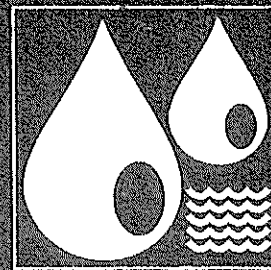


JAPAN INTERNATIONAL COOPERATION AGENCY

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 TAWI-TAWI

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

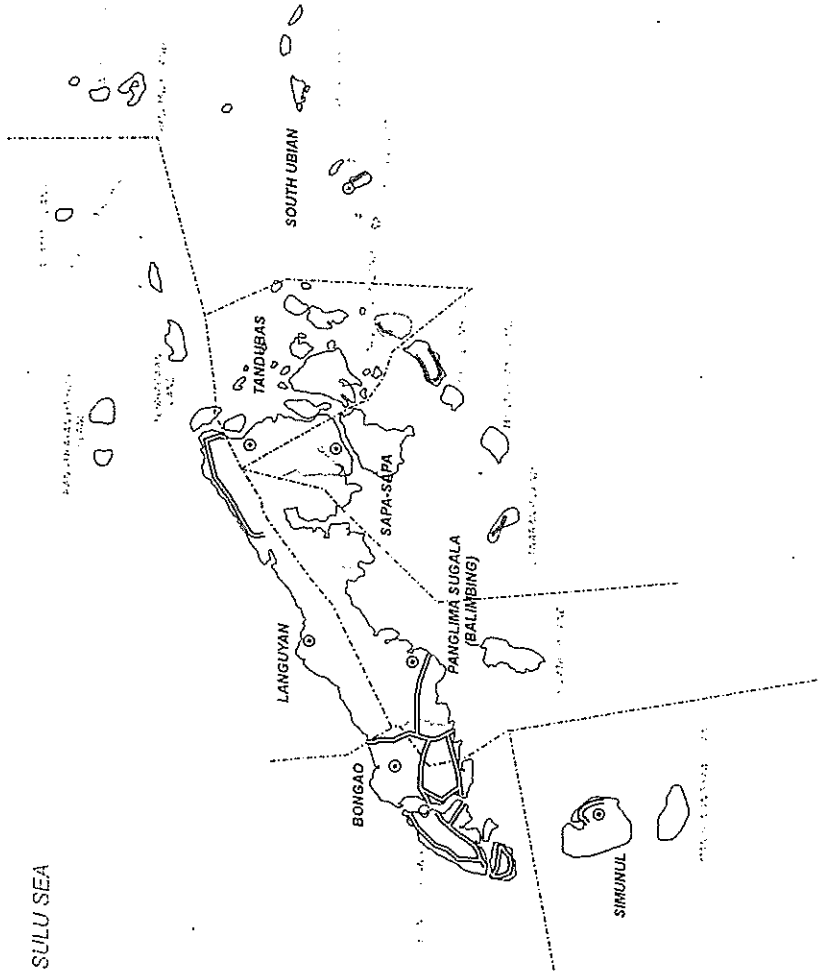
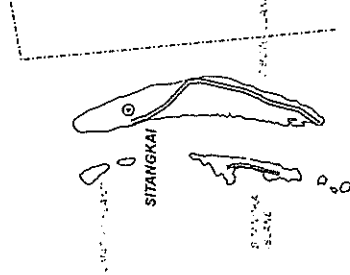
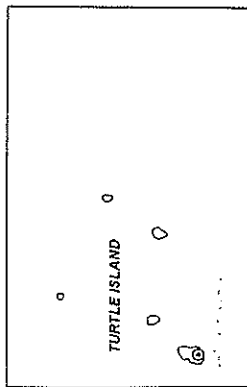
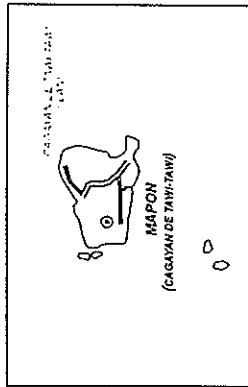
PROVINCE OF TAWI-TAWI

FINAL REPORT

DECEMBER 2003



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KILOMETERS



MINDANAO SEA



SULU SEA

MINDANAO

MOROGUAY

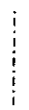
MINDANAO SEA

KEY MAP

LEGEND:



Provincial Boundary



Municipal Boundary

River

National Road

Provincial Road



City Center



Town Center

PROVINCE
OF
TAWI-TAWI

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Appendix 5-1	Budget Operations Statement
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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.

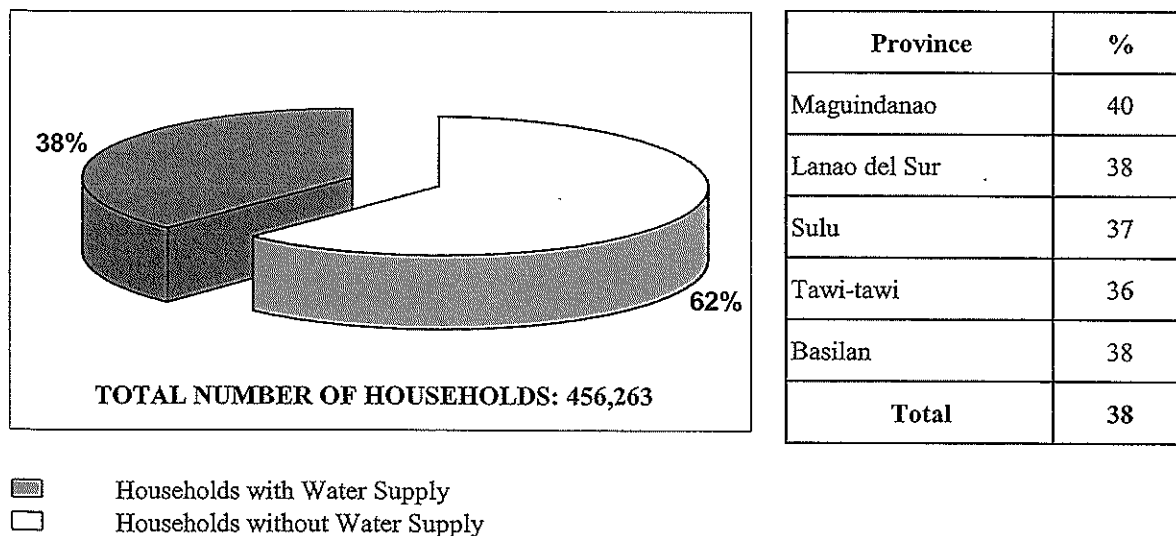


Figure ES-1 Households in ARMM with Access to Water Supply, as of 2000

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 Philippine 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 Tawi-Tawi group of islands is located at the southwestern tip of the Philippine archipelago across the water of the state of Sabah in East Malaysia. It is bounded by the Sulu Sea on the north and west, and by the Celebes Sea on the east and south. It lies along the earth's equatorial zone and is composed of 307 islands and islets, 88 of which are characterized by extensive reefs.

The province consists of three main island groups covering 307 island and islets. The Tawi-Tawi island group includes the islands of Tawi-Tawi, Bongao, Simunul, Sibutu, and Sitangkai. The Cagayan de Tawi-Tawi (also called Cagayan de Sulu) Island group is halfway between the southern tip of Palawan and Sulu archipelago

The main island of Tawi-Tawi is characterized by a continuous range of low, rolling hills and verdant forests. The smaller islands are surrounded by extensive reefs which make navigation difficult, except by light boats. The capital town has a deep harbor.

The National Statistics and Coordination Board (NSCB) reports that Tawi-Tawi has a land area 1,087.4 km². As of 2003, there are 10-municipalities, 203 barangays, and a congressional district in the province.

The total population of Tawi-Tawi, as of May 1, 2000, was 322,317 persons, an increase of 71,599 persons over the 1995 Census of Population results. This translates to an annual population growth rate of 5.53 percent, during the 1995 to 2000 period, higher than the 1.78 percent growth rate in the 1990 to 1995 period. Bongao, the provincial capital, registered the highest population comprising 18.05 percent of the total provincial population. It was followed by Sitangkai (16.37 percent), Languyan (13.04 percent), and Panglima Sugala (Balimbing) (10.34 percent). The least populous municipality was Turtle Island (1.12 percent).

Physical Features

The Tawi-Tawi archipelago is comprised of islands settled on top of a huge sea mountain. Among the islands, Tawi-Tawi has the least rugged relief. Its major peaks, which include Mt. Datu Sali, Mt. Sitangkai and Mt. Baluk Sampan have an average peak elevation of 200 m above sea level. These peaks butt across the main island Tawi-Tawi from north to south.

There are two rivers in the area, the Malum and Luuk. Malum is the biggest river, also serving as the transportation passage of the residents in the upper area. It originates from Mt. Bulungan, Mt. Binwang and Mt. Datu Sali and flows southwesterly receiving Magsagao Stream and its tributary.

The province has a Type IV climate (classified from Modified Corona's Classification System.). This type of climate is characterized by more or less evenly distributed rainfall throughout the year. The general climate of Tawi-Tawi is cool and breezy along the coastal areas and hot and humid within the island. During the months of August, September, October and November, the average rainfall is 170 mm, 61 mm, 226 mm and 215 mm, respectively.

Socio-economic Aspects

Much of Tawi-Tawi's resources come from the sea; from the rich fishing grounds to spectacular sceneries of white sand beaches and vibrant coral reefs. The major economic crops grown are rice, corn, cassava, vegetables, fruit trees and banana.

Tawi-Tawi has an airport, a commercial seaport and a road network of 334 kilometers long. Electricity comes from the National Power Corporation through a local electric cooperative. The water supply comes from communal faucets, from deep wells and spring waterworks system. Tawi-Tawi has 2 radio stations, a television station, 2 telegraph stations, 2 telex stations, a post office and a telephone system.

The trade and investment opportunities in Tawi-Tawi are in tourism and aquaculture. Tawi-Tawi can boast of unique tourist attractions peculiar to its location. Its white sand beaches are certified to have pristine waters while the coral reefs are guaranteed to be world class. Nature lovers and environmentalists would have a grand time in the bird sanctuary in Sibutu as well as in the protected areas of Turtle Islands. Tourist accommodation facilities would complement the splendid sites in the islands. Production and processing of marine products are also potential business ventures in Tawi-Tawi.

The province is provided with fairly adequate electric power system. Four out of the total ten municipalities have existing thermal power plants, these are located at Bongao, Panglima Sugala, Mapun and Languyan. These electric facilities were implemented by the National Power Corporation (NPC) and being managed by Tawi Tawi Electric Cooperative (TAWELCO).

4. Existing Facilities and Service Coverage

Tawi Tawi was surveyed to assess the conditions and the needs of the people in the locality. Other water supply system and sanitation facilities 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 only one municipality with level III and mixed with level II water supply systems and this is being managed by Bongao Water District that serves the town of Bongao. Other municipalities like Languyan, Mapun and Panglima Sugala have Level II water systems. These Level II systems that are being operated and managed by the LGU's and BWSAs. Most of these systems utilize shallow wells as water source.

About 70% 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 Tawi Tawi 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.

Based on the data gathered during the investigation, about 35% of the households in the province have sanitary toilets. This figure clearly demonstrates that the province needs to improve the sanitation facilities of the locality. The low figure can be attributed to lack of water supply facilities and the lack of capability of the rural households to construct the approved type of toilet.

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

The geology of Tawi-Tawi Island is composed of sandstone and conglomerate to the southwest and highly altered serpentinite to the northeast. The island also has a narrow band of alluvial deposits and coral rock along the shore. Some of the smaller islands have a rock core similar to that of the nearest large island with some coral along the shore, but most smaller islands are low flat islands composed entirely of coral rock and sand and gravel.

Groundwater Availability in the Province

The different geologic units in the province were classified according to their potential as water source. The different units were classified as Recent Alluvium, Late Miocene to Pliocene Clastic rocks and Quaternary Volcanics and Pyroclastics. Sustainable groundwater occurs mainly within the Quaternary volcanics and pyroclastics which consist of sandstone and conglomerate and in some cases in the siltstone beds. The groundwater availability in the province could be classified as follow:

- **Shallow well areas.** By definition, these are areas with water-bearing formations where water can be withdrawn up to the depth of not more than 20m from the ground surface. These are the areas underlain mostly by Recent corals and alluvium, if present, and possibly in Late Miocene to Pliocene Clastic Rocks (N₂S).
- **Deep well areas.** In deep well areas, the aquifers exist to depths of more than 20m from the ground surface. These can be found in areas underlain by Clastic rocks (N₂S).
- **Difficult areas.** These are areas not suitable for well development. In the province, the areas under this category are Basement Complex (BC), Ultramafic Complex (UC) and Quaternary Volcanics (QV). Limited groundwater, if any, occurs in the fractured and/or weathered zones. Springs may be present but expected not to be significant.

8. Future Requirements in Water Supply and Sanitation Improvement

Physical Targets and Service Coverage

The future requirements of each municipality within the province of Tawi Tawi were evaluated based 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 Tawi Tawi. 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. Table below shows the sector target for Phase I and II in comparison with the current coverage.

FACILITIES	Existing (2003)		Phase I (2005-2010)		Phase II (2010-2015)	
	Population Served	Population Coverage	Additional Population to be Served	Population Coverage	Additional Population to be Served	Population Coverage
WATER SUPPLY						
Urban	33,258	10%	33,528	19%	42,835	25%
Rural	88,729	27%	71,908	46%	56,127	56%
Total	121,987	37%	105,436	65%	98,963	80%
SANITATION - HOUSEHOLD TOILETS	<i>Household Served</i>	<i>Additional Household to be Served</i>	<i>Additional Household to be Served</i>	<i>Household Coverage</i>	<i>Additional Household to be Served</i>	<i>Household Coverage</i>
Urban	6,178	11%	2,401	14%	2,153	17%
Rural	13,554	24%	8,268	36%	5,043	43%
Total	19,732	35%	10,669	50%	7,196	60%
SANITATION - SCHOOL TOILETS	<i>Schools Served</i>	<i>Coverage</i>	<i>Additional Schools to be Served</i>	<i>Coverage</i>	<i>Additional Schools to be Served</i>	<i>Coverage</i>
	217	100%	24	100%	13	100%
SANITATION - PUBLIC TOILETS	<i>Public Utilities Served</i>	<i>Coverage</i>	<i>Additional No. of Public Toilet</i>	<i>Coverage</i>	<i>Additional No. of Public Toilet</i>	<i>Coverage</i>
	12	100%	7	100%	7	100%

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	No. of add'l wells
1 Bongao	Improvement	1,756			75	1,049	0	233
2 Languyan	New	1,222	New	184	28	251	47	29
3 Mapun	New	423	New	59	423	29	29	13
4 Panglima Sugala	New	798	Improvement	332	18	246	97	17
5 Sapa-Sapa		0	New	159	15	736	7	-7
6 Simunul	New	724	New	196	16	0	1,462	0
7 Sitangkai		0	New	889	31	4,385	111	25
Provincial Total		4,924		1,821	606	6,697	1,752	311

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 Bongao	3,025	7	1	1,985	4	1
2 Languyan	2,328	1	1	912	1	1
3 Mapun	337	0	1	376	0	1
4 Panglima Sugala	1,116	6	1	934	3	1
5 Sapa-Sapa	269	2	1	589	1	1
6 Simunul	1,616	3	1	718	1	1
7 Sitangkai	1,978	5	1	1,682	3	1
Total	10,669	24	7	7,196	13	7

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.

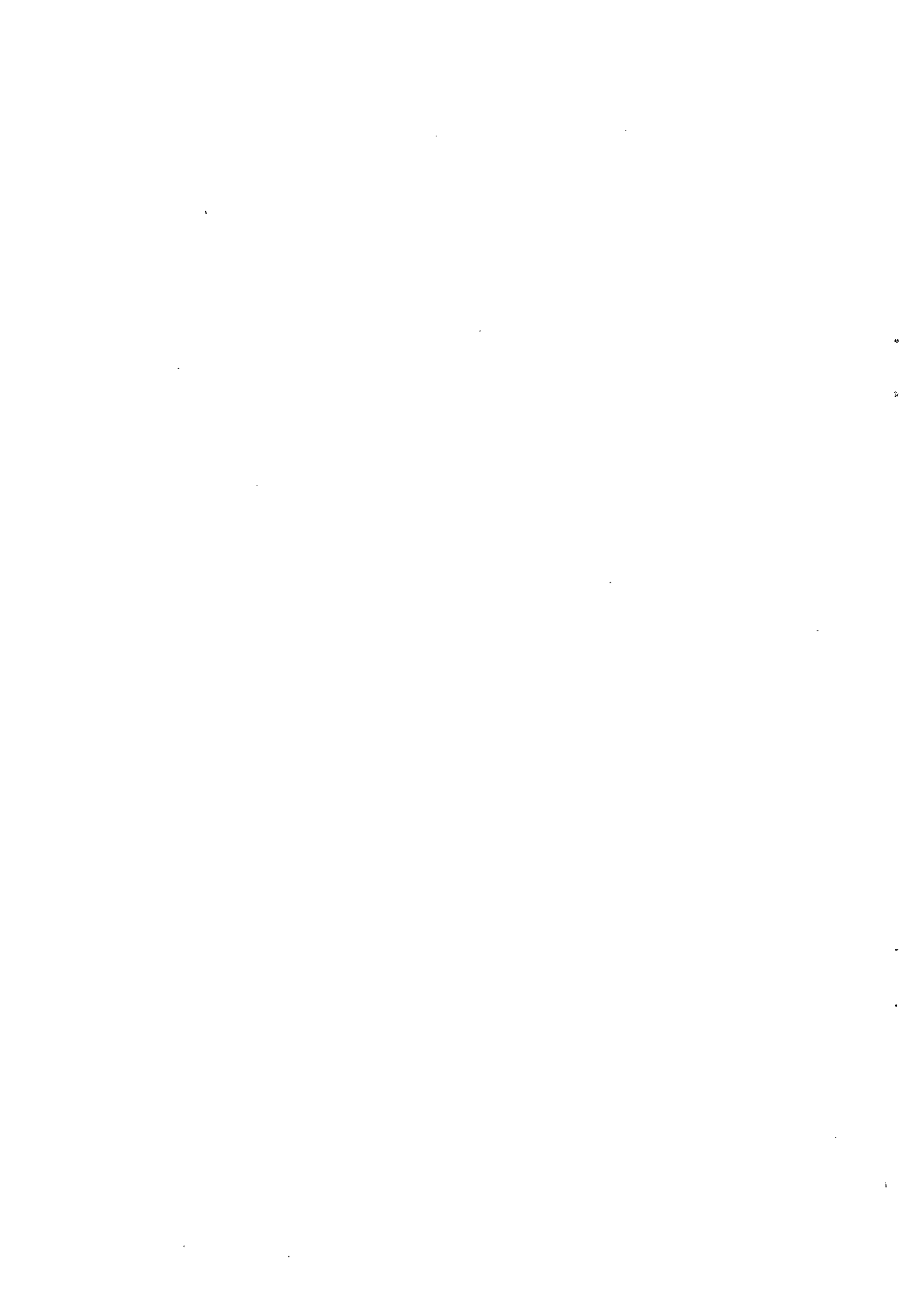
Conditions and assumptions used to come up with investment costs covering all sub-sector components were established in coordination with concerned provincial and municipal LGUs and to current standards of relevant sector agencies like the DILG, LWUA, DOH and DPWH.

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.

During the 2005 Medium Term Development period, a total of 910 million pesos will be required for construction of required facilities. Of the requirements, urban and rural water supply will share 20 % and 68 %, respectively. The remaining 12% will be required for urban and rural sanitation.



CHAPTER 1
INTRODUCTION



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.

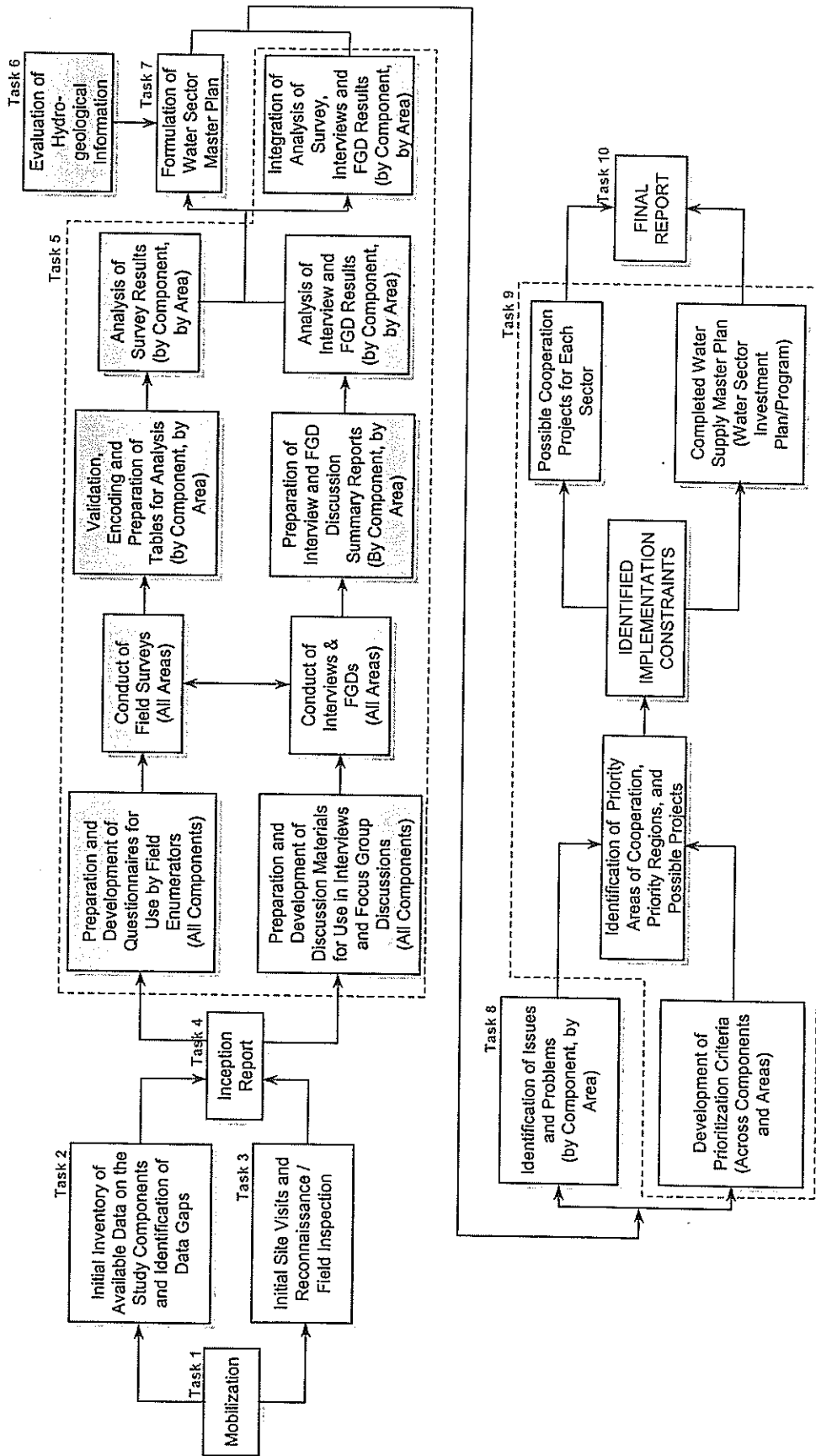


Figure 1-1 Overall Study Framework for the Comprehensive Basic Survey of ARMM

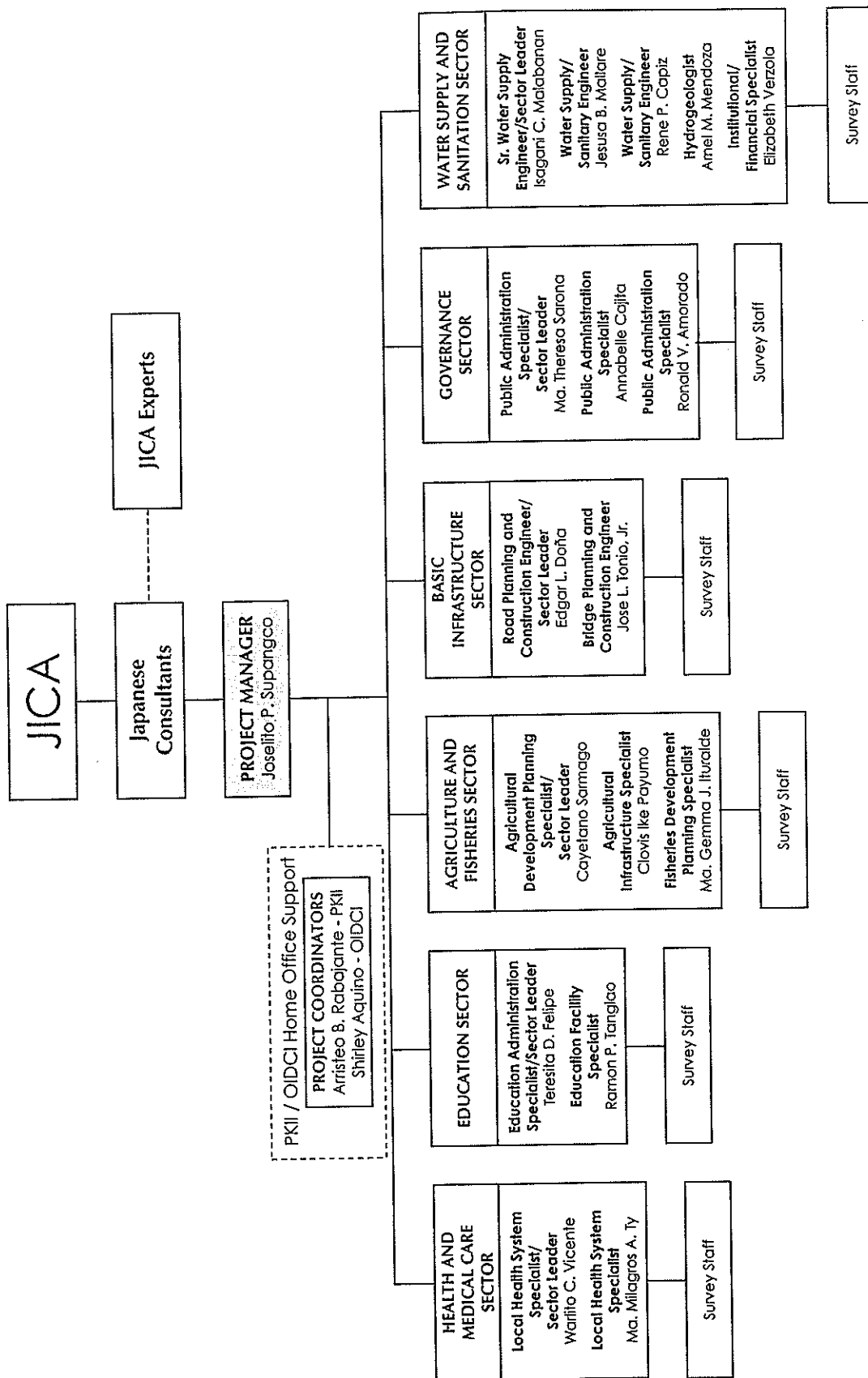


Figure 1-2 Project Organizational Chart

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 Tawi-Tawi 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

2. PROVINCIAL PROFILE

2.1 Brief History

Tawi-Tawi derives its name from the Malay word “jau” meaning “far”. Early travelers in the area would repeat the word as “jau-jau” to mean it was “very far” from the Asian mainland.

The folklore of the Tawi-Tawi Samals holds that the seafaring people came from the Malay Peninsula. The links with the rest of Southeast Asia are very strong and these contacts have helped shape the culture and the history of the islands. Tawi-Tawi claims the distinction of being the earliest home of Islam in the country. In 1380, Sheik Karim ul-Makhdum established the first mosque on Philippine territory, in Simunul. Makhdum’s tomb in Sibutu continues to be revered by Philippine Muslims. From the time of the Sulu Sultanate’s inception in the 14th century, Tawi-Tawi had traditionally been part of its realm. During most of the Spanish period in the Philippines, Tawi-Tawi remained free of western intervention. In 1882, the Spaniards made their first attempt to control the island group by establishing a garrison on the island. They withdrew from the islands at the close of the century as a result of the Philippine Revolution.

The Americans established control over the islands and incorporated Tawi-tawi into the province of Sulu in 1914. Parts of the Tawi-Tawi islands were repurchased from Spain as a consequence of omissions in the Treaty of Paris. Sibutu and Cagayan de Tawi-Tawi were bought for an additional \$100,000. In 1948, when the Turtle Islands were returned to the Philippines by Great Britain, they were constituted as part of the island group. The islands remained part of Sulu until 1973 when the province of Tawi-Tawi was created through Presidential Decree No. 302.

Tawi-Tawi was incorporated into an autonomous regional government for Western Mindanao in 1979 following agreements with the Moro secessionist movement. In 1989, the province voted overwhelmingly to become part of an Autonomous Region in Muslim Mindanao.

2.2 Location and Accessibility

Tawi-Tawi, in southwestern Mindanao, is the southernmost province in the country. Across its water is the state of Sabah in East Malaysia. Tawi-Tawi is bounded by the Sulu Sea on the north and west, and by the Celebes Sea on the east and south.

The Tawi-Tawi group of islands is located at the southwestern tip of the Philippine archipelago. It lies along the earth's equatorial zone and is composed of 307 islands and islets, 88 of which are characterized by extensive reefs. The total land area is 1149 km² with terrain ranging from level to steep.

2.3 The Land

The province consists of three island groups covering 307 island and islets. The Tawi-Tawi island group includes the islands of Tawi-Tawi, Bongao, Simunul, Sibutu, and Sitangkai. The Cagayan de Tawi-Tawi (also called Cagayan de Sulu) Island group is halfway between the southern tip of Palawan and Sulu archipelago. The Turtle Island group is a mere 22 km from Sandakan in Sabah.

The main island of Tawi-Tawi is characterized by a continuous range of low, rolling hills and verdant forests. The smaller islands are surrounded by extensive reefs which make navigation difficult, except by light boats. The capital town has a deep harbor.

The National Statistics and Coordination Board (NSCB) reports that Tawi-Tawi has a land area 1,087.4 km². The Department of Budget and Management (DBM), in its 2003 Internal Revenue Allotment, reports a total land area of 3,426.55 km². As of 2003, there are 10 municipalities, 203 barangays, and a congressional district in the province.

The climate is generally moderate, with a wet season from August to November and a dry season for the rest of the year.

2.3.1 Topography and Drainage

The Tawi-Tawi archipelago is comprised of islands settled on top of a huge sea mountain. Among the islands, Tawi-Tawi has the least rugged relief. Its major peaks, which include Mt. Datu Sali, Mt. Sitangkai and Mt. Baluk Sampan do not go beyond 200 m. These peaks butt across the main island Tawi-Tawi from north to south.

There are two rivers in the area-the Malum and Luuk. Malum is the biggest river, also serving as the transportation passage of the residents in the upper area. It originates from Mt. Bulungan, Mt. Binwang and Mt. Datu Sali and flows southwesterly receiving Magsagao Stream and its tributary.

Underground water in the islands of South Ubian, Tandubas, Sapa-Sapa, Bongao, Simunul, Sitangkai and Turtle islands is impossible since these islands are rocky. The municipalities of Languyan, balimbing, Panglima Sugala, and Cagayan de Tawi-Tawi have their own underground water table because these areas have a great volume soil and watershed that can hold water for many years.

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.

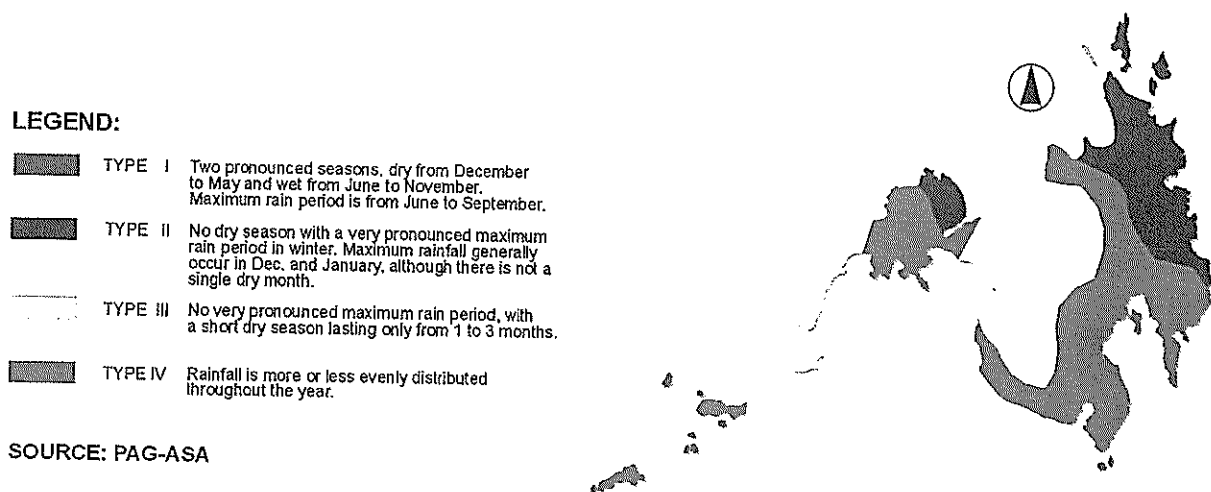


Figure 2-1 Climate Map of Mindanao

The general climate of Tawi-Tawi is cool and breezy along the coastal areas and hot and humid within the island. Tawi-Tawi has two seasons: dry and wet. The climate is generally moderate. During the months of August, September, October and November, the average rainfall is 170mm, 61mm, 226mm, and 215mm, respectively. Other months of the year are generally dry, although there are occasional rain shower.

Meteorological data from Cagayan de Tawi-Tawi show that the wettest period in the southwestern Sulu Sea is during the transition season (October and November), while data from Sandakan indicate that high rainfall occurs during the early part of the northeast monsoon (December and January). Although meager, rainfall data gathered from Baguan show that the

island has more or less the same rainfall pattern as Sandakan, with the highest rainfall recorded during the months of December and January.

The Turtle Islands are typified by warm and humid conditions. Data from the Sandakan weather station (1956-1957) indicate a mean minimum temperature range from 22.06°C to 23.69°C and a mean maximum temperature range from 28.95°C to 32.87°C. The diurnal temperature is about 7°C. Relative humidity averages 70 % because of the high temperature, high rate of evaporation, and heavy rainfall.

Monthly rainfall data collected by the Sandakan station for a period of 52 years (1905-1957) show an annual average of 3138.93 mm of rain. The annual average rainfall from the Cagayan de Tawi-Tawi station is 2,286.2 mm.

2.3.3 Land Classification

Lands in the Tawi-Tawi archipelago can be classified as follows:

Table 2-1 Land Classification as of December 2000

CLASSIFICATION	Area, km ²	Percent of Province	Percent of ARMM
Total Land Area	1,087.40	100.00	8.41
Alienable and Disposable	553.83	50.93	8.81
Total Forest Area	533.57	49.07	8.02
Unclassified Forest Land	248.64	22.87	24.71
Total Classified Public Forest	284.93	26.20	5.05
<i>Forest Reserves</i>	0.00	0.00	0.00
<i>Established Timber Land</i>	251.08	23.09	5.03
<i>National Park (GRBS/WA)</i>	0.00	0.00	0.00
<i>Area for Fishpond Development</i>	33.85	3.11	43.66

Source: Bureau of Census and Statistics, Statistical Yearbook 2002

2.4 Socio-Demographic Profile

Total Population. As shown in Table 2-2, the total population of Tawi-Tawi, as of May 1, 2000, was 322,317 persons, an increase of 71,599 persons over the 1995 Census of Population results. This translates to an annual population growth rate of 5.53 percent, during the 1995 to 2000 period, higher than the 1.78 percent growth rate in the 1990 to 1995 period. A corresponding increase in the number of households was also recorded at 54,345 households, higher by 8,400 households over the 1995 figure. This resulted to an average household size of

5.93 persons, higher than the average household size recorded in 1995 (5.45 persons) and the 2000 national average of five persons.

Table 2-2 Population Distribution of Tawi-Tawi, 2000

Municipality	Total Population	Percent
1. Bongao	58,174	18.05
2. Languyan	42,040	13.04
3. Mapun (Cagayan De Tawi-Tawi)	22,011	6.83
4. Panglima Sugala (Balimbing) (Capital)	33,315	10.34
5. Sapa-Sapa	26,242	8.14
6. Simunul	31,962	9.92
7. Sitangkai	52,772	16.37
8. South Ubian	27,301	8.47
9. Tandubas	24,900	7.73
10. Turtle Islands	3,600	1.12
TOTAL	322,317	100.00

Source: NSO, 2000 Census of Population and Housing

Bongao, the provincial capital, was the largest municipality in with its population comprising 18.05 percent of the total population of the province. It was followed by Sitangkai (16.37 percent), Languyan (13.04 percent), and Panglima Sugala (Balimbing) (10.34 percent). The least populous municipality was Turtle Island (1.12 percent).

Tawi-Tawi had the second smallest population from among the ARMM provinces with 11.47 percent of the 2.8 million persons of the region. At the national level, the province contributed 0.42 percent to the total population of 76.5 million. Yet, Tawi-Tawi had the highest population growth rate in the region.

Population Distribution. Table 2-3 shows that Tawi-Tawi had a median age of 17 years, the same as that of 1995. This means that half of the population was below 17 years.

There were 160.3 thousand males and 162.0 thousand females in Tawi-Tawi, or a sex ratio in 2000 of 99 males for every 100 females. In contrast, in 1995, there were 106 males for every 100 females in the province. There were more females in the age group 0 to 39 years, while more males in the 40 years and above age group.

Young dependents (0 to 14 years age group) made up 40.73 percent of the total population, while old dependents (65 years and above) comprised 1.47 percent. Thus, the economically active population aged 15 to 64 years was 57.79 percent of the total population in Tawi-Tawi.

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

Age Group	Total Population	Male	Female	Sex Ratio
Tawi-Tawi	322,317	160,319	161,998	98.96
Under 1	4,033	1,972	2,061	95.68
1 to 4	34,206	16,603	17,603	94.32
5 to 9	48,280	23,791	24,489	97.15
10 to 14	44,775	22,359	22,416	99.75
15 to 19	41,859	20,536	21,323	96.31
20 to 24	29,280	14,482	14,798	97.86
25 to 29	24,769	11,911	12,858	92.63
30 to 34	19,794	9,659	10,135	95.30
35 to 39	22,128	10,829	11,299	95.84
40 to 44	16,675	8,499	8,176	103.95
45 to 49	12,827	6,745	6,082	110.90
50 to 54	8,776	4,757	4,019	118.36
55 to 59	6,068	3,329	2,739	121.54
60 to 64	4,096	2,288	1,808	126.55
65 to 69	2,277	1,207	1,070	112.80
70 to 74	1,396	781	615	126.99
75 to 79	560	309	251	123.11
80 & Over	518	262	256	102.34

Source: NSO, 2000 Census of Population and Housing

The overall dependency ratio in 2000 was 73.04, lower than the 1995 ratio of 76.20. This means that for every 100 persons aged 15 to 64 years, there were about 73 dependents, i.e., 70 young dependents and 3 old dependents.

There were 166,009 persons or 51.50 percent of the total population belonging to the voting population (aged 18 years and over), slightly higher than the 1995 figure (50.91 percent).

In 2000, about 52.27 percent of the female population were in the childbearing ages (15 to 49 years old), slightly higher by 0.24 percentage point from the 1995 figure (52.02 percent).

Housing. As shown in Table 2-4, of the 52,964 occupied housing units in Tawi-Tawi, about 22 percent had floor area of 20 to 29 m². This figure increased by 2.18 percentage points from the 1990 figure (19.94 percent). Housing units with floor area of 30 to 49 m² followed with 21.37 percent. Only 3.21 percent had floor area of 120 m² or more.

The proportion of housing units with roof made of galvanized iron/aluminum increased from 37.92 percent in 1990 to 52.18 percent in 2000. On the other hand, the proportion of housing units with roof made of cogon/nipa/anhaw dipped by 17.56 percentage points (55.88 percent in 1990 to 38.32 percent in 2000).

Two out of five occupied housing units had galvanized iron/aluminum for roof, while wood for walls; and, one out of five had cogon/nipa/anhaw for roof and wood for walls.

Table 2-4 Occupied Housing Units by Construction Materials of Outer Walls and Roof: Tawi Tawi, 2000

CONSTRUCTION MATERIALS OF THE OUTER WALLS	Total Occupied Housing Units	CONSTRUCTION MATERIALS OF THE ROOF						
		Galvanized Iron/Aluminum	Tile/Concrete/Clay Tile	Half GI and Half Concrete	Wood	Cogon/Nipa/Anahaw	Makeshift/Salvaged/Improvised	Others/Not Reported
Tawi-Tawi	52,964	27,639	402	864	1,463	20,297	67	2,232
Concrete/Brick/Stone	2,397	2,220	71	62	8	34	1	1
Wood	35,772	23,115	206	606	1,211	10,261	11	362
Half Concrete/Brick/Stone and Half Wood	1,007	816	22	127	16	25	-	1
Galvanized Iron/Aluminum	109	33	-	8	35	33	-	-
Bamboo/Sawali/Nipa	11,273	1,243	-	54	173	9,766	22	15
Asbestos	13	8	4	-	-	-	-	1
Glass	6	3	1	-	-	-	-	2
Makeshift/Salvaged/Improvised Materials	65	5	-	-	1	20	32	7
Others/Not Reported	2,277	177	94	7	19	137	1	1,842
No Walls	45	19	4	-	-	21	-	1

Source: NSO, 2000 Census of Population and Housing

2.5 Commerce and Industry

Much of Tawi-Tawi's resources come from the sea, from the rich fishing grounds to spectacular sceneries of white sand beaches and vibrant coral reefs.

Tawi-Tawi has an airport, a commercial seaport and a road network of 334 kilometers long. Electricity comes from the National Power Corporation through a local electric cooperative. The water supply comes from communal faucets, from deep wells and spring waterworks system. Tawi-Tawi has 2 radio stations, a television station, 2 telegraph stations, 2 telex stations, a post office and a telephone system.

The trade and investment opportunities in Tawi-Tawi are in tourism and aquaculture. Tawi-Tawi can boast of unique tourist attractions peculiar to its location. Its white sand beaches are certified to have pristine waters while the coral reefs are guaranteed to be world class. Nature lovers and environmentalists would have a grand time in the bird sanctuary in Sibutu as well as in the protected areas of Turtle Islands. Tourist accommodation facilities would complement the splendid sites in the islands. Production and processing of marine products are also potential business ventures in Tawi-Tawi.

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)

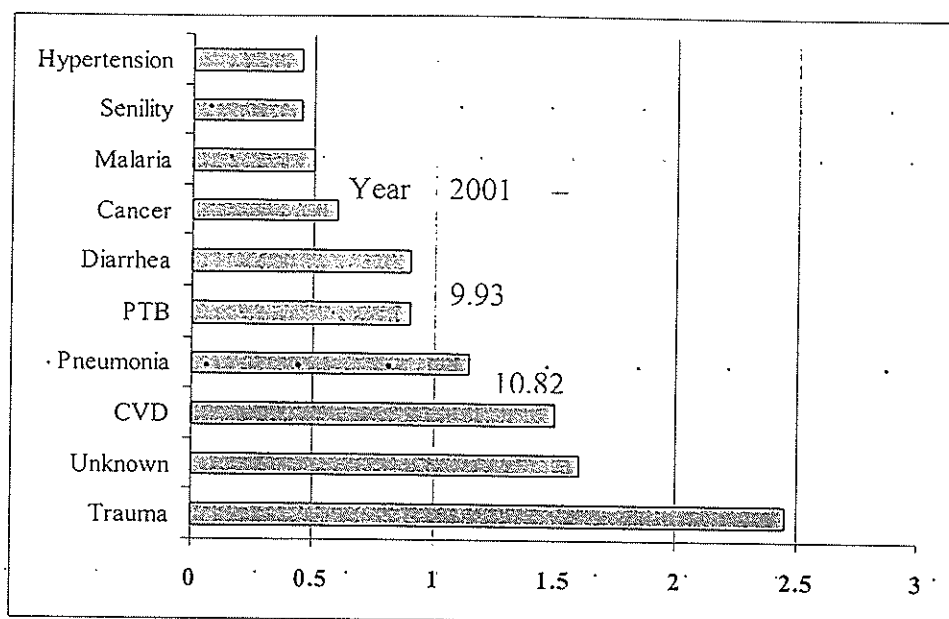
2.6.2 Ten Leading Causes of Mortality

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

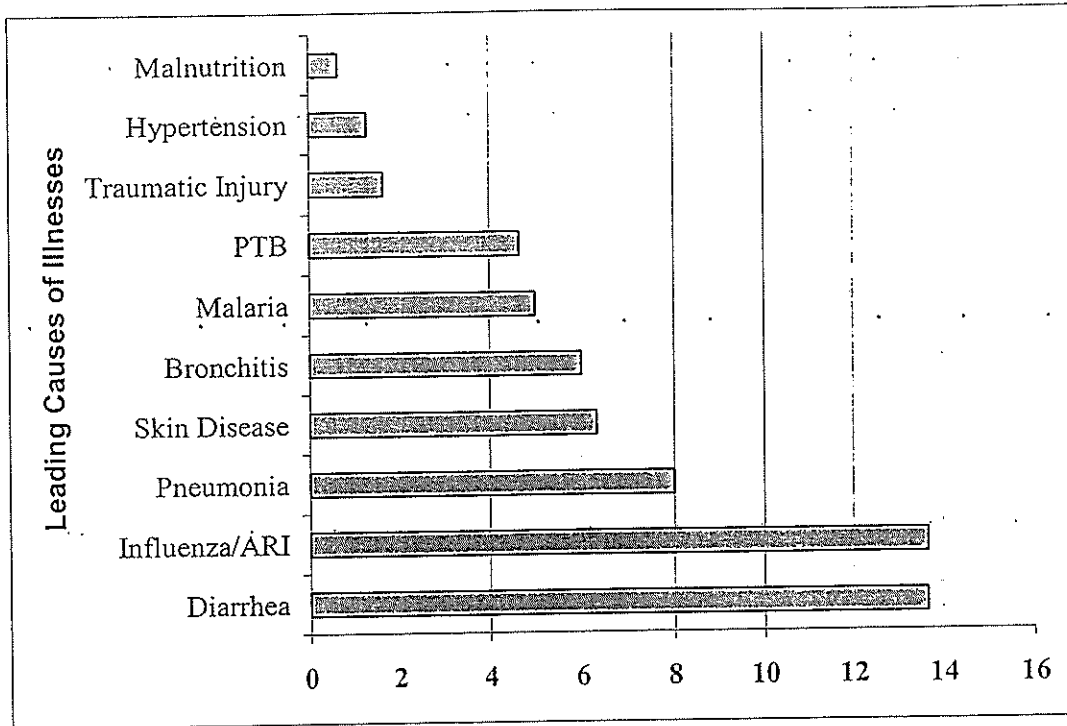
2.6.3 Leading Causes of Morbidity

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 2-3 Ten Leading Causes of Illnesses per 1,000 Population – ARMM (2002)

CHAPTER 3
EXISTING FACILITIES AND SERVICE COVERAGE

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.

Types of Facilities and Definition of Service Level Standard

Composition of Water Supply System and Facility. The service level and system components of water supply system and facilities are shown below.

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	Pipe system provided with reservoir
4. Delivery and Service level	Generally none.	Communal faucet shared by houses within 25 m radius	Household connection
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.

<u>Safe Sources</u>	<u>Unsafe Sources</u>
Protected deep well	Unprotected deep well
Protected shallow well	Unprotected shallow well
Improved/covered dug well	Open dug well
Developed spring	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

Urban and Rural Barangays Classification. The municipal barangay classification of urban and rural areas used in this report was based on the National Statistics Office (NSO) classification. The following are the NSO definition for urban area.

1. Poblaciones or central districts of municipalities and cities which have a population density of at least 500 persons per square kilometer;
2. Poblaciones of central districts, not included in item 1 above, regardless of population size which have the following characteristics:
 - a) Street pattern, that is network of streets in either parallel or right angle orientation;
 - b) At least six establishments, either commercial, manufacturing, recreational and/or personal services; and
 - c) At least three of the following:
 - ◆ A town hall, church or chapel with religious service at least once a month;

- ◆ A public place, park or cemetery;
- ◆ A market place or building like school, hospital, pisciculture or health center or library;

Barrios having at least 1,000 inhabitants that meet the conditions set forth in item 2 above, and in which the occupation of the inhabitants is predominantly non-farming/ fishing.

3.1.2 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 Tawi-Tawi, there is only one municipality with level III and mixed with level II water supply systems: Table 3-2 shows the available details of the water supply system of the Municipality of Bongao.

Table 3-2 Existing Level III Water System

Municipality	Water Service Provider	Service Area		2003 Served Pop.	No. of connections	Water source	Estimated unit water cons. (lpcd)
		Barangay	Class				
Bongao	Bongao Water District	1. Poblacion	Urban	2,101	1,270	Deepwells	120
		2. Pagasa	Rural	830			
		3. Nalil	Rural	519			
		4. Sanga Sanga	Rural	705			
		5. Pahut	Rural	288			
		6. Simandagit	Rural	446			
		7. Lamion	Rural	1,350			
		8. Pasiagan	Rural	148			
		9. Tubig-boh	Urban	453			
		10. Pagasinana	Rural	441			
				7,282			
		Total	Urban	2,553			
			Rural	4,728			
			Total	7,282			
Simunul	Simunul Water District	1. Doh-Tong 2. Tubig Indangan	Rural Rural	There is Water District in Simunul but not operational		Shallow well	80
			Urban	2,553			
			Rural	4,728			
			Total	7,282			

3.1.3 Level II Water Supply Systems

The Level II water systems, defined as communal faucets, are designed to serve barangays at specified service area. The systems are usually operated by the Barangay Waterworks System

Association (BWSA). In Tawi-Tawi, the municipalities of Languyan, Mapun and Panglima Sugala have Level II water systems. The details are shown in Table 3-3.

Table 3-3 Existing Level II Water System

Municipality	Water Service Provider	Barangay Served		Estimated Population Served	No. of Communal faucets	Water Source	Estimated unit water consumption (lpcd)
		Served	Class				
Bongao	Bongao Water District	Pasiagan	Rural	370	10	Deep well	60
Languyan	BWSA	1. Darussalam	Rural	1,310	8	Spring	60
		2. Poblacion	Urban	1,545			
				2,855			
Mapun	BWSA	1. Liyubud	Urban	676	No data	Spring	80
		2. LupaPula	Urban	419			
		3. Mahalo	Rural	871			
			Urban	1,095			
			Rural	871			
			Total	1,966			
Panglima Sugala	BWSA	Bato Bato	Urban	2,325	No data	Spring	60
Total			Urban	4,965			
			Rural	2,551			
			Total	7,516			

3.1.4 Level I Facilities

Level I water systems are usually used in the rural areas of the municipality. The common sources, like shallow wells, are equipped with hand pumps and for those who can afford they use motorized pump to get water. There are also areas where springs are used as point source by connecting polyethylene pipes directly to the households. Other households get water from the river nearest to their area for domestic use and rainwater for drinking. It was estimated that about 30% of the Level I system has shallow/deep well sources. Table 3-4 shows the level I served population.

Table 3-4 Existing Level I Water System

Municipality	Type	Year 2003		No. of Facilities
		Mun. Population	Served Population	
1 Bongao	Urban	9,821	2,907	34
	Rural	50,199	18,041	210
	Total	60,020	20,948	244
2 Languyan	Urban	5,151	1,442	18
	Rural	37,491	14,472	178
	Total	42,642	15,915	196
3 Mapun	Urban	3,129	813	9
	Rural	18,822	7,180	76
	Total	21,951	7,994	85
4 Panglima Sugala	Urban	1,093	219	2
	Rural	33,362	12,634	137
	Total	34,455	12,852	139
5 Sapa-Sapa	Urban	26,701	8,010	88
	Rural	273	82	1
	Total	26,974	8,092	89
6 Simunul	Urban	4,835	1,934	20
	Rural	28,212	11,285	116
	Total	33,047	13,219	136
7 Sitangkai	Urban	29,248	10,237	116
	Rural	26,675	5,335	60
	Total	55,923	15,572	176
8 South Ubian	Urban	8,383	0	0
	Rural	19,001	0	0
	Total	27,384	0	0
9 Tandubas	Urban	3,910	1,955	21
	Rural	21,287	10,643	112
	Total	25,197	12,598	133
10 Turtle Islands	Urban	1,373	0	0
	Rural	2,283	0	0
	Total	3,656	0	0
Provincial Total	Urban	93,644	2,553	308
	Rural	237,605	4,728	890
	Total	331,249	7,282	1,198

3.1.5 Water Supply Service Coverage

In Tawi-Tawi, the town of Bongao has Level III water system system but not all barangays are being served. Likewise, there are municipalities with Level II water systems, which cater only the Poblacion. All other municipalities have Level I systems. Table 3-5 shows the distribution of water system level per municipality. Figure 3-1 shows the existing water supply facilities coverage.

Table 3-5 Water System Level Coverage

Municipality	Type	Population (2003)	Population Served by 2003 Facilities				
			Level III	Level II	Level I	Total	% Coverage
1 Bongao	Urban	9,821	2,553	0	2,907	5,460	9%
	Rural	50,199	4,728	370	18,041	23,138	39%
	Total	60,020	7,282	370	20,948	28,599	48%
2 Languyan	Urban	5,151	0	1,545	1,442	2,988	7%
	Rural	37,491	0	1,310	14,472	15,782	37%
	Total	42,642	0	2,855	15,915	18,770	44%
3 Mapun	Urban	3,129	0	1,095	813	1,908	9%
	Rural	18,822	0	871	7,180	8,052	37%
	Total	21,951	0	1,966	7,994	9,960	45%
4 Panglima Sugala	Urban	1,093	0	546	219	765	2%
	Rural	33,362	0	1,778	12,634	14,412	42%
	Total	34,455	0	2,325	12,852	15,177	44%
5 Sapa-Sapa	Urban	26,701	0	0	8,010	8,010	30%
	Rural	273	0	0	82	82	0%
	Total	26,974	0	0	8,092	8,092	30%
6 Simunul	Urban	4,835	0	0	1,934	1,934	6%
	Rural	28,212	0	0	11,285	11,285	34%
	Total	33,047	0	0	13,219	13,219	40%
7 Sitangkai	Urban	29,248	0	0	10,237	10,237	18%
	Rural	26,675	0	0	5,335	5,335	10%
	Total	55,923	0	0	15,572	15,572	28%
8 South Ubian	Urban	8,383	0	0	0	0	0%
	Rural	19,001	0	0	0	0	0%
	Total	27,384	0	0	0	0	0%
9 Tandubas	Urban	3,910	0	0	1,955	1,955	8%
	Rural	21,287	0	0	10,643	10,643	42%
	Total	25,197	0	0	12,598	12,598	50%
10 Turtle Islands	Urban	1,373	0	0	0	0	0%
	Rural	2,283	0	0	0	0	0%
	Total	3,656	0	0	0	0	0%
Provincial Total	Urban	93,644	2,553	3,187	27,518	33,258	10%
	Rural	237,605	4,728	4,329	79,672	88,729	27%
	Total	331,249	7,282	7,516	107,189	121,987	37%

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.

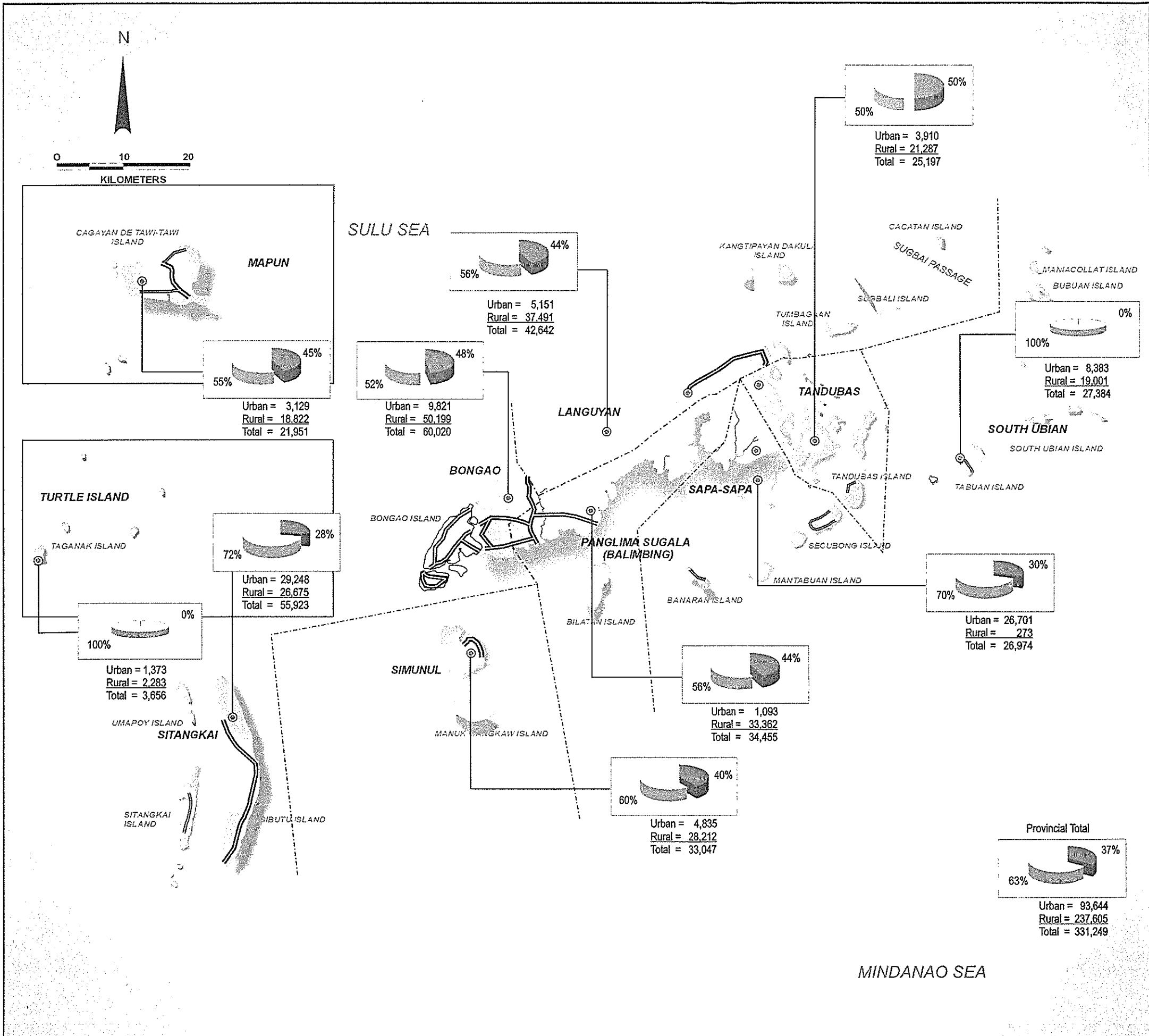
From the table it could be observed that access to Level III & II water system is lowest in ARMM. Likewise remedial means to obtain potable water from rain collector, private vendor

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	10,550	2.0	6,557	0.94

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



KEY MAP

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
TAWI-TAWI

3.2 Sanitation and Sewerage

3.2.1 General

The present sanitation condition of the municipalities was also assessed to determine the present need and to integrate measures with the water supply. The key to sanitation is water. In the areas visited the common problem to sanitation is lack of potable water. One gateway to progress of the municipality basically rely on the cleanliness of the community.

3.2.2 Types of Facilities and Definition of Service Level Standard

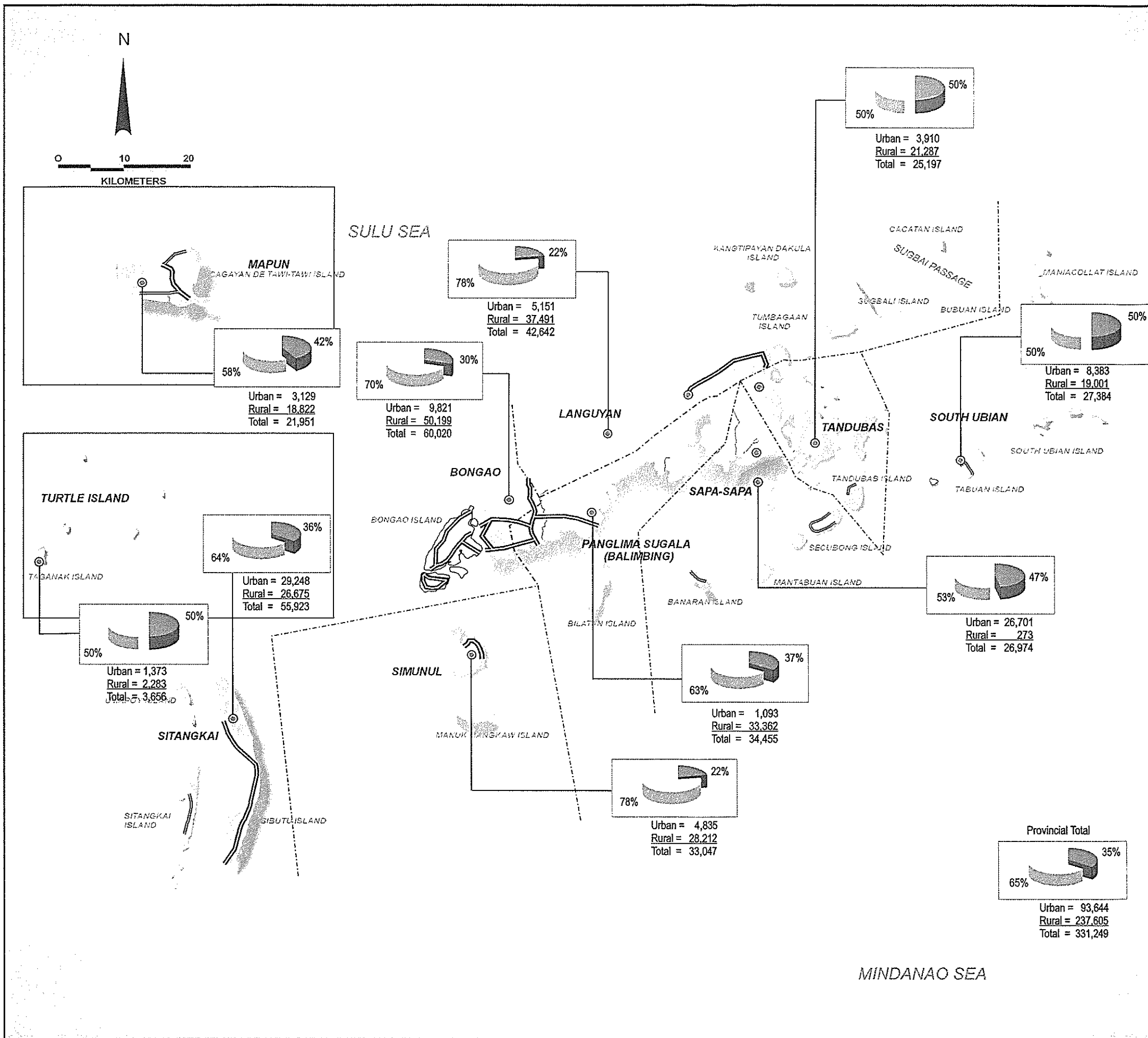
The household toilets are categorized into two types: sanitary and unsanitary toilets. Sanitary toilets are defined as approved, water sealed toilets that can be flush type or pour-flush type with receiving pit or septic tanks, or septic vault, with ventilation. The unsanitary toilets include the types of facilities used for disposing human waste, which do not fall under the category of the approved type.

3.2.3 Sanitation Facilities and Service Coverage

Based on the data gathered during the investigation, about 35% of the households in the province have sanitary toilets. This figure clearly demonstrates that the province needs to improve the sanitation facilities of the locality. The low figure can be attributed to lack of water supply facilities and the lack of capability of the rural households to construct the approved type of toilet. Table 3-5 shows the number of existing sanitation facilities of households, public schools and public toilets. Figure 3-2 shows the 2003 base year coverage of sanitation facilities.

Table 3-6 Existing Sanitation Facilities of Tawi-Tawi

Municipality	Type	2003		Served Pop	Households with Sanitary Toilet		Public School Toilets (2003)			Public Utilities (2003)		
		Population	Ho. Of HH		No. of HH	Cove- rage	Total Public Schools	No with toilets	Cove- rage	Total Public Utilities	No. with toilets	Cove- rage
1 Bongao	Urban	9,821	1,713	2,946	514	5%						
	Rural	50,199	8,755	15,060	2,627	25%						
	Total	60,020	10,468	18,006	3,140	30%	34	34	100%	3	3	100%
2 Languyan	Urban	5,151	952	1,133	209	3%						
	Rural	37,491	6,930	8,248	1,525	19%						
	Total	42,642	7,882	9,381	1,734	22%	26	26	100%	1	1	100%
3 Mapun	Urban	3,129	496	1,314	208	6%						
	Rural	18,822	2,986	7,905	1,254	36%						
	Total	21,951	3,482	9,219	1,463	42%	23	23	100%	1	1	100%
4 Panglima	Urban	1,093	177	404	66	1%						
	Sugala	Rural	33,362	5,414	12,344	2,003	36%					
	Total	34,455	5,591	12,748	2,069	37%	32	32	100%	1	1	100%
5 Sapa-Sapa	Urban	26,701	4,398	12,549	2,067	47%						
	Rural	273	45	129	21	0%						
	Total	26,974	4,443	12,678	2,088	47%	27	27	100%	1	1	100%
6 Simunul	Urban	4,835	743	1,064	163	3%						
	Rural	28,212	4,334	6,207	953	19%						
	Total	33,047	5,077	7,270	1,117	22%	24	24	100%	1	1	100%
7 Sitangkai	Urban	29,248	4,971	10,529	1,790	19%						
	Rural	26,675	4,534	9,603	1,632	17%						
	Total	55,923	9,505	20,132	3,422	36%	24	24	100%	1	1	100%
8 South	Urban	8,383	1,458	4,192	729	15%						
	Ubian	Rural	19,001	3,304	9,500	1,652	35%					
	Total	27,384	4,762	13,692	2,381	50%	12	12	100%	1	1	100%
9 Tandubas	Urban	3,910	618	1,955	309	8%						
	Rural	21,287	3,364	10,643	1,682	42%						
	Total	25,197	3,982	12,598	1,991	50%	14	14	100%	1	1	100%
10 Turtle	Urban	1,373	246	686	123	19%						
	Islands	Rural	2,283	410	1,141	205	31%					
	Total	3,656	656	1,828	328	50%	1	1	100%	1	1	100%
Total	Urban	93,644	15,772	36,773	6,178	11%						
	Rural	237,605	40,076	80,780	13,554	24%						
	Total	331,249	55,848	117,554	19,732	35%	217	217	100%	12	12	100%



KEY MAP

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 3-2
SANITATION FACILITIES
BASE YEAR (2003)
COVERAGE
TAWI-TAWI

CHAPTER 4
EXISTING SECTOR INSTITUTIONS AND
ARRANGEMENTS

4 EXISTING SECTOR INSTITUTIONS AND ARRANGEMENTS

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 and Plan 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 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 administering 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 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 Provincial Plans and Priority Programs

The province envisions the attainment of self-reliance and transformation into the trading center of the South. To achieve this vision, the provision of adequate infrastructure facilities including roads, airport and seaports, modern communication facilities, light and water system and other industry related infrastructures have been considered as essential.

Tawi-Tawi has a major water supply problem, since the people cannot depend on the rain alone since the weather is quite unpredictable and subject to long dry spells. For the period 1994-2002, the province requires additional infrastructure for water supply such as gravity fed and/or pressure pumped water supply systems, reservoirs and water supply trunk pipelines. It is anticipated that the water falls at Biraddali in Languyan municipality will be developed as a level III gravity-fed water supply source. An additional one (1) unit of pressure pump will be provided in Bongao to increase water pressure to satisfy level III requirements. Reservoirs will be constructed at Languyan and Bongao.

The forecasted water supply infrastructure projects for 1994-2002 are summarized below:

Project	Description of Proposed Development	Location
Level III Gravity Fed Water Supply Areas	a. Expansion of reservoir/ overhead water tank b. Expansion of Reservoir c. Additional Overhead water tank	Languyan, Kaulabro P.Sugala Tandubas, Mapun, Sitangkai, Simunul, South Ubian, Turtle Islands
Level III Pressure Pumped Water Supply Areas	Provision of genset pressure pump	Bongao, Languyan, P. Sugala, Sitangkai, Simunul, South Ubian, Sapa-Sapa, Mapun, Tandubas, Turtle Island
Other Level III Water Supply Source (e.g. reservoir)	Reservoir	Bongao, Biraddali (Languyan), Batu-Batu, Ungus-Matata, Lupa Pula
Other Level III Water Supply Trunk Lines	Additional Pipeline	Malasisa (Lupa Pula), Kualbaro (Languyan), Tarawakan (Batu-Batu), Ungus (Matata), Salangan, Lupa Pula, Sitangkai Asibi/Sibutu.

Source: *Draft Provincial Physical Framework Plan/Comprehensive Provincial Land Use Plan, Province of Tawi-Tawi (1993-2002), Provincial Development Council, Tawi-Tawi.*

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 RA 9054 “ An Act to Strengthen and Expand the Organic Act for ARMM, passed in 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.

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).

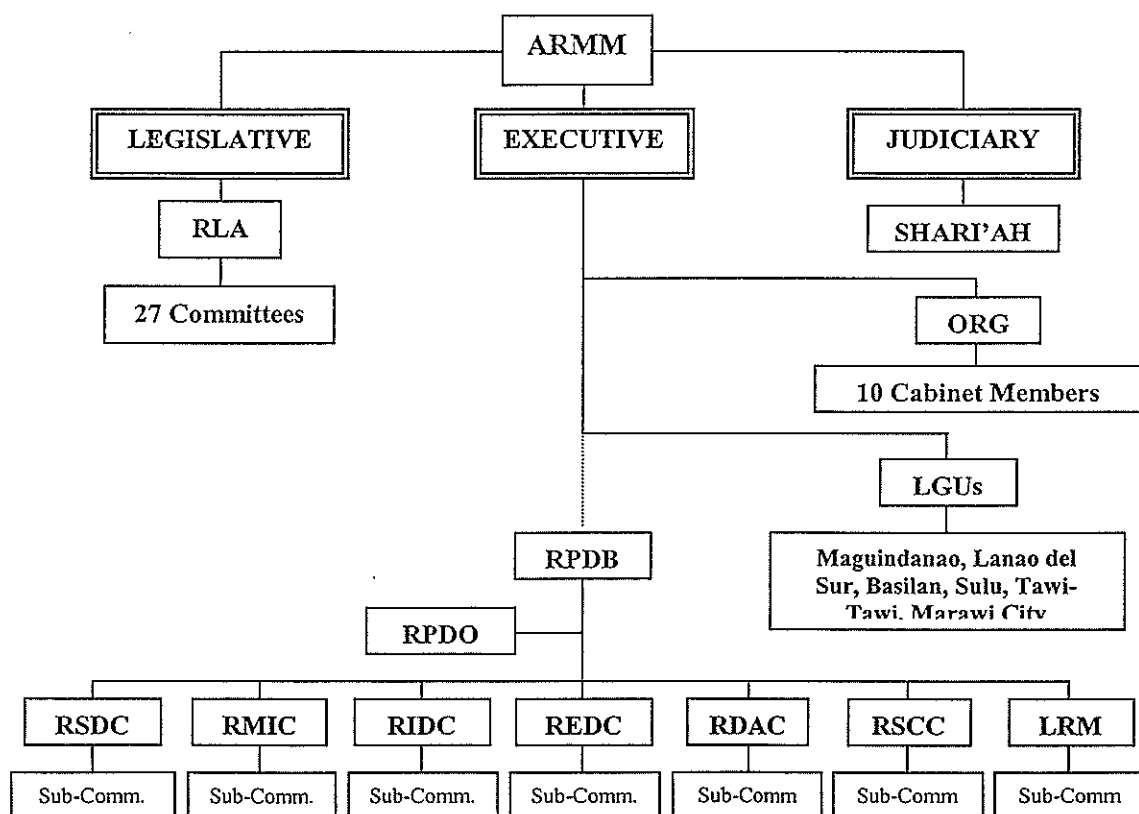
The Executive and Legislative Departments carry out these powers and functions with the administration of justice provided by the Regular Trial and Shari'a courts, directly supervised by the Supreme Court of the Philippines. The President of the Republic of the Philippines provides general supervision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

Figure 4-1 ARMM Organizational Structure¹



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

¹ 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; LRM-LGUs Regional Management Committee

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

Provisions of RA 9054 with respect to composition of the Executive Department	Status of Implementation
<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 30th 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 30th 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 Autonomous Region; The 3 Deputy Governors shall be Ex-Officio members of the Regional Cabinet with</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> <ul style="list-style-type: none"> • Honorable Gumbalia Gunsí representing the Lumads or the

Provisions of RA 9054 with respect to composition of the Executive Department	Status of Implementation
<p>or without portfolio (Article VII, Section 6).</p>	<ul style="list-style-type: none"> • Indigenous Cultural Communities • Honorable Abdul Sahrin, an MNLF member representing the Muslims • Honorable Luis Olano representing the Christians <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"> • The Executive Secretary under the Office of the Regional Governor • The Acting Executive Director of the Bureau of Cultural Heritage (BCH-ARMM) • The Executive Director of the Regional Planning and Development Office (RPDO-ARMM) • The Regional Manager of the Regional Ports and Management Authority (RPMA)

Provisions of RA 9054 with respect to composition of the Executive Department	Status of Implementation
	<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> <ul style="list-style-type: none"> • The Director of the National Police Commission (NAPOLCOM) • The Executive Director of the National Statistics Office (NSO) • The Director of the Civil Service Commission (CSC) • The Regional Manager of the Philippine Coconut Authority (PCA) • The Administrator of the Southern Philippines Development Authority (SPDA)
<p>4. 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>4.1 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

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.

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:

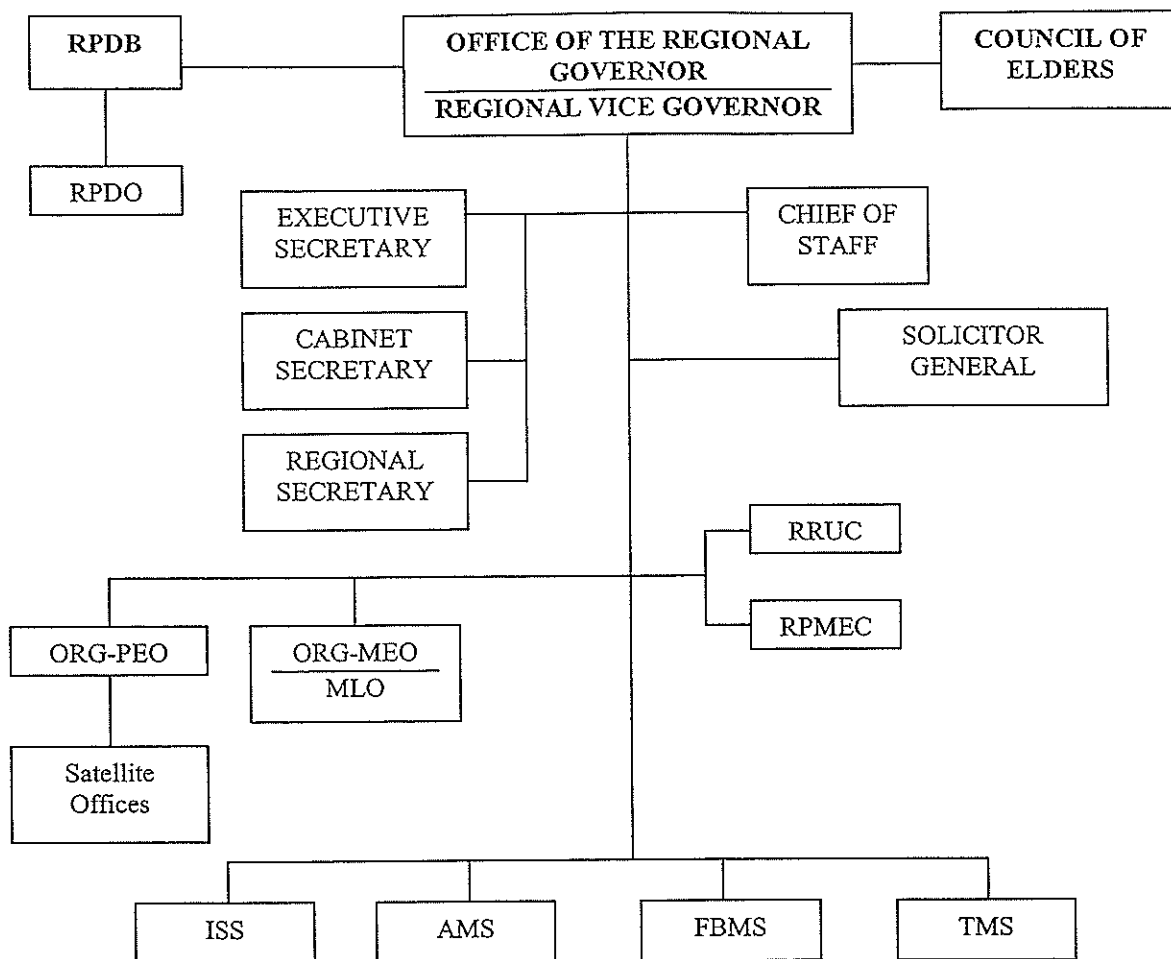
- Regional Economic Development and Planning Board (REDPB)

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 4-2.

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;

Figure 4-2 Office of the Regional Governor Organizational Structure



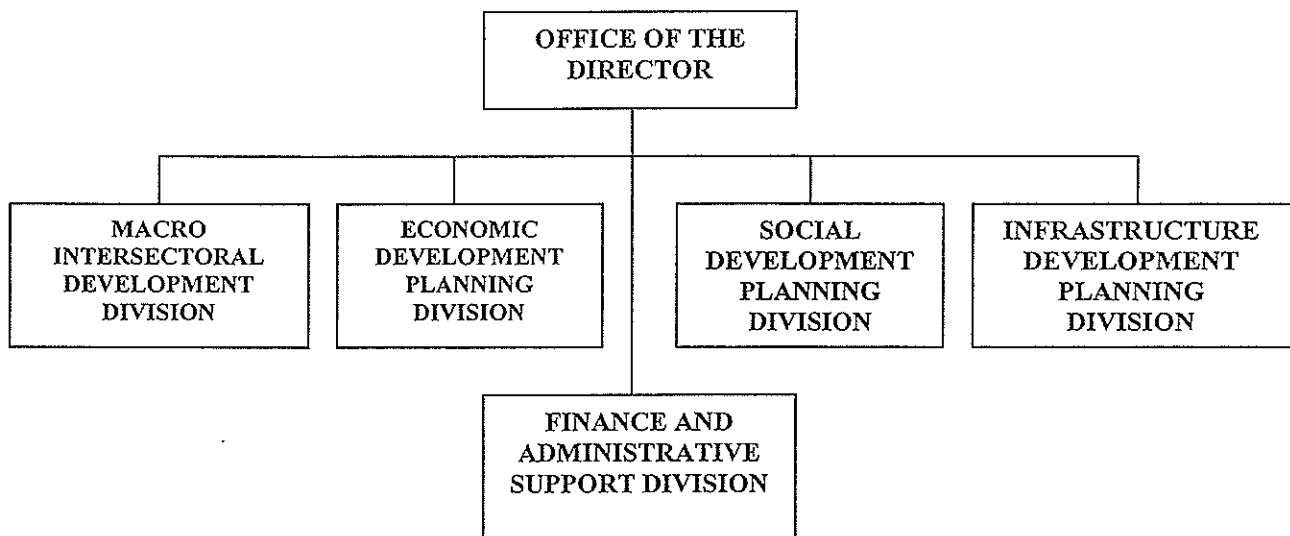
LEGEND:

- 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

- 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
- 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.

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



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

- 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.

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

Devolved Agencies	Functions and Roles
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.

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"> Development planning, implementation, monitoring and evaluation of WATSAN projects, approval of cost sharing arrangements and policies at the national level
	Local Water Utilities Administration (LWUA)	<ul style="list-style-type: none"> Technical and financial assistance to WDs
ARMM Government	Regional Economic Planning & Development Board (REPDB)/ Regional Planning & Development Office (RPDO)	<ul style="list-style-type: none"> Policy formulation, monitoring and evaluation, regional development planning
	Department of Interior and Local Government (DILG) – ARMM	<ul style="list-style-type: none"> Institutional Strengthening of LGUs (same as DILG National Office)
	Department of Health (DOH) – ARMM	<ul style="list-style-type: none"> Water quality monitoring and sanitation (Same as DOH National Office)

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

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

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

For its Tawi-Tawi Engineering District and Area Equipment Services, DPWH-ARMM has a total of 45 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	171.80	-76.03
2001	177.38	3.25
2002	277.90	56.67
2003	281.90	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
Total	177.38	1.00	277.91	1.00	418.45	1.00

Source: Office of the Regional Governor, ARMM

The ARMM Public Investment Program for water supply in Tawi-Tawi, 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 Tawi-Tawi.

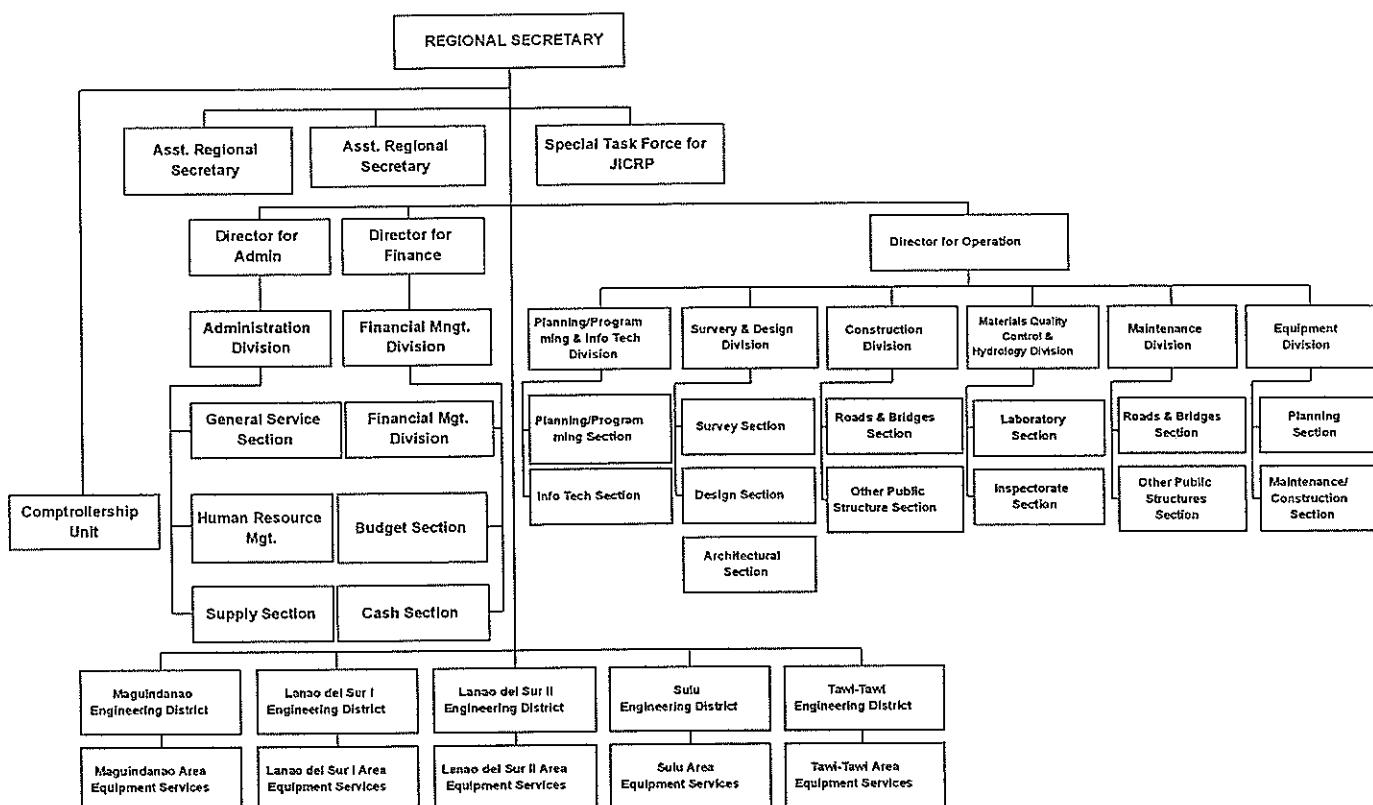
Table 4-7 ARMM Public Investment Program for Water Supply – Tawi-Tawi (2004-2006)

Project	2004	2005	2006	Total
Construction of Level II Water System	-	6.00	6.00	12.00
Surface Water Source Development at Maalum River with Hydro Electric and Irrigation Component	200.00	150.00	150.00	500.00
Construction and Installation of potable Water Supply and Distribution System				
a. Sibuto, Sitangkai	1.50			1.50
b. Sitangkai	1.50			1.50
c. Ligayan, Sitangkai	1.50			1.50
d. Tandubanak, Sitangkai		1.50		1.50
e. Tumandao, Sitangkai		1.50		1.50
f. Tampakan-Ubol, Simunul	1.50			1.50
g. Bakong, Simunul	1.50			1.50
h. Lupa Pula, Mapun	1.50			1.50
i. Tanduan, Mapun	1.50			1.50
j. Tandubas Proper, Tandubas	1.50			1.50
k. Sapa-Sapa, Tandubas		1.50		1.50
l. Lookan, Tandubas		1.50		1.50
m. Taganak, Turtle Island, Languyan	1.50	1.50		1.50
n. South Ubian Proper, South Ubian				
o. Tabawan, South Ubian	1.50			1.50
p. Bato-Bato, Panglima Sugala				
q. Balimbing, Panglima Sugala	1.50			1.50
		1.50		1.50
		1.50		1.50
Total Water Supply	215.00	166.50	156.00	537.50
Total Infrastructure	1,011.92	1,027.00	969.50	2,959.92
% water supply	21.25	16.21	16.09	18.16

Source: Regional Planning and Development Office, ARMM

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

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



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.

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.

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

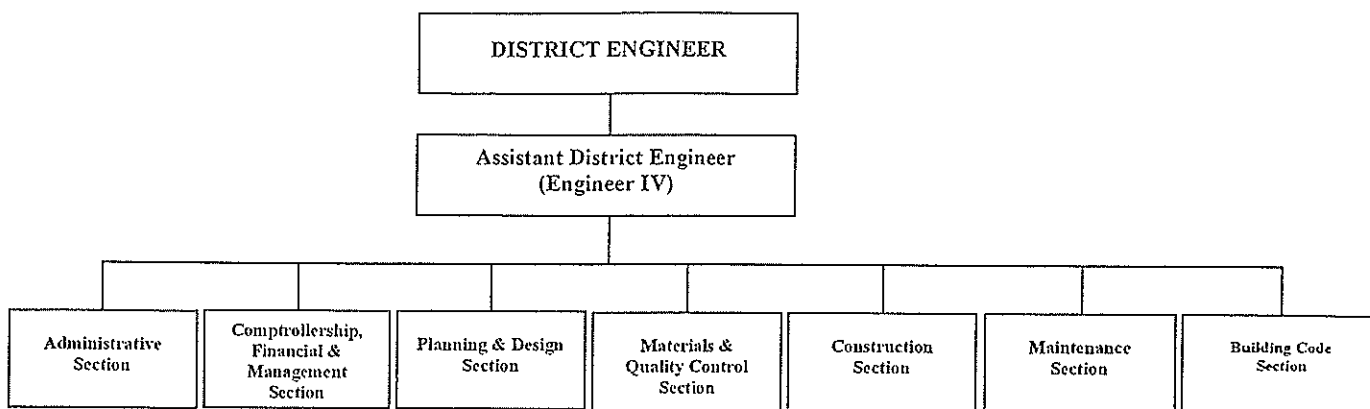


Figure 4-6 Organizational Chart – Department of Interior and Local Government ARMM

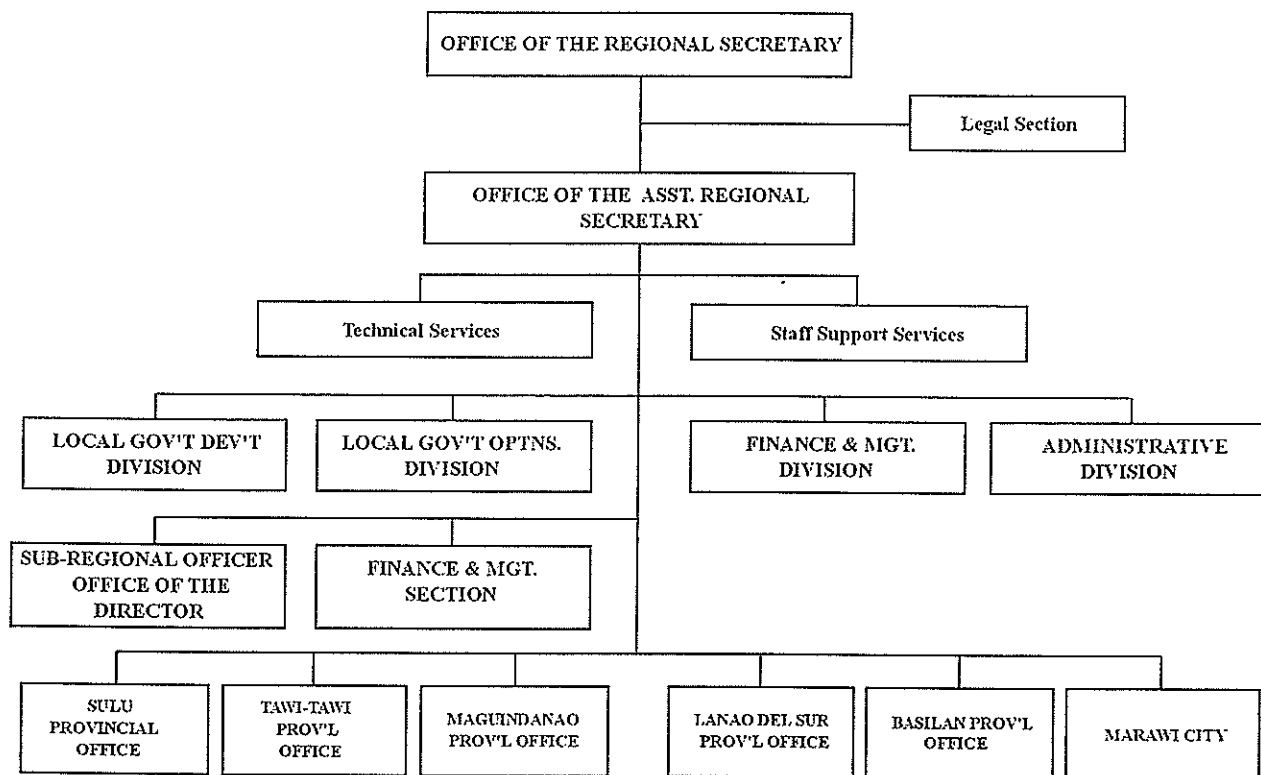


Table 4-8 Actual Budget of DILG-ARMM (1996-2003)

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)

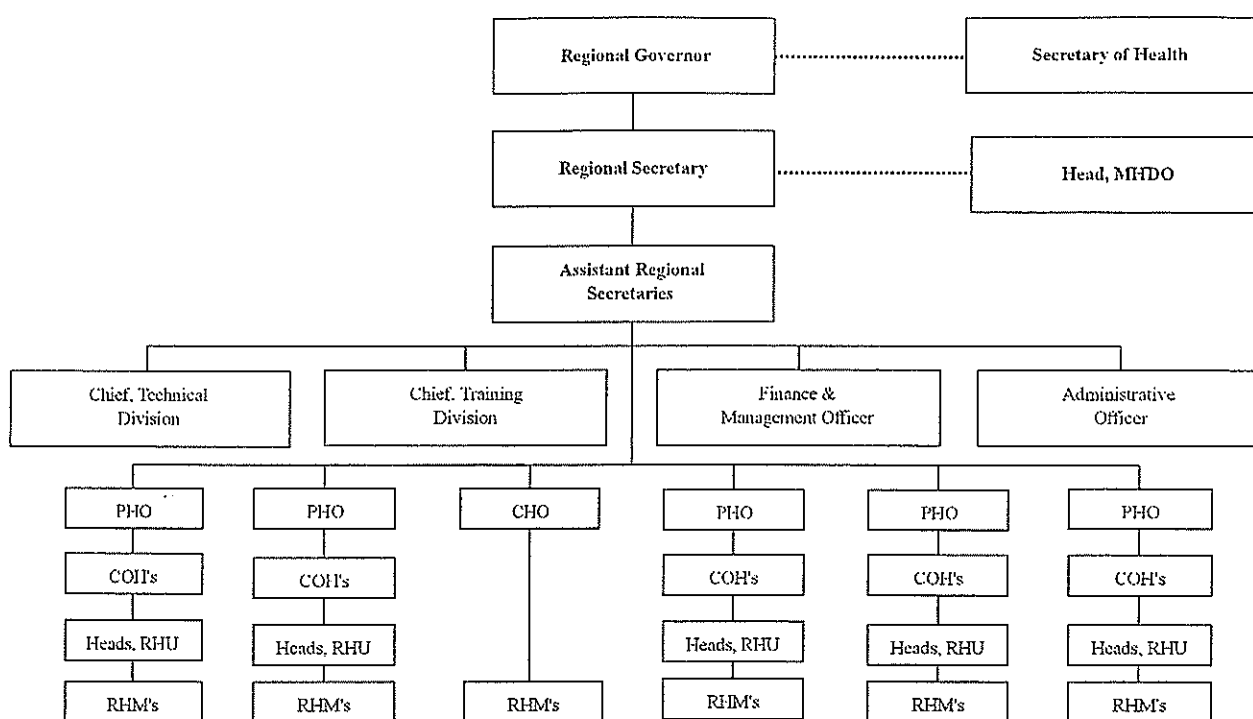
Expenditure Item	2001	% of Total	2002	% of Total	2003	% of Total
Personal Services	59.4	0.81	58.04	0.84	59.87	0.84
Automatic Appropriation	5.59	0.08	5.45	0.08	5.72	0.08
MOOE	7.95	0.11	5.53	0.08	5.68	0.08
Capital Outlay						
Total	72.94	1.00	69.02	1.00	71.27	1.00

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.

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



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.

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	10.00	0.02	7.70	0.02	1.50	0.00
Total	410.91	1.00	408.93	1.00	432.39	1.00

Source: Regional Planning and Development Office, ARMM

4.5 Water Service Providers in Tawi-Tawi

The Province had three (3) Water Districts, but only one remains 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 RW3SP.

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 Tawi-Tawi 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

Tawi-Tawi 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 recently, Rural Water Supply and Sanitation Sector Project (RW3SP). The Second Island Provinces Water Supply and Sanitation Sector Project and RW3SP both had extensive training components for the DEO and DILG/LGU of the province, respectively.

Under the RW3SP, the province had to create a Provincial Water and Sanitation Committee or Team which acted as the focal point for the WATSAN activities of RW3SP and as the coordinating arm with the DILG for site selection, BWSA organizing and training and implementation of the Project. The Committee or Team is lodged with the Engineering and Planning Office of the Province.

Since municipalities and barangays generally do not have any capacity to undertake WATSAN projects, it is the Tawi-Tawi 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.

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

Equipment Type	Brand	Number of Units
Bulldozer	KOMATSU	1
Grader	KOMATSU	1
Loader	KOMATSU	1
Dumptruck	HINO	2
Generator Set	KOMATSU	1
Motorized Vessel Barge	DAIHATSU Engine	1
Welding Machine	HISIHATSU	1
Jeep	LOCAL	2

Source: Provincial Engineers Office

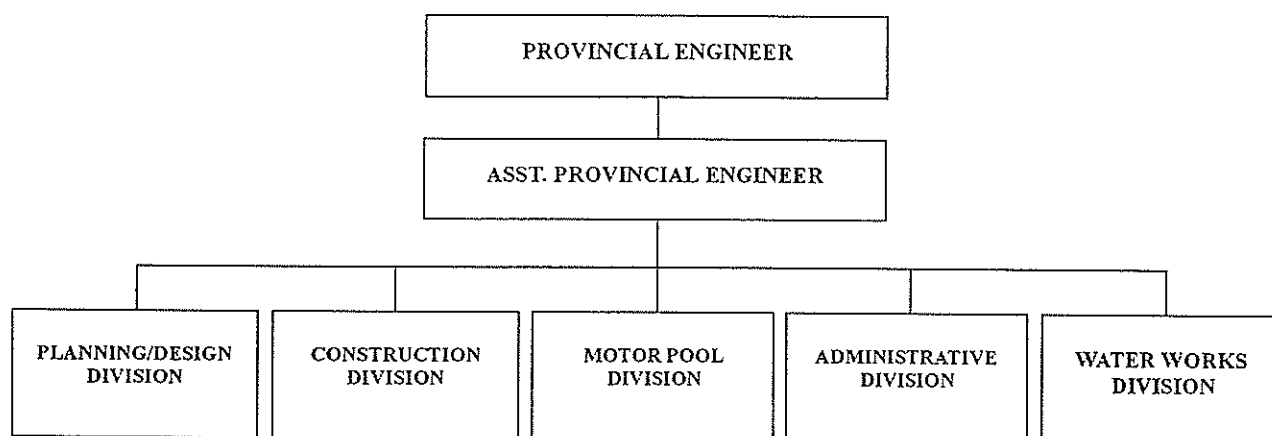
Pursuant to the ARMM Local Government Code, the functions of the PEO with reference to WATSAN are given below:

- 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 Tawi-Tawi PEO is given in Figure 4-8.

Figure 4-8 Organizational Structure of the Tawi-Tawi Provincial Engineers Office



4.6.3 Community-Based Organizations or Associations

Community organizing in Tawi-Tawi 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

Tawi-Tawi is a recipient 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, but has been extended up to mid-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 Tawi-Tawi was included. The whole 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.

CHAPTER 5
PAST FINANCIAL PERFORMANCE

5. PAST FINANCIAL PERFORMANCE

5.1 General

One of the major problems usually encountered in ARMM in general and, more specifically, in the different local government units (LGUs) that compose the ARMM, is compliance to the financial reporting system of the national government. Thus, historical records of revenues and expenditures of the various ARMM LGUs are difficult to collect and, when available, the veracity of the information contained is usually questioned. Even the regular audit of these LGUs are often not undertaken due to security concerns for the Commission on Audit (COA) teams that would normally undertake the audits.

In addition, the procedural aspects of the LGU planning, programming, budgeting and expenditure process may have not been followed as required under the ARMM Local Government Code (ARMM-LGC). Thus, the reliability, consistency and truthfulness of the financial information of these LGUs should be considered seriously.

5.2 Financial Performance of the LGU

The provincial and municipal governments' financial performance for the period 1999-2001, which are the only available information, was generated from the Bureau of Local Government Finance database together with that of the Department of Budget and Management. At the LGU level, the results of the financial operations could not be released by the LGU Accountants unless clearance from the local chief executive (LCE) is given. In most instances, such clearance for the release of the financial information was not given and the Study Team had to find alternative sources to collect the needed information. could be looked into.

Data on the Internal Revenue Allotment (IRA) for the LGUs were readily available from the DBM, but this only provided information on financial resource availability, not use or allocation.

5.2.1 Sources and Uses of Funds

(a) Revenue Sources

The sources of income are the Internal Revenue Allotment (IRA), local tax revenues, non-tax revenues such as grants, aids and subsidies. At present, the IRA is the major funding source of the LGUs.

As mandated in Article IX Section 9 of RA 9054, the sharing of Internal Revenue, Natural Resources, Taxes, Fees and Charges are as follows:

- (a) Thirty-five percent (35%) to the province or city:
 - i. The share of the province is apportioned as follows: 45% to the province, 35% to the municipality; and 20% to the barangays;
 - ii. The share of the city is distributed as follows: 50% to the city and 50% to the barangays.
- (b) Thirty-five percent (35%) to the regional government; and
- (c) Thirty percent (30%) to the central/national government.

There are minimal grants/subsidies reported by the province.

Other income usually comes from economic enterprises, but the LGU has no income from various fees and charges on certain services.

Table 5-1 presents the actual income and expenditures of the Province for the 1999-2001 period. Local revenues, which was less than 0.05% of the total revenues of the province, consisted of its share of real property tax, business taxes and licenses, and miscellaneous taxes. IRA's annual average share to total income was at least 99.9%, which indicates that the province has historically been dependent on IRA, given with its low tax and non-tax revenue collections.

The results of the financial operations of the various municipalities in Tawi-Tawi are given in Appendix 5-1.

In order to mobilize fund sourcing, the 1987 Constitution and the 1991 Local Government Code granted the Provincial Government to have its initiative to create new revenue sources. The LGU financing options are based on NEDA Board Resolution 4.

(b) Uses of Funds in the Province

Actual expenditures of the provincial government for general government services were 67.2% in 1999 but subsequently decreased to 58.72% of total expenditures. Expenditures on economic development activities has also decreased from 13.4% in 1999 to 10.9% by 2001. The province enjoys some revenue surplus and this seems to be substantial at about P23 million in 2001.

However, compared to provinces outside of the ARMM, ARMM provinces have less responsibilities as some services have not been devolved such as social services, agriculture, education, etc.

Table 5-1 Actual Results of the Financial Operations of the Province (1999-2001)

Description of Items	1999	2000	2001
INCOME			
LOCAL SOURCES	56,229	262,654	108,218
REVENUE FROM TAXATION	55,544	262,654	108,218
Real Property Tax	6,102	174,258	73,264
Local Taxes	49,442	88,396	12,700
Other Taxes			22,254
NON-TAX REVENUES	685		
Receipt from Eco. Ent.	-		
Fees/Charges	685		
Loans and Borrowings	-		
Other Receipts	-		
AIDS AND ALLOTMENTS	105,492,830	159,714,016	166,886,881
BIR Allotments	105,492,830	159,714,016	166,886,881
National Aids		0	
National Wealth		0	
TOTAL INCOME	105,549,059	159,976,670	166,995,099
EXPENDITURES			
CURRENT EXPENDITURES	79,971,893	139,577,675	143,760,007
General Government	65,371,862	91,683,820	84,408,136
Health, Nutrition & Pop. Control			709,010
Housing & Community Devt.			0
Public Welfare & Int. Safety	1,562,767	2,427,907	7,698,340
Economic Development	13,037,264	45,465,947	15,707,996
Debt Servicing			14,900,402
Operation of Econ. Ent.	-	0	
Other Charges	-	0	20,336,124
CAPITAL OUTLAY	17,253,198	21,867,779	
TOTAL EXPENDITURES	97,225,091	161,445,454	143,760,007
EXCESS (DEFICIT) OF INCOME OVER EXPENDITURES	8,323,968	-1,468,784	23,235,091

Source: Bureau of Local Government Finance

5.2.2 Availability of Funds

As previously noted, the IRA comprises 99.9% of the total income of the province, which is tapped to finance most of its expenditures including capital outlays. According to the Provincial Treasurer's Office, the amount of IRA that will be received by the province is known in advance before the end of the preceding year. Thus, for budgeting purposes, the province just uses the actual amount of IRA it received in the preceding year as its estimate of IRA for the budget year. In the case where the IRA received is larger than that of the preceding year, the province prepares a supplemental budget.

For 2000, the 20% Development Fund (20% of IRA) amounted to about P30.42 million. By 2003, the estimated share of the Development Fund from the IRA is now P44.18 million. These are usually spent for development/infrastructure projects contained in the Annual Investment Plan of the province (AIP).

Based on the past financial performance of the province, IRA has been a major source of funds. At first, 20% Development Fund (DF) and 5% Calamity Fund are deducted from the total amount of provincial IRA. Then, the remaining portion of the IRA is combined with other income sources. Contractual and statutory items, which are covered by R.A. 324(b) are deducted from the pooled income (75% IRA + all other income) before other appropriations are made.

5.3 Annual Investment Plans

The LGU uses its 20% DF for expenditures on economic and social services, the water sector included.

5.3.1 Budgetary Allocation to the Sector

The Budget Office of the province consolidates the budget proposal submitted by all offices of the Provincial Government. While, the DBM issues a Local Budget Memorandum every October of the preceding budget year to guide the provinces in their budget preparation, the sector allotment usually comes from the 20% DF, depending on the priorities set and approved by the Provincial Development Council (PDC) and the Governor.

The Governor endorses the AIP to the Sanggunian Panlalawigan for approval and appropriation. Unfortunately, the Governor can change the budget allocation in the AIP, based on his own priorities, with the approval of the PDC.

5.4 Cost Sharing Arrangements/ Counterpart Funding

The PEO implements the Provincial government-funded projects under the General Fund. The implementation of these projects is closely monitored with reference to progressive disbursements. For the sector implementation, the following are the local funding sources and corresponding implementing agencies.

Funding Source	Implementing Agency/ Unit
Provincial Government	PEO/PPDO
PEDAF (Congressmen)	DPWH – District Engineering Office
Municipal Government	MEO/MPDO

A new cost-sharing scheme was authorized in 2003 in accordance with the policy on national government grants. Cost sharing arrangements for levels I, II and III systems are shown as follows:

Table 5-2 PGB-approved Cost Sharing (% share)

Level and Type of Service	Income Class								
	1st/ 2 nd			3rd/ 4 th			5th/ 6 th		
	NG ¹	LGU ²		NG ¹	LGU ²		NG ¹	LGU ²	
		Equity ¹	Loan ¹		Equity ¹	Loan ¹		Equity ¹	Loan ¹
Level I/II WS	30	20	50	40	15	45	50	10	40
Level III WS	0	0	0	20	10	70	50	10	40
Sanitation	20	20	60	40	15	45	50	10	40

For any central government grants that are provided for the development of Level I water supply systems and sanitation facilities to the limited classes of municipalities, the LGUs and beneficiaries concerned shall share the capital cost required. No subsidies from the central government will be provided for the construction of Level II and III water supply systems.

¹ NG – National Government grant for the respective level and type of service and respective income class of the LGU.

Equity – refers to the minimum cash equity contribution to be put up by the LGU.

Loan – refers to the portion of the project cost that the LGU must finance either through loan from MDFO or other Government Financing Institutions (GFIs), e.g., Land Bank, DBP, etc.

² If the LGU can raise the equity portion more than the minimum required amount, then the portion of the project cost it needs to raise through loan would be lower. Loan terms of MDFO: Interest Rate - currently at 14% per annum fixed until maturity of the sub-loan; Repayment Period - payable in 15 years inclusive of a 3-year grace period.

Any grants from the national government that are provided for the development of Level I water supply systems and sanitation facilities are based on the income classification of the municipalities. The LGUs and beneficiaries concerned shall share the capital cost required.

5.5 LGU Financing Options

Other external source of funds of the province is foreign assisted projects either directly coursed through the province as in the case of the funds from ADB.

LGUs have the following financing options :IRA, ODA, private sector financing and debt (both public and private sector debts). The LGU can also avail of funds through conduits, e.g., MDFO, GFIs, and through foreign lending agencies and private sector financing institutions.

5.5.1 Municipal Development Fund Office (MDFO)

The MDF is a revolving fund created under Presidential Decree No. 1914 to provide LGUs access to foreign loans, assistance or grants. Operations of the MDF, as well as the evaluation and control of local government transactions of the fund, are guided by the financial policies defined in the Joint Circular No. 6-87 of the DOF, COA and DBM. The policies include, among others, the following:

- On-lending terms for local governments or government corporations to be in accordance with the terms and conditions of the international agreements with foreign financial institutions;
- Loan repayments to conform with the terms and conditions of the corresponding Loan and Project Agreements;
- Annual debt service liabilities to all creditors to be at least 120 per cent of total net annual revenues from all sources after operating costs, unless otherwise provided in a mutual agreement among all parties concerned;
- Repayment to MDF to take precedence over all subsequent borrowings incurred;
- Payment of additional interest, charges and fees on amounts to be relent to local governments may be required by the Secretary of Finance in consultation or agreement with foreign lending institutions and LGUs/Project Cities to cover foreign exchange

risks, commitment charges and front-end fees applied on foreign borrowings by lending institutions; and

- Internal revenue/specific tax allotments to be withheld by the DOF in case of default or arrears for more than three months.

The MDF-Policy Governing Board (PGB) formulates its policies. It is composed of representatives from the DPWH, DBM, NEDA and the DILG and chaired by the DOF. The funds administered by the MDF come from loan proceeds from multilateral and bilateral sources, contributions from domestic and foreign institutions, various grants and donations, and repayments by borrowing LGUs.

5.5.2 Governmental Financing Institutions (GFI)

In the past, the LGUs could not access financing institutions for direct assistance. But with the devolution of the sector to the LGUs, the LGUs could now access direct financing from banks and other financing institutions.

Among the GFIs through which LGUs can access ODA loans are the Land Bank of the Philippines (LBP), Philippine National Bank and the Development Bank of the Philippines (DBP). For the LGU to enter into a loan, the respective legislative council (Sangguniang Panlalawigan, SP for the Province; Sangguniang Panglunsod, SP for the City; and Sangguniang Bayan, SB for the Municipality) will authorize the Chief Executive Officer (Governor or Mayor, as the case may be). The collateral that the LGU may use in order to avail of loans from the bank could be any of the following: deposit hold out, public land and assignment of IRA.

In a deposit hold out loan, the loan is based on the amount in the time deposit account of the LGU in the bank. The LGU is allowed a maximum loan amount of up to 90 per cent of the total amount of its time deposit account in the bank. One of the terms for this kind of loan includes deduction of the amount due from the LGU's IRA deposited in that bank.

Another condition that the bank usually imposes on the loan is the signing of a MOA between the LGU and the bank, where the LGU guarantees that the loan will be honored despite a change in administration in the next election. Interest rate is not fixed.

Loanable amount may be based on the amount of time deposit of the province in the bank.

Other collaterals accepted by the bank are: public land and assignment of IRA. Interest rate is not fixed but fluctuating depending on the current interest rates prevailing during repayment. Penalty charges are imposed whenever the IRA of the province is delayed.

5.5.3 Foreign Lending Agencies

The external assistance to the Sector in the province comes from foreign assisted projects.

5.5.4 Private Sector Financing Institutions

There are several private sector financing modalities that can be promoted to finance WATSAN sector projects particularly in urban areas, where existing service area coverage may warrant viability of WATSAN investments for a profit by the private sector proponent. Further, Level III water supply expansion projects are now increasingly financed through private sector financing mainly thru concession contracts and BOT schemes.

5.6 Cost Recovery Practices by the LGU

5.6.1 Capital Cost

In the past, the capital cost for Level I systems was given as grant to the community. As for Level II systems, the capital cost was shouldered by the RWSA through loan or grants. Water charges collected by each association cover the cost of operation and maintenance and loan amortization. According to the Loan Department of LWUA, new loan disbursements to RWSAs has been stopped.

5.6.2 Operation and Maintenance Cost

The operation and maintenance cost for Level I and II water supply systems is the responsibility of the users upon turnover of the facilities. As such, an organization (or association) to handle the collection of water charges should have been formed beforehand by the implementer.

When DPWH had been undertaking the construction of Level I water supply facilities, the DPWH through DEOs and PEOs assisted in the formation of BWSAs. However, most of these BWSAs are no longer operational, due to the non-collection or low rates of water fees. As a consequence, the users had to go to the LGUs (usually barangay or municipal governments) to address the problem. In some cases, the users likewise requested the PEOs for assistance.

Although the DEO had no budget for operation and maintenance, it extended assistance in the form of materials from their supplies, if these items are available. Because of this situation, the emphasis was placed on the need of monthly contributions from the users for O&M.

Cost recovery for Level III systems, particularly those covered by Water Districts is managed through a different system. Because of the individual connections, the households covered by the Water Service Providers can be disconnected in case of non-payment by the users.

Average monthly rates range from P2 to P262 per m³ while collection efficiencies range from 25% to 100%.

5.7 Affordability

5.7.1 Capital Cost Contribution

Based on the workshop discussion with the PSPT and the MPDCs of some of the municipalities of the Province, their experience in implementation of water supply projects was with the CVWSP, and contribution from the community was only in kind, i.e., mostly free labor. The LGU however, provided cash equity as its counterpart.

5.7.2 Operation and Maintenance Cost

Since there are no data on average water rate for the RWSAs, no affordability analysis could be made for Tawi-Tawi.