COMPREHENSIVE BASIC SURVEY OF THE AUTONOMOUS REGION IN MUSLIM MINDANAO

PROJECT BACKGROUND AND PROFILE OF ARMM

FINAL REPORT

DECEMBER 2003

FOREWORD

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LIST OF ABBREVIATIONS AND ACRONYMS

ARMM	Autonomous Region in Muslim Mindanao
ASDS	Assistant Schools Division Superintendent
BAS	Bureau of Agricultural Statistics
BFAR	Bureau of Fisheries and Aquatic Resources
CARPO	Comprehensive Agrarian Reform Project Officer
DA	Department of Agriculture
DAF	Department of Agriculture and Fisheries
DAR	Department of Agrarian Reform
DBM	Department of Budget and Management
DENR	Department of Environment and Natural Resources
DepEd	Department of Education
DILG	Department of Interior and Local Government
DOH	Department of Health
DPWH	Department of Public Works and Highways
DTI	Department of Trade and Industry
FGD	Focus Group Discussion
GRDP	Gross Regional Domestic Product
JICA	Japan International Cooperation Agency
KFI	Kasanyangan Foundation, Inc.
LGU	Local Government Unit

MEO	Municipal Engineering Office
MinPhil	MinPhil International Consultants, Inc.
MPDC	Municipal Planning and Development Coordinator
NSCB	National Statistical Coordination Board
NSO	National Statistics Office
OIC	Officer In-Charge
OIDCI	Orient Integrated Development Consultants, Inc.
ORG	Office of the Regional Governor
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PAO	Provincial Agricultural Office
PEO	Provincial Engineering Office
PFZ	Philippine Fault Zone
PHIVOLCS	Philippine Institute of Volcanology and Seismology
PHO	Provincial Health Office
PKII	PKII Engineers
PPDO	Provincial Planning and Development Office
PSWDO	Provincial Social Welfare and Development Officer
QV	Quaternary Volcanic
QVP	Quaternary Pyroclastic
R	Recent Deposits
RA	Republic Act
RDAC	Regional Development Administration Committee
RPDO	Regional Planning and Development Office
TMS	Technical Management Services
TOP	Technology of Participation

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.

CHAPTER 1
THE PROJECT

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 have been able to preserve their unique culture and identity through eleven (11) ethnic tribes: the Maranao, Maguindanao, Iranun, Tausug, Yakan, Sama, Sangil, Kaangan, Kolibugan, Palawan or Panimusan, and the 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 (2) 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.

1.2 Scope of the Survey

The study involved data collection/surveys and analyses focusing on the following sectors:

- Agriculture and Fisheries
- Water Supply
- Health and Medical Care
- Education
- Basic Infrastructure, and
- Governance.

The sector survey for Agriculture and Fisheries covers the inventory and analysis of existing agricultural infrastructure, agricultural development programs and fisheries development.

For Water Supply, the survey covered the inventory and analysis of existing water supply and sanitary systems, hydro-geological surveys and analysis, and an institutional and financial evaluation of existing system and/or service providers.

For the Health and Medical Care sector, the surveys and analysis focused on the existing health system delivery and how this can be further developed to provide the health care needs of those in the ARMM.

The sector survey for Education determined and analyzed existing educational facilities, planning methods, and the effectiveness or ineffectiveness of current educational administration approaches.

The sector survey for Basic Infrastructure covered road and bridge planning and construction.

Finally, the issue of Governance was weighed in terms of the effectiveness of public administration systems and local government capabilities in handling the multifarious challenges that confront the ARMM.

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.

1.3 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.

CHAPTER 2

APPROACH AND METHODOLOGY

2. Approach and Methodology

2.1 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:

- 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; and
- Identification of potential programs and projects for JICA's possible cooperation; consolidated report.

2.2 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.

2.2.1 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.

2.2.2 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.

2.3 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 2-1, while the Project Organization is shown in Figure 2-2.

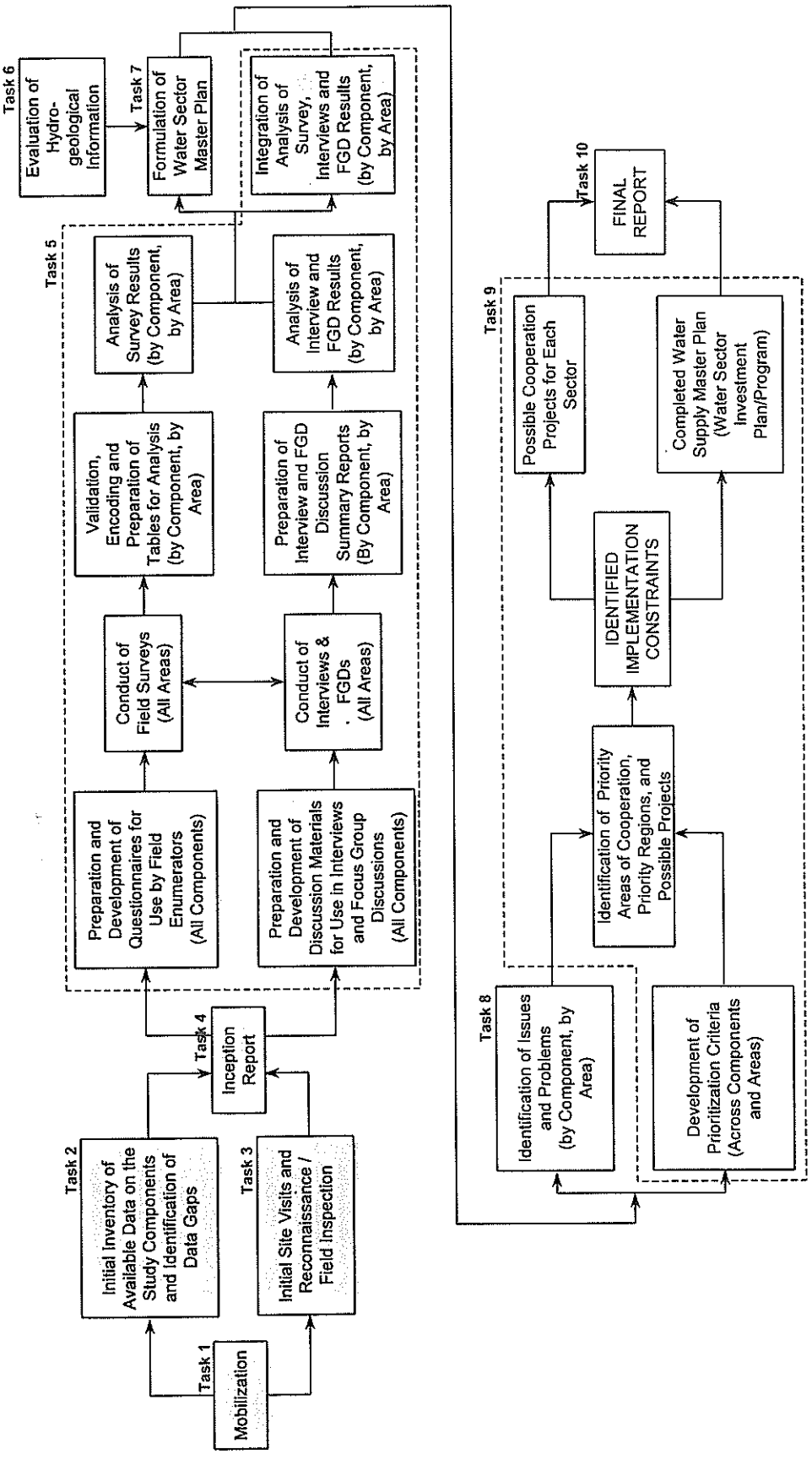


Figure 2-1
Overall Study Framework
For the Comprehensive Basic Survey of ARMM

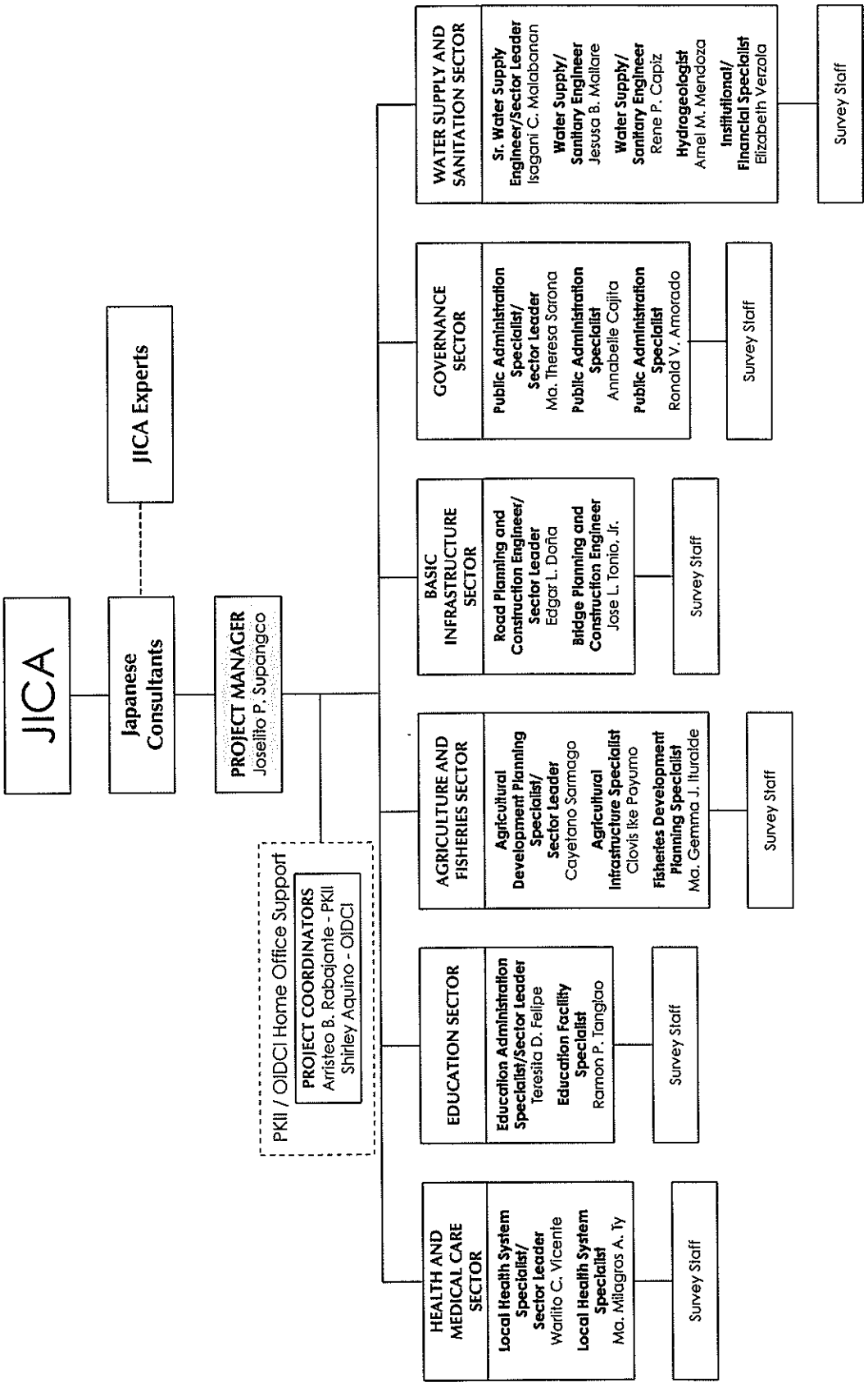


Figure 2-2
Project Organizational Chart

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

2.4.1 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 (6) 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 in Table 2-1. Selected workshop activities are illustrated in Figures 2-3 to 2-7.

Table 2-1 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 City, Basilan	10 Sept. 2003	36
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	21

* *Complete list of participants in the Provincial Workshops are given in Appendices A1-A5.*

** *Number of participants does not include the Survey Team members.*

2.4.2 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 (2) 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 List of Participants is given in Appendix B. The final Consultation Workshop was attended by the members of the Regional Development Administration Committee (RDAC) and additional participants. The list of participants is given in Appendix C.

2.4.3 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.

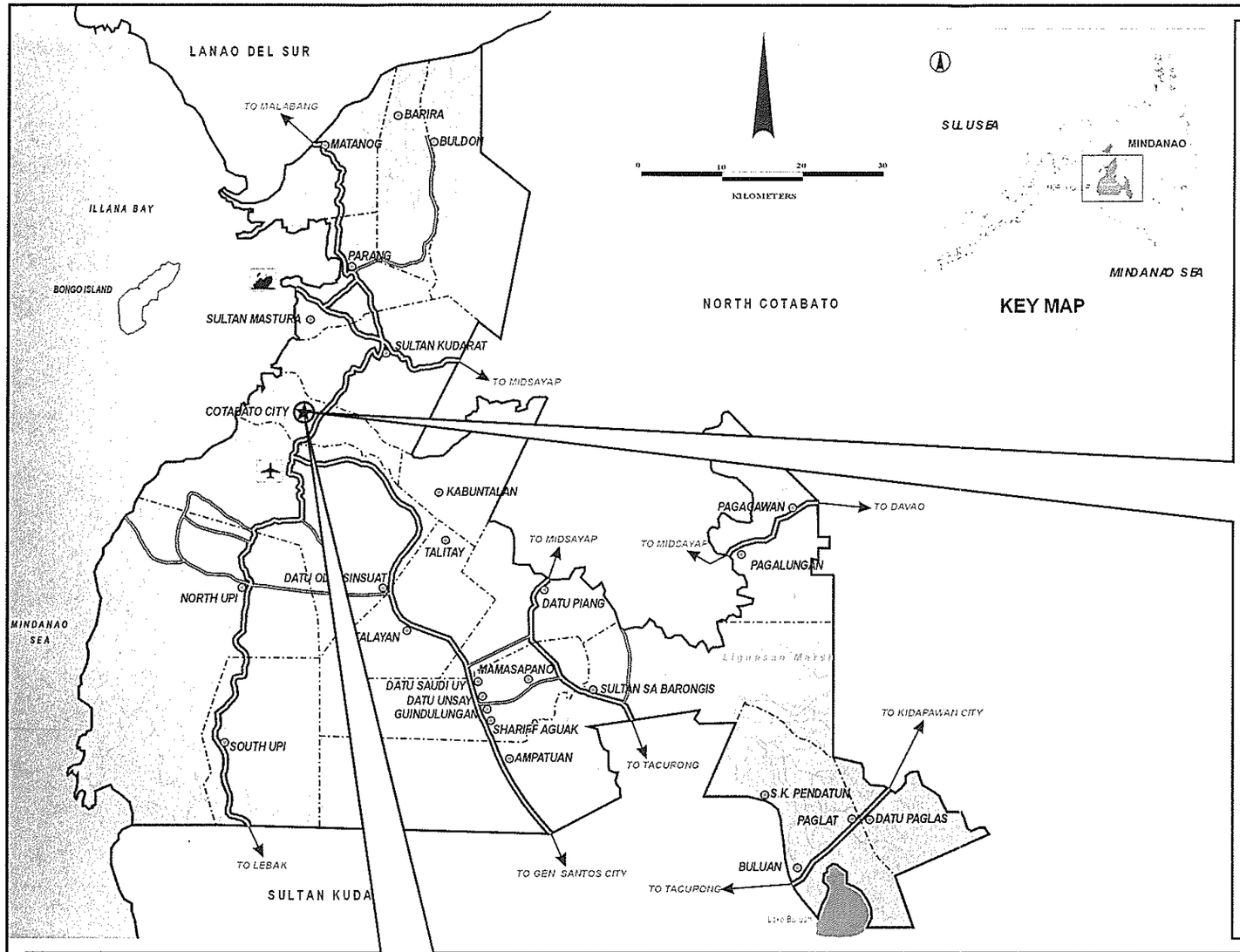


Figure 2-3
Selected Photos of Activities in MAGUINDANAO WORKSHOPS

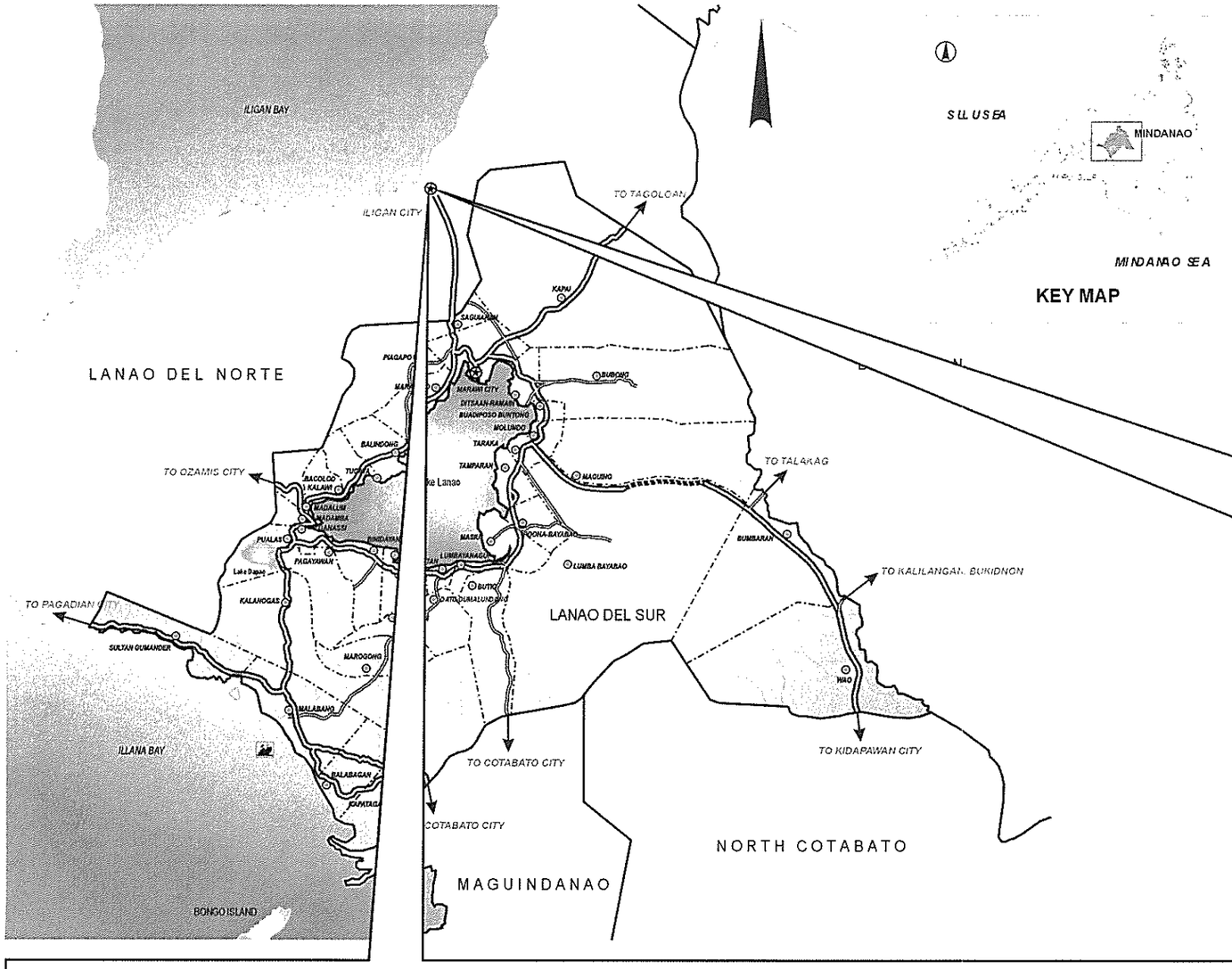
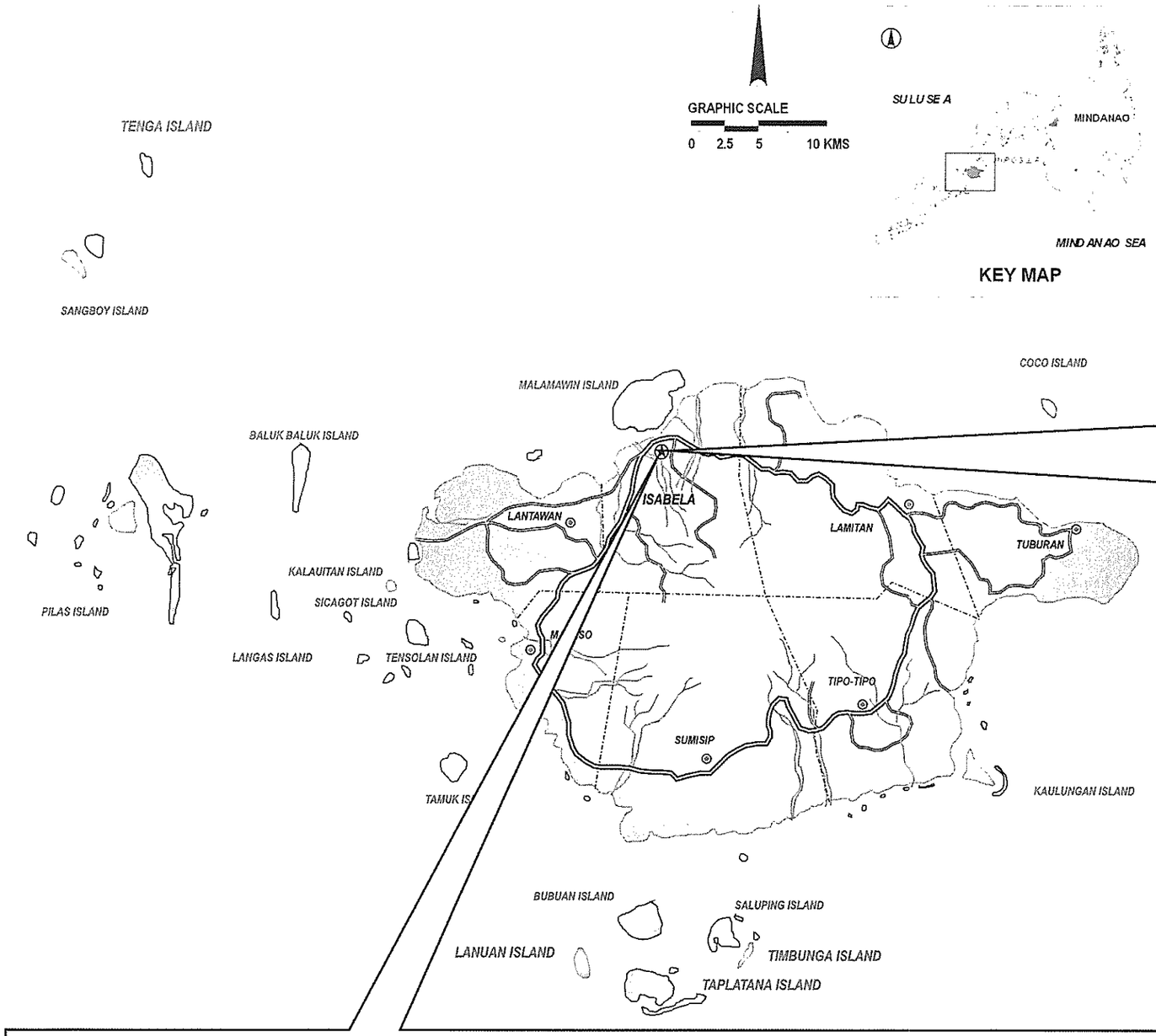


Figure 2-4
Selected Photos of Activities in LANAO DEL SUR WORKSHOPS



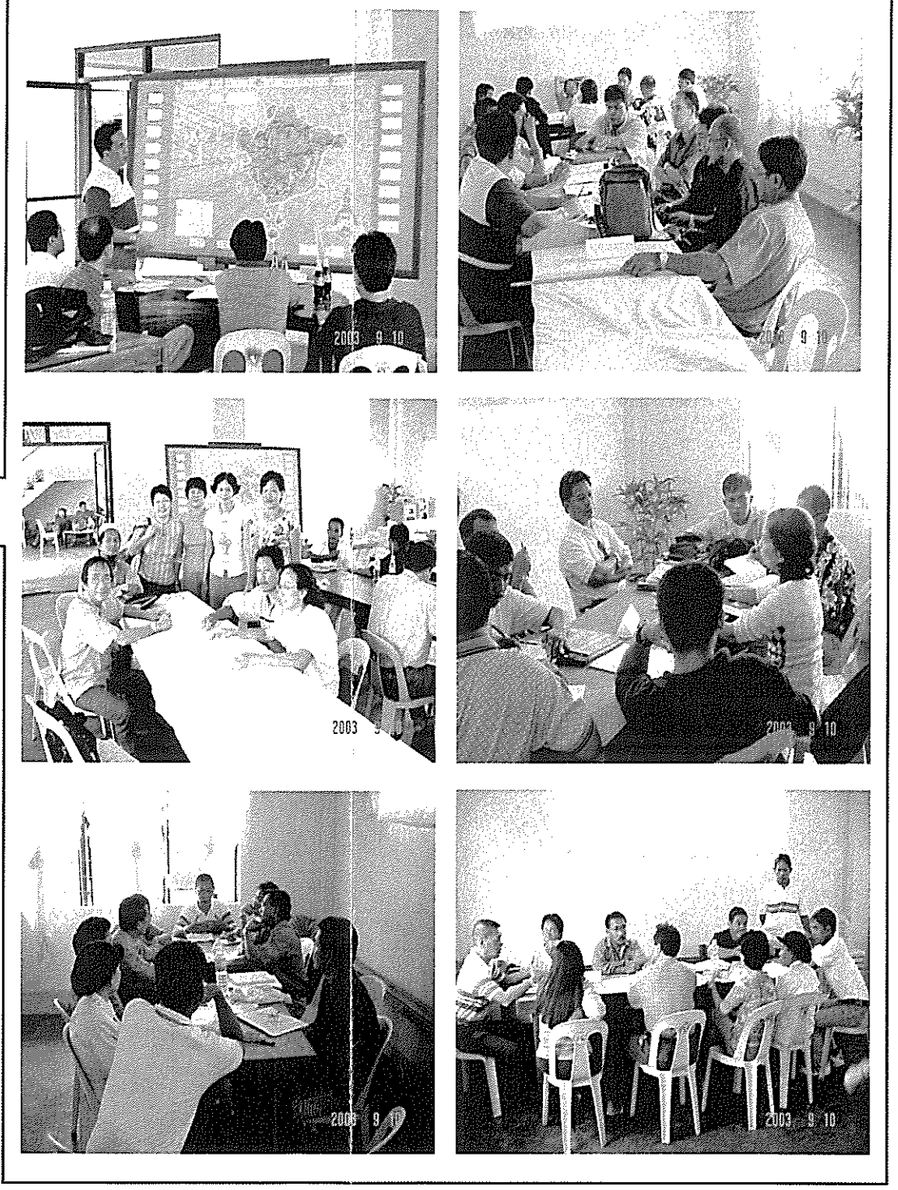
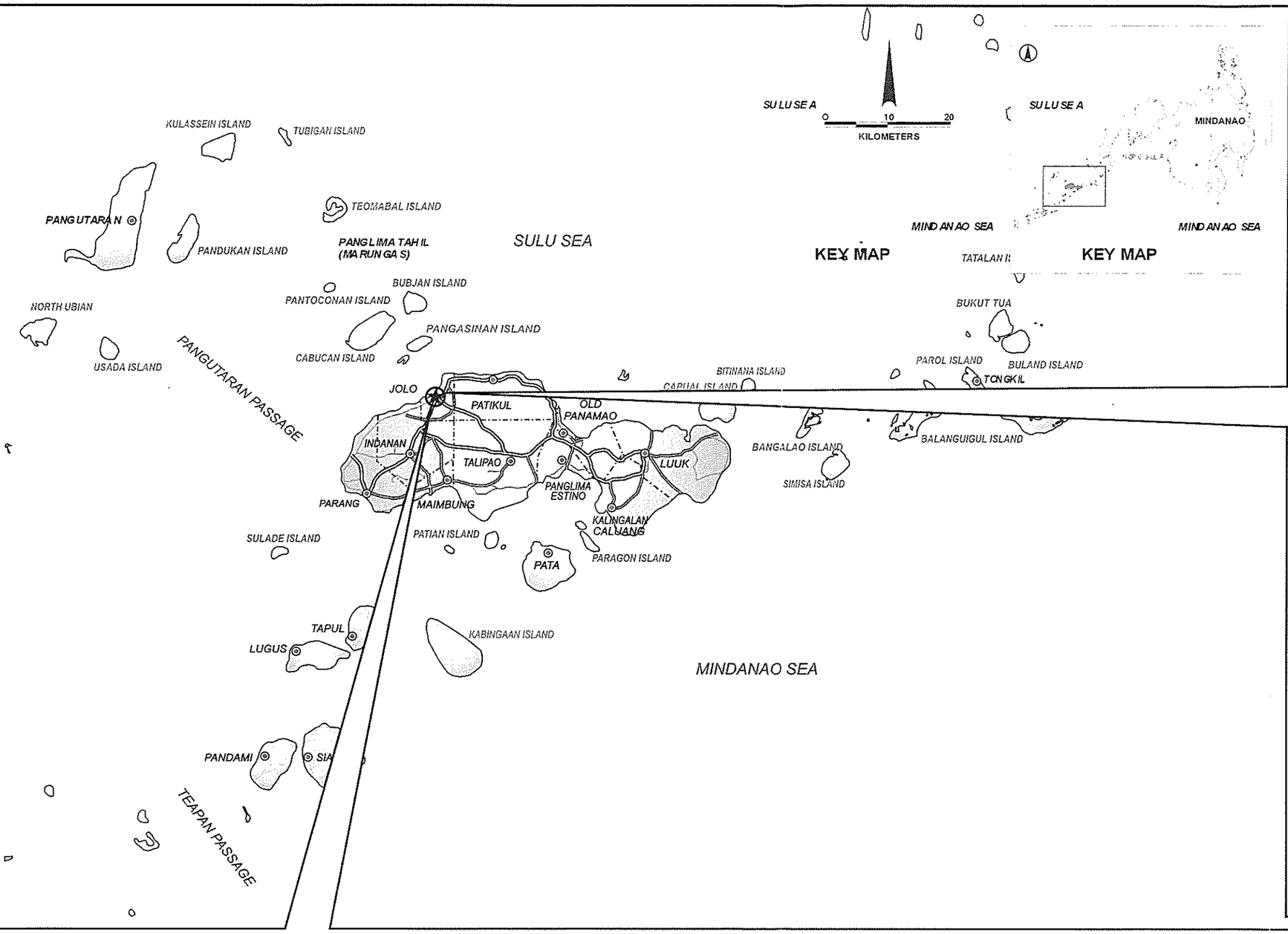
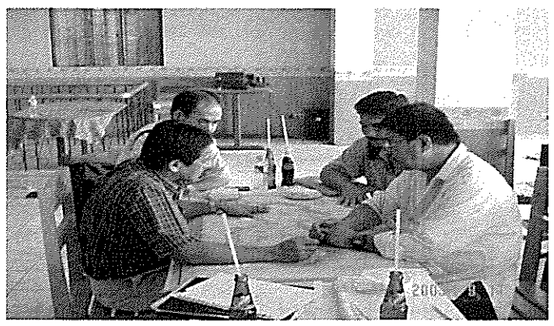
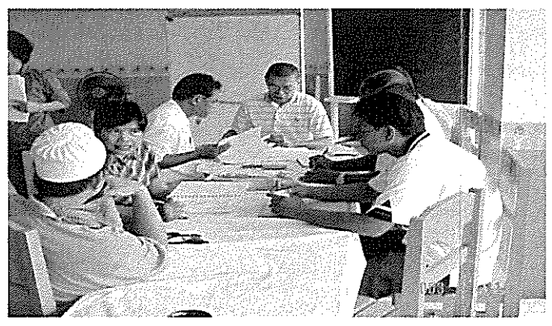


Figure 2-5
Selected Photos of Activities in BASILAN WORKSHOPS







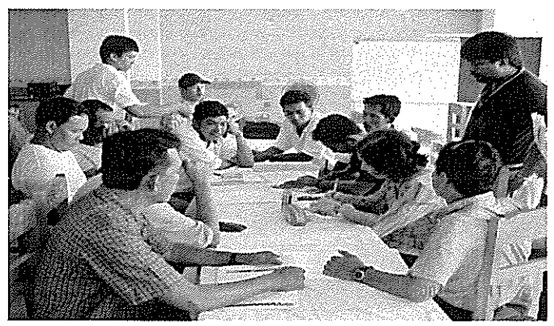


Figure 2-6
Selected Photos of Activities in SULU WORKSHOPS

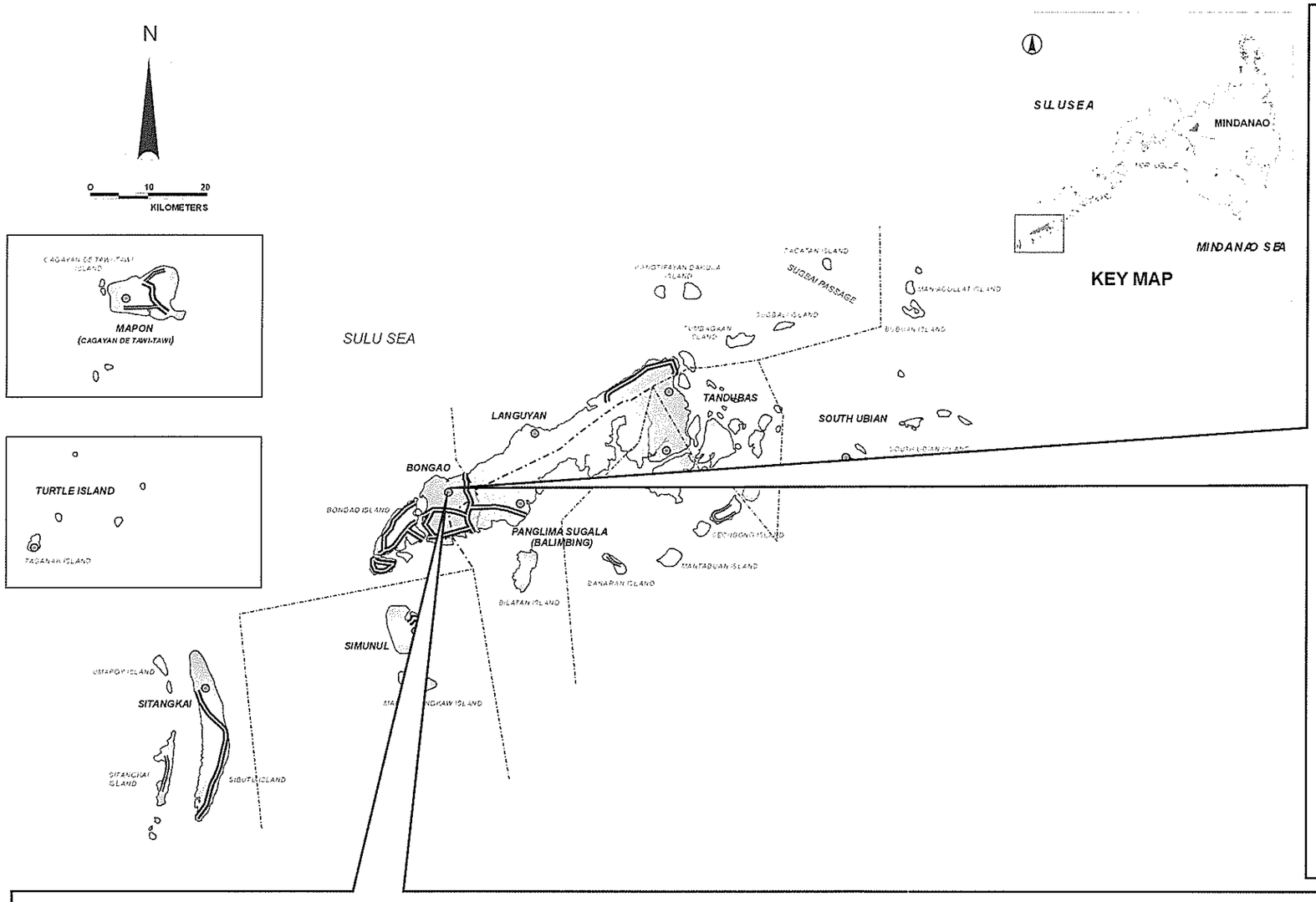


Figure 2-7
Selected Photos of
Activities in
TAWI TAWI WORKSHOPS

CHAPTER 3

PHYSICAL AND SOCIO-ECONOMIC PROFILE

PHYSICAL AND SOCIO ECONOMIC PROFILE OF THE AUTONOMOUS REGION IN MUSLIM MINDANAO

3. Physical Profile

3.1 Topography

The Philippines is an archipelago of approximately 7,100 islands with an estimated total land area of 300,000 square kilometers. It lies 966 kilometers off the southern coast of Asia between latitude 4°23'N to 21°25'N and between longitude 116°E to 127°E. It is divided into three major island groups: Luzon with an area of approximately 141,395 square kilometers; Visayas with an estimated area of 56,606 square kilometers; and Mindanao with an area of 101,999 square kilometers.

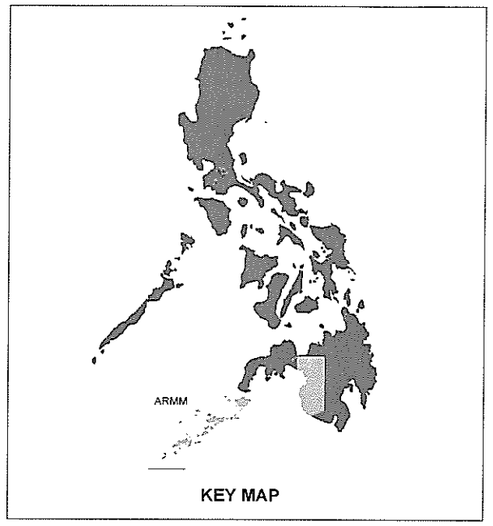
Mindanao Islands, the second largest among the groups, has varied terrain that is generally mountainous and heavily forested, rising to 2,954 meters at Mt. Apo, an active volcano and the highest point in the island. The island is indented by several deep bays and has a large western peninsula, the Zamboanga or Sibuguey Peninsula. Its main rivers are Rio Grande de Mindanao (Cotabato River) known as the Pulangui Riverb in its upper course and the Agusan River. The largest lake is Lake Lanao. Off the northeast coast in the Philippine Sea is the Mindanao Trench, one of the greatest known ocean depths.

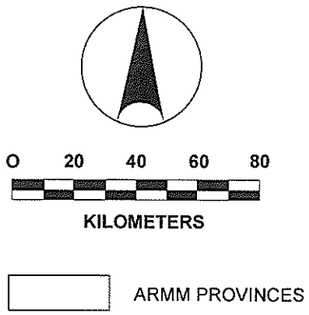
The Autonomous Region in Muslim Mindanao (ARMM) has a varied topography brought about by the fact that it is not contiguous and is usually divided into the mainland and island provinces. The mainland provinces are Maguindanao and Lanao del Sur, while the island provinces are Basilan, Sulu and Tawi-Tawi. Figure 3-1 shows the location map of the ARMM.

3.1.1 Maguindanao

Maguindanao has a generally flat terrain and scattered hills with fertile valleys and isolated mountain ranges. It can be divided into two physiographic units: the southwest mountain clusters and the Maguindanao lowlands.

The southwest mountain clusters include the two big groups of mountain elevations - Binaca and Blik. These are separated by the valleys of Mateber River, which flows northwest into the Moro Gulf and Lawasig River, which flows southward into the Mindanao Sea.





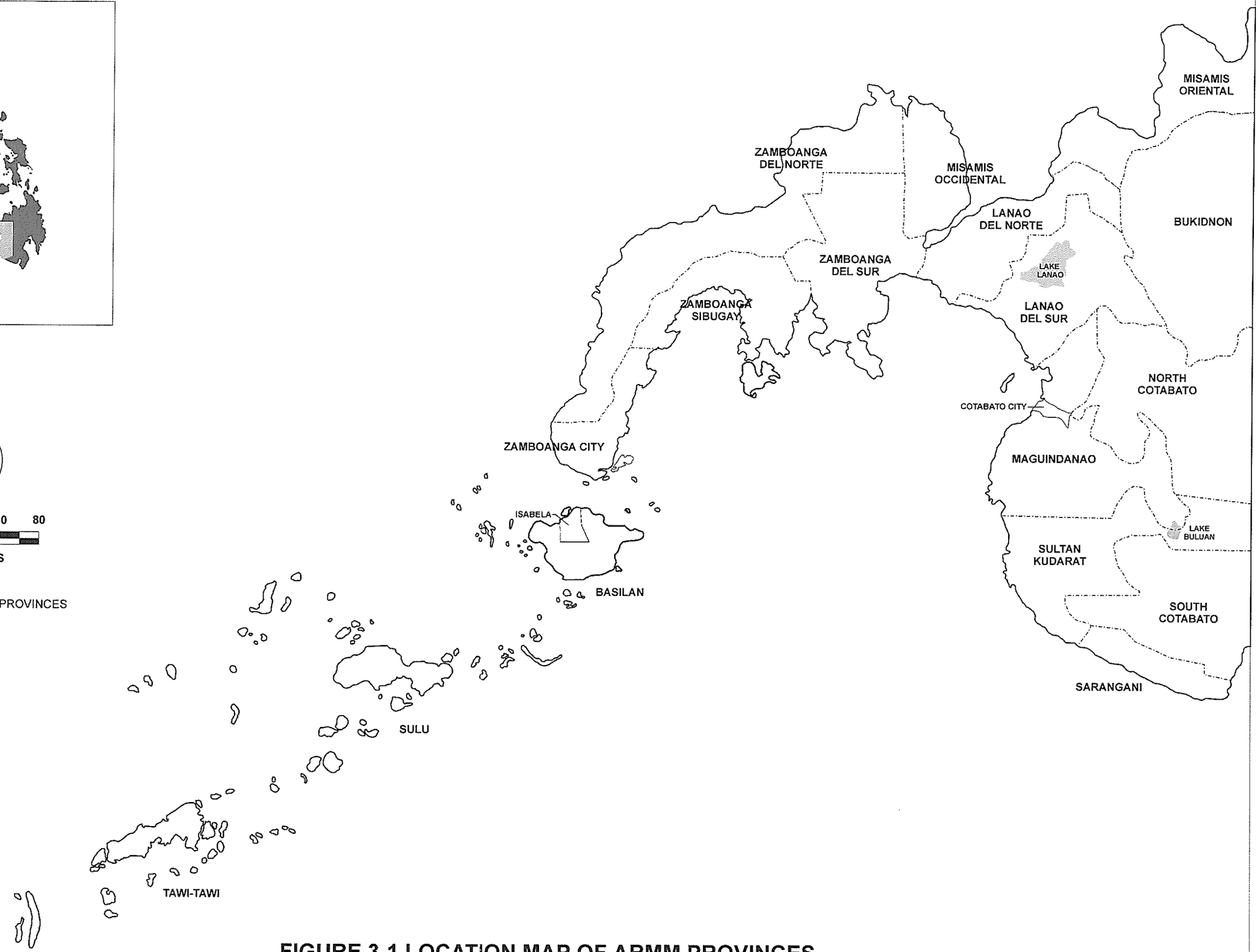


FIGURE 3-1 LOCATION MAP OF ARMM PROVINCES

The Maguindanao lowlands include the north extremity of Cotabato Basin, northeast of the province's highlands. The area is gently sloping from the foothills to relatively flat as it approaches the sea and the Liguasan Marsh. Thick accumulation of detrital materials derived from the weathering and erosion of the adjacent emergent landmass compose the area.

The biggest river in Maguindanao is the Pulangi River. It is at the same time the northeast boundary of the province and as such the western banks are within the province's jurisdiction. The river meanders with flood plains developed at places together with extensive delta, which make its immediate vicinity marshy. It drains westward into the Mindanao Sea. Several smaller streams and creeks dissect the area.

3.1.2 Lanao del Sur

Rolling plateaus dominate the landscape of the province. Deep canyons cut near the edges of these plateaus where, at several points, waterfalls descend to the narrow coastal plains. Lake Lanao is set on one such plateau. Several smaller streams and creeks dissect the area in dendritic pattern and generally flow towards Lake Lanao and Mindanao Sea. Some of these streams and creeks are of the perennial type, while the rest are intermittent. The location, source and discharge of these streams can give a good indication of the general groundwater condition.

3.1.3 Basilan

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

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

3.1.4 Sulu

The Sulu archipelago is marked by a number of mountain ranges that traverse the mid-section of the island of Jolo from east to west. The mountain chain includes Mt. Tumantangis (about 248 m), Mt. Pula (about 86 m), Mt. Kangangan (about 202 m), and Mt. Datu (about 30 m). Siasi Island is also hilly. The other islands, such as Pangutaran are coral formation resulting to low, swampy, flat and forested areas. However, numerous places around the reef-surrounded island afford anchorages.

3.1.5 Tawi-Tawi

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, St. 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.

3.2 Geology

The Philippines lies in the West Pacific Ocean, just north of the junction of three great tectonic plates of the lithosphere, the Eurasian Plate, Pacific Plate and the Indo-Australian Plate. It forms a roughly triangular area bounded by the Bashi Channel on the north, the North Luzon-Manila-Palawan Trench and the ridge system on the west, the Sulu-Sabah Ridge Complex and Cotabato Trench on the south and the Philippine-East Luzon Trench on the east.

Morphologically, the Philippines may be described as a composite of linear, subparallel ridges alternating with basins and troughs following the trend of bordering trenches. The ridges are upthrusted and/or uplifted belts of ophiolite and volcano-plutonic complexes. The intervening lows are sedimentary basins and troughs exposed partly on land areas following uplift or folding. The archipelago is defined by a main arc of islands facing the Pacific and two narrower arcs projecting from its southwest flank, linking it to Borneo. The main arc may be viewed as made up of convex arcs, the northern arc convex westward and the southern arc convex eastward.

Considering both inland and submarine morphology, the Archipelago is divided into four (4) physiographic provinces, namely: (1) Eastern Physiographic Province; (2) Central

Physiographic Province; (3) Western Physiographic Province; and (4) Palawan Physiographic Province. For the ARMM provinces, the geologic condition is described below.

3.2.1 Maguindanao

The uplifted igneous and sedimentary rocks in Maguindanao were formed during pre-Cretaceous to recent. They are the result of magmatic and tectonic action generated by westward and northeast crustal dipping plates that were subducted during the course of the province evolution. The subduction zones south of Cotabato, along the Agusan-Davao Trough and east of Surigao are considered most significant in the geologic development of Maguindanao and its adjoining provinces.

The sedimentary rocks which were intercalated with the igneous rocks were formed during the Cretaceous to Pleistocene. The oldest known rocks are the partly metamorphosed Cretaceous to Paleogene dense, relatively impervious tuffaceous mudstone and greywacke, which are intercalated with lava flows. These are mostly transformed sedimentary deposits derived from basic oceanic crust. Final uplift of younger deposits above sea level occurred during the Pleistocene to Recent time.

In general, none of the igneous and well-cemented, compacted sedimentary rocks can be considered as dependable sources of pumpable groundwater. Only the Pleistocene to Recent deposits can be considered as potential sources of significant quantity of pumpable groundwater. (See Figure 3-2)

3.2.2 Lanao del Sur

The uplifted metamorphic, igneous and sedimentary rocks in Lanao del Sur were formed during the pre-Cretaceous to Recent. They are the result of magmatic and tectonic action generated by westward and northeast crustal dipping plates that were subducted during the course of the province's evolution. The subduction zones south of Cotabato, along the Agusan-Davao trough and east of Surigao are considered most significant in the geologic development of Central Mindanao. Westward subduction from the Agusan-Davao trough is said to have lifted up rock formations that formed the Mindanao Central Cordillera during Late Oligocene to Middle Miocene. The southwest Cotabato Oceanic crust was lifted up by the northeast moving Cotabato under-thrusted plate during this time. It was also active during the Pliocene to Pleistocene. It probably lifted up the Lanao area. This and the Philippine eastern plate are considered to be intermittently active to the present. (See Figure 3-3)

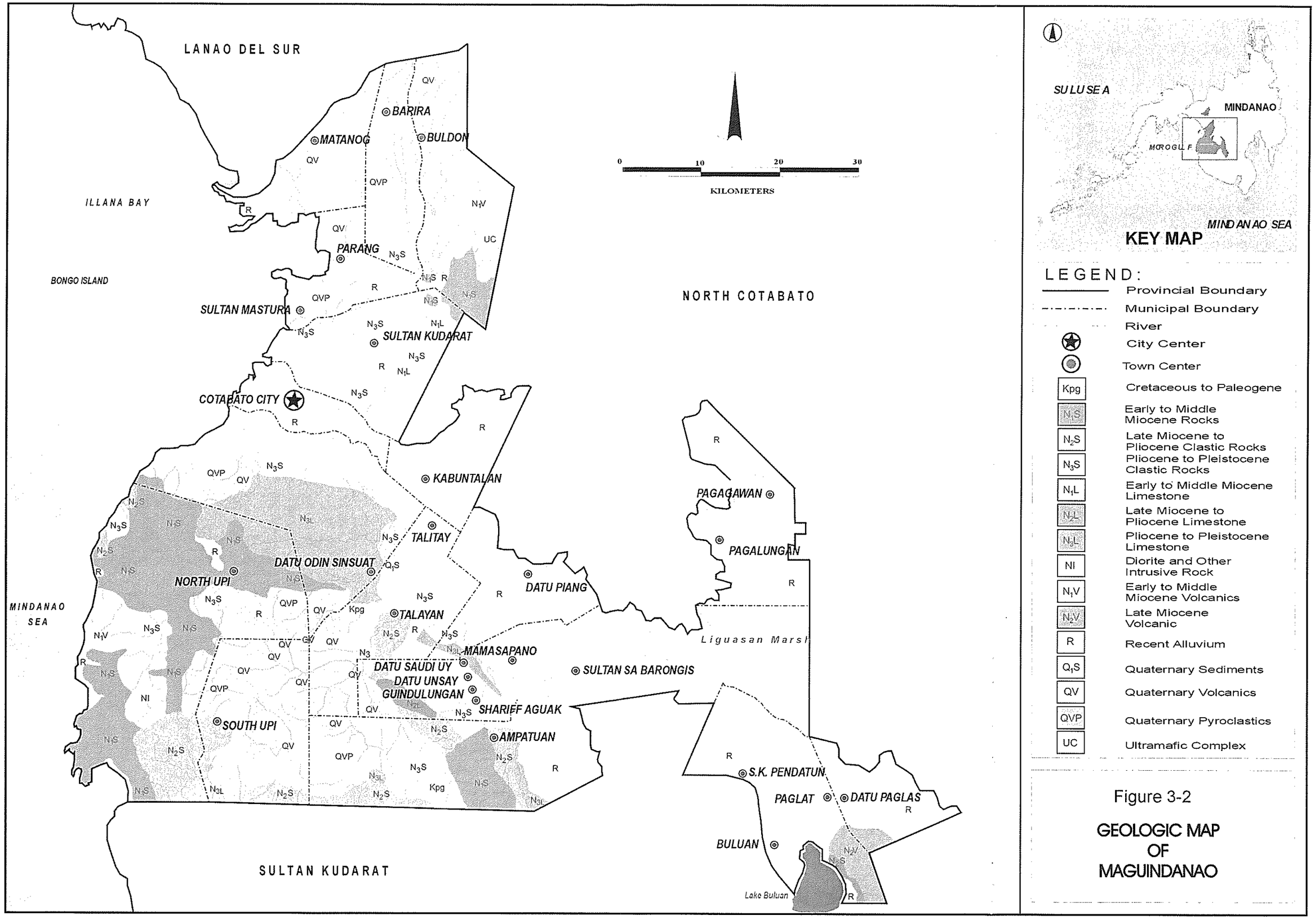


Figure 3-2

GEOLOGIC MAP OF MAGUINDANAO

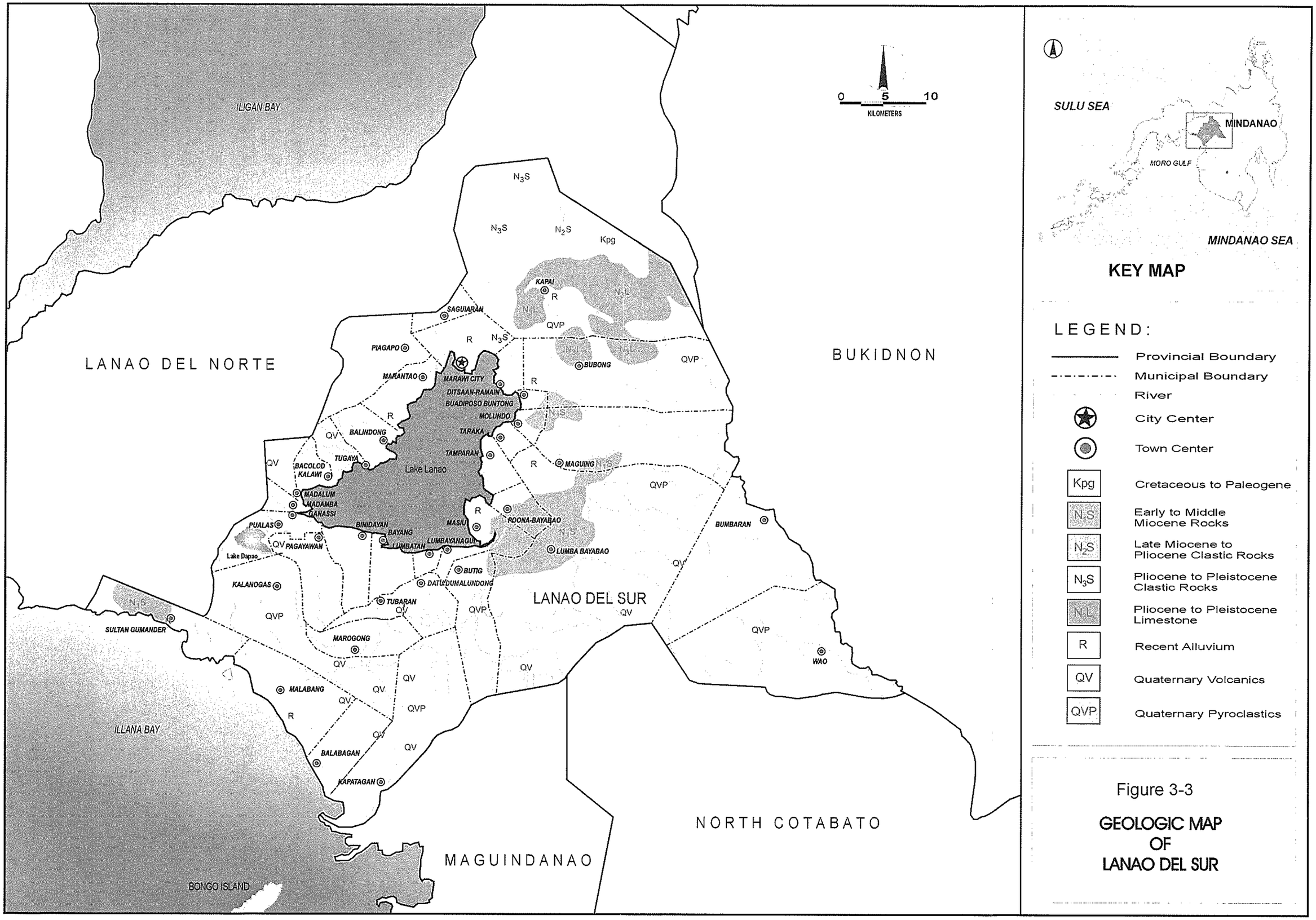


Figure 3-3

GEOLOGIC MAP OF LANAO DEL SUR

3.2.3 Basilan

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

Recent deposits (R) include alluvium, beach deposits, swamp deposits, residual clays and corals.

The small islands are made up of either Quaternary Volcanics or limestone/corals.

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

Majority of the residents in the lowland and coastal areas derive most of the groundwater for domestic use from wells tapping the alluvial deposits. Sand and gravel layers, though of limited thickness in several localities, generally make up the water table or shallow water table aquifers within the alluvium. Brackish or salt water is to be expected in some localities particularly those near the coast. (See Figure 3-4)

3.2.4 Sulu

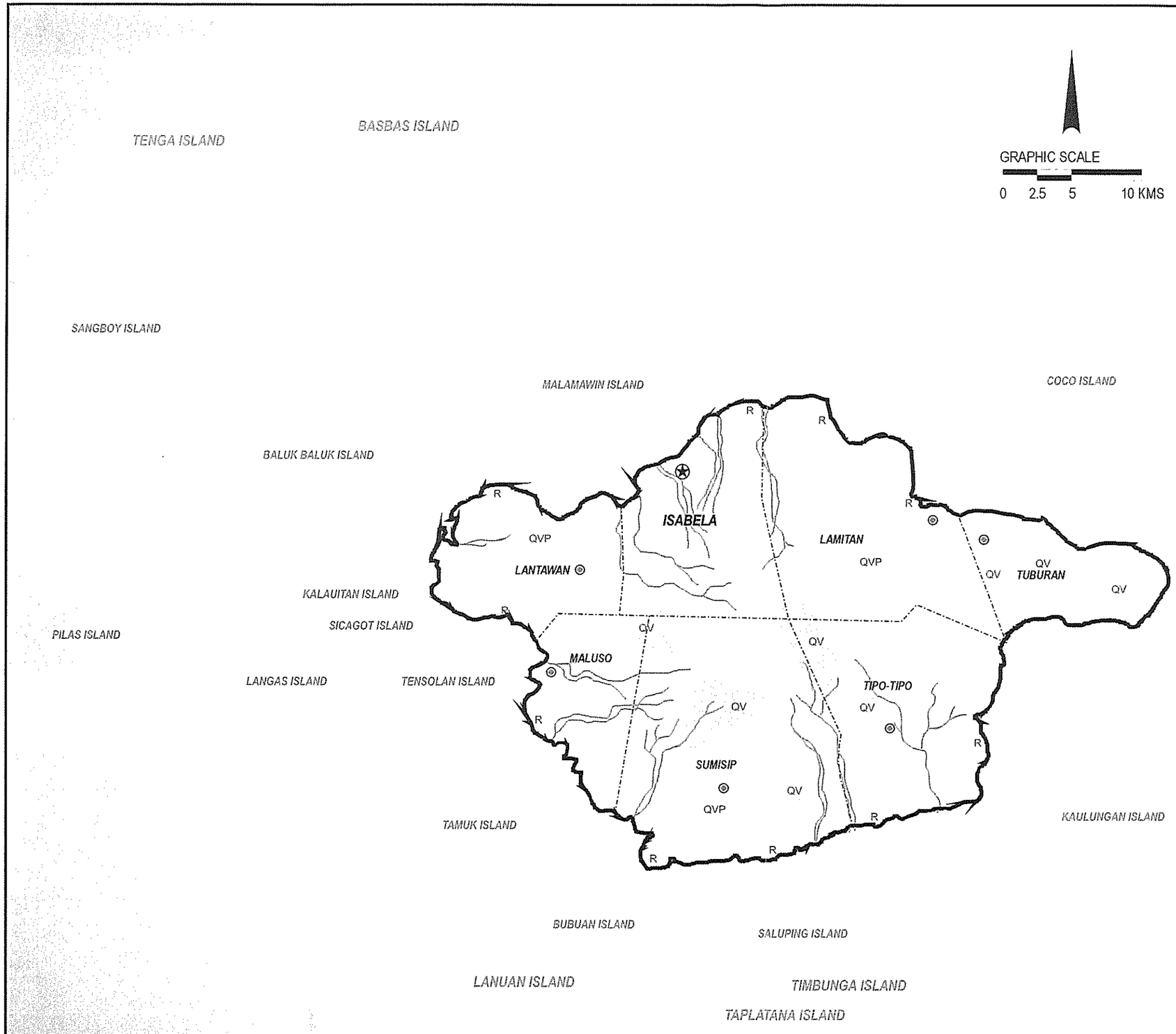
Sulu Island consists of Pliocene to Quaternary volcanics and its erosional by-products. The volcanic mounds, lava domes, vents, cinder cones and other peaks are made up of Quaternary volcanic rocks (QV). The Quaternary Pyroclastics (QVP) overlies the Quaternary Volcanics

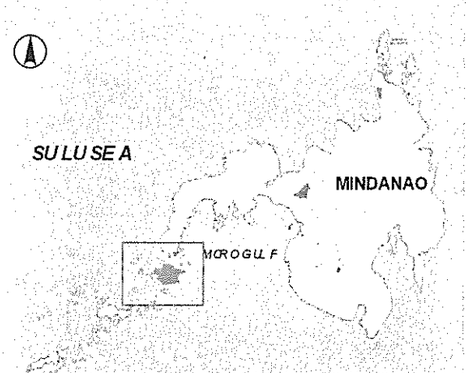
Recent deposits (R) include limited alluvial deposits, beach and swamp deposits, residual clays and corals.

The small islands are made up of either Quaternary Volcanics or limestone/corals.

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

Brackish or salt water is to be expected in some localities particularly those near the coast. (See Figure 3-5)





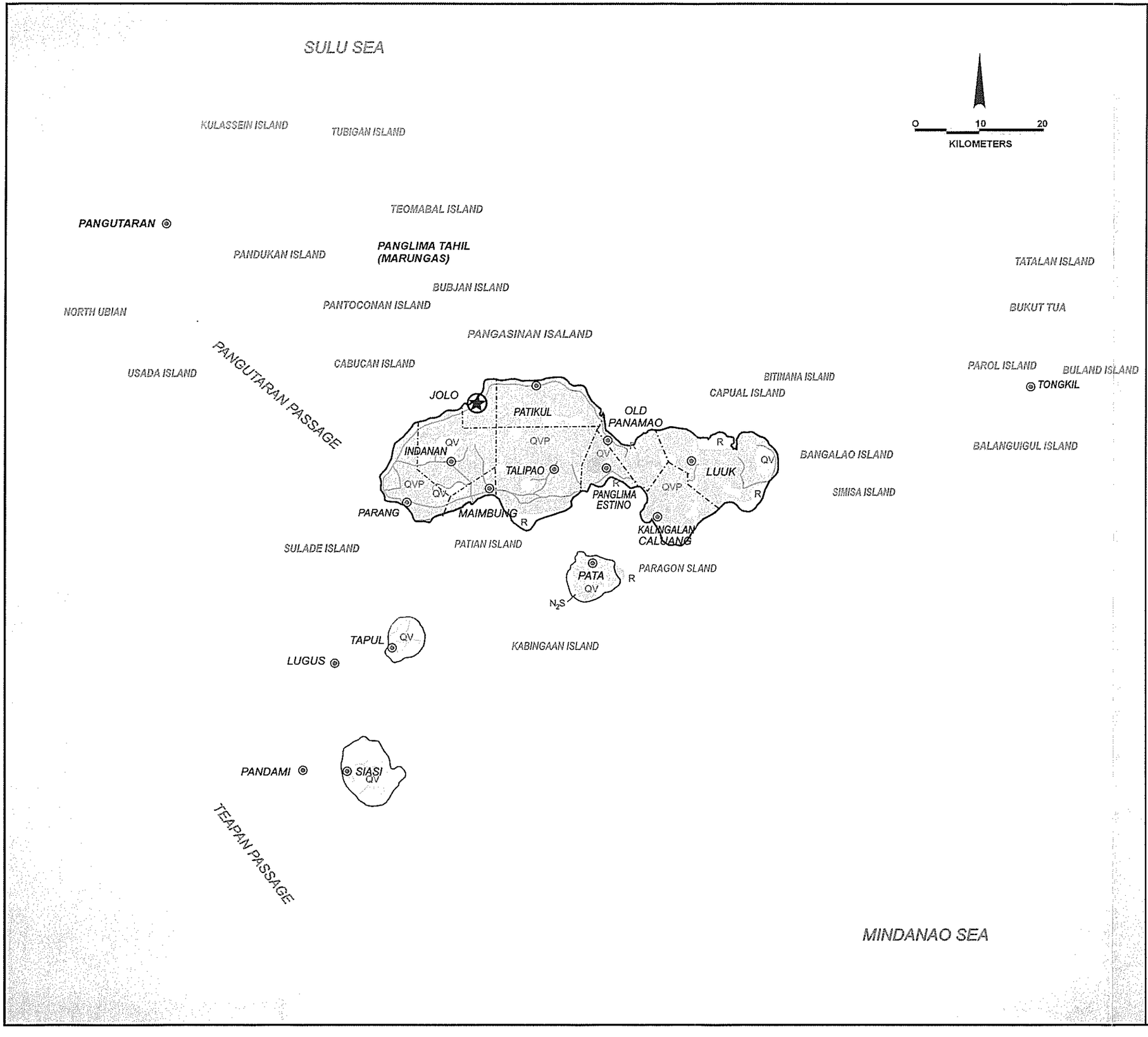
KEY MAP

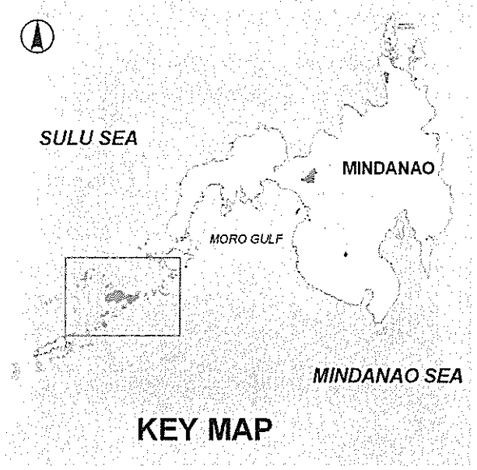
LEGEND:

- Provincial Boundary
- Municipal Boundary
- River
- City Center
- Town Center
- QVP — Quaternary Pyroclastics
- QV — Quaternary Volcanics
- R — Recent Deposit

Figure 3-4

GEOLOGIC MAP OF BASILAN





KEY MAP

LEGEND:

- Provincial Boundary
- Municipal Boundary
- River
- City Center
- Town Center
- N_2S — Late Miocene to Pliocene Clastic Rocks
- R — Recent Alluvium/Corals
- QV — Quaternary Volcanics
- QVP — Quaternary Pyroclastics

Figure 3-5

GEOLOGIC MAP OF SULU

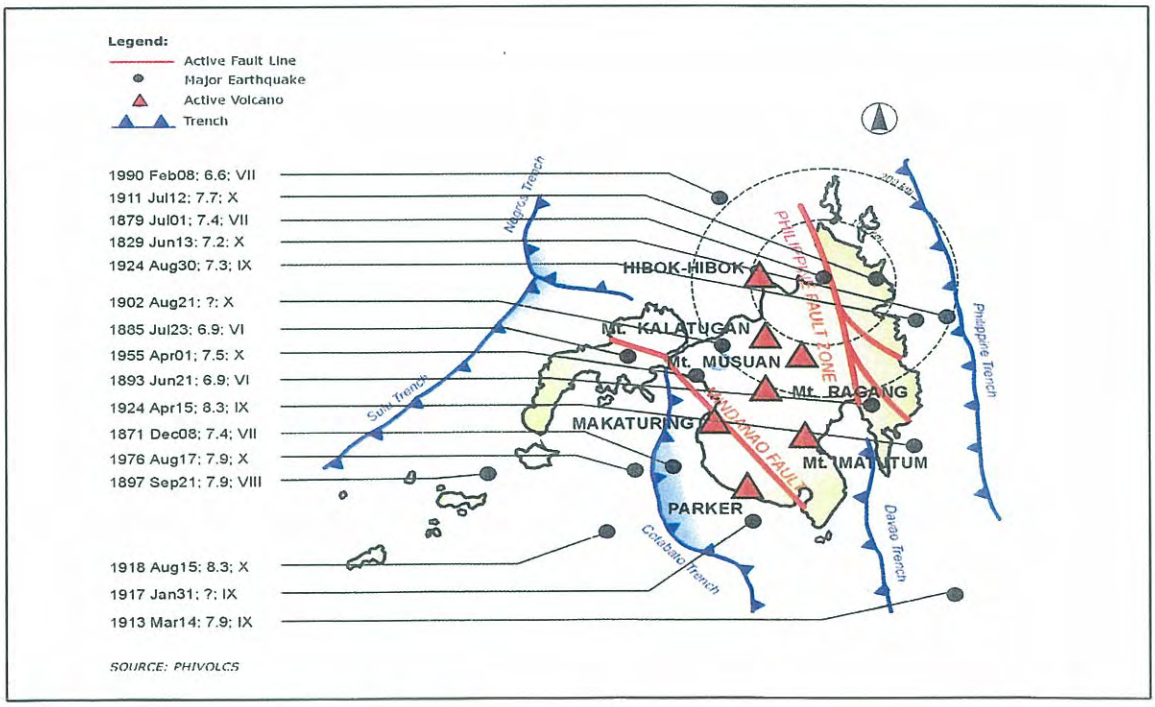
3.2.5 Tawi-Tawi

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. (See Figure 3-6)

3.2.6 The Philippine Fault Zone

The Philippine Fault Zone (PFZ) is 1,300 kilometers long, fairly continuous fault structure transecting the entire Philippine archipelago. It is divided into three (3) major segments: the Northern segment, which comprises traces of the PFZ as it transects the northern portion of Luzon; the Central Segment, as defined by the trace of the PFZ following a northwesterly trend cutting across the islands of Leyte, Masbate, Burias and Alabat and between the Bicol and Bondoc Peninsula and the Southern Segment, as characterized by the trace of the PFZ passing through the Agusan-Davao Basin and exits in Davao Gulf in eastern Mindanao. However, the PFZ splits into several fault zones in the northern terminus namely: Digdig, Lupao and San Manuel Faults. Figure 3-7 shows the tectonic features of the Philippines focused on the ARMM.

Figure 3-7 Trenches, Active Fault Lines, Volcanoes and Recorded Earthquakes in Mindanao



N

0 10 20

KILOMETERS

CAGAYAN DE TAWI-TAWI ISLAND

MAPON
(CAGAYAN DE TAWI-TAWI)

TURTLE ISLAND

TAGANAK ISLAND

SULU SEA

KANGTIPAYAN DAKULA ISLAND

CACATAN ISLAND

SUGDAI PASSAGE

MANIACOLLAT ISLAND

SUGBALI ISLAND

TUMBAGAAN ISLAND

BUBUAN ISLAND

TANDUBAS

SOUTH UBIAN

SOUTH UBIAN ISLAND

TANDUBAS ISLAND

TABUAN ISLAND

LANGUYAN

ONGAO

BONGAO ISLAND

SAPA-SAPA

PANGLIMA SUGALA
(BALIMBING)

SECUBONG ISLAND

MANTABUAN ISLAND

BANARAN ISLAND

BILATAN ISLAND

SIMUNUL

UMAPOY ISLAND

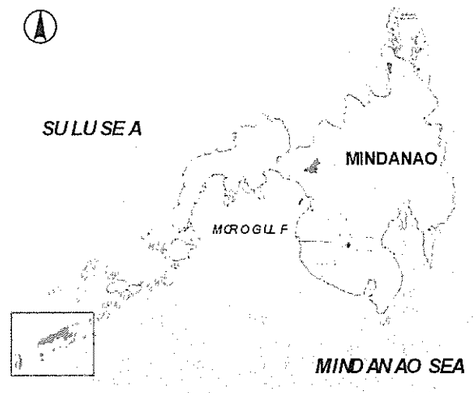
SITANGKAI

MANUK MANGKAW ISLAND

SITANGKAI ISLAND

SIBUTU ISLAND

MINDANAO SEA



KEY MAP

LEGEND:

- Provincial Boundary
- Municipal Boundary
- River
- City Center
- Town Center
- BC — Basement Complex
- UC — Ultramafic Complex
- N_2S — Late Miocene to Pliocene Clastic Rocks
- R — Recent Alluvium/Corals
- QV — Quaternary Volcanics

Figure 3-6

GEOLOGIC MAP
OF
TAWI - TAWI

3.3 Meteorology

3.3.1 Climate

The climatic classification in the Philippines was based on the Modified Corona's Classification (1920) using the modal of the yearly type of rainfall distribution. That is, the rainfall distribution type for each year was determined and the type with the most number of occurrences during the 30-year period (1961-1990) was considered as the final climatic type. The four types of climates are described as follows:

Type 1 - Two pronounced seasons: dry from November to April, wet during the rest of the year. Maximum rain period is from June to September during the prevalence of the southwest monsoon;

Type 2 - No dry season with a very pronounced maximum rainfall from November to January.

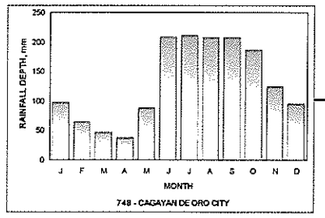
Type 3 - Seasons not very pronounced; relatively dry from November to April and wet during the rest of the year. This type is intermediate between the preceding two, although it resembles the first type more closely since it has a short dry season.

Type 4 - Rainfall is more or less evenly distributed throughout the year. This type is an intermediate between the first and second types, but it resembles the second more closely since it has a dry season.

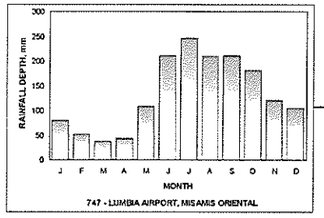
The rainfall data map for Mindanao inclusive of ARMM is shown in Figure 3-8.

The climate map for ARMM is shown in Figure 3-9 and the description for each of the provinces in ARMM is presented in the next sub-sections.

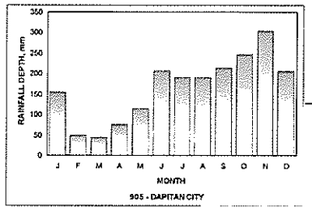
Figure 3-8
RAINFALL DATA MAP OF MINDANAO



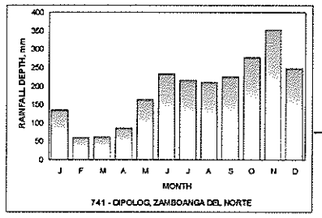
CAGAYAN DE ORO CITY



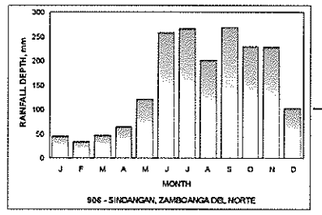
LUMBIA AIRPORT, MISAMIS ORIENTAL



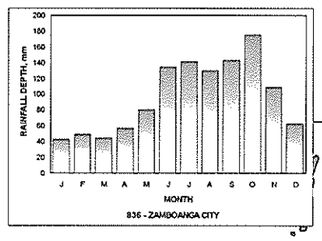
DAPITAN CITY, ZAMBOANGA DEL NORTE



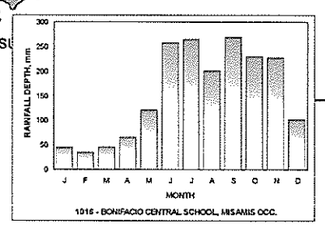
DIPOLOG CITY, ZAMBOANGA DEL NORTE



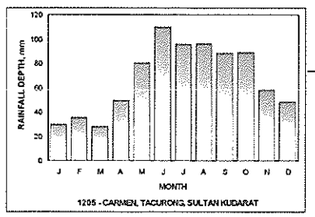
SINDANGAN, ZAMBOANGA DEL NORTE



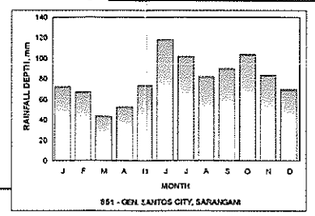
ZAMBOANGA CITY



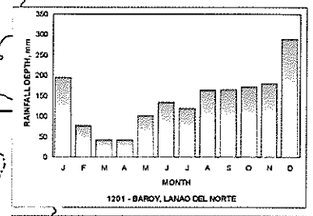
BONIFACIO CENTRAL SCHOOL, MISAMIS OCCIDENTAL



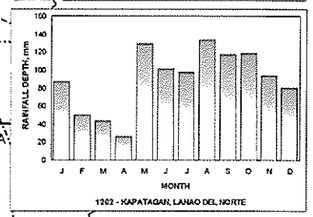
CARMEN TACURONG, SULTAN KUDARAT



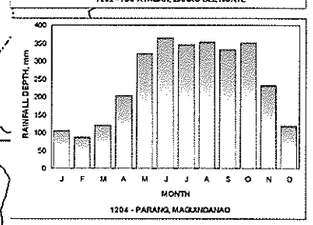
GEN. SANTOS CITY, SARANGANI



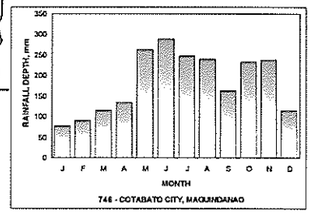
BAROY, LANAO DEL NORTE



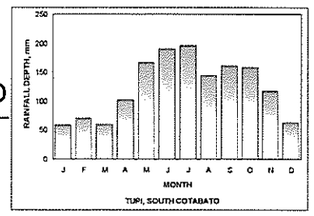
KAPATAGAN, LANAO DEL NORTE



PARANG, MAGUINDANAO



COTABATO CITY, MAGUINDANAO



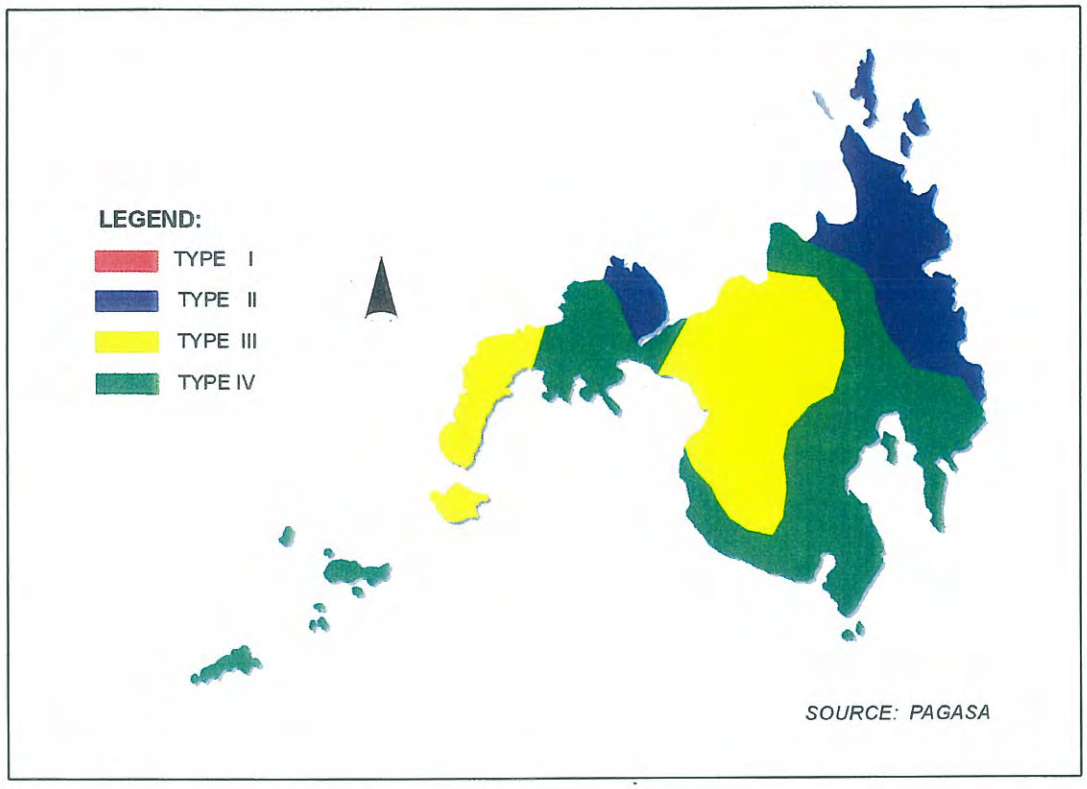
TUPI, SOUTH COTABATO

SURIGAO DEL NORTE
LAKE MAINIT
AGUSAN DEL NORTE
SURIGAO DEL SUR
MISAMIS ORIENTAL
AGUSAN DEL SUR
MISAMIS OCCIDENTAL
LANAO DEL NORTE
BUKIDNON
ZAMBOANGA DEL NORTE
ZAMBOANGA DEL SUR
LAKE LANAO
LANAO DEL SUR
DAVAO DEL NORTE
CAMPOSTELA VALLEY
ZAMBOANGA SIBUGAY
NORTH COTABATO
ZAMBOANGA CITY
MAGUINDANAO
LAKE BUDIAN
SULTAN KUDARAT
DAVAO DEL SUR
SOUTH COTABATO
BASILAN
SARANGANI
TAWI-TAWI

0 20 40 60 80
KILOMETERS

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

Figure 3-9 Climate Map of Mindanao



3.3.1.1 Maguindanao

The province enjoys a tropical rainy climate with May to December showing an excess of rainfall. The main moisture carriers are the northeast monsoons during October to May and the southwest winds from June to September. The local surficial winds are generally influenced by the monsoons and by physiographic differences.

The climate is characterized by more or less even distribution of rainfall throughout the year. Compared to the other provinces of the country, Maguindanao has the lowest frequency of cloudy or overcast days.

From the rainfall data map, northern Maguindanao receives more rain annually (2935mm in Parang) than western Maguindanao (2204mm in Cotabato City). Its southeastern portion (810mm in Carment, Tacurong) is relatively drier than the rest of the province.

3.3.1.2 Lanao del Sur

The province has a cool and pleasant climate because of its elevation. Summertime, as it is known elsewhere in the country, is not quite distinct here. Rainfall is evenly distributed throughout the year. The province is also outside the typhoon belt. The average monthly rainfall is 330mm. December to April are the months with the least amount of rainfall, an average of 150mm. The annual average rainfall is 1,500mm. The average temperature in Marawi City is about 22.78°C with monthly ranges from 21.67°C in January to 23.89°C in May and June.

3.3.1.3 Basilan

There are two agro-climatic zones identified in the province, the wet and moist zones. The wet zone is characterized by an annual rainfall of 2,500 mm and growing period of 270-330 days occurring generally in the hilly to highland areas.

The moist zone is characterized by an annual rainfall ranging from 1,500-2,500 mm and a growing period of 210-270 days. This zone covers most of the present agricultural and expansion areas in lowland, upland and hilly areas.

The province is predominantly within the moist agro-climatic zone, which shows a moderate moisture deficit during the dry season. As such, it is capable to sustain a year-round maximum production taking into consideration moisture availability. Areas with growing season of 210 days or more are suitable for a sequence of cropping system.

3.3.1.4 Sulu

Sulu lies outside the typhoon belt. The climate is warm and moist and precipitation is fairly steady throughout the year.

3.3.1.5 Tawi-Tawi

The general climate is cool and breezy along the coastal areas and hot and humid within the island. The rainy season begins in August and ends in November.

The climate of the province except for the municipalities of South Ubian and Sibutu Island belongs to type 01 with maximum rainfall from May to August.

3.4 Natural Calamities

The Philippines has four (4) major natural calamities in the form of volcanic eruptions, tsunami and tropical cyclones. Based on record, volcanic eruptions, earthquakes and tsunami occurred several times throughout the country, while tropical cyclone is a normal yearly occurrence especially during the rainy season.

3.4.1 Volcanoes

The Philippines had a vigorous history of volcanic activity and related phenomena through recorded time as indicated in the geological records. The country has 220 Quarternary volcanoes of which 21 are classified as active. In ARMM, the active volcanoes are Bud Dajo in Jolo Island with 1897 as its last date of eruption and Makaturing in Lanao with an unknown date of last eruption. (See Figure 3-7)

3.4.2 Earthquakes

There are eight major and several minor earthquake generators in the Philippines. These are zones or belts where differential movements of solid materials are likely to occur and consequently trigger the generation of earthquakes. The location of these earthquake generators in Mindanao are given in Figure 3-7.

3.4.3 Tropical Cyclones

The occurrence of tropical cyclones in the Philippines is a natural phenomena with the typhoon season occurring from June to December, with an average monthly frequency of more than one tropical cyclone. As shown in Figure 3-9, the ARMM is seldom hit by tropical cyclones – the frequency being once in 12 years.

3.5 Socio-Economic Profile

3.5.1 General Description

3.5.1.1 Administrative Division

The Philippines, in general, is politically divided into local administrative units according to the hierarchy of Region – Province – City/Municipality – Barangay. The ARMM was created under the provisions of Republic Act No. 6734, the Organic Act for the Autonomous Region in Muslim Mindanao and was composed of the provinces of Lanao del Sur, Maguindanao, Sulu and Tawi-Tawi. RA 6734 was subsequently amended by RA 9054, An Act to Strengthen and

Expand the Organic Act for the Autonomous Region in Muslim Mindanao, Amending for the Purpose Republic Act No. 6734, Entitled An Act Providing for the Autonomous Region in Muslim Mindanao. Through a plebiscite, only Basilan and Marawi City opted to join the four other provinces originally composing the ARMM. Table 3-1 gives the provinces and city now composing the ARMM.

Table 3-1 Provinces/City Composing the Expanded ARMM By class, number of municipalities and barangays

Province/City	Class	Number of Municipalities	Number of Barangays
Maguindanao	4th	26	474
Lanao del Sur	4th	38	1,059
Basilan	4th	6	210
Sulu	4th	18	411
Tawi-Tawi	4th	10	204
Marawi City	3rd	-	96
TOTAL		**98**	**2,454**

Source: ARMM Provinces and Marawi City

3.5.1.2 Maguindanao

Maguindanao is in central Mindanao. It is bounded on the north by Lanao del Sur, on the east by North Cotabato, on the west by the Moro Gulf and on the south by Sultan Kudarat.

Maguindanao is accessible by plane through the Awang airport in Datu Odin, Sinsuat municipality. An international port located at Polloc, Parang and a sub-port located across the Polloc Port, also makes access by sea possible. The province has a total road network of 1,943 km long that links Maguindanao to its neighboring provinces of Sultan Kudarat, South Cotabato, and Cotabato. The province of Maguindanao is the site of the Regional Industrial Center for the ARMM and is strategically located at the center of two growth areas in Mindanao, the Cagayan-Iligan Industrial Corridor and the South Cotabato-Sarangani - Sultan Kudarat- General Santos City Project.

Maguindanao is one of the provinces carved out of old Cotabato. The National Statistics and Coordination Board (NSCB) reports that Maguindanao has a land area 5,047.6 km^2. The Department of Budget and Management (DBM), in its 2003 Internal Revenue Allotment, reports a total land area of 7,447.75 km^2. As of 2003, there are 26 municipalities and 472 barangays in the province of Maguindanao.

The municipalities composing the province, income class and land area are given in Table 3-2:

Table 3-2 Income Class and Land Area of Municipalities in Maguindanao

Municipalities		Income Class	Land Area, km^2	Number of Barangays
MAGUINDANAO		4th	7,447.75	474
1.	Ampatuan	5th	475.40	21
2.	Barira	6th	241.67	15
3.	Buldon	5th	429.40	15
4.	Buluan	5th	343.30	37
5.	Datu Odin Sinsuat (Dinaig)	3rd	461.80	34
6.	Datu Paglas	5th	132.10	23
7.	Datu Piang	5th	363.13	34
8.	Gen. S. K. Pendatun	6th	189.37	18
9.	Kabuntalan (Tumbao)	6th	223.30	24
10.	Mamasapano	6th	76.58	18
11.	Matanog	6th	146.50	8
12.	Pagagawan	6th	31.74	11
13.	Pagalungan	4th	898.76	11
14.	Paglat	6th	77.53	4
15.	Parang	2nd	731.20	23
16.	Shariff Aguak (Maganoy)	4th	392.70	25
17.	South Upi	6th	184.80	11
18.	Sultan Kudarat (Nuling)	1st	611.51	52
19.	Sultan Sa Barongis (Lambayong)	6th	291.30	23
20.	Talayan	6th	190.31	19
21.	Talitay	6th	65.19	13
22.	Upi	3rd	890.16	35
23.	Sultan Mastura *	6th		
24.	Datu Unsay *	6th		
25.	Datu Saudi *	6th		
26.	Guindulungan *	6th		

Note: * - *Newly created municipalities*

Source: Province; ARMM

3.5.1.3 Lanao del Sur

Lanao del Sur is in Northern Mindanao. It is bounded on the north by Lanao del Norte, on the east by Bukidnon, on the west by Illana Bay, and on the south by Maguindanao and Cotabato.

Access to the province is possible either by land, air, or water transportation. Lanao del Sur is only 36 km from Iligan City and 137 km away from Cagayan de Oro City. The province is connected to other provinces through a network of roads that also links it to the international seaport in Maguindanao and the airport in Lanao del Norte. The total road network stretches to about 3,850 km. Lanao del Sur has an airport in Malabang and 31 municipal ports.

Lanao del Sur forms the western portion of the extensive plateau of Northern Mindanao. Adjoining Illana Bay on the southwest are a narrow coastal plain and rolling hills that give way to mountain ranges along the boundary with Cotabato and lowlands going east to the boundary with Bukidnon. Lake Lanao, around which most of the province's towns are located, is the second largest lake in the country. It covers an area of 340 km^2 and is 700 meters above sea level. Agus River is the lake's outlet that flows for 30 km into Iligan Bay.

Lanao Lake lies to the west of a plateau and dominates the province of Lanao del Sur. The plateau is sealed from the Pulangi lowlands by the high Piapayungan ridge but loses elevation towards the southwest, and meets with the sea at Illana Bay. The coast is regular, with few good anchorages.

The municipalities composing the province, income class and land area are given in Table 3-3 below.

Table 3-3 Income Class and Land Area of Municipalities in Lanao del Sur

Municipality		Income Class	Land Area, km^2	Number of Barangays
LANAO DEL SUR		4th	12,051.85	1,059
1.	Bacolod-Kalawi (Bacolod Grande)	5th	491.57	27
2.	Balabagan	6th	230.00	26
3.	Balindong (Watu)	6th	290.00	60
4.	Bayang	6th	115.20	38
5.	Binidayan	5th	189.56	26
6.	Buadiposo-Buntong	6th	215.00	33
7.	Bubong	6th	798.50	36

Municipality		Income Class	Land Area, km^2	Number of Barangays
8.	Bumbaran	6th	544.10	17
9.	Butig	6th	331.49	19
10.	Calanogas	6th	97.50	17
11.	Ditsaan-Ramain	6th	375.50	34
12.	Ganassi	6th	256.00	32
13.	Kapai	6th	398.50	20
14.	Kapatagan	6th	288.13	11
15.	Lumba-Bayabao (Maguing)	5th	640.62	38
16.	Lumbatan	6th	158.39	30
17.	Lumbayanague	6th	302.18	25
18.	Madalum	6th	498.38	35
19.	Madamba	6th	225.00	24
20.	Maguing	6th	615.04	32
21.	Malabang	4th	198.10	37
22.	Marantao	6th	550.00	34
23.	Marogong	6th	220.88	24
24.	Masiu	5th	56.09	35
25.	Mulondo	6th	458.67	26
26.	Pagayawan (Tatarikan)	6th	218.00	18
27.	Piagapo	6th	260.07	37
28.	Poona Bayabao (Gata)	6th	280.00	25
29.	Pualas	6th	242.34	23
30.	Saguiaran	6th	182.89	28
31.	Sultan Dumalondong	6th	51.35	23
32.	Sultan Gumander	6th	277.56	19
33.	Tagoloan II	6th	362.35	19
34.	Tamparan	6th	170.00	44
35.	Taraka	6th	300.00	43
36.	Tubaran	6th	435.00	21
37.	Tugaya	6th	155.10	23
38.	Wao	4th	485.24	26
MARAWI CITY		3rd	87.55	96

Source: Province; ARMM

3.5.1.4 Basilan

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

The province of Basilan occupies a total land area of 1,379 km^2. The terrain ranges from undulating to rolling and becomes moderately steep towards the interior of the province.

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

The province consists of the volcanic, hilly main island and 61 smaller islands surrounding it. The climate varies from fairly even all year-round in the north to dry from November to April in the South.

The municipalities composing the province, income class and land area are given in Table 3-4 below.

Table 3-4 Income Class and Land Area of Municipalities in Basilan Province

Municipality		Income Class	Land Area, km^2	Number of Barangays
BASILAN		4th	1,994.03	210
1.	Lamitan	3rd	254.45	45
2.	Lantawan	5th	305.84	35
3.	Maluso	5th	104.14	20
4.	Sumisip	4th	567.60	41
5.	Tipo-Tipo	4th	217.00	39
6.	Tuburan	4th	545.00	30

Source: Province; ARMM

3.5.1.5 Sulu

Sulu lies midway between Basilan and Tawi-Tawi in southern Mindanao. It is surrounded by the Sulu Sea on the north and west, the Mindanao Sea on the east, and the Celebes Sea on the south. The province has a total land area of 1,600 km^2.

The province is accessible through regular air links between Zamboanga and Sulu. Ferry boats also run the route from Zamboanga and Basilan to Jolo. The communication and postal services of Sulu consist of four private radiotelegraph stations, 17 telecommunications offices, 18 post offices and one telephone system.

The province consists of four island groups (Jolo, Pangutaran, Tapul and Samales) that cover 157 islands and islets.

Jolo is the name of the capital town, the island on which the town is located, and the group of islands to which belongs Jolo Island is mountainous, being volcanic in origin.

Siasi Island in the Tapul Group has a hilly interior. Other big islands are also of volcanic origin. The rest of the islands are coral and reef formations with low-forested and swampy areas.

The municipalities composing the province, income class and land area are given in Table 3-5 below.

Table 3-5 Income Class and Land Area of Municipalities in Sulu

Municipalities		Income Class	Land Area, km^2	Number of Barangays
SULU			2,135.05	411
1.	Hadji Panglima Tahil (Marunggas)	6th	49.50	5
2.	Indanan	5th	101.90	34
3.	Jolo (Capital)	4th	22.24	8
4.	Kalingalan Caluang	6th	55.83	9
5.	Lugus	6th	44.98	17
6.	Luuk	6th	167.12	20
7.	Maimbung	6th	47.90	27
8.	Old Panamao	6th	51.10	31
9.	Pandami	6th	170.69	16
10.	Panglima Estino(New Panamao)	6th	45.00	12
11.	Pangutaran	6th	258.10	16
12.	Parang	6th	156.83	40
13.	Pata	6th	61.82	14
14.	Patikul	6th	179.30	30
15.	Siasi	5th	102.52	50
16.	Talipao	6th	285.76	52
17.	Tapul	6th	89.17	15
18.	Tongkil	6th	245.29	15

Source: Province; ARMM

3.5.1.6 Tawi-Tawi

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 km^2 with terrain ranging from level to steep.

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 municipalities composing the province, income class and land area are given in Table 3-6:

Table 3-6 Income Class and Land Area of Municipalities in Tawi-Tawi

Municipalities		Income Class	Land Area, km^2	Number of Barangays
TAWI-TAWI		4th	3,426.55	204
1.	Bongao	4th	165.95	36
2.	Languyan	6th	581.20	20
3.	Mapun (Cagayan De Tawi-Tawi)	6th	181.29	15
4.	Panglima Sugala (Balimbing) (Capital)	5th	416.66	17
5.	Sapa-Sapa	6th	235.61	23
6.	Simunul	6th	167.25	15
7.	Sitangkai	6th	792.00	25
8.	South Ubian	6th	272.04	31
9.	Tandubas	6th	552.05	20
10.	Turtle Islands	6th	62.50	2

Source: Province; ARMM

3.6 Present Land Use

The estimated total land of all the provinces including Marawi City that compose the ARMM is 1.29 million hectares. Of this, about 48.6% is alienable and disposable land; 51.4% is forest land of which 15.1% is unclassified forest land and 84.9% classified public forest; of the classified forest, 7.6% is forest reserves, 85.7% is established timberland; 6.1% is national parks and 0.6% is for fishpond development. Table 3-7 below gives the land area by classification of ARMM provinces.

Table 3-7 Land Area by Classification – ARMM (By province, as of 2000)

Classification	PROVINCES IN ARMM (in hectares)				
	Maguindanao	**Lanao del Sur**	**Basilan**	**Sulu**	**Tawi-Tawi**
Total Land Area	*504,760*	*387,289*	*132,723*	*160,040*	*108,740*
Alienable and Disposable	306,622	133,135	85,574	47,687	55,383
Total Forest Land	198,138	254,154	47,149	112,353	53,357
Unclassified Forest Land	3,525	-	5,953	66,284	24,864
Classified Public Forest	194,613	254,154	41,196	46,069	28,493
Forest Reserves	12,515	11,844	18,397	-	-
Established Timberland	152,050	240,628	18,153	44,898	28,108
National Parks	30,048	1,682	2,597	213	-
Fishpond Development	-	-	2,049	958	385
TOTAL	504,760	387,289	132,723	160,040	108,740

Note: Figures may not tally with provincial data. It was observed that various data sources gave different total land areas for the provinces.

Source: National Statistical Coordination Board

3.7 Population

3.7.1 Historical Trend

The population of ARMM as of the 2000 Census of Population and Households was 2.74 million compared to the 1995 population of 2.31. This translates to an absolute increase in the ARMM population of about 428.5 thousand or an annual growth rate of 3.86%. As of 2000, Maguindanao province has the largest population of 801.1 thousand (or 29.2% of total ARMM population); Lanao del Sur is second with a population of 669.1 thousand (or 24.4% of total ARMM population); Sulu is third with a population of 619.7 thousand (or 22.6% of total ARMM population); Basilan is fourth largest with a population of 332.8 thousand (or 12.1% of total ARMM population); and last is Tawi-Tawi with the smallest population of 322.3 thousand (or 11.7%).

The population by municipality by province from 1980 to 2000 is given in Tables 3-8 to 3-12.

Figure 3-10 Population Growth of ARMM vs Philippines 1975-2000 (in million persons)

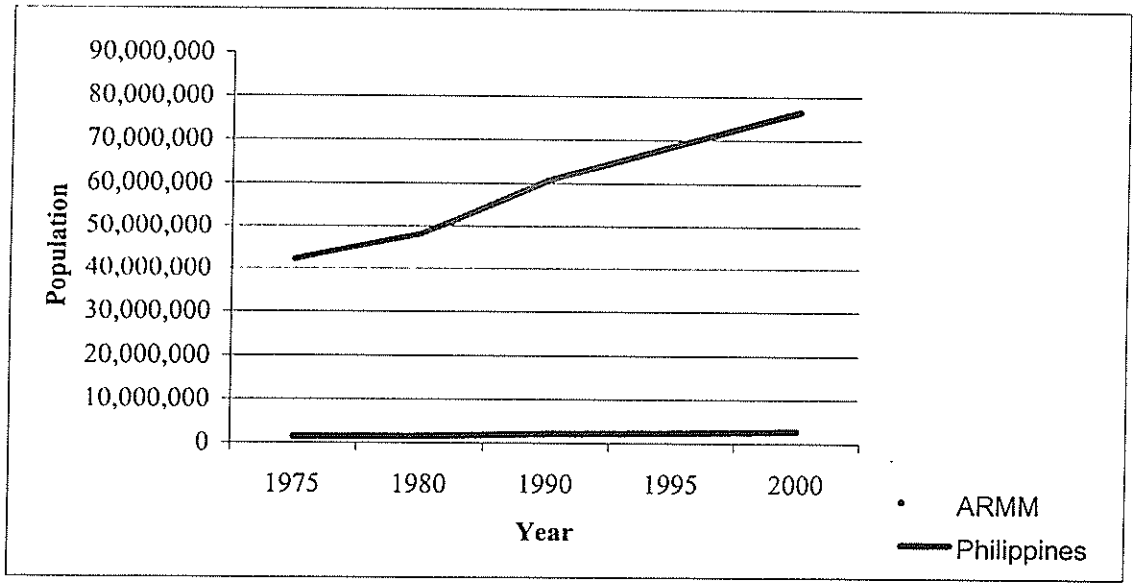


Table 3-8 Population of Lanao del Sur Province, 1980-2000 by Municipality

	MUNICIPALITY / CITY	TOTAL POPULATION			
		1980	1990	1995	2000
1.	Bacolod-Kalawi (Bacolod Grande)	6,589	12,077	16,145	17,761
2.	Balabagan	9,524	18,146	21,557	24,558
3.	Balindong (Watu)	9,947	19,617	21,825	24,470
4.	Bayang	18,795	18,931	20,060	21,020
5.	Binidayan	8,318	15,211	16,157	18,081
6.	Buadiposo-Buntong	5,552	10,380	11,657	13,535
7.	Bubong	5,949	11,406	14,054	19,003
8.	Bumbaran	3,038	4,341	6,001	6,589
9.	Butig	3,697	12,082	13,722	16,283
10.	Calanogas	2,108	7,559	8,577	9,989
11.	Ditsaan-Ramain	6,607	13,486	16,285	19,157
12.	Ganassi	7,863	15,394	16,947	18,947
13.	Kapai	4,934	11,221	13,310	16,564
14.	Kapatagan	2,364	5,784	6,702	7,804
15.	Lumba-Bayabao (Maguing)	12,957	18,911	21,003	23,521
16.	Lumbatan	8,506	14,432	15,103	17,445
17.	Lumbayanague	2,679	10,803	10,548	12,835
18.	Madalum	6,920	13,917	15,838	18,405
19.	Madamba	6,557	10,428	11,914	15,442
20.	Maguing	4,381	15,937	15,539	18,095
21.	Malabang	18,283	25,773	28,840	33,177
22.	Marantao	4,254	18,115	20,942	24,647
23.	Marawi City	46,261	92,490	114,389	131,090
24.	Marogong	6,193	12,775	13,765	16,165
25.	Masiu	8,105	16,825	20,042	24,105
26.	Mulondo	7,321	11,135	11,866	12,368
27.	Pagayawan (Tatarikan)	2,451	8,507	8,900	9,757
28.	Piagapo	11,419	16,730	19,198	23,903
29.	Poona Bayabao (Gata)	6,017	13,105	15,149	17,390
30.	Pualas	5,410	7,177	8,259	7,887
31.	Saguiaran	12,185	15,296	18,164	22,636
32.	Sultan Dumalondong	1,550	4,889	6,376	11,105
33.	Sultan Gumander	4,010	9,220	10,503	12,230
34.	Tagoloan II	3,193	7,414	7,760	8,714
35.	Tamparan	7,083	16,379	17,618	19,975
36.	Taraka	11,097	14,767	16,505	18,832
37.	Tubaran	7,635	8,491	9,617	11,021
38.	Tugaya	11,403	17,103	17,552	20,139
39.	Wao	15,540	22,932	27,503	35,517
	TOTAL	**326,695**	**599,186**	**685,892**	**800,162**

Source: National Statistics Office

Table 3-11 Population of Sulu Province, 1980-2000 by Municipality

MUNICIPALITY / CITY		TOTAL POPULATION			
		1980	1990	1995	2000
1.	Indanan	32,074	41,969	46,140	53,425
2.	Jolo (Capital)	52,429	53,055	76,948	87,998
3.	Kalingalan Caluang	8,639	15,824	19,320	22,688
4.	Luuk	19,669	29,378	31,705	38,819
5.	Maimbung	20,080	17,251	21,692	24,982
6.	Hadji Panglima Tahil (Marunggas)	4,325	4,153	4,419	5,314
7.	Old Panamao	19,505	27,189	28,549	35,906
8.	Pangutaran	19,311	17,122	22,846	26,211
9.	Parang	22,304	43,273	48,124	54,994
10.	Pata	7,213	9,244	10,065	11,791
11.	Patikul	26,208	30,455	30,699	34,396
12.	Siasi	37,362	46,468	50,655	59,069
13.	Talipao	24,839	66,261	66,568	73,015
14.	Tapul	12,215	10,111	12,392	14,881
15.	Tongkil	15,716	10,469	12,971	15,933
16.	Panglima Estino (New Panamao)	13,499	15,683	18,597	21,443
17.	Lugus	11,257	14,907	16,330	18,839
18.	Pandami	12,498	17,159	18,181	19,964
	TOTAL	**359,143**	**469,971**	**536,201**	**619,668**

Source: National Statistics Office

Table 3-12 Population of Tawi-Tawi Province, 1980-2000 by Municipality

MUNICIPALITY / CITY		TOTAL POPULATION			
		1980	1990	1995	2000
1.	Bongao	27,884	37,932	38,274	58,174
2.	Languyan	16,269	31,984	32,738	42,040
3.	Mapun (Cagayan De Tawi-Tawi)	19,607	19,372	-	22,011
4.	Panglima Sugala (Balimbing) (Capital)	22,189	20,767	24,398	33,315
5.	Sapa-Sapa	14,946	16,173	17,728	26,242
6.	Simunul	26,816	26,491	-	31,962
7.	Sitangkai	27,419	34,493	32,546	52,772
8.	South Ubian	17,356	18,378	20,180	27,301
9.	Tandubas	19,459	19,505	20,646	24,900
10.	Turtle Islands	2,197	2,296	2,359	3,600
	TOTAL	**194,142**	**227,391**	**188,869**	**322,317**

Source: National Statistics Office

Table 3-9 Population of Maguindanao Province, 1980-2000 by Municipality

MUNICIPALITY / CITY		TOTAL POPULATION			
		1980	1990	1995	2000
1.	Ampatuan	27,362	25,542	27,200	32,907
2.	Barira	7,724	16,858	17,825	18,296
3.	Buldon	12,350	22,730	24,209	26,903
4.	Buluan	26,008	34,277	38,695	51,098
5.	Datu Odin Sinsuat (Dinaig)	48,353	52,370	59,841	71,569
6.	Datu Paglas	8,262	13,970	15,522	20,014
7.	Datu Piang	38,240	53,311	55,104	67,303
8.	Gen. S. K. Pendatun	12,345	18,866	20,280	28,374
9.	Guindulungan	6,626	15,024	15,239	14,894
10.	Kabuntalan (Tumbao)	11,603	15,913	19,409	23,137
11.	Mamasapano	18,350	21,991	16,121	20,059
12.	Matanog	8,300	14,759	16,018	19,006
13.	Pagagawan	10,964	22,189	23,962	27,010
14.	Pagalungan	11,783	20,306	22,439	25,908
15.	Paglat	-	-	-	5,832
16.	Parang	46,003	55,355	49,562	60,935
17.	Shariff Aguak (Maganoy)	28,332	30,484	36,989	49,531
18.	South Upi	11,463	20,293	23,186	28,186
19.	Sultan Kudarat (Nuling)	39,720	59,740	61,745	78,951
20.	Sultan Mastura	8,663	12,591	14,380	15,910
21.	Sultan Sa Barongis (Lambayong)	25,957	29,916	29,967	34,709
22.	Talayan	7,519	15,977	15,886	18,235
23.	Talitay	5,965	13,316	14,156	17,026
24.	Upi	30,644	45,261	46,440	51,141
	TOTAL	**452,536**	**631,039**	**664,175**	**806,934**

Source: National Statistics Office

Table 3-10 Population of Basilan Province, 1980-2000 by Municipality

MUNICIPALITY / CITY		TOTAL POPULATION			
		1980	1990	1995	2000
1.	Lamitan	45,223	50,605	54,433	58,709
2.	Lantawan	17,733	19,340	25,613	27,487
3.	Maluso	17,287	18,666	26,844	31,054
4.	Sumisip	29,696	33,301	42,003	51,712
5.	Tipo-Tipo	22,981	30,214	44,588	48,284
6.	Tuburan	15,584	22,540	31,249	42,550
	TOTAL	**148,504**	**174,666**	**224,730**	**259,796**

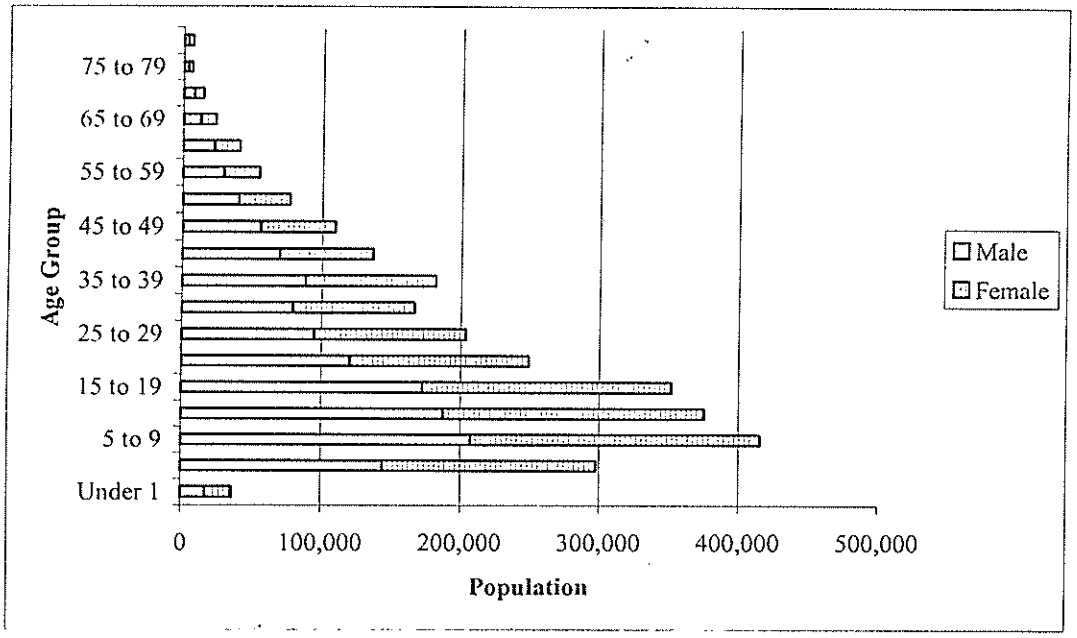
Source: National Statistics Office

3.7.2 Age and Sex Structure

Figure 3-11 illustrates the age and sex structure of the 2000 population in the ARMM. In terms of sex of the population, there are 2.4% more females than male. This occurs consistently from the youngest age bracket up to 39 years of age. From 40 to 79 years old, males outnumber females. However, at the oldest age bracket of 80 and over, females slightly outnumber males.

The age composition is not the normal pyramid type where the younger, the more as shown in the figure. A very high 42% of the total ARMM population is between the ages of 5-19 and the dependent population of under 1 to 14 is about 41%. Such a high dependent population is one of the areas disadvantages.

Figure 3-11 Population Distribution by Age and Sex – ARMM (2000)



3.8 Economy

3.8.1 Gross Regional Domestic Product

The five provinces and one (1) city in the ARMM produced P9.92 billion or about 0.95% of the National Gross Domestic Product of P1,046.08 billion in 2002. Compared to the other regions of the country, ARMM contributes the lowest and is therefore ranked last. Table 3-13 gives the Gross Regional Product of the Mindanao Regions and the Philippines as a whole.

In terms of GRDP contribution by sector, Agriculture, Fishery and Forestry Sector contributed 60.5% of total GRDP, Industry Sector contributed 10.9%; and the Service Sector contributed 28.6% to total GRDP. In the Agriculture, Fishery and Forestry Sector, Agriculture and Fishery contributed 99.98% with minimal contribution from Forestry. In the Industry Sector, Electricity and Water contributed the largest at 52.5%, Manufacturing contributed 40.1% and the Mining and Quarrying and Construction Sector having minimal contribution. In the Services Sector, Government Services was the highest contributor at 37.7% of the sectors total contribution. Table 3-14 gives the GRDP of ARMM by industrial origin.

Table 3-13 Gross Regional Domestic Product of Mindanao Regions and the Philippines – 2000 to 2002, (in 1000 pesos and 1985 prices)

Area	2000	2001	2002
Philippines	972,960,699	1,001,715,338	1,046,083,473
Western Mindanao	27,063,784	26,938,789	28,382,289
Northern Mindanao	37,480,930	39,254,435	39,748,836
Southern Mindanao	61,863,618	62,741,572	64,094,744
Central Mindanao	25,761,601	26,185,533	27,642,420
ARMM	**9,199,622**	**9,461,849**	**9,915,275**

Source: Economic Statistics Office, National Statistical Coordination Board

Table 3-14 Gross Regional Domestic Product by Industrial Origin – ARMM 2000 to 2002 (in 1000 pesos and 1985 prices)

Industry	2000	2001	2002
1. Agriculture, Fishery, Forestry	5,472,029	5,776,724	6,000,592
a. Agriculture and Fishery	5,464,511	5,771,743	5,999,688
b. Forestry	7,518	4,981	904
2. Industry Sector	1,192,928	1,026,941	1,080,678
a. Mining and Quarrying			
b. Manufacturing	379,440	411,934	433,466
c. Construction	281,562	74,960	80,057
d. Electricity and Water	531,926	540,047	567,155
3. Service Sector	2,534,665	2,658,184	2,834,005
a. Transport, Comm., Storage	158,114	164,003	176,327
b. Trade	650,329	671,641	725,676
c. Finance	25,554	26,125	26,955
d. O. Dwellings, Real Estate	499,906	475,700	483,977
e. Private Services	325,589	338,348	352,887
f. Government Services	875,173	982,367	1,068,183
GROSS DOMESTIC PRODUCT	**9,199,622**	**9,461,849**	**9,915,275**

Source: Economic Statistics Office, National Statistical Coordination Board

APPENDIX

PARTICIPANTS IN THE CONSULTATION WORKSHOPS

APPENDIX A-1

Provincial Consultation Workshop for Tawi-Tawi

Date : September 08, 2003
Venue : Halipa Hotel and Restaurant, Bongao

	Name of Participant	Office/Position
1.	Sulay H. Halipa	Provincial Administrator
2.	Wahab D. Bakil	Provincial Planning and Development Coordinator
3.	Aminsali Jumah	Barangay Chairman
4.	Moh. Jalil Sappayani	Provincial Budget Officer
5.	Engr. Rosendo Reyes	General Manager - Bongao Water District
6.	Engr. Julius G. Pampora	Engineer - Bongao Water District
7.	Jadda I. Jawali	Provincial Development Officer II
8.	Ruben B. Eleuterio	Provincial Development Officer III
9.	ibrahim M. Abdulwahid	Provincial Agriculturist
10.	Sheremar A. Ambang	Statistical Aide - PPDO
11.	Amlorzi M. Tabarasa	Executive Secretary
12.	Lito D. Ticzon	Provincial Engineer - PEO
13.	Kresler G. Romero	OIC PARO - DAR
14.	Ibrahim M. Abdulwahid	Head, PMEU
15.	Ahmad-Bederi M. Hamad	Provincial Tourism Officer
16.	Sandoval P. Tiblan	DAR
17.	Termizie G. Masahud	Supervisor – TIDS
18.	Dr. Sukarno Asri	Provincial Health Officer II
19.	Reginaldo Rejino	IPHO
20.	Hj. Mohatar Buldiman	Executive Officer - DENR-ARMM
21.	Saido D. Espitiro	DENR
22.	Albin Buddahim	DPWH
23.	Martin D. Maing	DPWH
24.	Julgabir I. Sappayani	DILG
25.	Ruslie M. Abidin	DILG
26.	Gulamhasan Spippayani	DILG
27.	Korshid B. Lauddin	Simunul Water District
28.	Sangkula A. Tindick	Provincial Director/PAO - DAF
29.	Nurjaya Asaali	Planning Officer – DAF
30.	Aynun J. Racelin	Chief-BFAR
31.	Alhazen Sapie	Provincial Assessor
32.	Kim Hua Tiannok	PEO

Provincial Consultation Workshop for Tawi-Tawi

Date : September 08, 2003
Venue : Halipa Hotel and Restaurant, Bongao

	Name of Participant	Office/Position
33.	Bernadette Budlong	Provincial Assessors Office
34.	Moh. Said Tingdan	Office of the Sanggunian Panlalawigan Secretary
35.	Nonito A. Magbanua	PEO
36.	Catherine Caubang	Nutritionist
37.	Masil H. Mohammadsira	OIC-PASO/BAS
38.	Engr. Jul-Amri T. Insail	Planning Assistant, PPDO
39.	Jamail K. Elloh	Provincial Tourism Office

APPENDIX A-2

Provincial Consultation Workshop in Basilan

Date : September 10, 2003

Venue : Provincial Social Rehabilitation Center, Isabela City

	Name of Participant	Office/Position
1.	Julita B. Larracochea	Municipal Agriculture Office, Lantawan, Basilan
2.	Edris A. Usman	MPDC, Lantawan, Basilan
3.	Abdulbakil C. Abdua	MEO, Lantawan, Basilan
4.	Roben J. Mustapa	MPDO, Lantawan, Basilan
5.	Salie D. Francisco	Maluso Water District
6.	Raymond N. Lintag	CARPO-BDCD / DAR-Basilan
7.	Eduardo S. Baird	PSWDO-Basilan
8.	Harrybert S. Hadjala	PHO-Basilan
9.	Ramon T. Nuñal, Jr.	PPDO-Basilan
10.	Munib T. Majirul	MPDC, Tipo-Tipo
11.	Nasser U. Abdulgani	PEO-Basilan
12.	Sarrapa S. Latip	PASO-Basilan
13.	Antonio N. Locson	MA-Sumisip
14.	Antonio T. Siasoli	BGH
15.	Nul B. Wali	DPA-Basilan
16.	Janil H. Tutoh	DPWH-Basilan
17.	Bensali A. Kasim	DPWH-Basilan
18.	Hja Fatima Bensali-Abubakar	DepEd, Basilan
19.	Hja Jarasiya B. Francisco	DepEd, Basilan
20.	Abdulbari N. Ibno	DTI, Basilan
21.	Nonito S. Manuel	DTI, Basilan
22.	Sharif Madsmo Hasim	DPWH-Basilan
23.	Eleanor B. delos Santos	BGH
24.	Muner N. Ladjamatli	DAR
25.	Renato DS. Medina	Lamitan Water District
26.	Racquel C. Flores	DARPO-ARMM
27.	Wilson R. Versano	DAT
28.	Agit B. Jamjiron	PENRO-ARMM
29.	Margani B. Atalad	PPDO-Basilan
30.	James P. Dinil	PPDO-Basilan
31.	Aben N. Abubakar	PBMO
32.	Danilo D. Orque	DPWH-Basilan
33.	Janag A. Japanul	
34.	Mohammed Abdulla	
35.	Usman J. Rajam	PAO
36.	Salim A. Sali	PAO

APPENDIX A-3

Provincial Consultation Workshop in Sulu

Date : September 11, 2003

Venue : Honeybee Foods and Apartelle, Jolo

	Name of Participants	Position/Office
1.	Dr. Fahra Omar	IPHO-Sulu
2.	Dr. Emelyn B. Jalani	Pangutaran District Health Office
3.	Nayda Nour U. Julkarnain	IPHO-Sulu
4.	Josephine T. Elcamil	Pangutaran District Health Office
5.	Absir A. Imlan	Prov. Budget Office
6.	Dr. Abdulhasad S. Mukarrama	ASDS, DepEd
7.	Rodel K. Dawili	Community Dev. Office
8.	Isson S. Asiri	MPDC-Hadji Panglima Tahil
9.	Abduhail J. Hajihil	Prov. Agriculturist Office
10.	Ukson J. Maring	DTI
11.	Cyrus D. Mariwa	DTI
12.	Akmodnur H. Mukattil	MPDC-Parang
13.	Delmar B. Yusop	MPDC-Pandami
14.	Sawradjan P. Allama	MPDC-Indanan
15.	Virgilio L. Kong	MPDC-Siasi
16.	Munil U. Sahi	MPDC-Maimbung
17.	Alrashid S. Imlani	MPDC-P. Estino
18.	Amiruddin H. Abduwa	MPDC-Talipao
19.	Agustin D. Lim, Jr.	MPDC-Lugus
20.	Rocky S. Undug	DAR
21.	Ruhir A. Shammah	MPDC-Jolo
22.	Abdurajak Arid	PPDC
23.	Ronnie S. Nulon	MPDC-Pata
24.	Thomas A. Chang	DPWH
25.	Abdulwajan A. Kalim	PEO
26.	Jane T. Bahjin	RHU-Jolo
27.	Felipa H. Abubakar	RHU-Jolo
28.	Jamahani D. Ibno	DepEd-Panamao
29.	Ibrahim I. Lakibu	UNMDPS

APPENDIX A-4

Joint Provincial and City Consultation Workshop for Lanao del Sur and Marawi City

Date : September 17, 2003
Venue : Café Hermoso, Iligan City

	Name of Participants	Position/Office
1.	Hadji Ali A. Malambut	General Manager - MCWD
2.	Omar T. Alip	MPDC-Ganassi
3.	Sultan Alengan Macalawi	MPDC-Masiu
4.	Noraida Columpang	Budget - Masiu
5.	Engr. Ahmad S. Sakilan, Jr.	MPDC-Calanogas
6.	Engr. Rashdi P. Masorong	Chief-Eng'g. Div. - MCWD
7.	Engr. Cairoding P. Riga	Asst. Prov'l. Eng'r.- Lanao del Sur
8.	Dr. Macapagal P. Camama	Supply Officer II
9.	Mr. Tatar Boriongan	Prov'l. Environment Officer
10.	Badroden B. Unda	Exec. Asst./OIC - PARO DAR-ARMM
11.	H. Moda B. Batua-an	PA-OPAG, Lanao Sur
12.	Dr. Ali Dalidig	City Health Office, Marawi
13.	Villamor P. Bagumbaran	CPDC, Marawi
14.	Jaime T. Dumarpa	Consultant, Marawi
15.	Engr. Bulkais M. Linog	Asst. Exec. Director
16.	Engr. Amerodin Abdulwahab	MPDC-Balindong
17.	Jamael H. Edaros	LGU Staff-Balindong
18.	Supt. Olindang G. Dimaampao	OIC - Marawi City Division - DepEd
19.	Mr. Mona A. Macatanong	Asst. Schls. Div. Supt.
20.	Ms. Norjanah Mimbalawag	Elem. Grades Teacher
21.	Engr. Luvizminda S. Sani	Planning Engineer - DPWH-Lanao del Sur I
22.	Dr. Aida M. Abaton	Municipal Health Officer - BDH, Balindong, Lanao del Sur
23.	Baimona B. Guiling	Dist. Nurse Supervisor - Tamparan Dist. Hospital
24.	Dr. Potri Disomimba-Ali	Chief of Hospital - Tamparan Dist. Hospital
25.	Lawan A. Ca??	STIDS - DTI-ARMM, Lanao del Sur
26.	Ali B. Mangotara	MLGOO-DILG
27.	Maulana M. Sumpingan	Chief, Trade and Industry Specialist - DTI-ARMM, Lanao del Sur
28.	Marina N. Loja	Project Dev't. Asst. - MPDC, Wao

Joint Provincial and City Consultation Workshop for Lanao del Sur and Marawi City

Date : September 17, 2003
Venue : Café Hermoso, Iligan City

29.	Mangondaya S. Hadji Yusoph	LGOOV - DILG, Lanao del Sur
30.	Saidah D. Panawidan	TIDS - DTI-ARMM, Lanao del Sur
31.	Dr. Mangoda A. Dima, Jr.	Provincial Health Oficer II - PHO, LGU, Lanao del Sur
32.	Danny Y. Balt	MPDC-Lumbatan, Lanao Sur
33.	Hadji Moda B. Batua-an	Prov'l. Agriculturist-Lanao del Sur
34.	Alicia V. Langskid	OPAG-Lanao del Sur
35.	Esmeralda Lamago	OPAG-Lanao del Sur
36.	Engr. Liling L. Ibrahim	OIC, Prov'l. Irrig. Officer - NIA, Lanao del Sur
37.	Sultan Salong Rasuman	IDS-Chief - Lanao del Sur
38.	Badelles D. Palagawad	Municipal Engineer - Balindong, Lanao del Sur
39.	Tatar Boriongan	Prov'l. Environment Officer
40.	Abduljalil M. Macapantan	Municipal Engineer - Mulondo, Lanao del Sur
41.	Sambitory D. Abdul	DOH-SI-Mulondo
42.	Rohanisha S. Alioden	DPWH-Task Force, Marawi City
43.	Talib R. Bayabao	City Engineer - Marawi City
44.	Alexander M. Saidar	Technical Assistant - CEO, Marawi City
45.	Somerado M. Mangondaya	MPDC-Piagapo, Lanao del Sur
46.	Cairoding P. Riga	Asst. Prov'l. Eng'r. - Lanao del Sur

APPENDIX A-5

Provincial Consultation Workshop in Maguindanao

Date : September 24, 2003
Venue : Estosan Hotel, Cotabato City

	Name of Participants	Position/Office
1.	Saupada T. Quituar	OIC - PPDO/PHMO-Maguindanao
2.	Alexander Manuel	PO4 - PPDO-Maguindanao
3.	David K. Lagasi	DAF-ARMM/ARC
4.	Paisal T. Makalingkang	Engineer B, NIA, Maguindanao
5.	Tato Usman	MS-III - DOH-ARMM
6.	Abdul Rakman Mokamad	Engr. II - PEO, Maguindanao
7.	Monib T. Usman	Sr. Agriculturist - Maguindanao
8.	Stanley R. Cang	Chief - DTI, Maguindanao
9.	Catalina L. Icauna	STIDS - DTI, Maguindanao
10.	Alibai Benito Aliuden	Dep't. of Education - Maguindanao
11.	Mohalidew M. Kasid	DENR-PERO, Maguindanao
12.	Opao E. Tiboron	DENR-Region
13.	Siya B. Belongan	ACM/DAF-ARMM
14.	Sylvia Delosa	DOH-ARMM
15.	Datuali R. Abpi	PBO-Maguindanao
16.	Dr. Tahir Sulaik	PHO II/IPHO-Maguindanao
17.	Meriam I. Laguilay	APD-DILG-Maguindanao
18.	Engr. Ronaldo E. Capocao, Sr.	DPWH-Maguindanao
19.	Engr. Tayan A. Sendad	DPWH-Maguindanao
20.	Engr. Romeo Y. Dadang	DPWH-Maguindanao
21.	Salem T. Bagis, Jr.	DPWH-Maguindanao

APPENDIX B

CONSULTATION WORKSHOP ON THE GOVERNANCE COMPONENT OFFICE OF THE REGIONAL GOVERNOR AND LOCALLY CREATED OFFICES

Date : September 24, 2003
Venue : ORG Conference Room, Cotabato City

	Name of Participants	Position/Office
1.	Tanhar M. Ahmad	Training Assistant I - ADA, ARMM
2.	Manuel A. Ceniza	PO2-TMS - ORG-ARMM
3.	Nasser Sinarimbo	O.L. - ODA-ARMM
4.	Abdulnasser G. Nul	DMO V - TMS-ORG
5.	Esmeralda A. Simpal	Planning Officer - RCBW-ARMM
6.	Dir. Abdulmuin S. Ahmad	Director III - TMS-ORG
7.	Abebakrin Lukman	Director - BPI-ARMM
8.	Samson S. Goen	Info. Officer - BPI-ORG
9.	Medzar S. Awali	Exec. Director - CDO-BYA,ARMM
10.	Nur-sadat K. Iraji	AO II - CDO-BYA, ARMM
11.	Wahida H. Madjuon	Record Asst. - RBMO
12.	Taya K. Apcal	Director II - Dep. Ed - ARMM
13.	Annabelle A. Aray	PRO V - RGAC-ORG
14.	Richard D. Sanlolan	S.O. III - OCS-ORG
15.	Eva T. Usop	RPMA-ARMM
16.	Aga B. Paki	Secretary E - ISS-ORG
17.	Priscilla C. Candao	Cashier IV - ORG-ARMM
18.	F. Dedicatoria	MAA-III - ORG-ARMM
19.	B.D. Abdullah	Dir III IBMS - ORG-ARMM
20.	B.C. Fontanella	Acct. - ORG-ARMM
21.	Vivien Harun	BO III - ORG-ARMM
22.	Vic P. Sakuib	Exec. Asst. III IBMS - ORG-ARMM
23.	Ganki Petron	LRCO V - ORT-ARMM
24.	M.T. Milanes	Asst. Regional Treas.- ORT-ARMM
25.	Amil Nor	Cashier V - ORT-ARMM
26.	Julieta Largogan	RO V - ORG-ARMM
27.	Rey Bayonos	CP 3 - ORG-ARMM
28.	Nor_____	ORG-ARMM
29.	Bobby Udat	ORG-ARMM
30.	Naila A. Salik	N.E. II - BPI-ARMM

CONSULTATION WORKSHOP ON THE GOVERNANCE COMPONENT OFFICE OF THE REGIONAL GOVERNOR AND LOCALLY CREATED OFFICES

Date : September 24, 2003
Venue : ORG Conference Room, Cotabato City

	Name of Participants	Position/Office
31.	Jocelyn G. Mejer	Exec. Asst. III IBMS-ODRG-IPS
32.	Elizabeth Nataño	Sr. Stenographer-ORG-ARMM
33.	Julita Aviles	Sten. Rep. III-ORSG-Legal Division
34.	Datu Nur Maridul	Clerk-BPI
35.	Abdurahman I. Sampang II	Legal Officer II - ORSG
36.	Arlie Joy Clarete	Secretary I - ODRG-Ips
37.	Naga B. Mauyag	Legal Officer III - ORSG-ORG-ARMM
38.	Ma. Theresa Sarona	Public Administration Specialist – PKII
39.	Annabelle G. Cajita	Public Administration Specialist – OIDCI

APPENDIX C

CONSULTATION WORKSHOP ON THE GOVERNANCE COMPONENT REGIONAL DEVELOPMENT ADMINISTRATION COMMITTEE (RDAC)

Date : September 25, 2003
Venue : CSC Conference Room, Cotabato City

	Name of Participants	Position/Office
1.	C/Insp. Sambas D. Muhammad	B.O. Budget Officer - Bureau of Fire Protection
2.	Marabene C. Uy	A.O. V - JLURB-ARMM
3.	Raina B. Sembrano	Planning Officer for R&D - DA-ARMM ARC
4.	Taya K. Apcal	Director II - Dep-Ed-ARMM
5.	Lita E. Enok	RD - OCD-ARMM
6.	Baintan Ampatuan	Acting Chief, MICAD - RPDO
7.	Mamintal Indar	P.O. - RPDO
8.	Tatemangcul C. Ao	HRMO - DAR-ARMM
9.	Ma. Violeta Jennylyn Yap	SWO IV - DSWD-ARMM
10.	P/Supt. Pendatun Salilama	C, RPCRD Pro ARMM - PNP
11.	Prof. Datu Yacob Mansul	ADA-President - ARMM
12.	Abdulnasser G. Nul	DMO V - TMS-ORG-ARMM
13.	Gani Petron	LRCO V - ORT
14.	Manuel Ceniza	PO2-TMS - ORG-ARMM
15.	Ricardo R. Engro	Chief, Adm. Div. - NAPOLCOM-ARMM
16.	Mauricio Ceviles	Chief, PDMU - DILG-ARMM
17.	Adams Torres	Director III - CSC-ARMM
18.	Tanhar M. Ahmad	Training Assistant I - ADA-ARMM
19.	Myrna J. Angot	Civil Defense Officer - OCD-ARMM
20.	Commando Pilimpinas	Regional Director - NSO
21.	S/Supt. Alcantara M. Alonto	Regional Director - BSMP-ARMM
22.	Insp. Manuel K. Ampatuan	AC, OPNS BR - BSMP-ARMM
23.	SPO1 Jose F. Pacan	BSMP ARMM
24.	Bailinang Marohombsar	SWO 2 - DSWD-ARMM
25.	A.S. Ahmad	Director III - TMS-ORG-ARMM
26.	K.K. Solaiman	State Auditor IV - COA-ARMM
27.	Iskak K. Paguital	Chief of Info. Division - DAE-ARMM
28.	Ma. Theresa Sarona	Public Administration Specialist – PKII
29.	Annabelle G. Cajita	Public Administration Specialist – OIDCI