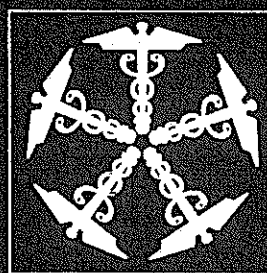


JAPAN INTERNATIONAL COOPERATION AGENCY

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

Final Report



HEALTH SECTOR

December 2003

PKII ENGINEERS
ENGINEERING CONSULTANT

IN ASSOCIATION WITH



ORIENT INTEGRATED DEVELOPMENT CONSULTANTS INC.

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

HEALTH SECTOR

FINAL REPORT

DECEMBER 2003



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ABBREVIATIONS AND DEFINITION OF TERMS

BHS- Barangay Health Stations - smallest health facility in a community.

BHW- Barangay Health Worker- community health volunteers

CDR -Crude Death rate or Mortality Rate- The number of deaths in a year per 1,000 population.

CPR - Contraceptive Prevalence Rate- refers to the proportion of all currently married women reporting current use of any contraceptive device.

Crude Birth Rate or Birth Rate -The number of live births per 1,000 population in a given year. Not to be confused with the growth rate.

District Hospital - in the WHO context is a first level referral hospital with the four (4) major medical services, although not departmentalized (Internal medicine, Surgery, Pediatrics, OB-Gyn) and with appropriate laboratory, other diagnostic, and logistic support services. It also includes a wide variety of interrelated elements that contribute to health in homes, school, work places, and communities through the health and other related sectors (like water supply for example), - (WHO Technical Report Series 819). (See also Annex 4- AO 70-A s. 2002: Hospital Licensing)

Fully Immunized Child - a 9-11 months old child given BCG, 3 doses of DPT and OPV (oral polio vaccine), and measles vaccine.

Growth Rate - The number of persons added to (or subtracted from) a population in a year due to natural increase and net migration expressed as a percentage of the population at the beginning of the time period.

HDI - Human Development Index - a measure of how well a country or a local government unit has performed, not only in terms of real income growth, but also in terms of social indicators of people's ability to lead a long and healthy life, to acquire knowledge. The higher the score, the better the quality of life.

Hilots - traditional birth attendants, or TBA

IMR-infant mortality rate - The number of deaths of infants under age 1 year per 1,000 live births in a given year.

MMR - Maternal Mortality Rate- The number of women who die as a result of pregnancy and childbirth complications per 1,000 live births in a given year.

Morbidity Rate - The rate of illness in a population. The number of people ill during a time period divided by the number of people in the total population

ORS - oral rehydration solution- used for the early management of dehydration

Total Fertility Rate - the average number of children that would be born alive to a woman (or group of women) during her lifetime if she were to pass through her child-bearing years conforming to the age-specific fertility rate of a given year. This rate is often stated as the number of children women are having today.

Unmet Needs for Family Planning - refers to the proportion of currently married women who do not want any more children or who prefer to space births are not using any family planning method.

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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



EXECUTIVE SUMMARY

I. PROJECT TITLE: COMPREHENSIVE BASIC SURVEY ON ARMM- THE HEALTH SECTOR

II. LOCATION AND EXTENT OF THE STUDY

The Autonomous Region in Muslim Mindanao comprising an area of 12,000 square kilometers and a population of 2.9 million. The health sector component dealt mainly with Department of Health of ARMM.

III. BRIEF DESCRIPTION OF THE PROJECT

The project aims to gather and analyze data within the framework of the health system and infrastructure of the Department of Health of ARMM. The output is an overview of the health situation in ARMM with some focus on its health facilities, human resources and identification of possible areas of intervention and or collaboration.

IV. SIGNIFICANT FINDINGS/ ISSUES:

Considering the time frame and security concerns, one can not make sweeping conclusions, nevertheless there are observations/findings which come out strongly. The major health indices show that ARMM has a long way to go to catch up even with the over-all national performance. Utilities like power, water, communications which are assumed to be present are not consistently nor reliably in place and are therefore found wanting in several areas.

In terms of burden of disease, the leading causes are infectious in nature with diarrhea being consistently number one through the years and number 7 as a cause of death in 2001, number 6 in 2002. This is a pathetic figure since oral rehydration as a treatment of diarrhea is not only effective but also cheap. Trauma became the number one killer in 2002 reflecting the peace and order condition of the area. Among the notifiable diseases, TB and malaria consistently remain on top of the list.

Maternal and child health are also areas of concern given that the maternal mortality rate of ARMM is almost double the national average and the infant mortality rate is about 63 % higher than the national average.

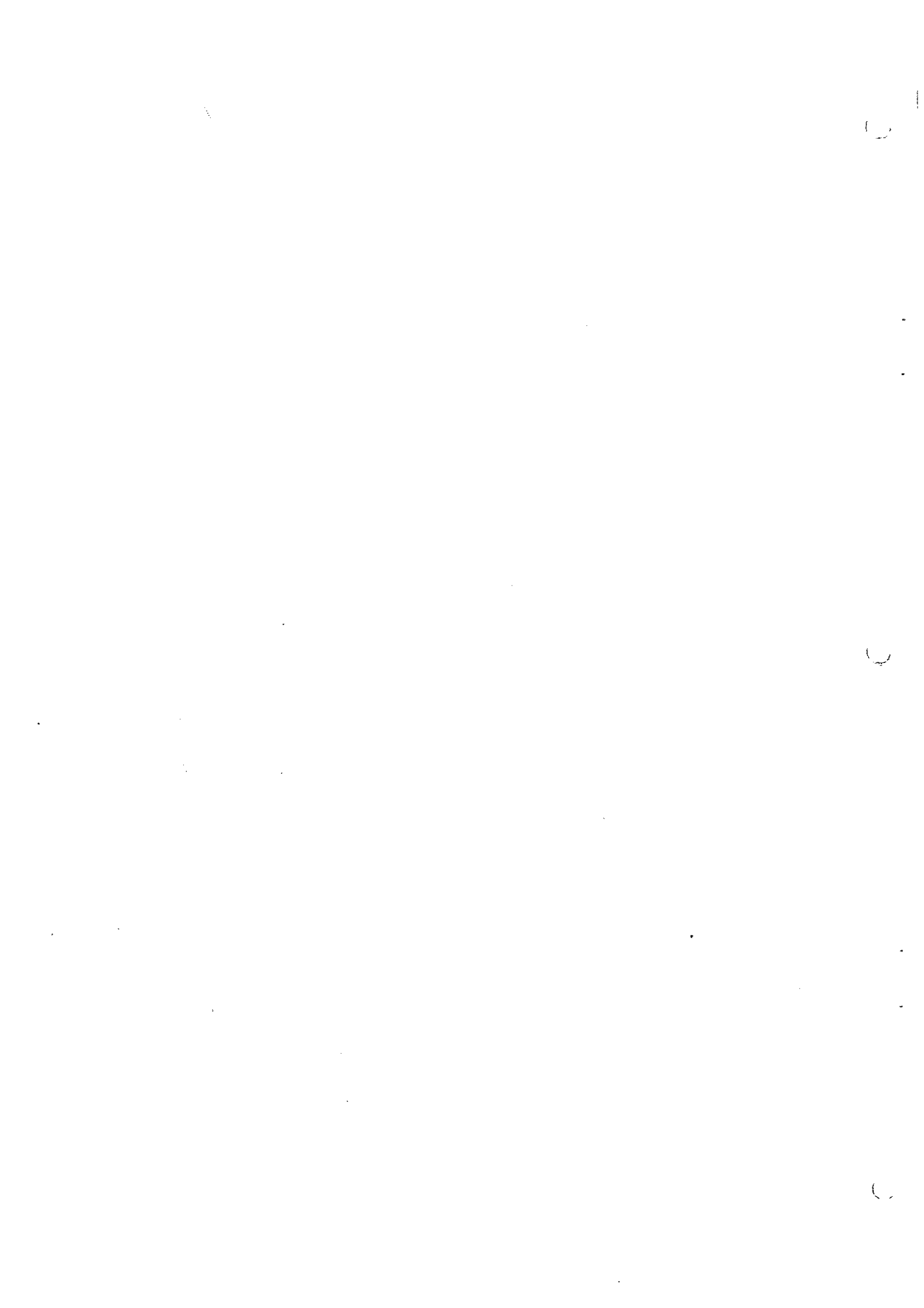
Family planning is a real challenge. The contraceptive prevalence rate is almost 3 times lower than the national figure. Unmet needs of married women in terms of family planning is also almost double than the national average.

Health facilities notably Rural Health Units and District Hospitals are ill-equipped. While it appears that there is adequate manpower in the health sector, the gap is in the availability and distribution of trained health workers especially doctors and nurses.

There is also a need to look more closely into the referral system so as to rationalize scant resources. An efficient and effective referral system will unburden tertiary and secondary care hospitals which are admitting even cases that would have been handled adequately at the primary levels. While there are several opinions on how many hospitals a population should have (WHO- 1 district hospital per 50,000 population), what is more important is the location and accessibility.

There is indeed a window of opportunity to improve the quality of life in ARMM. Broadly the areas of intervention include human resource development, health facility improvement, provision of basic utilities (like safe water!), and other development interventions that will empower the communities economically, socially and wholistically.

CHAPTER 1
INTRODUCTION



1. INTRODUCTION

The purpose of the survey is to clarify the present development constraints and potentials of ARMM in the local health sector, and to explore possibilities of future cooperation therein. The study likewise seeks to identify issues and problems attendant to health service delivery in ARMM, and to present recommendations for JICA's possible cooperation. The study further aims to identify priority areas of cooperation, and possible approaches to the identified issues.

Data for this study were gathered principally from the DOH-ARMM and the various provincial/local health units, and the national DOH central office in Manila. Where appropriate, data was taken from the official websites of the National Statistics Office, Food and Nutrition Research Institute and the official website of the Department of Health. In generating data, the study used various data collection methods such as semi-structured and unstructured interviews, focus-group discussions, surveys, and other quantitative and qualitative data collection strategies. In analyzing data, the study applied both quantitative and qualitative analysis methods taking into account the context of Japan's Support Package to ARMM in exploring possibilities of future cooperation.

The study is limited by the very short time allotted by the project for data gathering and analysis and the over riding security concerns of the areas to be visited. Another limitation is the secondary materials available in the study areas, on which the team had to rely. In some instances, some basic data from the provinces and municipalities differed from those gathered from DOH-ARMM.

Likewise, because of the inaccessibility of some areas especially the island barangays, only thirty (30) of 83 RHUs (or 36.14%) were visited by the enumerators and/or interviewers. A number of the RHUs are not operating, since there are no facilities, and therefore all the health personnel report to the Main Health Center only. In some Rural Health Units, there was no staff present when the team/enumerators came. Issues of security and peace and order also prevented visits to some areas.

Furthermore, since Basilan and Marawi City were not members of ARMM before 2000, there was difficulty obtaining and confirming data from these areas, and checking for compatibility of information.

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CHAPTER 2
THE PHILIPPINE HEALTH SITUATION

2. THE PHILIPPINE HEALTH SITUATION

The health situation in the Philippines has improved through the years. To have a global perspective of how the Philippine stands as against other countries with respect to health conditions, Tables 2-1 to 2- 2 provide an insight.

Table 2-1 Major Demographic Indicators for Mid-2000 in Selected Countries

Country	POPULATION							1999 GNP per Capita US\$	Surface Area (1000 sq.km.)
	Total (in millions)			Birth Rate*	Death Rate*	Annual Rate of Growth	1998 Adult Illiteracy Rate		
	2000*	2025*	1980*						
PHILIPPINES	75.3*	111.5	48.1	27.1	5.6	2.0*	9	1,020	3000
Cambodia	12.2	16.5	6.5	34.6	11.0	2.4	43	260	181
China	1,277.6	1,480.4	984.7	15.4	7.0	0.8	9	780	9,597
Indonesia	212.1	272.4	154.9	21.4	7.3	1.3	9	580	1,905
Japan	126.9	121.2	116.8	9.6	7.5	0.2	-	32,230	3780
Malaysia	23.2	31.0	13.8	24.4	4.4	2.0	9	3,400	330
Singapore	4.2	4.2	2.4	3.5	13.2	4.6	4	29,610	1
Thailand	62.3	72.7	47.0	16.3	5.9	1.0	3	1,960	513
United States	275.6	338.1	227.7	15.0	9.0	0.6	-	30,600	9,364
Vietnam	79.8	108.0	53.7	20.9	6.5	1.4	5	370	332
WORLD	6,055.1	7,920.9	4,453.9	22.0	9.0	1.3	18	4,890	133,572

Sources: United Nations Development Program; National Statistics Office Census 2000; UNESCAP; World Bank

Table 2-2 Other Major Demographic Indicators for Mid-2000 in Selected Countries

Country	Life Expectancy at Birth		Infant Mortality Rate	Total Fertility Rate	Urban Population		HDI (1998)
	Male	Female			Percent Urban	Annual Growth Rate	
PHILIPPINES	67	71	30	3.4	59	3.4	0.744
Indonesia	64	68	44	2.4	41	3.9	0.670
Japan	77	84	4	1.4	79	0.3	0.924
Thailand	71	76	22	1.8	31	2.4	0.745
United States	66	71	35	2.4	24	3.6	0.671
Vietnam	74	80	7	2.1	75	2.0	0.929
WORLD	64	68	57	2.9	45	-	0.721

• HDI – Human Development Index Value

Sources: United Nations Development Program; National Statistics Office Census 2000; UNESCAP; World Bank

The infant mortality rate for the Philippines in 2000 is reported at 30/1,000 live births compared to Indonesia's 44/1,000 and Japan's 4/1,000. ARMM infant mortality rate (IMR) is estimated at 55.1/1,000 live births (year 2000). The Philippines has a maternal mortality rate (MMR) of 0.6/1000 live births and a crude death rate (CDR) of 5.89/1,000 population while ARMM is 1.1/1000 (FSHIS, 2000). Table 2-1 and 2-2 compares the Philippine situation with those of other countries. Table 2-3 shows the vital health indicators for the Philippines.

Table 2-3 Vital Health Indicators – Philippines

Indicator	Philippines
Population (2000)	76,498,735
Population Growth Rate (2000)	2.36
Life Expectancy at Birth (2000)	67.2
Maternal Mortality Rate (2000)	0.6/1,000 LB
Infant Mortality Rate (2000)	30/1000 LB
Crude Birth Rate (2000)	26.78/1000 LB
Crude Death Rate (2000)	4/1,000
Total Fertility Rate (2000)	3.4

Sources: 2000 Census of Population and Housing, NSCB

NSCB Philippine Statistical Yearbook 2000

Differences, however, occur among population groups and certain geographic areas in the Philippines and therefore the over-all data above may not be true in some areas. This study shows the disparity between ARMM and the rest of the country.

2.1 The Current DOH-ARMM Structure

Two landmark events altered the landscape of political governance and health care system of the government with greater impact on Mindanao and, more specifically, the Muslim-dominated areas.

The creation of the Autonomous Region of Muslim Mindanao (ARMM) in November 6, 1990 in effect devolved the different functions of major national government agencies to the Office of the Regional Governor of ARMM. It also ended the armed conflict with the Moro National Liberation Front (MNLF), although it also opened a new front with the conflict with the Moro Islamic Liberation Front (MILF) under the leadership of Hashim Salamat.

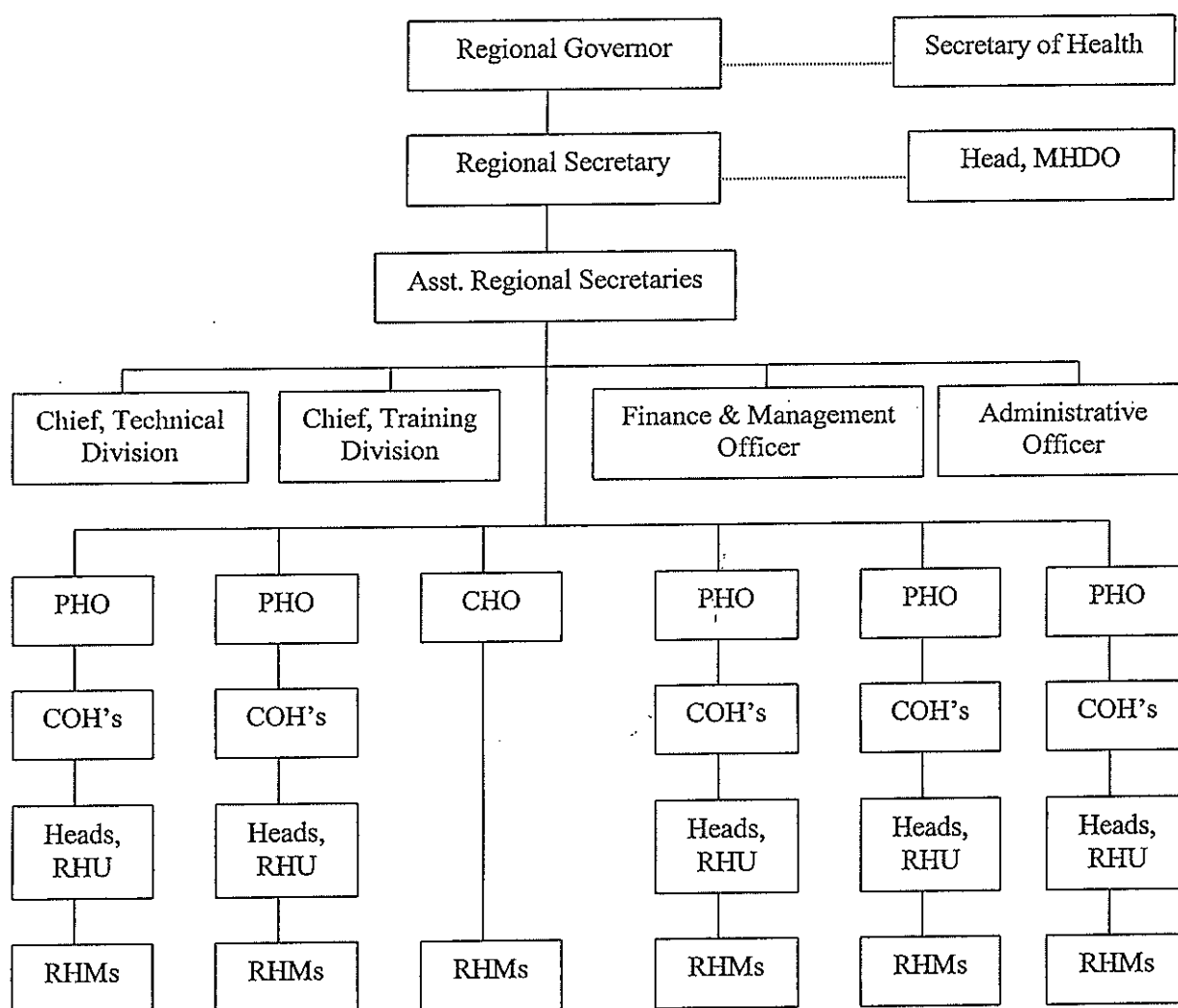
The other landmark event is the Local Government Code of 1991, which took effect in 1993. It devolved the functions and responsibilities of the different line agencies of the national government (except the Department of Education, the Military and the Philippine National Police) to the Local Government Units (LGUs). The delivery of health care services was also devolved to the LGUs with the vision that it will make health care delivery more responsive to the local needs.

There is, however, a significant difference in the devolution of functions as mandated by the Local Government Code and that of ARMM. While the functions of the different national agencies were devolved to the LGUs in the Local Government Code, ARMM, through the Office of the Regional Governor retained its administrative control over such agencies. The Department of Health-ARMM (DOH-ARMM) retained its administrative control over the health care delivery system in contrast to the national DOH, which has devolved its functions to the local government units except for tertiary and special hospitals whose control remained with the national government. LGUs in regions outside ARMM exercised administrative control over the health facilities notably the Rural Health Units (RHUs) and District/ Provincial Hospitals.

In the case of ARMM, all health facilities remained under the control and supervision of DOH-ARMM. The chain of command starts with the DOH-ARMM Secretary of Health, the Provincial Health Officer, which runs both the hospital and public health programs, the District Health Officer which runs the District Hospital and the Rural Health Units or RHUs and which are managed by a Rural Health Physician. The RHUs, in turn, supervise the Barangay Health Stations (BHS). Figure 2-1 below shows the organizational structure of DOH-ARMM.

National programs like TB and other programs continue to be under the control of the national DOH except in terms of service delivery, meaning, administratively it is under the control of national DOH but in terms of implementation, this is done through the health facilities nationwide.

Figure 2-1 The Organizational Structure of DOH-ARMM



Source: Department of Health-ARMM (Legend: MHDO- Mindanao Health and Development Office; PHO- Provincial Health Officer; CHO- City Health Officer; COH- Chief of Hospital, RHU- Rural Health Unit, RHM- Rural Health Midwife)

The other unique aspect of hospitals in ARMM is that, in some areas, some hospitals serve the ARMM constituents but without any financial obligation of maintaining such hospitals on the part of ARMM. These hospitals are facilities under the supervision and control of the national DOH. These facilities include the following:

- ◆ Cotabato Regional and Medical Center in Cotabato City where the Office of the Regional Governor of ARMM is located. Cotabato City is not part of ARMM, but is within the geographic boundaries of ARMM;
- ◆ Zamboanga Medical Center - Zamboanga City in Western Mindanao;

- ◆ Amai Pakpak Medical Center – Marawi City, Lanao del Sur
- ◆ Basilan General Hospital - Isabela, Basilan.

The abovementioned facilities are described in the later part of the report. Technically such facilities are not part of the study but were included nevertheless not only because of their strategic location but also because health services does not recognize geographic boundaries.

2.2 General Health Profile of ARMM

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.

2.2.1 Human Development Index (HDI)

The Human Development Index (HDI) has been recognized as an important indicator of human development. Specifically, the HDI provides a measure of how well the provinces have performed, not only in terms of real income growth, but also in terms of social indicators of people's ability to lead a long and healthy life, to acquire knowledge and skills, and to have access to the resources needed to afford a decent standard of living.

The five provinces in the ARMM are ranked as the five lowest in the Philippine Human Development Index for the year 2000. Out of seventy-seven provinces, Lanao del Sur is ranked 72, Maguindanao is 73, Basilan is 74, Tawi-Tawi is 76 and Sulu is 77. For the life expectancy indicator, the top five ranking provinces have a life expectancy range of 67.7-70 years. The lowest five provinces have a life expectancy range of 51-61 years only.

The functional literacy rate of the five highest provinces ranges from 88.7% - 93%, while that of the five lowest provinces ranges from 48% - 68.7%. Sulu was consistently at the bottom end of the HDI list for CY2000, CY1997 and CY1994. Among the last ten provinces, Tawi-Tawi and Basilan experienced a worsening of their state of human development in 2000. Tawi-Tawi's

HDI declined by 9.3 percent from its index in 1997 and Basilan, by 3.3 percent. In addition, of the bottom 10 provinces, eight were in Mindanao.

Table 2-4 The Bottom Ten Provinces of the Philippines Human Development Index – 1994, 1997, 2000

Province	2000		1997		1994		Percent Change	
	HDI	Rank	HDI	Rank	HDI	Rank	2000-'97	'97-'94
Maguindanao	0.461	73	0.416	75	0.449	71	10.8	(7.3)
Lanao del Sur	0.464	72	0.415	76	0.442	72	11.8	(6.1)
Basilan	0.425	75	0.439	73	0.423	73	(3.3)	3.8
Sulu	0.351	77	0.336	77	0.357	76	4.3	(5.9)
Tawi-Tawi	0.390	76	0.430	74	0.387	75	(9.3)	11.1
Ifugao	0.461	74	0.452	72	0.406	74	1.9	11.3
Agusan del Sur	0.482	71	0.482	70	0.459	70	-	5.0
Samar	0.511	70	0.493	67	0.462	67	3.6	6.7
Lanao del Norte	0.512	69	0.470	71	0.473	65	8.8	(0.6)
Sarangani	0.516	68	0.494	66	0.529	46	4.5	(6.6)

Source: NSCB Human Development Report, 2000

2.2.2 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). The seeming discrepancy in the data especially on crude death rate (CDR) in Table 2.5 is the fact that the data from FHSIS are data emanating from the government health facilities only while the data coming from NSCB (National Statistics and Census Board) are consolidated data and may thus include other sources. It is also important to note that data on death rates in Muslim areas maybe under reported because of the practice among Muslims to bury their dead within 24 hours often without the benefit of a burial permit (which requires a death certificate). In an interview with the Office on Muslim Affairs in Region XI, about 5-10 clients per month come to their office asking for certifications of birth and death for various legal reasons like death benefits or for travel purposes (birth certificate for passport for example).

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

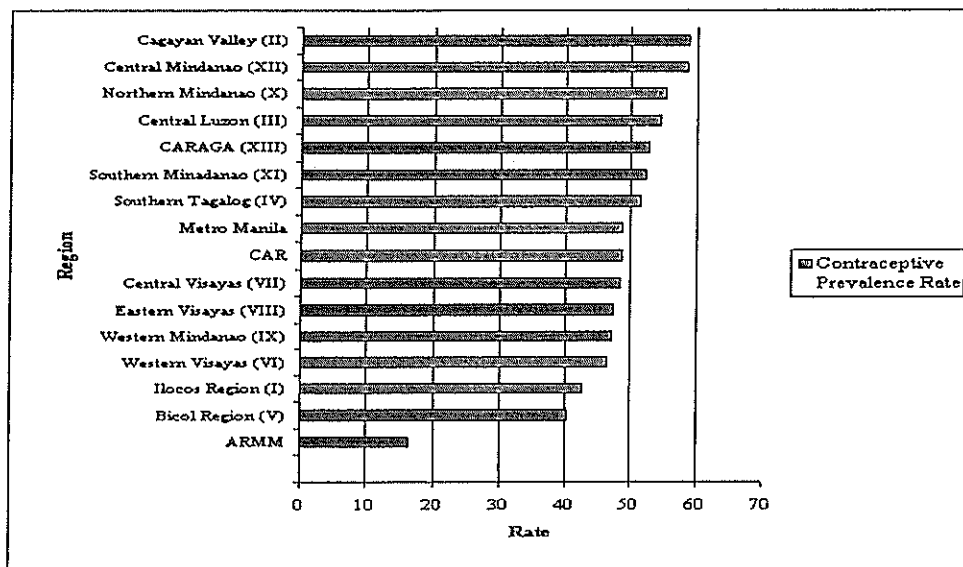
Indicator	National	ARMM
Population (2000)	76,498,735	2,951,188
Population Growth Rate (2000)	2.36	3.86
Life Expectancy at Birth (2000)	67.2	57.2
Maternal Mortality Rate (2000)	0.6/1,000 LB	1.1/1,000 LB
Infant Mortality Rate (2000)	30/1000 LB	55.1/1000 LB
Contraceptive Prevalence Rate (CPR)	48.8	16.2
Unmet Needs for Family Planning	20.5	35.0
Crude Birth Rate (2000)	26.78/1000	27.36/1000
Crude Death Rate (2000)	5.89(4*)	9.51(1.7*)
Poverty Incidence	31.8	71.3
Total Fertility Rate (TFR- 2000)	3.4	4.61

Source: DOH-ARMM (Consolidated data- NSCB); * FHSIS-2000

(LB – live birth)

A closer look at the vital health indices highlights certain critical issues as far as family planning is concerned. The population growth rate of ARMM is 3.86% compared to the national growth rate of 2.36%. The total fertility rate of ARMM is 4.61 as against the national which is 3.73. The contraceptive prevalence rate (CPR refers to the proportion of all currently married women reporting current use of any contraceptive device) in ARMM is about three times lower than the national average which is 48.8, which, by international standards, is already low (see figure below for comparison with other regions). The unmet needs of family planning is also almost double the national figure (ARMM-35.0 vs. National-20.5). Unmet needs for family planning refers to the proportion of currently married women who do not want any more children or who prefer to space births are not using any family planning method. Such figures do not augur well for the family planning program of DOH-ARMM. There are several factors that one can mention, among which are: budgetary allocations for the Family Planning Program, cultural and religious biases (e.g., children are a blessing from God, therefore, the more children, the better), varied interpretations of the Qur'anic scripture and many others. In the coming years, the decision of USAID to discontinue its support for the supply of contraceptive materials will even have dire consequences. Poor performance in family planning is also reflected in the number of current users of Family planning which has declined from 72,164 in 2000 to 55,692 in 2001. This shows a decline of about 16,472 current users. While there is an increase in the number of new users in 2001, it is not really that significant (1,456 new users more than in 2000). (See Annex 1- FHSIS Annual Report 2000, 2001)

Figure 2-2 Comparative Contraceptive Prevalence Rate (CPR) Among Regions



Source: DOH

Contraceptive prevalence (CPR) is 33% lower and the unmet needs for family planning is 58% higher than the national figure. The latter figure together with CPR indicates poor performance in terms of family planning.

Latest health indices for the ARMM and its provinces for the year 2001 indicate some improvement as shown by Tables 2-6 to 2-9. There is a seeming “improvement” in crude death rate from 1.7 in 2000 and 1.48 in 2001. Note, however, that Basilan and Marawi are not yet included in this data since they were not part of ARMM at the time the data was compiled.

Table 2-6 Comparative Mortality Report for ARMM – 2000

AREA	Deaths				Maternal Deaths		Infant Deaths	
	Male	Female	Total		No.	Rate	No.	Rate
			No.	Rate				
PHILS	174,107	124,233	308,634	4.0	1,087	0.6	20,928	12.3
Region 12	4,371	2,770	7,141	2.7	41	0.8	391	7.3
ARMM	2,115	1,499	3,614	1.7	58	1.1	415	7.9

Table 2-7 Crude Birth and Death Rates in ARMM – 2001 (by province)

Province	Population	BIRTH		DEATH	
		Number	Rate	Number	Rate
Maguindanao	729,515	19,981	27.25	974	1.34
Lanao del Sur	638,188	16,855	26.41	1,061	1.66
Sulu	599,973	8,076	13.45	668	1.11
Tawi-Tawi	278,566	7,246	26.01	617	2.21
ARMM	2,246,242	52,049	23.17	3,320	1.48

Source: MFHIS; Rate is Per 1,000 population

Table 2-8 Comparative Mortality Report for ARMM – 2001

AREA	Deaths				Maternal Deaths		Infant Deaths		Deaths due to Neonatal Tetanus	
	Male	Female	Total		No.	Rate	No.	Rate	No.	Rate
			No.	Rate						
PHILS	188,880	134,736	323,616	4.2	1,086	0.6	18,940	11.3	479	0.3
Region 12**	4,221	2,744	6,965	2.6	56	1.2	331	6.8	8	0.2
ARMM	1,999	1,320	3,319	1.5	70	1.3	332	6.2	22	0.4

** Incomplete report

Source: MFHIS

Table 2-9 Maternal and Infant Death Rate in ARMM–2001 (by province)

Province	Livebirths	DEATH			
		Maternal		Infants	
		Number	Rate	Number	Rate
Maguindanao	19,881	16	0.80	84	4.23
Lanao del Sur	16,855	17	1.01	98	5.81
Sulu	8,067	31	3.84	29	3.59
Tawi-Tawi	7,246	6	0.83	121	16.70
ARMM	52,049	70	1.34	332	6.38
Philippines		1,086	0.6	18,940	11.3

Source: MFHIS; Per 1,000 livebirths

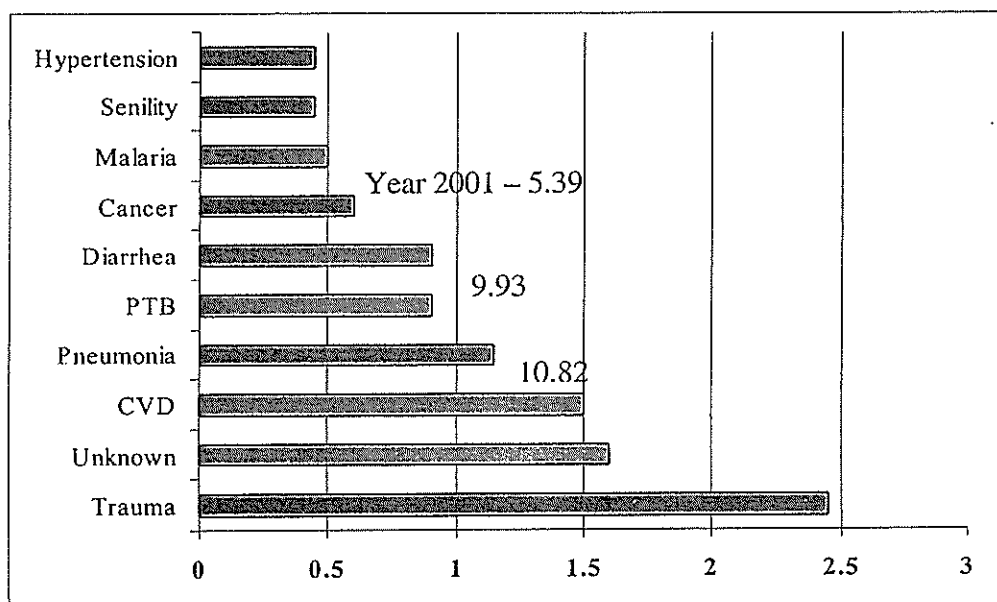
Table 2-10 Ten Leading Cause of Mortality per 100,000 Population in ARMM, 2001

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

Source: MFHSIS

The data on the ten leading causes of mortality 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 below. “Unknown causes” is a cause of concern in terms of data recording and so is senility.

Figure 2-3 Ten (10) Leading Causes of Deaths Per 100,000 Population – ARMM (2002)



Note: X axis times 10
Source: DOH-ARMM

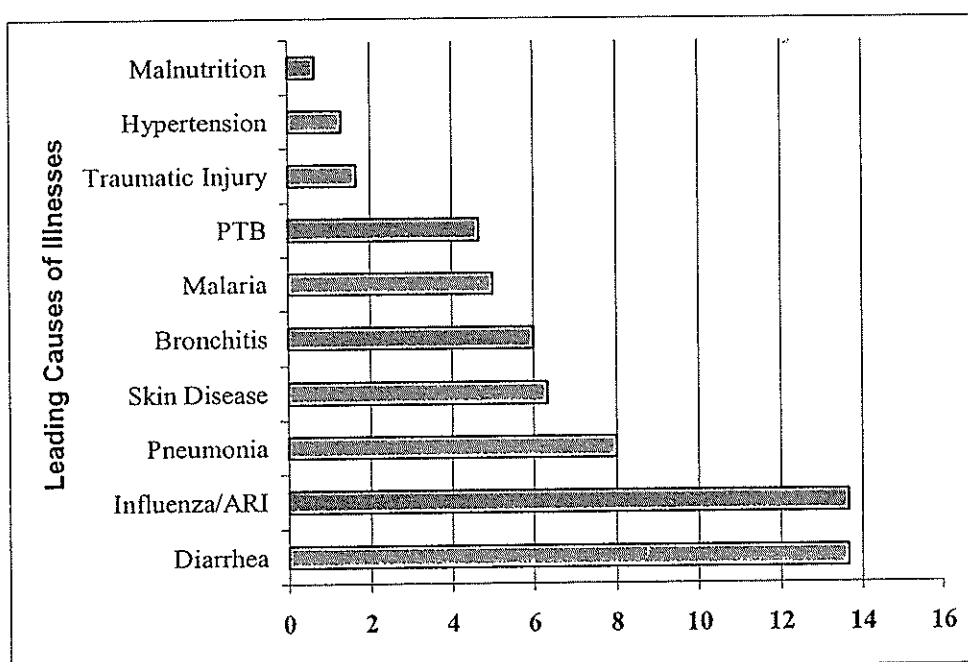
Table 2-11 Ten Leading Causes of Illnesses per 1000 Population – ARMM-2001

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

The top three causes of morbidity or illness are all infectious in nature and 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 (see Annex 1-FSHIS).

Figure 2-4 Ten (10) Leading Causes of Illnesses Per 1,000 Population – ARMM (2002)



Source: DOH-ARMM Report

2.2.3 Leading Notifiable Diseases

Of the twenty-six notifiable diseases, three diseases come out with high rates in ARMM, namely TB, malaria and hypertension. The greatest number of malaria is reported in Tawi-tawi, followed by Sulu. PTB and malaria are the top two diseases and a major concern in ARMM, with hypertension beginning to catch up. This trend is worth looking into and could be a subject of more intensive studies.

Table 2-12 Leading Notifiable Diseases

Notifiable Diseases	Philippines (2002 Only) No./Rate	ARMM 1999 No./Rate	ARMM 2000 No./Rate	ARMM 2001 No./Rate
1) TB, All forms				
a) Pulmonary TB	126,489/165.7	No data	2,871/131.3	4,509/202.9
b) TB Meningitis	404/0.5	No data	15/0.7	4/0.2
c) TB, other forms	6,377/8.4	No data	607/27.8	196/88
2) Malaria	50,869/66.6	No data	13,307/608.5	10,071/453.1
3) Hypertension	279,992/366.7	2,785/129.5	7,552/345.6	11,945/537.4

Source: FHSIS

Table 2-13 TB-2000

	TB, Pulmonary (No./Rate)	TB Meningitis (No./Rate)	TB, Other Forms (No./Rate)
Philippines	126,489/165.7	404/0.5	6,337/8.4
Region XII	4,262/160.2	46/1.7	20/0.8
ARMM	2,871/131.3	15/0.7	607/27.8

Source: FHSIS 2000

Table 2-14 TB-2001

	TB, Pulmonary (No./Rate)	TB Meningitis (No./Rate)	TB, Other Forms (No./Rate)
Philippines	110,841/142.2	462/0.6	11,494/14.7
Region XII	4,474/164.3	1/0.04	115/4.2
ARMM	4,509/202.9	4/0.2	196/8.8

Source: FHSIS 2001

Table 2-14 shows a marked increase in the rate of PTB cases in ARMM, from 131.3 in 2000 to 202.9 in 2001. This dramatic increase may be attributed to many factors (e.g., better case-finding, evacuation of some communities due to armed conflict situations, etc.), although none are verified.

There are likewise sporadic outbreaks of measles, notably in May and July 2002 in Pata, Sulu, in Laminusa and Siasi, Sulu, and in Bongao, Tawi-Tawi.

In 2002, there were also significant casualties due to the armed conflict in Sulu, Maguindanao and Lanao. Between August and December 2002, about 15,700 deportees from Malaysia arrived in Tawi-Tawi. This also unduly burdened the local health system.

2.3 Nutrition Profile Of Children In ARMM – 1998

The nutrition profile of children in the ARMM for 1998, the latest year for which comprehensive data is available, is summarized below:

- ◆ 29 in every 100 preschool-age children (0-5 years) are underweight; 70 in every 100 are normal; and 1 in every 1000 children is overweight, based on the International Reference Standards;
- ◆ 5 in every 10 children (6 months to 5 years of age) are afflicted with iron deficiency anemia;
- ◆ 4 in every 10 children (6 months to 5 years) have low to deficient vitamin A levels; and
- ◆ 2 in every 10 children (6 to 12 years) have iodine deficiency disorders.

Comparative Prevalence of Malnutrition in ARMM with Other Regions

While the Bicol Region appears to be the worst-off in underweight prevalence having the highest proportion with 37.8% followed by Western Visayas at 35.2, ARMM has an alarmingly high prevalence level (42.0%) for underheight.

Table 2-15 Prevalence of Malnutrition Among 0-5 Year-Old Children in Selected Regions – 2001

Region	Underweight	Underheight	Thinness	Overweight for Age
PHILIPPINES	30.6	31.4	6.3	1.0
NCR	20.3	20.0	5.2	2.5
Central Visayas (VII)	28.3	30.2	5.8	1.0
Western Mindanao (IX)	31.8	35.5	8.4	0.3
Northern Mindanao (X)	34.1	36.9	5.7	0.3
Southern Mindanao (XI)	32.3	35.4	4.3	0.1
Central Mindanao (XII)	30.2	29.0	8.8	1.0
CARAGA	33.5	36.0	7.7	0.1
ARMM	27.9	42.0	6.1	1.4

Source: Food & Nutrition Research Institute (FNRI) 2001

2.4 Child Care in ARMM – 2000

While in terms of immunization, the performance of ARMM is comparable with the national data, subsequent data has shown that its performance has declined from 85.91 in 2000 to 62.18 in 2002 as shown in Figure 2-5.

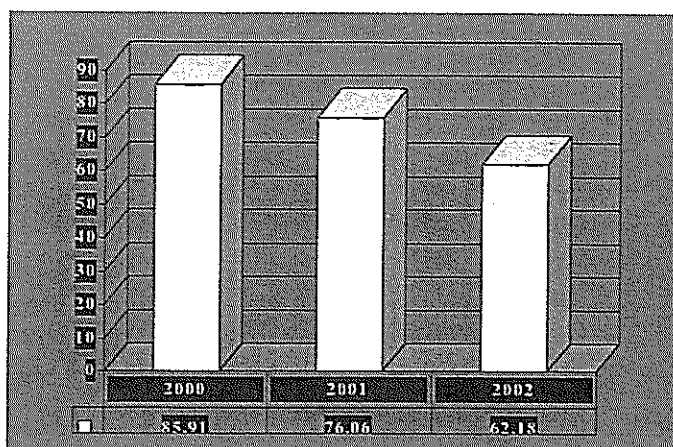
Table 2-16 Immunization Performance of ARMM Compared to Selected Regions - 2000

AREA	Fully Immunized Child (9-11 mos.)		Infant given 3 rd dose of Hepa B		Diarrhea cases given ORS	
	No.	%	No.	%	No.	%
PHILS	1,979,034	86.4	142,621	6.2	746,558	24.1
Region 12	61,418	78.2	2,190	2.7	28,039	26.0
ARMM	56,855	86.7	1,279	1.9	32,211	36.3
CARAGA	54,353	82.9	2,186	3.3	13,746	15.5

AREA	Pneumonia cases given Tx		Children 9-11 mos. Given Vitamin A		Children 12-59 mos. Given Vitamin A.	
	No.	%	No.	%	No.	%
PHILS	528,141	93.9	1,760,380	76.9	8,655,675	101.2
Region 12	19,188	95.5	56065	70.2	271,988	91.3
ARMM	20,174	104.0	63,526	96.8	244,708	99.9
CARAGA	15,073	74.1	48,655	74.2	237,772	97.2

Source: FHSIS, 2000

Figure 2-5 Percent of Fully Immunized Child (FIC)
ARMM, 2000-2002



Source: DOH-ARMM

2.5 Maternal Care

Maternal care in the ARMM Region is severely lacking. This is evidenced by the fact that the maternal mortality rate for ARMM in 2000 was 1.1/1,000 LB and infant mortality rate was 55.1/1,000 LB. The role of midwives has metamorphosed from the traditional role as caregiver of pregnant and post-partum women into an all-around person. Rural Health Midwives (RHMs) previously tasked with pre-natal, natal and post-natal care are now tasked with carrying out all the health programs in which the Provincial Health Office is involved. This leaves the midwives limited time to actively monitor the pregnancies and deliveries of pregnant women. This is significant because the preferred mode of delivery in ARMM region is still home delivery.

The highest rate of maternal deaths in 2000 was reported by Lanao del Sur (1.72), with Sulu as the lowest (.69).

Table 2-17 Deliveries By Attendance, ARMM, 2000

AREA	Total Deliveries	Doctors		Nurses		Midwives		Trnd Hilot		Untrnd Hilot		Others	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ARMM	52,600	1,513	2.9	681	1.3	25,784	49.0	18,752	35.7	5,472	10.4	398	0.8

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Table 2-18 Deliveries By Attendance, Philippines, Region XII and ARMM, 2001

AREA	Total Deliveries	Doctors		Nurses		Midwives		Trnd Hilot		Untrnd Hilot		Others	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
PHILIPPINES	1,682,737	454,291	27.0	22,138	1.3	685,915	40.8	448,048	26.6	60,521	3.9	11,824	0.7
Region 12**	48,412	8,409	17.4	266	0.5	17,416	36.0	18,694	38.6	3,282	6.8	345	0.7
ARMM	52,064	2,147	4.1	1,002	1.9	22,677	43.6	18,630	35.8	6,284	12.1	1,324	2.5

**Incomplete report

Tables 2-17 and 2-18 show that almost half of all deliveries in ARMM are assisted by midwives, (49% in 2000 and 43.6% in 2001), either in the RHU or at home. This is followed by deliveries assisted by trained hilots (Traditional birth attendants, or TBAs), usually at home.

In 2001, untrained birth attendants assisted 12% of deliveries. This increases the risk of maternal mortality and incidence of neonatal tetanus since these hilots have not been trained in the aseptic method of delivery. The training of more TBAs will minimize this risk.

It should be noted that there is a 2.2% increase in deliveries assisted by other persons (e.g., relatives, etc.) in 2001. This may be due to the armed conflict in Maguindanao in 2001 which resulted in the displacement of hundreds of families.

Table 2-19 Maternal Care, ARMM, 2000

AREA	Preg. W/3 or more PNV		Preg. Given TT2 plus		Postpartum women w/1 PP visit		Lactating given Vitamin A		Women 15-49 yrs. Given iodized oil cap.	
	No.	%	No.	%	No.	%	No.	%	No.	%
ARMM	55,288	72.2	56,210	73.4	53,234	81.1	47,552	72.5	40,074	7.3

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Table 2-20 Maternal Care, Philippines, Region XII and ARMM, 2001

AREA	*Preg. W/3 or more PNV		*Preg. Given TT2 plus		*Postpartum women w/1 PP visit		*Lactating given Vitamin A		*Women 15-49 yrs. Given iodized oil cap.	
	No.	%	No.	%	No.	%	No.	%	No.	%
PHILS	1,714,903	62.9	1,477,216	54.2	1,640,048	70.2	1,293,567	55.3	2,777,684	14.3
Region 12	51,575	54.1	49,956	52.4	48,643	59.5	44,536	54.5	75,619	11.1
ARMM	50,561	65.0	43,165	55.5	52,862	79.3	47,563	71.3	63,967	11.5

*Legend:

- Preg. W/3 or more PNV – Pregnant women having gone on 3 or more Pre-Natal Visits
- Preg. Given TT2 plus – Pregnancy given at least two doses of Tetanus Toxoid
- Postpartum women w/1 PP visit – Postpartum women with (checkup) at least 1 visit to the RHU after delivery
- Lactating given Vitamin A- Breastfeeding women given Vitamin A
- Women 15-49 yrs. given iodized oil capsule – women 15-49 years old given an iodized oil capsule (for iodine supplementation)

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CHAPTER 3
HEALTH WORKERS/MANPOWER



3. HEALTH WORKERS/MANPOWER

The distribution of the health manpower of the DOH-ARMM office shown in Table 3-1 below.

Table 3-1 Number of Personnel in DOH-ARMM – 2001 By office/unit

Office/Unit	Number of Personnel	Population/Personnel	Land Area (ha)/Personnel
Regional Office	76	34,821	17,020
Maguindanao	402	1,789	1,255
Lanao del Sur	383	1,629	985
Basilan	170	1,871	491
Sulu	442	1,319	369
Tawi-Tawi	278	985	392
Marawi City	11	11,288	-
Total	1,762	1,261	734

No. of Health Workers in ARMM	ARMM		National	
	Number	Population/Personnel	Number	Population/Personnel
Doctors	73	29,958	2,943	25,942
Dentist	22	99,407	1,943	39,294
Nurses	109	20,064	4,724	16,162
Midwives	381	5,740	16,451	4,641
Nutritionist	11	198,813	1,634	46,725
Eng/SI	107	20,439	3,310	23,066
Med Tech	38	57,551	1,467	52,044
Active BHWs	1,965	1,113	194,577	392
Dental Aides	18	121,497	1,140	66,972
Trained Birth Attendant	761	2,874	38,743	1,971

Source: DOH-ARMM

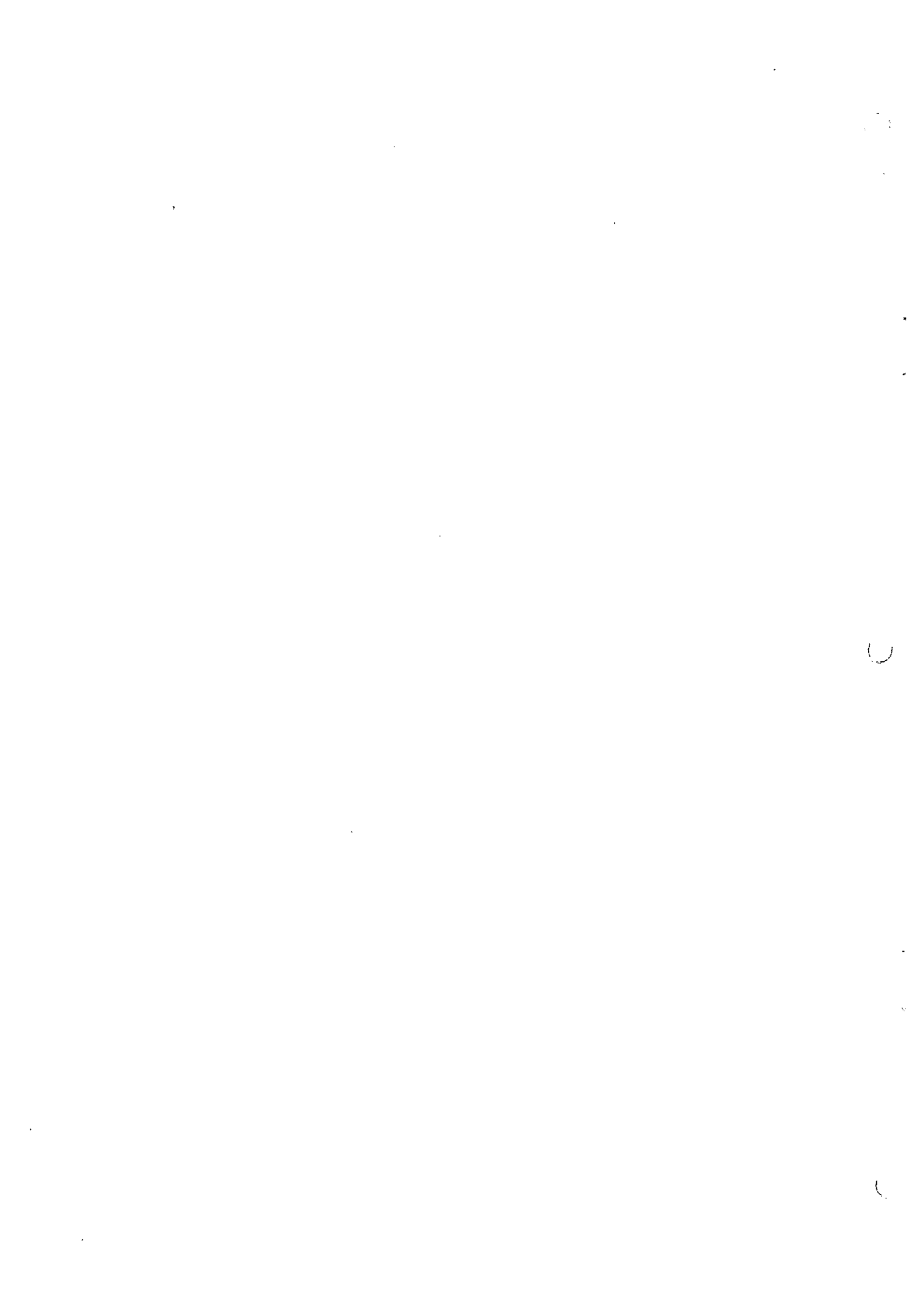
While it appears that there is adequate manpower, the more important issue is really the lack of health workers notably doctors and nurses and their distribution. It is a well-known fact that nurses and doctors are more concentrated in urban rather than rural areas. Having a doctor of one per 15,000 to 20,000 population would be ideal (WHO 1:10,000) but as in most areas of the Philippines, this is not feasible.

The Republic Act 1082- Rural Health Act, mandates the following health staff to population ratio as given in the table below (Recommended ratio also in Sentrong Sigla)

**Table 3-2 Health Staff to Population Ratio
(Based on Republic Act No. 1082)**

Category	LGU/Catchment Population	Personnel			
		Doctor	Nurse	Midwife	RSI
I	2,000 or less	-	-	1	1
II	2,001 – 5,000	-	1	1 ^a	1 ^a
III	5,000 – 10,000	1	1	1	1
IV	10,001 – 20,000	1	1	2	1
V	20,001 – 30,000	1	2	2	1
VI	30,001 – 40,000	2	2	2	2
VII	40,001 – 50,000	2	2	3	3
VIII	50,001 and over	2	4	4	3

CHAPTER 4
FACILITIES OF RURAL HEALTH UNITS



4. FACILITIES OF RURAL HEALTH UNITS

A Rural Health Unit (RHU) is in charge of delivering primary levels of health care. Its main task is to provide preventive and promotive aspects of public health. The RHU is usually manned by a physician (or a nurse in areas where there are no doctors), who is assisted by at least one midwife. The main health center is usually located in the Poblacion, with satellite stations called Barangay Health Stations in the nearby barangays within the catchment areas. These are manned by the Rural Health Midwives, who are assisted by community volunteers called Barangay Health Workers (BHWs). They deliver primary care services such as pre-natal, natal and post-natal care, immunization, growth monitoring of infants and children, and dispensing TB medication. Cases needing a higher level of care are referred to the Main Health Center or to the District and/ or Provincial Hospitals

Table 4-1 Number of Rural Health Units and Barangay Health Stations in ARMM – 2001 (By province/city)

Province	Municipality/City	RHU/CHO	Barangay	BHS
Maguindanao	22	21****	467	175****
Lanao del Sur	38	25	1,068	88
Basilan	6	8	216	58
Sulu	18	18	410	54
Tawi-Tawi	10	12*	203	42
Marawi City	1	1	96	4
TOTAL	95	76	2,460	421

Note: * - Number of Sentrong Sigla Facilities (Sentrong Sigla is a seal of quality given by DOH)
Source: DOH-ARMM

Table 4-2 Number of Rural Health Units and Barangay Health Stations in ARMM Covered by the Study (By province/city)

Province	No. of RHUs/CHOs	No. of RHUs/CHOs covered by the Study
Maguindanao	21	7
Lanao del Sur	25	12
Basilan	8	2
Sulu	18	5
Tawi-Tawi	10	3
Marawi City	1	1
Total	83	30

According to the officer-in-charge of DOH-ARMM Secretary Dr. Lampa Pandi, he envisions RHUs as centers for the following services:

- ◆ Maternal and Child Health;
- ◆ Pulmonary Tuberculosis Control;
- ◆ Malaria Control; and
- ◆ Environmental Health and Disaster Preparedness.

His plan is to downgrade non-performing hospitals and to put up Maternal and Child Health (MCH) centers in their place. An MCH Center will essentially be a birthing center, with the adjunct facilities for pre-natal, natal and post-natal care, and infant care. Emergency medical treatment shall also be provided.

4.1 Infrastructure/Building

Of the thirty RHUs covered by the study, twenty-nine (29) or 97% are easily accessible to the public. This means that there are road networks leading to the health facility and that public transportation is cheap and/or readily available. When RHUs are inaccessible, the patients are forced to hire expensive transportation or walk a long way to reach it. Twenty-seven (27) or ninety percent have well-defined catchment areas.

Table 4-3 Accessibility and Catchment Areas of RHUs

RHU	Accessibility	Catchment Area
Maguindanao		
Shariff Aguak	accessible	clear
Ampatuan	accessible	clear
Upi	accessible	clear
Datu Paglas	accessible	not clear
Parang	accessible	clear
Sultan Kudarat	accessible	not clear
Barira	accessible	clear
Lanao del Sur		
Balindong	accessible	clear
Piagapo	difficult to access	not clear
Masiu	accessible	clear

RHU	Accessibility	Catchment Area
Marantao	accessible	clear
Taraka	accessible	clear
Wao	accessible	clear
Poma Bayabao	accessible	clear
Tamparan	accessible	clear
Malabang	accessible	clear
Kapatagan	accessible	clear
Ditsaan Ramain	accessible	clear
Binidayan	accessible	clear
Basilan		
Lamitan	accessible	clear
Lantawan	accessible	clear
Sulu		
Jolo	accessible	clear
Pangutaran	accessible	clear
Taglibi, Patikul	accessible	clear
Indanan	accessible	clear
Parang	accessible	clear
Tawi-Tawi		
Simunul	accessible	clear
Sitangkai	accessible	clear
Bongao	accessible	clear
Marawi		
CHO Marawi	accessible	clear

Table 4-4 Physical Condition of RHUs

RHU	Adequate & Clean Space	Good	Needs Repair	For Replacement	For Expansion
Maguindanao	5	2	1	1	4
Shariff Aguak				1	
Ampatuan	1	1			
Upi			1		1
Datu Paglas	1				1
Parang	1				1
Sultan Kudarat	1				1
Barira	1	1			
Lanao del Sur	9	4	2	1	7
Balingdong				1	1
Piagapo					1
Masiu	1		1		
Marantao	1	1			
Taraka	1	1			
Wao	1				1
Poma Bayabao	1				1
Tamparan					1
Malabang	1		1		1
Kapatagan	1	1			
Ditsaan Ramain	1	1			
Binidayan	1				1
Basilan	2	0	0	1	1
Lamitan	1			1	
Lantawan	1				1
Sulu	4	1	2	0	2
Jolo					1
Pangutaran	1				1
Taglibi, Patikul	1		1		
Indanan	1	1			
Parang	1		1		
Tawi-Tawi	3	3	1	0	0
Simunul	1	1			
Sitangkai	1	1	1		
Bongao	1	1			
Marawi	1	0	1	0	0
CHO Marawi	1		1		
Total	24	10	7	3	14

RHU	Water	Power	Phone	Ambulance	Note
Lanao del Sur	6	6	6	3	
Balindong	0	0	0	0	
Piagapo	0	0	0	0	
Masiu	1	1	1	1	
Marantao	0	0	0	0	
Taraka	1	1	1	0	
Wao	1	1	1	0	
Poma Bayabao	0	0	0	0	
Tamparan	1	1	1	1	Water not potable, erratic power supply, generator as backup.
Malabang	1	1	1	1	
Kapatagan	0	0	0	0	
Ditsaan Raman	1	1	1	0	
Binidayan	0	0	0	0	
Basilan	1	1	0	1	
Lamitan	1	1	0	0	
Lantawan	0	0	0	1	Ambulance is being used by the Mayor
Sulu	2	1	1	2	
Jolo	1	1	0	0	
Pangutaran	0	0	1	0	Generator and satellite phone available; water has to be fetched from a nearby barangay
Taglibi, Patikul	0	0	0	1	
Indanan	0	0	0	1	
Parang	1	0	0	0	
Tawi-Tawi	3	3	1	0	
Simunul	1	1	0	0	
Sitangkai	1	1	0	0	
Bongao	1	1	1	0	
Marawi	1	1	0	0	
CHO Marawi	1	1	0	0	
Total for ARMM	16	16	8	7	

Table 4-5 shows that 47% of the RHUs covered by the study do not have electricity and potable water, 77% do not have telephones and 80% do not have ambulances.

Potable water is not enjoyed by fourteen (14) of the thirty (30) RHUs covered by the study. The RHU in Pangutaran has a generator but the thirteen (13) other RHUs do not have any power source. Only seven (7) and six (6) RHUs are equipped with telephone lines and ambulances, respectively. The staff use their personal cellular telephones to aid in communication. While power supply is available, most often it is erratic even in areas where the power source is in their area, e.g. Lanao del Sur.

4.4 Health Services

Health service delivery is mainly limited to the preventive and promotive aspects of health care. Maternal and Child health involves pre-natal natal and post-natal care, growth monitoring, administration of vitamin and mineral supplements, and immunization. Information, education and communication activities include Mothers' Classes, Nutrition Month events, supplemental feeding (when food supplements are available through donations), etc.

Very few RHUs are able to provide emergency care because of the lack of medical professionals (physicians and nurses), medical equipment and/or medicines and life-saving drugs. Emergency care is usually limited to preparation of patients for transport to a referral facility. Table 4-5 shows that of the 30 RHUs covered by the study only thirteen (43%) are capable of providing emergency care while twenty-three (77%) have to take patients to hospitals/other medical facilities.

Table 4-6 Health Services Available in RHUs

RHU	MCH	Prev. & Control	Emergency Care	Referral System
Maguindanao	7	7	5	7
Shariff Aguak	1	1	1	1
Ampatuan	1	1	1	1
Upi	1	1	0	1
Datu Paglas	1	1	1	1
Parang	1	1	1	1
Sultan Kudarat	1	1	1	1

RHU	MCH	Prev. & Control	Emergency Care	Referral System
Barira	1	1	0	1
Lanao del Sur	11	10	6	10
Balingdong	1	1	0	1
Piagapo	0	0	0	0
Masiu	1	1	0	1
Marantao	1	1	0	1
Taraka	1	1	1	1
Wao	1	1	1	1
Poma Bayabao	1	1	0	1
Tamparan	1	1	1	1
Malabang	1	1	1	1
Kapatagan	1	1	1	1
Ditsaan Ramain	1	1	1	1
Binidayan	1	0	0	-
Basilan	2	2	0	2
Lamitan	1	1	0	1
Lantawan	1	1	0	1
Sulu	4	4	3	5
Jolo	1	1	0	1
Pangutaran	1	1	1	1
Taglibi, Patikul	1	1	1	1
Indanan	1	1	1	1
Parang	0	0	0	1
Tawi-Tawi	3	3	3	3
Simunul	1	1	1	1
Sitangkai	1	1	1	1
Bongao	1	1	1	1
Marawi	1	0	1	0
CHO Marawi	1		1	
Total	28	26	18	27

4.5 Laboratory/Diagnostic Services

Table 4-7 below shows that of the 30 RHUs covered by the study, twenty-five or 83% cannot perform a routine CBC, twenty-three or 77% cannot not perform urinalysis, twenty-two or 73% are unable to do fecalysis and 16 or 47% cannot perform sputum examinations.

- ◆ In some areas only a sputum exam can be done because it does not need a medical technologist (Med Tech) to perform it – a trained microscopist will do. Routine lab exams can not also be performed because of a host of factors other than the absence of a med tech such as no reagents, no centrifuge apparatus, etc.

In Jolo, for example, the lack of laboratory facilities and reagents has resulted in a significant number of clinically-diagnosed typhoid fever. There is a great discrepancy between the blood tests that have been tested positive for typhoid fever and the ones that have been diagnosed based simply on the symptoms presented.

- ◆ Tawi-Tawi - Peculiar health problems like malaria and TB
- ◆ Malaria smear, microscopes
- ◆ Skin diseases

In the main health center in Jolo, there are only 4 speculums and no sterilizer or autoclave. There is a kerosene stove - the nurse buys kerosene, sterilizes the speculums, but they are used up by noontime. The patients have to come back the following day.

Table 4-7 Laboratory/Diagnostic Services Available in RHUs

RHU	CBC	Urinalysis	Stool Exam.	Sputum Exam.	Note
Maguindanao	1	2	3	6	
Shariff Aguak	0	0	0	1	
Ampatuan	1	1	1	1	
Upi	0	0	0	1	
Datu Paglas	0	0	0	1	
Parang	0	0	1	1	No Equipment
Sultan Kudarat	0	1	1	1	

RHU	CBC	Urinalysis	Stool Exam.	Sputum Exam.	Note
Barira	0	0	0	0	
Lanao del Sur	0	0	0	3	
Balindong	0	0	0	0	No Lab/MedTech
Piagapo	0	0	0	0	No facilities
Masiu	0	0	0	0	
Marantao	0	0	0	1	
Taraka	0	0	0	1	No Lab./equipment
Wao	0	0	0	0	All lab work is referred to the hospital
Poma Bayabao	0	0	0	0	
Tamparan	0	0	0	0	
Malabang	0	0	0	0	
Kapatagan	0	0	0	0	
Ditsaan Ramain	0	0	0	1	
Binidayan	0	0	0	0	
Basilan	0	0	0	1	
Lamitan	0	0	0	0	
Lantawan	0	0	0	1	
Sulu	2	4	2	5	
Jolo	1	1	1	1	
Pangutaran	0	1	1	1	
Taglibi, Patikul	0	1	0	1	
Indanan	1	1	0	1	
Parang	0	0	0	1	
Tawi-Tawi	2	2	2	3	
Simunul	0	0	0	1	
Sitangkai	1	1	1	1	
Bongao	1	1	1	1	
Marawi	0	0	1	1	
CHO Marawi	0	0	1	1	
Total	5	8	8	19	

4.6 Health Workers

On the average, each of the thirty RHUs covered by the study employ eleven personnel. Table 4-8 shows that of the eleven (average) personnel, six are midwives. Ten percent of the thirty RHUs do not have a doctor, 13% do not have nurses, twenty-one or 70% do not have administrative support, and there are only twelve Rural Sanitary Inspectors (RSI) in nine RHUs (with two RSIs in Indanan, Sulu and three in CHO Marawi City). There are only three dentists, four medical technologists, four RSIs, one utility person, and twelve barangay health workers (all in Balindong RHU, Lanao del Sur) in all of the thirty RHUs.

Midwives are the workhorses of the RHUs. Their functions have evolved through the years from merely assisting births to an array of health services. The ratio of midwives to population in ARMM is 1:5,798 (FHSIS, 1999). This is a long way from the standard local ratio of 1:340 persons. The Rural Health Act based on Republic Act 1082 requires at least the following personnel staffing: a population of 20,000- 30,000 should have at least 1 MD, 2 nurses, 2 midwives and 1 sanitary inspector. The lack of positions in the plantilla is the common reason given for the lack of health personnel. In some areas, the poor peace and order situation discourages most health professionals from applying for long-vacant positions. A recent additional factor is the migration of thousands of Filipino nurses to foreign countries. A number of midwives have also sought employment as caregivers abroad.

Table 4-8 Personnel Complement of RHUs – ARMM

RHU	Total Number of Personnel	MD	Nurse	Midwife	Admin staff	Rural Sanitary Inspector	Others
IPHO Maguindanao							
1. Shariff Aguak	11	1	1	7	0	1	Dentist-1
2. Ampatuan	11	1	1	8	0	1	
3. Upi	15	1	1	12	0	1	
4. Datu Paglas	2	1	1				
5. Parang	21	1	2	14	4		
6. Sultan Kudarat	26	1	3	19	0	1	1 Dentist, 1 Med Tech
7. Barira	3	0	1	2	0	0	
Sub-total	89	6	10	62	4	4	D-2, MT-1

RHU	Total Number of Personnel	MD	Nurse	Midwife	Admin staff	Rural Sanitary Inspector	Others
IPHO Lanao del Sur							
1. Balindong	17	1	1	3			12 BHWs
2. Piagapo	2	0	0	2			
3. Masiu	3	1	0	2	0		
4. Marantao	6	1	1	4			
5. Taraka	4	1	0	3	0		
6. Wao	14	1	1	10	0	1	Utility-1
7. Poma Bayabao	6	1	1	3	0	1	
8. Tamparan	5	1	1	3	0		
9. Malabang	8	1	1	6	0		
10. Kapatagan	3	1	1	1	0		
11. Ditsaan Ramain	7	1	0	4	0	1	1 MedTech
12. Binidayan	17	2	8	4	3		
Sub-total	92	12	15	45	3	3	BHWs-12, U-1, MT-1
Basilan							
1. Lamitan	30	1	6	17	6	-	-
2. Lantawan	16	0	2	11	2		Med Tech-1
Sub-total	46	1	8	28	8		MT-1
IPHO Sulu							
1. Jolo	13	1	3	9			
2. Pangutaran	19	1	7	7	4		
3. Taglibi	3	1	1	1	0		
4. Indanan	11	1	1	3	0	2	4 PSI
5. Parang	10	1	1	8			
Sub-total	56	5	13	28	4	2	PSI-4
IPHO Tawi-Tawi							
1. Simunul	4	None	1	3			
2. Sitangkai	15	1	1	9	4		
3. Tawitawi	7	1	1	5	0		
Sub-total	26	2	3	17	4	No data	
CHO Marawi City	17	2	2	8	0	3	1 Med Tech, 1 Dentist
Sub-total	17	2	2	8	0	3	MT-1, D-1
Total	326	28	51	188	23	12	D-3, MT-4, U-1, PSI-4, BHW-12

4.7 Equipment

Not all RHUs have the basic medical equipment in the delivery of health services. In Table 4-9, 10% of those covered by the study do not have a stethoscope and five RHUs or 17% do not have a weighing scale. Of the twenty-seven RHUs that have stethoscopes, six RHUs have stethoscopes that need replacement or are not functioning at all. Also, six RHUs need to replace their weighing scales with better models. In some areas, all the BP apparatuses and stethoscopes are issued to the BHWs and none are left in the RHU.

In Table 4-10, four RHUs or 13% (all of which are located in Lanao del Sur) do not have a BP apparatus and eleven RHUs or 37% do not have microscopes. Seven RHUs have non-functioning BP apparatuses and six RHUs need to replace their existing microscopes. (See Annex-2 for recommended list of equipments for RHU).

Table 4-9 Availability of Basic Medical Equipment

RHU	Stethoscope	Weighing Scale	BP Apparatus	Microscope	Note
Maguindanao	7	7	7	6	
Shariff Aguak	1	1	1	1	
Ampatuan	1	1	1	1	
Upi	1	1	1	1	
Datu Pagulas	1	1	1	1	
Parang	1	1	1	1	
Sultan Kudarat	1	1	1	1	
Barira	1	1	1	0	
Lanao del Sur	10	8	8	2	
Balingdong	1	1	1	0	
Piagapo	0	0	0	0	
Masiu	1	1	1	0	
Marantao	1	1	1	1	
Taraka	1	1	1	0	
Wao	1	1	1	0	
Poma Bayobao	1	0	1	0	
Tamparan	1	1	1	0	
Malabang	1	0	0	1	

RHU	Stethoscope	Weighing Scale	BP Apparatus	Microscope	Note
Kapatagan	1	1	0	0	
Ditsaan Ramain	1	1	1	0	
Binidayan	0	0	0	0	
Basilan	2	2	2	2	
Lamitan	1	1	1	1	
Lantawan	1	1	1	1	
Sulu	5	5	5	5	
Jolo	1	1	1	1	
Pangutaran	1	1	1	1	
Taglibi, Patikul	1	1	1	1	
Indanan	1	1	1	1	
Parang	1	1	1	1	MS not functioning
Tawi-Tawi	3	3	3	3	
Simunul	1	1	1	1	
Sitangkai	1	1	1	1	
Bongao	1	1	1	1	
Marawi	1	1	1	1	
CHO Marawi	1	1	1	1	
Total	28	26	26	19	

4.8 Drugs, Medicines and Other Basic Supplies

Less than 50% of the surveyed RHUs have medicines available for patients. Of those surveyed, thirteen RHUs or only 43% have essential drugs including one RHU having only a drug for tuberculosis and another RHU with irregular supply. Of the 30 RHUs surveyed, only six or 20% have life-saving drugs with only 4 RHUs having both essential and life-saving drugs. In some of the municipalities, medicines and supplies are bought only for free clinic activities of the local politicians or during instances of outbreaks or epidemics.

In Lantawan, for example, most of the medicines for the RHU are in the mayor's house, since the mayor distributes them to patients during his sponsored free-clinic activities. The RHU personnel ask the mayor for medicines as needed and the choices are limited only to the types that the mayor has bought.

Lack of funds for health has affected the capacity to procure medicines and supplies in the public health system. For example, there are vaccines available through the national programs, but the RHUs do not have sufficient funds to purchase enough alcohol or cotton. The RHU staff (midwives, or barangay health workers, or nurses) use their personal funds to buy these or ask their patients to provide their own supplies. Some RHUs have a donation box and it is these small cash donations that are used to purchase supplies.

For the same reasons, majority of the RHUs cannot provide emergency care because of lack of medicines and equipment.

In Basilan, vaccines used to come from Region 9 but supply was disrupted last year when the province became part of ARMM. In many areas, the supply of TB drugs was discontinued for some months; the supply only resumed in August this year. Contraceptive drugs and devices are also in short supply. In some provinces, there are more TB patients than drugs. There are reported cases of doctors ordering the distribution of drugs to all the patients, regardless of the insufficiency of supply, in the hope that new stocks would arrive before the supply runs out. However, the fresh supply did not arrive until many months later, so that none of the patients was able to complete the 6-month regimen. This is a complete violation of the standards for TB therapy.

Table 4-10 Availability of Drugs and Basic Supplies in RHUs – ARMM

RHU	Essential Drugs/Formulary		Life-Saving Drugs	
	Yes	No	Yes	No
IPHO Maguindanao				
1. Shariff Aguak	1	0	0	1
2. Ampatuan	1	0	1	0
3. Upi	1	0	0	1
4. Datu Paglas	0	1	1	0
5. Parang	0	1	0	1
6. Sultan Kudarat	0	1	0	1
7. Barira *	0	1	0	1
Sub-total	3	4	2	5
IPHO Lanao del Sur				
1. Balindong	0	1	0	1
2. Piagapo	0	1	0	1
3. Masiu	0	1	1	0
4. Marantao	1	0	0	1

RHU	Essential Drugs/Formulary		Life-Saving Drugs	
	Yes	No	Yes	No
5. Taraka	0	1	0	1
6. Wao	1-TB drugs only	0	0	1
7. Poma Bayabao	1	0	0	1
8. Tamparan	0	1	0	1
9. Malabang	0	1	0	1
10. Kapatagan	0	1	0	1
11. Ditsaan Ramain	1	0	0	1
12. Binidayan	0	1	0	1
Sub-total	4	8	1	11
IPHO Basilan				
1. Lamitan	1	0	0	1
2. Lantawan	0	1	0	1
Sub-total	1	1	0	2
IPHO Sulu				
1. Jolo	0	1	0	1
2. Pangutaran	1	0	1	0
3. Taglibi	0	1	0	1
4. Indanan	Yes, but irregular supply	0	0	1
5. Parang	0	1	0	1
Sub-total	2	3	1	4
IPHO Tawitawi				
1. Simunul	1	0	1	0
2. Sitangkai	0	1	0	1
3. Tawitawi	1	0	1	0
Sub-total	2	1	2	1
CHO Marawi City	1	0	0	1
Sub-total	1	0	0	1
Total	13	17	6	24

Given the high incidence of malaria in the ARMM region especially in Tawi-Tawi and Sulu, Dr. Pandi proposes a Malaria Research Center. Through the years, various funding institutions have provided grants for malaria control operations, equipment and training, but a research center has never been established. (See Annex 3- RHU Recommended List of Drugs)

4.9 Information System/Medical Records

For whatever reason, 30% of the 30 RHUs surveyed do not have any record concerning maternal mortality and 33% do not have records on malnutrition and infant mortality. It is worth noting that Table 4-11 shows that only five of twelve RHUs in the Lanao del Sur area have records on maternal mortality and four of the twelve RHUs have records on malnutrition and infant mortality. The table also shows that in the Sulu area, two of the five RHUs surveyed cannot provide information on maternal and infant mortality and malnutrition. All of the RHUs are required to submit a periodic report of the FHSIS (Field Health Surveillance and Information System) although some of the interviewees admitted that they are unable to supply all of the data required by the system.

Table 4-11 Availability of Standard Health Data in RHUs – ARMM

RHU	MMR	IMR	Malnutrition Rate	Note (Other Records)
Maguindanao	7	7	7	
Shariff Aguak	1	1	1	FHSIS
Ampatuan	1	1	1	FHSIS
Upi	1	1	1	Morbidity/mortality rate, FP methods, # of FICs, FHSIS
Datu Pagulas	1	1	1	FHSIS
Parang	1	1	1	FHSIS
Sultan Kudarat	1	1	1	FHSIS
Barira	1	1	1	# of FICs, FP methods, prenatal care, M&M rates, FHSIS
Lanao del Sur	5	4	4	
Balindong	1	1	1	FHSIS
Piagapo	0	0	0	
Masiu	1	1	1	OPD records, pre- & post-natal, MTP record, MCH
Marantao	0	0	0	No. of OPD px/day
Taraka	0	0	0	NTP, FP, EPI, MCH, ITR records
Wao	0	0	0	Annual, OPT & FP

RHU	MMR	IMR	Malnutrition Rate	Note (Other Records)
				reports
Poma Bayobao	-	-	-	
Tamparan	1	1	1	FHSIS
Malabang	1	1	1	
Kapatagan	1	0	0	
Ditsaan Ramain	0	0	0	ITR- by family
Binidayan	-	-	-	
Basilan	2	2	2	Immunization Records, Pneumonia, Patient Records
Lamitan	1	1	1	FHSIS
Lantawan	1	1	1	FHSIS
Sulu	3	3	3	
Jolo	1	1	1	FHSIS
Pangutaran	1	1	1	FHSIS
Taglibi, Patikul	1	1	1	FHSIS
Indanan	-	-	-	
Parang	-	-	-	
Tawi-Tawi	3	3	3	
Simunul	1	1	1	FHSIS
Sitangkai	1	1	1	FHSIS
Bongao	1	1	1	FHSIS
Marawi	1	1	1	
CHO Marawi	1	1	1	FHSIS
Total	21	20	20	

4.10 Community Networking

Of the 30 RHUs surveyed, only two RHUs do not have Barangay Health Workers (BHWs) while there is no record to show that Masiu RHU of IPHO Lanao del Sur has any; twenty-seven RHUs or 90% have BHWs. Table 4-12 also shows that only three (3) RHUs or 10% do not have Barangay Health Stations and two RHUs (in IPHO Lanao del Sur) do not have data on the existence of any BHS.

The number of Barangay Health Workers, is not directly proportional to health service delivery since not all BHWs may be considered "active" BHWs. In Lantawan, Basilan, for example, there are forty (40) trained Barangay Health Workers on record, but only half of them are active. This is because most barangay captains recommended their own relatives to be trained as BHWs, but this was merely to enable them to avail of the ₱500.00 monthly honorarium provided for BHWs. After the training, it was discovered that most of the BHWs were full-time students, some even outside Lantawan, and therefore could not be depended on to serve.

Twenty-seven RHUs (90%) have regular community dialogues in different forms, especially during health promotion activities. Only Barira in Maguindanao and Piagapo in Lanao del Sur did not report any dialogue with the community. No reasons were given. There are no data on this aspect from Binidayan, Lanao del Sur.

Table 4-12 Availability of Community Networks in RHUs – ARMM

RHU	BHWs	BHSs	Referral System
Maguindanao	6	6	7
Shariff Aguak	1	1	1
Ampatuan	1	1	1
Upi	1	1	1
Datu Paglas	1	1	1
Parang	1	1	1
Sultan Kudarat	1	1	1
Barira	0	0	1
Lanao del Sur	10	8	9
Balingdong	1	0	1
Piagapo	1	0	0
Masiu	No data	No data	1
Marantao	1	1	1
Taraka	1	1	No data
Wao	1	1	1
Poma Bayabao	1	1	1
Tamparan	1	1	1
Malabang	1	1	1

RHU	BHWs	BHSs	Referral System
Kapatagan	1	1	1
Ditsaan Ramain	1	1	1
Binidayan	0	No data	No data
Basilan	2	2	2
Lamitan	1	1	1
Lantawan	1	1	1
Sulu	5	5	5
Jolo	1	1	1
Pangutaran	1	1	1
Taglibi, Patikul	1	1	1
Indanan	1	1	1
Parang	1	1	1
Tawi-Tawi	3	3	3
Simunul	1	1	1
Sitangkai	1	1	1
Bongao	1	1	1
Marawi	1	1	1
CHO Marawi	1	1	1
Total	27	25	27

4.11 Management Structures/Systems

Tables 4-13, 4-14, 4-15 and 4-16 show the presence of management structures and systems in the Rural Health systems. Twenty-three (76.7%) of thirty RHUs surveyed have organizational charts and twenty have Monitoring and Evaluation Systems. Only fifteen or 50% have Manual of Policies and Procedures and Planning and Implementation Systems. The Administrative Support Systems such as Finance, Personnel and Human Resource Development are lodged at the Provincial Health Office and/or Provincial Government where services are centralized. Thus, there is no need for separate staff or units to cover these functions.

Table 4-13 Availability of Management Structures and Systems in RHUs – ARMM

RHU	Organization Structure & Chart	Manual of Policies & Procedures	Planning & Implementing System	Monitoring & Evaluation System
Maguindanao	5	4	4	5
Shariff Aguak	1	1	1	1
Ampatuan	1	1	1	1
Upi	0	0	0	1
Datu Paglas	1	1	1	1
Parang	1	1	1	1
Sultan Kudarat	1	0	0	0
Barira	0	0	0	0
Lanao del Sur	9	4	4	7
Balindong	1	0	-	1
Piagapo	0	0	0	0
Masiu	0	0	0	1
Marantao	1	No data	No data	No data
Taraka	1	1	1	1
Wao	1	0	0	0
Poma Bayabao	1	1	1	1
Tamparan	1	1	1	1
Malabang	1	1	1	1
Kapatagan	0	0	0	0
Ditsaan Ramain	1	0	0	1
Binidayan	1	0	0	0
Basilan	2	1	1	2
Lamitan	1	1	1	1
Lantawan	1	0	0	1
Sulu	3	3	3	2
Jolo	1	0	1	1
Pangutaran	1	1	1	1
Taglibi, Patikul	0	0	0	0
Indanan	1	1	1	-
Parang	0	1	-	0
Tawi-Tawi	3	2	2	3
Simunul	1	1	1	1
Sitangkai	1	0	0	1
Bongao	1	1	1	1
Marawi	1	1	1	1
CHO Marawi	1	1	1	1
Total	23	15	15	20

Table 4-13 Availability of Management Structures and Systems in RHUs-ARMM

RHU	Administrative Support System	Financial System	Human Resource Development Programs	Note
Maguindanao	3	2	6	
Shariff Aguak	1	1	1	
Ampatuan	0	0	1	
Upi	0	0	1	
Datu Paglas	1	1	1	
Parang	0	0	1	
Sultan Kudarat	0	0	1	
Barira	1	0	0	
Lanao del Sur	6	3	5	
Balindong	1	1	1	by District & IPHO
Piagapo	0	0	0	
Masiu	1	0	1	
Marantao	-	-	-	
Taraka	-	0	-	
Wao	0	0	0	
Poma Bayabao	1	0	0	
Tamparan	0	0	1	
Malabang	1	1	1	
Kapatagan	0	0	0	
Ditsaan Ramain	1	1	1	
Binidayan	1	0	0	
Basilan	2	2	2	
Lamitan	1	1	1	
Lantawan	1	1	1	by LGU
Sulu	3	0	2	
Jolo	1	0	0	
Pangutaran	1	0	1	
Taglibi, Patikul	0	0	0	
Indanan	1	0	0	
Parang	0	0	1	

RHU	Administrative Support System	Financial System	Human Resource Development Programs	Note
Tawi-Tawi	1	1	2	
Simunul	0	1	1	
Sitangkai	1	0	0	
Bongao	0	0	1	
Marawi	1	1	1	
CHO Marawi	1	1	1	by City Government
Total	16	9	18	

4.12 Referral System

The referral system followed by almost all the RHUs is one-way. This means that the RHUs refer their patients to the closest hospital facility. However, it is rare that the hospitals send back the referral slips to the RHUs to inform them about the diagnosis and condition of the patients that had been referred. A few hospitals do send back instructions (e.g., for post-operative care, etc.) although the system is not instituted formally.

- ◆ RHU staff in many of the areas visited said that neither the ARMM-DOH nor the provincial/municipal government has provided them with report forms for at least a year now. There are no funds set aside for forms, so that the staff pays for the reproduction of forms with their personal funds. Sometimes the money comes from cash donations from patients.
- ◆ There are currently two Provincial Health officers (PHO) for Lanao del Sur. The DOH-recognized PHO, Dr. Mamasao B. Sani has been the province's PHO for some time. The Governor of Lanao del Sur appointed another doctor, Dr. Mangoda A. Dima, Jr., as the PHO in August 2003. Dr. Dima used to be the City health officer of Marawi City. In his stead, his former Asst. City Health Officer, Dr. Ali Dalidig, has been appointed City Health Officer.
- ◆ The appointment of Dr. Dima was made without any clearance or official notification from the DOH-ARMM. At the time that the research team conducted the workshop in Cotabato City in late September, the DOH-ARMM had not yet been notified of this

development. It is not clear how Dr. Dima intends to carry out his functions since he has no office and manpower under his control.

Table 4-14 Resources for Monitoring and Referral System

RHU	Protocol	Forms	Monitoring
Maguindanao	7	5	7
Shariff Aguak	1	1	1
Ampatuan	1	1	1
Upi	1	1	1
Datu Paglas	1	0	1
Parang	1	1	1
Sultan Kudarat	1	0	1
Barira	1	1	1
Lanao del Sur	6	6	6
Balindong	1	0	1
Piagapo	0	0	0
Masiu	1	1	1
Marantao	0	1	0
Taraka	1	0	1
Wao	1	1	0
Poma Bayabao	0	1	1
Tamparan	1	1	1
Malabang	1	1	1
Kapatagan	0	0	0
Ditsaan Ramain	0	0	0
Binidayan	0	0	0
Basilan	2	1	2
Lamitan	1	1	1
Lantawan	1	0	1
Sulu	4	1	2
Jolo	1	0	1
Pangutaran	1	0	1
Taglibi, Patikul	0	0	0
Indanan	1	1	0

RHU	Protocol	Forms	Monitoring
Parang	1	0	0
Tawi-Tawi	3	3	3
Simunul	1	1	1
Sitangkai	1	1	1
Bongao	1	1	1
Marawi	1	1	1
CHO Marawi	1	1	1
Total	23	17	21

4.13 Issues Concerning Rural Health Units

Changes in administration often result to changes of personnel and/or programs initiated by a previous administration. This results in the disruption in the implementation of health services, especially when service commitments are not honored or sustained.

Local executives use health projects like "civic action programs" or free clinics to further their political ends. This is the reason why many local chief executives hoard medicines or insist on storing them in their homes or offices instead of in the health centers and RHUs. The practice also disrupts schedules of health personnel and programs, strains resources and usually discourages the community from observing the norms set by the public health system (e.g., no dispensing of medicines especially antibiotics without prescriptions), etc. The intentions behind the activities may be noble but the negative effects to public health programs usually (except in very remote areas) outweigh the positive.

Public health facilities are severely lacking and the number of Barangay Health Stations reported is inconsistent with the number of those actually existing. Many have not been constructed at all. In many areas, this results to all the midwives and BHWs reporting to the Main Health Center, resulting to congestion there and/or an imbalance of health service providers in the community.

The construction and location of many Health Centers and Barangay Health Stations were based on political considerations. A more rational basis for deciding on location of health facilities

RHU	Protocol	Forms	Monitoring
Parang	1	0	0
Tawi-Tawi	3	3	3
Simunul	1	1	1
Sitangkai	1	1	1
Bongao	1	1	1
Marawi	1	1	1
CHO Marawi	1	1	1
Total	23	17	21

4.13 Issues Concerning Rural Health Units

Changes in administration often result to changes of personnel and/or programs initiated by a previous administration. This results in the disruption in the implementation of health services, especially when service commitments are not honored or sustained.

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development. It is not clear how Dr. Dima intends to carry out his functions since he has no office and manpower under his control.

Table 4-14 Resources for Monitoring and Referral System

RHU	Protocol	Forms	Monitoring
Maguindanao	7	5	7
Shariff Aguak	1	1	1
Ampatuan	1	1	1
Upi	1	1	1
Datu Paglas	1	0	1
Parang	1	1	1
Sultan Kudarat	1	0	1
Barira	1	1	1
Lanao del Sur	6	6	6
Balindong	1	0	1
Piagapo	0	0	0
Masiu	1	1	1
Marantao	0	1	0
Taraka	1	0	1
Wao	1	1	0
Poma Bayabao	0	1	1
Tamparan	1	1	1
Malabang	1	1	1
Kapatagan	0	0	0
Ditsaan Ramain	0	0	0
Binidayan	0	0	0
Basilan	2	1	2
Lamitan	1	1	1
Lantawan	1	0	1
Sulu	4	1	2
Jolo	1	0	1
Pangutaran	1	0	1
Taglibi, Patikul	0	0	0
Indanan	1	1	0

(e.g., criteria such as population, distance from the nearest health facility, etc.) would ensure the maximization of public health services and resources.

Installation of communication facilities, with Internet connections as the minimum standard. This would be especially beneficial to the island provinces where the health professionals have very little access to medical journals, books and research papers. E-mail would enhance the exchange of information vital to health service delivery. Better communications facilities would also strengthen the referral system.

There is need to undertake the immediate rehabilitation/construction of floating clinics for Sulu and Tawi-Tawi.

Given the high incidence of malaria in the region, and especially in the island provinces including Palawan, the establishment of a Malaria Research Center would greatly benefit the area.



CHAPTER 5
HOSPITAL SERVICES



5. HOSPITAL SERVICES

5.1 Hospital Profiles

There are 24 hospital facilities under ARMM with three provincial hospitals namely: Sulu Provincial Hospital in Jolo, Datu Halun Sakilan Memorial Hospital in Bongao, Tawi-Tawi and Maguindanao Provincial Hospital - Shariff Aguak, Maguindanao. There are three (3) Medical Centers within the geographic area of ARMM but are within the administrative control of the national government namely (1) Cotabato Regional Medical Center, (2) Amai Pakpak Medical Center, (3) Zamboanga Medical Center. Basilan General Hospital, Isabela, Basilan has just been re-nationalized and converted into a 100-bed tertiary hospital by law. By classification, Basilan General Hospital is tertiary but in terms of capability and actual resources, it is a secondary hospital. All 3 provincial hospitals were visited including the 3 medical centers and 2 district hospitals namely: Buluan District in Maguindanao; Luuk and Parang District-Sulu.

The 22 other hospitals have been designated as district hospitals but in terms of capabilities, six (6) are officially recognized as secondary hospitals but the rest are primary hospitals as shown in Table 5-1 below. In the Philippine context a "district hospital" is not the same as a District Hospital as defined by WHO. A district hospital in the Philippine context invariably mean a hospital in a political district without regard of its service capability while a district hospital in the WHO context is a first level referral hospital with the four (4) major medical services, although not departmentalized (Internal Medicine, Surgery, Pediatrics, OB-Gyn) and with appropriate laboratory, other diagnostic, and logistic support services. It also includes a wide variety of interrelated elements that contribute to health in homes, school, work places, and communities through the health and other related sectors (like water supply for example), - (WHO Technical Report Series 819). (See also Annex 4- AO 70-A s. 2002: Hospital Licensing)

Table 5-1 List of Hospitals and their Classification/Capability – ARMM

Hospitals	Classification/ Capability
Maguindanao	
Maguindanao Provincial Hospital	Secondary
Buluan District Hospital	"Secondary"

Hospitals	Classification/ Capability
South Upi Municipal Hospital	Primary
Dinaig Municipal Hospital	Primary
Datu Blah Sinsuat District Hospital	Primary
Lanao del Sur	
Dr. Ali Agama / Kapatagan Hospital	Primary
Dr. Serapio Montaner Memorial Hospital	Primary
Balindong Municipal Hospital	Primary
Tamparan District Hospital	Primary
Unayan Municipal Hosp.	Primary
Wao District Hospital	Primary
Basilan	
Basillan General Hospital (non-ARMM)	Secondary
Lamitan District Hospital	Primary
Sulu	
Sulu Provincial Hospital	Secondary
Luuk District Hospital	Primary
Pangutaran District Hospital	Primary
Siasi District Hospital	Primary
Tapul Municipal Hospital	Primary
Tongkil Municipal Hospital	Primary
Parang District Hospital	Primary
Tawi-Tawi	
Datu Halun Sakilan Memorial Hospital	Secondary
Languyan Municipal Hospital	Primary
Datu Alawaddin Bandon Municipal Hospital	Primary
Tuan Liggadung Lipae Municipal Hospital	Primary
Cagayan de Tawi- Tawi District Hospital	"Secondary"

The bed capacity of each hospital varies from a low of 10 (especially in district hospitals) to a high of 100 (Sulu Provincial Hospital). However, the authorized bed capacity varies from its actual bed capacity and this reflects rate of utilization, which is also affected by factors such as availability of drugs, facilities, doctors, etc. In some, the occupancy rate (BOR) exceeds the bed capacity. Sulu Provincial Hospital for example, has an authorized bed capacity of 100 but its actual bed capacity is 150 or a BOR of 141.64 % (refer to Table 5-2 below).

Table 5-2 Bed Capacity and Occupancy – ARMM Hospitals

Hospitals	ABC*	IBC*	BOR*
Maguindanao			
Maguindanao Provincial Hospital	50	50	83%
Buluan District Hospital	25	25	-
South Upi Municipal Hospital		10	-
Dinaig Municipal Hospital		10	-
Datu Blah Sinsuat District Hospital	10	25 above	126%
Lanao del Sur			
Dr. Ali Agama / Kapatagan Hospital	25	25	25%
Dr. Serapio Montaner Memorial Hospital	25	25	25%
Balindong Municipal Hospital	10	10	66%
Tamparan District Hospital	25	25	80.26%
Unayan Municipal Hospital	25	-	-
Wao District Hospital	25	25	55%
Sulu			
Sulu Provincial Hospital	100	155	141.64%
Luuk District Hospital	-	25	-
Pangutaran District Hospital	25	25	27.6%
Parang District Hospital	25	25	54%
Siasi District Hospital	-	25	-
Tapul Municipal Hospital	-	10	-
Tongkil Municipal Hospital	-	-	-
Tawi-Tawi			
Datu Halun Sakilan Memorial Hospital	50	50	88.51%
Languyan Municipal Hospital	10	10	-
Datu Alawaddin Bandon Municipal Hospital			-
Tuan Liggadung Lipae Municipal Hospital	25	10.63	42.51%
Cagayan de Tawi- Tawi District Hospital	-	-	-

Note: * ABC - Authorized Bed Capacity; IBC- Implementing Bed Capacity,
BOR - Bed Occupancy Rate

Table 5-3 Bed Capacity and Occupancy – Non-ARMM Hospitals

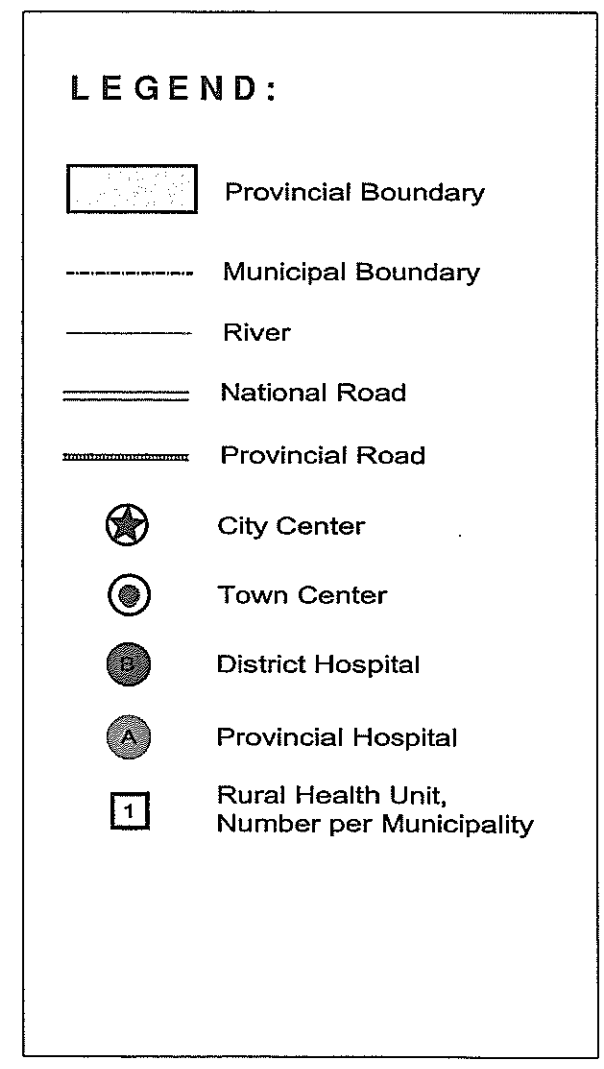
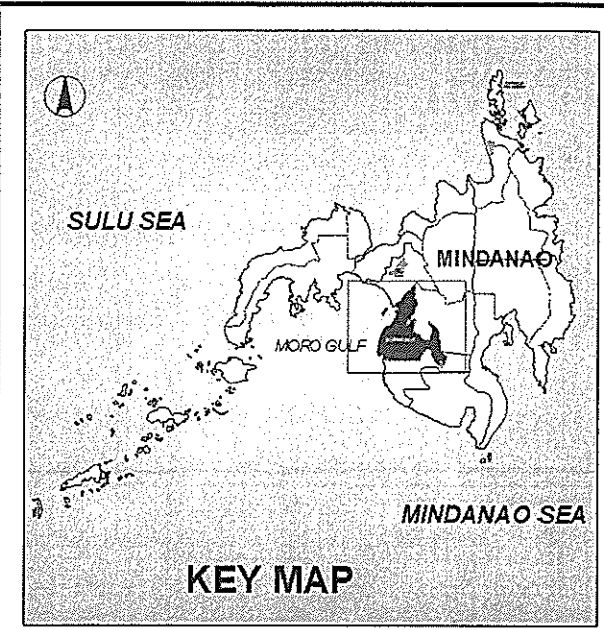
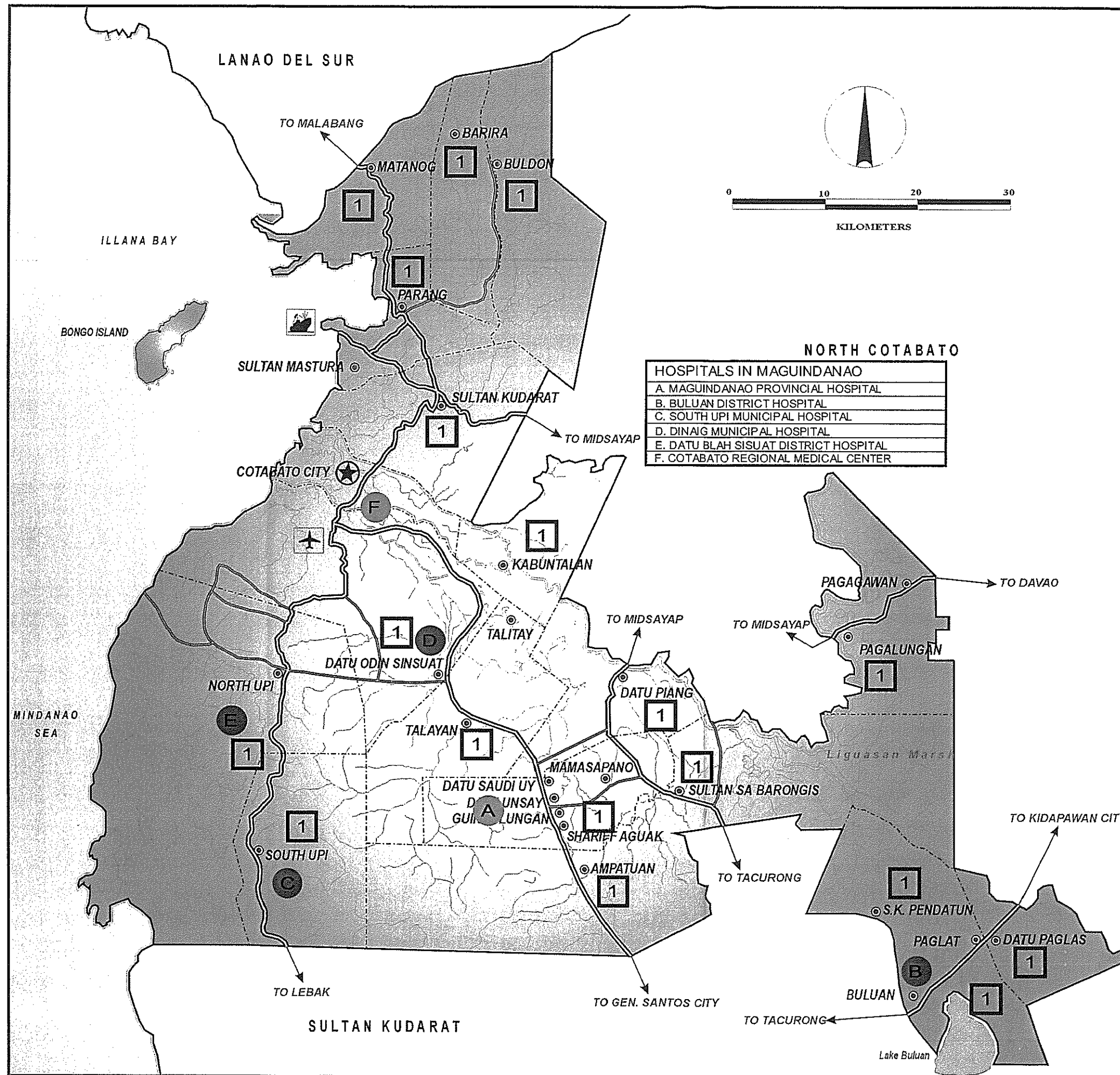
Hospitals	ABC*	IBC*	BOR*
Basilan			
Basilan General Hospital **	25	25	102.5%
Cotabato			
Cotabato Regional and Medical Center	400	270	100%
Marawi City			
Amai Pakpak	200	75	116.5%
Zamboanga			
Zamboanga City Medical Center	250	98-100	105%

Note * ABC - Authorized Bed Capacity; IBC- Implementing Bed Capacity,
 ** Recently nationalized to a 100-bed capacity hospital
 BOR - Bed Occupancy Rate

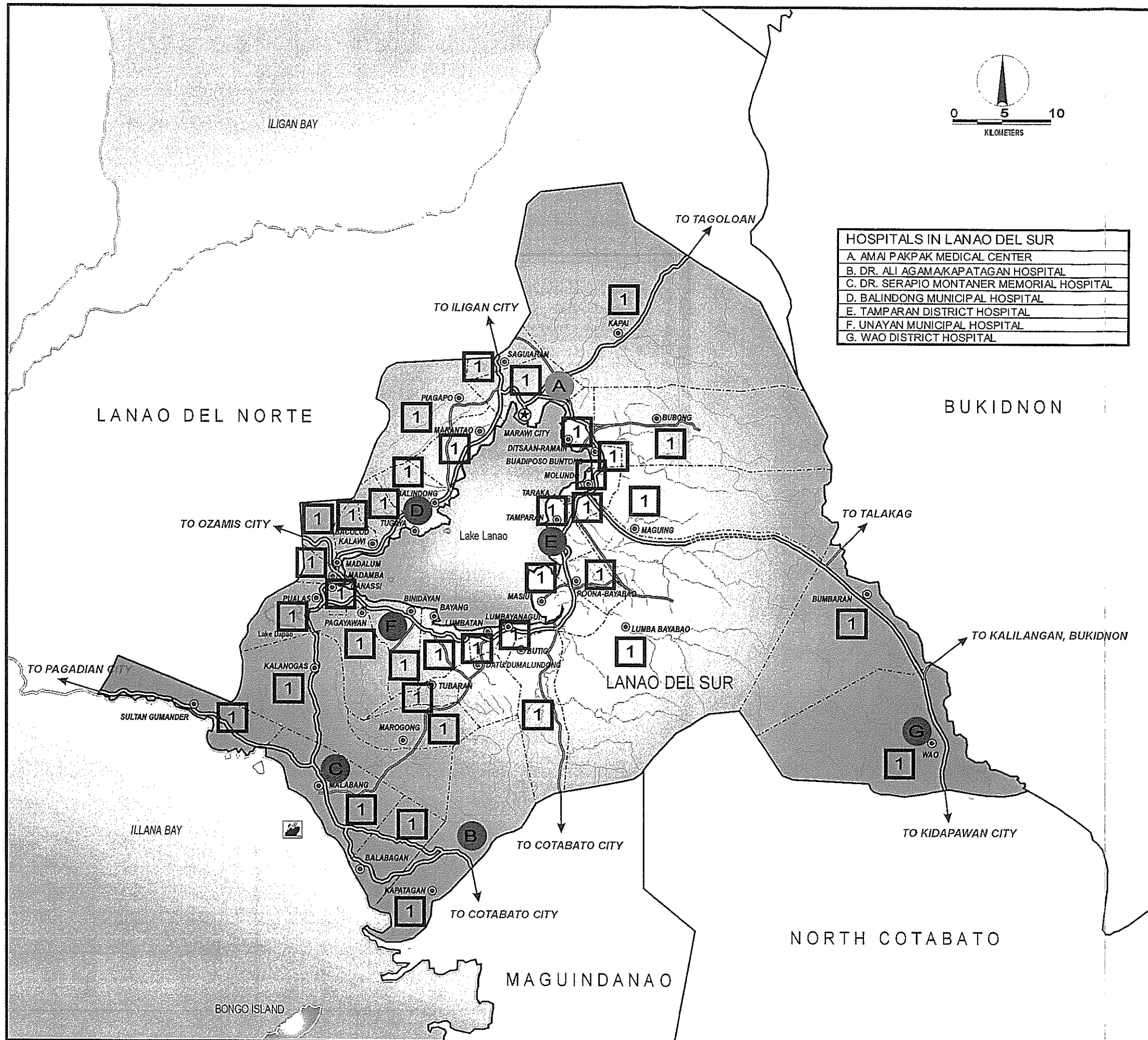
Geographically the hospitals are spread out in a topography that can be described mainly as island provinces and mountainous or inland provinces. Such geographic diversity poses a real challenge in terms of delivery of health services and administrative / managerial control and supervision. Such topography also proves a real challenge to hospital where its catchment areas (see Table 5-4 on catchment areas) are physically difficult to reach e.g. islands of Tawi-Tawi and the mountainous areas in Maguindanao.

5.2 Catchment Areas Of Hospitals

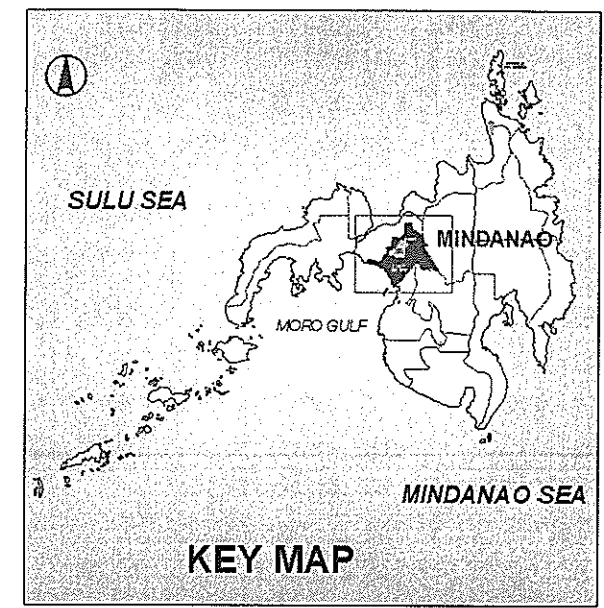
The location of a hospital is chosen so as to serve a specific catchment area. The map (see Figures 5-1 to 5-5 below) shows the locations of the different hospitals: the island provinces of Basilan, Sulu and Tawi-tawi pose a greater challenge in terms of accessibility because of the nature of transportation required, i.e., by sea. The location and inclusion of catchment areas is an area that needs to be studied further.



**FIGURE 5-1
HOSPITALS AND
RURAL HEALTH UNITS
IN MAGUINDANAO**



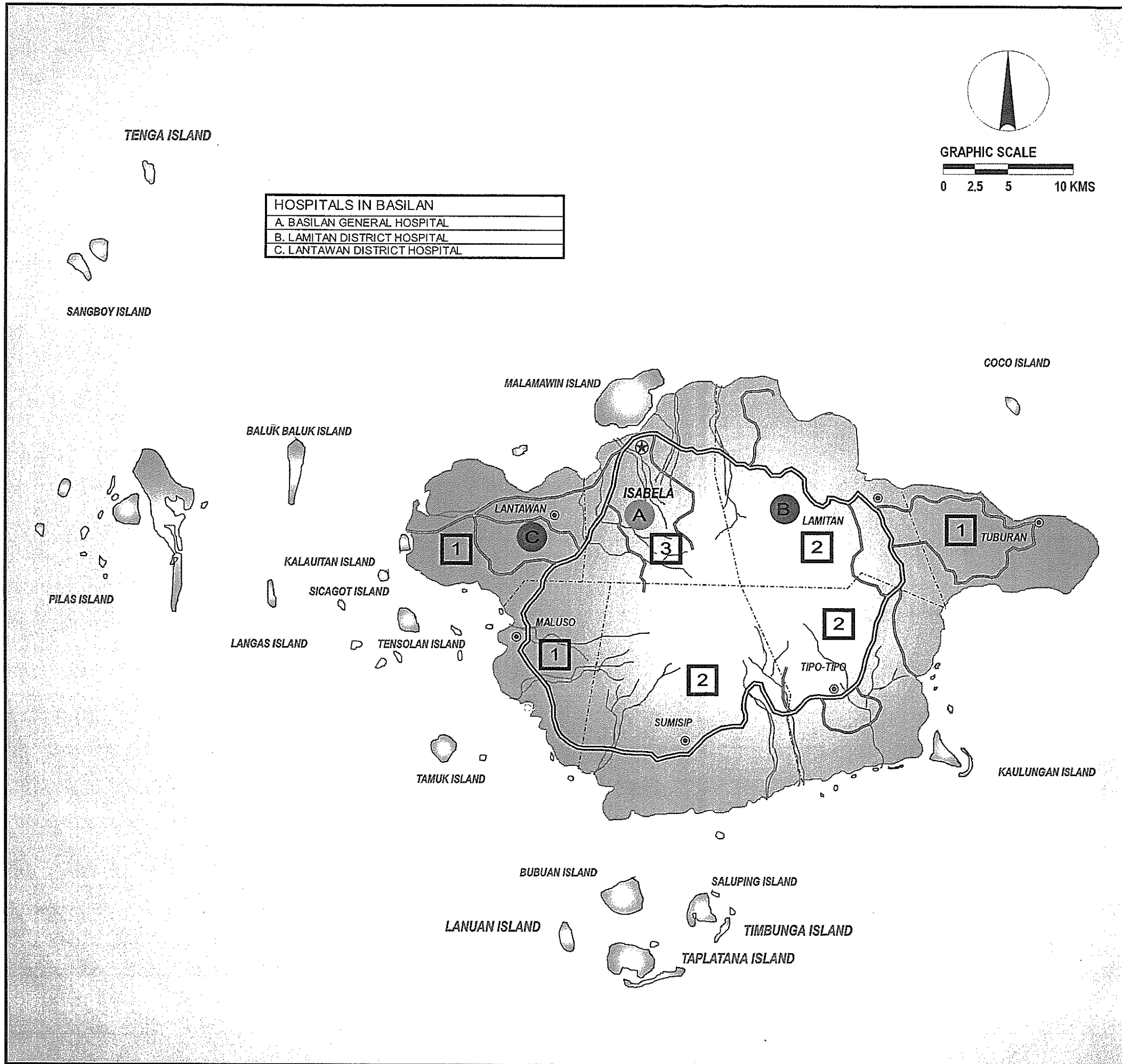
HOSPITALS IN LANA DEL SUR	
A.	AMAI PAKPAK MEDICAL CENTER
B.	DR. ALI AGAMA/KAPATAGAN HOSPITAL
C.	DR. SERAPIO MONTANER MEMORIAL HOSPITAL
D.	BALINDONG MUNICIPAL HOSPITAL
E.	TAMPARAN DISTRICT HOSPITAL
F.	UNAYAN MUNICIPAL HOSPITAL
G.	WAO DISTRICT HOSPITAL



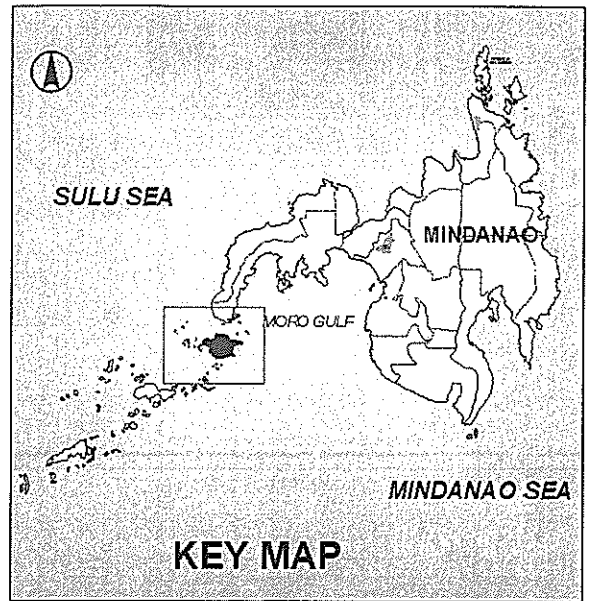
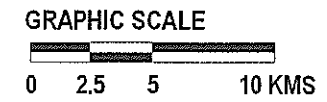
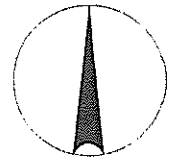
LEGEND:

- Provincial Boundary
- Municipal Boundary
- River
- National Road
- Provincial Road
- ★ City Center
- Town Center
- B District Hospital
- A Provincial Hospital
- 1 Rural Health Unit, Number per Municipality

**FIGURE 5-2
HOSPITALS AND
RURAL HEALTH UNITS
IN LANA DEL SUR**



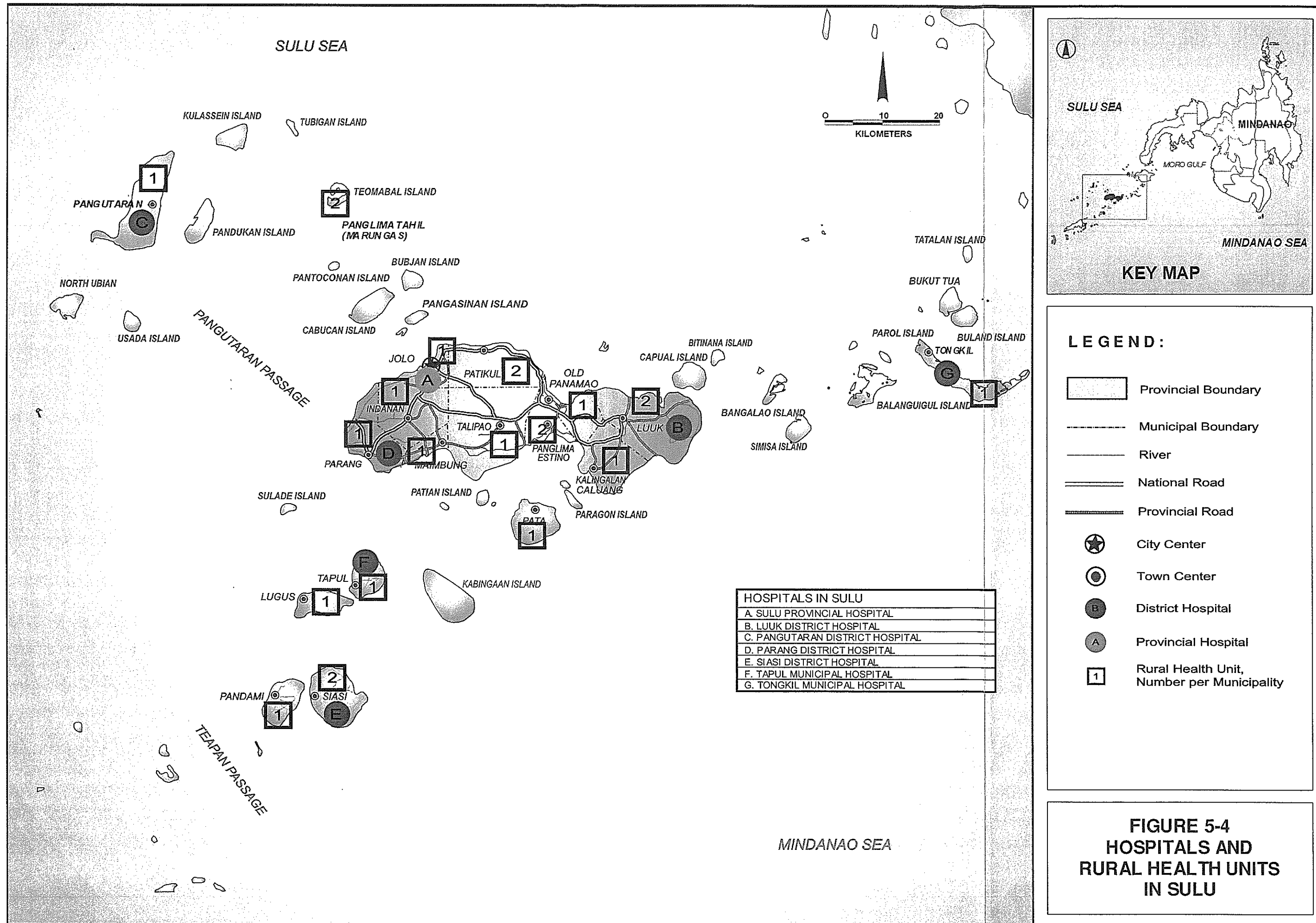
HOSPITALS IN BASILAN	
A.	BASILAN GENERAL HOSPITAL
B.	LAMITAN DISTRICT HOSPITAL
C.	LANTAWAN DISTRICT HOSPITAL



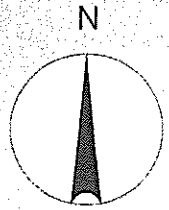
LEGEND :

- Provincial Boundary
- Municipal Boundary
- River
- National Road
- Provincial Road
- City Center
- Town Center
- District Hospital
- Provincial Hospital
- Rural Health Unit, Number per Municipality

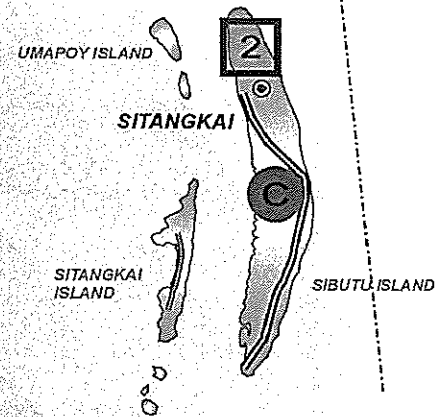
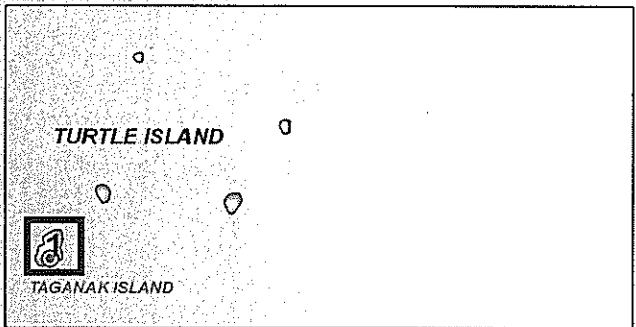
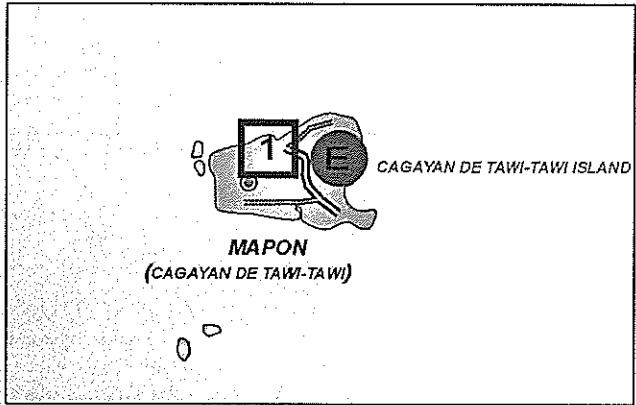
**FIGURE 5-3
HOSPITALS AND
RURAL HEALTH UNITS
IN BASILAN**



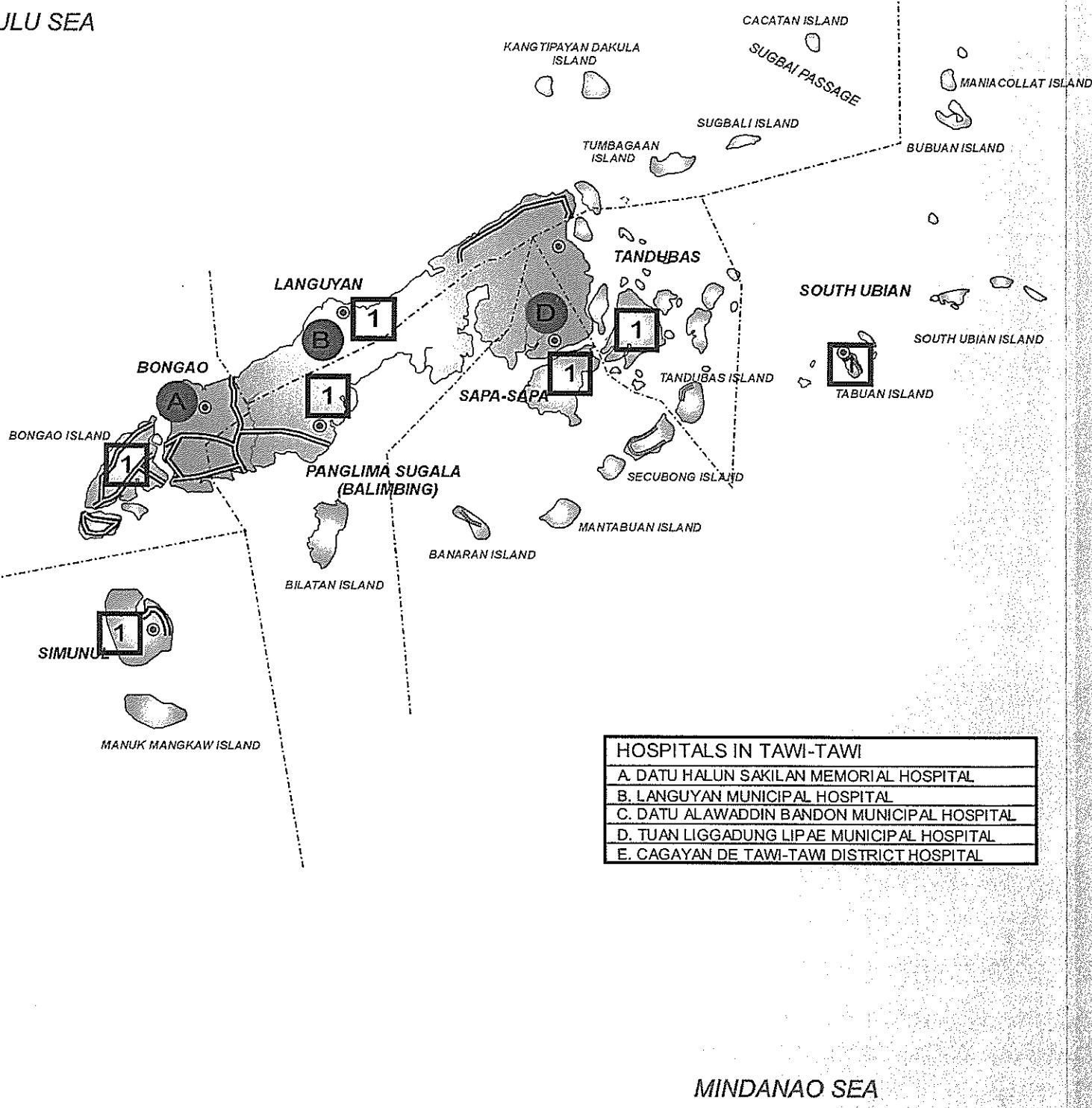
**FIGURE 5-4
HOSPITALS AND
RURAL HEALTH UNITS
IN SULU**



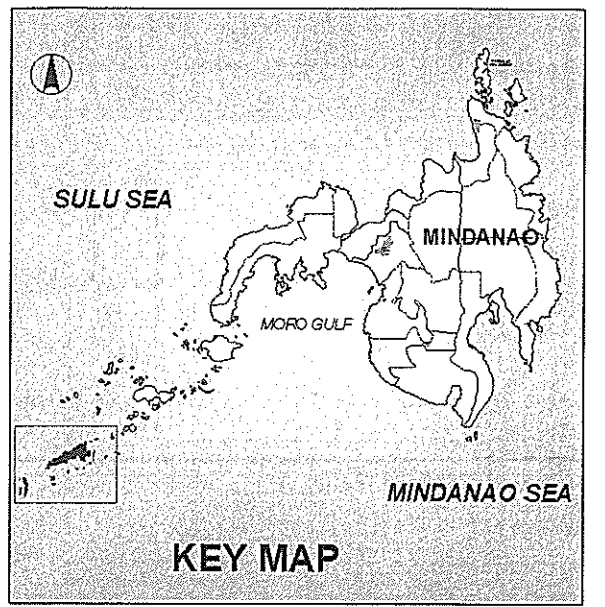
0 10 20
KILOMETERS



SULU SEA



HOSPITALS IN TAWI-TAWI	
A.	DATU HALUN SAKILAN MEMORIAL HOSPITAL
B.	LANGUYAN MUNICIPAL HOSPITAL
C.	DATU ALAWADDIN BANDON MUNICIPAL HOSPITAL
D.	TUAN LIGGADUNG LIPAE MUNICIPAL HOSPITAL
E.	CAGAYAN DE TAWI-TAWI DISTRICT HOSPITAL



LEGEND:

- Provincial Boundary
- Municipal Boundary
- River
- National Road
- Provincial Road
- City Center
- Town Center
- District Hospital
- Rural Health Unit, Number per Municipality

FIGURE 5-5
HOSPITALS AND
RURAL HEALTH UNITS
IN TAWI-TAWI

MINDANAO SEA

Table 5-4 Hospital Catchment Areas, Population Served, Number of RHUs and BHS and Accessibility Conditions – Maguindanao

Name of Hospitals	Distance from Hospital	Population	No. of RHUs	No. of BHS	Accessibility of Hospital	Road Condition
MAGUINDANAO		722,865	21	175	By land	Relatively good roads
<i>Maguindanao Provincial Hospital</i>						
- Shariff Aguak	W/in poblacion	41,403	1	7	√	
- Talayan	20 kms	40,964	1	2	√	
- Datu Piang	15 kms	61,193	1	15	√	
- Ampatuan	7 kms	32,169	1	14	√	
- Sultan sa Barungis	25 kms	33,918	1	6	√	
- Datu Unsay Ampatuan	6 kms				√	
- Datu Sandi Ampatuan	10 kms				√	
- Talitay	25 kms	19,924	1	3	√	
- Mamasafano	10 kms	18,038	1	3	√	
- Guindolungan	10 kms				√	
<i>Buluan District Hospital</i>					By land	Relatively good roads
- Datu Paglas	7 kms.	20,630			√	
<i>South Upi Municipal Hospital</i>					√	
<i>Dinaig Municipal Hospital</i>					√	Good
<i>Datu Blah Sinsuat District Hospital</i>					√	Difficult terrain
- Upi	2 kms.		2		√	

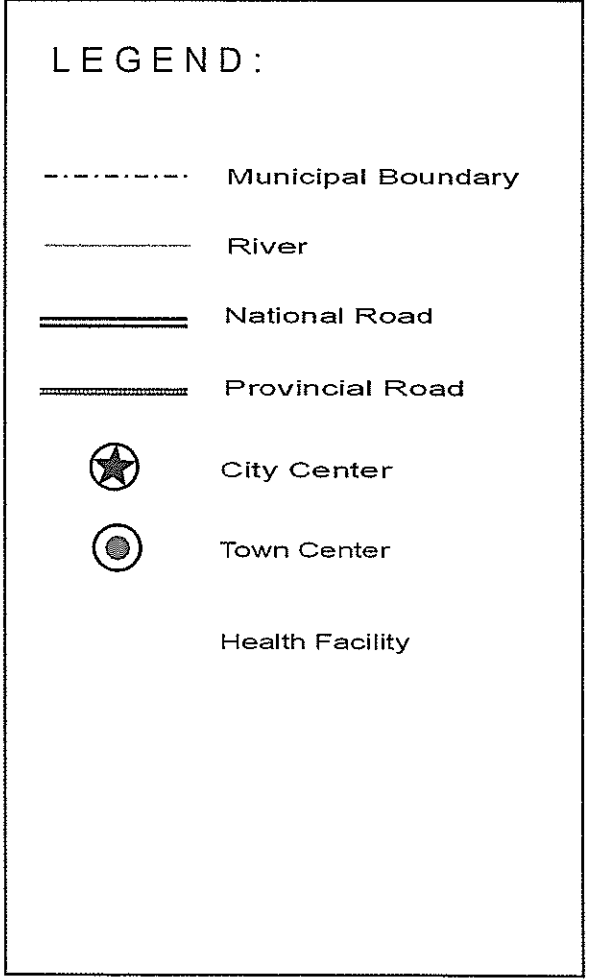
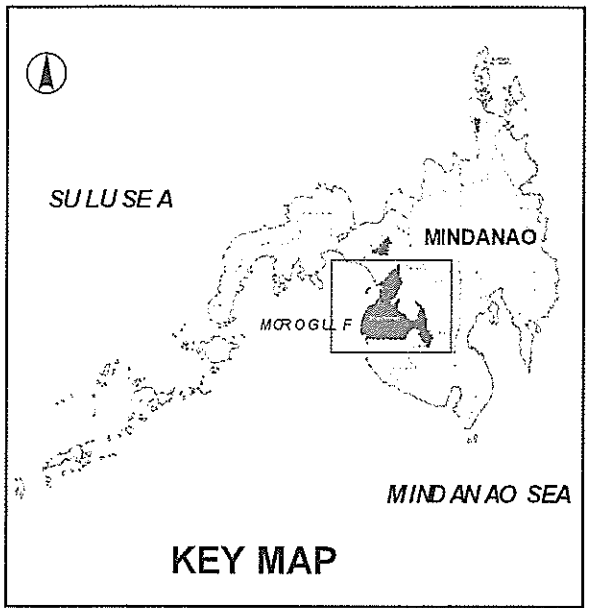
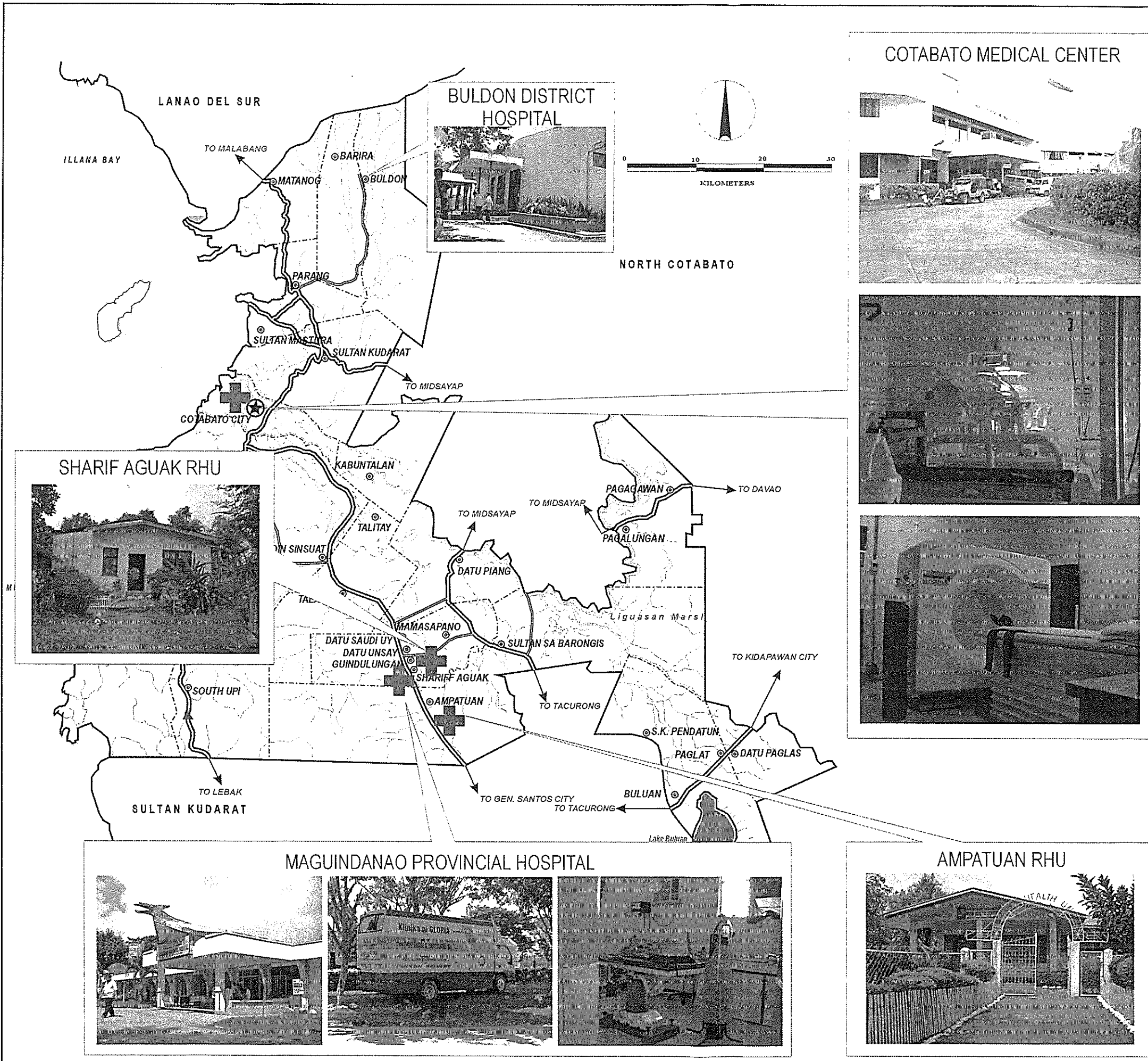
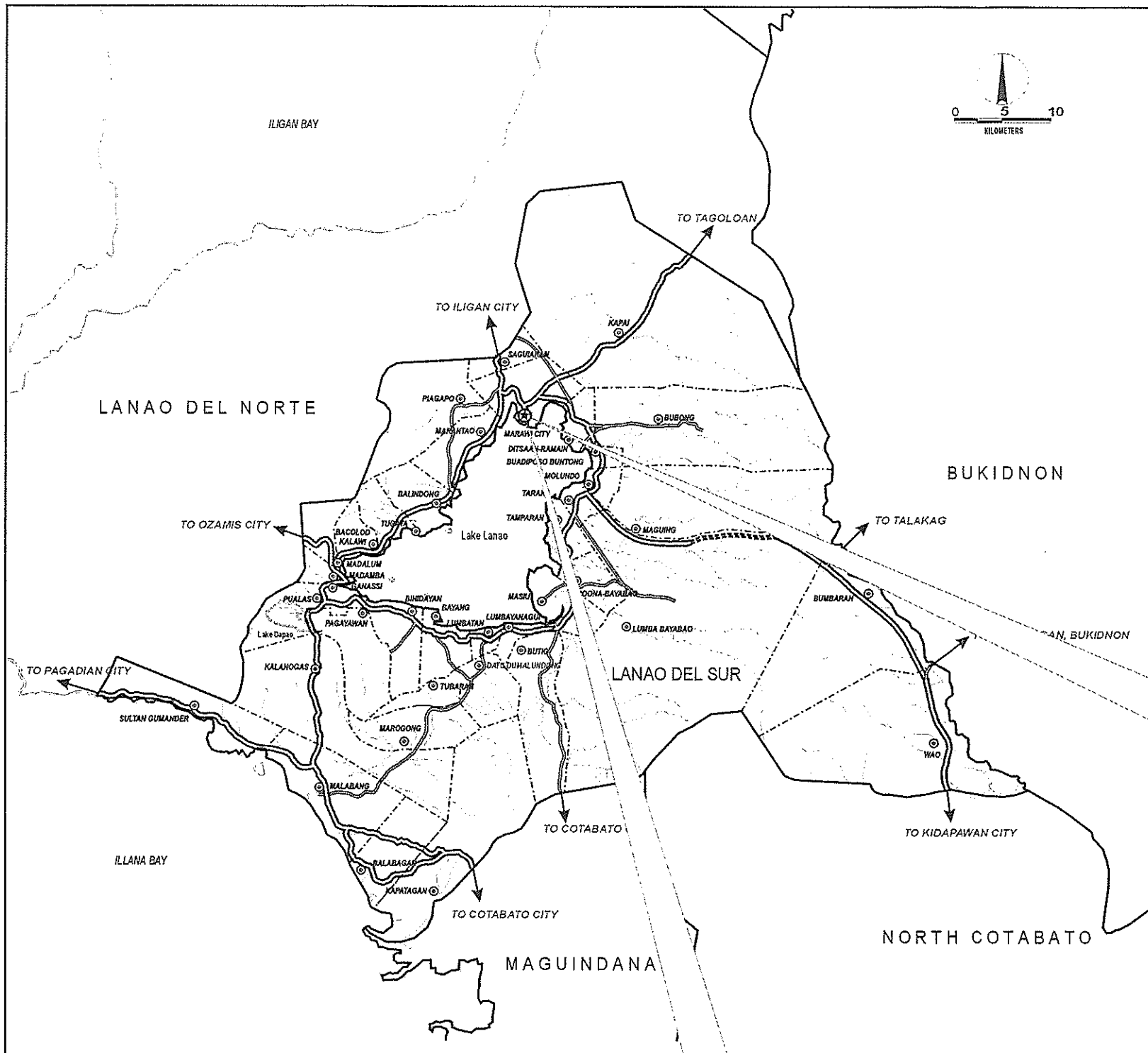
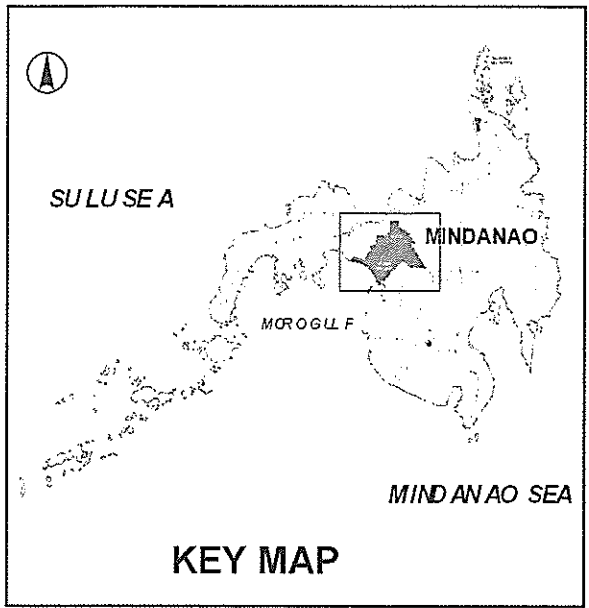
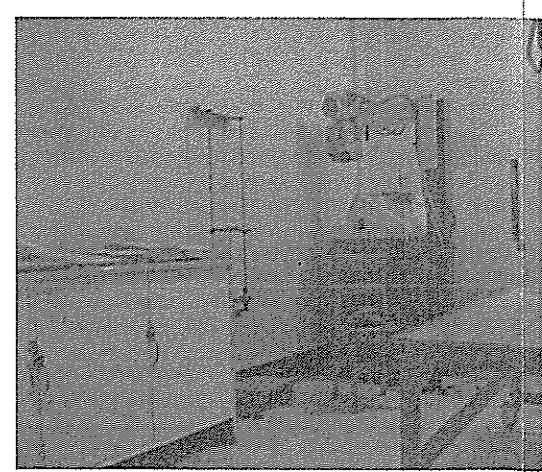
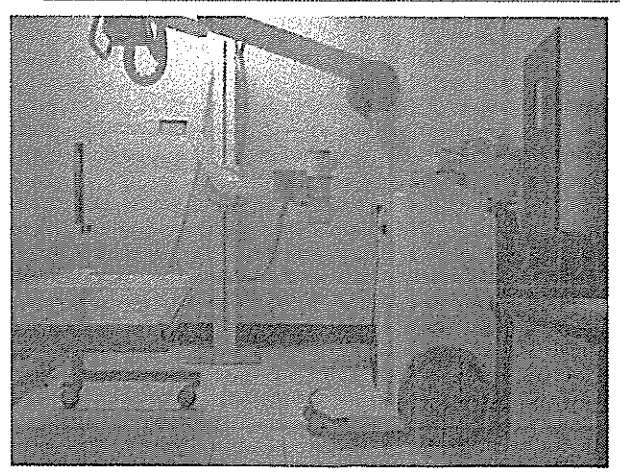
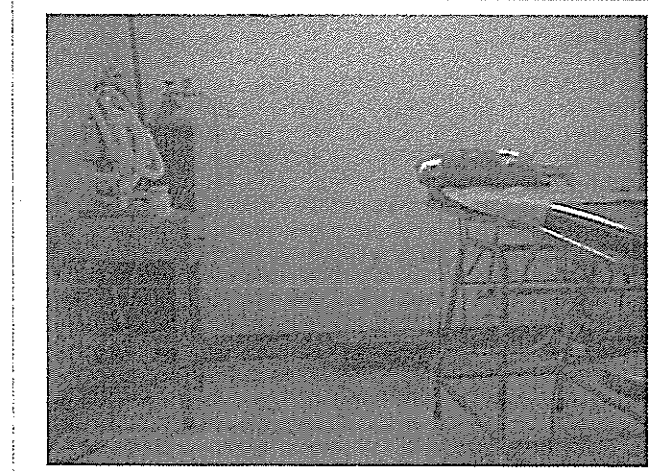


Figure 5-6
SELECTED PHOTOGRAPHS
OF EXISTING HEALTH
FACILITIES IN
MAGUINDANAO



AMAI PAKPAK MEDICAL CENTER

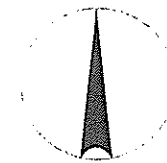
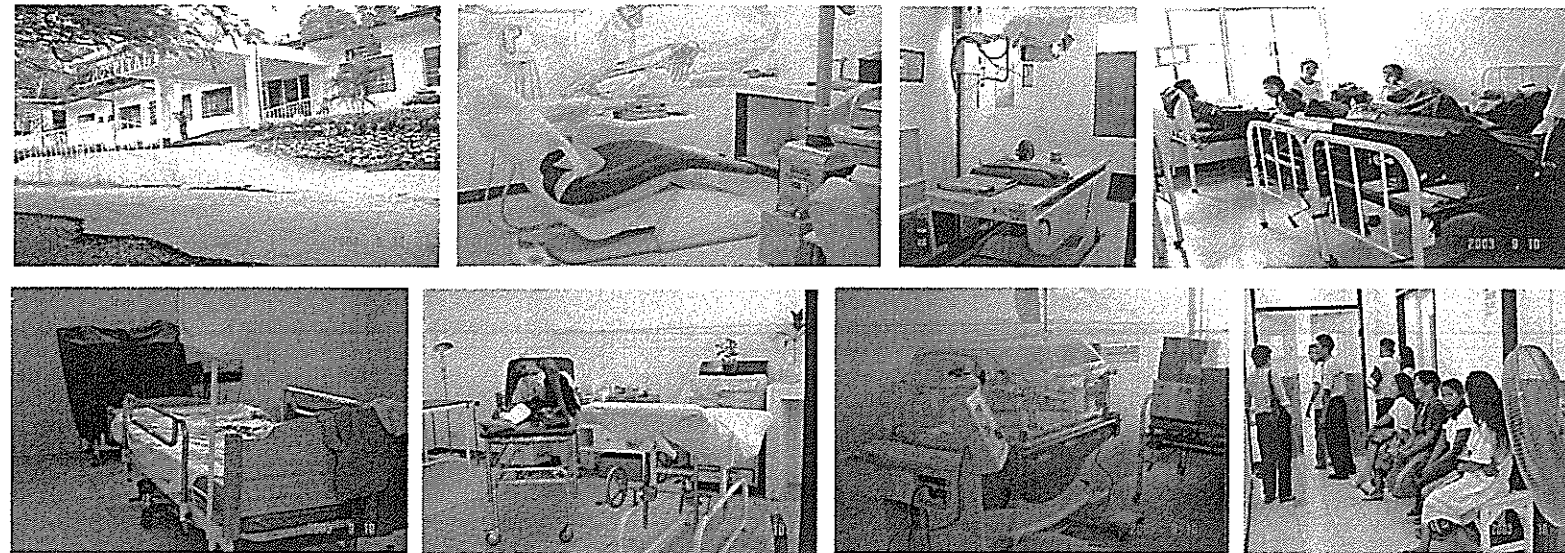


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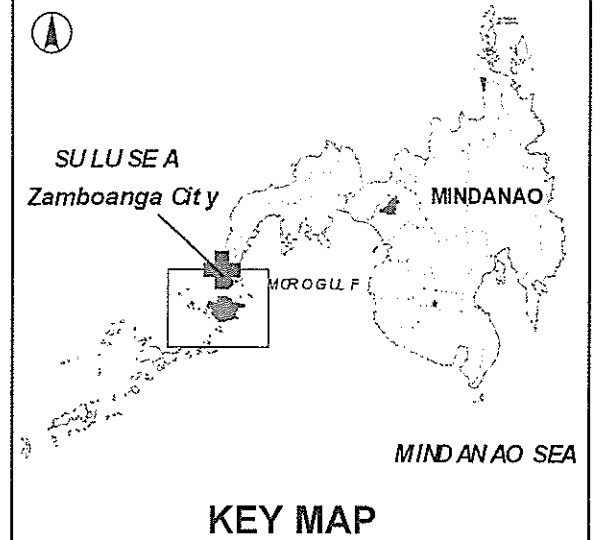
- Municipal Boundary
- River
- ==== National Road
- ==== Provincial Road
- ★ City Center
- Town Center
- ⊕ Health Facility

Figure 5-7
SELECTED PHOTOGRAPHS
OF EXISTING HEALTH
FACILITIES IN
LANAO DEL NORTE AND
MARAWI CITY

BASILAN PROVINCIAL HOSPITAL



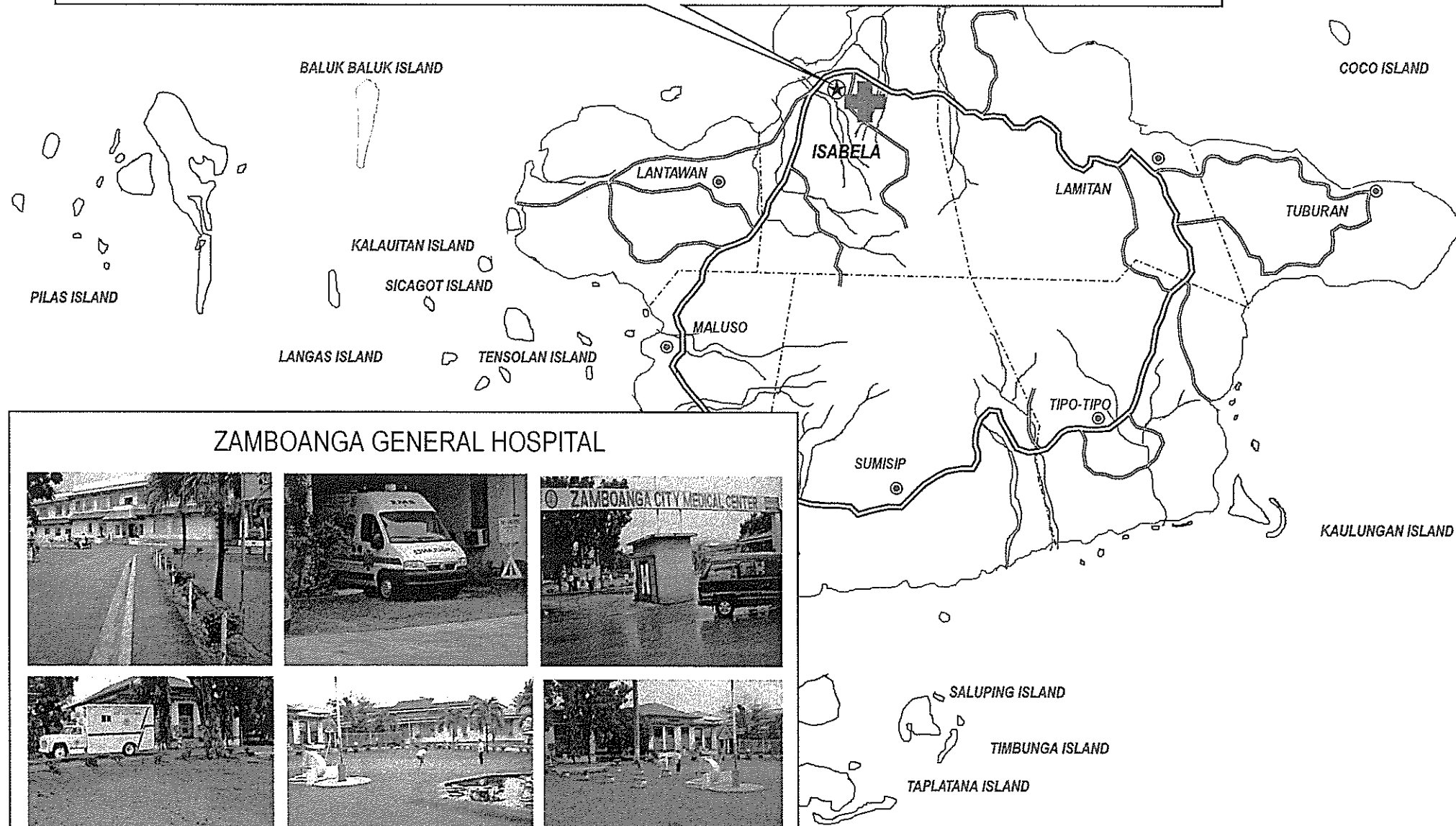
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0 2.5 5 10 KMS



KEY MAP

LEGEND:

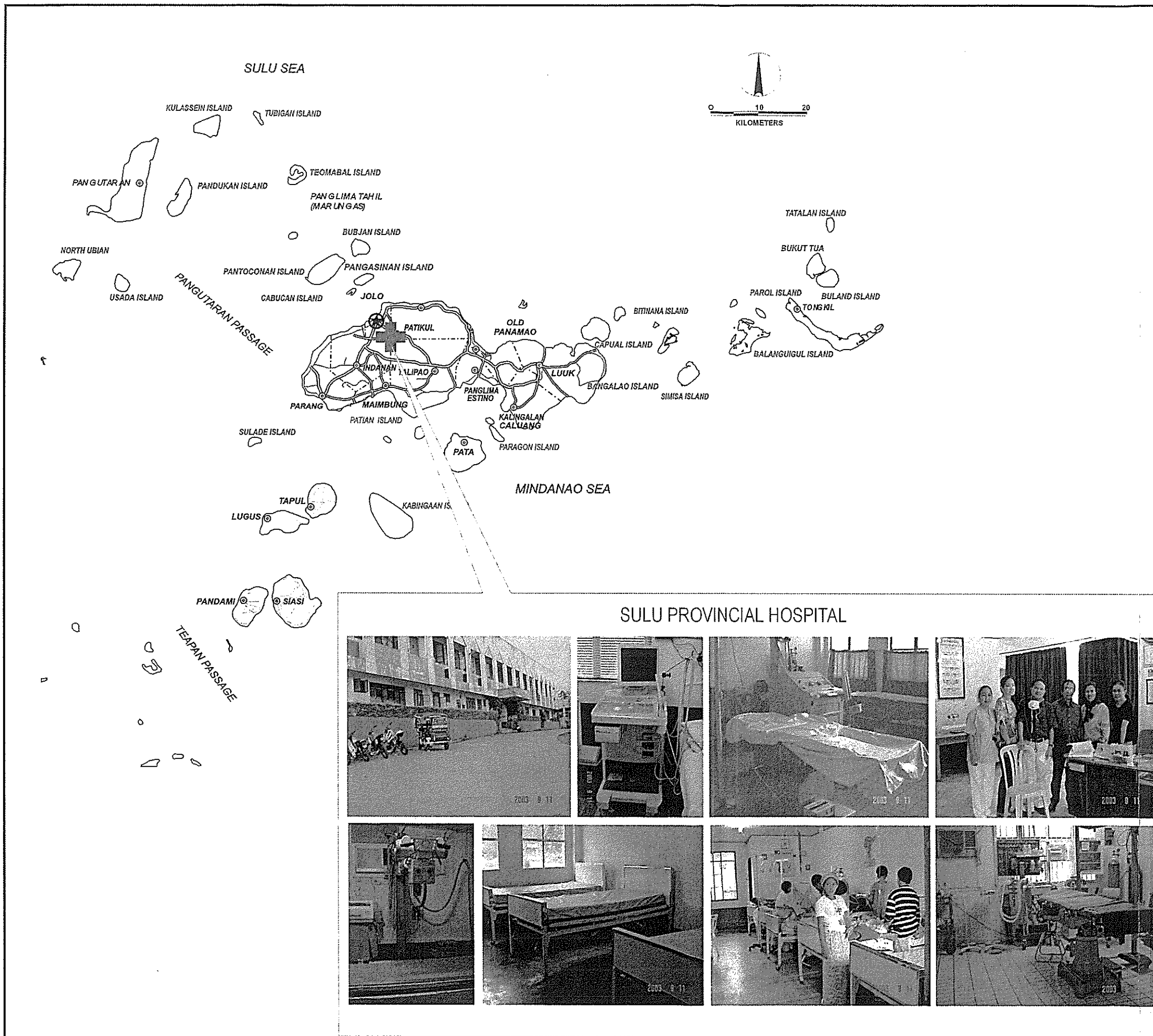
- Municipal Boundary
- River
- ==== National Road
- ==== Provincial Road
- ★ City Center
- ⊙ Town Center
- ⊕ Health Facility



ZAMBOANGA GENERAL HOSPITAL



Figure 5-8
SELECTED PHOTOGRAPHS
OF EXISTING HEALTH
FACILITIES IN
BASILAN PROV'L. & ZAMBOANGA
GENERAL HOSPITAL



KEY MAP

LEGEND:

- Municipal Boundary
- River
- ==== National Road
- ==== Provincial Road
- ★ City Center
- Town Center
- ⊕ Health Facility

Figure 5-9
SELECTED PHOTOGRAPHS
OF EXISTING HEALTH
FACILITIES IN
SULU

Table 5-5 Hospital Catchment Areas, Population Served, Number of RHUs and BHS and Accessibility Conditions – Lanao del Sur

Name of Hospitals	Distance from Hospital	Population	No. of RHU	No. of BHS	Accessibility of Hospital	Road Condition
LANAO DEL SUR		624,206	25	88	Accessible	Fair passable
<i>Dr. Ali Agama / Kapatagan Hospital</i>						
- Kapatagan	W/in poblacion	10,000	1	2	Accessible by land (horse), boat	
<i>Dr. Serapio Montaner Memorial Hospital</i>						
- Malabang	Town site	20,000			Accessible	Passable
- Balabagan	20 kms	15,000			Accessible	Passable
- Sultan Gomander	15 kms	10,000			Accessible	Passable
- Kapatagan	35 kms	10,000			Accessible	Passable
<i>Balindong Municipal Hospital</i>						
- Balindong	W/in poblacion	27,729	1	3	Accessible	Passable
- Tugaya	4 kms	27,729	1	3	Accessible	Passable
- Bacolod-Kalawi	8 kms	17,534	1	1	Accessible	Passable
- Madalmo	15 kms	20,065	1	2	Accessible	Passable
- Mayamba	17 kms	14,173	1	1	Accessible	Passable
- Ganassi	20 kms	20,809	1	2	Accessible	Passable
<i>Tamparan District Hospital</i>						
- Tamparan		19,834	1	2	Accessible	Good
- Mulondo		12,124	1		Accessible	Good
- Maguing		15,891	1		Accessible	Good
- Taraka		18,525	1	1	Accessible	Good
- Lumba-Bayabao		22,891	1	1	Accessible	Good
- Poona-Bayabao		18,035	1		Accessible	Good
- Masiu		24,139	1	1	Accessible	Good
- Lumbayanaque		12,590	1		Accessible	Good
- Lumbatan		17,019	1		Not accessible	Not good
- Butig		15,738	1		Not accessible	Not good
- Dumalondong		6,061	1		Not accessible	Not good
<i>Unayan Municipal Hospital</i>						
- Bayang	2.5 kms					Passable but need to be concreted
- Tubaran	3.5 kms					
- Pagayawan	4.0 kms					
- Lumbatan	6.5 kms					
- Ganassi	5.5 kms					
<i>Wao District Hospital</i>						
- Wao	W/in poblacion	34,000+	1	22	accessible	Rough road
- Bumbaran	25 kms	5,200+		1	accessible	Rough road
- Lumbatan	6.5 kms					
- Ganassi	5.5 kms					
<i>Wao District Hospital</i>						
- Wao	W/in poblacion	34,000+	1	22	accessible	Rough road
- Bumbaran	25 kms	5,200+		1	accessible	Rough road

Table 5-6 Hospital Catchment Areas, Population Served, Number of RHUs and BHS and Accessibility Conditions – Basilan

Hospitals	Distance from Hospital	Population	No. of RHU	No. of BHS	Accessibility of Hospital	Road Condition
BASILAN		318,186	8	58		
<i>Basilan General Hospital</i>					Accessible	Good
<i>Lamitan District Hospital</i>						
- Lamitan	0.3 km.	62,412	3	45	Accessible	Passable
- Tipo-tipo	45 km.	54,047	1	-	Partly accessible	Partly passable
- Tubukan	60 km.	48,836	1	-	Partly accessible	Partly passable
- Sumisip	65 km.	59,012	1	-	Partly accessible	Partly passable

Source: Survey report

Table 5-7 Hospital Catchment Areas, Population Served, Number of RHUs and BHS and Accessibility Conditions – Sulu

Hospitals	Distance from Hospital	Population	No. of RHU	No. of BHS	Accessibility of Hospital	Road Condition
SULU		583,340	18	54		Ok
<i>Sulu Provincial Hospital</i>						
- Jolo	0 km	108,437	1	4	accessible	Concrete paved
- Hadji Pangilinan Tahil	4.35 n.m.	5,503	1	0	accessible	By water
- Talipao	22 km.	73,212	1	1	accessible	Concrete paved
- Indanan	12.2 km	56,346	1	3	accessible	Concrete paved
- Patikul	13.5 km.	34,551	1	3	accessible	Concrete paved
<i>Luuk District Hospital</i>						
<i>Pangutaran District Hospital</i>	W/in poblacion	35,195	1	0	W/in poblacion	Rough road
- Pangutaran						
<i>Parang District Hospital</i>						
- Parang	1 km.		1	3	Land/sea	Poor
- Mambong	15 km.		1	0	Land/sea	Long route
- Pata	10 n.m.		1	0	By sea	
<i>Siasi District Hospital</i>						
<i>Tapul Municipal Hospital</i>						
<i>Tongkil Municipal Hospital</i>						

Legend: n.m. = nautical miles

Table 5-8 Hospital Catchment Areas, Population Served, Number of RHUs and BHS and Accessibility Conditions - Tawi-Tawi

Hospitals	Distance from Hospital	Population	No. of RHU	No. of BHS	Accessibility of Hospital	Road Condition
TAWI-TAWI		273,695	12	42	By sea	
<i>Datu Hahm Sakilan Memorial Hospital</i>						
- Bongao	W/in poblacion	61,553	1	5	By land and sea	concrete
- P. Sugala	1 hr	35,250	1	6	By sea	concrete
- Simunul	1 hr	33,819	1	3	By sea	concrete
- Sitangkai	3 hrs	55,837	1	6	By sea	concrete
- Sapa-sapa	4 hrs	27,766	1	9	By sea	concrete
- South Ubian	7 hrs	28,886	1	3	By sea	concrete
- Tandubas	5 hrs	26,346	1	4	By sea	concrete
- Languyan	8 hrs	44,482	1	2	By sea	concrete
- Mapun	16-18 hrs	23,290	1	4	By sea	concrete
- Turtle Island	12 hrs	3,309	1	1	By sea	concrete
<i>Languyan Municipal Hospital</i>	3-4 hrs				By sea	
<i>Datu Alawaddin Bandon Municipal Hospital</i>	3 hrs				By sea	
<i>Tuan Liggadung Lipae Municipal Hospital</i>	4 hrs				By sea	
- Sapa-sapa	4 hrs	27,762	1	9	By sea	
- South Ubian	7-8 hrs	22,345	2	5	By sea	
- Tandubas	5 hrs		1	7	By sea	
<i>Cagayan de Tawi-Tawi District Hospital</i>	16-18 hrs				By sea	

5.3 Basic Utilities

While basic utilities such as power, water, communications are a given in most regions, ARMM shows pockets of inadequacy even in areas where the source of power is supposed to come from, e.g. Tamparan District Hospital. Sulu also suffers from a severely inadequate power supply. Such situation unduly burden not only the population at large but more specifically the hospital itself whose equipments are dependent on a continuous and reliable power supply (Jolo has brownouts which extends to about 12 hours a day at times). Water supply is also a concern

in most hospitals in terms of potability and safety. Communication system as a whole is no different from the rest of the country but it is of more serious concern especially in the island provinces, although cellular phones has already somehow eased the problem of communication (see Table 5-9 below).

Table 5-9 Availability of Basic Utilities in Hospitals – ARMM

Hospitals	Water	Power	Communication	Ambulance
Maguindanao				
Maguindanao Provincial Hospital	Present (+)	Present (+)	Present (+)	Present (+)
Buhan District Hospital	(+) Not for drinking	+	Cellphone, Radio ICOM (inactive)	+ not functional
South Upi Municipal Hospital	?	?	?	?
Dinaig Municipal Hospital	+	+	+	?
Datu Blah Sinsuat District Hospital	(+) Not for drinking	Only one generator, No power	+	-
Tawi-Tawi				
Datu Halun Sakilan Memorial Hospital	+ Bongao Water District	+ Tawelco and Standby genset	+ SSB/Fax Machine/Telephone	-
Languyan Municipal Hospital	No data	+	No data	+
Datu Alawaddin Bandon Municipal Hospital	No data	+	No data	No data
Tuan Liggadung Lipae Municipal Hospital	+ water tank	+	-	-
Cagayan de Tawi-Tawi District Hospital		+		
Lanao del Sur				
Dr. Ali Agama / Kapatagan Hospital	+ on-going	-	-	-
Dr. Serapio Montaner Memorial Hospital	+ water pump	+ La Surico	-	

Hospitals	Water	Power	Communication	Ambulance
Balindong Municipal Hospital	+	+	+	+ for repair
Tamparan District Hospital	+ river, lake, shallow well, spring	+ unstable	+ cellphone, 2-way radio	+ good condition
Unayan Municipal Hospital	- insufficient	- generator	-	-
Wao District Hospital	+	+ on & off most of the time	+	- non-functional
Basilan				
Basilan General Hospital	+	+ (plus generator)	+	+
Lamitan District Hospital	-	- fluctuating	-SSB old model, No telephone	-
Sulu				
Sulu Provincial Hospital	by schedule	by schedule	satellite phone	anytime
Luuk District Hospital	By schedule	By schedule	-	+
Pangutaran District Hospital	+ need to develop	+	+	-
Parang District Hospital	rain water	5 KVA genset	VHF transceiver	-
Siasi District Hospital	-	-	Satellite phone	-
Tapul Municipal Hospital	-	-	Satellite phone	-
Tongkil Municipal Hospital	-	Generator	Satellite phone	-

5.4 Service Capabilities

In terms of service capabilities, the provincial hospitals to a large extent are able to comply with the licensing requirements for hospitals of the DOH while the district hospitals have been in limbo since devolution. All district hospitals have been downgraded to primary hospitals or lying-in facilities because of lack of facilities and the necessary doctors and nurses to man the hospitals. (See Table 5-10 below).

Table 5-10 Service Capabilities of Hospitals – ARMM

Hospital	Administrative Services	Clinical Services	Ancillary Service
Maguindanao			
Maguindanao Provincial Hospital	+	+	+
Buluang District Hospital	+	+	+
South Upi Municipal Hospital	+	+	+
Dinaig Municipal Hospital	+	+	+
Datu Blah Sinsuat District Hospital	+	+	+
Lanao del Sur			
Dr. Ali Agama / Kapatagan Hospital	+	+	+
Dr. Serapio Montaner Memorial Hospital	+	+	+
Balindong Municipal Hospital	+	+	+
Tamparan District Hospital	+	+	+
Unayan Municipal Hospital	+	+	-
Wao District Hospital	+	+	+
Sulu			
Sulu Provincial Hospital	+	+	+
Luuk District Hospital			
Pangutaran District Hospital	+	+	+
Parang District Hospital	+	+	+
Siasi District Hospital	+	+	+
Tapul Municipal Hospital	+	+	+
Tongkil Municipal Hospital	+	+	+
Tawi-Tawi			
Datu Halun Sakilan Memorial Hospital	+	+	+
Languyan Municipal Hospital	+	+	+
Datu Alawaddin Bandon Municipal Hospital	+	+	+
Tuan Liggadung Lipae Municipal Hospital	+	+	+
Cagayan de Tawi- Tawi District Hospital	+	+	+

Table 5-10 Service Capabilities of Hospitals – ARMM (Continuation)

Hospital	Nursing Service	Dietary Services	Maintenance Services
Maguindanao			
Maguindanao Provincial Hospital	+	+	+
Buluan District Hospital	+	+	+
South Upi Municipal Hospital	+	+	+
Dinaig Municipal Hospital	+	+	+
Datu Blah Sinsuat District Hospital	+	+	+
Lanao del Sur			
Dr. Ali Agama / Kapatagan Hospital	+	+	+
Dr. Serapio Montaner Memorial Hospital	+	+	+
Balindong Municipal Hospital	+	+	+
Tamparan District Hospital	+	+	+
Unayan Municipal Hospital	+	+	+
Wao District Hospital	+	+	+
Sulu			
Sulu Provincial Hospital	+	+	+
Luuk District Hospital	+	+	+
Pangutaran District Hospital	+	+	+
Parang District Hospital	+	+	+
Siasi District Hospital	+	+	+
Tapul Municipal Hospital	+	+	+
Tongkil Municipal Hospital	+	+	+
Tawi-Tawi			
Datu Halun Sakilan Memorial Hospital	+	+	+
Languyan Municipal Hospital	+	+	+
Datu Alawaddin Bandon Municipal Hospital	+	+	+
Tuan Liggadung Lipae Municipal Hospital	+	+	+
Cagayan de Tawi- Tawi District Hospital	+	+	+

5.5 Equipment

Generally, the provincial hospitals and medical centers have basic equipments such as x-ray and ultrasound machines which are not normally available as far as in district hospitals (See Annex 5 for listing of hospital equipments). District hospitals severely lack equipment required of a secondary care hospital.

5.6 Technical Requirements/ Personnel Component

In terms of personnel, there is adequate personnel complement except for doctors and nurses. The bigger issue is distribution and availability of competent and trained health workers especially doctors and nurses. (See Table 5-11)

Table 5-11 Personnel Complement of Hospitals – ARMM

Name of Hospital	MD	Nurses	MW	Dentists	MT	SI	Others	Total
Maguindanao								
Maguindanao Provincial Hospital/Field	25	45	121	6	8	11	51	267
Buluang District Hospital	7	10	13	1	1	-	23	55
South Upi Municipal Hospital	3	4	-	-	1		12	20
Dinaig Municipal Hospital	3	4	-	-	1	-	12	20
Datu Blah Sinsuat District Hospital	4	7	13	1	1	1	13	40
IPHO Lanao del Sur	16	16	35	3	5	17	24	116
Dr. Ali Agama / Kapatagan Hospital	-	+	-	+	1	-	-	3
Dr. Serapio Montaner Memorial Hospital	12	9	23	1	2	3	22	72
Balindong Municipal Hospital	4	4	11	1	1	4	10	35
Tamparan District Hospital	19	9	32	2	2	14	16	94
Unayan Municipal Hospital	3	4	-	-	1	-	12	20
Wao District Hospital	5	8	8	1	2	1	21	46
Sulu								
Sulu Provincial Hospital/Field	23	39	27	3	4	13	72	182
Luuk District Hospital	8	9	12	1	2	4	19	55
Pangutaran District Hospital	5	7	5	1	2	2	19	41

Name of Hospital	MD	Nurses	MW	Dentists	MT	SI	Others	Total
Parang District Hospital	8	8	13	1	2	4	12	48
Siasi District Hospital	5	7	6	1	2	2	20	43
Tapul Municipal Hospital	2	5	-	-	1	-	11	19
Tongkil Municipal Hospital	1	5	-	-	1	-	11	18
Basilan General Hospital (Note: - Non-ARMM)	8	5	2	1	1	-	23	40
Lamitan District Hospital	2	4	5	2	2	-	5	20
IPHO Tawi-Tawi								
Datu Halun Sakilan Memorial Hospital/Field	11	13	25	2	8	7	49	115
Languyan Municipal Hospital	2	5	-	-	1	-	12	20
Datu Alawaddin Bandon Municipal Hospital	3	4	-	-	1	-	12	20
Tuan Liggadung Lipae Municipal Hospital	7	15	26	2	3	6	22	81
Cagayan de Tawi-Tawi District Hospital	6	7	5	1	2	2	19	42

TABLE 5- Personnel Staff (Legend: MW- midwife; MT- medical technologist; SI- Sanitary inspector)

There is however a disparity of personnel complementation viz a viz the number of beds. Technically DOH licensing for first level referral hospitals require at least the following staffing pattern as shown in Table 5-12 below:

Table 5-12 DOH Standards for First-Level Referral Hospital (A.O. 70-A S. 2002)

Position	Standard Requirements
1. Administrative	6 (including 1 storekeeper)
2. Doctors/ dentist	Standard: 1:8 beds; 1 dentist (part time)
3. Pharmacist	Standard: 1:25
4. Medical Record	1 Medical Records officer and staff
5. Laboratory	1 medical technologist
6. X-ray	1 technician
7. Nursing service Midwives/ nursing aides	1 chief, 1 supervisor, 4 nurses/ nursing station 1: 6 beds
8. Dietetic service	1 dietician, 1 cook, 1 food service worker
9. Utility man/guard/laundry	3/shifts (laundry/utility/guard)

5.7 Management / Referral System

From the standpoint of hospital management, all hospitals use the prescribed Manual of Hospital Operations. The ideal referral system should be a two-way system, vertically and horizontally meaning that the facilities involved should put a system in place whereby a patient requiring care beyond the capability of the unit is referred appropriately to a unit capable of handling the case being referred. It also assumes that once the need of the patient has been addressed, such a patient should be referred back to the initial facility with instructions on what to do as a matter of follow-up of care. Please see Box 1 for the proposed detail of a referral system that could be implemented. Statistical reporting however is not consistently done due to lack of manpower and office equipment that will facilitate the compliance with such a requirement. Along this line, a hospital information system should be strengthened to ensure that decision-making process is not only evidenced-based but also reliable and accessible whenever data is needed. During this study, there is difficulty getting data as needed. Perhaps one of the factors identified by the respondents is survey-fatigue. Respondents have had several survey teams visiting their facilities asking for various data.

BOX 1**PROPOSED REFERRAL SYSTEM PROTOCOL**

- I. Definition: Referral is a set of activities undertaken by a health care provider or facility in response to its inability to provide the necessary intervention to a patient's need whether it's real or just a perceived need. In its wider context referral will encompass referrals all the way from the community to the hospital and back (two-way referral); and within the hospital internal system. It also involves not only direct patient care but support services as well, e.g. knowing where to get a transport facility to move the patient from one facility to the other. It also requires a good communication system such that a patient requiring emergency intervention can be attended to within the shortest possible time through an advance notice to the receiving facility.

A functional referral system however assumes that:

- There is a willingness to share resources.
- One does not exist in isolation
- Resources are not unlimited
- There is a room for flexibility and innovation
- There is always room for improvement
- Communities are willing to share in ensuring quality health care.
- Members in the link of facilities are individually competent and with adequate and appropriate resources to meet the needs of the community.
- There is an open line of communication - horizontally and vertically.
- There is an efficient information system.

- There is a Political Will to support such system with adequate policy and administrative and technical support.
- There is a framework of integration such as a District Health System that is in place
- Patient management protocols are in place with corresponding role identification on what level of health facility should handle such a case

II. Types of referral:

1. External referral- refers to referral from one health facility to another. Example is a referral of a patient from a Rural Health Unit to a hospital.
2. Hospital internal referral- refers to a referral from one physician to another physician within the same hospital.

III. General guidelines for referral: It is important for health facilities to refer only those patients for whom care is beyond its mandated level of essential health services. In general, referral from one health facility / health care provider to the other or to higher levels should occur in any or all of the following situations:

1. When a patient needs expert advise,
2. When a patient needs a technical examination that is not available at the health facility,
3. When a patient requires a technical intervention that is beyond the capabilities of the health facility,
4. When a patient requires in-patient care.

Subsequently, the referral back to the lower levels should occur also in the following situations:

1. When the expert advise has been achieved
2. When the technical examination has been done
3. When the technical intervention has been successfully performed
4. When the reason for admission has been resolved and the patient can be discharged safely back to a lower level of care or to the community.

These guidelines are important since these will govern the reason/s why a patient needs to be referred. Outside of these guidelines there should be a very strong reason for bypassing the lower levels in the health care delivery system.

IV. Essential Health Services / Minimum Package of Activities

The definition of a minimum package of essential services is necessary to ensure that limited resources are maximized and not unnecessarily wasted. Such services will subsequently be assigned to the health facilities as either their primary or secondary responsibilities. Examples of such services are hereunder listed. These are not however exhaustive nor exclusive.

A. Public Health Services (Primary care) in this instance may include the ff:

1. immunization
2. school-based services
3. Family Planning and education
4. Nutrition services (including growth monitoring)
5. Environmental protection
 - a. sanitation

- b. food safety
- c. safe water supply
- d. safe housing
- 6. Essential individual clinical services:
 - a. Prenatal, childbirth and post-partum services
 - b. Acute childhood and malnutrition- exacerbated illnesses including:
 - i. Diarrhea
 - ii. ARI
 - iii. Measles
 - iv. Malaria
 - v. Dengue
 - vi. Other endemic diseases of the area
 - c. Family planning
 - d. TB
 - e. STD
 - f. Injuries and other common conditions specific to the area

B. Hospital services (- secondary and tertiary care)- in-patient care and diagnostic work- up for possible referral to higher levels of care. This shall also include current hospital initiatives like Center of Wellness, Breast feeding, etc. At the minimum District Hospitals in this instance should have the capability to respond to life-threatening surgical emergencies such as chest injuries requiring tube insertion, ruptured appendicitis, ectopic pregnancy, etc. Necessarily the hospital should have expertise and facilities to be able to respond to all of these.

V. Categories of Health Care Providers and levels of care:

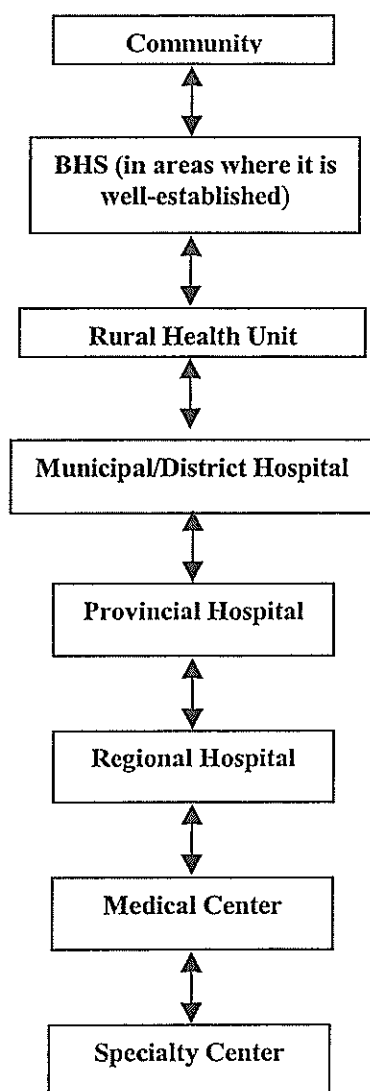
The range of services demands that there should likewise be a range of health care providers appropriate to the services required. Manpower complement could thus be assigned to the level of service depending on the complexity of care required.

1. Community-based Health Services- home remedies:
 - a. Family or Family Health Aide (?)
 - b. Community-based physical rehabilitation aide (?)
 - c. Barangay Health Worker- (interface between Community and RHU)
 - d. Others- traditional healers
2. Public Health Services
 - a. Barangay Health Station- Barangay Health Worker- Midwife
 - b. Rural Health Unit (RHU) - provides essential public health services such as listed above. It shall also provide individual clinical services especially for minor ailments that persist beyond 48-72 hours, trauma and accidents.
 - i. Rural Health Physician
 - ii. Dentists
 - iii. Public Health Nurse
 - iv. Midwife
 - v. Sanitary inspector
 - vi. Medical technologist (?)
 - vii. Health Educator / Community organizer/liaison
 - viii. Other support staff

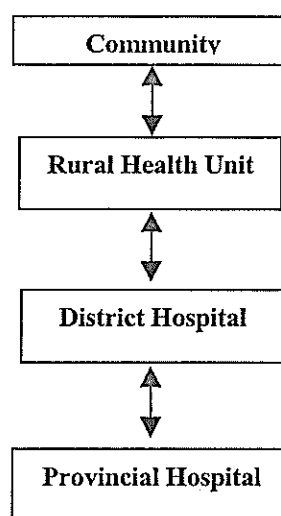
3. Hospital services - this includes an appropriate laboratory, diagnostic and logistical support services. Such a hospital should at least have the capability to respond to life-threatening conditions such as ruptured ectopic pregnancy, acute appendicitis, caesarian section, and provide basic life-support system. Its manpower complement shall be appropriate and commensurate to the service required- ideally with secondary care capability.

VI. Referral System Flowchart:

A. Over-all Referral System



B. District Health Referral System



- C. Hospital Internal Referral System: Within the hospital setting referrals may be made assuming that there are several doctors or health care providers with varied skills and expertise or with different specialties. Reasons for referral could vary from any of the following: The referral note (See Annex B) should be accomplished by the referring physician. Patient must also sign consent for referral (See Annex D).

1. Evaluation/opinion (referred physician does not actively manage the patient...mainly gives opinion)
2. Co- management (both the referring and referred physician actively manage the case)
3. Transfer service (attending physician endorses management completely to the referred physician)

4. Transfer to another facility (another hospital) for further management

VII. Protocol of Referral:

Patients coming from health centers should bring with them a referral note (See Annex A) that shall contain relevant information and shall include: This note may be filled up initially by the clerk/nurse for the benchmark data however the following should be filled up by a physician:

- Pertinent history (brief)- focusing on salient points
- problem
- interventions given (home/facility)
- advise given after consultation
- reason for referral

Once the reason for the referral has been addressed by the recipient hospital such a patient should be referred back to the RHU if necessary for follow-up with a corresponding referral slip or instruction on how the patient will be managed on an outpatient basis or home setting. This instruction should be contained in a discharge summary (See Annex C).

VIII. Monitoring and Evaluation

Under the scheme of the DHS, the District Unit should periodically monitor and evaluate how referrals are being implemented. This presupposes an information system that is able to track movement of patients from one health facility to the other.

Some parameters that can be used to gauge the quality of the referral system will involve looking at:

- efficiency,
- effectiveness,
- accessibility,
- appropriateness,
- responsiveness,
- good interpersonal relationship.

IX. Summary

A referral system in a wider sense is a form of networking and it can only work more effectively and efficiently within a framework where there is coordination and collaboration of the network of facilities. Such a framework is a District Health System which recognizes the strengths and weaknesses of its member health facilities and complement/ supplement whenever necessary to achieve better health service delivery. It also recognizes the fact that it is only as strong as the weakest member in the chain of health facilities. Its ultimate goal is better patient outcome.

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Local Health System Specialist*

As far as the referral system, there is ample evidence that a referral system is in existence but there is no clear structure to monitor the system. It is also mainly one-way as there is no explicit attempt to refer back a patient to the RHU or District hospitals as the case maybe. There is scant documentation as far as disposition of patients except reports coming from Maguindanao Provincial Hospital which tracks down the number of patients coming from its catchment area and uses the information for financial support from the municipalities which benefited from the services of the hospital. Hospitals are also unduly burdened by diseases that should have been handled at the level of RHU, Table 5-13 below shows that the number one cause of hospital discharges in all hospitals of ARMM is either Acute Gastroenteritis or Diarrhea. These diseases are preventable through a good water system and advocacy through schools and communities. A good referral system within the context of a District Hospital System as envisioned by WHO will go a long way towards addressing this issue.

Table 5-13 Leading Causes of Discharges (2000-2001)*

Diagnosis	Remarks (Hospitals)
Acute Gastroenteritis/Diarrhea	Maguindanao, Amai Pakpak, Tamparan (CRMC, Sulo, Tawi-Tawi, BGH, Lamitan
Pneumonia/URTI, URI, Bronchitis	- as above -
Newborn Deliveries/Normal/Cesarian Section	Maguindanao, CRMC, Lamitan
Typhoid	Maguindanao (# 4), AmaiPakpak (# 3)
Hypertension, CVD	Maguindanao (# 6), CRMC (# 6)
Abortion	CRMC (# 5), Maguindanao (# 9)
PTB	Amai Pakpak (# 4), CRMC (# 9), Maguindanao (# 10)
Amebiasis	Tamparan (# 5), Maguindanao (# 6),

Note: consolidated data: Acute gastroenteritis/Diarrhea is consistently #1.

5.8 The Hospitals Visited - Some Observations

Table 5-14 below shows the general profile of hospitals physically visited during the study.

The tables above provide a glimpse into the capability of the hospital facility in terms of delivering levels of care or specialized care. Cotabato Regional Medical Center is the tertiary referral center in Maguindanao while Zamboanga Medical Center provides tertiary care for the island provinces of Basilan, Sulu and Tawi-Tawi. Amai Pakpak Medical Center provides

tertiary level of care for the Lanao del Sur area. Maguindanao Provincial Hospital provides secondary care to Maguindanao province.

The three medical centers namely Cotabato Regional Medical Center (CRMC), Zamboanga Medical Center (ZMC) and Amai Pakpak Medical Center (APMC) are fairly equipped to provide tertiary medical care except perhaps for Amai Pakpak which may have difficulty handling critical care. Zamboanga Medical Center is currently a recipient of several equipments (including a CT-SCAN) under a program with the Spanish government. Building renovations are being undertaken to accommodate the equipment. Some time in the future it may need to put up a separate Outpatient Department (OPD). Its present OPD may be too small to handle future patient load given the upgrading of facilities that are going on. (See pictures below Figure 5-6 Zamboanga/Basilan; Figure 5-7 Amai Pakpak/Marawi; Figure 5-8 Maguindanao/Cotabao and Figure 5-9 Sulu).

As far as APMC, its location is strategic for the Lanao del Sur area. It has constructed a building for its expansion but somehow it has not gone beyond the construction of posts. Cotabato Regional Medical Center is a well-established hospital and it provides tertiary care not only for the Cotabato area but the Maguindanao area as well. Maguindanao Provincial Hospital is a sprawling hospital which provides care to the Maguindanao area. It is a well-managed facility which is fortunate to have a very supportive Provincial Governor. It may need however updating its equipments. Basilan General Hospital is a newly nationalized hospital whose building has recently been renovated by the U.S. military personnel (Balikatan). It is also a recipient of some equipment such as a new generator courtesy of the U.S. also. Sulu Provincial Hospital is due for rehabilitation / renovation through WB.

Table 5-14 General Profile of Hospitals Visited – ARMM

Hospitals	ABC*	IBC*	BOR*	LOS*
Maguindanao				
Maguindanao Provincial Hospital	50	50	83%	
Buluan District Hospital	25	25	?	3
Lanao del Sur/Marawi City				
Amai Pakpak Medical Center @	200	75	116.5%	2.92
Basilan				
Basilan General Hospital @	100	25		

Hospitals	ABC*	IBC*	BOR*	LOS*
Sulu				
Sulu Provincial Hospital	100	155	141.64%	5
Luuk District Hospital		25		
Parang District Hospital	25	25	54%	
Tawi-Tawi				
Datu Halun Sakilan Memorial Hospital	50	50	88.51%	
Cotabato				
Cotabato Regional and Medical Center @	400	270	100%	
Zamboanga				
Zamboanga City Medical Center @	250	98-100	105%	

Note: * ABC - Authorized Bed Capacity; IBC - Implementing Bed Capacity,
 LOS - Length of Stay, BOR - Bed Occupancy Rate
 @ - Non- ARMM hospital

Table 5-14 General Profile of Hospitals Visited – ARMM (Continuation)

Hospitals	Classification	Accessibility	General Condition of the Building
Maguindanao			
Maguindanao Provincial Hospital	Secondary/ Provincial H.		
Buluan District Hospital	Primary/ District H	land	Good For expansion
Lanao del Sur/ Marawi City			
Amai Pakpak Medical Center @	Secondary/ National		Newly renovated hospital building
Basilan			
Basilan General Hospital @	Secondary/ Re-nationalized		Newly renovated
Sulu			
Sulu Provincial Hospital	Secondary/Provincial H.	Land/water	For expansion: Reconstruction
Primary/ District H.	Primary/ District H.		Needs repair
Parang District Hospital	Primary/ District H.	Land/sea	For expansion:
Tawi-Tawi			
Datu Halun Sakilan Memorial Hospital	Secondary/ Provincial H		Good For Expansion
Cotabato			
Cotabato Regional and Medical Center @	Tertiary/ National		For expansion: Onco. Ward & cobalt therapy
Zamboanga			
Zamboanga City Medical Center @	Tertiary/ National		For general repair

Note: * ABC - Authorized Bed Capacity; IBC - Implementing Bed Capacity,
 LOS - Length of Stay, BOR - Bed Occupancy Rate
 @ - Non- ARMM hospital

Table 5-15 Availability of Basic Utilities In Selected Hospitals - ARMM

Hospitals	Water	Power	Communication	Ambulance Service
Maguindanao				
Maguindanao Provincial Hospital	+	+	+	+
Buluan District Hospital	+	+	SSB	+
Lanao del Sur/ Marawi City				
Amai Pakpak Medical Center @				3 units of ambulance (1 not in running condition)
Basilan				
Basilan General Hospital @	+	+, generator	+	
Sulu				
Sulu Provincial Hospital	+	+, frequent brownouts	+	+
Luuk District Hospital	+	+ brownouts	-	-
Parang District Hospital				-
Tawi-Tawi				
Datu Halun Sakilan Memorial Hospital	+	+	+	
Cotabato				
Cotabato Regional and Medical Center @	+	+, generator	+, internet	+(3) running condition
Zamboanga				
Zamboanga City Medical Center @	+	+	+, internet	+