santa Barbara	41,771	33,801	46,637	37,784	81.0%	51,171	41,965	2.12%	82.0%
Sara	40,551	36,698	45,062	40,781	90.5%	51,110	46,789	2.79%	91.5%
Tigbauan	50,061	41,726	57,181	47,660	83.3%	65,257	54,796	2.83%	84.0%
Tubungan	20,486	19,075	25,989	24,198	93.1%	28,964	26,922	2.16%	93.0%
Zanaga	19,196	16,062	23,607	19,753	83.7%	27,053	22,829	2.94%	84.4%
Study Area	1,489,555	1,178,553	1,671,052	1,320,644	79.0%	1,797,841	1,419,598	1.46%	79.0%

Table 8.3.9 Projected Number of Households by Urban and Rural Area by Municipality by Target Year

Name of Municipality/City	Household Size						Number of Households								
	1995		1996		1998		2005		2010		Total				
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural					
Ajuy	5.26	5.18	5.18	5.18	7.409	6.831	59	6,978	7,569	617	7,293	7,910	873	9,982	10,855
Almodian	5.00	5.55	5.42	1,278	4.107	5.365	1,355	4,356	5,711	1,545	4,967	6,512	2,048	7,315	9,363
Amilao	5.18	5.36	5.34	331	3,544	3,875	349	3,731	4,080	391	4,179	4,570	555	5,989	6,544
Badianjan	5.13	5.17	5.17	315	4,093	4,408	327	4,257	4,584	356	4,628	4,984	504	6,166	6,670
Balasan	5.19	5.09	5.10	666	3,830	4,496	694	3,994	4,688	760	4,376	5,136	993	5,967	6,960
Banatic	5.31	5.39	5.25	270	4,368	4,638	286	4,624	4,910	324	5,247	5,571	452	7,783	8,235
Barotac Nuevo	5.32	5.25	5.25	697	7,103	7,800	723	7,354	8,077	780	7,939	8,719	1,038	10,866	11,904
Barotac Viejo	5.22	5.47	5.44	716	5,467	6,183	756	5,770	6,526	851	6,496	7,347	1,199	9,731	10,930
Badad	4.73	5.21	5.17	233	2,734	2,967	247	2,897	3,144	281	3,296	3,577	342	4,601	4,945
Bingawan	4.81	5.10	5.01	664	1,629	2,293	698	1,712	2,410	780	2,693	2,693	1,031	2,527	3,558
Cabatuan	5.30	5.30	5.30	7,980	8,274	7,980	8,274	8,274	8,274	8,274	8,960	8,960	12,439	12,439	12,439
Calinog	5.21	5.32	5.31	890	7,669	8,559	962	8,288	9,250	1,145	9,862	11,007	1,617	14,311	15,928
Carles	5.06	5.35	5.33	435	8,235	8,670	464	8,781	9,245	537	10,157	10,694	730	15,023	15,753
Concepcion	5.57	5.19	5.24	758	4,988	5,746	800	5,259	6,059	899	5,914	6,813	1,500	8,335	9,835
Dingle	4.94	5.16	5.12	1,174	5,782	6,956	1,198	5,905	7,103	1,249	6,159	7,408	1,614	8,313	9,927
Dueñas	5.29	5.29	5.29	916	4,555	5,471	942	4,685	5,627	998	4,966	5,964	1,461	6,763	8,224
Dumangas	4.92	5.13	5.12	371	9,604	9,975	383	9,906	10,289	409	10,580	10,989	510	14,286	14,796
Estancia	5.29	5.16	5.19	1,379	4,531	5,910	1,506	4,951	6,457	1,839	6,048	7,887	2,692	8,898	11,590
Guimbal	5.58	5.51	5.53	1,183	3,578	4,761	1,289	3,897	5,186	1,563	4,727	6,290	2,386	7,017	9,403
Igbaras	5.10	5.04	5.05	1,012	4,131	5,143	1,045	4,266	5,311	1,122	4,578	5,700	1,569	5,858	7,427
Janauay	5.09	5.40	5.35	1,597	7,762	9,359	1,681	8,178	9,859	1,884	9,167	11,051	2,522	13,048	15,570
Lambunao	5.65	5.66	5.66	753	9,632	10,385	794	10,164	10,958	893	11,439	12,332	1,350	17,262	18,612
Leganes	5.14	5.37	5.29	1,293	2,342	3,635	1,346	2,440	3,786	1,469	2,662	4,131	2,041	3,864	5,905
Lemery	4.70	5.01	4.97	555	3,646	4,201	581	3,812	4,393	641	4,209	4,850	849	5,634	6,483
Leon	5.33	5.62	5.59	836	6,512	7,348	906	7,058	7,964	1,087	8,468	9,555	1,536	12,727	14,263
Maasin	5.93	5.87	5.88	527	4,470	4,997	540	4,577	5,117	567	4,807	5,374	852	7,099	7,951
Miagao	5.51	5.18	5.23	1,444	8,558	10,002	1,477	8,758	10,235	1,549	9,188	10,737	2,270	12,084	14,354
Mina	5.37	5.45	5.44	415	2,602	3,017	432	2,709	3,141	471	2,952	3,423	711	4,307	5,018
New Lucena	5.12	5.30	5.27	508	2,694	3,202	516	2,735	3,251	532	2,819	3,351	735	3,926	4,661
Oton	5.22	5.22	5.22	10,884	10,884	11,661	11,661	11,661	11,661	13,608	13,608	13,608	19,374	19,374	19,374
Passi City	5.32	5.28	5.28	1,565	9,709	11,274	1,621	10,054	11,675	1,751	10,860	12,611	2,521	15,009	17,530
Pavia	5.32	5.19	5.23	1,428	3,688	5,116	1,559	4,028	5,587	1,900	4,907	6,807	2,859	7,204	10,063
Pototan	5.39	5.24	5.28	2,986	7,679	10,665	3,115	8,016	11,131	3,419	8,797	12,216	4,874	12,192	17,066
San Dionisio	5.12	5.23	5.21	876	3,973	4,849	920	4,176	5,096	1,027	4,662	5,689	1,597	6,322	7,919
San Enrique	5.34	5.32	5.32	381	4,427	4,808	396	4,596	4,992	429	4,887	5,416	590	7,110	7,700
San Joaquin	5.52	5.65	5.63	750	7,124	7,874	812	7,712	8,524	972	9,232	10,204	1,436	13,871	15,307
San Miguel	5.22	5.12	5.19	2,488	1,138	3,626	2,634	1,205	3,839	2,988	1,367	4,355	4,402	1,976	6,378
San Rafael	5.23	5.58	5.49	567	1,619	2,186	601	1,717	2,318	685	1,955	2,640	929	3,213	4,142
Santa Barbara	5.26	5.13	5.16	1,431	6,260	7,691	1,506	6,589	8,095	1,683	7,365	9,048	2,302	10,491	12,793
Sara	5.06	5.12	5.11	725	6,837	7,562	761	7,168	7,929	846	7,965	8,811	1,080	11,697	12,777
Tigbauan	5.56	5.33	5.36	1,413	7,381	8,794	1,499	7,829	9,328	1,712	8,942	10,654	2,615	13,699	16,314
Tubungan	5.25	5.51	5.49	242	3,119	3,361	269	3,462	3,721	341	4,392	4,733	511	6,731	7,242
Zaraga	5.19	5.41	5.37	551	2,710	3,261	604	2,969	3,573	743	3,651	4,394	1,056	5,707	6,763
Provincial Total	5.26	5.32	5.31	56,061	210,661	266,722	59,120	221,563	280,683	66,603	248,118	314,721	94,565	354,904	449,469