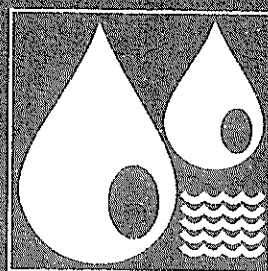


JAPAN INTERNATIONAL COOPERATION AGENCY

# Comprehensive Basic Study of the Autonomous Region in Muslim Mindanao in the Republic of the Philippines

## Final Report



### WATER SUPPLY AND SANITATION SECTOR

### PROVINCE OF BASILAN

December 2003

**PKII** **ENGINEERS**  
ENGINEERING CONSULTANT

IN ASSOCIATION WITH



**ORIENT INTEGRATED DEVELOPMENT CONSULTANTS INC.**



**COMPREHENSIVE BASIC SURVEY  
OF THE AUTONOMOUS REGION  
IN MUSLIM MINDANAO**

**WATER SUPPLY AND SANITATION SECTOR**

**PROVINCE OF BASILAN**

**FINAL REPORT**

**DECEMBER 2003**


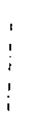









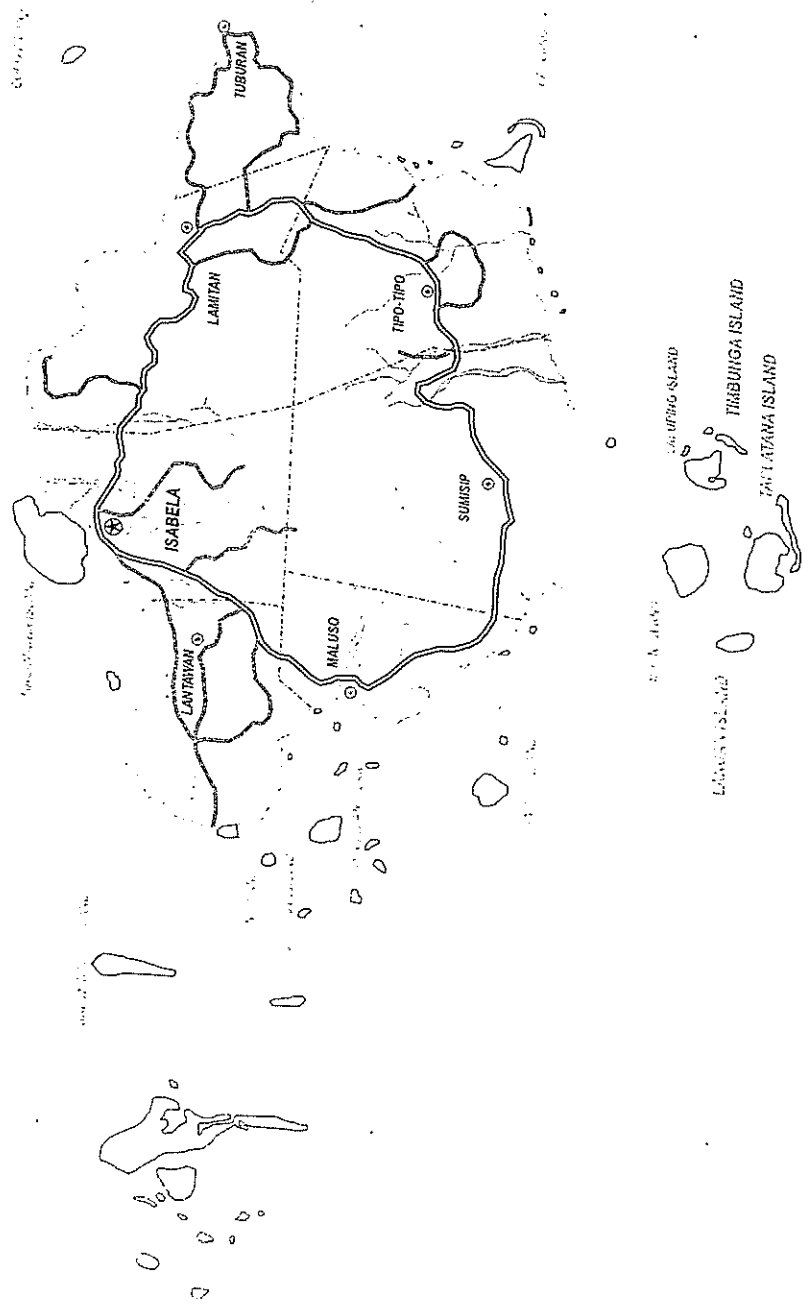
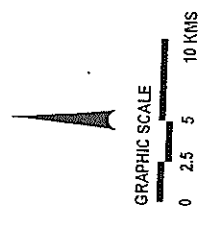
SULU SEA  
MINDANAO  
VICINO GULF  
MINDANAO SEA

**KEY MAP**

**LEGEND:**

-  Provincial Boundary
-  Municipal Boundary
-  River
-  National Road
-  Provincial Road
-  City Center
-  Town Center

**PROVINCE OF BASILAN**





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## LIST OF ABBREVIATIONS

ADB	-	Asian Development Bank
AFMA	-	Agriculture and Fisheries Modernization Act
AIP	-	Annual Investment Plan
ARG	-	Autonomous Regional Committee
ARMM	-	Autonomous Region in Muslim Mindanao
CBOS	-	Community-based Organization
COA	-	Commission on Audit
CPSO	-	Central Project Support Office
CSC	-	Civil Service Commission
DBM	-	Department of Budget and Management
DILG	-	Department of Interior and Local Government
DOF	-	Department of Finance
DOH	-	Department of Health
DPWH	-	Department of Public Works and Highways
IEC	-	Information Education Campaign
IMR	-	Infant Mortality Rate
IRA	-	Internal Revenue Allotment
JICA	-	Japan International Cooperation Agency
KFI	-	Kasanyangan Foundation, Inc.
LCE	-	Local Chief Executive
LGU	-	Local Government Unit
LWUA	-	Local Water Utilities Administration
MBUSSP	-	Mindanao Basic Urban Services Sector Project
MGB	-	Mines and Geoscience Bureau
MNLF	-	Moro National Liberation Front
MPDO	-	Municipal Planning and Development Office
NAMRIA	-	National Mapping and Resources Information Administration
NAPOLCOM	-	National Police Commission
NEDA	-	National Economic Development Authority
NSCB	-	National Statistics and Coordination Board
NSDW	-	National Standards for Drinking Water
NSO	-	National Statistics Office
NWRB	-	National Water Resources Board
ORG	-	Office of the Regional Director
PDC	-	Provincial Development Council
PDDO	-	Provincial Planning and Development Office
PHO	-	Provincial Health Officer
POs	-	Peoples Organizations
PST	-	Provincial Sector Team
PWSO	-	Provincial Water and Sanitation Office
QV	-	Quaternary Volcanics
QVP	-	Pliocene to Recent Pyroclastic
REDBP	-	Regional Development and Planning Board
RLA	-	Regional Legislative Assembly
RLEDAC	-	Regional Legislative and Executive Development Advisory Committee

ROAC	-	Regional Development Administration Committee
RPDO	-	Regional Planning and Development Office
RPMEC	-	Regional Project Monitoring and Evaluation Committee
RRUC	-	Regional Reconciliation and Unification Council
SPOA	-	Southern Philippines Development Authority
TMS	-	Technical Management Services
TOR	-	Terms of Reference
WATSAN	-	Water Supply and Sanitation
WD	-	Water District

## FOREWORD

The “Comprehensive Basic Survey of the Autonomous Region In Muslim Mindanao (ARMM)” in the Republic of the Philippines, hereinafter referred to as the “Survey”, was funded by the Japan International Cooperation Agency (JICA) of the Government of Japan. The Survey had commenced on August 4, 2003 and was for three (3) month duration. The sectors included in the Survey were:

- (1) Agriculture and Fisheries
- (2) Health and Medical Care
- (3) Education
- (4) Basic Infrastructure
- (5) Governance
- (6) Water Supply and Sanitation

All the information/data used in the survey was generated during the aforementioned survey period with the objective of gathering as much as possible the latest statistics available to provide an up-to-date picture of the current situation in the ARMM. What is therefore provided in these reports are the latest available data, though in some cases these already seemed outdated.

The difference between time period (year) reflected by the statistics and the period (year) of the conduct of this Survey shows the inadequacy in the availability of updated information. In instances wherein the desired information/data were not available, the Survey had to generate the necessary information itself through field surveys.

***EXECUTIVE SUMMARY***



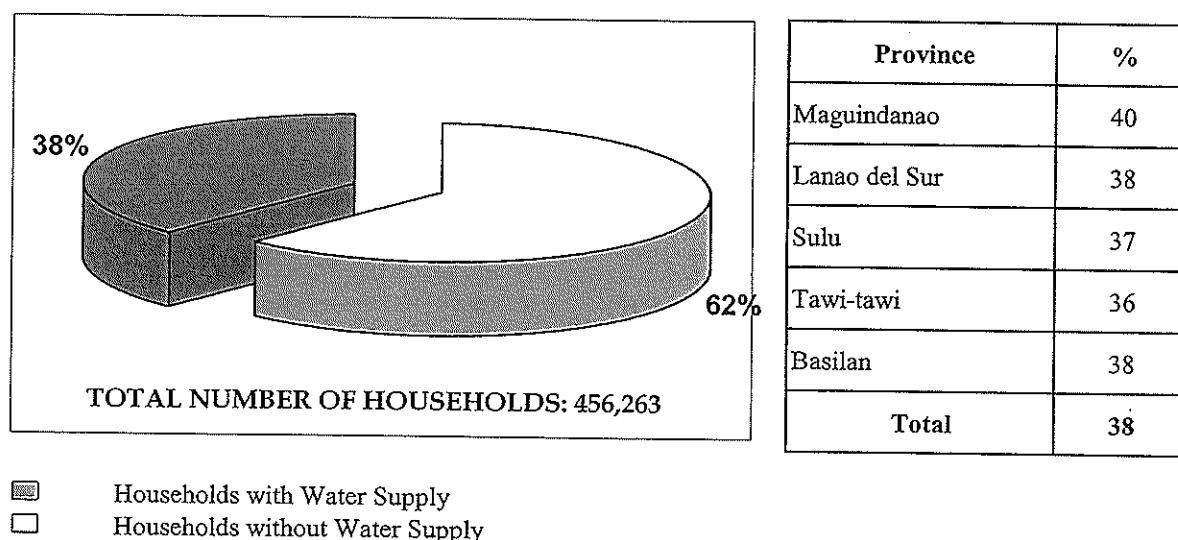




**1. Overview of the Water Supply and Sanitation Sector**

The provision of safe and potable water is a pressing need in the ARMM, where most of the communities are forced to utilize any form and means of water sources to sustain for domestic needs. Many of these communities have utilized brackish and saline groundwater, collected and stored rainwater, and bulk-hauled untreated water transported by barge or other sea transport from mainland Mindanao.

Based on data furnished by ARMM, in 1992 the Region had a total population of 2.02 million corresponding to about 295,242 households and had grown to 2.808 million in the year 2000. During this said year, the ARMM Socio-Economic Report indicates that accessibility to potable water is estimated at 38% of the regional population, which corresponds to 456,263 households. The figure below shows the access to water supply by province.



**Figure ES-1 Households in ARMM with Access to Water Supply, as of 2000**

At present, the percentage to access to potable water has a marginal increase which could be traced to assistance from various institution. Based on the data of present existing water supply facilities, analysis showed that about 40% of ARMM projected 2003 population have access to water supply. These data, however, is still far from acceptable level of providing safe and potable water within the community, thus the need to further impart technical and financial assistance to the Region in terms of water supply development.



### 2. Introduction

#### Background and Objectives

The preparation of the master plan for the Water Supply and Sanitation Sector Plan was undertaken by the Consultant thru the assistance of Japan International Cooperation Agency (JICA). Past reports such as the PW4SP was made as reference and basis to come-up with the sector development plan for possible financing thru sector loan(s) by foreign donors, LGU's counterpart including internal revenue allotment from the National Government and private sector investments.

This Study covers a Medium-Term Investment Plan (2005-2010) as well as a Long-Term Development Plan (2010-2015) to attain the provincial targets of water supply and sanitation sector. The plan includes development cost to cover the construction of water supply and sanitation improvement in the ARMM covered provinces. The Study likewise includes institutional strengthening, to assure that community based operational framework and capability could be sustained in the future.

As part of the initial move to familiarize the different LGUs and evaluate their respective sector management capability, the Study undertook workshops and consultation with local officials and planning managers.

#### Coverage of Study Area

Based on the Terms and Reference provided to the Consultant, the sector evaluation and analyses shall cover the ARMM which is composed of the following provinces and city:

- ◆ Maguindanao
- ◆ Lanao del Sur
- ◆ Basilan
- ◆ Sulu
- ◆ Tawi Tawi
- ◆ Marawi City

The Provinces of Maguindanao, Lanao del Sur and Marawi City are found in mainland Mindanao while the Provinces of Basilan, Sulu and Tawi Tawi are island provinces.

### Approach and Methodology

The primary bases of this Study are the sector policies and strategies, as well as existing legislations and regulations pertaining to water supply and sanitation development, and guidelines for setting the provincial sector targets. In conjunction to these policies, reference was likewise made in the current sector policies and strategies to ensure:

- ◆ self-reliance and local community management services
- ◆ integrated approach to water, sanitation and hygiene education
- ◆ financial arrangement and, operation and maintenance
- ◆ participation of private sector and NGOs
- ◆ integrated water resources strategy

The methodology and work approach in undertaking the Study is also patterned in accordance to the previous water supply and sanitation studies prepared for JICA, like the PW4SP Feasibility Study reports.

All other technical criteria and standards are based on other sector agencies such as Local Water Utilities Administration (LWUA), National Water Resources Board (NWRB), Department of Public Works and Highways (DPWH), Sanitary Code of the Philippines and the National Standards for Drinking Water (NSDW).

### Report Composition

Five (5) study reports were prepared covering the respective provinces as previously mentioned (Marawi City is included in the Lanao del Sur report). The analyses, evaluation and relevant information form part of the individual report consisting of 10 chapters.

### **3. Provincial Profile**

The Province of Basilan is an island province in the southern most part of the Zamboanga peninsula. The capital town is Isabel City although it is not a part of the ARMM, major commercial activities and government offices are found in the city. Basilan is composed of 6 municipalities with 210 barangays broken down into 58 urban and 152 rural. The province is classified as 3<sup>rd</sup> class. At the municipal level only one (1) municipality belong to 2<sup>nd</sup> class (Lamitan), three (3) belong to 3<sup>rd</sup> class (Sumisip, Tipo Tipo and Tuburan) and two (2) are classified as 4<sup>th</sup> class (Lantawan and Maluso). The provincial population in year 2000 was 259,796 with an average annual growth rate of 2.94 percent between the periods 1995 to 2000.

#### *Physical Features*

The province of Basilan consists of the volcanic, hilly main island and 61 smaller islands surrounding it. From the coast, the terrain of the islands ranges from undulating to rolling, moderately steep towards the interior parts of the islands. Dominant mountain range within the main island is the Basilan Peak with its summit towering close to 1,000 meters above mean sea level.

The province has a Type III climate (classified from Modified Corona's Classification System). This type of climate is characterized by no pronounced maximum rain period, with a short dry season lasting only from 1 to 3 months. From the rainfall data map it can be inferred that Basilan receives an annual rainfall of about 1,200 mm.

#### *Socio-economic Aspects*

Agriculture and fishery are the major economic activity in the province. About 70 percent of the province's land is devoted and planted extensively with coconuts, rubber and coffee. Other crops include palay, corn, cacao, cassava, palm oil and black pepper.

Various edible sea creatures and fish species abounds the provincial waters of Basilan. Found in these waters are grouper, tuna, squid, octopus and marlin while inland fishponds are stocked with milkfish, prawns and shrimps. Basilan has the only lobster fattening and culture operations in the region.

About 70 percent of the Basilan mainland grid has been energized covering 195 barangays. Landline telecommunication is still very limited to the densely populated areas of the capital city of Isabela and the municipality of Lamitan. While this fall-back in telecommunication exist, large part of the mainland is covered by cellular phone system operated by Smart and Globe. Land transportation, such as jeepneys and busses are the available means to move people and goods within the island. Commercial bank transaction could only be done in the capital city of Isabela, since no other banks are located in the rest of the municipalities. The local road network is 865 km long and links all the municipalities and barangays of Basilan. More than half of the roads are categorized as all-weathered roads.

#### 4. Existing Facilities and Service Coverage

The present water supply system for each of the municipally comprising the province of Basilan was surveyed to assess the conditions and the needs of the people in the locality. Other water supply system parameters such as, service areas, service area population, served population, water service level, water quality of present sources, present distribution system( for level II and III) were also assessed to define the necessary measures to be planned for the improvement of the water supply system of each municipality.

##### Water Supply

The province has two(2) Level III water systems, namely: Lamitan and Maluso. Spring water and surface water are being utilized respectively in the mentioned areas, and are treated and disinfected prior to distribution to the consumers. Based on the data furnished by the Water Districts who operates and manages these water systems, service coverage within their respective franchise areas average to about 24% to 30% only. The deficit in service could be traced to lack or limited financial resources to expand and reach-out the rest of the franchise services areas.

There are 24 Level II systems that are being operated and managed by BWSAs. Most of these systems utilize spring as water source. In most of the areas that were surveyed, it was observed that installation of lateral pipes and communal faucets are inappropriately done due to lack of technical skills, resulting to decrease in water pressure and quantity. Likewise, inadequate maintenance of spring boxes and transmission pipeline adds up to the problem.

About 85% of the Level II systems have a flat rate water charge and the remaining is given free to the consumers. This practice makes it hard for the BWSAs to cope-up with their obligations in the operations and maintenance of the system and results to cost recovery over-runs.

Level I water system(s) are found in the other areas of the municipalities, that are not being served by either Level II or Level III systems. Level I system commonly utilize shallow well(s) as water source and are equipped with hand pumps, but for those who have the means and financial resources, they use motorized water pump to withdraw water. There are also areas where they tapped spring as their point source. Water from the spring is conveyed directly to their households by connecting series of pipes (polyethylene or galvanized iron). Other households get their water from nearby river channel for domestic use and rainwater (stored in individual water tank) for drinking.

### Sanitation

The present sanitation condition of the municipalities covered by the province of Basilan was also assessed to evaluate the present sanitary needs and to integrate measures with the water supply plan. Majority of the areas that were visited during the survey indicates that the common problem to sanitation is the lack of adequate water supply. Since water supply and sanitation are complimentary to each system one of the gateway to progress of every municipality is a reliable and safe sanitary/environmental facility. In providing safe and reliable water supply vis-à-vis the improvement in sanitation condition follows.

The household toilets are categorized into two types. These are the sanitary and unsanitary toilets. The sanitary toilets (which are the approved ones) are defined as, water sealed toilet, flush type or pour-flush type with receiving pit or septic tank or septic vault, with ventilation. The unsanitary toilets include the types of facilities used for disposing human waste which do not fall under the category of the approved type

Sanitation data furnished by the PPDO could not be use to make a conclusive picture of the present sanitation condition of all the six(6) municipalities comprising the province of Basilan, since only two(2) municipalities (Lamitan and Maluso) have submitted the data. However, based on these data obtained, the present condition can be deduced as follows:

- ◆ Provision for household sanitary facilities, (extrapolated on a provincial wide basis) ranges from 2.30% (Maluso) to 11.50% (Lamitan) while on a municipal wide basis, it ranges from 18% to 48%.
- ◆ On the criteria of acceptability of these facilities, sanitary facilities ranges from 5% to 19% and unsanitary facilities ranges from 1% to 12%, given only for the two (2) municipalities that submitted their data.

The above data is only an indicative ratio that may clearly demonstrate the need to improve the sanitary facilities of the Province of Basilan. The low value can be attributed to lack of water supply facilities (that will render the residents to provide sanitary provisions) and the capability of the rural households to construct the approved type of sanitary facilities.

### **5. Existing Sector Arrangements and Institutional Capacity**

The ARMM Local Government Units (LGUs) have the distinct advantage over non-ARMM LGUs on that certain basic services have been retained by the Regional Government and continue to be provided by them, i.e. health, social services, agriculture. This results in more financial resources being available for other basic services that could be provided by the LGU, such as water supply for instance.

In general, the ARMM Regional Government also undertakes water supply related projects but this does not seem to be a priority. Only a minimal amount of the ARMM infrastructure budget has been allocated to water supply.

The ARMM offices involved in water supply include the Department of Public Works and Highways, Department of Health, Department of the Interior and Local Government and all LGU's.

### **6. Past Financial Performance in Water Supply and Sanitation**

Given the limited financial resources of the ARMM Regional Government, the LGUs have taken greater responsibility in the provision of basic infrastructures. With their Internal Revenue Allotment (IRA) increasing over time, the available 20% Development Fund has also increased. This means that LGUs have more financial resources that could be parlayed into



funding water supply projects. However, based on the amount allocated to various infrastructures, local roads/bridges enjoy a higher priority.

Most LGUs have repeated surpluses in their financial operations.

### 7. Water Source Development

Basilan Island consists of Pliocene to Quaternary Volcanics and its erosional by-products. The volcanic mounds, lava domes, vents, cinder cones and other peaks are made up of Quaternary volcanic rocks (QV). The Quaternary Pyroclastics (QVP) overlie the Quaternary Volcanics.

Recent deposits (R) include alluvium, beach deposits, swamp deposits, residual clays and corals. The small islands are made up of either Quaternary Volcanics or limestone/corals.

Geologic information indicates that the Quaternary Volcanic Plains (QVP) and the Quaternary alluvium can be considered as important groundwater reservoir in the area. The Quaternary Volcanics are generally hard and massive and therefore too tight to contain and yield significant amount of water.

Majority of the residents in the lowland and coastal areas derive most of the groundwater for domestic use from wells tapping the alluvial deposits. Sand and gravel layers, though of limited thickness in several localities, generally make up the water table or shallow water table aquifers within the alluvium. Brackish or salt water is to be expected in some localities particularly those near the coast.

### Groundwater Availability in the Province

For planning purposes, the different rock units in the province can be classified into the following in terms of groundwater availability. It should be noted that Quaternary pyroclastics wherein groundwater occurs both in unconfined and confined conditions can be classified as both shallow and deep well areas.

- ◆ *Shallow well areas.* By definition these are areas having water-bearing formations where water can be withdrawn up to the depth of not more than 20 m from the ground surface. These are the areas underlain mostly by Recent Alluvium. Though generally classified as deep well areas, in some cases shallow groundwater also occur within the QVP.

Coral deposits generally fall under this category. Limited groundwater, if any, occurs in the porous, fractured and/or weathered zones.

- ◆ *Deep well areas.* In deep well areas, the aquifers exist to depth of more than 20 m from the ground surface. These are the areas underlain by QVP.
- ◆ *Difficult areas.* These are areas not suitable for well development. In the province the areas under this category are the Quaternary Volcanics (QV).

## 8. Future Requirements in Water Supply and Sanitation Improvement

### Physical Targets and Service Coverage

The future requirements of each municipality within the province of Basilan was evaluated base on its current condition of existing water supply system and sanitation facilities. The proposed development was also based on respective LGU's priority service areas, water source(s) availability, and service area population. For other LGUs with no data generated, evaluation was made based on LGUs similar case and profile.

The master plan aims to provide a ten-year design period for water and sanitation project in the Province of Basilan. Implementation of the project is assumed to be undertaken in two phases, Phase I will cover the needs of the province from year 2005 to 2010, and the second Phase from 2010 to 2015.

Sub-sector	Base Year Service Coverage	Additional Population/Facility to be Served	
		Phase I	Phase II
Sub-sector			
Water Supply			
Urban Area	36,050	16,531	7,050
Rural Area	73,756	42,182	29,746
Sanitation			
Household Toilets	16,414	9,493	1,914
School Toilet	235	15	14
Public Toilet	17	14	11

Required Facilities to Meet Target Services

Water Supply

The required facilities for each water level service were estimated based on the existing condition and the projected served population for all service areas and broken down into two(2) phases of implementation. The number of service connections (Level III), public faucets (Level II), and shallow/deepwells as point source (Level I) are presented in the table below.

Municipality	Phase I (2005-2010) Requirement					Phase II (2010-2015) Requirement		
	Level III		Level II		Level I	Level III	Level II	Level I
	Mode of Project	No. of Connections	Mode of Project	No. of Stand Faucets	Total No. of Wells	No. of Connections	No. of Stand Faucets	Total No. of Wells
1 Lamitan	New and Expansion	734	New	159	27	270	17	28
2 Lantawan	New	220	New	122	11	419	37	11
3 Maluso	New and Expansion	560	New and Expansion	48	8	0	39	8
4 Sumisip	New	1,042	New	328	39	259	133	38
5 Tipo Tipo	None	0	New	9	92	0	0	83
6 Tuburan	None	0	0	9	77	0	40	79
<b>Provincial Total</b>		<b>2,555</b>		<b>676</b>	<b>253</b>	<b>948</b>	<b>265</b>	<b>247</b>

Sanitation

Future requirements on the number of household toilets were estimated based on the additional number of households to be served both for urban and rural population by municipality. Likewise the future requirements for public school and public toilets were estimated based on the projected increase in the number of public school and public utilities. Table below shows the required sanitary facilities:

Municipality	Phase I (2005-2010) Requirement			Phase II (2010-2015) Requirement		
	No. of Household Toilet	No. of Public School Toilet	No. of Public Toilet	No. of Household Toilet	No. of Public School Toilet	No. of Public Toilet
1. Lamitan	1,947	4	3	539	3	6
2. Lantawan	952	0	0	215	0	0
3. Maluso	1,862	0	0	226	0	0
4. Sumisip	1,592	0	0	322	0	0
5. Tipo-Tipo	1,720	4	5	313	4	2
6. Tuburan	1,419	8	4	300	7	3
<b>TOTAL</b>	<b>9,493</b>	<b>15</b>	<b>12</b>	<b>1,914</b>	<b>14</b>	<b>11</b>

### 9. Institutional Strengthening for Medium-Term Plan

The failure of barangay/rural water service associations have resulted in the discontinuation of potable water supply availability. This might be due to the failure to properly train the community in the management, operation and sustenance of their systems. Unfortunately, the diversity of cultures in the area have resulted in the inability to organize working/effective associations to oversee water supply service operations. In addition, the deteriorating security, peace and order situation and frequent clan wars have further resulted in the dismantling of these associations.

In any institutional-strengthening and capability-building activities for water supply projects, cultural diversity must be of paramount consideration in sustaining these projects.

### 10. Cost Estimates for Future Sector Development

The total investment cost required for the two phased implementation as identified in Chapters 7 and 8 is defined to include direct costs for construction of required facilities and sector management, as well as physical and price contingencies. Cost requirements for the equipment and vehicle are considered for O& M and long-term development.

Conditions and assumptions used to come up with investment costs covering all sub-sector components were established in coordination with concerned provincial and municipal LGUs and to current standards of relevant sector agencies like the DILG, LWUA, DOH and DPWH.

With regards to construction cost, unit costs per person/household facility were prepared under contract-out basis for respective sub-sector component facilities in current 2003 price levels.

The required development cost for water supply and sanitation facilities covering Phase I (2005-2010) and Phase II (2010-2015) will amount to ₱455,887 million and ₱374,883 million, respectively.

***CHAPTER 1***  
***INTRODUCTION***

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## 1. INTRODUCTION

### 1.1 Background of the Project

Being an archipelago, the Philippines has to cope with ethnic cultural differences such as dialects and customs to the more sensitive are like religion. Although touted as the only predominantly Christian country in Southeast Asia, Philippine Muslims were once a dominant group in the country. Presently concentrated between the western portion of Mindanao and the Sulu Archipelago, Philippine Muslims have 500 years of political history behind them; the longest political experience compared to other groups in the Philippines.

Philippine history had witnessed the Muslims steadfastness, unwilling to succumb to foreign hegemony since the time of the Spanish colonization. They have thrived and preserved their unique culture and identity through 11 ethnic tribes: Maranao, Maguindanao, Iranun, Tausug, Yakan, Sama, Sangil, Kaangan, Kolibugan, Palawan or Panimusan, and Molbog.

The inaccessibility and neglect that was born out of a confluence of political, ideological, geological and cultural differences has stirred unrest with Philippine Muslims. For more than two decades, the political unrest in the region has given a devastating blow to the already delicate economy of Mindanao.

To quell this unrest, the Philippine government has conducted a number of negotiations and concluded agreements with the Muslim separatist groups. This culminated with the creation of the Autonomous Region in Muslim Mindanao (ARMM). Still, distrust in the government's efforts for lasting peace has continued, not due only to cultural differences but also because of a high level of dissatisfaction on the government among Philippine Muslims. Such distrust then can only be outweighed by a sincere effort to uplift the socio-economic conditions of Philippine Muslims and only then could lasting peace and development be achieved in the ARMM.

Towards this end, the Japan International Cooperation Agency (JICA) intends to contribute its share to the development and growth of the ARMM. The conduct of the "Comprehensive Basic Survey of Autonomous Region in Muslim Mindanao" would be the initial stage of its involvement in turning Mindanao from a "Land of Promise" to a "Land of Realized Dreams". Through the basic survey, a comprehensive look into the current reality within the ARMM region in terms of socio-economic conditions, delivery of basic services, resources and

infrastructure would be made. This will help identify gaps in the programs and local policies inherent to the approaches currently being applied. The collection and analysis of primary data on sectors directly affecting the ARMM residents is indispensable if one is to come up with a responsive and sustainable developmental approach for the ARMM. Needless to say, the developmental approach will take into account the ARMM Development Framework Plan for 2003-2004 which prescribes the direction towards which the ARMM government has set its sights in the promotion of peace and security, social development, economic development, infrastructure development, and development of administration and finance. Eventually the analyzed data will aid in identifying the various issues and problems for the sectors reviewed leading towards the identification of appropriate intervention (policies, programs or projects) for both the short and long term.

Overall, the surveys should help in creating a complete and accurate picture of the ARMM as determined from the stakeholders themselves. This democratizes the process of development by creating a participatory atmosphere.

## 1.2 Survey Objectives

To reiterate, the basic study for the ARMM was conducted to achieve the following objectives:

1. Study and analyze the existing conditions in the region, e.g. socio-economic, policy/program, institutions, donors trend etc.;
2. Analyze the existing conditions, problems and needs of the sectors on health and medical care, education, water supply, infrastructure, agriculture and fisheries, and governance; and
3. Formulate the programs/projects that JICA can promote, considering both aid strategy and viable approaches specifically tailor-fit for the ARMM.

The objectives defined the sectors that need to be addressed if the ARMM is to succeed in its quest for self-determination and envisioning a peaceful and progressive society through social justice, human equity, responsive governance while preserving its unique identity in establishing international amity in enjoying the freedom to chart its own destiny.



### 1.3 Approach and Methodology

#### 1.3.1 Approach to the Survey

The Scope of Work defined in straightforward fashion the required activities to produce a reliable database of basic data, a profile of administrative systems and identification of issues or problems and list of recommendations for JICA's possible assistance.

The stated objectives are immediate and more appropriately understood as purposes as they describe the activities that were conducted and what shall be produced in physical terms, which included:

Activities	Output
Collection of basic data covering six (6) major sectors: health and medical care, education, agriculture and fishery, basic infrastructure (roads and bridges), governance and water supply	Additional new field data and/or data that confirmed or validated existing documented data; prepare the findings of the sector survey and official data in a consolidated database report
Review of the administration systems of concerned ARMM regional line agencies (i.e., DOH, DepEd, DA, DPWH/DILG, ARMM Government);	Consolidated report
Identification and analysis of issues and problems	Consolidated report
Identification of potential programs and projects for JICA's possible cooperation	Consolidated report

**Multi-Sectoral Participatory Approach.** One of the most critical components of the plan were the inputs of the stakeholders in the plan which provided their insights, visions and aspirations, future directions and purpose. These stakeholders consisted of the Provincial and Municipal government officials, line agencies, non-government organizations, women organizations, people's organization, and the private sector, which had the opportunity to actively participate in the process.

**Computerized Information System.** A systematic handling and management of voluminous sets of information is a requisite for any data collection exercise. It was expected that the process will generate masses of information from both primary and secondary sources. The

multi-sectoral approach combining the aspects of social, economic, cultural, environment, physical and market generated complex sets of data, which need to be integrated and correlated.

This process expedited data compilation and analysis allowing more effective and efficient use of project time for the Consultant as well as better basis for drawing up analysis and strategies.

**Utilization of Mindanao-based Support Staff.** The associated firms sourced the required support staff from two Mindanao-based Non-Government Organizations with which we have partnered in past engagements. This set-up facilitated data gathering but data collection at the field level was still problematic. These firms are the following:

- ◆ *Kasanyangan Foundation, Inc. (KFI)* is a non-stock, non-profit organization based in Zamboanga City. A social development agency for a period of twelve years, KFI staff has the necessary expertise in Community and Institution Organizing and Building, Enterprise Development and Management, Agricultural Services, Policy Research and Advocacy, and Local Governance Capacity Building.
- ◆ *MinPhil International Consultants* is a service institution, which provides technical assistance to private firms, government owned and controlled corporations, non-government organizations, national government agencies, local government units and development agencies. Its services include training, policy analysis and research, feasibility and market studies, and project design, implementation and evaluation. MinPhil is based in Davao City.

### 1.3.2 Methodology

An Overall Study Framework for the Conduct of the Survey was developed and served as the road map that guided the Survey Team in the conduct and completion of the Survey consistent with JICA's objectives for the Survey and the quality of Survey outputs.

The Framework is given as Figure 1-1.

The Project Organization is given as Figure 1-2.

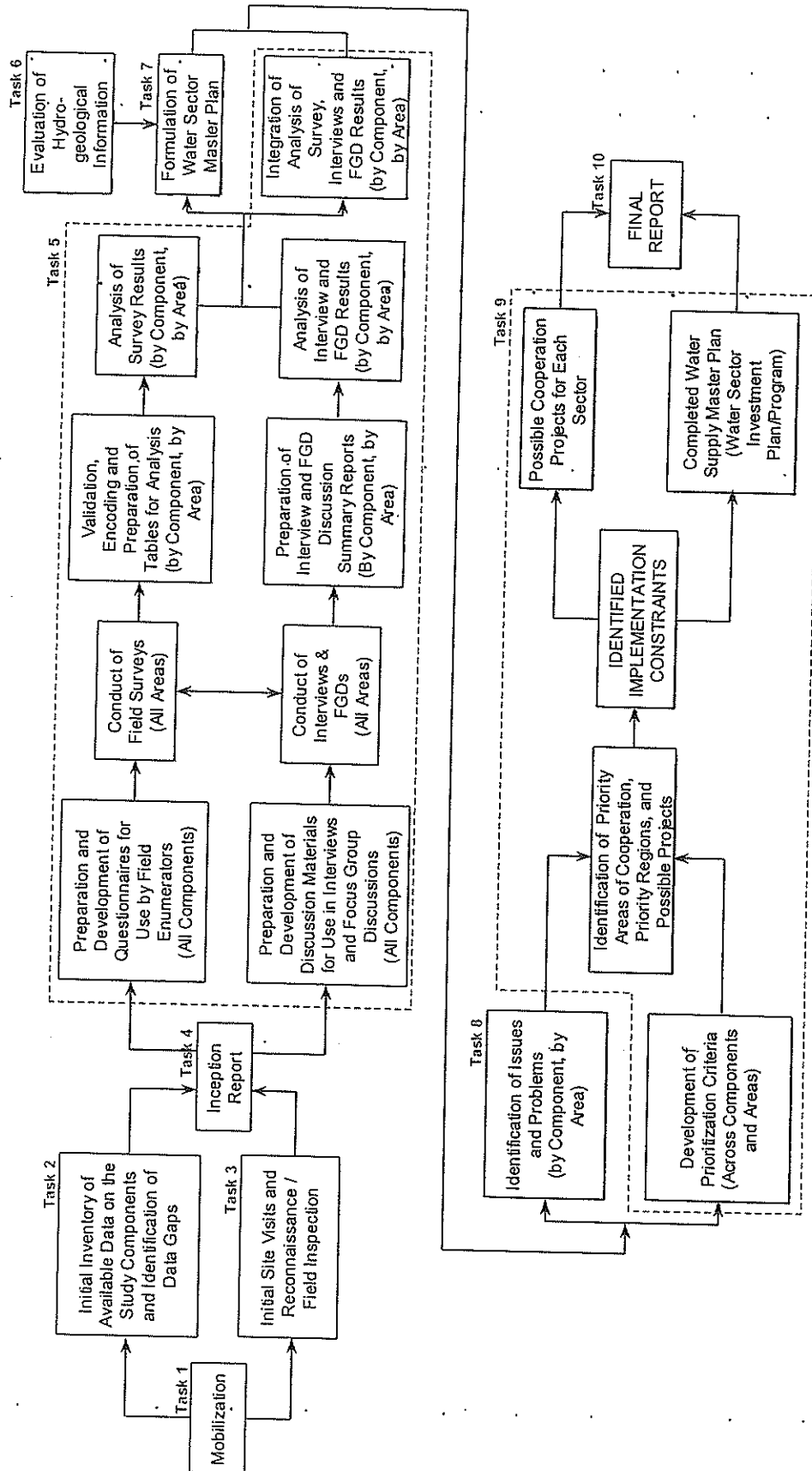


Figure 1-1 Overall Study Framework for the Comprehensive Basic Survey of ARMM

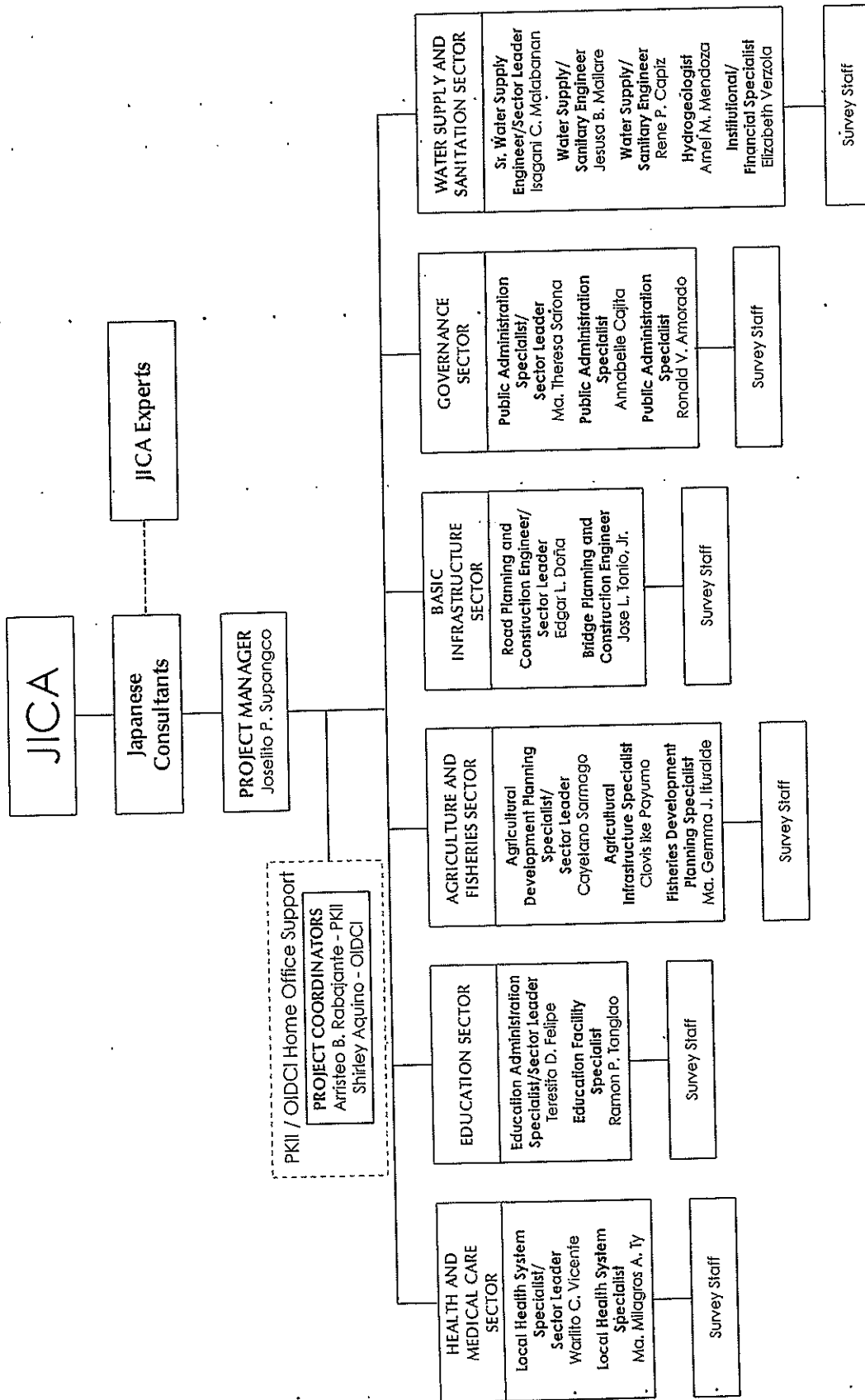


Figure 1-2 Project Organizational Chart

### 1.3.3 Conduct of Workshops, Meetings, Focus Group Discussions and Other Participatory Activities

*Provincial Workshops.* An important component of the Survey was the conduct of the Provincial Workshops which were intended to facilitate the collection of information from the various stakeholders and to allow the participants to vent issues and problems related to their specific sectors. The preparatory activities for the conduct of the Workshops were facilitated by the Provincial Government through the Offices of the Provincial Administrator and the Provincial Planning and Development Coordinator. The conduct of the Workshops were still delayed as it required a significant amount of time to invite the targeted participants. While attendance was significant, some of the major stakeholders did not attend for various reasons. The structure of the workshops were simplified due to time constraint, as the Study Team members still had to meet the various key informants in their offices to collect whatever data was required by the Survey.

Thus, the Provincial Workshops started with the usual traditional program followed by the introduction of the participants and the introduction of the Survey and its objectives. The participants were then divided into the six sector groupings of the Study for the conduct of the Focus Group Discussions facilitated by the Specialists concerned. The focus questions were:

- a) What operational and statistical data are available in the various offices of the participants? (This included the method of data collection, forms used, data validation, frequency of data collection and problems the agency faced in data collection)
- b) What are the various issues and concerns faced by the sector in the area? (This also included what the suggested solutions are and how these solutions should be implemented.)

The problems usually encountered in the conduct of the workshops were as follows:

- a) *Communication and Scheduling the Workshops.* In spite of advances in communication technology, there was great difficulty in contacting the appropriate persons responsible for inviting the targeted participants, arrangement of the venue and the scheduling of the workshops itself. The provinces usually had a lot of intervening activities such as trainings, meetings, and other activities that usually involved the

targeted participants. This had caused difficulty in scheduling the date of the workshops.

- b) *Attendance of Participants.* While the provincial government, through the office of the governor, expedited the identification of the participants and the distribution of the invitations, a significant number of the identified key informants were still unable to attend due to other activities within and outside the province.
- c) *Level of Participants.* Sometimes, when the invitees are unable to attend, representatives were sent. Oftentimes, the representatives were not well versed in the operations of their offices or the type of information that was being generated by their offices. Thus, they could not effectively participate in the discussions during the workshops.
- d) *Distance of the Venue.* While the venues of the workshops were usually in the provincial capitol, some of the participants, especially those from the LGUs had to travel long distances just to attend the workshop. This also meant that they had to leave early in order to catch the last trips to their LGUs, which were usually early in the afternoon.

The Provincial Workshops did serve the purpose intended in terms of: (a) expediting the gathering of information from the participants' offices; (b) generating key informants and stakeholders' viewpoints on issues and problems in their sector; and (c) assisting the specialists in the site investigations that usually followed the conduct of the workshops.

The date, location and number of participants in these workshops are summarized below.

**Table 1-1** Venue, Date and Number of Participants in Provincial Workshops

Province	Venue	Date	Number of Participants
Tawi-Tawi	Rachel Halipa Hotel and Restaurant, Bongao, Tawi-Tawi	8 Sept. 2003	39
Basilan	Provincial Livelihood Center, Isabela, Basilan	10 Sept. 2003	37
Sulu	Honeybee Foods and Apartelle, Jolo, Sulu	11 Sept. 2003	29
Lanao del Sur/ Marawi City	Cafe Hermoso, Iligan City, Lanao del Norte	17 Sept. 2003	46
Maguindanao	Estosan Hotel, Cotabato City, Maguindanao	24 Sept. 2003	24

*Special Consultation Workshops for the Office of the Regional Governor.* In agreement with the Regional Planning and Development Office (RPDO) and the Technical Management Services (TMS) of the Office of the Regional Governor (ORG), two sets of consultation workshops were conducted. The objectives of these two additional workshops were:

- a) To identify the emerging trends since the implementation of the Organic Act as amended in the following areas;
  - i. Development Directions for ARMM
  - ii. Budget and Funds Flow
  - iii. Resource Mobilization
  - iv. Devolution
  - v. Operating Systems and Procedures
  - vi. Delivery of Basic Services
  - vii. Intergovernmental and Non-Governmental Relations
  - viii. Legislation
- b) To identify the constraints in the implementation of the Organic Act; and
- c) To identify the strategic interventions in governance and development administration.

The consultation workshop used a combination of small group discussions and the technology of participation (TOP) approach. The participants were divided into small groups where greater participation was maximized.

At the end of each session, it was expected that there would be agreements reached in terms of emerging trends, constraints and strategic interventions on governance.

The first set of workshop was for the offices within the Office of the Regional Governor (ORG), which was preliminary activity before the final consultation workshop. There was an expressed interest from these offices to be involved since they felt that the ultimate beneficiaries need to be consulted.

The second and final consultation workshop was attended by the members and additional agencies of the Regional Development Administration Committee (RDAC), the Planning

Committee tasked to coordinate Development Administration, including governance matters for the ARMM.

The Preliminary Consultation Workshop was attended by the Division Chiefs of the different offices and services in the Office of the Regional Governor. The final Consultation Workshop was attended by the members of the Regional Development Administration Committee (RDAC) and additional participants.

*One-on-One Meetings.* For the actual data collection at site, the different specialists were fielded in the ARMM. They met, whenever available, the different key informants and officials at the municipal, provincial, local officials of national agencies, regional government and officials of different funding institutions involved in the ARMM. The detailed fieldwork was quite extensive, although the data that was actually collected from these were less than targeted. In the end, there were still substantial data gaps that prevailed across sectors and therefore could not be filled. This became a major constraint of the Survey.

#### **1.4 Organization of Report**

The sector plan will discuss existing situation of the water supply and sanitation sector in the Province of Basilan in terms of facilities and coverage, sector arrangements and institutional capacity, past financial performance and water source development. Based on the analysis of the existing situation and conditions of the province, future requirements in water supply and sanitation improvement will be projected. Costs for future sector development will be estimated, a sector management plan will also be drawn up including financial arrangements and monitoring and evaluation for the sector and the project. Selection criteria to identify priority projects/ area will also be established.



***CHAPTER 2***  
***PROVINCIAL PROFILE***

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## 2. PROVINCIAL PROFILE

### 2.1 Brief History

Basilan means "iron trail". It was once called the Tagima after a pre-Hispanic datu. The Orang Dampuans were the ancient people of Basilan. They are believed to be the ancestors of the modern Yakan who populate the island's interior. Tausugs and Samals settled along the coast bringing Islam to the island and converting the Yakans. During the 17th century, Lamitan in Basilan was a stronghold of Kudarat, Sultan of Maguindanao. In 1637, a strong Spanish force led by Governor General Sebastian Hurtado de Corcuera captured Lamitan but in 1663, the Spanish troops on the island were withdrawn.

The Spaniards were not alone in coveting Basilan. The Dutch attempted to seize the island in 1747 but were thwarted by the locals. In 1844, the French tried to occupy the island but likewise failed. Later that year the Spaniards built a stone fort, the *Fuerza de Isabela*, on Basilan to end further attempts by rival European powers to take it. However, the Spanish hold on the interior remained tenuous.

In 1901, Basilan became part of Zamboanga and an increasing number of Chabacanos and Visayans settled in the town of Isabela to work on rubber plantations. The island became a chartered city by virtue of Republic Act No. 288 in 1948. In 1973, through Presidential Decree No. 356, the City of Basilan was turned into the province of Basilan and the town of Isabela became the capital.

Bangsa Moro secessionist guerrillas actively operated in Basilan at the height of the struggle for an independent homeland in the 1970s. In the late 1980s, Basilan became the center of operations of an extremist group called the Abu Sayyaf.

### 2.2 Location and Accessibility

Basilan is an island province across the tip of the Zamboanga Peninsula in Western Mindanao. The bodies of water surrounding it are Basilan Strait on the north, Moro Gulf on the east, Sulu Sea on the west, and Celebes Sea on the south.

Basilan has three private airstrips that cater to light planes. Flying to Zamboanga City is the more convenient means to get to Basilan. The province also has two government wharves that provide regular boat trips to nearby Zamboanga City.

### **2.3 The Land**

The province consists of the volcanic, hilly main island and 61 smaller islands surrounding it. The National Statistics and Coordination Board (NSCB) reports that Basilan has a land area 1,327.236 km<sup>2</sup>. The Department of Budget and Management (DBM), in its 2003 Internal Revenue Allotment, reports a total land area of 2,217.76 km<sup>2</sup>, including Isabela City's land area of 223.73 km<sup>2</sup>. As of 2003, there are one congressional district, six municipalities and 210 barangays in the province of Basilan.

#### **2.3.1 Topography and Drainage**





From the coast, the terrain of the islands ranges from undulating to rolling; moderately steep towards the interior parts of the islands.

The topography of the province of Basilan ranges from rolling to very steep. At least 62% of the province area is classified within a slope range from 0-18% where most of the province's agricultural activities are done. Twenty percent (20%) of the area is within 18-30% slope range while the remaining area is with slope greater than 30%.

#### **2.3.2 Climate**

While the climate of the entire Philippines may be classified into four types following the Modified Corona's Classification System, only three types are observed in Mindanao and only two of these are observed in the ARMM area. Figure 2-1 presents the classification of climate within the entire island of Mindanao and within the coverage of ARMM.

**LEGEND:**

-  TYPE I Two pronounced seasons, dry from December to May and wet from June to November. Maximum rain period is from June to September.
-  TYPE II No dry season with a very pronounced maximum rain period in winter. Maximum rainfall generally occur in Dec. and January, although there is not a single dry month.
-  TYPE III No very pronounced maximum rain period, with a short dry season lasting only from 1 to 3 months.
-  TYPE IV Rainfall is more or less evenly distributed throughout the year.

SOURCE: PAG-ASA

**Figure 2-1 Climate Map**

The monthly and rainfall data recorded at weather stations located in the ARMM and its vicinity are summarized in Figure 2-2. From the rainfall data map, it can be inferred that Basilan receives an annual rainfall of close to 1200mm.

**2.3.3 Soils and Vegetation**

The soil types of Basilan Province are mostly of Bulaoen clay with few Bancal clay loam. In its central parts of mountain, soils are undifferentiated.

**2.3.4 Land Classification**

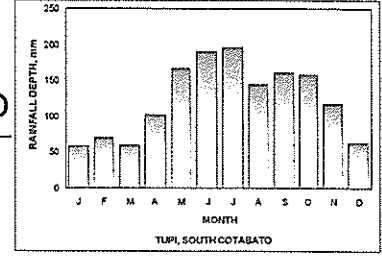
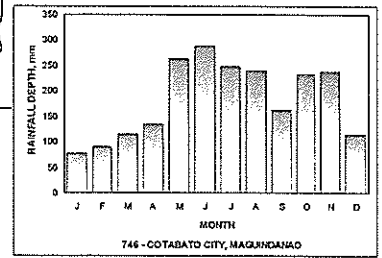
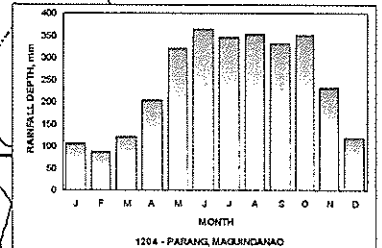
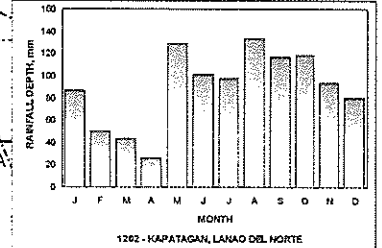
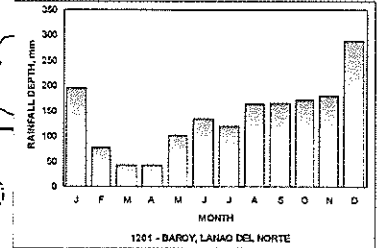
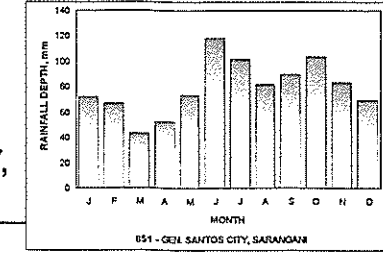
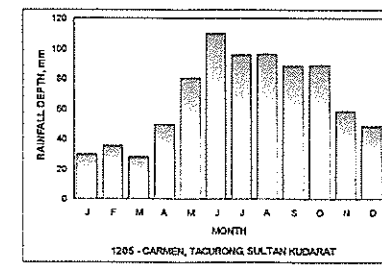
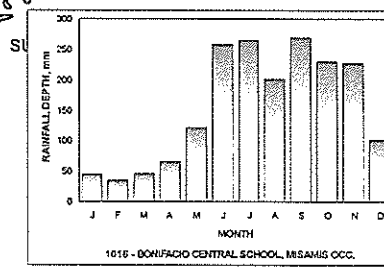
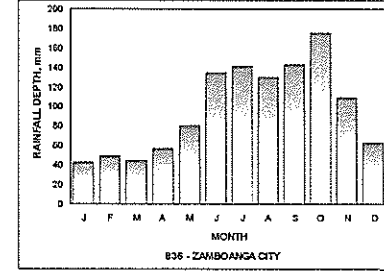
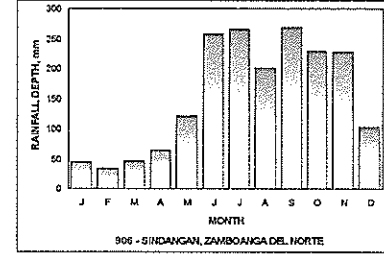
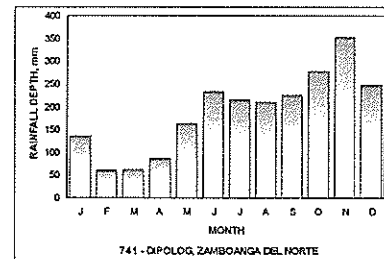
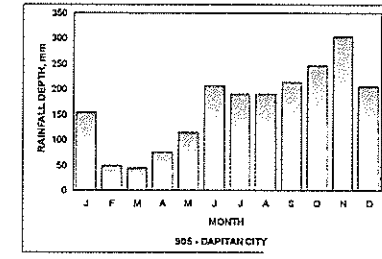
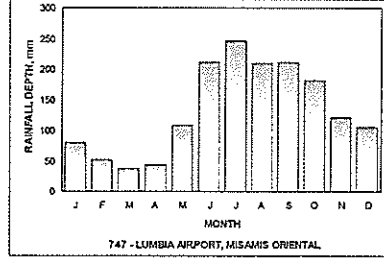
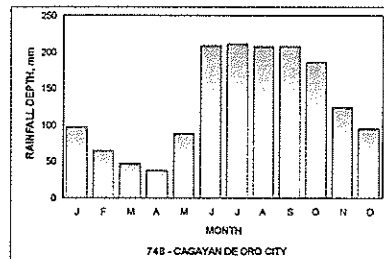
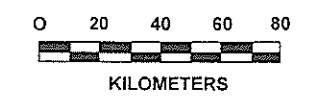
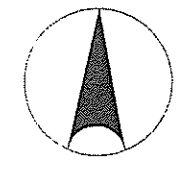
Lands in Basilan are classified as follows:

**Table 2-1 Land Classification as of December 2000**

CLASSIFICATION	Area, km <sup>2</sup>	Percent of Province	Percent of ARMM
Total Land Area	1,327.23	100.00	10.26
Alienable and Disposable	855.74	64.48	13.62
Total Forest Area	471.49	35.52	7.09
Unclassified Forest Land	59.53	4.49	5.92
Total Classified Public Forest	411.96	31.04	7.3
<i>Forest Reserves</i>	1.68	0.13	0.68
<i>Established Timber Land</i>	367.76	27.71	7.36
<i>National Park (GRBS/WA)</i>	8.40	0.63	2.56
<i>Area for Fishpond Development</i>	34.12	2.57	44.01

Source: Bureau of Census and Statistics, Statistical Yearbook 2002

**Figure 2-2  
RAINFALL DATA MAP OF MINDANAO**



SOURCE: Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)

## 2.4 Socio-Demographic Profile

Basilan is the homeland of the Yakan, a peace-loving people known for their colorful clothes hand-woven with intricate geometric designs, as well as for their elaborate wedding and festivals. Upland, they grow rice, corn, coconuts, and root crops.

Approximately 55 percent of the people speak Chavacano. The rest speak either the tribal dialects of Yakan, Tausug, and Samal, or Cebuano and Tagalog.

**Total Population.** The total population of Basilan, as of the May 1, 2000 Census of Population and Housing (2000 CPH), was 332,828 persons (Table 2-2). This implied an increase of 37,263 persons over the 1995 census figure or an average annual growth rate of 2.58 percent. This was 1.53 percentage points lower than the average growth rate recorded in 1995 (4.1 percent). A corresponding increase on the number of households was also registered, from 55,137 households in 1995 to 61,546 in 2000. This resulted to an average household size of 5.4 persons, higher than the national average of five persons.

**Table 2-2 Total Population by Municipality and Sex: Basilan, 2000**

Municipalities	Both Sexes	Percent	Male	Female
Basilan	332,828	100.00	166,413	166,415
Isabela	73,032	21.94	36,356	36,676
Lamitan	58,709	17.64	29,503	29,206
Lantawan	27,487	8.26	13,956	13,531
Maluso	31,054	9.33	15,544	15,510
Sumusip	51,712	15.53	25,900	25,812
Tipo-Tipo	48,284	14.50	23,872	24,412
Tuburan	42,550	12.78	21,282	21,268

*Source: NSO, 2000 Census of Population and Housing*

Of the six municipalities and one city in Basilan, the city of Isabela, the capital of the province, was the largest in terms of population size with 73,032 persons or 21.94 percent of the total population of the province. This was followed by Lamitan (17.64 percent), Sumisip (15.23 percent), Tipo-Tipo (14.50 percent), and Tuburan (12.78 percent). Lantawan and Maluso, on the other hand, had less than ten percent each.

Basilan had the lowest population from among the three provinces in ARMM, with only 9.24 percent of the 2.8 million persons in the region. It was, however, the fastest growing province





in the region in terms of population. At the national level, the province contributed 0.44 percent to the total population of 76.5 million.

**Population Distribution.** Table 2-3 shows that Basilan had a median age of 19 years, very much lower than the 1995 median age of 25 years. The sex ratio in Basilan was almost even; there were 166,413 males and 166,415 females in the 2000 CPH. However, there were more females in the age group 15 to 39 years and more males in all other age groups.

**Table 2-3 Total Population by Age Group, Sex and Sex Ratio:  
Basilan, 2000**

All Ages	Total Population	Male	Female	Sex Ratio
Basilan	332,828	166,413	166,415	100.0
Under 1	6,574	3,305	3,269	101.1
Under 1 to 4	39,738	20,242	19,496	103.8
5 to 9	49,819	25,356	24,463	103.7
10 to 14	44,679	22,746	21,933	103.7
15 to 19	36,423	17,875	18,548	96.4
20 to 24	27,572	13,343	14,229	93.8
25 to 29	25,653	12,166	13,487	90.2
30 to 34	21,567	10,605	10,962	96.7
35 to 39	21,609	10,715	10,894	98.4
40 to 44	16,126	8,112	8,014	101.2
45 to 49	13,096	6,642	6,454	102.9
50 to 54	9,356	4,858	4,498	108.0
55 to 59	6,812	3,497	3,315	105.5
60 to 64	5,460	2,798	2,662	105.1
65 to 69	3,526	1,766	1,760	100.3
70 to 74	2,448	1,243	1,205	103.2
75 to 79	1,109	567	542	104.6
80 & Over	1,261	577	684	82.9

*Source: NSO, 2000 Census of Population and Housing*

More than 55.2 percent belonged to the economically active population aged 15 to 64 years. About 42.3 percent were young dependents (aged 0 to 14 years) while less than three percent were old dependents (aged 64 years and over). The overall dependency ratio in 2000 was 81.2. This meant that for every 100 persons aged 15 to 64 years there were about 77 young dependents and 4 old dependents.

**Housing.** As shown in Table 2-4, out of 60,710 housing units in Basilan, 60,699 units (99.98 percent) were occupied by 61,546 households. This rate of occupancy was higher than that of 1990 (95.6 percent). It recorded a ratio of 1.01 households for every occupied housing unit or 5.48 persons per occupied housing unit.

A large proportion (94.3 percent) of the occupied housing units in Basilan in 2000 were single houses. More than three-fourths (75.9 percent) of the occupied housing units did not need repair or with minor repair while 17.8 percent needed major repair. One out of nine occupied housing units was built from 1996 to 2000.

**Table 2-4 Housing Statistics by Type of Building: Basilan, 2000**

Type of Building	Occupied Housing Unit	Household	Household Population	Ratio of Household & Household Population	
				Household to Occupied Housing Unit	Household Population to Occupied Housing Unit
Basilan	60,699	61,546	332,579	1.01	5.48
Single House	57,230	57,980	312,494	1.01	5.46
Duplex	1,166	1,220	6,869	1.05	5.89
Multi-unit Residential	1,012	1,051	5,502	1.04	5.44
Commercial/Industrial/Agricultural	81	82	407	1.01	5.02
Institutional Living Quarter	33	34	173	1.03	5.24
Other Housing Unit	8	8	42	1.00	5.25
Not Reported	1,169	1,171	7,092	1.00	6.07

Source: NSO, 2000 Census of Population and Housing

## 2.5 Commerce and Industry

About 70 percent of the province's land is devoted to agriculture and planted extensively with coconuts, rubber and coffee. Other crops include palay, corn, cacao, cassava, African oil palm and black pepper. The provincial waters are laden with grouper, tuna, squid, octopus and marlin while inland fishponds are stocked with milkfish, prawns and shrimps. Basilan has the only lobster fattening and culture operations in the region.

The local road network is 865 km long and links all the municipalities and barangays of Basilan. More than half of the roads are categorized as all-weather roads. The province generates enough power capacity to meet local demand and has enough water sources to supply

household, business and industrial needs. The local telecommunication facilities offer telegraph and long distance telephone services. Basilan hosts three government banks, two commercial banks and a rural bank.

The investment opportunities in Basilan revolve around the agricultural and marine resources of the province. Production and processing of rubber, coconuts, coffee and marine products rank high based on a product-market mix made by the local government. Specific business ventures include the manufacture of rubber-wood products such as furniture, tiles, gloves, conveyor belts, and latex; the processing of coconuts into oil, coir, desiccated coconut and activated carbon; processing of seaweeds, canning, and production of fish meal, starch and adhesives. The local government is also developing an eleven-hectare provincial agro-industrial center in Tabiawan, Isabela. Basilan also has myriad natural attractions consisting of a surrounding coastline of white sand beaches, pristine waters, and coral formations, waterfalls and historical sites. Business ventures in tourism and related services and facilities, such as hotels, inns, resorts, and restaurants are very welcome in Basilan.

## **2.6 General Health Profile**

The health status of a population reflects progress in efforts to promote equitable human development where everyone lives in a society where there is equal opportunity and chance to succeed in life.

The scenario in ARMM provides a real challenge since access to health services is not only affected by geographic constraints but even more so because of the armed conflict in various parts of ARMM.

### **2.6.1 Vital Health Indices**

It is widely acknowledged that the ARMM is among the poorest regions in the country. Consequently, its health indices bear witness to this: the Infant Mortality Rate (IMR) for the region is 63% higher than the national rate, maternal mortality rate is almost double that of the national rate, crude birth is slightly higher and the crude death rate is 61% higher than the national figure (see Table 2-5).

Table 2-5 The Vital Health Indicators – National vs. ARMM

Indicator	National	ARMM
Population Growth Rate ( 2000)	2.36	3.86
Life Expectancy at Birth ( 2000)	67.2	57.2
Maternal Mortality Rate ( 2000)	0.6/1,000 LB	1.1/1,000 LB
Infant Mortality Rate ( 2000)	30/1000 LB	55.1/1000 LB
Crude Birth Rate ( 2000 )	26.78 (/ 1000)	27.36
Crude Death Rate ( 2000)	5.89	9.51

Source: DOH-ARMM (Consolidated data- various years in bracket)

(LB – live birth)

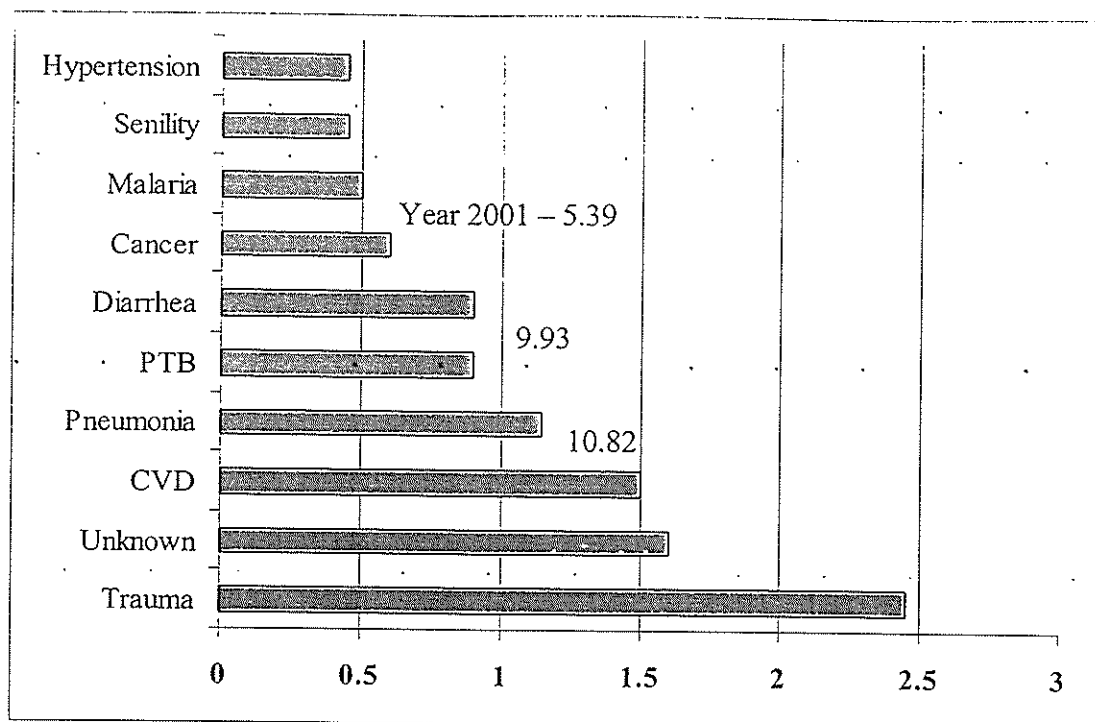
### 2.6.2 Ten Leading Causes of Mortality

The data on the ten leading causes of mortality in 2001 (Table 2-6) lists “Unknown/Senility” as the number one (1) cause of death in ARMM, which is quite unusual and may reflect an error in reporting. It is also not clear whether “Accident, all forms” which ranks second is significantly different from “Trauma/GSW”. The 2002 data on leading causes of death presents a different picture. “Trauma” is now ranked first followed by “Unknown Causes” and “Cardiovascular Diseases” as shown in Figure 2-3.

Table 2-6 Ten Leading Cause of Mortality per 100,000 Population in ARMM, 2001

CAUSES	NUMBER	RATE
1. Unknown, senility	445	19.81
2. Accident, all forms	404	17.99
3. Hypertension	278	12.38
4. Pneumonia	243	10.82
5. PTB	223	9.93
6. Trauma/GSW	214	9.53
7. Diarrhea	190	8.46
8. Cardiovascular Disease	168	7.48
9. Cancer, all forms	121	5.39
10. Diseases of the heart	79	3.52

Source: MFHSIS



Note: X axis times 10

Source: DOH-ARMM

**Figure 2-3 Ten Leading Causes of Deaths Per 100,000 Population – ARMM (2002)**

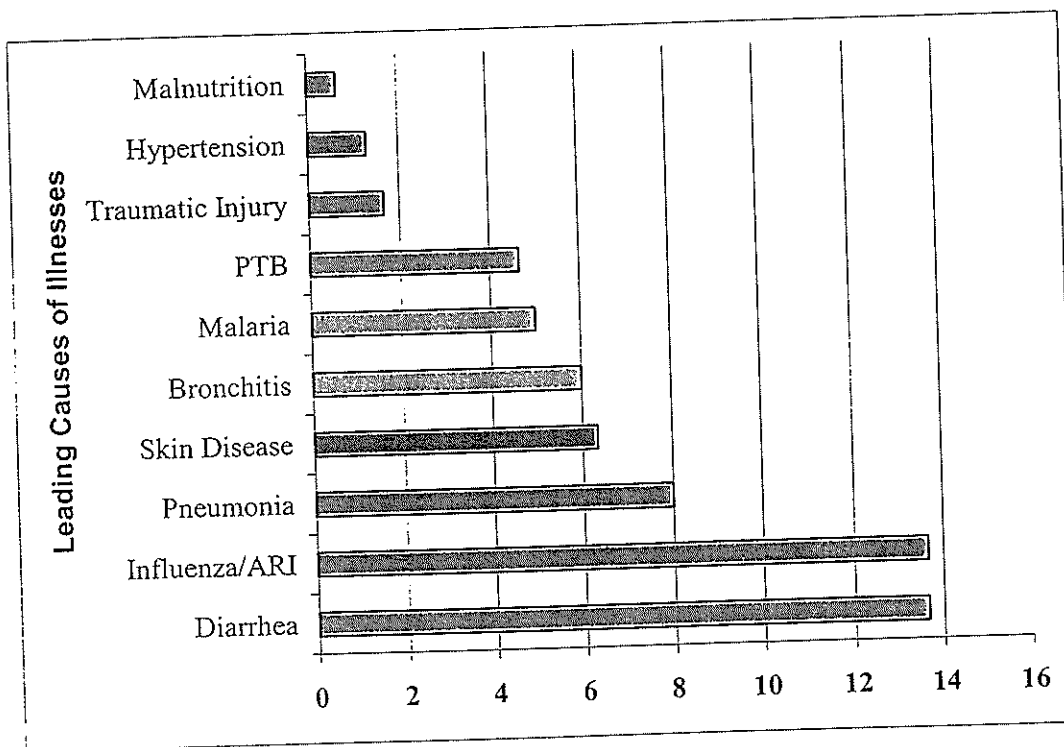
### 2.6.3 Leading Causes of Morbidity

The top three causes of morbidity or illness (Table 2-7 and Figure 2-4) are all infectious in nature. Diarrhea, which is ranked first, correlates well with the focused group discussion results, which indicate that potable water is a big problem in ARMM. The same result also correlates well with the report on notifiable diseases. There is no significant difference between the 2001 and the 2002 data.

Table 2-7 Ten Leading Causes of Illnesses per 1000 Population – ARMM-2001

CAUSES	NUMBER	RATE
1. Diarrhea	35,040	15.60
2. Influenza/ARI	34,864	15.52
3. Pneumonia	17,576	7.82
4. Bronchitis	14,120	6.29
5. Skin Diseases	9,612	4.28
6. Diseases of the Heart	6,984	3.11
7. PTB	3,674	1.64
8. Hypertension	3,361	1.50
9. Parasitism	2,533	1.13
10. Malaria	2,328	1.04

Source: MFHSIS- 2001



Source: DOH-ARMM Report

Figure 2-4 Ten Leading Causes of Illnesses per 1,000 Population – ARMM (2002)

***CHAPTER 3***  
***EXISTING FACILITIES AND SERVICE COVERAGE***

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### 3. EXISTING FACILITIES AND SERVICE COVERAGE

#### 3.1 Water Supply

##### 3.1.1 General

The present water supply system for each municipality was surveyed to assess the condition and the need of the people in the locality. Other water supply system parameters such as service areas, service area population, served population, water service level, water quality of present sources, present distribution system (for Level II and III) were also assessed to define the necessary measures to be planned for the improvement of the water supply system of each municipality.

In the province of Basilan, only the municipalities of Lamitan and Maluso can be considered to have an adequate water supply facilities, through their respective Water Districts. These two(2) areas have Level III system within the Poblacion and its adjacent barangays while those in the remote part are provided with either Level II or Level I system(s). The respective service area coverages (in terms of percentage of municipal population) is discussed in the succeeding section of this chapter (Sec. 3.1.6 Water Supply System Coverage).

The remaining municipalities which includes Lantawan , Sumisip, Tipo Tipo and Tuburan have either Level II or Level I water system within their respective Poblacion. Based on information provided (by PPDO) and field assessment conducted, the water supply facilities in the town centers of Sumisip, Tipo Tipo and Tuburan maybe considered as in its worst condition. In these areas majority of the population depends on open dug wells and shallow tube wells, unsecured and untreated water from springs and rivers.

##### 3.1.2 Types of Facilities and Definition of Service Level Standard

*Composition of Water Supply System and Facility.* The service level and system components of the water supply system and facilities are shown in Table 3-1.

Table 3-1 Composition of Water Supply system and Facility

Facility	Level I	Level II	Level III
1. Water Source	Drilled shallow well, Drilled deep well, Spring, Dug well, Rain Collector	Drilled shallow well, Drilled deep well, Spring, Infiltration gallery	Drilled shallow well, Spring, Infiltration gallery, Surface water intake
2. Water Treatment	Generally none. Disinfection of well is conducted periodically by local health authorities	Disinfection facility is sometimes not provided.	Disinfection facility is provided. Systems with surface water source have series of treatment facilities.
3. Distribution	None	Pipe system provided with reservoir	
4. Delivery and Service level	Generally none.	Communal faucet shared by houses within 25 m radius	
5. Consumption Rate	At least 20 lpcd	At least 60 lpcd	At least 100 lpcd

**Safe and Unsafe Classification of Water Sources.** Generally, all water sources cannot be assumed to be safe for drinking unless chemical and bacteriological tests are conducted. However, the sources can be classified initially as either safe or unsafe considering the physical condition and accessibility of source to contamination.

#### Safe Sources

Protected deep well  
Protected shallow well  
Improved/covered dug well  
Developed spring

#### Unsafe Sources

Unprotected deep well  
Unprotected shallow well  
Open dug well  
Unprotected Rain Collector

**Service Level Standard.** The water supply system has three service levels. Normally, the number of households served for each level is sometimes beyond the standard set. The ideal service level standards are shown below.

Level I	15 households per point source 1 household per private well
Level II	4 to 6 households per communal faucet
Level III	1 household per connection

### 3.1.3 Level III Water Supply Systems

The Level III water system is usually operated by the Water District or by the municipal waterworks. In the province of Basilan, there are two municipalities having Level III water

supply system, namely Lamitan and Maluso. Table 3-2 shows the available data of the water supply system for each municipality.

**Table 3-2 Existing Level III Water Systems**

Municipality	Water Service Provider	Service Area				Water Source	Estimated Unit Water Consumption (lpcd)
		Barangay	Class	2003 Served Population	Number of Connections		
Lamitan	Lamitan Water District	1. Bulingan	Urban	291	58	Spring	120
		2. Lo-ok	Urban	355	71		
		3. Colonia	Urban	1,109	220		
		4. Balobo	Urban	705	140		
		5. Limo-ok	Urban	992	197		
		6. Sengal	Urban	879	175		
		7. Bato	Urban	1,791	356		
		8. Kulay Bato	Urban	852	169		
		9. Matibay	Urban	1,346	267		
		10. Malakas	Urban	592	118		
		11. Matatag	Urban	826	164		
		12. Malinis	Urban	963	191		
		13. Maganda	Urban	953	189		
		14. Maligaya	Urban	825	164		
		<b>Total</b>		Urban	12,479		
		Rural	0	0			
Maluso	Maluso Water District	1. Townsite(Pob.)	Urban	1,849	322	Treated surface water	120
		2. Port Holland (L)	Rural	1,429	249		
		3. Port Holland (U)	Urban	1,186	206		
		4. Tabuk	Rural	526	92		
		5. Samal Village	Urban	1,033	180		
		6. South Guanán	Rural	485	85		
		7. North Guanán	Rural	319	56		
		8. Fuente Maluso	Rural	391	68		
		9. Port Holland V	Rural	509	89		
		10. Port Holland (M)	Urban	762	133		
		<b>Total</b>		Urban	4,830		
		Rural	3,659	637			

Source : Data furnished by PPDO MPDC's, Lamitan WD and Maluso WD

### 3.1.4 Level II Water Supply System

The Level II water systems are defined as communal faucets which are designed to serve the barangays at specified service points. The systems are usually operated by the Barangay Waterworks System Association (BWSA). In the province of Basilan, four out of the six municipalities covering ARMM Basilan have Level II water system. Table 3-3 shows the municipalities covered by Level II water system. In the Municipality of Lamitan and Maluso

wherein the Poblacion is being served with Level III system, some of the remote Barangays have Level II systems.

Table 3-3 Existing Level II Water System

Municipality	Water Service Provider	Service Area				Water Source	Estimated Unit Water Consumption (lpcd)	
		Barangay Served	Class	2003 Served Population	Number of Communal Faucets			
Lamitan	BWSA(s)	1. Sta. Clara	Urban	1,678	No data furnished	Spring and shallow wells	100*	
		2. Balagtasan	Urban	876				
		3. Bohesapa	Urban	524				
		4. Boheyakan	Urban	373				
		<b>Total</b>	Urban	3,452				
		Rural	0					
Lantawan	BWSA(s)	1. Atong Atong	Rural	711	No data furnished	Spring and shallow wells	80*	
		2. Matikang	Rural	352				
		3. Mangas (L)	Rural	240				
		4. Tairan	Rural	1,125				
		5. Bulanza	Rural	164				
		6. Switch Yakal	Rural	571				
		7. Matarling	Rural	638				
		8. Lower Banas	Rural	350				
		<b>Total</b>	Urban	0				
	Rural	4,152						
Maluso	BWSA(s)	1. Abong Abong	Rural	450	No data furnished	Spring	80*	
		2. Canas	Rural	671				
		3. Tubigan	Rural	1,144				
		4. Mahayahay (L)	Rural	371				
		5.	Rural	425				
		<b>Total</b>	Urban	0				
	Rural	3,061						
Sumisip	BWSA(s)	1. Guiong	Rural	1,190	No data furnished	Spring	80*	
		2. Mangal	Rural	1,057				
		3. Marang	Rural	391				
		4. Tumahubong	Urban	1,143				
		5. Benembengan (U)	Rural	653				
		<b>Total</b>	Urban	1,143				
	Rural	3,292						
Tipo Tipo	BWSA(s)	No data furnished						
Tuburan	BWSA(s)	No data furnished						

\* Based on projected 2003 barangay population

Source : Data furnished by PPDO & MPDC's

## 3.1.5 Level I Water Supply System

Level I water system(s) are found in the other areas of the municipality, that are not being served by either Level II or Level III system (as mentioned in the above tables). This system commonly utilize shallow well(s) as water source and are equipped with hand pumps, but for those who have the means and financial resources, they use motorized water pump to withdraw water. There are also areas where they tapped spring as their point source. Water from the spring is conveyed directly to their households by connecting series of pipes (polyethylene or galvanized iron). Other households get their water from nearby river channel for domestic use and rainwater (stored in individual water tank) for drinking.

Table 3-4 shows the municipalities covered by Level I water system.

**Table 3-4 Existing Level I Water System**

Municipality	Water Service Provider	Service Area				Water Source	Estimated Unit Water Consumption (lpcd)
		Barangay Served	Class	2003 Served Population	Number of Communal Faucets		
Lamitan	BWSA(s)	1 Ba-as	Urban	435	No data furnished	Spring and shallow wells	100*
		2 Baimbing	Urban	123			
		3 Balas	Urban	894			
		4 Baungos	Urban	395			
		5 Bohebessey	Urban	221			
		6 Boheibu	Urban	477			
		7 Bohengange	Urban	275			
		8 Boheyawas	Urban	388			
		9 Buahang	Urban	382			
		10 Bulanting	Urban	212			
		11 Cabobo	Urban	206			
		12 Calugusan	Urban	351			
		13 Campo Uno	Urban	322			
		14 Danit Puntucan	Urban	184			
		15 Lebbuh	Urban	240			
		16 Luksubang	Urban	181			
		17 Lumoton	Urban	316			
		18 Malo-ong Canal	Urban	599			
		19 Malo-ong (S.J.)	Urban	784			
		20 Parangbasak	Urban	667			
		21 Sabong	Urban	177			
		22 Simbangon	Urban	212			
		23 Tandong Ahas	Urban	451			
		24 Tumakid	Urban	386			
		25 Ubit	Urban	548			
		26 Ulame	Urban	432			
<b>Total</b>		Urban	9,862				
		Rural	0				

Municipality	Water Service Provider	Service Area				Water Source	Estimated Unit Water Consumption (lpcd)	
		Barangay Served	Class	2003 Served Population	Number of Communal Faucets			
Lantawan	BWSA(s)	1	Bagbagon	Rural	388	No data furnished	Spring and shallow wells	100*
		2	Baluk-baluk	Rural	305			
		3	Baungis	Rural	190			
		4	Bulan-bulan	Rural	353			
		5	Calayan	Rural	186			
		6	Calugusan	Rural	327			
		7	Canibungan	Rural	684			
		8	Dasalan	Rural	504			
		9	Landugan	Rural	157			
		10	Lantawan Proper (Pop.)	Rural	181			
		11	Lawila	Rural	85			
		12	Lawi-lawi	Rural	209			
		13	Lubukan	Rural	536			
		14	Luukbongsod	Rural	328			
		15	Luuk-Maluha	Rural	151			
		16	Mananggal	Rural	126			
		17	Palahangan	Rural	159			
		18	Pamucalin	Rural	458			
		19	Panducan	Rural	293			
		20	Paniongan	Rural	119			
		21	Parian-Baunoh	Rural	405			
		22	Sangbay Big	Rural	470			
		23	Sangbay Small	Rural	544			
		24	Suba-an (Pangasahan)	Rural	138			
		25	Tausan	Rural	638			
		26	Upper Bañas	Rural	138			
		27	Upper Manggas	Rural	217			
				<b>Total</b>	Urban			
			Rural	8,291				
Maluso	BWSA(s)	1	Limubong	Rural	526	No data furnished	Spring and shallow wells	80*
		2	Mahayahay Upper (Zone II)	Rural	315			
		3	Muslim Area	Rural	263			
		4	Taberlongan	Rural	782			
		5	Upper Garlayan	Rural	297			
				<b>Total</b>	Urban			
			Rural	2,184				

Municipality	Water Service Provider	Service Area				Water Source	Estimated Unit Water Consumption (lpcd)
		Barangay Served	Class	2003 Served Population	Number of Communal Faucets		
Sumisip	BWSA(s)	1 Babag (Babuan Island)	Rural	777	No data furnished	Spring and shallow wells	80*
		2 Bacung	Rural	606			
		3 Baiwas	Rural	464			
		4 Balanting	Rural	312			
		5 Basak	Rural	293			
		6 Benembengan Lower	Rural	251			
		7 Bohe-languyan	Rural	334			
		8 Boloh-boloh	Rural	253			
		9 Bukut-Umus	Rural	706			
		10 Buli-buli	Rural	607			
		11 Cabcaban	Rural	403			
		12 Cabengbeng Lower	Rural	309			
		13 Cabengbeng Upper	Rural	818			
		14 Ettub-ettub	Rural	420			
		15 Kaum-Air	Rural	286			
		16 Kaumpamatsakem	Urban	308			
		17 Kaumpurnah	Rural	484			
		18 Lanawan	Rural	923			
		19 Libug	Rural	590			
		20 Limbocandis	Rural	204			
		21 Lukketon	Rural	455			
		22 Luuk-Bait	Rural	453			
		23 Mahatalang	Rural	405			
		24 Manaul	Rural	920			
		25 Mebak	Rural	327			
		26 Pisak-pisak	Rural	341			
		27 Sahaya Bohe Bato	Rural	324			
		28 Saluping	Rural	685			
		29 Sapah Bulak	Rural	591			
		30 Suligan (Babuan Island)	Rural	276			
		31 Sulloh (Tapiantana)	Rural	792			
		32 Sumisip Central	Rural	590			
		33 Tambulig Buton	Rural	471			
		34 Tikus	Rural	416			
		35 Tongsengal	Rural	463			
		36 Tong-Umus	Rural	1,415			
		<b>Total</b>	Urban	308			
			Rural	17,966			

Municipality	Water Service Provider	Service Area				Water Source	Estimated Unit Water Consumption (lpcd)
		Barangay Served	Class	2003 Served Population	Number of Communal Faucets		
Tipo-Tipo	BWSA(s)	1 Amaloy	Rural	622	No Data furnished	Spring and shallow wells	80*
		2 Apil-apil	Urban	507			
		3 Badja	Rural	558			
		4 Baguindan	Rural	442			
		5 Banah	Rural	454			
		6 Bangcuang	Rural	263			
		7 Bato-bato	Rural	494			
		8 Bohebaca	Rural	383			
		9 Bohelebung	Rural	387			
		10 Bohe-Pahuh	Rural	680			
		11 Bohe-Piang	Rural	574			
		12 Bohe-Suyak	Rural	529			
		13 Bohe-Tambak	Rural	298			
		14 Bucalao	Rural	819			
		15 Cabangalan	Rural	404			
		16 Cambug	Rural	704			
		17 Danapah	Rural	394			
		18 Danit	Rural	310			
		19 Guinanta	Rural	571			
		20 Kailih	Rural	803			
		21 Kamamburingan	Urban	566			
		22 Kinukutan (taken from Bucalao)	Rural	300			
		23 Kuhon	Urban	409			
		24 Kuhon Lennuh	Urban	465			
		25 Lagayas	Rural	388			
		26 Limbo-Upas	Rural	668			
		27 Linuan	Rural	522			
		28 Lookbisaya (Kaulungan Island)	Rural	277			
		29 Macalang	Rural	299			
		30 Magcawa	Rural	517			
		31 Matata	Rural	371			
		32 Materling	Rural	761			
		33 Pipil	Rural	754			
		34 Sangkahan (Kaulungan Island)	Rural	239			
		35 Silangkum	Rural	620			
		36 Sungkayut	Urban	560			
		37 Tipo-tipo Proper (Pob.)	Urban	697			
		38 Tongbato	Rural	495			
		39 Ulitán	Rural	539			
<b>Total</b>		Urban	3,204				
		Rural	16,438				



Municipality	Water Service Provider	Service Area				Water Source	Estimated Unit Water Consumption (lpcd)
		Barangay Served	Class	2003 Served Population	Number of Communal Faucets		
Tuburan	BWSA(s)	1 Basakan	Rural	458	No data furnished	Spring and shallow wells	80*
		2 Bohetambis	Rural	465			
		3 Buton	Rural	863			
		4 Caddayan	Rural	229			
		5 Calut	Rural	2,232			
		6 Candiis	Rural	543			
		7 Duga-a	Rural	1,106			
		8 Katipunan	Urban	399			
		9 Lahi-lahi	Rural	713			
		10 Langil	Rural	476			
		11 Langong	Rural	270			
		12 Languyan	Rural	395			
		13 Linongan	Rural	420			
		14 Lower Bato-bato	Rural	385			
		15 Lower Sinangkapan	Rural	760			
		16 Lower Tablas	Urban	430			
		17 Mahawid	Rural	420			
		18 Mangalut	Rural	746			
		19 Manguso	Rural	272			
		20 Paguengan	Rural	720			
		21 Pintasan	Rural	419			
		22 Semut	Rural	1,319			
		23 Seronggon	Rural	533			
		24 Sibago	Rural	665			
		25 Sinulatan	Rural	274			
		26 Sulutan Matangal	Rural	506			
		27 Tablas Usew	Rural	470			
		28 Tuburan Proper (Pob.)	Rural	929			
		29 Upper Bato-bato	Rural	232			
		30 Upper Sinangkapan	Rural	302			
		<b>Total</b>	Urban	829			
			Rural	17,123			

### 3.1.6 Water Supply System Coverage

There are two (2) areas with Level III system and these are the Municipalities of Lamitan and Maluso. They cover about 35% of their respective total number of barangays and are concentrated within the Poblacion. Also, there are municipalities with Level II water system which serves the Poblacion while all other municipalities have Level I systems. Table 3-5 shows the distribution in terms of percent of population coverage in each level of water system. Figure 3-1 shows the existing water supply facilities coverage.

Table 3-5 Water System Level Coverage

Municipality	Type	Population (2003)	Served Population Coverage				% Water System Level Coverage			
			Level III	Level II	Level I	Total	Level III	Level II	Level I	Total
1 Lamitan	Urban	61,996	12,830	3,272	9,862	25,965	21%	5%	16%	42%
	Rural	0	0	0	0	0	0%	0%	0%	0%
	Total	61,996	12,830	3,272	9,862	25,965	21%	5%	16%	42%
2 Lantawan	Urban	0	0	0	0	0	0%	0%	0%	0%
	Rural	29,031	0	3,322	8,291	11,612	0%	11%	29%	40%
	Total	29,031	0	3,322	8,291	11,612	0%	11%	29%	40%
3 Maluso	Urban	12,074	4,830	0	0	4,830	15%	0%	0%	15%
	Rural	20,728	3,659	2,449	2,184	8,291	11%	7%	7%	25%
	Total	32,802	8,488	2,449	2,184	13,121	26%	7%	7%	40%
4 Sumisip	Urban	3,054	0	914	308	1,222	0%	2%	1%	2%
	Rural	51,498	0	2,634	17,658	20,292	0%	5%	32%	37%
	Total	54,552	0	3,548	17,966	21,513	0%	7%	33%	39%
5 Tipo Tipo	Urban	8,011	0	0	3,204	3,204	0%	0%	7%	7%
	Rural	41,095	0	0	16,438	16,438	0%	0%	33%	33%
	Total	49,106	0	0	19,642	19,642	0%	0%	40%	40%
6 Tuburan	Urban	2,073	0	0	829	829	0%	0%	2%	2%
	Rural	42,807	0	0	17,123	17,123	0%	0%	38%	38%
	Total	44,880	0	0	17,952	17,952	0%	0%	40%	40%
Provincial Total	Urban	87,208	17,660	4,186	14,204	36,050	6%	2%	5%	13%
	Rural	185,158	3,659	8,404	61,693	73,756	1%	3%	23%	27%
	Total	272,367	21,318	12,590	75,897	109,805	8%	5%	28%	40%

Source: Data furnished by PPDO & MPDC's

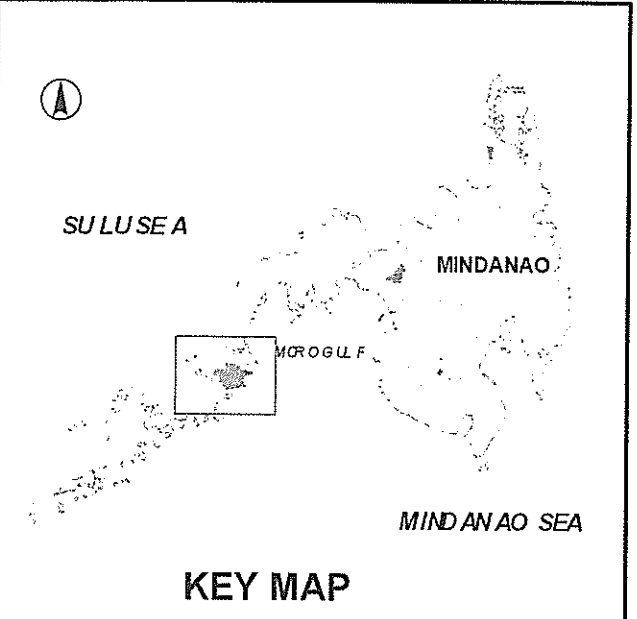
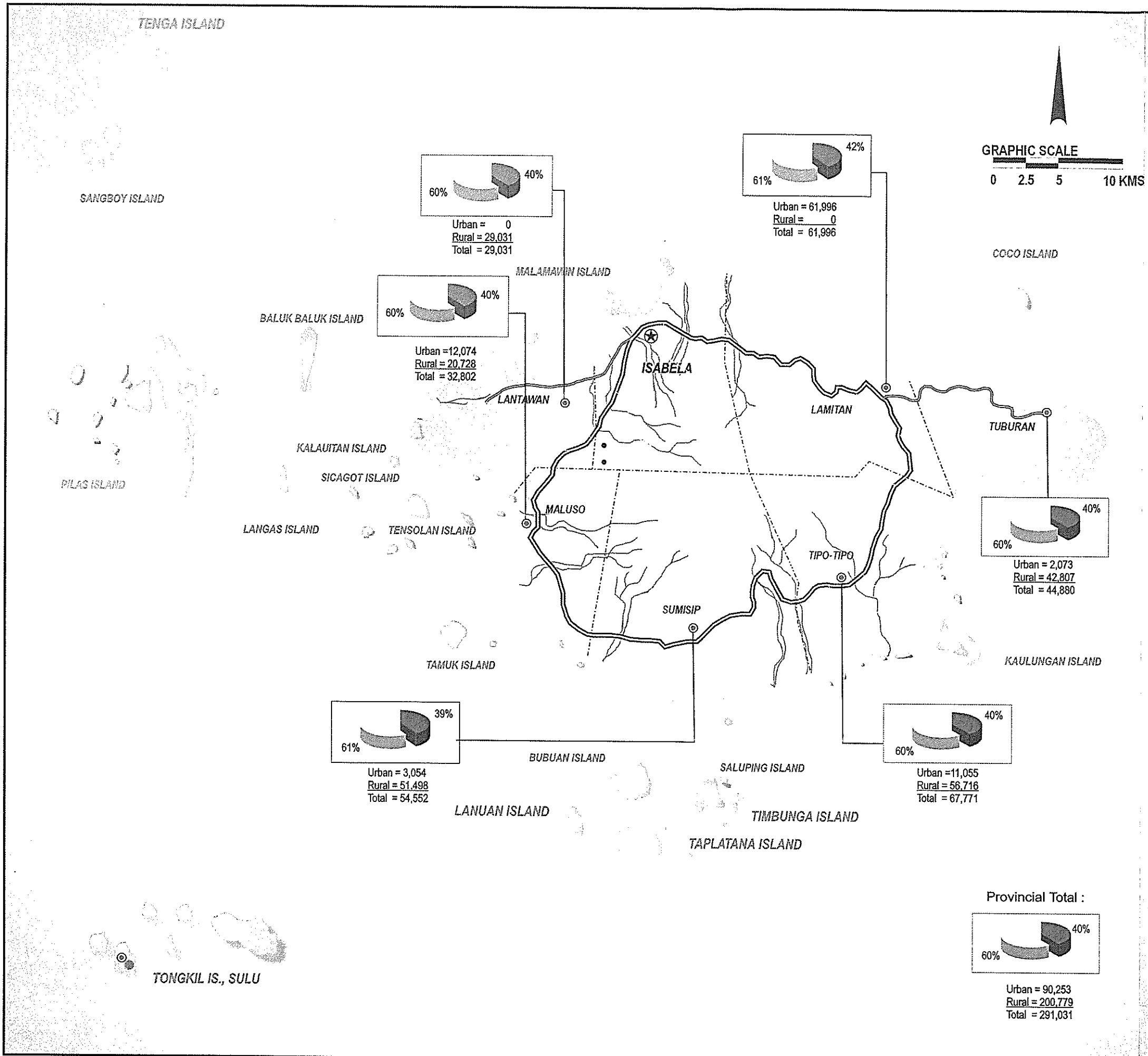
The present provincial coverage for ARMM was compared to the national and other regional data in the country. Table below shows the comparison between ARMM with other regions, which demonstrates very low coverage within the sector.

From the table it could be observed that access to Level III & II water system is lowest in ARMM. Likewise remedial means to obtain potable water from rain collector, private vendor and other sources, which shows highest values for ARMM indicates the lack of adequate standard water source.

### Number of Families Main Source of Water Supply (2002)

Region	Total Families	Main Source of Water Supply											
		Level III		Level II		Level I		Rain Collector		Private Vendor		Others	
		Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
PHILIPPINES	15,925,454	5,194,864	33	2,626,307	16	7,393,385	46	61,513	0.4	573,598	4.0	75,787	0.5
ARMM	388,437	22,549	6	26,657	7	299,895	77	12,456	3.0	24,172	6.0	2,708	1.00
Ilocos Region	849,081	164,955	19	82,758	10	597,765	70	0	0.0	3,440	0.4	163	0.02
Eastern Visayas	774,958	172,869	22	282,421	36	308,072	40	1,011	0.1	9,177	1.0	1,408	0.18
Western Mindanao	637,944	165,860	26	161,173	25	299,617	47	0	0.0	7,091	1.0	4,203	0.66
Central Mindanao	694,91	136,540	20	65,586	9	475,113	68	566	0.08	10,200	2.0	6,557	0.94

Source: National Statistics Office, 2002 Annual Poverty Indicators Survey (APIS)



**LEGEND:**

- Provincial Boundary
- Municipal Boundary
- River
- National Road
- Provincial Road
- City Center
- Town Center
- Population served by water supply facilities (%)
- Population un-served by water supply facilities (%)

Source: PPDO & ACTUAL FIELD VERIFICATION

**Figure 3-1**  
**WATER SUPPLY FACILITIES**  
**BASE YEAR (2003) COVERAGE**  
**BASILAN**

## 3.2 Sanitation

### 3.2.1 General

The present sanitation condition of the municipalities was also assessed to evaluate the present sanitary needs and to integrate measures with the water supply plan. For majority of the areas visited during the survey, commonly the problem to sanitation is lack of potable water. Since water supply and sanitation are complimentary, the gateway to progress of every municipality is a reliable and safe sanitary/environmental facility.

### 3.2.2 Types of Facilities and Definition of Service Level Standard

The household toilets are categorized into two types, namely, the sanitary and unsanitary toilets. Sanitary toilets (which are the approved ones) are defined as water sealed toilet, flush type or pour-flush type with receiving pit or septic tank or septic vault, with ventilation. Unsanitary toilets include the types of facilities used for disposing human waste which do not fall under the category of the approved type.

### 3.2.3 Sanitation Facilities and Service Coverage

Sanitation data furnished by the PPDO could not be used to make a conclusive picture of the present sanitation condition of all the six municipalities of Basilan, since only two municipalities (Lamitan and Maluso) have submitted the data. However, based on these data obtained, the present condition can be deduced as follows:

- ◆ Provision for household sanitary facilities, (on a provincial wide basis) ranges from 2.30% (Maluso) to 11.50% (Lamitan) while on a municipal wide basis, it ranges from 18% to 48% respectively.
- ◆ On the criteria of acceptability of these facilities, sanitary facilities ranges from 5% to 19% and unsanitary facilities ranges from 1% to 12%.
- ◆ For the municipalities with lacking data, analysis will be made based on the average percentage coverage. This will be done by taking the average value of the submitted data for the municipalities of Maluso and Lamitan, and will be 34%.

The available data may be an indication of the need to improve the sanitary facilities of the province of Basilan. The low figure can be attributed to lack of water supply facilities and lack of capability of rural households to construct the approved type of sanitary facilities. Table 3-6 and Figure 3-2 shows the base year (2003) household sanitary facilities.

**Table 3-6 Base Year (2003) Household Sanitation Facilities**

Municipality	Type	2003		Households with Sanitary Toilet		
		Population	No. of HH	No. of HH	Served Pop	Coverage
1 Lamitan	Urban	61,996	12,235	5,873	29,758	48%
	Rural	0	0	0	0	0%
	Total	61,996	12,235	5,873	29,758	48%
2 Lantawan	Urban	0	0	0	0	0%
	Rural	29,031	5,497	1,814	9,580	33%
	Total	29,031	5,497	1,814	9,580	33%
3 Maluso	Urban	20,728	2,121	382	2,173	7%
	Rural	12,074	3,642	656	3,731	11%
	Total	32,802	5,763	1,037	5,904	18%
4 Sumisip	Urban	3,054	513	169	1,008	2%
	Rural	51,498	8,653	2,856	16,994	31%
	Total	54,552	9,166	3,025	18,002	33%
5 Tipo Tipo	Urban	8,011	1,458	481	2,644	5%
	Rural	41,095	7,478	2,468	13,561	28%
	Total	49,106	8,936	2,949	16,205	33%
6 Tuburan	Urban	2,073	377	124	684	2%
	Rural	42,807	7,789	2,570	14,126	31%
	Total	44,880	8,167	2,695	14,810	33%
Provincial Total	Urban	95,862	16,704	7,029	36,267	13%
	Rural	176,505	33,059	10,363	57,993	21%
	Total	272,367	49,763	17,393	94,260	35%

Source : Data furnished by PPDO & MPDC's

Table 3-7 shows the existing sanitary facilities of public schools and public facilities. The data indicates that the schools are fairly provided with sanitary facilities. However, in some of the schools that were visited during the survey, it was observed that although the toilets are still usable, their present condition are not within the acceptable standards. This is either due to lack of proper maintenance and/or as result of poor quality construction.

**Table 3-7 Existing Sanitation Facilities**

Municipality	School Sanitation*		No. of Public Toilet
	No. of Schools	No. of Toilets	
1. Lamitan	45	132	32
2. Lantawan	44	41	4
3. Maluso	21	21	-
4. Sumisip	56	52	-
5. Tipo Tipo	49	46	-
6. Tuburan	36	30	-
<b>Total</b>	<b>250</b>	<b>322</b>	<b>36</b>

Source : PPDO and respective MPDC's

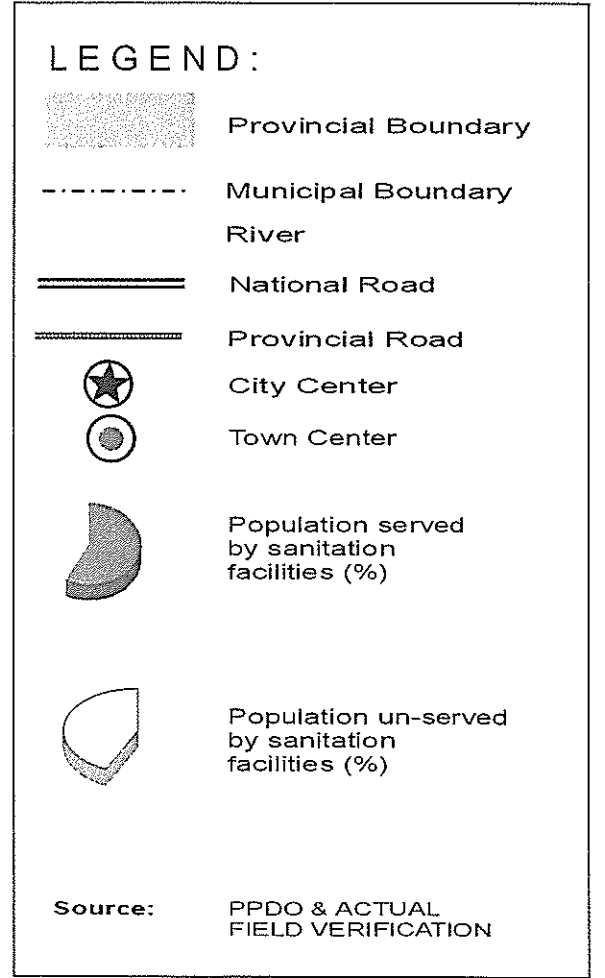
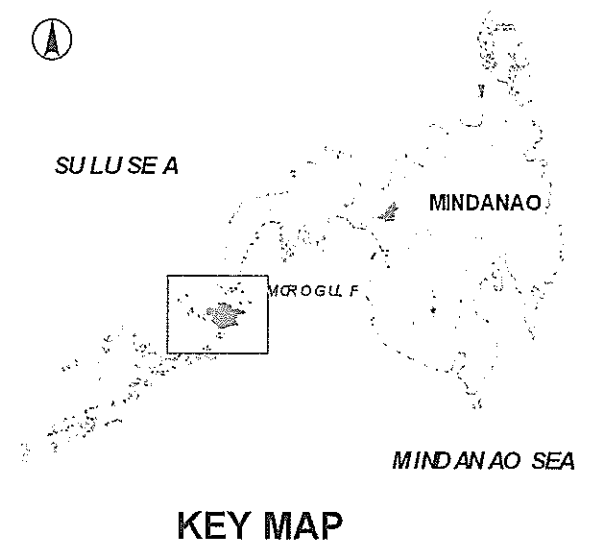
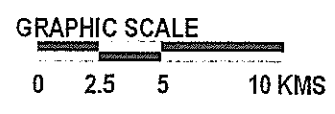
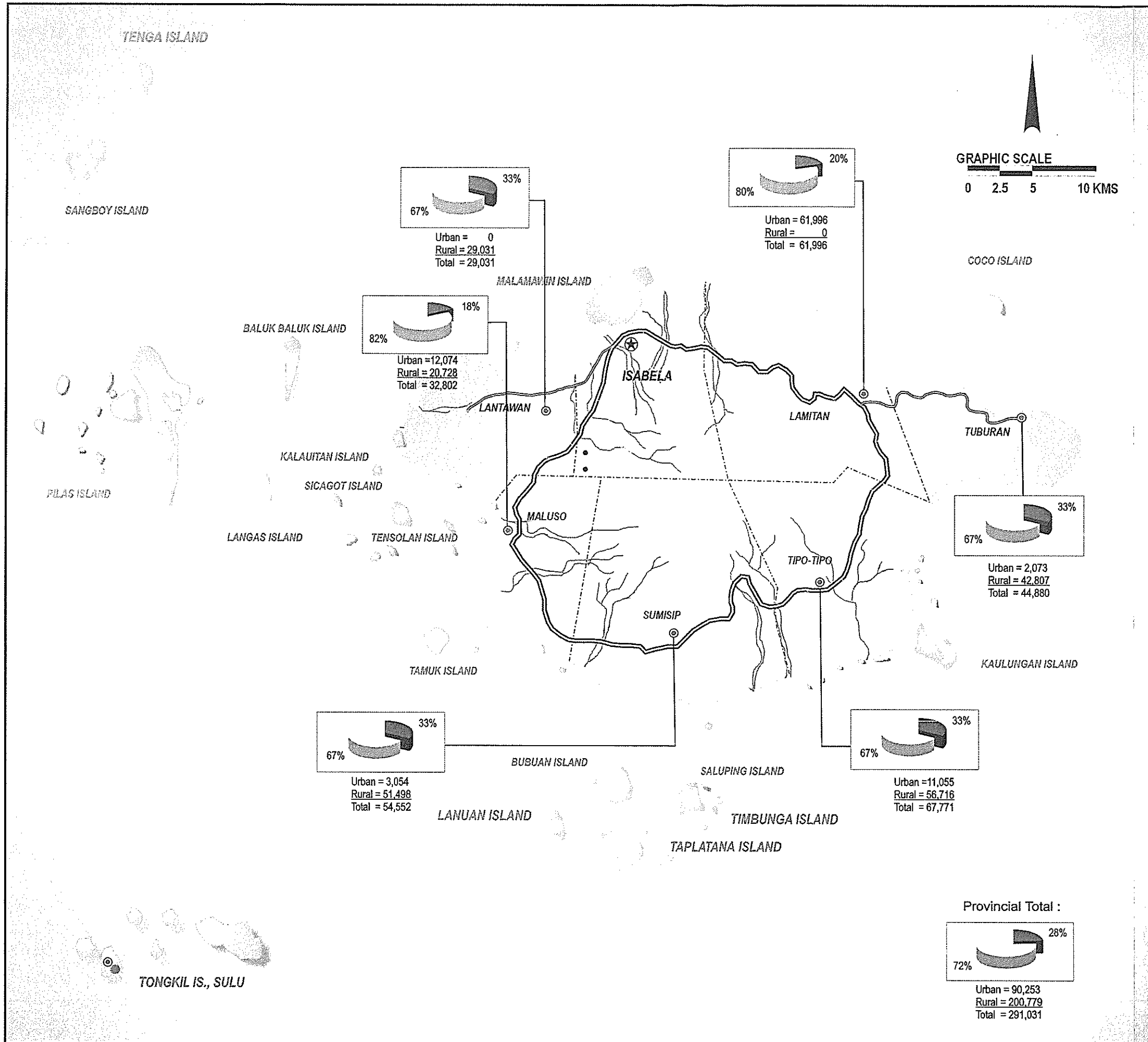


Figure 3-2  
**SANITATION FACILITIES  
BASE YEAR (2003)  
COVERAGE  
BASILAN**

***CHAPTER 4***  
***EXISTING SECTOR INSTITUTIONS AND***  
***ARRANGEMENTS***

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**4. EXISTING SECTOR ARRANGEMENTS AND INSTITUTIONAL CAPACITY**

**4.1 General**

The existing sector institutional arrangements in the ARMM is determined largely by two laws: the Act Providing for the ARMM (RA No. 6734), which has been subsequently amended by the Act to Strengthen and Expand the Organic Act for the Autonomous Region in Muslim Mindanao (RA 9054) and the Local Government Code of ARMM, Mindanao Muslim Autonomy # 25 Book III. These laws have resulted in substantially different inter-agency relationships than those currently existing between the national government and the regions other than the ARMM.

**4.2 Policies and Development Plan on ARMM**

**4.2.1 National Government Policies on ARMM**

1) National Government Policies on ARMM

RA 9054 defines the national government policies on the ARMM as follows:

- ◆ ARMM remains an integral and inseparable part of the national territory as defined by the Constitution and existing laws;
- ◆ Policy of settlement of conflicts by peaceful means;
- ◆ Guaranteed recognition and protection of the beliefs, customs and traditions of the people in the ARMM and the free exercise of their religions;
- ◆ Perpetuation of Filipino and Islamic values and ideals;
- ◆ Improved status of the marginalized; and
- ◆ Enhancement of the quality of life, protection of women and children and preferential rights of the inhabitants.



### 2) National Government Plan on ARMM

The Medium Term Philippine Development Plan 2001-2004, while defining the development aspirations for the country as a whole, puts special attention and focus on securing peace and development in Mindanao. With reference to Mindanao, the Plan states the policy framework towards national government's approach to its development, to wit – aim at securing peace while accelerating development in conflict and non-conflict areas to attain political and socio-economic stability as well as cultural harmony, in conformity with the rule of law and in accordance with constitutional processes.

The development strategies for Mindanao include the following:

- ◆ Peace building efforts through confidence building measures to create a favorable environment for resuming peace talks with the MILF and rehabilitation of communities damaged by the armed conflict with the MILF and return of affected population to their communities; and
- ◆ Socio-economic upliftment through the provision of basic services such as food and nutrition, health, *water and sanitation*, basic education/literacy and employment/livelihood opportunities.

Thus, water and sanitation is considered as a priority development sector in Mindanao in general. Among the identified projects directed towards the sector is the ADB-funded Mindanao Basic Urban Services Sector Project (MBUSSP) intended to provide basic infrastructure such as water supply for urban centers and urbanized municipalities in Mindanao.

### 3) Water Supply and Sanitation Sector Reforms - National

The national government has endorsed the major recommendations of the Water Supply Sector Reform Study and the National Urban Sewerage and Sanitation Strategy Study as evidenced by NEDA Board Resolution Nos. 4, 5 and 6. These resolutions have been enforced in the sector for more than five years with the transition process still ongoing particularly at the provincial level where the community-based demand-driven approach is being handed over to the LGUs.

The following are the aforementioned NEDA Board resolutions that provide the operating and regulatory policies for the sector as a whole and have been followed by the recently completed

## **CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity**

ADB-funded RW3SP (Rural Water Supply and Sanitation Sector Project) implemented by DILG jointly with the DOH and LGUs of the 20 poorest provinces covered by the Social Reform Agenda of the 1990s.

(a) NEDA Resolution Nos. 4 (series of 1994)

In the context of the national and ARMM Local Government Codes, LGUs in general, now play the lead role in basic services delivery. The resolution allows the LGUs to implement all levels of water supply projects and redefines the roles of other sector agencies.

With the purpose of ensuring common interpretation of clause (g) of this resolution, its Implementing Rules and Regulations (IRR) was prepared by the DILG and approved by the NEDA Board in 1998. It delineates the responsibilities of government agencies involved in the sector and defines the role of LGUs in the provision of water supply and sanitation services, including operation and maintenance (O&M) of the facilities.

(b) NEDA Resolution No. 5 (series of 1994)

This resolution designates the LGUs as primary implementers of the sanitation/ sewerage programs and mandates the establishment of a Central Project Support Office (CPSO) at LWUA to assist LGUs in the formulation, preparation and implementation of sewerage/sanitation projects.

(c) NEDA Resolution No.6 (series of 1996)

This resolution defines the extent of national government assistance to LGUs in the implementation of devolved infrastructure activities/facilities under the LGC in support of national priority programs in order to ensure efficiency, effectivity and more focused implementation. It affirms DILG's responsibilities for overseeing and administrating national government assistance to LGUs including institutional capability building of the LGUs.

### **4.2.2 ARMM Plans**

The Development Framework Plan 2002-2004 (or the Regional Executive Agenda for Peace and Development) sets the policy guidelines and development directions in the ARMM for the indicated period. In general, these include the following:

- ◆ Support to the peace process through (i) completion of the 1996 GRP-MNLF Peace Agreement; (ii) sustained efforts to further peace building and stability; and (iii) national reconciliation including peaceful reconciliation/reconstruction and rehabilitation of the communities affected by the armed conflict;
- ◆ Social reforms through (i) delivery of basic services including *potable water supply and sanitation*, health care and nutrition; (ii) focus on education and manpower skills training; and (iii) development of comprehensive social protection package which includes safety nets and conflict prevention components;
- ◆ Economic reforms through (i) fast tracking the implementation of livelihood projects complemented with resources of microfinance to enable the marginalized communities to undertake economic activities; (ii) refocus strategic intervention from Agriculture and Fisheries Modernization Act (AFMA) to modernize agriculture and fisheries; (iii) formulation of comprehensive economic plan focusing on providing strategic infrastructures; and (iv) improving the business policy environment and building the capacity of the private sector for small-medium enterprises (SMEs);
- ◆ Political reforms by (i) establishing strong partnerships between the legislative and administrative departments; and (ii) establishing mechanisms for greater collaboration between the regional and local governments; and
- ◆ Institutional reforms through (i) the formulation of a code of ethical conduct for all public servants in ARMM; (ii) restructuring and reorganization of the ARMM bureaucracy; and (iii) acceleration and improvement in the use of ODA-funded projects.

Access to potable water is one of the key strategic issues viewed as a major stumbling block in attaining sustainable peace and development in ARMM. As a result, one of the more significant objectives for infrastructure development was the development of water resources both for agricultural development and water supply and for social development was the improved delivery of basic services. To achieve these objectives, the sectoral strategies include (i) intensification of massive Information/Education Campaign (IEC) and capability building among stakeholders to ensure the effective and efficient delivery of basic services [social development]; and (ii) building the capacity of LGUs to implement projects and involving the

## **CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity**

private sector in infrastructure planning, implementation, monitoring and evaluation [infrastructure development].

However, as a priority economic agenda, water and sanitation facilities and services seems to lag compared to other strategic infrastructure facilities.

### **4.2.3 Basilan Accelerated Development Strategy**

The Basilan Accelerated Development Strategy was prepared by the Inter-Agency Committee for Relief, Rehabilitation and Development of Areas Affected by Armed Conflict in Mindanao (INTERACT-Mindanao) of the Regional Development Council IX.

The overall goal of the plan is to develop the province into an efficient and competitive economy capable of providing the socio-economic well being of the population within the context of sustainable agri-industrial development, people's empowerment and sustained peace.

In the short-term, the plan aims to reduce poverty, to intensify rehabilitation and accelerate provision of basic social services and to accelerate provision of employment. For the medium term, the plan aims to improve access to physical and other community infrastructure facilities, to accelerate growth in trade and investment, to increase agricultural productivity, and to improve access of the poor to basic social services.

The development of the province is anchored on three (3) major strategies:

- (a) acceleration of economic development;
- (b) strengthening of governance capacity and institutional change; and
- (c) promotion of people participation.

The program components specifically focused on water supply are:

- (a) Increase access of local people to potable water supply [Social Services and Development Strategy];
- (b) Establish laboratories for water testing [Social Services and Development Strategy]; and

## **CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity**

- (c) Develop spring water sources at the community level and improve distribution of Level III facilities to increase people's access to potable water [Physical and Other Community Facilities Strategy].

In the short to medium term, the province intends to implement the following projects:

### *Short-term*

- (a) Construction of 12 units toilet for public schools and for the public including a water analysis laboratory;
- (b) Construction of Deep Wells

### *Medium Term*

- (a) Construction of pilot water analysis laboratory for the Lamitan District Hospital;
- (b) Provide sanitation facilities in public areas;
- (c) Provide sanitation facilities in school sites;
- (d) Provide assistance to individual households for the construction of their sanitary toilets
- (e) Development of springs and level III water system province wide;
- (f) Improvement of water distribution system in Isabela City, Lamitan and Maluso

#### **4.2.4 ARMM Institutions Involved in Water Supply and Sanitation**

- 1) The ARMM Government

The creation of the Autonomous Region evolved through a series of steps taken by the national leadership to resolve what was commonly shown as the “*Mindanao Problem*”, a simmering unrest caused by decades of neglect and discrimination, which resulted in the period of fratricidal conflict.

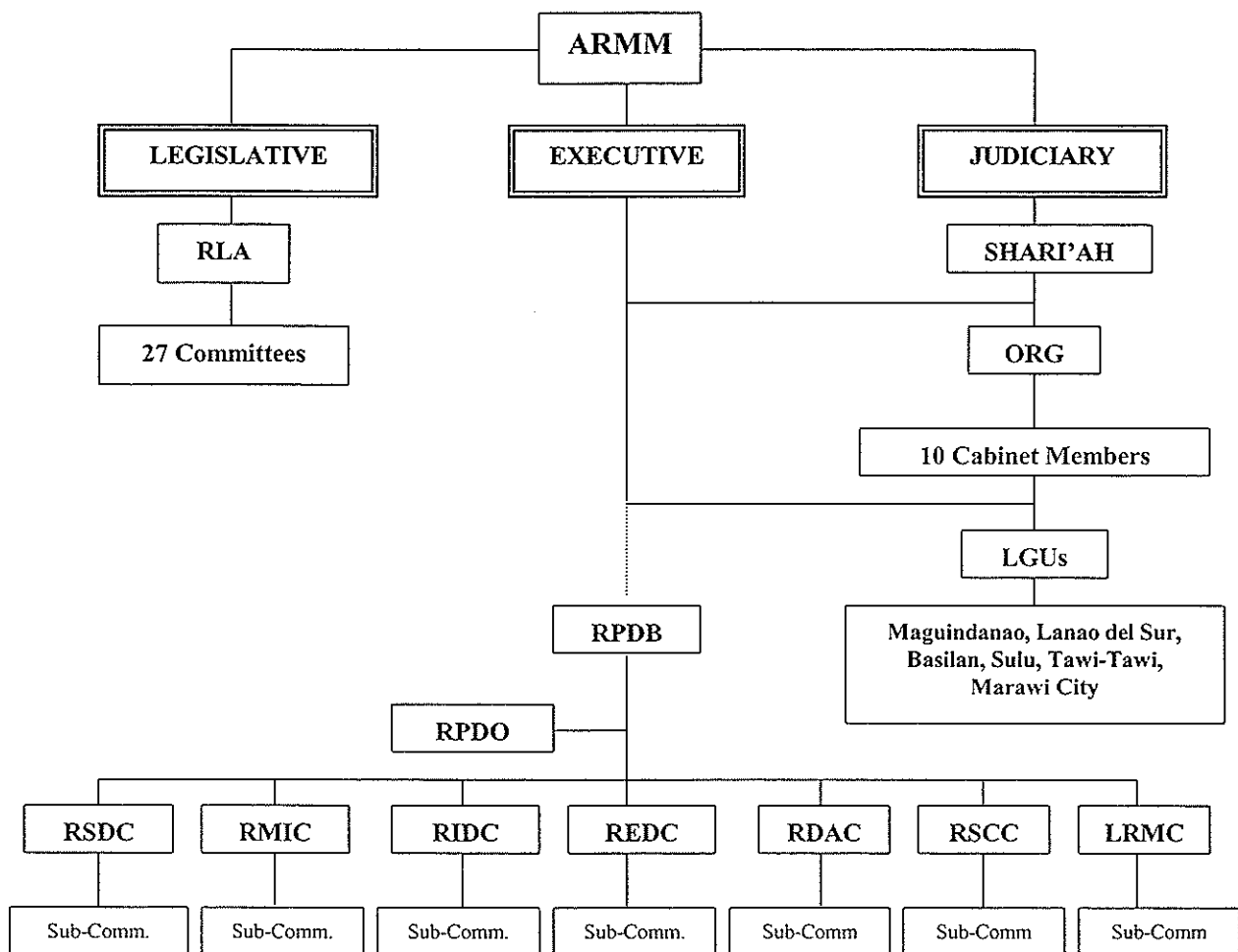
President Corazon C. Aquino signed the first Organic Act for the Autonomous Region in Muslim Mindanao into law as Republic Act 6754 on August 1, 1989. This was then amended by R.A. 9054 “ An Act to Strengthen and Expand the Organic Act for ARMM, passed in

## CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity

February 7, 2001 and became a law on March 31, 2001 in accordance with Article VI, Section 27 (i) of the Philippine Constitution.

Republic Act 6734 as amended by RA 9054 provides for the establishment of the Executive Department (Article VII) and the Legislative Department (Article VI) in the ARMM Regional Government. These enactments also provide for the administration of Justice (Article VIII). The over-all organizational structure and the relationship with each other are shown in Figure 4-1.

Figure 4-1 ARMM Organizational Structure<sup>1</sup>



Source: Regional Planning and Development Office (RPDO)-ARMM

<sup>1</sup> RLA-Regional Legislative Assembly; ORG-Office of the Regional Governor; RPDB-Regional Planning and Development Board; RPDO-Regional Planning and Development Office; RSDC-Regional Social Development Committee; RMIC-Regional Macro-Intersectoral Committee; RIDC-Regional Infrastructure Development Committee; REDC-Regional Economic Development Committee; RDAC-Regional Development Administration Committee; RSCC-Regional Statistical Coordination Committee; LRMC-LGUs Regional Management Committee

## **CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity**

The Regional Government exercises its powers and functions necessary for or incidental to the proper governance and development of all the constituent units within the autonomous region. Specifically mentioned in the Organic Act are:

- ◆ Creation of its own sources of revenues and to levy taxes, fees and charges, subject to the provisions of the Constitution and the Republic Act (Article IX);
- ◆ Protection of the ancestral domain, ancestral lands and agrarian reform (Article X);
- ◆ Promotion of urban and rural planning and development (Article XI);
- ◆ Promotion of regional economy and patrimony consistent with the Constitution and existing laws (Article XII);
- ◆ Maintenance and preservation of law and order (Article XIII);
- ◆ Establish, maintain and support education, science and technology, arts and sports (Article XIV); and
- ◆ Promotion of social justice, services, institutions and other concerns (Article XV).

The Executive and Legislative Departments carry out these powers and functions with the administration of justice provided by the Regular Trial and Shari'a courts, directly supervised by the Supreme Court of the Philippines. The President of the Republic of the Philippines provides general supervision over the Autonomous Regional Government (ARG) through the Regional Governor.

The Regional Legislative and Executive Development Advisory Committee (RLEDAC) was recently created to provide the venue for both Departments to inter-act on development matters affecting the ARG.

### 2) The Executive Department

The Executive power in ARMM is vested in the Regional Governor, who is elected by the qualified voters of the Autonomous Region (Article VII, Section 1).

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### *Composition of the Executive Department*

The Regional Governor, the Vice Governor, the three Deputy Regional Governors, the Cabinet Secretaries and the Local Chief Executives of the Provinces, City and Municipalities covered by the ARMM Region represent the Executive Department.

**Table 4-1 Composition of the ARMM Executive Department  
(As of October 2003)**

<b>Provisions of RA 9054 with respect to composition of the Executive Department</b>	<b>Status of Implementation</b>
<p>1. The Regional Governor is the Chief Executive of the ARMM Regional Government (Article VII, Section 2)</p> <p>The term of office of the Regional Governor is for a period of three (3) years, which will begin at noon on the 30<sup>th</sup> day of September next following the day of the election and will end at noon of the same date three (3) years thereafter. (Article VII, Section 7)</p>	<p>1.1 The incumbent Regional Governor assumed office after the first elections for the expanded autonomous region under RA 9054 in 2002. He is also the concurrent Regional Secretary of Department of Public Works and Highways (DPWH)-ARMM.</p> <p>1.2 He heads the Office of the Regional Governor (ORG) with an Executive Secretary and with 4 support services.</p>
<p>2. The Regional Vice Governor takes over the position of the Regional Governor in case of permanent vacancy (Article VII, Section 11) and temporary vacancy (Article VII, Section 12).</p> <p>The Regional Vice-Governor may be appointed by the Regional Governor as a member of the Regional Cabinet without need of confirmation by the Regional Legislative Assembly (RLA).</p> <p>The term of office of the Vice Regional Governor is for a period of three (3) years, which will begin at noon on the 30<sup>th</sup> day of September next following the day of the election and will end at noon of the same date three (3) years thereafter. (Article VII, Section 7)</p>	<p>2.1 The incumbent Regional Vice-Governor also assumed office together with the Regional Governor in 2002. He is also the Department of Education (DepED)-ARMM Regional Secretary in a concurrent capacity.</p> <p>2.2 He heads the Office of the Regional Vice-Governor (ORVG).</p>
<p>3. Deputy Regional Governors: Executive Council</p> <p>This Council shall advise the Regional Governor on matters of governance of the</p>	<p>3.1 Three (3) Deputy Regional Governors representing the Christians, the Indigenous Cultural Communities and the Muslims in the Region were appointed. These officials are:</p>



Provisions of RA 9054 with respect to composition of the Executive Department	Status of Implementation
<p>Autonomous Region; The 3 Deputy Governors shall be Ex-Officio members of the Regional Cabinet with or without portfolio (Article VII, Section 6).</p>	<ul style="list-style-type: none"> <li>▪ Honorable Gumbalia Gunsi representing the Lumads or the Indigenous Cultural Communities</li> <li>▪ Honorable Abdul Sahrin, an MNLF member representing the Muslims</li> <li>▪ Honorable Luis Olano representing the Christians</li> </ul> <p>3.2 The ARMM Regional Government is requesting for the budgetary requirements of the 3 positions, their staff and operating budget from the Department of Budget and Management (DBM).</p>
<p>4. Cabinet Members</p> <p>The Regional Governor shall be assisted by a Cabinet not exceeding ten (10) members (Article VII, Section 2)</p>	<p>4.1 There are twenty (20) Cabinet Secretaries /Directors representing the Devolved Agencies under the direct supervision of the Regional Governor. The List of Cabinet Officials of these agencies is shown in Annex 2-2.</p> <p>4.2 In addition to the Cabinet Secretaries of the Devolved Agencies, its own locally created offices also assist the Regional Governor. These offices are represented by the following officials:</p> <ul style="list-style-type: none"> <li>▪ The Executive Secretary under the Office of the Regional Governor</li> <li>▪ The Acting Executive Director of the Bureau of Cultural Heritage (BCH-ARMM)</li> <li>▪ The Executive Director of the Regional Planning and Development Office (RPDO-ARMM)</li> <li>▪ The Regional Manager of the Regional Ports and Management Authority (RPMA)</li> </ul> <p>4.3 National Government with field offices in ARMM are also tapped by the Regional Governor to participate in Cabinet meetings. These agencies are represented by the following officials:</p>

**CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity**

Provisions of RA 9054 with respect to composition of the Executive Department	Status of Implementation
	<ul style="list-style-type: none"> <li>▪ The Director of the National Police Commission (NAPOLCOM)</li> <li>▪ The Executive Director of the National Statistics Office (NSO)</li> <li>▪ The Director of the Civil Service Commission (CSC)</li> <li>▪ The Regional Manager of the Philippine Coconut Authority (PCA)</li> <li>▪ The Administrator of the Southern Philippines Development Authority (SPDA)</li> </ul>
<p>5. Local Chief Executives of the Provinces, City, Municipalities and Barangays</p> <p>The term limits in Republic Act No. 7160, the Local Government Code of 1991, will apply to the Governors of Provinces and Mayors of Cities, Municipalities and Punong Barangay in the Autonomous Region.</p>	<p>5.1 There are five (5) provinces, one (1) city, 98 municipalities and 4,445 barangays in the Autonomous Region. The five provinces are: Basilan, Lanao del Sur, Maguindanao, Sulu and Tawi-Tawi. The lone city is Marawi.</p>

Sources: RA 9054 and various documents obtained from the Regional Planning and Development Office (RPDO)-ARMM

The Office of the Regional Governor (ORG) and Locally Created Offices

As mentioned, Offices of the Regional and Vice Governor were established, together with other locally created officers.

The Organizational Structure of the Office of the Regional Governor is shown in Figure 4-2 below:

The Office of the Regional Governor is tasked to pursue programs and projects geared towards the proper governance and total development of all constituents within the 5 provinces and 1 city. This office provides for the supervision, implementation and execution of the Regional Development Plans, Policies and Programs.

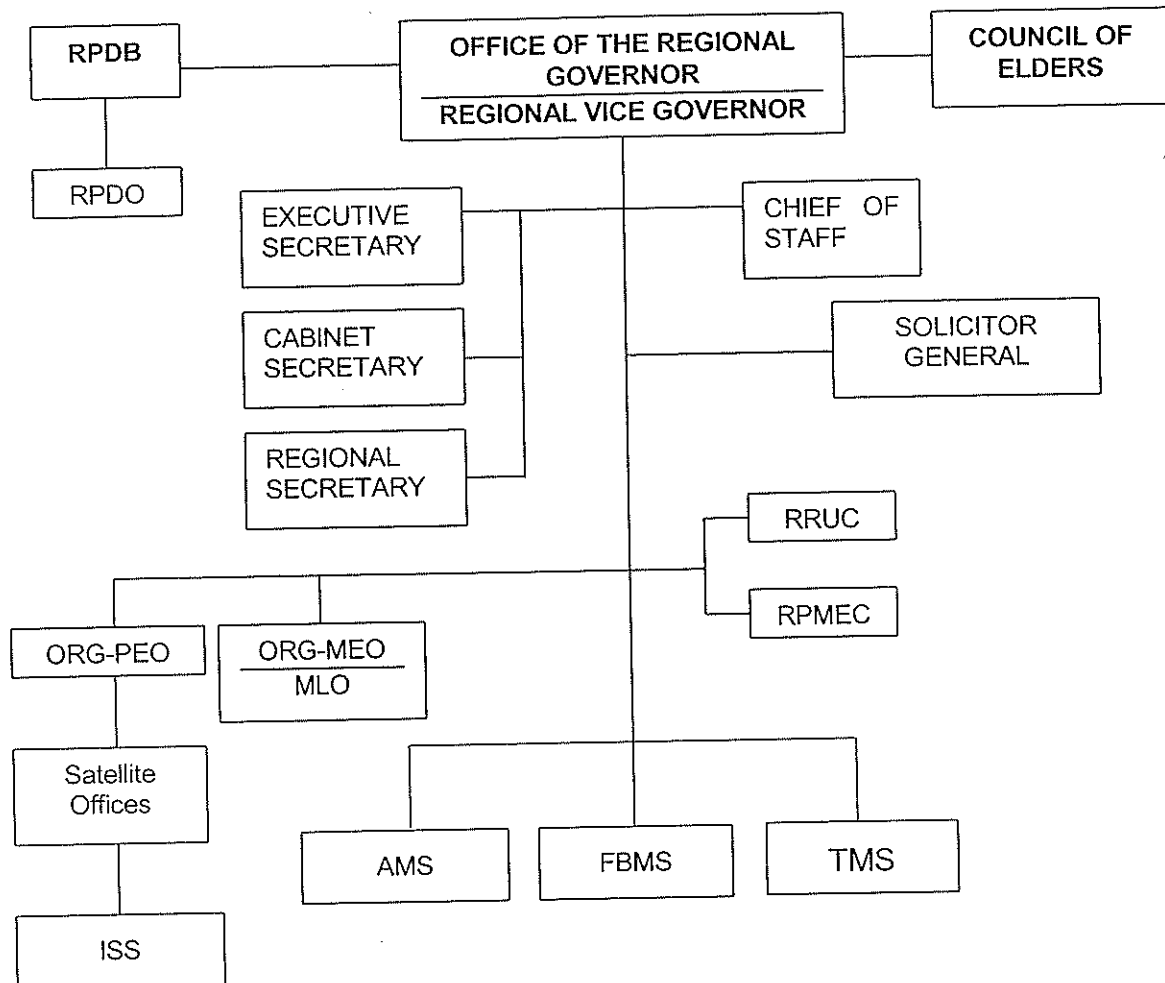
In addition to its support services, there are three (3) Councils, Boards and Committees within the ORG, namely:

- ◆ Regional Economic Development and Planning Board (REDPB)

## CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity

Providing secretariat support to the REDPB, the highest planning body of the Region is the Regional Planning and Development Office (RPDO). Five (5) Divisions support the RPDO, as shown in Figure 4-3.

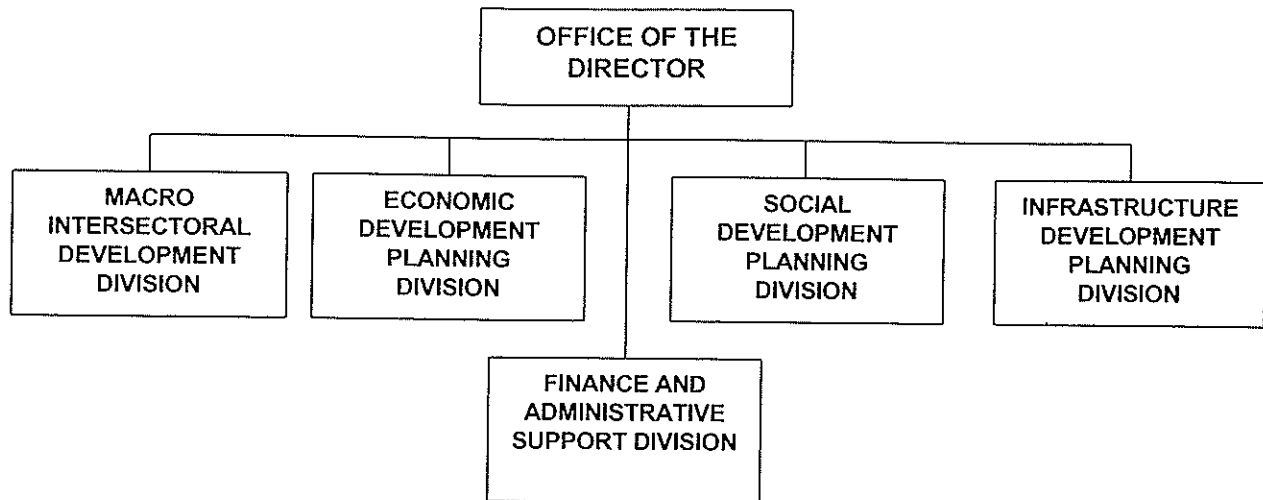
Figure 4-2 Office of the Regional Governor Organizational Structure



**LEGEND:**

- |         |  |
|---------|--|
| RPDB    | - Regional Planning and Development Board              |
| RPDO    | - Regional Planning and Development Office             |
| ORG-PEO | - ORG Provincial Extension Office                      |
| ORG-MEO | - ORG Manila Extension Office                          |
| RRUC    | - Regional Reconciliation and Unification Council      |
| RPMEC   | - Regional Project Monitoring and Evaluation Committee |
| ISS     | - Intelligence and Security Service                    |
| AMS     | - Administrative Management Service                    |
| FBMS    | - Finance and Budget Management Service                |
| TMS     | - Technical and Management Service                     |

Figure 4-3 Regional Planning and Development Office (RPDO) Organizational Structure



Source: Regional Planning and Development Office (RPDO)-ARMM

Functions of the RPDO are similar to the National Economic and Development Authority Regional Offices (NROs) in the other Administrative Regions. These functions are:

- ◆ Evaluate and review proposed programs and projects for consideration by the regional planning and development board;
- ◆ Monitor and assess the programs and projects' implementation in the ARMM;
- ◆ Serve as the technical staff of the regional planning and development board in the ARMM;
- ◆ Provide technical assistance to implementing agencies in the autonomous region in identifying and developing regional programs and projects;
- ◆ Coordinate with the regional offices, other departments and agencies, and assist the local government units in the ARMM in the performance of their assigned tasks;
- ◆ Coordinate the implementation of foreign-assisted projects in the new autonomous region;
- ◆ Coordinate both foreign and local scholarship grants in the region; and

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- ◆ With the creation of the Official Development Assistance (ODA) unit, the RPDO will need to work closely with said unit in the coordination of foreign-assisted projects.
- ◆ Regional Reconciliation and Unification Council (RRUC)
- ◆ Regional Project Monitoring and Evaluation Committee (RPMEC)

The Manila Extension Office plays an active role as a liaison office in dealing with the National Government, Congress and ODA donors.

### *Other Locally Created Offices*

Of the locally created offices in ARMM, the Office of the Regional Treasurer would be relevant to the sector since its main function is to evolve a system of sound and efficient management of ARMM financial resources and to ensure that said resources are generated and managed in accordance with the Regional Law and applicable existing national policies.

### *The Devolved Agencies*

Article XVIII, Section 4 of the transitory provision of RA 9054 specifies that line agencies and offices of the National Government dealing with local government, social services, science and technology, labor, natural resources, and tourism, including their personnel, equipment, properties and budgets, are placed under the control and supervision of the Regional Governor.

While devolution continues from the National Government to the ARMM, the provision of RA 9054 Section 3 provides that the Regional Government shall adopt a policy on local autonomy whereby regional powers shall also be devolved to local government units particularly in areas of education, health, human resources, science and technology and people empowerment. This has not taken into effect as of this time.

One of the guiding principles and policies embodied in RA 9054 is the provision, maintenance and assurance of the delivery of, among other things, basic and responsive health programs, quality education, appropriate services, livelihood opportunities, affordable and progressive housing projects and water resource development (Article III, Section 11). In view of this provision, the different devolved agencies were created to implement the basic services required of the law.

## **CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity**

There are 20 devolved agencies in ARMM, of which for water supply/sanitation, the Department of Public Works and Highways (DPWH-ARMM), the Department of Health (DOH-ARMM) and the Department of Interior and Local Government (DILG-ARMM) are the relevant agencies. The general functions and roles of these agencies involved in the water supply and sanitation (WATSAN) sector are shown in Table 4-2.

**Table 4-2 Functions and Roles of Devolved Agencies Involved in WATSAN**

<b>Devolved Agencies</b>	<b>Functions and Roles</b>
Department of Interior and Local Government (DILG-ARMM)	Assist the Regional Governor in the exercise of general supervision over the LGUs; develop and strengthen local government capability to promote local autonomy, decentralization, community empowerment through technical assistance and capability-building programs.
Department of Public Works and Highways (DPWH-ARMM)	Lead role in the provision and maintenance of highways, flood control and water resource development systems, and other public works within the ARMM.
Department of Health (DOH-ARMM)	Lead role in the provision and maintenance of health, nutrition and sanitation services to the people.
Department of Environment and Natural Resources (DENR-ARMM)	Lead role in the conservation, protection and rehabilitation of the natural resources of the Region (forests, lands, environment, and other related services)

### **4.3 National Government Agencies with Field Offices in ARMM**

Article XVIII, Section 4 of RA 9054 provides for the transfer of agencies and offices to the ARMM except for the following: Foreign Affairs, National Defense and Security, Postal Services, Coinage/Fiscal/Monitoring Policies, Administration of Justice except Shari'a, Customs and Tariff, Citizenship, Naturalization, Immigration and Deportation, General Auditing, National Elections, Maritime, Land and Air Transportation and Communication, Patents, Trademarks, Trade Names and Copyrights and Foreign Trade (Article IV, Section 3), national government offices and agencies in the ARMM are placed under the control and supervision of the Regional Governor pursuant to a prescribed schedule or within six (6) years from the re-organization of the Regional Government.

## CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity

Agencies without physical presence in ARMM are represented by other Administrative Regions such as Regions IX and XII. These include: Department of Budget and Management (DBM) and Department of Finance (DOF).

### 4.3.1 Functions and Roles of National Government with Field Offices in ARMM

The functions and roles of non-devolved national government offices in the ARMM are the same as those of the other regions. These agencies coordinate with the Regional Governor when asked to participate in development planning activities of the REDPB and its Sub-committees, in Cabinet Meetings and in reporting major and significant accomplishments affecting ARMM. There are loose arrangements anchored on maintaining harmonious relationships between NGAs and ARMM.

### 4.4 Key Players in the Sector in ARMM

The key players in the water/sanitation sector and their nature of involvement are shown in Tables 4-3 and 4-4.

**Table 4-3 Key Players Involved in the Water Supply and Sanitation Sector at the National Level and ARMM Government**

Level	Offices/Agencies	Nature of Involvement
National Government	Department of Finance (DOF)/ Investment Coordination Committee (ICC)/ Municipal Development Fund Office (MDFO)	<ul style="list-style-type: none"> <li>Development planning, implementation, monitoring and evaluation of WATSAN projects, approval of cost sharing arrangements and policies at the national level</li> </ul>
	Local Water Utilities Administration (LWUA)	<ul style="list-style-type: none"> <li>Technical and financial assistance to WDs</li> </ul>
ARMM Government	Regional Economic Planning & Development Board (REPDDB)/ Regional Planning & Development Office (RPDO)	<ul style="list-style-type: none"> <li>Policy formulation, monitoring and evaluation, regional development planning</li> </ul>
	Department of Interior and Local Government (DILG) - ARMM	<ul style="list-style-type: none"> <li>Institutional Strengthening of LGUs (same as DILG National Office)</li> </ul>
	Department of Health (DOH) - ARMM	<ul style="list-style-type: none"> <li>Water quality monitoring and sanitation (Same as DOH National Office)</li> </ul>

**Table 4-4 Offices/Agencies Involved in the Water Supply and Sanitation Sector at the Local Level**

Offices/Agencies	Nature of Involvement
Provincial Planning & Development Office	<ul style="list-style-type: none"> <li>• Development planning, implementation, monitoring and evaluation of WATSAN projects.</li> </ul>
Provincial Engineering Office	<ul style="list-style-type: none"> <li>• Oversees and may undertake construction, operation and maintenance of the WATSAN facilities in the province including municipalities and barangays.</li> </ul>
Provincial Health Office	<ul style="list-style-type: none"> <li>• Conducts water quality examination (thru Municipal Health Office)</li> <li>• Provide toilet facilities</li> </ul>
Barangay/Municipal governments (thru MPDO)	<ul style="list-style-type: none"> <li>• Identifies projects</li> <li>• Provides counterpart support</li> </ul>
Water Service Providers, BWSAs	<ul style="list-style-type: none"> <li>• Provides water supply coverage in urban areas</li> <li>• Provides water supply coverage in rural areas</li> </ul>
Provincial General Services Office	<ul style="list-style-type: none"> <li>• Responsible for the procurement of materials</li> </ul>
Provincial Accounting, Budget, Treasury Offices	<ul style="list-style-type: none"> <li>• Undertakes administrative works in budgeting and funds releasing</li> </ul>
Sangguniang Panlalawigan	<ul style="list-style-type: none"> <li>• Approves project implementation and appropriates funds (Provincial level)</li> </ul>
Provincial Development Council	<ul style="list-style-type: none"> <li>• Initiates a comprehensive multi-sectoral plan of the province</li> </ul>
NGOs, CBOs, POs	<ul style="list-style-type: none"> <li>• Provides consultancy services especially in CO/CD works</li> </ul>
DILG-ARMM Provincial Director's and Municipal Local Government Office	<ul style="list-style-type: none"> <li>• Conducts/assists training especially on topics related to human resource development</li> </ul>

**4.4.1 Department of Public Works and Highways – ARMM (DPWH-ARMM)**

The capability of the DPWH-ARMM and its implementing arm, the various District Engineers' Offices in the provinces' congressional districts, in planning and implementing water supply projects is quite limited. Its primary focus has been on roads and bridges and has essentially left the different local government units (LGUs) to plan and undertake their own water supply projects. In addition, the District Engineers' Offices have minimal construction equipment in their inventory, all of which are for the repair/maintenance of roads and bridges. However, given its previous experiences in water supply projects in terms of planning and implementation



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supervision, the District Engineers' Offices do assist the different LGUs in the aforementioned areas upon request.

For its Basilan Engineering District and Area Equipment Services, DPWH-ARMM has a total of 54 technical field personnel, while for DPWH-ARMM Regional Office, there are 44 technical personnel. However, as previously stated, their activities seem to be primarily concentrated in roads and bridges.

The budget of DPWH-ARMM for the implementation of projects is quite limited, as most of its budgetary appropriations are consumed by personnel services and maintenance, operating and other expenses. Actually, even the Department's MOOE are actually mostly spent for personal services. Table 4-5 gives the DPWH-ARMM actual budget from 1996-2003, while Table 4-6 gives the budget breakdown by major expenditure items from 2001-2003.

**Table 4-5 Actual Budget of DPWH-ARMM (1996-2003)**

Year	Actual Budget	% Change
1996	190.85	
1997	192.26	0.74
1998	189.34	-1.52
1999	716.64	278.49
2000	171.8	-76.03
2001	177.38	3.25
2002	277.9	56.67
2003	281.9	1.44

*Source: Regional Planning and Development Office, ARMM*

**Table 4-6 Breakdown of DPWH-ARMM Budget by Major Expenditure Items (2001-2003)**

Expenditure Item	2001	% of Total	2002	% of Total	2003	% of Total
Personal Services	91.36	0.52	89.34	0.32	92.72	0.22
Automatic Appropriation	8.29	0.05	8.09	0.03	8.58	0.02
MOOE	77.73	0.44	180.48	0.65	180.61	0.43
Capital Outlay					136.54	0.33
<b>Total</b>	<b>177.38</b>	<b>1.00</b>	<b>277.91</b>	<b>1.00</b>	<b>418.45</b>	<b>1.00</b>

*Source: Office of the Regional Governor, ARMM*

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The ARMM Public Investment Program for water supply in Basilan, which is implemented by DPWH-ARMM and is funded out of ARMM lump sum appropriations for the period 2004-2006 is given in Table 4-7. It shows the minimal amount that is allocated by the ARMM government to water supply for Basilan.

**Table 4-7 ARMM Public Investment Program for Water Supply – Basilan (2004-2006)**

Project	2004	2005	2006	Total
Construction of Level II Water System	-	6.0	6.0	12.0
Construction and Installation of Potable Water Supply and Distribution System in:				
1. Lamitan	1.5			1.5
2. Tuburan	1.5			1.5
3. Sumisip	1.5			1.5
4. Lantawan	1.5			1.5
5. Maluso	1.5			1.5
6. Tipo-Tipo	1.5			1.5
Total Water Supply	9.0	6.0	6.0	21.0
Total Infrastructure	1,129.23	1,096.20	1,113.60	3,271.53
% water supply	0.8	0.6	0.5	0.6

Source: Regional Planning and Development Office, ARMM

The organizational charts of DPWH-ARMM and its District Engineers' Office in Basilan are given in Figures 4-4 and 4-5.

Figure 4-4 Organizational Chart – Department of Public Works and Highways ARMM

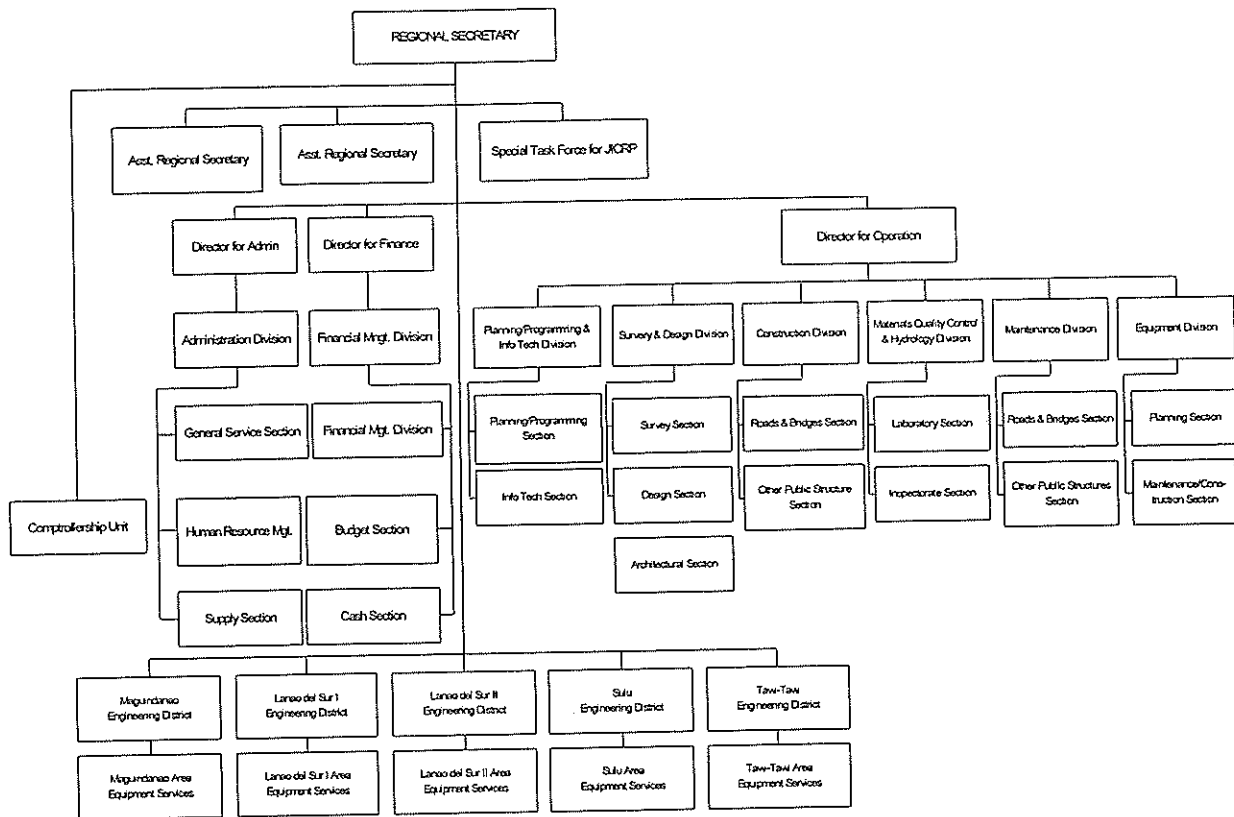
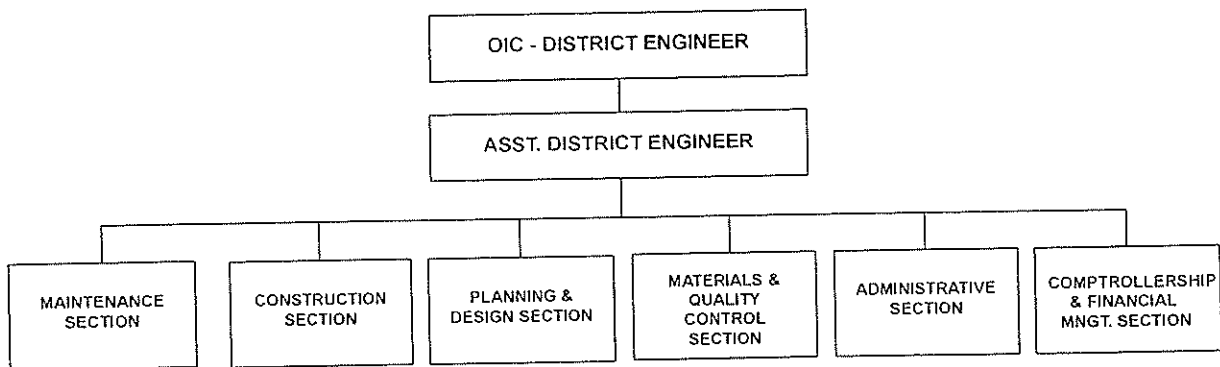


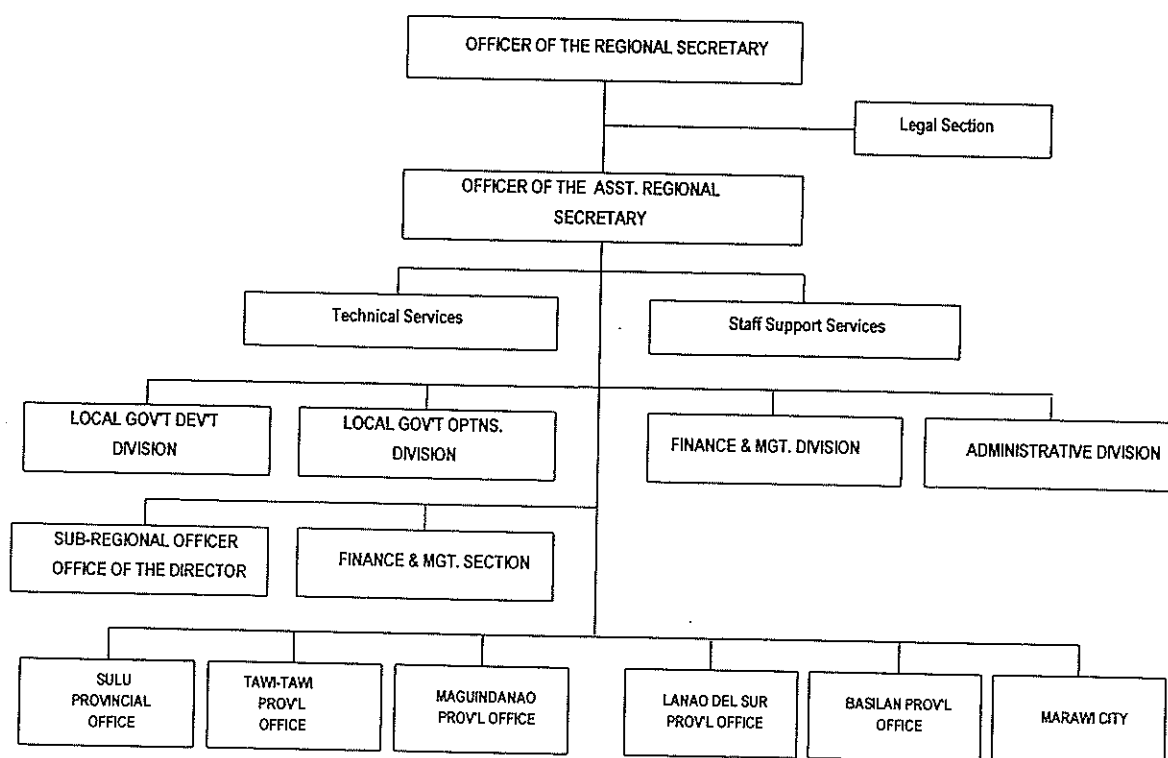
Figure 4-5 Organizational Chart – DPWH District Engineers’ Office, Basilan



4.4.2 Department of the Interior and Local Government – ARMM (DILG-ARMM)

The activities of DILG-ARMM, compared to its national counterpart, has been severely hampered by budgetary constraints. While it is one of the few ARMM-devolved agencies that has substantial geographical coverage in all ARMM LGUs, it has been unable to extend any significant assistance to LGUs in water/sanitation activities/projects, in such areas as project development and institution/capability-building. The organizational chart of DILG-ARMM is given in Figure 4-6.

Figure 4-6 Organizational Chart – Department of Interior and Local Government-ARMM



As with DPWH-ARMM, its budget goes mostly to personal expenditures and MOOE. Table 4-8 gives the agency’s budget from 1996-2003 and the budget breakdown by expenditure items is shown in Table 4-9.

Table 4-8 Actual Budget of DILG-ARMM (1996-2003)

Year	Actual Budget	% change
1996	38.24	-
1997	44.34	15.95
1998	61.09	37.78
1999	67.45	10.41
2000	64.12	-4.94
2001	72.93	13.74
2002	68.02	-6.73
2003	71.27	4.78

Source: Regional Planning and Development Office, ARMM

Table 4-9 Breakdown of DILG-ARMM Budget by Major Expenditure Items (2001-2003)

Expenditure Item	2001	% of Total	2002	% of Total	2003	% of Total
Personal Services	59.4	0.81	58.04	0.84	59.87	0.84
Automatic Appropriation	5.59	0.08	5.45	0.08	5.72	0.08
MOOE	7.95	0.11	5.53	0.08	5.68	0.08
Capital Outlay						
<b>Total</b>	<b>72.94</b>	<b>1.00</b>	<b>69.02</b>	<b>1.00</b>	<b>71.27</b>	<b>1.00</b>

Source: Regional Planning and Development Office, ARMM

#### 4.4.3 Department of Health – ARMM (DOH-ARMM)

The DOH-ARMM continues to provide health services up to the LGU level, since it is one of the agencies which functions were not devolved in the ARMM Local Government Code. However, given current financial constraints of ARMM, its LGUs are participating in the financing and delivery of health services to its constituents. The organizational structure of DOH-ARMM is shown in Figure 4-7.

As with the other two previous departments, DOH-ARMM's budget has declined as shown in Table 4-10 and may have already affected its delivery of health services. Furthermore, most of its budget goes to personal services and MOOE, as shown in Table 4-11.

Figure 4-7 Organizational Chart – Department of Health – ARMM

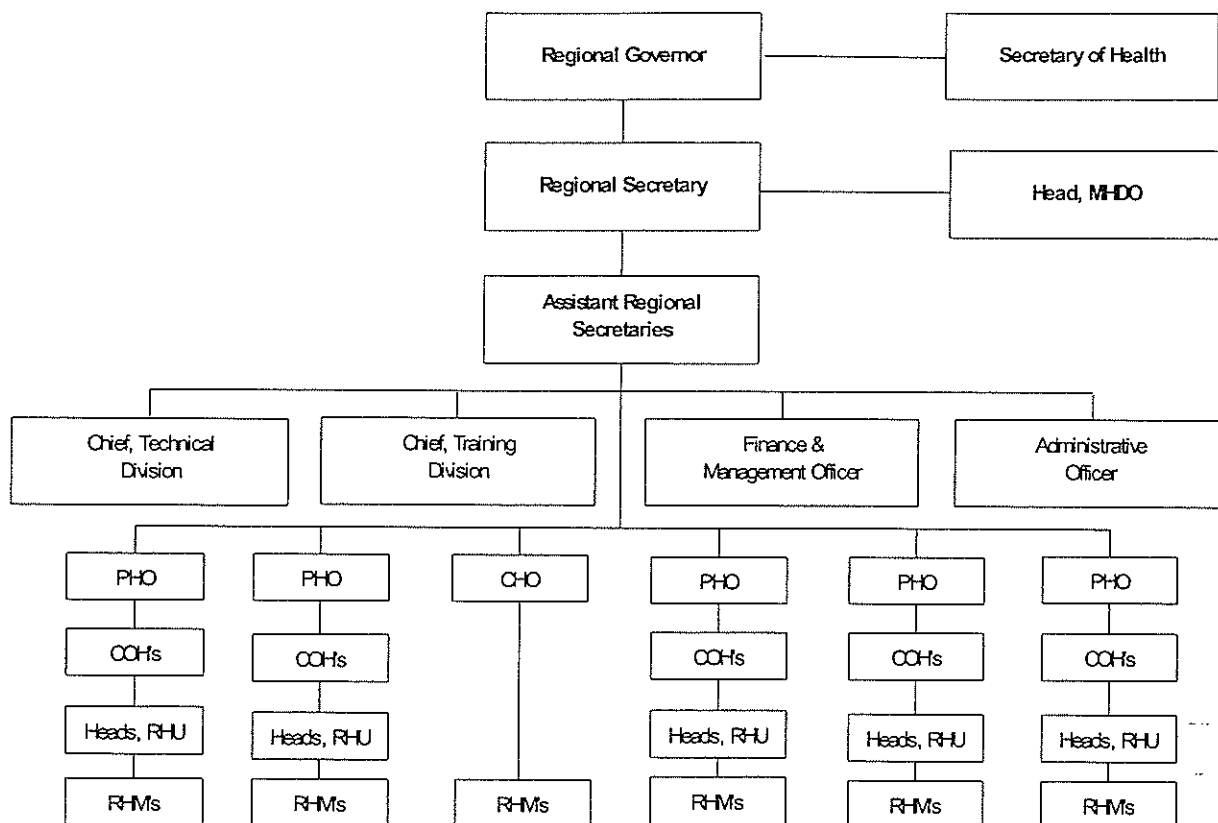


Table 4-10 Actual Budget of DOH-ARMM (1996-2003)

Year	Actual Budget	% change
1996	230.34	-
1997	253.45	10.03
1998	331.18	30.67
1999	420.09	26.85
2000	394.76	-6.03
2001	410.91	4.09
2002	408.93	-0.48
2003	432.4	5.74

Source: Regional Planning and Development Office, ARMM

**Table 4-11 Breakdown of DOH-ARMM Budget by Major Expenditure Items (2001-2003)**

Expenditure Item	2001	% of Total	2002	% of Total	2003	% of Total
Personal Services	292.07	0.71	292.69	0.72	318.25	0.74
Automatic Appropriation	24.77	0.06	24.21	0.06	25.96	0.06
MOOE	84.07	0.20	84.33	0.21	86.68	0.20
Capital Outlay	10	0.02	7.7	0.02	1.5	0.00
<b>Total</b>	<b>410.91</b>	<b>1.00</b>	<b>408.93</b>	<b>1.00</b>	<b>432.39</b>	<b>1.00</b>

Source: Regional Planning and Development Office, ARMM

#### 4.5 Water Service Providers in Basilan

There are three (3) Water Districts in the province – one in Lamitan, in Maluso and in Isabela City (the city is not part of ARMM). All of the WDs are operational. BWSAs were formed during the Island Provinces and Second Island Provinces Rural Water Supply and Sanitation Projects. Other BWSAs were formed and trained under the on-going RW3SP. Per record, there are at least two functioning RWSAs, which manage and operate Level II systems in the province.

#### 4.6 Institutional/Technical Capacity of WATSAN Agencies in ARMM

##### 4.6.1 ARMM Government

Previously, the Project Management Office – Rural Water Supply at DPWH national in coordination with DOH national handled all WATSAN projects in Basilan through the District Engineers’ Office (DEO). Trainings provided through the national projects were filtered down through the DEOs. As a result of NEDA Board Resolution No. 4, DILG national was given greater involvement in the sector.

With respect the ARMM Government, capacity building in WATSAN has not yet been undertaken for the ARMM agencies involved in the sector.

##### 4.6.2 The Province

Basilan is a recipient of three consecutive water supply and sanitation projects since the 1980s, namely: Island Provinces and Second Island Provinces Water Supply and Sanitation Sector Projects and more recently, the Rural Water Supply and Sanitation Sector Project (RW3SP).

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The Second Island Provinces Water Supply and Sanitation Sector Project and RW3SP both had extensive training components for the DEO and DILG/LGU of Basilan, respectively.

Under the RW3SP, the province created the Provincial Water and Sanitation Committee under Provincial Executive Order No. 98-10. The functions of the Provincial Water and Sanitation Committee are as follows:

- ◆ Provide guidelines to municipalities in WATSAN Project Management;
- ◆ Provide technical assistance to municipalities in project preparation, implementation, supervision and training of beneficiaries;
- ◆ Provide the necessary manpower and equipment to facilitate project implementation at the barangay level (subject to their availability) when requested by municipalities;
- ◆ Prepare the required documentation to facilitate approval and release of provincial/municipal counterpart funds;
- ◆ Monitor and evaluate the progress of project execution;
- ◆ Prepare progress reports for submission to the DILG WSSPMO, through the office of the governor; and
- ◆ Resolve problems, which can be addressed at their level, or assist municipalities in resolving their problems at the latter's level.

The committee is comprised of an Executive Committee chaired by the Governor with members from DPWH, LPHO, President of Mayors' League, DILG, PEO, PPDO and the DENR. A Technical Working Group (TWG) chaired by the PPDC with members from APE, DOH, IPHO, DPWH (2 seats), DILG (2 seats), PPDO, ISAWAD and President of MPDCs league was also created.

Since municipalities and barangays generally do not have any capacity to undertake WATSAN projects, it is the Basilan Provincial Engineers Office (PEO) that has been assisting these lower LGUs. While the equipment of the PEO seems to be primarily for road/bridge maintenance and construction (see Table 4-11), it has the complement of experienced engineers that assists the municipalities/barangays in implementing their WATSAN projects.



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Table 4-12 Equipment Inventory of the Provincial Engineers Office (PEO-Basilan)

Equipment Type	Brand	Number of Units
Dump Truck	ISUZU	3
Dump Truck	HYUNDAI	8
Mini Dump Truck	ISUZU	1
Light Truck	FUSO	1
Transit Mixer	ISUZU	2
Vibratory Compactor	DYNAPAC	3
Vibratory Compactor	INGESOLLRAND	1
Excavator	HITACHI	2
Prime Mover	ISUZU	1
Front End Loader	MICHIGAN	2
Front End Loader	CATERPILLAR	2
Road Grader	mitsubishi	2
Road Grader	KOMATSU	1
Road Grader	CATERPILLAR	2
Pick up	NISSAN	1
Straight Dozer	KOMATSU	2
Road Grader	MITSUBISHI	1
Front End Loader	INTERNATIONAL	1
Loader/Backhoe	CASE	1
Multi Purpose Truck	SAKAI	1
Tandem Road Roller	SAKAI	2
Pneumatic Road Roller	KAWASAKI	1
Dump Truck	HYUNDAI	1
Dump Truck	ISUZU	1
Dump Truck	HINO	1
Dump Truck	TOYOTA	1
Dump Truck	ISUZU	2
Land Cruiser	TOYOTA	1
Motorcycle	HONDA	2
Motorcycle	YAMAHA	1
Truck Mounted Crane		1
Excavator	HITACHI	1
Rio Prime Mover	HINO	1
Tamaraw Jeep	TOYOTA	1

Source: Provincial Engineers Office

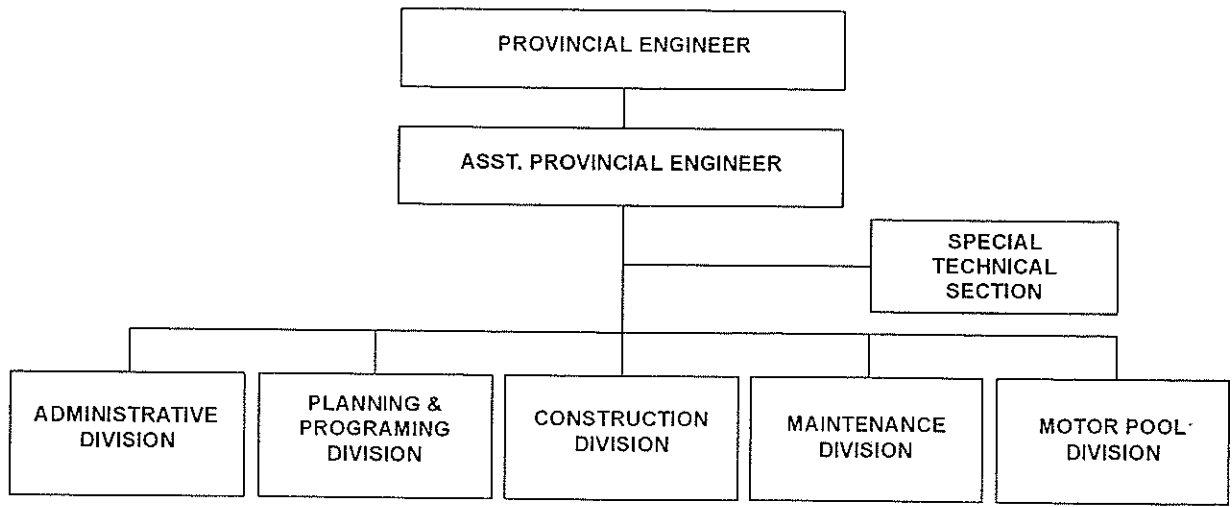
## CHAPTER FOUR Existing Sector Arrangements and Institutional Capacity

Pursuant to the ARMM Local Government Code, the functions of the PEO with reference to WATSAN are given below:

- ◆ Initiate, review and recommend changes in policies and objectives, plans and programs, techniques, procedures and practices in infrastructure development and public works in general;
- ◆ Administer, coordinate, supervise and control the construction, maintenance, improvement, and repair of roads, bridges, and other engineering and public works projects of the LGU;
- ◆ Provide engineering services to the LGU including investigation and survey, engineering designs, feasibility studies and project management; and
- ◆ Exercise technical supervision over all engineering offices of the component cities and municipalities.

The organizational structure of the Basilan PEO is given in Figure 4-8.

**Figure 4-8 Organizational Structure of the Basilan Provincial Engineers Office**



### **4.6.3 Community-Based Organizations or Associations**

Community organizing in Basilan has to take into account religious and cultural norms, which are particular to the people and communities of this province. The practice of the family (clan) head as the decision-maker is practiced in most rural water supply organizations, e.g., RWSAs/BWSAs. There are no elections of officers as required of an association. The operations and maintenance of the system falls on the shoulder of the family. A clan is composed of many families in the same tribe and could comprise the population of a small barangay. The leaders in the community are chosen on the basis of their being the head of the clan or family.

### **4.6.4 External Support Agencies Active in the Sector**

Basilan is a recipient in the past five years of the Rural Water Supply and Sanitation Sector Project (RW3SP) funded by the Asian Development Bank (ADB). The project commenced in 1998 and was originally scheduled to be completed in 2002, although there are still activities on-going as of 2003.

The Project was based on a sector lending approach that supports the government's Social Reform Agenda (SRA) for the 20 poorest provinces of the country, of which Basilan was one. The project area covered about 3,000 communities with population ranging from 200 to 5,000 persons in the SRA provinces. The project provided capacity building to LGUs to enhance the delivery of social services, improved water supply and sanitation facilities, and aimed to reduce poverty through these interventions. The Project included comprehensive institutional capacity-building, community development program, provision of point source water supply systems (Level I) and public and household latrine facilities.