

#### 4. EXISTING FACILITIES AND SERVICE COVERAGE

##### 4.1 Water Supply

##### 4.1.3 Level III Systems

Table 4.1.1 Details on Existing Level III Systems

Sheet 1 of 4

Municipality	Name of Operating Body	Level III Service								
		Number of Barangays Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Alabel (Capital)	Alabel WD	1		1	248		248	1,488		1,488
	San Miguel Coop.		1	1		70	70		350	350
	Sto. Niño Coop.	1		1	186		186	1,150		1,150
	Municipal Total	2	1	3	434	70	504	2,638	350	2,988
Glan	Glan WD	1	1	2	737	56	793	4,100	336	4,436
Maasim	Maasim WD	2		2	174		174	870		870
Malapatan	Malapatan WS	1		1	150		150	900		900
	Lun Padidu WS	1		1	115		115	690		690
	Municipal Total	2		2	265		265	1,590		1,590
<b>Provincial Total</b>		<b>7</b>	<b>2</b>	<b>9</b>	<b>1,610</b>	<b>126</b>	<b>1,736</b>	<b>9,198</b>	<b>686</b>	<b>9,884</b>

Sheet 2 of 4

Municipality	Name of Operating Body	Level II Service								
		Number of Public Faucets			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Alabel (Capital)	Alabel WD									
	San Miguel Coop.									
	Sto. Niño Coop.									
	Municipal Total									
Glan	Glan WD									
Maasim	Maasim WD									
Malapatan	Malapatan WS	3		3	15		15	90		90
	Lun Padidu WS									
	Municipal Total	3		3	15		15	90		90
<b>Provincial Total</b>		<b>3</b>		<b>3</b>	<b>15</b>		<b>15</b>	<b>90</b>		<b>90</b>

Sheet 3 of 4

Municipality	Name of Operating Body	Water Sources			Consumption			
		Type <sup>1</sup>	Number	Production (cu.m/day)	Domestic	Institutional	Commercial	Industrial
		(cu.m/day)						
Alabel (Capital)	Alabel WD	DW	1	432	168.70	0.50		1.00
	San Miguel Coop.	DW	1	58	48.00	1.00		
	Sto. Niño Coop.	DW	1	164	134.00	1.50		
	Municipal Total	DW	3	654	350.70	3.00		1.00
Glan	Glan WD	DW	5	723	589.60	16.70		20.50
Maasim	Maasim WD	SP	2	158	102.92	2.58		8.06
Malapatan	Malapatan WS	DW	1	98	73.00	1.70		0.50
	Lun Padidu WS	DW	1	85	65.00	1.20		
	Municipal Total		2	183	138.00	2.90		0.50
<b>Provincial Total</b>			<b>17</b>	<b>1,718</b>	<b>1,181.22</b>	<b>25.18</b>		<b>30.06</b>

Note: 1. Type of Water Source; DW - Deep Well, DgW - Dug Well, Surf - Surface Water (River), SP - Spring.

Sheet 4 of 4

Municipality	Name of Operating Body	Consumers											
		Domestic House Connections			Domestic Public Faucets			Institutional Consumers		Commercial Consumers		Industrial Consumers	
		Connection		Consumption (m <sup>3</sup> /day)	Connection		Consumption (m <sup>3</sup> /day)	Connection	Consumption (m <sup>3</sup> /day)	Connection	Consumption (m <sup>3</sup> /day)	Connection	Consumption (m <sup>3</sup> /day)
		Metered	Unmetered		Metered	Unmetered		Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Alabel (Capital)	Alabel WD	247	1	168.70			1	0.50	1		1.00		
	San Miguel Coop.	70		48.00			2	1.00					
	Sto. Niño Coop.	185		134.00			3	1.50					
	Municipal Total	503	1	350.70			6	3.00	1		1.00		
Glan	Glan WD	691		589.60			5	16.70	41		20.50		
Maasim	Maasim WD	160		102.92			4	2.58	10		8.06		
Malapatan	Malapatan WS	150		73.00			3	1.70	2		0.50		
	Lun Padidu WS			65.00				2	1.20				
	Municipal Total	150	115	138.00			3	2.90	2		0.50		
<b>Provincial Total</b>		<b>1,504</b>	<b>116</b>	<b>1,181.22</b>			<b>18</b>	<b>25.18</b>	<b>54</b>		<b>30.06</b>		

#### 4.1.4 Level II System

**Table 4.1.2 Details on Existing Level II Systems**

Sheet 1 of 6

Municipality	Name of Operating Body	Water Source			Existing Facilities				
		Type	Number	Discharge (m <sup>3</sup> /day)	Length of Transmission Line (meter)	Reservoir		Length of Distribution Line (meter)	Number of Public Faucet
						Number	Volume (m <sup>3</sup> )		
Alabel (Capital) Glan	Spring L-II Ass	SP	1	28.8	600	1	27.0	1,600	28
	Batotoling WS	SP	1	24.0	1,800	1	14.9	400	4
	Calabanit WS	SP	1	24.0	4,500	1	18.0	800	3
	Cross WS	SP	1	69.1	1,000	1	4.5	100	3
	Gumasa WS	SP	1	17.3	500	1	8.0	200	2
	Pangyan WS	SP	1	327.1	1,500	1	12.0	2,000	3
	San Vicente WS	SP	1	172.8	2,000	1	6.8	200	2
	Small Margus WS	SP	1	172.8	500	1	4.5	200	4
	Tapon WS	SP	1	121.0	840	2	27.0	120	3
<b>Municipal Total</b>	<b>SP</b>	<b>8</b>	<b>928.1</b>	<b>12,640</b>	<b>9</b>	<b>95.6</b>	<b>4,020</b>	<b>24</b>	
Kiamba	Badtasan WS	SP	1	69.1	2,000	1	12.5	500	30
	BKWASA	SP	1	63.6	500	1	27.0	1,800	19
	Gasi WS	SP	1	69.1	100	1	9.0	3,200	12
	Katubao WS	SP	1	69.1	100	1	8.0	2,500	6
	Kayupo WS	SP	1	69.1	1,000	1	8.0	200	6
	Maligang WS	SP	1	69.1	800	1	10.0	1,000	12
	Nalus WS	SP	1	69.1	1,000	2	12.5	200	17
	Tablao WS	SP	1	69.1	1,200	1	10.0	1,000	9
	Tamadang WS	SP	1	86.4	1,400	2	12.0	1,100	12
	<b>Municipal Total</b>	<b>SP</b>	<b>9</b>	<b>633.9</b>	<b>8,100</b>	<b>11</b>	<b>109.0</b>	<b>11,500</b>	<b>123</b>
Maasim	Amsipit WS	SP	1	51.8	1,500	1	15.6	500	4
	Daliao WS	SP	1	64.8	2,000	1	12.0	1,500	9
	Kabatiol WS	SP	1	58.3	500	1	27.0	1,500	3
	Kanalo WS	SP	1	27.0	400	1	15.6	1,200	8
	Lumatil WS	SP	1	34.6	300	1	18.0	2,500	18
	Nomoh WS	SP	1	95.0	500	1	18.0	1,900	13
	Seven Hills WS	SP	1	69.1	200	1	4.0	1,000	3
	TWASA	SP	1	17.3	1,500	1	8.0	2,400	6
	<b>Municipal Total</b>	<b>SP</b>	<b>8</b>	<b>418.0</b>	<b>6,900</b>	<b>8</b>	<b>118.3</b>	<b>12,500</b>	<b>64</b>
Maitum	BUWASA	SP	1	112.3	200	1	15.6	2,500	10
	Kalaong WS	SP	1	51.8	300	1	12.0	1,500	9
	Kiyap WS	SP	1	51.8	500	1	12.0	2,100	33
	New La Union WS	SP	1	57.6	200	1	12.0	1,800	30
	Zion WS	SP	1	51.8	200	1	8.0	1,500	6
<b>Municipal Total</b>	<b>SP</b>	<b>5</b>	<b>325.4</b>	<b>1,400</b>	<b>5</b>	<b>59.6</b>	<b>9,400</b>	<b>88</b>	
Malapatan	Bahasuan WS	DW	1	4.0		1	6.0	240	6
	Daan Suyan WS	SP	1	2.7	1,400	1	3.0	500	8
	Kihan WS	SP	1	21.6	150	1	17.3	390	8
	Malaygang WS	DW	1	6.0		1	0.5	240	6
	Pag-asa WS	DW	1	10.9		1	0.5	240	10
	Purok I WS	DW	1			1	0.5	420	8
	Purok II WS	DW	1	32.0		1	0.5	360	4
	Suib WS	DW	1	6.0		1	0.5	600	7
	ULCA	SP	1	0.3	3,000	1	3.0	800	6
	<b>Municipal Total</b>	<b>DW/SP</b>	<b>6/3</b>	<b>83.5</b>	<b>4,550</b>	<b>9</b>	<b>31.8</b>	<b>3,790</b>	<b>63</b>
Malungon	Ampon WS	DW	1	43.2	1,200	1	15.6	500	4
	Banate WS	SP	1	129.6	3,000	1	22.0	150	5
	B'laan WS	SP	1	129.6	1,000	1	8.0	300	3
	Datal Batong WS	SP	1	172.8	3,000	1	27.0	100	8
	Datal Tampal WS	SP	1	43.2	3,000	1	27.0	150	3
	J.P. Laurel WS	SP	1	86.4	2,500	1	17.5	150	3
	Malalag Cogon WS	SP	1	138.2	1,200	1	18.3	500	4
	Malandag WS	SP	1	43.2	10	1	15.6	150	10
	Malungongamay W	SP	1	258.7	2,000	1	27.0	500	8
	Nagpan WS	SP	1	172.8	2,500	1	12.5	700	5
	Panamin WS	SP	1	172.8	4,000	1	15.6	100	4
	Poblacion WS	SP	1	129.6	2,000	1	22.5	150	7
	San Roque WS	SP	1	129.6	2,500	1	18.0	100	3
	Talus WS	SP	1	86.4	2,200	1	15.6	180	4
	Tamban WS	SP	1	172.8	2,000	1	22.5	500	5
	Upper Lumabat WS	SP	1	172.8	2,200	1	12.5	200	3
<b>Municipal Total</b>	<b>DW/SP</b>	<b>1/15</b>	<b>2,081.8</b>	<b>34,310</b>	<b>16</b>	<b>297.2</b>	<b>4,430</b>	<b>79</b>	
<b>Provincial Total</b>			<b>56</b>	<b>4,499.4</b>	<b>68,500</b>	<b>59</b>	<b>738.5</b>	<b>47,240</b>	<b>469</b>

Note: 1. Type of Water Source; *DW* - Deep Well, *DgW* - Dug Well, *Surf* - Surface Water (River), *SP* - Spring

Table 4.1.2 Details on Existing Level II Systems

Sheet 2 of 6

Municipality	Name of Operating Body	Number of Barangay Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Alabel (Capital)	Spring L-II Ass.		1	1		140	140		840	840
Glan	Batotoling WS		1	1		20	20		120	120
	Calabanit WS		1	1		15	15		90	90
	Cross WS		1	1		18	18		108	108
	Gumasa WS		1	1		14	14		84	84
	Pangyan WS	1		1	18		18	108		108
	San Vicente WS		1	1		16	16		96	96
	Small Margus WS		1	1		24	24		144	144
	Tapon WS		1	1		15	15		90	90
	<b>Municipal Total</b>	<b>1</b>	<b>7</b>	<b>8</b>	<b>18</b>	<b>122</b>	<b>140</b>	<b>108</b>	<b>732</b>	<b>840</b>
Kiamba	Badtasan WS		1	1		150	150		900	900
	BKWASA		1	1		114	114		684	684
	Gasi WS		1	1		60	60		360	360
	Katubao WS		1	1		36	36		216	216
	Kayupo WS		1	1		36	36		216	216
	Maligang WS		1	1		72	72		432	432
	Nalus WS	1		1	102		102	612		612
	Tablao WS		1	1		45	45		270	270
	Tamadang WS		1	1		60	60		360	360
<b>Municipal Total</b>	<b>1</b>	<b>8</b>	<b>9</b>	<b>102</b>	<b>573</b>	<b>675</b>	<b>612</b>	<b>3,438</b>	<b>4,050</b>	
Maasim	Amsipit WS		1	1		20	20		120	120
	Daliao WS		1	1		45	45		270	270
	Kabatiol WS		1	1		18	18		108	108
	Kanato WS		1	1		40	40		240	240
	Lumatil WS		1	1		90	90		540	540
	Nomoh WS		1	1		65	65		390	390
	Seven Hills WS		1	1		15	15		90	90
	TWASA		1	1		30	30		180	180
<b>Municipal Total</b>		<b>8</b>	<b>8</b>		<b>323</b>	<b>323</b>		<b>1,938</b>	<b>1,938</b>	
Maitum	BUWASA		1	1		50	50		300	300
	Kalaong WS		1	1		45	45		270	270
	Kiayap WS		1	1		165	165		990	990
	New La Union WS		1	1		150	150		900	900
	Zion WS		1	1		30	30		180	180
<b>Municipal Total</b>		<b>5</b>	<b>5</b>		<b>440</b>	<b>440</b>		<b>2,640</b>	<b>2,640</b>	
Malapatan	Bahasuan WS		1	1		30	30		180	180
	Daan Suyan WS		1	1		40	40		240	240
	Kihan WS		1	1		56	56		336	336
	Malaygang WS		1	1		30	30		180	180
	Pag-asa WS		1	1		50	50		300	300
	Purok I WS		1	1		30	30		180	180
	Purok II WS		1	1		24	24		144	144
	Suib WS		1	1		35	35		210	210
	ULCA		1	1		30	30		180	180
<b>Municipal Total</b>		<b>9</b>	<b>9</b>		<b>325</b>	<b>325</b>		<b>1,950</b>	<b>1,950</b>	
Malungon	Ampon WS		1	1		20	20		120	120
	Banate WS	1		1	30		30	180		180
	B'laan WS		1	1		18	18		108	108
	Datal Batong WS		1	1		40	40		240	240
	Datal Tampil WS		1	1		15	15		90	90
	J.P. Laurel WS		1	1		18	18		108	108
	Malalag Cogon WS		1	1		20	20		120	120
	Malandag WS		1	1		50	50		300	300
	Malungongamay WS		1	1		40	40		240	240
	Nagpan WS		1	1		30	30		180	180
	Panamin WS		1	1		20	20		120	120
	Poblacion WS	1		1	35		35	210		210
	San Roque WS		1	1		18	18		108	108
	Talus WS		1	1		28	28		168	168
	Tamban WS		1	1		25	25		150	150
	Upper Lumabat WS		1	1		15	15		90	90
<b>Municipal Total</b>	<b>2</b>	<b>14</b>	<b>16</b>	<b>65</b>	<b>357</b>	<b>422</b>	<b>390</b>	<b>2,142</b>	<b>2,532</b>	
<b>Provincial Total</b>	<b>4</b>	<b>52</b>	<b>56</b>	<b>185</b>	<b>2,280</b>	<b>2,465</b>	<b>1,110</b>	<b>13,680</b>	<b>14,790</b>	

Table 4.1.2 Details on Existing Level II Systems  
Sheet 3 of 6

Municipality	Name of Operating Body	Service Conditions During Dry Season								Supply Water Pressure (% of total)	
		Supply (Hrs/day)	Dirty Water <sup>1</sup>	Taste or Smell <sup>2</sup>	Supply Interruption (number/month)				Adequate	Inadequate	
					Power Failure	Pump Breakdown	Pipe Burst	Others			
Alabel (Capital)	Spring L-II Ass.	8	E		4					100	
Glan	Batotoling WS	24		G							
	Calabanit WS	24		G							
	Cross WS	24		G							
	Gumasa WS	24		G							
	Pangyan WS	24		G							
	San Vicente WS	24		G							
	Small Margus WS	24		G							
Kiamba	Tapon WS	24		G							
	Badfasan WS	24	O	G							
	BKWASA	18	O	G							
	Gasi WS	24		G							
	Katubao WS	24	O	G							
	Kayupo WS	24	O	G			1				
	Maligang WS	24	O	G			1				
	Nalus WS	24	O	G							
Maasim	Tablao WS	24	O	G							
	Tamadang WS	24	O	G							
	Amsipit WS	18	O	G							
	Daliao WS	18	O	G							
	Kabatiol WS	18	O	G							
	Kanalo WS	18	O	G							
	Lumatil WS	12	O	G							
	Nomoh WS	24	O	G							
Maitum	Seven Hills WS	24	O	G							
	TWASA	8	O	G			1	30			
	BUWASA	24	O	G							
	Kalaong WS	18	O	G							
	Kiayap WS	18	O	G							
Malapatan	New La Union WS	20	O	G							
	Zion WS	18	O	G							
	Bahasuan WS	4		G							
	Daan Suyan WS	6	O	G							
	Kihan WS	4		G							
	Malaygang WS	4		G							
	Pag-asa WS	8		G							
	Purok I WS	8		G							
Malungon	Purok II WS	8		G							
	Suib WS	4		G							
	ULCA	2		G							
	Ampon WS	24		G							
	Banate WS	24		G							
	B'laan WS	24		G							
	Datal Batong WS	24		G							
	Datal Tampil WS	8		G							
	J.P. Laurel WS	24		G							
	Malalag Cogon WS	24		G							
	Malandag WS	24		G							
	Malungongamay WS	24		G							
	Nagpan WS	24		G							
	Panamun WS	24		G							
Poblacion WS	24		G								
San Roque WS	24		G								
Talus WS	24		G								
Tamban WS	24		G								
Upper Lumabat WS	24		G								

Note: 1. Dirty Water: E - Everyday, OW - Once a week, OM - Once a month, O - Occasional.

2. Taste or Smell: G - Good taste, S - Salty, W - Wood taste, M - Metallic taste, O - Others.

Table 4.1.2 Details on Existing Level II Systems

Sheet 4 of 6

Municipality	Name of Operating Body	Number of Staff				Repair Work			
		Technical Staff	Administrative Staff	Collector	Total Number of Staff	Local Tradesman	MEO/CEO	DEO	Others
Alabel (Capital)	Spring L-II Ass.		1	1	2				PEO
Glan	Batotoling WS								PEO
	Calabanit WS								PEO
	Cross WS								PEO
	Gumasa WS						✓		
	Pangyan WS								PEO
	San Vicente WS								PEO
	Small Margus WS					✓			
	Tapon WS								
Kiamba	Badtasan WS					✓			
	BKWASA			1	1				PEO
	Gasi WS					✓			
	Katubao WS					✓			
	Kayupo WS					✓			
	Maligang WS					✓			
	Nalus WS					✓			
	Tablao WS					✓			
Maasim	Tamadang WS					✓			
	Amsipit WS					✓			
	Daliao WS					✓			
	Kabatiol WS					✓			
	Kanalo WS					✓			
	Lumatil WS					✓			
	Nomoh WS					✓			
	Seven Hills WS					✓			
Maitum	TWASA					✓			
	BUWASA					✓			
	Kalaong WS					✓			
	Kiayap WS					✓			
	New La Union WS					✓			
Malapatan	Zion WS					✓			
	Bahasuan WS								Brgy. Council
	Daan Suyan WS			1	1				
	Kihan WS								
	Malaygang WS								
	Pag-asa WS								
	Purok I WS			1	1				
	Purok II WS			1	1				
Malungon	Suib WS								Brgy. Council
	ULCA	3	2		5				
	Ampon WS								PEO
	Banate WS								PEO
	B'laan WS								PEO
	Datal Batong WS								PEO
	Datal Tampal WS								PEO
	J.P. Laurel WS						✓		
	Malalag Cogon WS								PEO
	Malandag WS						✓		
	Malungongamay WS								PEO
	Nagpan WS								PEO
	Panarin WS								PEO
	Poblacion WS						✓		
	San Roque WS								PEO
Talus WS								PEO	
Tamban WS								PEO	
Upper Lumabat WS								PEO	

Table 4.1.2 Details on Existing Level II Systems  
Sheet 5 of 6

Name of Municipality	Name of Operating Body	Expenditures (P '000.00 / year)						Tariff (Pesos)				Average Collection Efficiency (%)			
		Annual	Wages	Fuel, Chem. Mat'l.	Transport	Repairs	Loan Repayment	Other	Consumer Payment (Year)	Cost per Fail	Cost per Cu. Meter		Cost/HH/Year	Other	
Alabel (Capital) Gian	Spring L-II Ass.	30	12			5						480		75	
	Batololing WS														
	Calebanit WS														
	Cross WS														
	Gumasa WS														
	Pangyan WS														
	San Vicente WS														
	Small Margus WS														
	Tapon WS														
	Badlasan WS														
	Kapate WS														
	Gasi WS														
Kiamba	Katubao WS														
	Kayupo WS														
	Maligang WS														
	Nalus WS														
	Tabiao WS														
	Tamadang WS														
	Amisipit WS														
	Daliao WS														
	Kabatol WS														
	Kanalo WS														
	Lumatil WS														
	Nomoh WS														
Maasim	Seven Hills WS														
	TWASA														
	Upo WS														
	Kalaong WS														
	Kiayap WS														
	New La Union WS														
	Zion WS														
	Maitum														

Table 4.1.2 Details on Existing Level II Systems  
Sheet 5 of 6

Municipality	Name of Operating Body	Expenditures (P '000.00 / year)						Tariff (Pesos)				Average Collection Efficiency (%)			
		Annual	Wages	Fuel, Chem. Mat'l.	Transport	Repairs	Loan Repayment	Other	Consumer Pay-ment	Cost per Pail	Cost per Cu. Meter		Cost/HH/Year	Other	
Malapatan	Bahasuan WS														
	Daan Suyan WS													20	
	Kihan WS														
	Malaygang WS														
	Pag-asa WS														240
	Purok I WS														
	Purok II WS														
	Suib WS														
	ULCA		2,304			2,304									72
	Ampon WS														
Malungon	Banate WS														
	B'taan WS														
	Datal Batong WS														
	Datal Tampil WS														
	J.P. Laurel WS														
	Malalag Cogon WS														
	Malandag WS														
	Malungongamay WS														
	Nagran WS														
	Panamin WS														
	Poblacion WS														
	San Roque WS														
	Talus WS														
	Tamban WS														
Upper Lumabat WS															

Table 4.1.2 Details on Existing Level II Systems  
Sheet 6 of 6

Municipality	Name of Operating Body	Billings			Revenues						
		Annual Billing P '000.00	Public Faucet Consumer	House Connection Consumers	Expected Subsidies	Others	Annual Income (P '000.00 / year)	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Other
Alabel (Capital) Glan	Spring L-II Ass.	29.76					29.76				
	Batotoling WS										
	Calabanit WS										
	Cross WS										
	Gumasa WS										
	Pangyan WS										
	San Vicente WS										
	Small Margus WS										
	Tapon WS										
	Badatasan WS										
	BKWASA										
	Gasi WS										
	Katubao WS										
Kayupo WS											
Maligang WS											
Nalus WS											
Tablao WS											
Tamadang WS											
Maasim	Amsipit WS										
	Dalao WS										
	Kabatiol WS										
	Kanalo WS										
	Lumatil WS										
	Nomoh WS										
	Seven Hills WS										
Maitum	TWASA										
	BUWASA										
	Kalaong WS										
	Kiayap WS										
	New La Union WS										
Zion WS											



Table 4.1.2 Details on Existing Level II Systems

Sheet 6 of 6

Municipality	Name of Operating Body	Billings				Revenues					
		Annual Billing P '000.00	Public Faucet Consumer	House Connection Consumers	Expected Subsidies	Others	Annual Income (P '000.00 / year)	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Other
Malapatan	Bahasuan WS										
	Daan Suyan WS										
	Kihan WS										
	Malaygang WS										
	Pag-asa WS										
	Purok I WS										
	Purok II WS										
	Suib WS										
	ULCA						6.912				
	Ampon WS										
	Banate WS										
	B'laan WS										
	Datal Batong WS										
Datal Tampil WS											
J.P. Laurel WS											
Malalag Cogon WS											
Malandag WS											
Malungongamay WS											
Nagpan WS											
Panamin WS											
Poblacion WS											
San Roque WS											
Talus WS											
Tamban WS											
Upper Lumabat WS											
Malungon											

#### 4.1.5 Level I Facilities

##### Safe and Unsafe Classification of Level I Facilities

According to the definition of DOH, protected deep wells protected shallow well, covered/improved dug well and developed spring are classified as safe sources, while unprotected shallow well, open dug well, undeveloped spring and rain water collector are classified as unsafe sources.

In the 1990 population census data on "Households by Main Source of Drinking Water and City/Municipality", it was shown that 52% of the households depended on several kinds of water sources such as shallow wells, dug wells, undeveloped springs, lake, river, rain water and others. This figure was considered as the upper limit of doubtful sources in terms of undeserved/unserved, if shallow wells were regarded as doubtful.

As for water sources of Level I facilities in the province, the PHO has conducted water quality examination upon request by the residents. However, the number of samples was very limited and water sampling by PHO is usually conducted only when problems on water quality and/or incidence of water related diseases have occurred. Under this situation, the PHO classifies all deep wells and developed springs into safe sources, while all dug wells into unsafe sources. Based on the field experience by the PHO, 30% of the existing shallow wells are classified into unsafe source, considering the location/surroundings of wells (distance from pit latrine, flood level, etc.).

On the other hand, the experiences from the study for 1<sup>st</sup> batch provinces in Mindanao area during the preparation of PW4SP show that around 20-50 % is considered as unsafe sources as shown below.

Surigao del Norte	Agusan del Norte	Agusan del Sur	Davao Oriental	Davao del Sur
20%	50%	23%	40%	46%

Comparing with the above figures, the percentage estimated by PHO is considered a common occurrence. Thus, the unsafe percentage of 30 % may be applied to the existing shallow wells of all municipalities in urban and rural areas for both public and private shallow wells. While, those sources other than shallow wells are processed as classified in the questionnaire. Table 4.1.4 presents the number of Level I facilities by safe and unsafe classification.

Table 4.1.4 Number of Level 1 Facilities by Safe and Unsafe Classification

Municipality	Area	Safe Sources										Unsafe Sources						Grand Total				
		Public					Private					Public			Private							
		Deep Well	Shallow Well	Covered/Improved Dug Well	Developed Spring	Sub-total	Deep Well	Shallow Well	Covered/Improved Dug Well	Sub-total	Total	Shallow Well	Open Dug Well	Undeveloped Spring	Rain Water Collection	Sub-total	Open Dug Well		Rain Water Collector	Sub-total	Total	
Alibei (Capital)	Urban	31	4			35	22	23		45	80	2			2	4	10	11		21	25	105
	Rural	28	60	1	8	97	19	279	16	314	411	26			26	120	120	1	121	146	557	
	Total	59	64	1	8	132	41	302	16	359	491	27			2	29	130	11	1	142	171	662
Glan	Urban		16	2		18	2	263	5	270	288	7			7	113	49	53	16	118	153	407
	Rural	17	76	23	1	117	34	114	23	171	288	33			40	42	161	53	16	230	272	848
	Total	17	92	25	1	135	36	377	28	441	576	40			6	11	203	4	5	212	223	712
Kiamba	Urban		15	1		16		473		473	489	6			6	30	277	48	6	331	361	1,102
	Rural	18	51	4	10	83	13	645		658	742	22			8	30	479	52	11	542	584	1,814
	Total	18	66	5	10	99	13	1,119		1,132	1,230	28			13	41	479	52	11	542	584	1,814
Maasin	Urban	2	9			11	1	96		97	108	4			4	4	41			41	45	153
	Rural	11	23	7	5	46	1	144	19	164	210	10			2	12	62			62	73	283
	Total	13	32	7	5	57	2	239	19	260	318	14			2	16	103			103	118	436
Mahum	Urban	24	6		4	34	63	224	99	224	258	3			3	26	11	11	3	40	43	301
	Rural	19	27		21	67	64	136	63	263	350	12			3	15	58	41		99	114	444
	Total	43	34		25	102	127	197	162	486	588	14			3	17	85	52	3	140	157	745
Malapatan	Urban	44	9			53	3	173	14	190	243	4			3	7	74	15		89	96	339
	Rural	14	40	28	4	86				86	17				17	17	6	6	15	21	38	124
	Total	58	49	28	4	139	3	173	14	190	329	21			3	24	74	21	15	110	134	463
Malungon	Urban	19			3	22		115		115	137					49	30		52	131	268	
	Rural	35			29	64		48		48	112				20	1,182	178	1,380	178	1,380	1,492	
	Total	54			32	86		162		162	248				70	1,212	230	1,512	230	1,512	1,760	
Provincial Total	Urban	120	60	3	7	190	91	1,204	118	1,413	1,603	26			10	36	516	71	60	647	683	2,285
	Rural	142	277	63	78	560	131	1,366	121	1,618	2,178	119			15	134	585	1,330	216	1,131	2,265	4,443
	Total	262	337	66	85	750	222	2,570	239	3,031	3,780	144			25	169	1,101	1,401	276	2,778	2,948	6,728

### Public and Private Level I Facilities for Rural Water Supply

Table 4.1.4 (b) presents the number and proportion of Level I facilities by public and private sources for rural water supply in the province. Public and private facilities share 15.6% and 84.4% of the total number of Level I facility, respectively. Developed springs occupy 11% of the total number of public facilities.

Table 4.1.4 (b) Public and Private Level I Facilities for Rural Water Supply

Facility	Public Source		Private Source		Total
	Number	%	Number	%	
Deep Well	142	52.0	131	48.0	273
Shallow Well	396	16.9	1,951	83.1	2,347
Spring Development	78	100	0	0	78
Others	78	4.4	1,667	95.6	1,745
Total	694	15.6	3,749	84.4	4,443

#### 4.1.6 Water Supply Service Coverage

##### Estimation of Service Coverage in Terms of Safe, Unsafe and Unserved Classification

Through review of the number of water supply systems/facilities and the number of households that were derived from the questionnaire, it was found out that a great number of unserved population would be accounted as a balance between the total population and the population with any levels of services (including unsafe facilities) by applying the service level standard for Level I and II. To come up with more realistic service coverage, the unserved population in 1997 was referred to using the profile in the 1990 population census data on "Households by Main Source of Drinking Water and City/Municipality" prepared by NSO. The rest of the population, those who are not served by Level III and/or II systems, were considered to be covered by shared or own use of Level I facilities. The calculation procedure is as follows:

- Service percentage/population of Level III and Level II systems was estimated based on the questionnaire survey results.
- Percentage of unserved population (using undeveloped spring, lake water, river water, peddler, etc.) of respective municipality by urban and rural areas, which were studied in the 1990 population census, was discounted to half of their percentage, since these figures were estimated based on 10% sample. Also, the situation at that time seems to have been improved.
- Population covered by Level I facilities was calculated as the balance between the total population and the population served by Level III & II and the unserved population.
- Level I population coverage was estimated with the assumption that 50% of the private facilities were shared by neighbors.

Under the above conditions, the unserved population and the population covered by Level I facilities are presented in Table 4.1.5. Table 4.1.6 (a and b) presents the overall population covered by Level I facilities and the number of households.

The number of households per shared public/private facility ranges from 5 to 31 households in rural areas and from 5 to 29 households in urban areas. Compared with the service level standard of Level I public facility (15 households/facility), these figures are within acceptable range.

#### **Percentage of Population Covered by Level I Public Facility for Rural Water Supply**

Grasping the current percentage of population covered by public facilities would be a useful information in considering as to what extent the additional population to be covered by public facilities in the future plan. This takes into account that the major facilities would be Level I especially for rural water supply in the future.

Population covered by public facilities is calculated as a balance between total population served by Level I facilities and population covered by private facilities. Thus, it is estimated at about 49,800 persons or 40% of the total population is covered by public Level I facilities based on the figures shown in Tables 4.1.6 (a) and 4.1.6 (b).

Table 4.1.5 Estimation of Unserved Population by Municipality

Municipality	Area	Population and Household (1997)		Served Population			Unserved Population			Population Covered by Level I Facilities	
		Number	HH Size	Level III	Level II	Total	Unserved Percentage (1995)		Unserved Population 1997		
							Total No. of HHs	No. of Unserved HHs			%
Alabel (Capital)	Urban	13,341	5.04	2,638		2,638	2,501	148	6	787	9,916
	Rural	35,887	4.91	350	840	1,190	6,883	569	8	2,967	31,730
	Total	49,228	4.95	2,988	840	3,828	9,384	717	8	3,759	41,647
Glan	Urban	17,851	5.48	4,100	108	4,208	3,117	395	13	2,259	11,384
	Rural	59,093	5.24	336	732	1,068	10,802	1,524	14	8,337	49,688
	Total	76,944	5.30	4,436	840	5,276	13,919	1,919	14	10,605	61,072
Kiamba	Urban	12,098	4.81		612	612	2,413	187	8	938	10,548
	Rural	29,191	5.01		3,438	3,438	5,606	722	13	3,760	21,993
	Total	41,289	4.95		4,050	4,050	8,019	909	11	4,680	32,542
Maasim	Urban	8,973	5.11	870		870	1,703	120	7	632	7,471
	Rural	23,656	5.24		1,938	1,938	4,373	464	11	2,510	19,208
	Total	32,629	5.21	870	1,938	2,808	6,076	584	10	3,136	26,679
Maitum	Urban	10,398	5.35				1,865	152	8	845	9,553
	Rural	25,705	5.16		2,640	2,640	4,826	585	12	3,116	19,949
	Total	36,103	5.21		2,640	2,640	6,691	737	11	3,974	29,502
Malapatan	Urban	25,730	5.32	1,590	90	1,680	4,655	255	5	1,407	22,643
	Rural	24,038	5.12		1,950	1,950	4,522	983	22	5,223	16,865
	Total	49,768	5.22	1,590	2,040	3,630	9,177	1,237	13	6,708	39,509
Malungon	Urban	26,359	5.39		390	390	4,497	491	11	2,875	23,094
	Rural	73,867	5.29		2,142	2,142	12,873	1,894	15	10,865	60,860
	Total	100,226	5.32		2,532	2,532	17,370	2,384	14	13,756	83,954
Provincial Total	Urban	114,750	5.25	9,198	1,200	10,398	20,751	1,746	8	9,742	94,610
	Rural	271,437	5.16	686	13,680	14,366	49,885	6,740	14	36,777	220,294
	Total	386,187	5.19	9,884	14,880	24,764	70,636	8,486	12	46,520	314,903

Table 4.1.6 (a) Estimation of Population Covered by Safe and Unsafe Source by Municipality

Municipality	Area	Pop. Covered by Level I Facilities	Number of Facilities						Coverage of Own Use					
			Public Facilities			Private Facilities			Number of Private Facilities			(1) Population Covered		
			Safe	Unsafe	Total	Safe	Unsafe	Total	Safe	Unsafe	Total	Safe	Unsafe	Total
Alabel (Capital)	Urban	9,916	35	4	39	45	21	66	23	10	33	114	53	166
	Rural	31,730	97	26	122	314	121	435	157	60	218	792	304	1,096
	Total	41,647	132	29	161	359	142	501	180	71	251	906	357	1,263
Glan	Urban	11,384	18	7	25	270	113	382	135	56	191	738	308	1,047
	Rural	49,688	117	35	152	171	118	289	86	59	145	469	323	792
	Total	61,072	135	42	177	441	230	671	220	115	336	1,207	631	1,839
Kiamba	Urban	10,548	16	11	27	473	212	685	237	106	343	1,138	509	1,647
	Rural	21,993	83	30	113	658	331	989	329	165	495	1,583	795	2,379
	Total	32,542	99	41	140	1,132	542	1,674	566	271	837	2,721	1,304	4,026
Maasim	Urban	7,471	11	4	15	97	41	138	48	21	69	248	105	353
	Rural	19,208	46	12	58	164	62	225	82	31	113	418	157	575
	Total	26,679	57	16	73	260	103	363	130	51	182	665	262	927
Maitum	Urban	9,553	34	3	37	224	40	264	112	20	132	598	108	706
	Rural	19,949	67	15	82	263	99	362	131	50	181	703	265	968
	Total	29,502	102	17	119	486	140	626	243	70	313	1,301	373	1,675
Malapatan	Urban	22,643	53	7	60	190	89	279	95	45	140	505	237	742
	Rural	16,865	86	17	103	21	21	21	11	11	11	56	56	798
	Total	39,509	139	24	163	190	110	300	95	55	150	505	293	798
Malungon	Urban	23,094	22		22	115	131	246	57	66	123	309	354	663
	Rural	60,860	64		64	48	1,380	1,428	24	690	714	128	3,720	3,848
	Total	83,954	86		86	162	1,512	1,674	81	756	837	438	4,074	4,511
Provincial Total	Urban	94,610	190	36	225	1,413	647	2,060	707	324	1,030	3,650	1,674	5,324
	Rural	220,294	560	134	694	1,618	2,131	3,749	809	1,066	1,875	4,093	5,621	9,714
	Total	314,903	750	169	919	3,031	2,778	5,809	1,515	1,389	2,905	7,744	7,295	15,038

Table 4.1.6 (b) Estimation of Population Covered by Safe and Unsafe Source by Municipality

Municipality	Area	Coverage of Shared Well										Level I Coverage (1) + (2)							
		(2) Population Covered by Private and Public					Number of Households					No. of HHs per Shared Facility		Safe		Unsafe		Total	
		Safe	Unsafe	Total	Safe	Unsafe	Total	Safe	Unsafe	Total	Facility	%	Pop.	%	Pop.	%	Pop.	%	
Alabel (Capital)	Urban	7,954	1,796	9,750	1,578	356	1,934				27	60	8,067	14	1,849	14	9,916	74	
	Rural	23,707	6,928	30,634	4,828	1,411	6,239			18	68	24,499	20	7,232	20	31,730	88		
	Total	31,660	8,724	40,384	6,406	1,767	8,174			20	66	32,566	18	9,081	18	41,647	85		
Glan	Urban	8,056	2,281	10,337	1,470	416	1,886			9	49	8,794	15	2,590	15	11,384	64		
	Rural	33,994	14,902	48,896	6,487	2,844	9,331			31	58	34,463	26	15,225	26	49,688	84		
	Total	42,049	17,184	59,233	7,957	3,260	11,218			22	56	43,257	23	17,815	23	61,072	79		
Kiamba	Urban	7,203	1,698	8,901	1,497	353	1,851			5	69	8,341	18	2,208	18	10,548	87		
	Rural	14,927	4,688	19,615	2,979	936	3,915			6	57	16,510	19	5,483	19	21,993	75		
	Total	22,129	6,387	28,516	4,477	1,289	5,766			6	60	24,851	19	7,691	19	32,542	79		
Maasim	Urban	5,296	1,822	7,118	1,036	357	1,393			17	62	5,544	21	1,927	21	7,471	83		
	Rural	14,403	4,230	18,633	2,749	807	3,556			21	63	14,821	19	4,387	19	19,208	81		
	Total	19,699	6,052	25,751	3,785	1,164	4,949			19	62	20,365	19	6,314	19	26,679	82		
Maitum	Urban	8,259	588	8,847	1,544	110	1,654			10	85	8,857	7	696	7	9,553	92		
	Rural	15,072	3,909	18,981	2,921	758	3,678			14	61	15,775	16	4,174	16	19,949	78		
	Total	23,331	4,497	27,828	4,465	868	5,332			12	68	24,632	13	4,871	13	29,502	82		
Malapatan	Urban	16,804	5,097	21,901	3,159	958	4,117			21	67	17,309	21	5,334	21	22,643	88		
	Rural	12,764	4,045	16,809	2,493	790	3,283			29	53	12,764	17	4,101	17	16,865	70		
	Total	29,568	9,143	38,711	5,652	1,748	7,400			24	60	30,073	19	9,436	19	39,509	79		
Malungon	Urban	12,646	9,785	22,431	2,346	1,815	4,162			29	49	12,955	38	10,139	38	23,094	88		
	Rural	6,868	50,143	57,011	1,298	9,479	10,777			14	9	6,997	73	53,863	73	60,860	82		
	Total	19,514	59,928	79,442	3,645	11,294	14,939			16	20	19,952	64	64,002	64	83,954	84		
Provincial Total	Urban	66,216	23,069	89,285	12,630	4,366	16,996			14	61	69,867	22	24,743	22	94,610	82		
	Rural	121,734	88,845	210,580	23,756	17,024	40,780			16	46	125,828	35	94,466	35	220,294	81		
	Total	187,951	111,914	299,865	36,386	21,390	57,777			15	51	195,695	31	119,209	31	314,903	82		



4.2 Sanitation and Sewerage  
 4.2.2 Types of Facilities and Definition of Service Level Standard

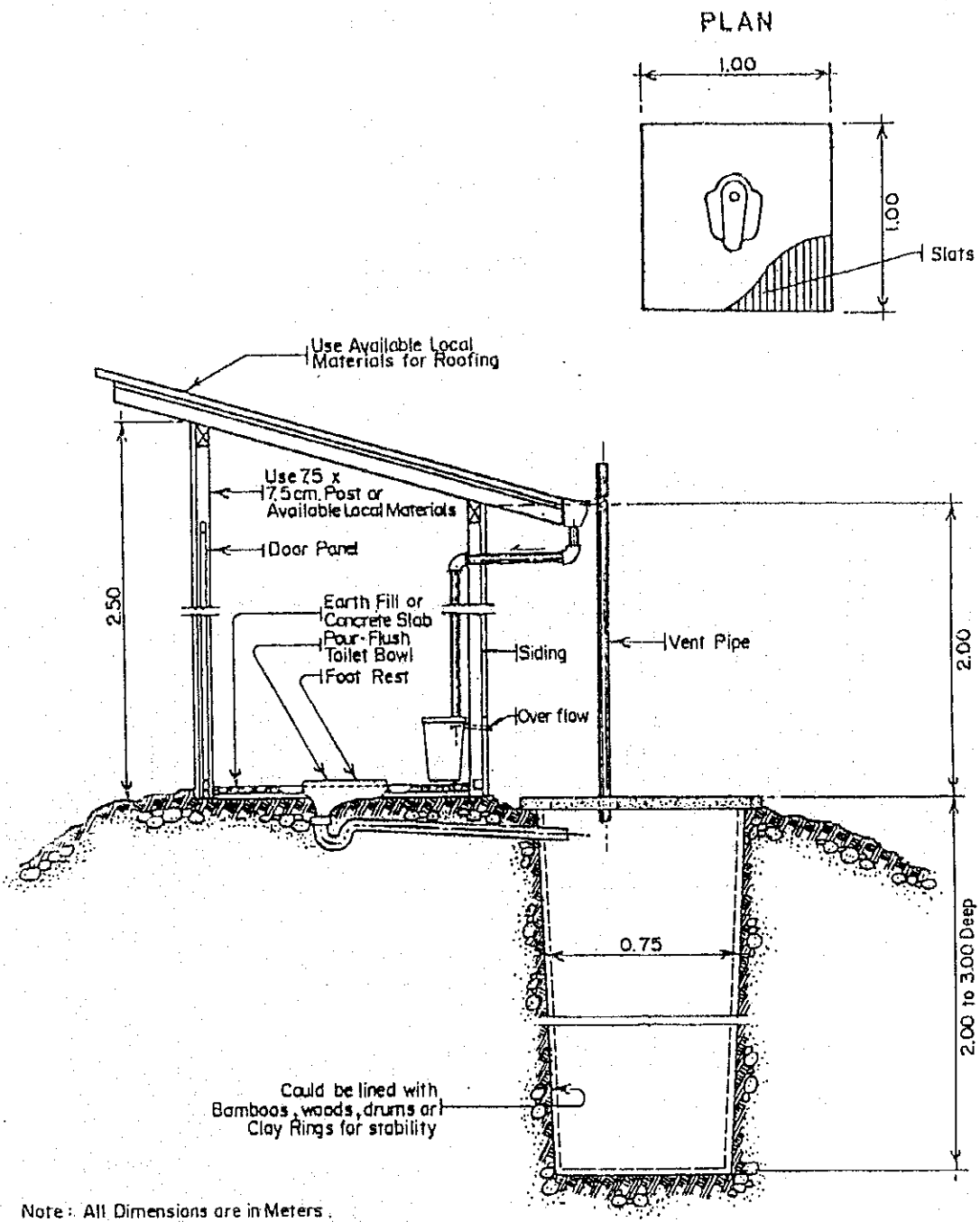
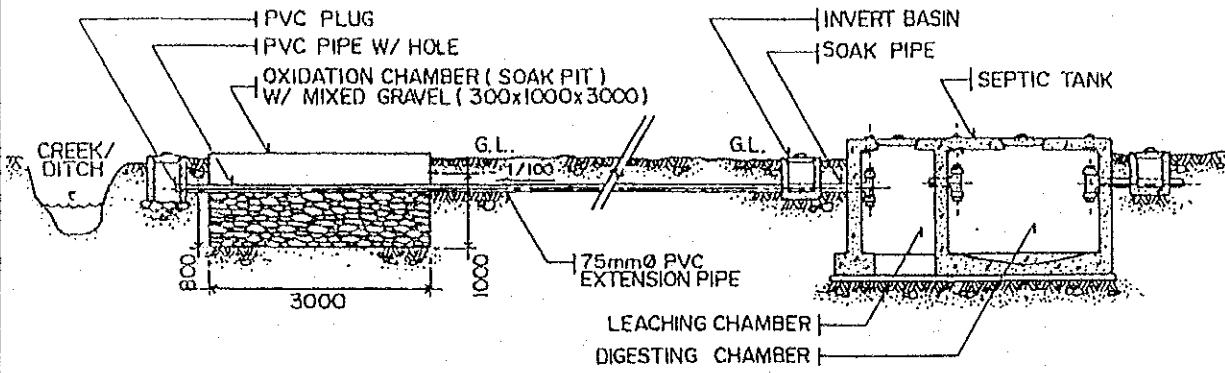
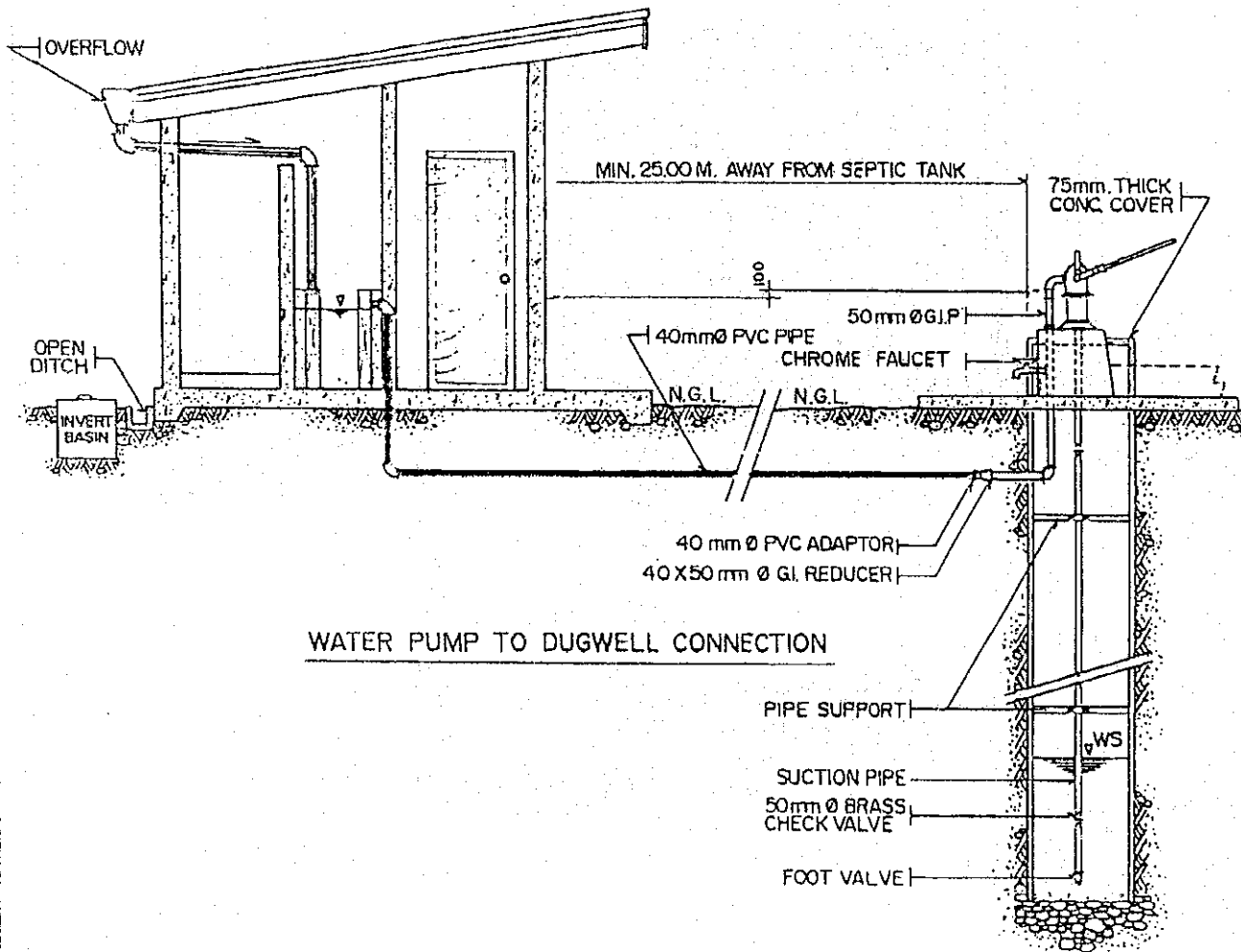


FIGURE 4.2.1  
 STANDARD STRUCTURE OF PRIVATE TOILET FACILITY

SOURCE : DEPARTMENT OF HEALTH



LAYOUT PLAN OF HIGH GROUND WATER SITE



WATER PUMP TO DUGWELL CONNECTION

FIGURE 4.2.2  
STANDARD STRUCTURE OF SCHOOL TOILET FACILITY

4.2.3 Sanitation Facilities and Service Coverage

Table 4.2.1 Sanitation Facilities and Service Coverage of Household Toilets by Type, by Municipality, Urban and Rural 1997

Municipality	Area	No. of Households (1997)	Households Served by Sanitary Toilets						Underserved/Unservd BHs						
			Flush Toilet		Pour Flush		VIP		Total		Unsanitary		No Facility		
			Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Alabel (Capital)	Urban	2,644			2,547	96						91	3	6	0
	Rural	7,277			6,234	86						212	3	831	11
	Total	9,921			8,781	89						303	3	837	8
Glan	Urban	3,250		23	1,809	56						648	20	770	24
	Rural	11,263		7	3,681	33						4,162	37	3,413	30
	Total	14,513		30	5,490	38						4,810	33	4,183	29
Kiamba	Urban	2,509		18	1,335	53						370	15	786	31
	Rural	5,829		4	3,720	64						715	12	1,390	24
	Total	8,338		22	5,055	61						1,085	13	2,176	26
Maasim	Urban	1,762		10	1,341	76						65	4	346	20
	Rural	4,526			1,889	42		3	0	1,892	42	83	2	2,551	56
	Total	6,288		10	3,230	51		3	0	3,243	52	148	2	2,897	46
Maitum	Urban	1,924			1,132	59						416	22	376	20
	Rural	4,977			2,507	50		1	0	2,508	50	1,201	24	1,268	25
	Total	6,901			3,639	53		1	0	3,640	53	1,617	23	1,644	24
Malapatan	Urban	4,838			2,788	58						1,298	27	752	16
	Rural	4,699			1,323	28		2	0	1,325	28	1,182	25	2,192	47
	Total	9,537			4,111	43		2	0	4,113	43	2,480	26	2,944	31
Malungon	Urban	4,877			2,421	50		8	0	2,429	50	1,921	39	527	11
	Rural	13,960			3,733	27		14	0	3,747	27	7,148	51	3,065	22
	Total	18,837			6,154	33		22	0	6,176	33	9,069	48	3,592	19
Provincial Total	Urban	21,804		51	13,373	61		8	0	13,432	62	4,809	22	3,563	16
	Rural	52,531		11	23,087	44		20	0	23,118	44	14,703	28	14,710	28
	Total	74,335		62	36,460	49		28	0	36,550	49	19,512	26	18,273	25

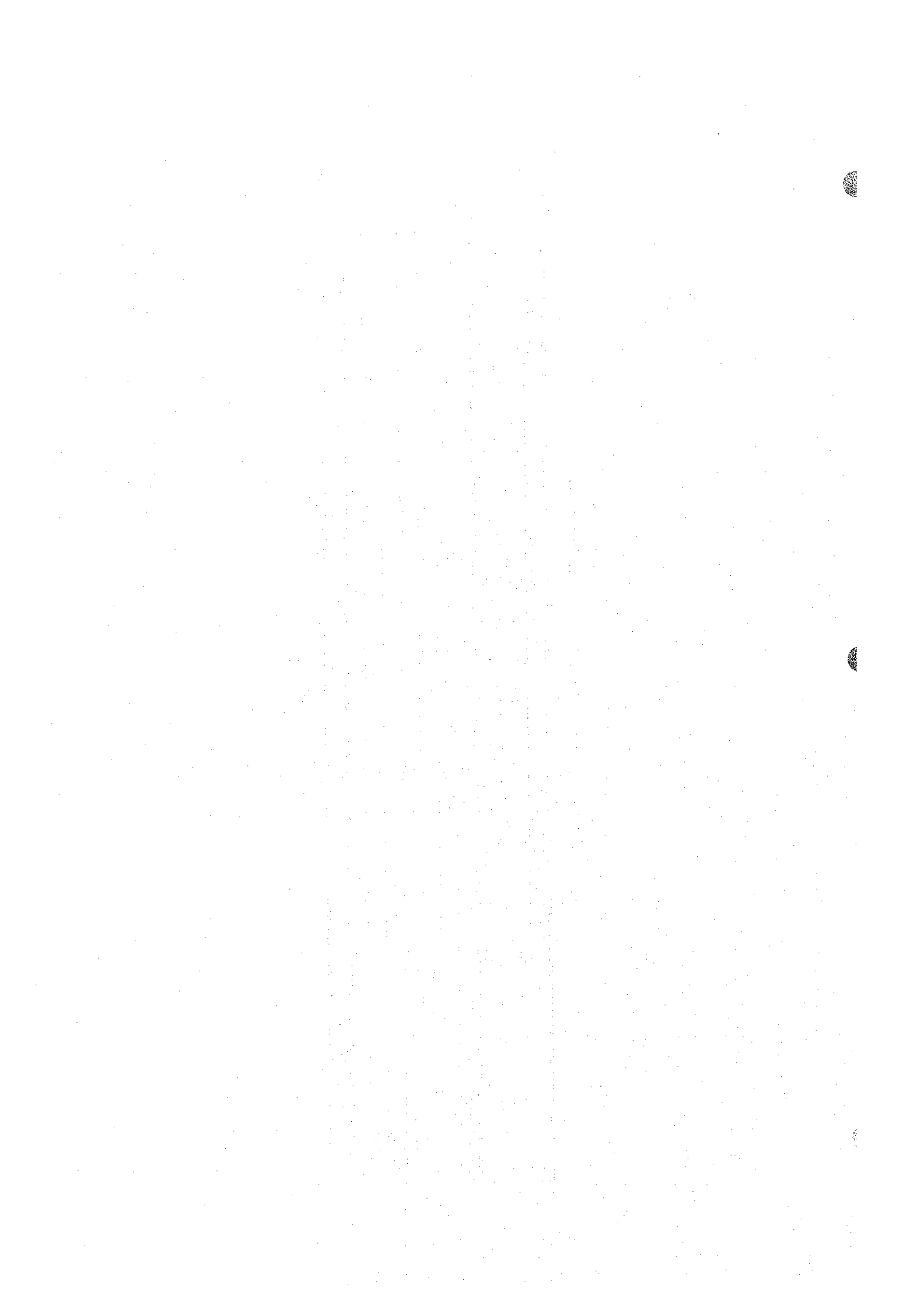
Note: Zero indicates that value is less than one (1).

Table 4.2.2 Number of Student and School Toilet Facilities by Municipality

Municipality	Number of School	Number of Student	Number of Toilets			
			Sanitary	Unsanitary		
Alabel (Capital)	Public	18	10,410	73	21	94
	Private					
	Total	18	10,410	73	21	94
Glan	Public	36	16,671	176		176
	Private	2	602	6	2	8
	Total	38	17,273	182	2	184
Kiamba	Public	18	8,112	150		150
	Private	3	921	19		19
	Total	21	9,033	169		169
Maasim	Public	15	7,190	51		51
	Private	1	233	3		3
	Total	16	7,423	54		54
Maitum	Public	17	6,007	152		152
	Private	2	385	15		15
	Total	19	6,392	167		167
Malapatan	Public	15	9,202	83	28	111
	Private					
	Total	15	9,202	83	28	111
Malungon	Public	45	16,914	169	14	183
	Private	5	1,250	24	2	26
	Total	50	18,164	193	16	209
Provincial Total	Public	164	74,506	854	63	917
	Private	13	3,391	67	4	71
	Total	177	77,897	921	67	988

Table 4.2.3 Number of Public Toilets Facilities in 1997

Municipality	Public Markets			Bus/Jeepney Terminals			Parks/Playground			Total Number of Toilets
	No. of Sanitary Toilets	No. of Unsanitary Toilets	Sub-total	No. of Sanitary Toilets	No. of Unsanitary Toilets	Sub-total	No. of Sanitary Toilets	No. of Unsanitary Toilets	Sub-total	
Alabel (Capital)	2		2	1		1	1		1	4
Glan	11		11	1		1	2		2	14
Kiamba	3		3	3		3				6
Maasim	2		2	1		1	1		1	4
Mainum	2		2	1		1				3
Malapatan	1		1	1		1				2
Malungon	15		15				3		3	18
<b>Provincial Total</b>	<b>36</b>		<b>36</b>	<b>8</b>		<b>8</b>	<b>7</b>		<b>7</b>	<b>51</b>



5. EXISTING SECTOR ARRANGEMENT AND INSTITUTIONAL CAPACITY

5.5 Sector Agencies at the Local Level

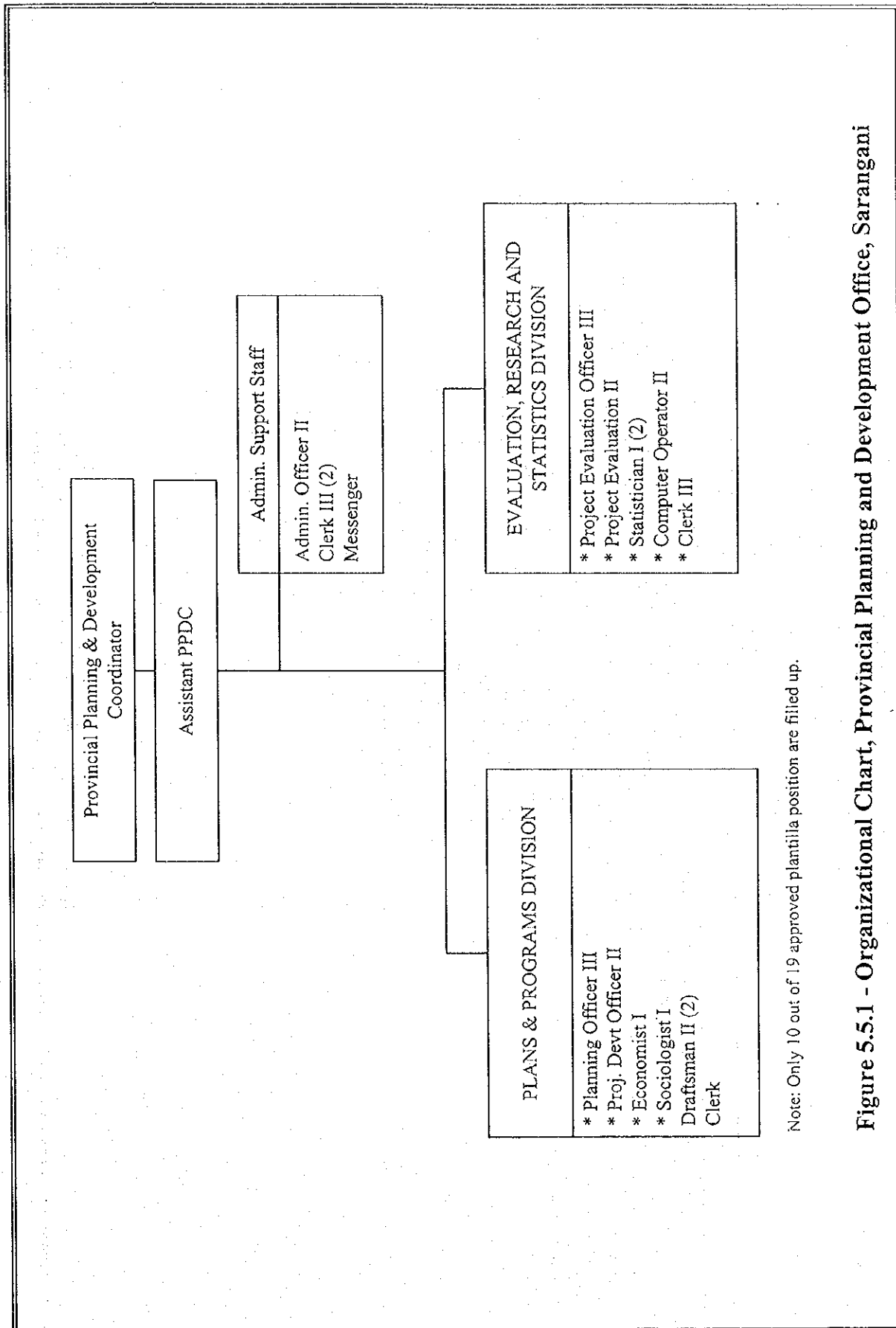


Figure 5.5.1 - Organizational Chart, Provincial Planning and Development Office, Sarangani

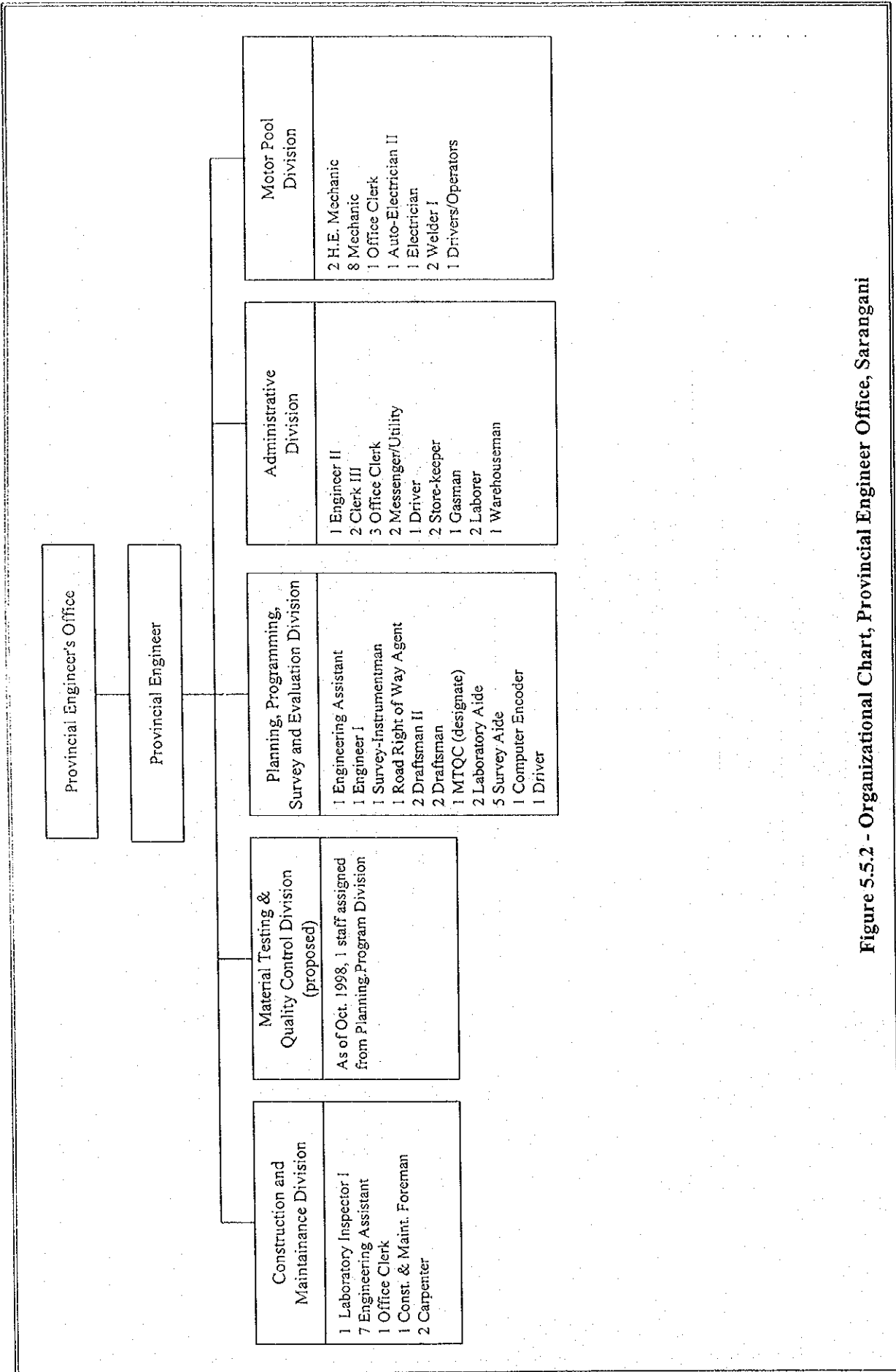
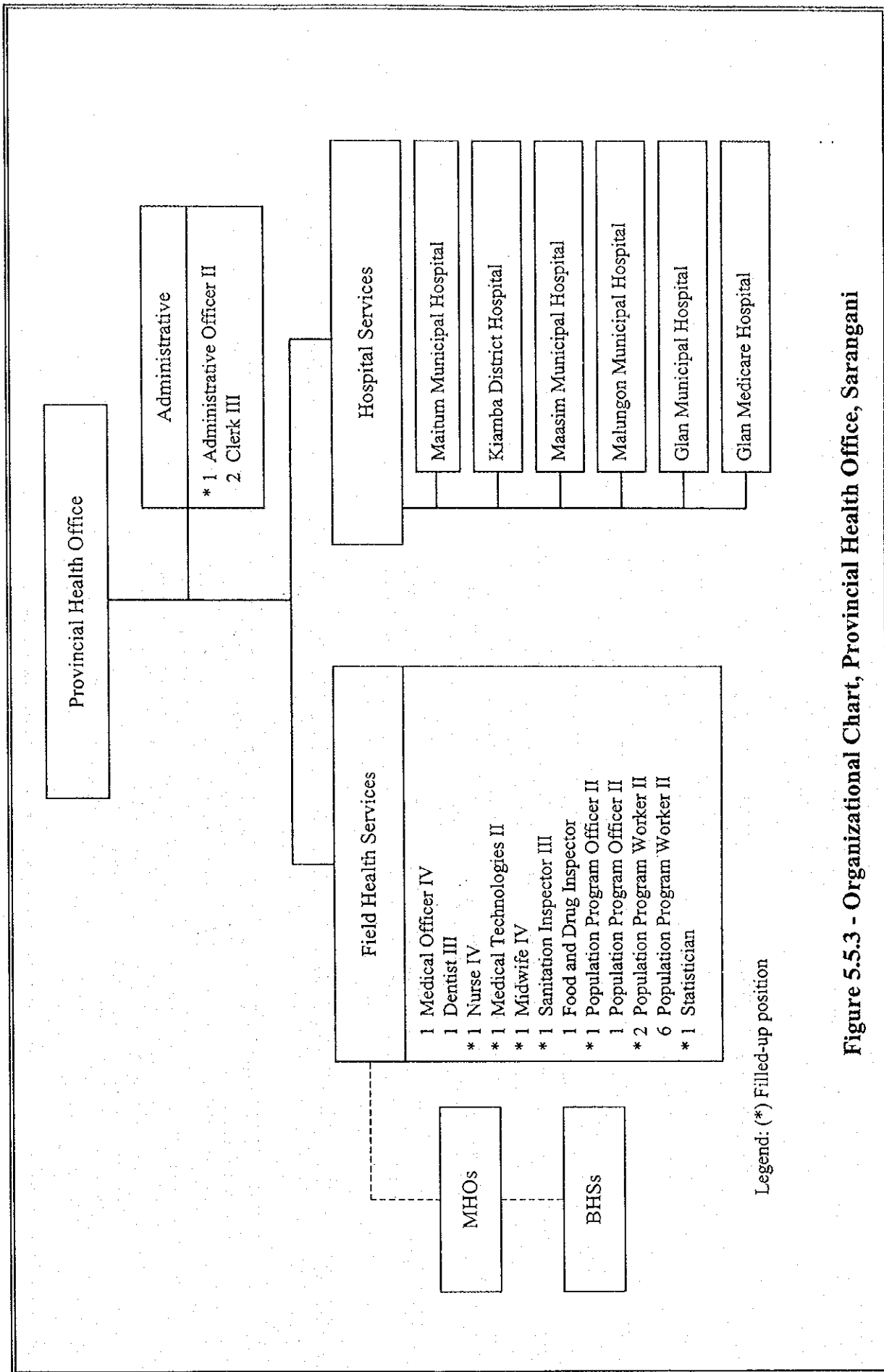


Figure 5.5.2 - Organizational Chart, Provincial Engineer Office, Sarangani





Legend: (\*) Filled-up position

Figure 5.5.3 - Organizational Chart, Provincial Health Office, Sarangani

## 5.6 External Support Agencies in the Sector

Table 5.6.1 Priority Areas/Terms and Conditions, Programs and Projects by Donor

Donor	Priority Areas/Terms and Conditions	Programs and Projects in the Sector/Executing Agency
OECD	Providing project loans for <i>capital infrastructure (urban/rural), agricultural development, export promotion</i> . Can finance 75% of total project cost of total foreign exchange component, whichever is higher. Interest Rate: 2 to 3%; 30-year amortization with 10-year grace period. Environmental projects, interest free.	Water Supply and Sanitation Project-23rd Yen Package/DILG; Co-financing AWSOP with World Bank and ADB/MWSS.
ADB	Providing both capital and technical assistance; Project loans: <i>agriculture, agri-industry, energy, social infra-transport and communications</i> ; Program Loans: sector loans (e.g. <i>forestry, livestock, environment</i> ). Can finance 60% of total project cost or 100% of foreign exchange cost whichever is higher. Special cases can finance up to 80% of total project cost. Terms: Interest rate- pool-based variable; commitment charge of 0.75% per annum; 25 years amortization period including 5-year grace period.	Rural Water Supply and Sanitation Sector Project/DPWH; Small Towns Water Supply Sector Project/LWUA; Technical Assistance for Water Supply and Sanitation Sector Study/NIEDA; Co-financing AWSOP with World Bank and OECF/MWSS.
AUSAID	Providing grant aid for <i>education, training, development planning, resource management, environmental management, health/population, infrastructure (e.g. water supply, coal energy development), social infrastructure, community development and agriculture</i> ; providing also supplies of commodities (steel cattle, drilling).	Water supply program in Central Visayas/RDCs and LGUs; Feasibility Study for Northern Mindanao Water and Sanitation Project.
DANIDA	Providing capital and technical assistance for <i>water supply and sanitation services and facilities, telecom ancillary equipment, small-scale power projects, environmental project, fishery and cold storage and post-harvest facilities</i> ; Can finance up to 100% of foreign exchange goods and services of Danish origin, 10% local cost on a case-to-case basis. Technical assistance can be negotiated for conduct of feasibility studies if implementation of the project will require Danish financing in the future.	Water supply projects for 10 towns/LWUA; Feasibility Study for control of pollution in the Pasig River-Metro Manila; Water Supply and Sanitation Data Bank.
Government of France	Grants for feasibility studies and detailed design for projects in priority areas, e.g. <i>power generation, telecommunication, research involving high technology, water supply, air navigational equipment, etc.</i> Can finance 100% of foreign exchange costs of goods and services of French origin.	Feasibility Study for water supply project in Rizal province.
German Agency for Technical Cooperation (GTZ)	Providing grants for technical assistance. Promotion of <i>small and medium-scale industries, rural development, technical training, health/family planning, and environmental protection (forest management)</i> .	Water Supply for 20 Towns/LWUA; a national water supply and sanitation on-going program; special TA programs for cost recovery, monitoring and evaluation.
JICA	Providing a combination of capital assistance thru grant-aid and technical assistance thru Technical Cooperation for development survey and project type assistance which is a combination of experts, equipment and training. Technical assistance for <i>conduct of feasibility studies/master plans, provision of training, limited provision of equipment</i> . Capital assistance for <i>provision of equipment/materials for construction of hospitals, schools, research, social welfare centers</i> . Priority areas include <i>basic infrastructure, e.g. construction of facilities and supply of equipment; project development for sectors dealing with basic services (agriculture, health public welfare, environment) and human resource development (education, research, training)</i> . Can finance 100% of foreign exchange costs of civil works, equipment, training (in Japan) and of all goods and services of Japanese origin.	Groundwater study in Manila; Feasibility Study for Balara Water Treatment Plant Feasibility Study.

**Tabel 5.6.1 Priority Areas/Terms and Conditions, Programs and Projects by Donor**

Donor	Priority Areas/Terms and Conditions	Programs and Projects in the Sector/Executing Agency
UNDP	<p>Providing technical assistance for capacity building, human resource training, technology transfer, policy research, planning, technology development and pre-investment studies; Technical assistance are formulated within country program (CP) frameworks: 6th CP (1997-2001) -poverty and sustainable livelihood, protection and regeneration of the environment and sound governance, gender equality</p>	<p>WAISAN Program for LGUs and selected BWSAs/DILG.</p>
UNICEF	<p>Providing grant aids for technical assistance. Priority area: <i>social services, particularly for children.</i></p>	<p>Community-based water supply program in Palawan Province; Water supply and sanitation Study for Southern Mindanao.</p>
USAID	<p>Providing grant aid within its strategic objectives. Six strategic objectives and one special objectives are: <i>Accelerate the economic transformation of Mindanao; Improve national systems for trade and investment; Reduce population growth and improve maternal and child health; Enhance management of renewable national resources; reduce emissions of greenhouse gas; broaden participation in public formulation/implementation (selected areas); prevent rapid increase of HIV/AIDS.</i></p>	<p>Barangay Water Program (BWP) for communities with populations of less than 10,000; TA for private sector participation in the sector.</p>
World Bank	<p>Providing capital assistance in the form of under IBRD and IDA. IBRD (Project/Program) Loans; Interest rate = less than 7%; 20 years amortization with 5 years grace period; IDA Loans: interest free; with 30 to 40-year amortization period. Providing also technical assistance in the form of ESW, IDF, Poverty and Human Resource Development Project Preparation and Policy Notes. Can finance 100% of foreign exchange costs of the project. Priority areas: <i>power and energy, roads and railways, telecommunications, ports, water supply and sanitation, agriculture and social services.</i></p>	<p>AWSOP co-financed with ADB and OECF/MWSS; TA for a Water Supply Sector Program Study/DILG; TA on private sector participation in the water supply and sanitation sector; Water Districts Development Project.</p>

Table 5.7.1 Matrix of Current Practices and Issues from Rapid Assessment of Subject Provinces and Local Offices of Central Government Agencies

Areas	Institutional	Technical	Financial	Community Development
<p>1. Provincial Government Offices of Davao del Norte, South Cotabato, Sarangani, Misamis Oriental, and Bukidnon</p>	<ul style="list-style-type: none"> <li>Sector implementation is project-based arrangement by setting up a multi-agency team/task force. There is no overall mechanism and responsibility delineation among members wherein interrelationships/linkages are clearly shown.</li> <li>There is no current provincial plan for the sector except for the annual investment plan that serves as the basis for project funding and Local Development &amp; Investment Plan (LDIP) as a "Shopping List". As planning is budget centered, it focuses on the completion of facilities resulting to haphazard planning and poor/absence of maintenance of constructed facilities.</li> <li>Management is a process requiring input at every level. At the barangay level, facilities are supposed to be managed by the community. Management at higher levels is also necessary to effectively and efficiently implement a plan and requires administration abilities, and technical, negotiation, finance and economic skills. In all levels, management and skills are underdeveloped.</li> <li>Qualifications and experiences of the PSTF/PPDO staff are sometimes inadequate/inappropriate for their allotted responsibilities. This is important as the municipal government requires support from the provincial government.</li> <li>Training has been irregular and poorly organized. Course materials are complicated and provided a very</li> </ul>	<ul style="list-style-type: none"> <li>Project identification is usually upon the request of the barangay/municipal officials and approval is made by the Sanguniang Panlalawigan (SP).</li> <li>Most of constructions are by administration with procurement of materials done by the LGUs.</li> <li>Majority of the wells constructed by DPWH is abandoned/non-operational due to user's attitude, which suggest the need of community organization.</li> <li>O&amp;M is participated by barangay officials with LGUs providing technical and material supply assistance upon request.</li> <li>Dry-type sanitary toilet shall be considered in areas where water is not available.</li> <li>Water quality problems, such as coliform contamination, salt water intrusion, high iron and manganese content, etc. are often encountered especially in shallow wells resulting to abandonment of these wells.</li> <li>There is a shortage of equipment and supplies at all levels of administration. Technologies are sometimes inappropriate to local conditions (e.g., no readily available spares for pumps).</li> <li>More extensive data on groundwater resource is required to determine potential yields and chemical quality. Very limited drilling expertise/equipment.</li> <li>Proper O&amp;M is unlikely without significant training and equipment support at the barangay/association level</li> </ul>	<ul style="list-style-type: none"> <li>Income of the province comes from local taxes, IRA, national wealth share (3 provinces), and revenues from economic enterprises.</li> <li>Budgeting is guided by DILG circulars and approval is by the SP</li> <li>Budgetary allocation to the sector comes from 20% development fund capital expenditures for projects. However, the allocation by sector is lumped under general headings, so that allocation for WATSAN projects cannot be readily identified in the listing.</li> <li>Counterpart fund of LGUs for sector projects is usually for material purchase and the community is providing their labor. Sometimes, the provincial government allocates funds for WATSAN projects and the municipal government put up its counterpart fund provided by the province.</li> <li>Cost recovery mechanisms by LGUs and the users are not in place. BWSAs and RWSAs charge water fees for O&amp;M purposes only and do not consider capital costs. Rates are usually based on agreement among association members.</li> <li>Logistics and incentives for water associations are coursed through the barangays but are limited and most often subject to availability of funds.</li> <li>Most of the provinces have accessed development banks to finance infrastructure projects and purchase of equipment. Foreign assistance, e.g., CIDA, UNICEF, is availed through the Regional Development Council.</li> </ul>	<ul style="list-style-type: none"> <li>Limited involvement of local communities/end-users particularly in the planning and maintenance of facilities.</li> <li>Active involvement of religious NGOs as community organizers.</li> <li>No established arrangement on gender-responsiveness.</li> <li>There is little investigation of socio-cultural issues related to WATSAN; there is not enough commonsense understanding of the community it is working with. Little attention is given to or understanding of ethnic groups which is a serious constraint on sustainability.</li> <li>BWSAs formed by the DPWH-DEO are mostly not functioning now. A case of one BWSA, which was formed thrice, the first by the DEO, then the last two times by themselves is finally working and earning income from water fee collection. The failure for the first two times was due to low collection efficiency and money mismanagement.</li> <li>No formal system for community participation in site selection and project request; participation at the grassroots level is only considered if willingness from the beneficiaries is required for project request from the provincial government. Process is for barangay government to submit request to MDC/PDC, but no regular process for barangay to formulate projects from consultation and community participation.</li> <li>DILG's experimented with social</li> </ul>

Table 5.7.1 Matrix of Current Practices and Issues from Rapid Assessment of Subject Provinces and Local Offices of Central Government Agencies

Areas	Institutional	Technical	Financial	Community Development
	<p>wide range of topics that are difficult to absorb by the participants at one given time considering their background and experience.</p> <ul style="list-style-type: none"> <li>For monitoring and reporting, no arrangements are made to merge reports of line agencies/offices resulting in fragmentary information and difficulty of feedback. Lack of manpower to monitor.</li> <li>PHO provided training on water quality control/examination and sanitary toilet distribution.</li> </ul> <p><i>Countermeasures</i></p> <ul style="list-style-type: none"> <li>Coordinative mechanism drawn up in all implementing levels of the sector</li> <li>Establishment of a management information program/data base</li> <li>Improved planning and monitoring procedures</li> </ul>	<ul style="list-style-type: none"> <li>Toilets in schools are not used because there is no water.</li> </ul>	<ul style="list-style-type: none"> <li>IRA is not sufficient. 20% development fund is used for other sectors as well.</li> <li>LGU managed waterworks can directly source funds from the Land Bank for initial capitalization and operation. They can request funds from the Province, particularly the barangay based waterworks.</li> </ul>	<p>preparation by requiring beneficiaries to put up its equity contribution through certain amount of money or labor. Until now, the system is still functioning.</p> <ul style="list-style-type: none"> <li>In some BWSAs, the practice is to ban those who get water but are not paying.</li> <li>Participation of NGOs in the planning process is through their membership in the MDC/ PDC.</li> </ul>
2. NEDA Regional Offices	<ul style="list-style-type: none"> <li>Communication between central and regional offices is deficient. Not all information on the on-going projects is reported to central office. Some multi/bilateral assistance are directly extended to the regional offices under certain amount, such as funds from CIDA, UNICEF, Japanese government grass-root assistance. Only foreign assisted and national projects are reported regularly (quarterly reporting) by the regional office to NEDA central office.</li> <li>Regional office has just started and staffing is minimal compared to other regional offices causing difficulty in smooth implementation of the work. Plans to start computer-aided information control system. Project monitoring and evaluation system in regional level is a requisite including information on infrastructure status and investment.</li> <li>NEDA follows a general flow of reporting system within its organization. In spite of this, the central office has no complete or any information on region-specific projects.</li> </ul>			
3. DILG Regional Offices	<ul style="list-style-type: none"> <li>The DILG has field offices down to municipal level.</li> <li>Increasing responsibilities of the DILG as a result of devolution and decentralization of authority to the LGUs, would require greater logistic support, i.e., administrative support, not only technical support.</li> </ul>			
4. DPWH - DEO			<ul style="list-style-type: none"> <li>The DEO has no more budget for WATSAN activities because this has been devolved to the LGUs. However, the people still approach the office and request for financial help for its O&amp;M.</li> </ul>	

## 5.7.2 Institutional Aspect

Table 5.7.2 Office/Agencies Involved in WATSAN Project

Offices/Agencies	Nature of Involvement
Provincial Engineering Office	<ul style="list-style-type: none"> <li>• Supervises in the construction, operation and maintenance of the WATSAN facilities</li> <li>• Prepares F/S, Detailed Designs and Programs of Work</li> </ul>
Provincial Planning & Development Office	<ul style="list-style-type: none"> <li>• Project identification, assessment, prioritization and funding allocation</li> </ul>
Provincial Health Office	<ul style="list-style-type: none"> <li>• Assists in project identification and prioritization</li> <li>• Monitors and evaluates environmental and sanitation activities</li> <li>• Provides augmentation of EVS facilities</li> </ul>
DILG, Provincial Office	<ul style="list-style-type: none"> <li>• Assists in the monitoring of project implementation</li> </ul>
Barangay/Municipal governments thru MPDO	<ul style="list-style-type: none"> <li>• Identifies projects and submits proposals for funding by the provincial government</li> <li>• Provides counterpart support during implementation</li> </ul>
Water Districts	<ul style="list-style-type: none"> <li>• Provides water supply coverage in urban areas</li> </ul>
Provincial General Services Office	<ul style="list-style-type: none"> <li>• Responsible in procurement of materials</li> <li>• Assists in the bidding of materials</li> </ul>
Provincial Accounting and Audit Office, Provincial Budget Office & Provincial Treasury Office	<ul style="list-style-type: none"> <li>• Responsible in the disbursement of funds</li> <li>• Responsible for fund allocation, appropriation</li> <li>• Responsible in financial releases</li> </ul>
NGOs (IPHC)	<ul style="list-style-type: none"> <li>• Provides services especially in CO/CD works/organizing BWSAs/community associations</li> <li>• Provides funding assistance for the construction of water system facilities</li> </ul>
UNICEF/UNDP/OECF	<ul style="list-style-type: none"> <li>• Provides technical and financial assistance in the construction of water supply projects</li> </ul>
NEDA/DOH XI	<ul style="list-style-type: none"> <li>• Provides technical and financial assistance in environmental and sanitation project implementation</li> </ul>
Sangguniang Panlalawigan	<ul style="list-style-type: none"> <li>• Appropriates funds for project implementation</li> </ul>

## 5.7.4 Institutional Arrangements/Capability of the Municipal Government

### Municipality of Alabel

#### (1) Existing Water Supply System

The municipality is operating 3 Level III water systems covering 2 barangays. Two are located in Poblacion and the other one in Barangay Bagacay. Water systems in the former are operated by the municipal government and the Sto. Nino Water Cooperative, while the latter is by the San Miguel Multi-purpose Cooperative serving 189 HHs/consumers.

The sources of these systems are drilled deep wells and have 24-hours service capacity. The LGU-managed water system currently serves 249 households/consumers and plans to expand additional service connections. The water cooperative system currently serves 72 households/consumers. There is no plan yet to expand its coverage.

The agricultural/industrial companies in Maribulan (SACI and SARI) have 2 private Level III water systems to cater to their industrial and institutional needs. The sources of both water systems are also drilled deep wells with 24-hour service level. Moreover, there are 662 operational Level I and 1 Level II (spring development) water facilities in the municipality.

#### (2) Management of the Waterworks

The municipal government of Alabel funded and constructed its water supply system, located at the Poblacion, in 1995. To date, it has a total investment of about 3.7 million pesos. Prior to the commencement of the project, the beneficiaries were consulted regarding the proposed construction. Implementation of the project started in 1995, through a loan of 2.4 million, which was negotiated by the municipal government from the Land Bank of the Philippines-Polomolok Branch. The loan is payable for 3 years. At the start of the project, the LGU counterpart was the provision of funds for the cost of labor. In 1996, the LGU provided an amount of ₱ 241,029.22 for the operation of the system. In the following years thereafter, ₱ 616,000.00 and ₱ 500,000.00 were allotted for O&M.

A committee was created to monitor and ensure the implementation of the project consistent with the provisions stipulated in the Municipal Ordinance No.95-05, "An Ordinance Fixing the Monthly Rate Fee and All Other Fees, Establishing Basic operating

Guidelines and Procedures Pursuant to the Provisions of PD 198 as Amended by PD 768 and 1479 and Determining the Responsible Offices for the Operation of Alabel Level III Water System Project at Alabel, Sarangani Province". The system is considered as a municipal economic enterprise project. Some employees of the municipal government are detailed to serve as water tenders in addition to their regular functions without extra compensation.

The municipal mayor approves applications for service connections and disconnection as recommended by the municipal treasurer and the municipal engineer. The municipal treasurer accepts applications for water service connection, with the payment of corresponding fees prescribed in the ordinance after which the service connection order is endorsed to the municipal engineer for action. Further, the municipal treasurer is also in-charge of the collection of monthly water bill and recommends for approval the application for water service connection and disconnection to the mayor including the specific bank(s) within the municipality designated to collect payment of water bills. On the other hand, the municipal engineer estimates the bill of materials needed for the connection of water line. He is also in-charge of the installations of connection and disconnection of water service lines including maintenance of which he supervises the pump tender, plumbers and electrician. In addition, he recommends to the mayor the approval of water service connection application and those to be disconnected. Meanwhile, the municipal accountant performs such functions as the preparation and submission of updated financial statements to the municipal mayor and to the Sangguniang Bayan on the results of operations. The municipal budget officer, on the other hand, prepares budgets or financial plan for the operation of the water system. The municipal health officer takes care of water chlorination or any means of water treatment and conducts monthly analysis of water samples taken from the reservoir. Finally, the general services officer takes charge of the safekeeping and withdrawals of all service connection material and all other materials needed for the operation of the Level III water system project. Employees of permanent status are assigned to do billing and collection while casuals are hired and assigned to maintain and operate the waterworks.

The municipality has yet to decide whether or not to make the operations of the waterworks autonomous from that of the LGU. Meanwhile, O&M and accounting of income and expenditures are made part of the regular functions of the municipal government of which O&M requirements are still being subsidized by the LGU.



a) O&M and cost recovery practiced at the waterworks

The Level II spring development project managed by the BWSA in Barangay Spring has a total of 28 communal faucets. On the average, there are 5 households for each cluster faucet and these faucets are not provided with water meters. Member-users pay monthly water charges at a flat rate of P 40/IIIH. The users provided labor during construction.

For LGU-Level III services, water charges are set as follows:

- Minimum charge 1 up to 10 cu.m – ₱ 60 for resident/institution; ₱ 120 for commercial/industry
- For 11-20 cu.m – ₱ 7.35/cu.m for resident/institution; ₱ 14.90/cu.m for commercial/industry.
- For 21-20 cu.m – ₱ 7.85/cu.m for resident/institution; ₱ 16.35/cu.m for commercial/industry.
- For 31 cu.m & above – ₱ 8.55/cu.m for resident/institution; ₱ 17.10/cu.m for commercial/industry.

In 1997, actual disbursement including wages of personnel was P 292,167.75. The budget expenditures also include cost for facility expansion, repairs, maintenance and pipe installation. For 1998, the municipal government has not appropriated any amount for operation except for the P 50,000 intended for sanitation activities.

b) Existing Level I water supply facilities

The construction of additional facilities, particularly, Level I requires the following:

- Formation of a BWSA as a component of the project
- MOA between the association and the LGU for operations and maintenance
- The association should be made responsible for the collection of water bills/charges

The municipality recognizes the need for M/P and F/S for the project. Also, the municipal engineer can handle the conduct of training activities of barangay associations as he had experienced doing such while with DPWH.

## 5.8 Community Development

### 5.8.1 General

#### (1) RESULTS OF THE BARANGAY KEY INFORMANT SURVEY FOR SARANGANI

##### I. BARANGAY

###### A. General

The barangay is the smallest political unit in the Philippines. A barangay captain who is elected for a three-year term heads it. Together with the barangay council, the barangay captain is responsible for running the affairs of the barangay. Water supply and sanitation sector projects are important to the barangay. Benefits are directly related to health and productivity, as well to improved economic activities in the community.

The key informant survey was conducted in three barangays representing two municipalities in Sarangani. The key informants were either an official of the barangay council, an official of the BWSA, or a recognized community leader representing the religious, cooperative and women's sectors. The purpose of the survey was to find out the degree and type of government assistance on the sector that cascades from the national government down to the barangay level. The barangays surveyed were: Nagpan and Atlae (Malungon) and Kawas (Alabel).

###### B. Community Organization

###### 1. Manner of Participation in Sector Development

The need for water supply and sanitation facilities is discussed within and prioritized by the Barangay Development Council (BDC). If the barangay is not able to finance the WATSAN project from its own funds, the BDC then endorses the project to the municipality. Again, the prioritization and funding of the endorsed project are discussed in the municipal development council (MDC). If the municipality can finance said project, then it does so, usually by providing technical and material support. The barangay is asked to contribute its share, which is usually in the form of free labor. If, however, the municipality cannot fund the barangays request, the project is once again endorsed, but this time to the province. The project is then discussed/prioritized and provided funding by the provincial development council. If implemented by the

province, a counterpart is asked of the barangay and sector participation is in the form of free labor and/or donations in cash or in kind.

**2. Existing Community Organization Serving /Acting as the Water Association**

The BWSA is still the WATSAN organization that can provide water service in the barangays surveyed. None of the respondents was able to identify any community-based organization that could act as a water association, aside from the BWSA.

**3. Role of the Barangay Council in O&M Assistance in the Form of Funds/ Manpower/Materials**

The three barangay councils manifested their willingness to pay for the training of community members/volunteers on the operation and maintenance of WATSAN facilities.

**II. COMMUNITY PARTICIPATION**

**A. General**

The beneficiaries' participation is recognized as one of the determining factors in the success of the WATSAN sector plans on the community level. Participation by the barangay people is measured by their willingness to organize themselves into a water association and contribute their share towards its operationalization. This may come in the form of free labor, donations in kind or in cash, or their active involvement in the management, operation and maintenance of the WATSAN facilities.

**B. Socio-Economic Conditions**

**1. Average Monthly Income in the Rural Area**

The average monthly income of the households in the barangays surveyed ranges from P1,000 to P2,000. The list of economic activities shows the following: livestock raising, farming, vegetable gardening, and sari-sari-store. The list shows both genders equally involved in these economic activities.

**2. Water Borne/Water Related Diseases**

Incidence of water borne and water related diseases were reported in all the barangays surveyed. Most prevalent diseases are malaria, diarrhea, intestinal disorder, typhoid

fever, dengue fever and amoebiasis. This could be traced to lack of drainage facilities and garbage disposal systems in the areas.

**C. Willingness to Participate**

**1. Initiating the Organization of a WATSAN Association**

Each of the three barangays surveyed has a committee on water and sanitation within the barangay council. The respondents indicated that all the barangay councils are willing to participate in sector projects by initiating the formation of a water and sanitation association. All of the interviewees indicated that the barangay council is willing to pay for and/or facilitate the training for the user-beneficiary volunteers on O&M. In the area of health and sanitation education, almost all also believed that the barangay council has the capability to implement information dissemination activities.

**D. Status of BWSAs/NGOs/CBOs/POs**

**1. Number of Barangay with Functional BWSAs**

All three barangays surveyed do not have Barangay Water and Sanitation Association (BWSA) organized in their communities.

**2. Status of NGOs/CBOs/POs**

Majority of the informants reported having NGOs/CBOs that do work in their communities. The areas of concern include skills training for women, health and sanitation, and livelihood. Specifically related to sector needs are the Women in Development Organization (headed by Merly Nebres) which specializes in skills training for women and Notre Dame Development Center – BRC which promotes health and sanitation.

**E. O&M Practices by Beneficiaries**

**1. Facility Conditions**

Groundwater is widely used as source of water in the barangays surveyed although there are surface water sources being utilized by the people. Water facilities that were constructed in the barangay as early as the '70s were mostly shallow and deep wells. Some springs were also developed in the two barangays in Malungon. Almost all of the systems/facilities are still functional but occasionally have problems. All of the respondents indicated that the water they drink is fit for drinking.

**2. Common Difficulties and O&M Problems Encountered**

Common problems cited by the respondents range from defective pumps to lack of funds for the maintenance work. The problems show that the users/beneficiaries still have the thinking that O&M is a task that belongs to others such as the barangay council or the municipality.

**F. Water Charges Adopted and Collection Efficiency**

**1. Sufficiency of Collected Charges for O&M**

The majority of the respondents indicated that most of the residents do not pay for the use of the water facilities. For those who are paying water fees, they are charged from P11.00 to P20.00 a month.

**2. Current Practices with Affordability by Users and Manner of Fee Collection**

The barangay council treasurer is generally responsible for collecting water fees, according to respondents who are currently paying their dues.

**G. Requests by the Beneficiaries on O&M of the Facilities from LGUs and other Sources**

**1. Government Subsidies Requested by End Users**

From among the three barangays surveyed, only Barangay Kawas received technical assistance from the provincial government, which rehabilitated the Magkove Water Supply System. On the other hand, all three barangays were recipients of financial grants from the province. Barangays Nagpan received financial assistance for its spring development project; Barangay Atlae received assistance for the purchase of toilet bowls; while Barangay Kawas was able to construct 12 deepwells through a financial aide from the province. At the same time, Barangays Nagpan and Kawas was given financial assistance by their respective municipal government for the construction of water systems and health/day care centers. Institutional assistance was also extended to the three barangays. This is in the form of skills training and development planning.

### **III. GENDER**

#### **A. General**

The survey results do not point to a severe lack of gender responsiveness to sector projects, but better awareness on the importance placed on gender responsive planning for the WATSAN sector should be better emphasized.

#### **B. Gender in the Composition of the Barangay Council**

There were 32 members of the barangay councils in the three barangays surveyed. Of this number, 21 were males and 11 females. All barangay captains are male.

#### **C. Gender in the Composition of the BWSA**

There are no BWSAs organized in the barangay surveyed. However, both the men and women respondents expressed willingness to become active members of their respective BWSA once formed in their communities.

#### **D. Gender in Participation in the O&M of the Water Facilities**

All of the key informants from Barangays Nagpan and Atlae indicated that women do not actively participate in the O&M of the water facilities. On the other hand, most of the respondents from Barangay Kawas believed that women could play active roles in the operation and maintenance of water facilities. The women, according to the respondents, can collect contribution for the repair of the system and can maintain the cleanliness of water facilities.

#### **E. Gender in Knowledge or Awareness of Sector Related Information**

There is no gender bias when it came to awareness of sector related information. Both women and men were knowledgeable as seen from the answers to questions such as assistance extended by LGUs, facility conditions, and O&M practices.

## (2) RESULTS OF BARANGAY GROUP INTERVIEWS (SARANGANI)

### A. General

Group interviews were conducted in two selected barangays representing two municipalities in the province of Sarangani. The objectives of the group survey/interviews were to identify potential service population and service level desired by the community, to assess the degree of involvement of both men and women in planning, managing, operating and maintaining WATSAN projects, and the willingness and capacity to pay of potential users.

The Project Team conducted the interviews on two sets of interviewees: an all female group and an all male group, each consisting of a minimum of 10 and a maximum of 20 participants. None of the respondents belonged to the same household. Answers to interview questionnaires were made by raising of hands. The group interviews were conducted in the following barangays: Maribulan (Alabel) and Sapu Masla (Malapatan).

### B. Demographic Profile

#### 1. Population

The aggregate population in the two barangays totaled 7,379, breakdown of which is as follows: Maribulan, 3,458 (1,953 males, 1,505 females) and Sapu Masla, 3,921, (2,005 males, 1,916 females).

#### 2. Households

As indicated by the respondents, there are 1,484 households in the two barangays. Breakdown per barangay is: Maribulan, 754 and Sapu Masla, 730. The figure represents an average of five members per household.

TABLE 1: TOTAL POPULATION OF BARANGAYS AND NUMBER OF HOUSEHOLDS

BARANGAY (MUNICIPALITY)	M	F	T	NO. OF HH
1. Maribulan (Alabel)	1,953	1,505	3,458	754
2. Sapu Masla (Malapatan)	2,005	1,916	3,921	730
TOTAL	3,958 (53.64%)	3,421 (46.36%)	7,379 (100%)	1,484

### 3. Composition of Barangay Councils

There are 23 barangay council members in the two barangays. Of the barangay council members, 17 are males and 6 females. All barangay captains are males.

## C. Respondents' Profile

### 1. Number and Gender of Respondents

There were 48 respondents in the group interviews. Both male and female respondents were equally distributed at 24 each. Below is the breakdown of the number of respondents by gender for each barangay:

TABLE 2: NUMBER OF RESPONDENTS

BARANGAY (MUNICIPALITY)	M	F	T
1. Maribulan (Alabel)	12	10	24
2. Sapu Masla (Malapatan)	12	14	26
TOTAL	24 (50%)	24 (50%)	48 (100%)

### 2. Age Bracket

The majority of the respondents or 30 belonged to 15 to 45 age bracket, with females outnumbering males, 19 to 11. A total of 17 (12 males, 5 females) were under the 46 to 60 age bracket, while 1 male respondent belonged to 60 and above age bracket.

TABLE 3: AGE BRACKETS OF RESPONDENTS

AGE BRACKET	M	F	T	%
15 and Below	-	-	-	-
15-45	11	19	30	63
46-60	12	5	17	35
60 and above	1	0	1	2
TOTAL	24	24	48	100

### 3. Level of Education

Twenty four respondents (13 males and 11 females) attended elementary level of education. Another 13 respondents reached the high school level, and nine attended college education. Two respondent pursued vocational course.



**TABLE 4: RESPONDENTS' LEVEL OF EDUCATION**

EDUCATION LEVEL	M	F	T	%
1. Elementary Level	13	11	24	50
2. Elementary Graduate	-	-	-	-
3. High School Level	7	6	13	27
4. High School Graduate	-	-	-	-
5. College Level	4	5	9	19
6. College Graduate	-	-	-	-
7. Vocational	-	2	2	4
8. Post Graduate	-	-	-	-
9. Not Indicated	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**4. Occupation**

The majority of the respondents (18) are presently engaged in either farming or fishing. The males outnumbered the females in this work category, 14 to 4. Other occupations of the respondents include: Office workers (8); laborers (4); service workers (2) and other occupation (16).

**TABLE 5: OCCUPATION OF RESPONDENTS**

OCCUPATION	M	F	T	%
1. Farmer/Fisherfolk	14	4	18	38
2. Laborer	4	-	4	8
3. Service Worker	2	-	2	4
4. Businessman/woman	-	-	-	-
5. Professional	-	-	-	-
6. Office Worker	4	4	8	17
7. Tech. Equipment Operator	-	-	-	-
8. Others	-	16	16	33
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**D. Socio Economic Profile****1. Number of Household Members**

The total number of household members of the respondents is 218, which is equally distributed at 109 males and 109 females. The figures represent an average of almost five members per household.

**TABLE 6: NUMBER OF HOUSEHOLD MEMBERS**

NO. OF HH MEMBERS	MALE HOUSEHOLD MEMBERS		FEMALE HOUSEHOLD MEMBERS		TOTAL HOUSE-HOLD MEMBERS
	NO. OF RESPONDENTS	TOTAL MALE HH MEMBERS	NO. OF RESPONDENTS	TOTAL FEMALE HH MEMBERS	
1	14	14	13	13	27
2	17	34	15	30	64
3	9	27	14	42	69
4	6	24	6	24	48
5	2	10	-	-	10
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-
<b>TOTAL</b>	<b>48</b>	<b>109</b>	<b>48</b>	<b>109</b>	<b>218</b>

**2. Ages of Household Members**

As pointed out by most male and female respondents, the majority of the household members belonged to the 15-45 age bracket. Male household members outnumbered female members in this age bracket. The 46-60 age level was the second largest age group; while the 60 and above age group has the least number in it.

**TABLE 7: AGE BRACKETS OF HOUSEHOLD MEMBERS**

AGES	MALE RESPONDENTS		T	FEMALE RESPONDENTS		T
	M	F		M	F	
15 and Below	7	9	16	7	7	14
15-45	12	10	22	16	16	32
46-60	12	7	19	8	11	19
60 and above	3	3	6	1		1
<b>TOTAL</b>	<b>34</b>	<b>29</b>	<b>63</b>	<b>32</b>	<b>34</b>	<b>66</b>

**3. Level of Education of Household Members**

The majority of the respondents (23) indicate that most household members have reached elementary education. Meanwhile, 14 respondents said their members attended high school, two said members finished college education and another reported vocational course. One interviewee said a member had pursued post-graduate course.

**TABLE 8: LEVEL OF EDUCATION OF HOUSEHOLD MEMBERS**

EDUCATIONAL LEVEL	EDUCATED HOUSEHOLD MEMBERS		
	M	F	T
1. Elementary Level	12	11	23
2. Elementary Graduate	-	-	-
3. High School Level	6	8	14
4. High School Graduate	-	-	-
5. College Level	3	2	5
6. College Graduate	-	-	-
7. Vocational	3	2	5
8. Post Graduate	-	1	1
9. Not Indicated	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>

**4. Employed Household Members**

The majority of the respondents did not respond to the question, which may mean most of the household members were not employed. Of members who were employed, most belonged to the 15 to 45 age group. Five respondents indicated 46-60 age bracket, while 1 reported a member within the above 60 age group.

**TABLE 9: EMPLOYED HOUSEHOLD MEMBERS**

RESPONSE	M	F	T	%
15 and Below	-	-	-	-
15-45	10	6	16	34
46-60	3	2	5	10
60 and above	1	-	1	2
No Response	10	16	16	54
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**5. Occupation of Household Heads and Other Members**

The majority of the male household heads and members were engaged in either farming or fishing where they derived income. Two female respondents reported members to have been employed as office workers. There were also 4 laborers, and a service worker.

For those who were gainfully employed, the respondents indicated that they earned an average monthly income of P 5,000.00 and below. Only three female workers earned more than P 5,000.

**TABLE 10: OCCUPATION OF HOUSEHOLD MEMBERS**

OCCUPATION	M	F	T
1. Farmer/Fisherfolk	18	-	18
2. Laborer	4	-	4
3. Service Worker	1	-	1
4. Businessman/woman	-	-	-
5. Professional	-	-	-
6. Office Worker	4	2	6
7. Dressmaker	-	-	-
8. Other/Occupation	-	24	-

**TABLE 11: MONTHLY INCOME OF HOUSEHOLD MEMBERS**

ITEM	M	F	T	%
Below P5,000	24	21	45	94
P 5,000 to 14,999	-	2	2	4
P 15,000 to 24,999	-	1	1	2
Above P 25,000	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**6. Average Expenditures of Household**

All male respondents, together with 20 female interviewees indicated that the average monthly expenses of the family was below P5,000. Four female participants reported expenses ranging from P 5,000 to P 24,999.

**TABLE 12: MONTHLY EXPENSES OF HOUSEHOLD MEMBERS**

ITEM	M	F	T	%
Below P5,000	24	20	44	92
P 5,000 to 14,999	-	2	2	4
P 15,000 to 24,999	-	2	2	4
Above P 25,000	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**7. Practices**

*Source of Drinking Water.* The majority of the respondents (26) indicated that the people get their source of drinking water from communal faucet. Other sources mentioned were: private shallow well (14 respondents), communal shallow well, (4), communal deep well (2) and communal dug well (2).

**TABLE 13: SOURCES OF DRINKING WATER**

SOURCES	USER RESPONDENT		T
	M	F	
1. Communal Shallow Well	2	2	4
2. Communal Deep Well	2	-	2
3. Communal Dug Well	-	2	2
4. Communal Faucet	12	14	26
5. Private Shallow Well	8	6	14
6. Private Deep Well	-	-	-
7. Piped Water Supply	-	-	-
8. Others	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>

*Responsible for Fetching Water.* The majority of the male respondents (17) said that the husband is still the one responsible for fetching drinking water for family use. The women also shared the burden as eight female respondents indicated that the wives are doing the task. For eight respondents (6 males and 2 females) the task is given to the male children as compared to six interviewees who said the female children are doing the task. Nine female respondents said other persons outside of the family were the ones fetching the water.

**TABLE 14: RESPONSIBLE FOR FETCHING DRINKING WATER**

FAMILY MEMBER	USERRESPONDENT		T	%
	M	F		
1. Husband	17	0	17	35
2. Wife	-	8	8	17
3. Male Children	6	2	8	17
4. Female Children	1	5	6	13
5. Others	-	9	9	19
6. Uncertain	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>101</b>

*Frequency of Fetching Water.* The majority of the respondents did not give reply to this question. But for the majority of male respondents who answered (5), a family fetch drinking water at an average frequency of twice a day. For the majority of female respondents, it takes three times a day to haul water for domestic use

**TABLE 15: FREQUENCY OF FETCHING DRINKING WATER**

DURATION	RESPONDENTS		T	%
	M	F		
1. Once a Day	2	1	3	14
2. Twice a Day	5	3	8	37
3. 3x a Day	4	5	9	41
4. 4x a Day	1	1	2	9
5. More	-	-	-	-
6. No Response	12	14	26	54
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>22</b>	<b>109</b>

*Duration of Fetching Water.* For most of the respondents (23), it takes only about 10 minutes to fetch water from the source to their house. For 14 female interviewees, however, one will take more than 30 minutes to haul water. Six male interviewees indicated 30 minutes, while another five male, 20 minutes. As many as 23 respondents did not respond to this question.

**TABLE 16: DURATION FOR FETCHING DRINKING WATER**

DURATION	RESPONDENTS		T	%
	M	F		
1. About 10 Minutes	13	10	23	48
2. About 20 Minutes	5	-	5	10
3. About 30 Minutes	6	-	6	13
4. More Than 30 Minutes	-	14	14	29
5. No Response	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>101</b>

*Problems with Source.* All of the respondents admitted that they have problems with the current water source.

**TABLE 17: PROBLEM WITH SOURCE OF WATER**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. No Problem	0	0	0	0
2. There are problems	24	24	48	100
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**E. Institutional**

**1. Presence of BWSA**

The majority of the respondents (26) indicated that there is a BWSA in their communities. The rest (22) said there was no BWSA in the area.

**TABLE 18: KNOWLEDGE OF THE EXISTENCE OF BWSA**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	12	14	26	54
2. No	12	10	22	46
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

Corollary to this, the majority of the respondents indicated that they were officers and members of the BWSA. The rest said that they are not actively involved in the affairs of the BWSA.

**TABLE 19: MEMBERSHIP TO THE BWSA**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	12	14	26	54
2. No	12	10	22	46
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

For respondents who were active members of BWSA four (2 males and 2 females) were BWSA officers; 11 members assist in the repair and maintenance of facilities; three were involved in the collection of water fees; and three attended/facilitated training programs. The rest said that they are not actively involved in the affairs of the BWSA.

**TABLE 20: HOW ACTIVELY ARE YOU INVOLVE IN THE AFFAIRS OF THE BWSA**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. As BWSA Officer	2	2	4	8
2. As Collection Officer	1	2	3	6
3. Assist in the repair maintenance of facilities	8	3	11	6
4. Attend/ Facilitate Training	1	2	3	11
5. Not active	12	15	27	46
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100%</b>

**2. Who maintains the facilities of the BWSA?**

Half of the respondents (10 males and 14 females) indicated that someone from the BWSA was responsible for maintaining the facilities of BWSA. The other half could not determine the person/group responsible for this task.

**TABLE 21: RESPONSIBLE FOR MAINTAINING FACILITIES OF THE BSA**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Someone in the Barangay	-	-	-	-
2. Professional caretaker	-	-	-	-
3. Someone from the BWSA	10	14	24	46
4. No one	-	-	-	-
5. Don't know/no response	12	12	26	54
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**3. Interested to be a member of BWSA**

The majority of the respondents (26) did not respond to the question. Twenty two interviewees indicated interest in becoming a member of BWSA once it is formed and/or activated in their respective barangays.

**TABLE 22: INTEREST OF RESPONDENTS TO JOIN BWSA**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Interested	12	10	22	46
2. Not Interested	-	-	-	-
3. No Response	12	14	26	54
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**4. How can respondents become actively involve in BWSA affairs?**

A total of 26 of the respondents, or 12 males and 14 females, indicated willingness to contribute either cash or free labor as a manifestation of their active involvement with the BWSA. Two respondents preferred to be officers of the BWSA, nine in the collection of fees, eight to undertake repair and maintenance while 10 opted to be just members.

**TABLE 23: HOW RESPONDENTS CAN BECOME ACTIVELY INVOLVED IN WATSAN PROJECTS**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Contribute Cash	12	14	26	54
2. Contribute labor	12	14	26	54
3. Be Officer	-	2	2	4
4. Collection of Fees	7	2	9	19
5. Do Repair/Maintenance	6	2	8	12
6. Just Member	-	10	10	21



5. **If not interested, where to get source of water**

All of the respondents were uncertain as to the sources of water in the event that they will not be members of the BWSA.

**TABLE 24: SOURCES OF DRINKING WATER OF NON-BWSA MEMBERS**

SOURCE OF WATER	RESPONDENTS		T	%
	M	F		
1. Private Well				
2. Communal Well				
3. Spring Water				
4. Buy from vendor				
5. Others				
6. Uncertain	24	24	48	100
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

6. **Responsible for minor repairs of water facilities**

The female member of the families, according to the majority of the respondents (36), was responsible for doing minor repairs of the family's water supply facility. The rest of the interviewees were uncertain on this aspect.

**TABLE 25: RESPONSIBLE FOR MINOR REPAIRS**

SOURCE OF WATER	RESPONDENTS		T	%
	M	F		
1. Female Member	12	24	36	75
2. Male Member	-	-	-	-
3. Somebody in the Brgy.	-	-	-	-
4. Professional Caretaker	-	-	-	-
5. Owner of the Well	-	-	-	-
6. Uncertain	12	-	12	25
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**F. Training Activities**

1. **Training Program attended in 1997**

Majority of the respondents, 12 male and 17 female for a total of 29, said they attended training program in 1997. Training programs attended by the respondents were: family health care, nursery training, family health care, aid preparation and COPAR Trading.

**TABLE 26: TRAINING ATTENDED BY RESPONDENTS IN 1997**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	12	17	29	60
2. No	12	7	19	40
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**2. Kinds of Training Program**

The respondents attended various training programs in 1997. Table 27 summarizes the training programs/seminars attended by the respondents during the year.

**TABLE 27: TRAINING COURSES ATTENDED BY RESPONDENTS IN 1997**

BARANGAY	MALE	FEMALE
1. Maribulan (Alabel)	AIP Preparation Copar Training	BHW, BDP Barangay Administration
2. Sapu Masla (Malapatan)	Family Health Care Nursery Training Barangay Development	Livestock and Poultry Raising Training ion Family Health Care Partnership Training Health Development Training Family Health Care Training Reproductive Health Training RDA-SRA Training BOP, RIC Barangay Health Volunteer Training

**3. On BWSA Training**

The majority of the male respondents indicated they are knowledgeable of the training programs for BWSA members. Half of the respondents are willing to attend such training programs. On the other hand, few female respondents did have knowledge, but they all expressed willingness to attend training programs.

**TABLE 28: AWARENESS ON THE FOLLOWING TRAINING FOR BWSA**

TRAINING PROGRAM	YES		NO	
	M	F	T	M
1. Caretaker's Training	10	2	14	22
2. Collection/Finance	5	1	19	23
3. Repair/O&M	10	2	2	22

**TABLE 29: WILLINGNESS TO ATTEND BWSA-RELATED TRAINING PROGRAMS**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	12	24	36	68
2. No	12	-	12	32
3. Uncertain	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**4. Training on Health Education**

The majority of the respondents, or 12 males and 15 females for a total of 27 have attended health education training program. The other interviewees, or 12 males and nine females have participated in BWSA health training program. If given a chance, however, the respondents wanted to attend WATSAN related training programs such as: water system management, livelihood, Electronics and Automotive and Food Processing Technology.

**TABLE 30: PARTICIPATION IN HEALTH EDUCATION AND TRAINING**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	12	15	27	56
2. No	12	9	21	44
3. Uncertain	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**TABLE 31: TYPES OF TRAINING RESPONDENTS WISH TO ATTEND**

BARANGAY	MALE	FEMALE
1. Maribulan (Alabel)	Training on Water System Related Training on Livelihood Training on Electronics and Automotive	Health and Sanitation Training Livelihood Training
2. Sapu Masla (Malapatan)	Water System Management Training Livelihood Training Nursery Development Training	Dressmaking Food Processing Technology Livelihood Training

In relation to this, most of the respondents (23) wanted to attend training programs that would be conducted for three days. The interviewees were almost equally varied in their choices distributed on their training period as reflected in the following table.

**TABLE 32: DESIRABLE TRAINING PEERIOD**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Less Than 1 Day	-	-	-	-
2. One (1) Day	1	6	7	14.5
3. Two (2) Days	3	4	7	14.5
4. Three (3) Days	16	7	23	48
5. More Than Three Days	-	7	7	14.5
6. Uncertain	4	-	24	8.5
<b>TOTAL</b>	<b>20</b>	<b>24</b>	<b>48</b>	<b>100</b>

**G. Community Development**

**1. CBOs and contact persons**

As pointed out by all the respondents, some community-based organizations have been doing different development works in the barangays. Table 34 lists down these NGOs/CBOs and their contact persons:

**TABLE 33: ARE THERE NGOs WORKING IN THE BARANGAY**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	24	24	48	100
2. No	-	-	-	-
3. Uncertain	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**TABLE 34: NGOS/CBOS IN THE BARANGAYS**

BARANGAY	CONTACT PERSON
1. Maribulan (Alabel) Maribulan MPC Barangay Women's Coops Senior Citizens Coops Small Coconut Farmer's Organization (SCFO)	Segundo Montefalcon
2. Sapu Masla (Malapatan) Davao Medical School Foundation (DMSF) Integrated Primary Health Care Business Resources Center (BRC)	Rudy Carillo – Project Coordinator Rudy Carillo

**2. Were the respondents consulted on their respective roles and responsibilities?**

All respondents indicated they were consulted on their proposed roles and responsibilities on the planning, design and construction of their water supply facilities. This is also true for the operation and maintenance and financing aspects of the system where the same number of respondents claimed they were consulted.

In the same manner, the majority of female respondents indicated that they were consulted when the BWSA was formed in their respective barangays as well as when the level/type of services and water fees were agreed upon. They were also involved in the O&M and the financing of the system.

**TABLE 35: RESPONDENTS CONSULTED/INVOLVED IN PAST WATSAN PROJECTS**

BWSA ACTIVITIES	YES		T
	M	F	
1. Planning & Design	24	15	39
2. Construction Facilities	24	19	43
3. O&M of the System	24	15	39
4. Financing of the System	24	17	41

**TABLE 36: WERE YOU CONSULTED WHEN**

ACTIVITIES	YES		NO		T
	M	F	M	F	
1. BWSA was formed in the Brgy.	12	-			12
2. Water fee was decided upon	12	14			26
3. Level or type of service was agreed upon					
4. Facilities were constructed	12	14			26
	12	14			26

**3. How did the respondents participate in past construction projects?**

All of the male respondents participated in the construction of previous WATSAN facilities by contributing cash or in kind. Majority of them provided free labor (21), cash and site (14 each), and material (12). Only one female respondent donated the site but 13 other than female respondents gave other services.

**TABLE 37: PARTICIPATION IN PAST CONSTRUCTION PROJECTS**

TYPE OF PARTICIPATION	RESPONDENTS		T	%
	M	F		
1. Contributed Cash	14	-	14	16
2. Provided labor	21	-	21	25
3. Donated Site	13	1	14	16
4. Provided Materials	12	-	12	14
5. Others	12	13	25	29

**4. Will the respondents participate in future projects?**

For future projects, all respondents indicated that they would participate and/or contribute for certain activities. For the formation of BWSA 13 male and 10 female respondents will participate. On the formulation of water rates, everybody will likely to participate.

In the selection of sites, construction of facilities and in the operation and maintenance however, the interviewees were willing to be involved.

**TABLE 38: WILLINGNESS/TYPE OF PARTICIPATION IN FUTURE PROJECTS**

PROJECT ACTIVITIES	YES		NO	
	M	F	M	F
1. Formation of BWSA	13	10		
2. Formulation of water rates	24	24		
3. Selection of sites and levels of services				
4. Construction of facilities	24	10		
5. Operation and maintenance	24	24		
	24	24		

**H. Financial Aspects**

**1. Are respondents presently paying for their water supply?**

The majority of the respondents (26) claimed they are presently paying for their water supply. The rest of the female interviewees indicated they are not paying.

**TABLE 39: NUMBER OF RESPONDENTS PRESENTLY PAYING WATER FEE**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	12	14	26	54
2. No	12	10	22	46
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**2. If so, how much per household?**

All of those presently paying indicated that they are paying the amount ranging from P6.00 to P10.00.

**TABLE 40: PRESENT WATER FEES PAID**

WATER FEES	RESPONDENTS		T	%
	M	F		
Below P 5.00	-	-	-	-
P 6.00 to P 10.00	12	14	26	54
P 11.00 to P 20.00	-	-	-	-
P 21.00 to P 30.00	-	-	-	-
P 31.00 to P 40.00	-	-	-	-
P 41.00 to P 50.00	-	-	-	-
Above P 50.00	-	-	-	-
Not paying	12	10	22	46
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

3. **Is the water fee enough for O&M?**

Majority of the respondents who were paying water fees was uncertain as to the adequacy of water fee to maintain the system. About 25% or 12 respondents said the water fee is adequate.

For those who claimed the water fees being collected are not enough they said the reasons could be that the water fee is low, O&M is too high or not all users pay. Nineteen respondents were uncertain.

**TABLE 41: ADEQUACY OF WATER FEE FOR O&M**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	3	9	12	25
2. No	9	5	14	29
3. Uncertain	12	10	22	46
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**TABLE 42: IF NOT ADEQUATE, STATE THE REASON/S**

REASON/S	M	F	T	%
1. Water fee is low	9	1	10	
2. O&M cost is too high	9	1	10	
3. Not all water users pay their Water fee	9	3	12	
4. Others/uncertain	-	19	19	

5. **Who shoulders the O&M of Facilities?**

The majority of the respondents could not determine which group/s in the community shoulder the cost of the operation and maintenance of the water supply facilities. However 18 (12 males and 6 females) agreed the Barangay Council should be responsible. Another four respondents said it should be the private owner.

**TABLE 43: RESPONSIBILITY FOR SHOULDERING THE O&M COSTS**

PERSON	RESPONDENTS		T	%
	M	F		
1. Barangay Council	12	6	18	37.5
2. WATSAN Association	-	-	-	-
3. Private Owner	-	4	4	8.3
4. Don't know/Uncertain	12	14	26	54.2
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

6. Are the people willing to pay for O&M of future facilities?

All the respondents expressed willingness to pay/contribute for the operation and maintenance of future facilities.

TABLE 44: RESPONDENTS' WILLINGNESS TO PAY FOR FUTURE FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	24	24	48	100
2. No	-	-	-	-
3. Uncertain	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

7. How much are respondents willing to pay?

Of those who are willing to pay, the majority or 27 (11 males and 16 females) claimed they can only pay from P 6.00 to P 10.00. per month of water service. Thirteen male respondents agreed to pay water fees below P 5.00. Eight female respondents will pay fees ranging from P 11.00 to P 20.00

TABLE 45: AMOUNT RESPONDENTS ARE WILLING TO PAY

RESPONSE	RESPONDENTS		T	%
	M	F		
Below P 5.00	13	-	13	27
P 6.00 to P 10.00	11	16	27	56
P 11.00 to P 20.00	-	8	8	17
P 21.00 to P 30.00	-	-	-	-
P 31.00 to P 40.00	-	-	-	-
P 41.00 to P 50.00	-	-	-	-
Above P 50.00	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

8. Are you willing to contribute for future projects?

Significantly, the majority respondents (38) indicated their willingness to contribute cash or in kind for the construction of WATSAN facilities in their respective barangays. Ten female respondents were not willing to contribute. As for the reasons for not willing to contribute, all could not provide answers.

TABLE 46: WILLINGNESS TO RESPONDENTS TO CONTRIBUTE FOR FUTURE FACILITIES

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	24	14	38	79
2. No	-	10	10	21
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>



**TABLE 47: IF NOT WILLING TO CONTRIBUTE, STATE THE REASON/S**

REASON/S	M	F	T	%
1. Water fee is low	-	-	-	-
2. O&M cost is too high	-	-	-	-
3. Not all water users pay Water fee	-	-	-	-
4. Uncertain	24	24	48	100
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**9. If so, what kind?**

Respondents gave varied answers. About 38 respondents (79%) indicated they could provide free labor; 17 male respondents would contribute materials while 11 interviewees (25%) will provide materials. Fifty percent were uncertain on this subject area.

**TABLE 48: TYPES OF CONTRIBUTION**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Will provide free labor	24	14	38	79
2. Will donate site	11	-	11	23
3. Will provide materials	17	-	17	35
4. Others/Uncertain	24	-	24	50

**I. Health and Sanitation**

**1. Type of toilet**

All male respondents, together with 10 female participants, indicated that household toilet, which flushes to a septic tank on the site is widely used. The rest of the female interviewees said they use private pit latrine. One female respondent said public toilet is also used.

**TABLE 49: TYPES OF TOILETS RESPONDENTS USE**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Toilet w/ flushes to septic tank on the site	24	10	34	71
2. Toilet w/ flushes/drops straight to sea	-	-	-	-
3. Private pit latrine	-	13	13	27
4. Shared flush toilet w/septic tank	-	-	-	-
5. Public toilet	-	1	1	2
6. Bush or other open outdoor site	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

2. Who got sick during the past year? What sickness?

The majority of the respondents could not determine the afflicted with water-related diseases. For those who responded, the female children were most afflicted with these diseases during the year. Susceptible also were the wives as ascertained by six respondents. The male children and the husband got sick also as indicated by 4 and 5 respondents respectively. As to the type of diseases most prevalent were skin diseases (8); diarrhea (4); kidney trouble (3), and typhoid fever (1).

TABLE 50: HOUSEHOLD MEMBERS FREQUENTLY GOT SICK IN 1997

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Husband	3	1	4	9
2. Wife	3	3	6	13
3. Father	-	1	1	2
4. Mother	-	-	-	-
5. Male Children	4	1	5	11
6. Female Children	9	4	13	28
7. Grandmother	-	-	-	-
8. Grandfather	-	-	-	-
9. Uncertain	5	14	18	38
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

TABLE 51: WATER-RELATED ILLNESSES

DISEASE	RESPONDENTS		T	%
	M	F		
1. Diarrhea	4	-	4	8
2. Kidney trouble	2	1	3	6
3. Gastro-enteritis	-	-	-	-
4. Cholera	-	-	-	-
5. Typhoid fever	1	-	1	2
6. Malaria	-	-	-	-
7. Skin Disease	6	2	8	17
8. Schistosomiasis	-	-	-	-
9. Uncertain	11	21	32	67
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

3. Health and hygiene practices

Most respondents recognized the importance of good health and hygiene practices. They learned about health and sanitation matters mostly from radio. Other popular source of information include NGOs, relatives and friends, school and television. (Refer to Table 53).

**TABLE 52: DO YOU RECEIVE/GET INFORMATION ABOUT HEALTH AND SANITATION**

RESPONSE	RESPONDENTS		T	%
	M	F		
1. Yes	24	24	48	100
2. No	-	-	-	-
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>48</b>	<b>100</b>

**TABLE 53: WHERE PEOPLE LEARNED HEALTH AND HYGIENE EDUCATION**

RESPONSE	RESPONDENTS		T
	M	F	
1. Radio	24	10	34
2. Newspapers	-	-	-
3. Television	-	10	10
4. NGOs	12	14	26
5. Family and Friends	12	10	22
6. Health Sanitation/ clinic/Hospitals	24	6	30
7. Health workers/ inspection	24	14	38
8. School	12	10	22
9. Others/HMO	12	-	12

### 5.8.5 Utilization of NGOs

#### LIST OF NGOs / CBOs FOR SARANGANI

NAME OF NGOS/PSO'S/PO'S	CONTACT PERSONS	ADDRESS / TEL. #
1. Institute of Primary Health Care-Davao Medical School Foundation	Dr. Warlito Vicente Executive Director	Davao City Tel.:
2. Mindanao Baptist Rural Life Center	Mrs. Leticia T. Espero Training Director	Kinusukusan, Bansalan, Davao del Sur Tel.:
3. Mindanao State University	Dr. Macapado Muslim Chancellor	Tambler, General Santos City Tel.:
4. University of Southern Mindanao	Dr. Virgilio Oliva President	Kabacan, Cotabato Tel.:

## 5.8.6 Existing Community Development Process

### Detailed Typical CD Process in Agusan del Sur

- 1) **Make courtesy calls.** Courtesy calls are made to barangay/sitio officials prior to the conduct of meetings with the community. Then, a series of meetings and community assemblies are done where the WATSAN program is introduced, its significance and impact taken up and the importance of organizing promoted. This is followed by a more detailed presentation/orientation of the project – its concept, features, history, stakeholders, and the CO process utilized. Depending on the level of community awareness regarding the program/project, two or three meetings/assemblies are needed before doing the baseline survey.
  
- 2) **Preparation of profile (secondary information) and survey forms.**
  - (a) General information. Distance from barangay to poblacion, mode of travel, time and fare; no. of sitio/purok; dominant ethnic groups, common occupation of residents; demographic data (no. of household, male and female population) by sitio/purok, no. of dwelling structures, school buildings, other buildings, availability of electricity by sitio/purok.
  
  - (b) Barangay WATSAN status. Existing water supply systems, by sitio/purok, by type and service level, no. of facilities (functioning), potability, no. of HH served, who installed, who operates, user charges, if any; HHs toilet facilities, by sitio/purok, no. of HHs with private toilets by type, no. of HH using shared toilets by type, no. of HH without toilets; no. of community waste disposal systems by sitio/purok, by method and wastewater system; no. of reported morbidity and mortality cases of water-borne/contact/vector-borne diseases of barangay residents.
  
  - (c) WATSAN related programs and projects in the barangay. Existing WATSAN programs/project by type of activity, implementing organization/agency, sponsoring funding agency, specify years when operated in barangay, name of community association organized, if any; past WATSAN programs/projects by type of activity, implementing organization/agency, sponsoring funding agency, specify years when operated, name of community association organized, if any; Community organizations in the barangay, watsan related groups/organization and other community organizations, its name of group/organization, sitios where members are, sponsoring agencies, year organized and status; other barangay facilities.

(d) Resources for barangay water supply and toilet facilities fabrication. Brief description of water sources-undeveloped springs, streams and other water sources which can be tapped and developed, sources which can be improved including estimated distance to center of HHs to be served, availability of water, estimated flows during dry and wet seasons; water and well depths by sitio/purok, by season; availability of construction materials for water supply and toilet if available for free at barangay or at hardware/other stores, its sources, name and address of store, materials available, distance from barangay and means of transport for materials; sources of pumps and spare parts for pumps – name and address of dealer/store, types of pumps/parts available and distance from barangay; barangay residents with skills in water supply system construction and maintenance, type of skill, no. of persons and remarks; well drillers and water supply contractors who can be tapped for barangay works, their name address, services rendered and charging rates; local fabricators of toilet bowls, their name, location, type/description of toilet bowl.

3. **Identify of community volunteers.** As an initial step in community organizing, a core group of about 7 persons consisting of community leaders is formed. This is the formation of an informal community organization that will assist the CD worker in the preparation of CO strategies, community profiling, identification of project sites, and other work.
4. **Conduct baseline survey.** In the conduct of this survey, focus group discussion was applied and the results validated during barangay spot mapping. The barangay spot map reflects the location of structures (scaled) and different facilities/infrastructure. This serves as a planning tool in the development of WATSAN program for the area.
5. **Inspect/identify project sites and validate projects.** An assembly is called again to present the results of the survey, its profile, assessment and needs. The CD team situates the community, i.e., *where they are now in the sector*. A member of the CD team will then facilitate the surfacing of thoughts from the group in terms of identifying the needs for WATSAN facilities, how project will be implemented in their area, how the facility will be designed and constructed, and how the community perceives their role in the project. In some cases, the community request technical assistance from the Center on site selection of identified areas.
6. **Conduct technical and community consultative meetings** of members and officers together with barangay officials. By this time, the core group has already specific

projects to be implemented. Together with these interim officers, meetings with barangay officials are undertaken to determine local counterpart funding support to the program/project.

7. **Facilitate project implementation.** After funding has been assured, the CD team facilitates the implementation of the project through supervision and monitoring progress of construction. Contribution from the community comes in the form of free labor (*pahina*).
8. **Consolidate BWSA Organization.** The core group formulates the by-laws and policies of the organization and have these ratified by the members. The election of BWSA officers follows. A barangay resolution is passed endorsing the association and submitted to the Municipal Development Council/Sangguniang Bayan for registration/accreditation. Parallel to this activity is the completion of the facility and in most cases, the turn-over of the facility to the newly-organized BWSA, which can coincide with the swearing-in of BWSA officials.
9. **Conduct training on skills and management to BWSA officials by the Center.** The module includes topics on: human resource development (self and group awareness, communication skills, group facilitation and conducting meeting, effective community work, leadership skills and roles of officers and members, and conflict management); technical (hydrogeology and site selection, well construction and identification of handpump parts, equipment plumbing tools and materials for construction and repairs, hand pump principles of operation, maintenance and approach in trouble shooting, spring development, types of spring, their characteristics and method of developing, operation and maintenance of tank, spring box and distribution line, excreta, liquid and solid disposal system, water related diseases-prevention/control and water quality surveillance); financial management; project planning management; and action planning.
10. **Undertake follow-up activities.** The CD team after the construction of the WATSAN facilities undertakes follow-up activities such as monitoring and evaluation and the provision of recommendations/adjustments on the O&M of the facilities, where needed.

---

Source: DILG/WATSAN UNDP-PHI as modified by Province of Agusan del Sur

