

CHAPTER 5

COMMUNITY ACTION PLAN

5.1 INTRODUCTION

This chapter will present the major analytical work derived from the results of the social surveys, covering both the Barangay Profiling which is discussed in Chapter 1 and the IBNA which was intensively discussed in Chapter 2. The findings of the IBNA and the Barangay Profiling were reviewed and cross-checked to describe an accurate picture of the current status of barangays in the conflict-affected areas (CAAM) and to introduce an action plan designed for their development. The latter is named the Community Action Plan or CAP.

The ultimate goal of this study is the comprehensive formulation of a Socio Economic Development Plan (SEDP) designed for CAAM. This SEDP is sub-divided into four sections according to a timeline: namely, The Emergency Plan, The Short-term Plan, The Mid-term Plan, and The Long-term Plan. The Urgent Plan literally addresses the immediate rehabilitation and development needs of people at the community level so as to ensure human security in CAAM and prepare a foundation for broad-based development in the future. The CAP, which this chapter is aiming to propose, not only constitutes the core of the Emergency Plan but also underlies the Short-term Plan as well, thus significantly contributing to the formulation of the SEDP in the end.

Specifically, the CAP is intended to provide concrete project options of various types that are ready for implementation in the immediate future. The CAP is therefore somewhat self-contained and quasi-independent from the entire structure of the SEDP which, in contrast, presents a comprehensive grand design and an overall strategy for socio-economic development in CAAM. It is imperative for the CAP to reflect the actual situation of the CAAM communities, respond to the actual needs, and address the issues people living there feel strongly about. Schematically speaking, the Barangay Profiling helped CAP depict the “actual situation” of the communities, in CAAM; while the IBNA reflected the “strongly felt needs” of people. It is however, apparently not easy to draw a line between the two aspects.

In the following sections, we will first review the findings of the Barangay Profiling, and then move to the results of the IBNA, and finally integrate them to work out a CAP. In addition, a comparative analysis will be made concerning the existing studies of a similar nature that other donors have conducted in this area of the Philippines.

A few notes should be put on here.

- This chapter includes many municipality-wise GIS maps to help readers understand geographical distribution of various subjects. Raw data and numerical statistics used for constructing these maps are not presented here due to the inconvenience of a large space the inclusion of such raw data requires. If the reader is interested in numerical basis of these maps, please use the Barangay Database which is one of products of this study. The Barangay Database may be obtained through the JICA Philippines Office.
- Some readers may also notice that province-wise tables contained in this chapter are not translated into maps unlike municipality-wise GIS maps. This is because of possible misinterpretations such maps may lead to. This chapter is based largely on barangay data and to a lesser extent on municipality data. In some provinces, too small a number of samples are collected to justify painting a color in the entire area of province, which will be apparently misleading. Therefore the Study Team decided not to present province-wise GIS map in this chapter.

5.2 ANALYSIS OF BARANGAY PROFILING

The Barangay Profiling successfully surveyed the socio-economic status of 3,532 barangays out of 3,856 target barangays through questionnaires and interviews. However, the rapidly deteriorating security conditions in Mindanao have blocked the implementation of the Barangay Profiling of all targeted barangays. Still, 92% of them were completed because of the extraordinary efforts of the project field workers, the BDA and barangay officials, under difficult circumstances.

In order to clarify the socio-economics of the CAAM, the data gathered through the Barangay Profiling is summed up and analyzed on different layers, which are 1) the statistical universe of the entire CAAM area; 2) The provinces, 3) the areas comprising the three different topographical types, and 4) the ARMM and non-ARMM areas.

Regarding the provinces, it is necessary to state that the data are merely representative of barangays which belong to CAAM within a province. Since some provinces only have a few barangays in CAAM, the survey results should not necessarily be interpreted as representing the whole province. This is particularly so in Davao Oriental, Compostela Valley, Sarangani and South Cotabato; because the number of samples is too small to represent the whole province in these cases.

The three topographical types are Coastal, Highland and Planes. Barangays with a shoreline

are classified as Coastal, ones located in mountainous areas are classified as Highland, and all other barangays are classified as Planes. The barangays were categorized into these types with GIS map information brought by the Field Teams. However, it is important to note that classification into these three topographical types is not based on objective numerical data. Correlation analysis was also undertaken to understand the relationship between socio-economic variables on this layer.

The Barangay Profiling has also gathered information on development needs from barangay officials. However, we consider that it is not as accurate as the development needs identified through the IBNA since the Barangay Profiling does not include a process of consensus making in communities. As a result, the Barangay Profiling tends to represent the needs perceived from the community leaders' point of view. We should therefore assume that the Barangay Profiling data on development needs are best used to understand the general tendency of the development needs structure in CAAM. Yet, we will see later, the overall similarities as well as specific differences that exist between the needs identified through IBNA and the Barangay Profiling.

The following describes only the broad overall socio-economic situation of the CAAM on which the social survey has shed light.

(1) Population

According to the survey, the total population of the CAAM is 5,573,487, with the average population of a barangay being 1,625. The population density of the area is 224 people per sq. km. The population density of the southern CAAM is lower relative to that of the northern areas as reflected in Figure 5.2-1 below.

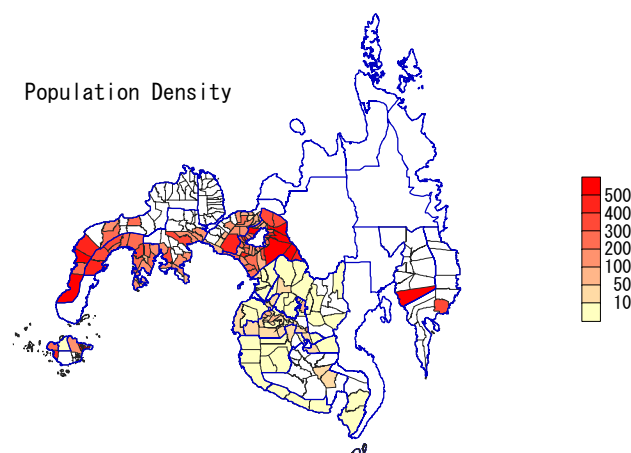


Figure 5.2-1 Population Density per km² by Municipality

Concerning the religious make up, the Muslim population slightly exceeds 50% of the total population in the entire CAAM. There is a clear trend in terms of religious distribution as shown in Figure 5.2-2. In ARMM areas, 89% of the total population is Muslim, while the same ratio is mere 27% in Non-ARMM CAAM (See Chart 5.2-1).

It is expected that the proportion of the Muslim population in an area is positively correlated with the number of madrasah, or Muslim schools, in the area, but it is worrisome that the same population is negatively correlated with the number of health centers, day care centers and people’s organizations (PO). We speculate that this may be the result of physical damages and social hindrances – including weak governance – attributable to the political instability and prolonged conflict in areas with Muslim majorities. The comparison between ARMM and non-ARMM CAAM also highlights the comparative underdevelopment of ARMM areas in terms of educational facilities, health facilities, toilet facilities and electrification among other things.

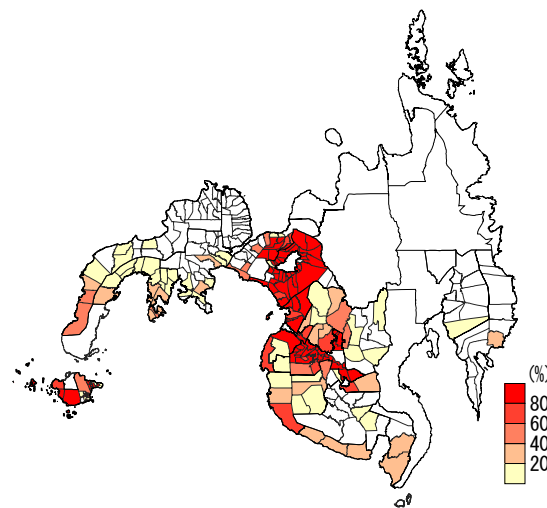
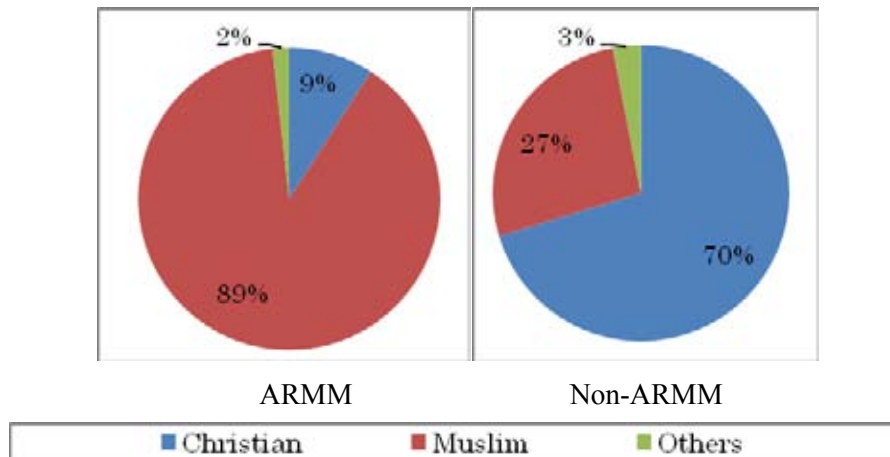


Figure 5.2-2 Proportion of the Muslim population by Municipality (%)

Chart 5.2-1 Muslim population in ARMM and Non-ARMM Areas (%)



The ethnicity in the region is composed mainly of four groups; i) Maguindanao, ii) Maranao, iii) Cebuano and iv) Illongo. These four groups combined account for more than 70% of the total population (See Chart 5.2-2). As shown in Figure 5.2-3, a geographical pattern appears in the distribution of the ethnic groups. Cebuano people live mainly in the Zamboanga Peninsula and the southern part of Mindanao. Maranao is the majority group in the Lanao area. The Maguindanao mostly live in the provinces surrounding Cotabato City, and from the edge of Maguindanao many Ilongo-majority barangays are present.

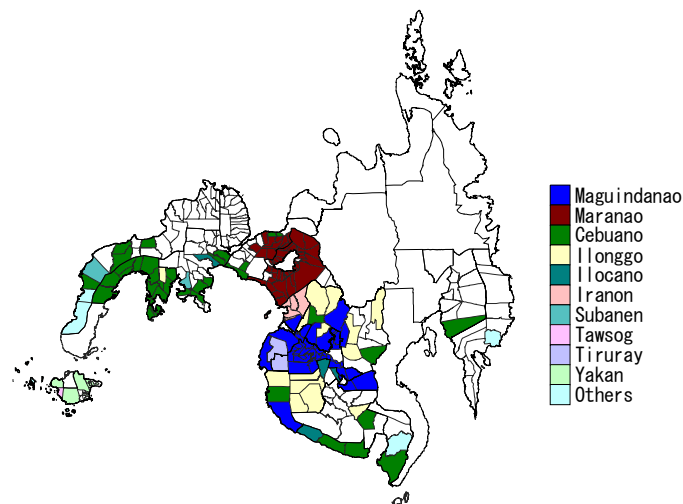


Figure 5.2-3 Major Ethnic Groups by Municipality

There is also a clear relationship between ethnicity and topographical types as shown in Chart 5.2-3. The Plains areas have a higher Maguindanao population, while Maranao and Cebuano are the largest ethnic groups in the Highlands and Coastal areas respectively.

In the context of ARMM and non-ARMM areas, ARMM areas have larger Maguindanao and Maranao populations, the combination of which accounts for almost 70% of the total population. The Non-ARMM areas have larger Illonggo and Cebuano populations accounting for 51% (see Chart 5.2-4).

Chart 5.2-2 Ethnic Group in CAAM

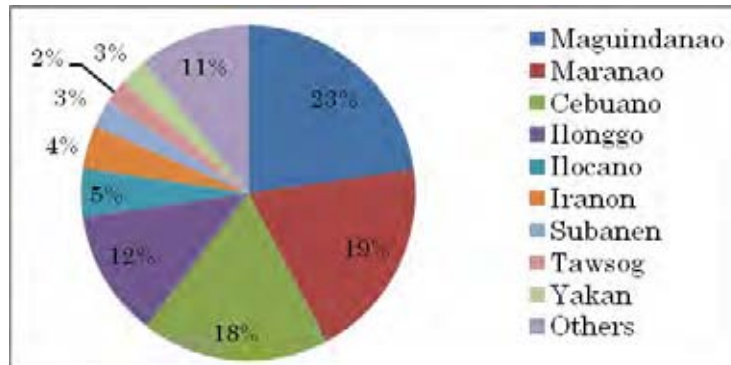


Chart 5.2-3 Ethnic Group by Geographical Types

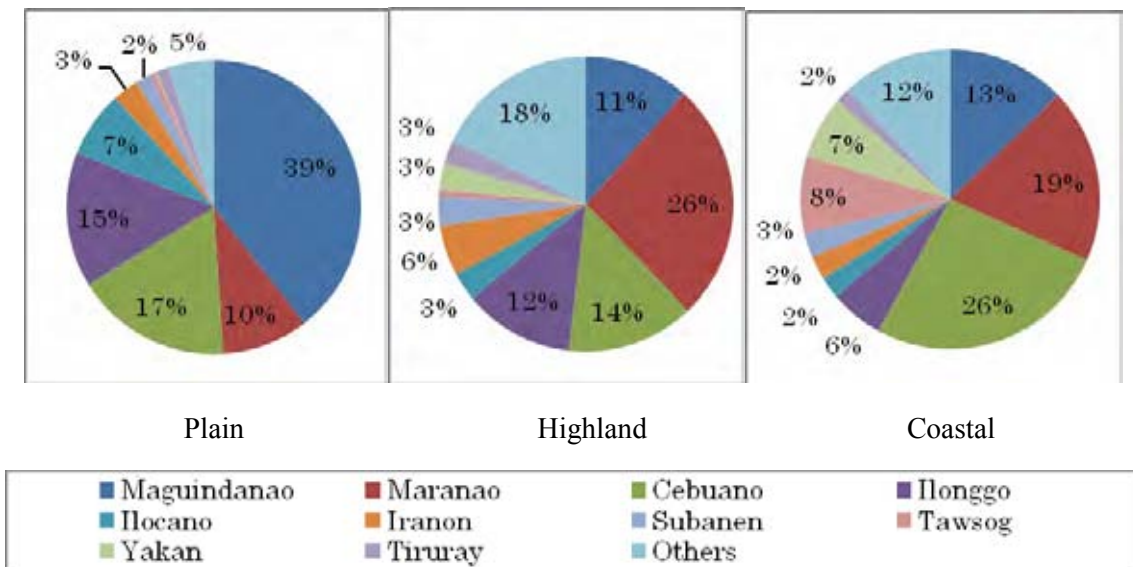
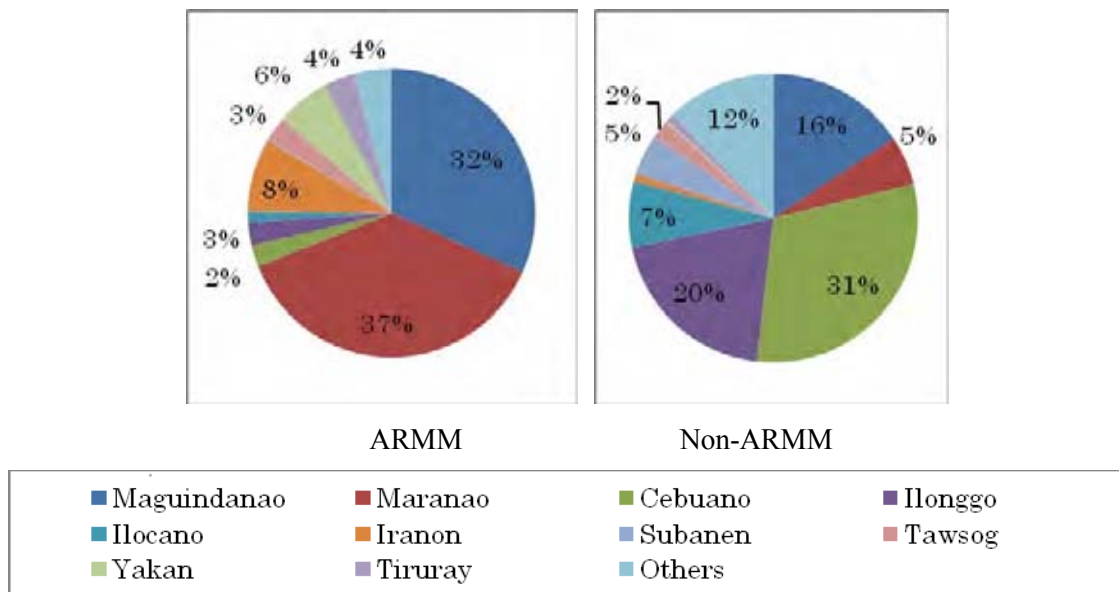


Chart 5.2-4 Ethnic Group between ARMM and Non-ARMM CAAM



(2) Road and Accessibility

The average distance and travel time from CAAM barangays to nearby national roads is 7.9km and 32 minutes. Only 23% of feeder roads to barangays are paved. People ride on motorcycles and other vehicles to access national roads, but they also frequently walk. The correlation analysis shows that the farther away from a national road person is, the higher the cost of transportation they have to bear for marketing their products. The electrification coverage is also negatively correlated with the distance from national roads.

The need for better roads and access was cited by the majority of the surveyed barangays. It can be inferred from this that people feel a great deal of inconvenience as a result of transportation deficiencies in their daily lives. Nonetheless, no solid verification has been found to validate our early assumption that the distance between a specific community and a national road can be seen as a proximate indicator of underdevelopment in CAAM. As discussed above, it has been confirmed that accessibility correlates to the cost of transportation and the degree of electrification. However, there is hardly any other statistical evidence to connect relative accessibility to the status of barangay development.

The survey results contained in Table 5.2-1 show that people in Highland areas spend almost twice as much time in travel as those living in Planes areas, since barangays in Highland areas tend to be located far from national roads.

People in Coastal areas also register much longer distances and travel times than those in Plains areas. This is probably because some people in Coastal area barangays use boats to reach the national roads. As much as 15% of all barangays in Coastal areas use boats as a

means of transportation to access national roads, while boats are rarely used in other geographical areas as shown in Chart 5.2-5.

There are clear differences between ARMM and non-ARMM areas in the modes of transportation and road types available, albeit a clear-cut reason for them is not immediately available. More people in ARMM areas use cars as the primary mode of transportation, this is more than twice that of the non-ARMM areas where motorcycles are the main form of transportation as is shown in Chart 5.2-6. The road conditions are also quite different; ARMM areas have a higher percentage of Paved and Soil roads, and fewer Gravel roads (See Chart 5.2-7).

Table 5.2-1 Accessibility and Road Condition

Geographic Type	Average distance from the nearest national road		Average transportation cost (Peso) to the nearest national road	
	Km	minutes	dry season	Rainy season
Plains	5.2	21.7	25.6	30.2
Highland	9.6	38.1	38.4	44.2
Coastal	7.9	33.2	27.3	32.4

Chart 5.2-5 Means of Transportation by Geographical Types (%)

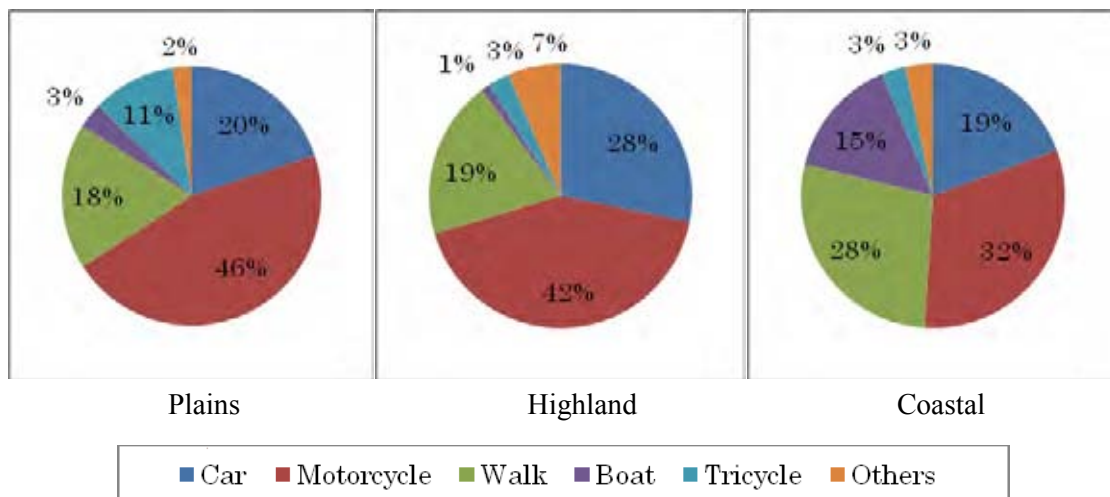


Chart 5.2-6 Means of Transportation in ARMM and Non-ARMM Areas (%)

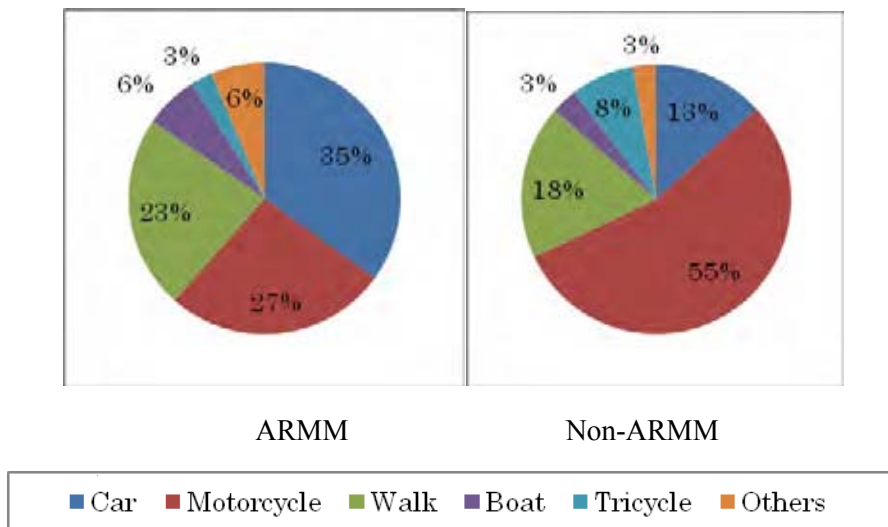
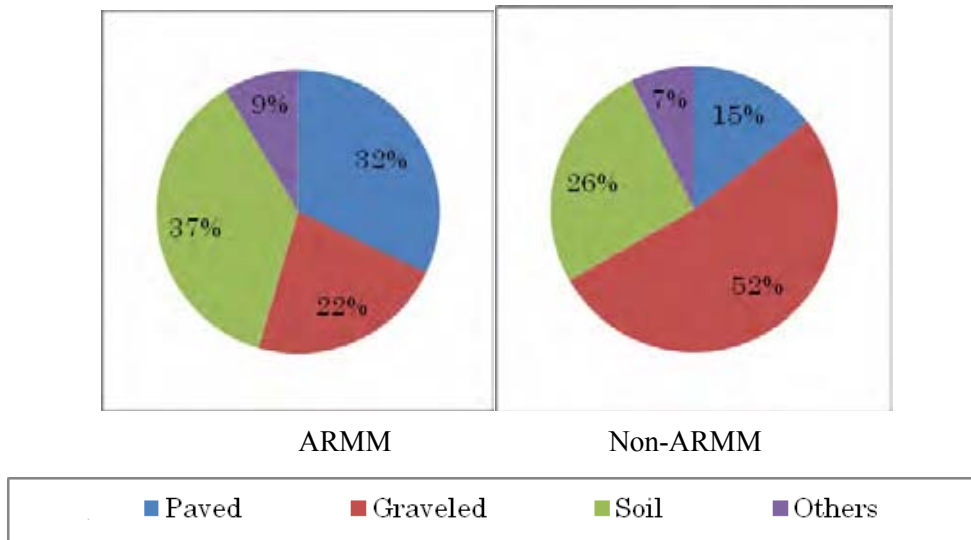


Chart 5.2-7 Road Type in ARMM and Non-ARMM Areas (%)



(3) Education

The numbers of school facilities for every 10,000 people per population clearly demonstrates the differences in the educational conditions among provinces. The number is higher in the Zamboanga area and lower in the provinces of Lanao del Norte, Maguindanao and Shariff Kabunsuan (see Figure 5.2-4, Table 5.2-2). The numbers in ARMM areas are lower than those in non-ARMM areas, with the only exception being madrasahs as seen in Table 5.2-3. The same table also shows that the number of madrasahs has a negative correlation to the number of elementary schools and day care centers. This is probably because madrasahs may serve some of the functions of an elementary school or day care center, especially in areas where Muslims are the majority group. As for geographical factors, neither the topographical types, nor the distance from national roads is significantly correlated to the number of educational facilities.

It should be noted here that the survey results depict quantitatively, not qualitatively, the state of education in CAAM. One may not find some important factors which should be taken into consideration for a qualitative discussion. For example, even though a school may exist, its condition is likely to be very poor in many barangays in CAAM. In the course of the field survey, the Field Teams often found schools in which many children from different grades were packed into small classrooms lacking even chairs. Walls of school buildings were often broken, or absent from the very beginning, and toilet facilities were not attached to many schools. The fact that people in CAAM take this issue seriously is reflected in the results of the needs survey in which education is one of the most highly prioritized sectors. We will take up this issue again later.

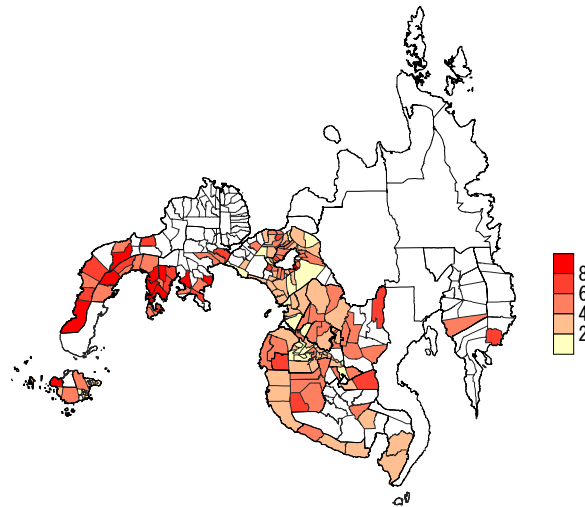


Figure 5.2-4 Number of Elementary Schools by Municipality per 10, 000 people

Table 5.2-2 Number of School Facilities by Province per 10, 000 People

Province name	High schools	Elementary schools	Primary schools	Daycares	Madrasahs	Informal
Lanao del Norte	0.8	3.4	3.6	3.6	3.9	0.0
Lanao del Sur	1.3	3.9	3.3	0.9	5.5	0.1
Compostela Valley	1.4	4.3	0.8	4.0	0.6	0.0
Davao Oriental	3.7	6.2	3.3	7.0	4.1	0.0
Maguindanao	0.7	2.6	1.4	2.0	3.1	0.0
North Cotabato	1.6	4.5	2.4	7.8	2.7	0.2
South Cotabato	1.2	3.4	1.1	6.0	0.8	0.0
Sarangani	0.7	3.8	0.8	7.6	1.7	0.0
Shariff Kabunsuan	0.9	2.7	2.4	3.3	4.7	0.1
Sultan Kudarat	1.3	4.2	2.4	7.9	2.1	0.2
Zamboanga del Norte	1.7	6.9	2.5	6.6	0.9	0.3
Zamboanga del Sur	1.7	6.3	4.2	6.9	1.4	0.0
Zamboanga Sibugay	1.5	6.7	3.4	6.9	1.2	0.7
Basilan	1.1	4.3	2.0	1.7	2.8	2.1

Table 5.2-3 Number of School Facilities by ARMM and Non-ARMM Area per 10, 000 People

	ARMM	Non-ARMM
High schools	1.1	1.4
Elementary schools	3.3	4.9
Primary schools	2.4	2.6
Daycares	1.8	7.0
Madrasah	4.4	2.0
Informal	0.3	0.2

(4) Health

Only half of the barangays surveyed had a health center. The information found regarding health centers among the provinces was similar to that of educational facilities. The Zamboanga peninsula had relatively more health centers in terms of the number per 10,000 people, while Lanao del Sur, Maguindanao and Basilan had smaller numbers (See Figure 5.2-5 and Table 5.2-4). ARMM areas registered lower figures than non-ARMM areas in this regard as well (See Table 5.2-5).

However, it's important to note that the number of health centers only represents the number of physical facilities in the barangays regardless of whether or not said health centers are indeed functional. The actual condition of the health sector in the barangays is much worse than what is implied simply by the number of facilities. Like the educational facilities discussed above, our fieldworkers observed many nonfunctioning health centers. This is due mainly to a lack of health workers and medical supplies. Facilities were counted as existing health centers regardless of their functionality.

The statistical analysis shows a positive correlation between the number of primary education facilities and the number of health facilities. This is to say, barangays without health centers also tended to lack education facilities as well. Barangays which are lacking in basic social services should be placed in the top priority of future development programs.

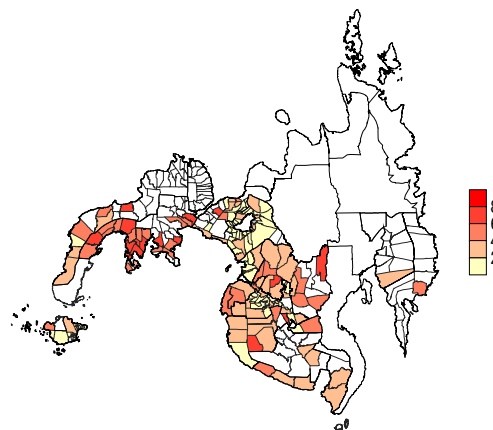


Figure 5.2-5 Number of Health Centers by Municipality per 10, 000 People

Table 5.2-4 Number of Health Facilities by Province per 10, 000 People

Province name	Hospitals	RHU	Health Centers	Informal
Lanao del Norte	0.1	0.3	2.2	0
Lanao del Sur	0.1	0.1	1.0	0.1
Compostela Valley	0.1	0.1	2.2	0
Davao Oriental	0	0.4	4.5	0
Maguindanao	0.1	0.4	1.6	0.1
North Cotabato	0.2	0.3	4.0	0.2
South Cotabato	0.3	0.3	2.4	0.4
Sarangani	0.2	0.2	3.3	1.6
Shariff Kabunsuan	0.1	0.2	2.3	0.1
Sultan Kudarat	0.3	0.3	3.5	0.6
Zamboanga del Norte	0.1	0.3	3.7	0.1
Zamboanga del Sur	0.1	0.6	5.5	0
Zamboanga Sibugay	0.3	0.6	5.3	0.5
Basilan	0	0.1	1.8	0

Table 5.2-5 Number of Health Facilities in ARMM and Non-ARMM Areas per 10, 000 People

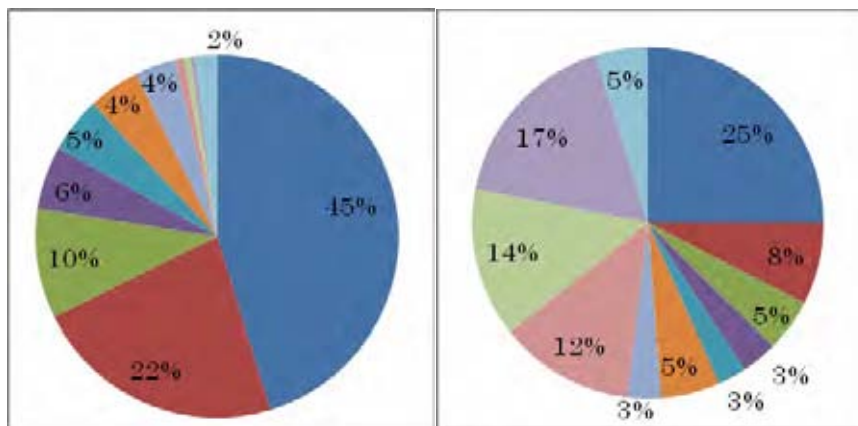
Per 10,000	ARMM	Non-ARMM
Hospitals	0.1	0.2
RHU	0.2	0.3
Health Centers	1.6	3.9
Informal	0.1	0.4

As summarized in Chart 5.2-8, the major illness in the region is fever/cold for both children and adults. “Child” here is defined as 13 years of age and younger. Fever/cold is the basic symptom and condition of many common illnesses. Many barangays do not have a health center in the close vicinity and, thus people often self-diagnose their illnesses.

Diarrhea and *Skin diseases* are the second and the third most commonly reported illnesses among children. *Diarrhea* is often related to the inaccessibility of potable water. *Malaria* and *Pneumonia* are other major illnesses reported among children.

Like many other countries, adults in CAAM are likely to be affected by so called “adult diseases” such as *Hypertension* and *Diabetes*. Other major “adult diseases” like *Cancer* and *Cardiac/cerebral Infarct* are possibly being overlooked due to the lack of health facilities in many areas. *Tuberculosis* is another major illness in the region, which is ranked third among adults. Although many of the illnesses mentioned above may not be immediately fatal, they can develop into more serious conditions without proper treatment. In addition, many of these illnesses do not require state-of-art facilities. Thus, an improvement of the local health center could possibly have a significant and quick impact on the health conditions of CAAM.

Chart 5.2-8 Illness in CAAM (%)



Illnesses of Those under 13

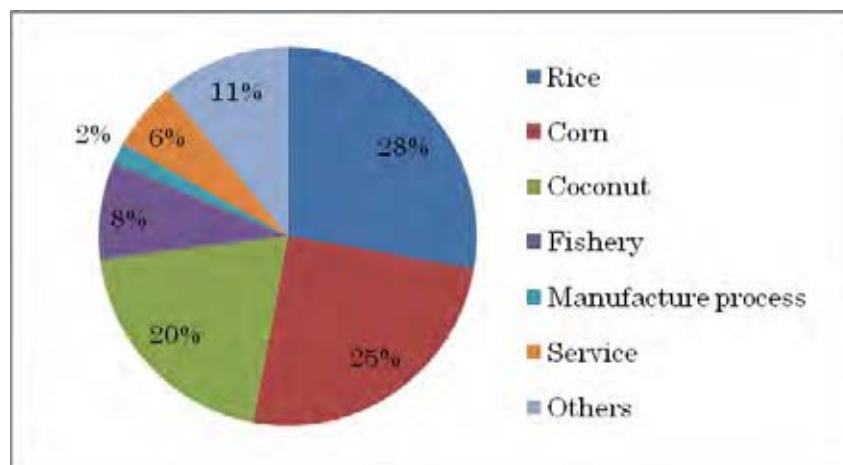
Illnesses of Those over 13



(5) Major Source of Income

Rice, corn and coconuts are the three major crops which support peoples' income in CAAM communities (See Chart 5.2-9). Figure 5.2-6 indicates a noticeable shift of primary crops from coconuts to rice and corn as the distance from the coastline increases. Zamboanga Sibugay is unique in that for many of the barangays in this province rubber plantations are the primary source of income.

Chart 5.2-9 Major Income Sources in CAAM (%)



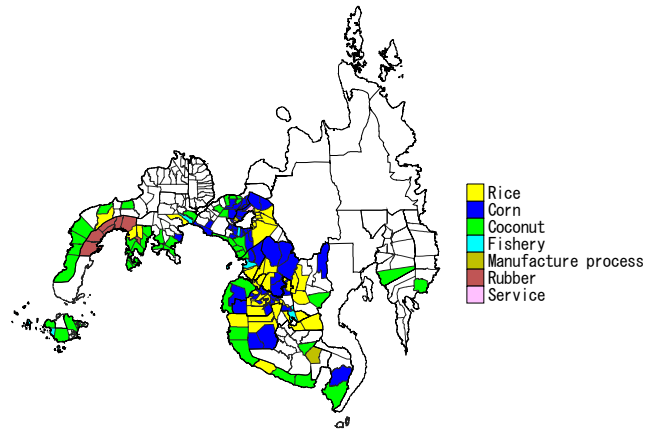
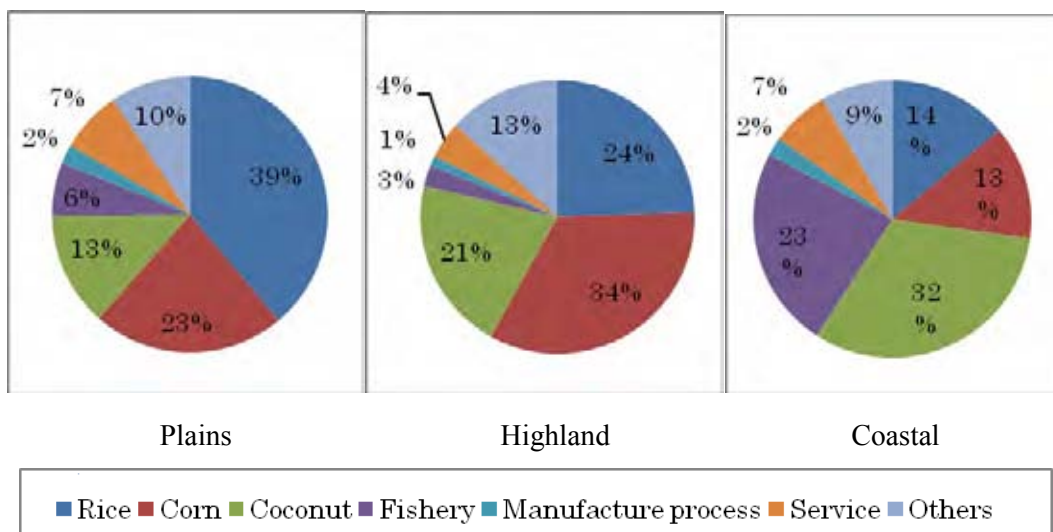


Figure 5.2-6 Major Income Sources by Municipality

The different topographical types employ clearly different strategies for income sourcing (see Chart 5.2-10). The Plains areas make much more use of rice production than other two. The *Highland* areas are, less flat than the Plains areas and rely more on Corn. Coconuts account for the largest segment in the *Coastal* areas. As is to be expected, Fishing also represents a higher percentage in the *Coastal* barangays.

More than 80% of the population relies on agriculture and fishing regardless of the topographical region where they live. This is a constraint for raising the income of people. For instance, there are many tenant farmers who are only employed during the time of planting and harvesting. Many of them borrow money from land lords to get through periods of unemployment. Thus, they are trapped in a typical vicious cycle of poverty and cannot find a way out of it. This explains why livelihood improvement and alternative income sources are so badly needed in many barangays. The needs survey also underscores many women’s strong aspiration for jobs. This issue will be discussed in the later part of this report.

Chart 5.2-10 Major Income Sources by Geographical Types



(6) Irrigation

In CAAM, 18% of the farming land is irrigated and 58% of the irrigated areas belong to the category of communal irrigation (see Chart 5.2-11). The development of irrigation differs among the provinces. For example, irrigation is more common in North Cotabato and Sultan Kudarat where almost 40% of farm land is irrigated (see Table 5.2-6). As related to topographical types,

Chart 5.2-12 shows that, the *Plains* areas have the highest irrigation rates among the three. Statistical analysis found a similar positive correlation between rice farming and the rate of irrigation. On the other hand, corn and coconut farming are inversely related to the rate of irrigation. The survey also shows that ARMM areas have a lower rate of irrigation than non-ARMM areas (see Chart 5.2-13).

Chart 5.2-11 Irrigation in CAAM (%)

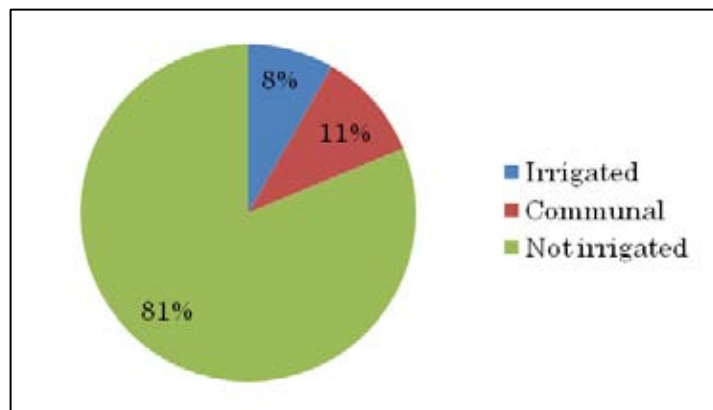


Table 5.2-6 Irrigation by Province (%)

Province name	Irrigated	Communal	Not irrigated
Lanao del Norte	2%	5%	92%
Lanao del Sur	1%	9%	90%
Compostela Valley	4%	2%	94%
Davao Oriental	5%	8%	86%
Maguindanao	14%	7%	79%
North Cotabato	18%	20%	62%
South Cotabato	3%	2%	95%
Sarangani	4%	6%	89%
Shariff Kabunsuan	3%	9%	88%
Sultan Kudarat	20%	20%	60%
Zamboanga del Norte	6%	8%	87%
Zamboanga del Sur	7%	12%	81%
Zamboanga Sibugay	6%	8%	86%
Basilan	1%	1%	99%

Chart 5.2-12 Irrigation by Geographical Types

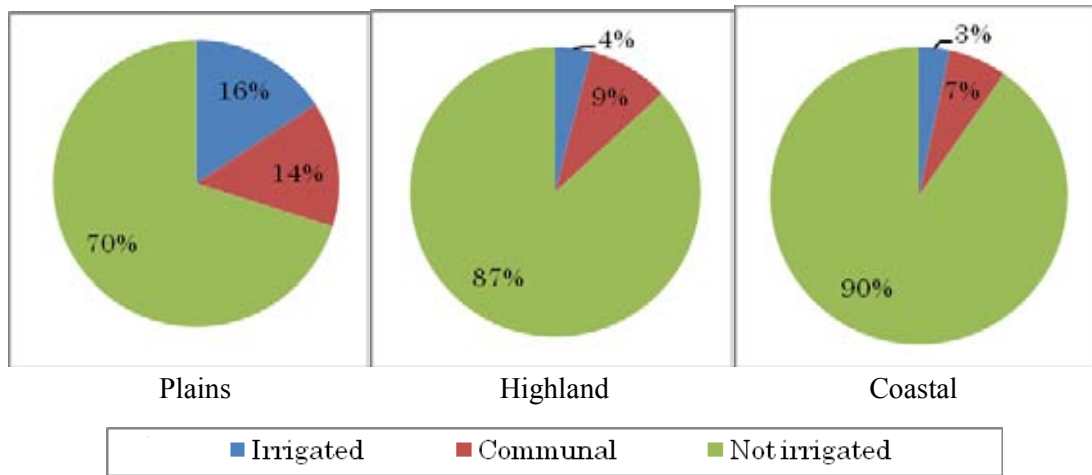
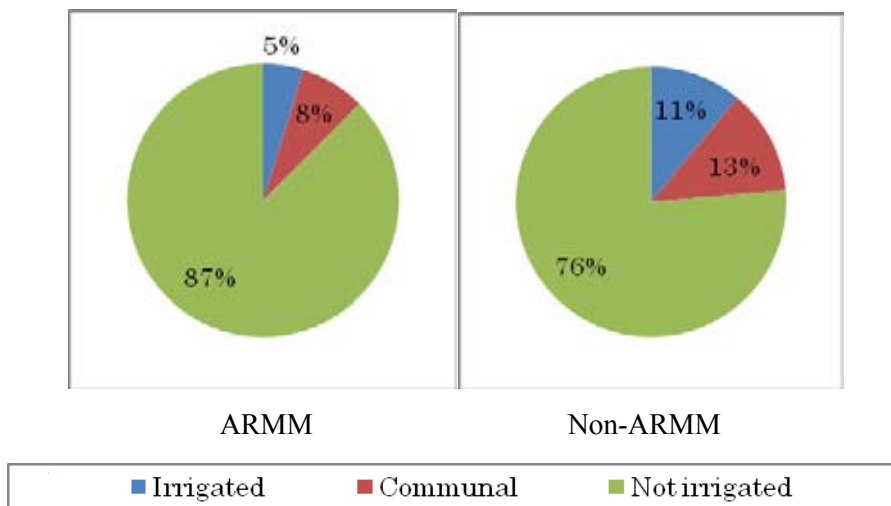


Chart 5.2-13 Irrigation between ARMM and Non-ARMM Areas



(7) Land Title

The surveys revealed that almost 50% of all land titles are *Family-owned* (See Chart 5.2-14). Distinct characteristics also appeared on a provincial basis as shown in Table 5.2-7. For instance, Sarangani has a high percentage of *Ancestral land* while Davao Oriental has a large proportion of *Agrarian reform*. However, since the survey did not cover all barangays in these two provinces, they may not be prevailing trends province-wise.

In Lanao del Sur, Zamboanga Sibugay and Zamboanga del Norte, the category of *Others* take the largest ratio. This *Others* category mainly represents self-declared land titles. In reality, however, land tiles under the categories of *Ancestral* and *Family-owned* are only endorsed by a community’s declaration and are therefore without official documentation. In this regard they are not very different from the *Others* category. Thus, when interpreting the results we should bear in mind that these figures are based only on questionnaires given to barangay officials and may not be consistent with official records of land titles.

Chart 5.2-14 Type of Land Ownership in CAAM (%)

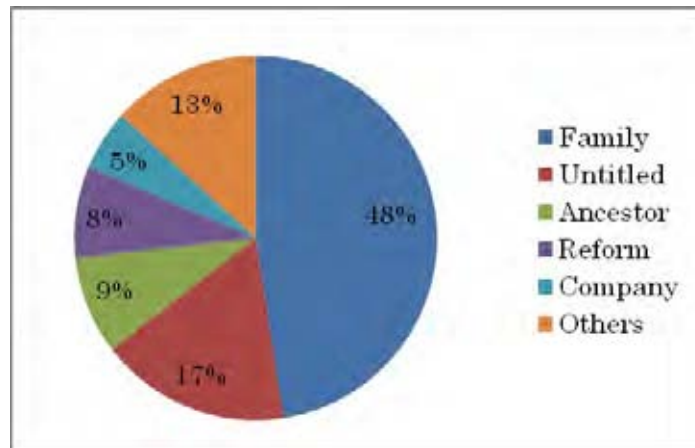


Table 5.2-7 Type of Land Ownership by Province (%)

Province name	Ancestor	Company	Family	Reform	Untitled	Others
Lanao del Norte	19%	5%	56%	4%	8%	9%
Lanao del Sur	5%	3%	23%	1%	14%	55%
Compostela Valley	12%	8%	53%	12%	14%	2%
Davao Oriental	3%	7%	42%	26%	21%	0%
Maguindanao	7%	7%	54%	7%	23%	2%
North Cotabato	4%	4%	63%	9%	17%	3%
South Cotabato	11%	8%	46%	11%	24%	0%
Sarangani	33%	2%	38%	10%	16%	1%
Shariff Kabunsuan	7%	5%	58%	7%	22%	1%
Sultan Kudarat	14%	5%	48%	17%	12%	3%
Zamboanga del Norte	1%	8%	51%	12%	13%	15%
Zamboanga del Sur	9%	6%	61%	9%	13%	3%
Zamboanga Sibugay	7%	6%	34%	9%	23%	20%
Basilan	3%	11%	63%	8%	13%	1%

(8) Toilet Facilities

36% of the total population does not have accesses to sanitary toilet facilities (See Chart 5.2-15). Particularly, the provinces under ARMM; namely Lanao, del Sur, Maguindanao, Shariff Kabunsuan and Basilan; have the lowest numbers (See Table 5.2-8). More than half of the total population in ARMM areas live without sanitary toilet facilities. In contrast, only a quarter of the population is without sanitary facilities in non-ARMM areas as Chart 5.2-16 indicates.

Sanitary toilet facilities are critical to keeping good hygienic conditions and protecting the barangays from communicable diseases. In the CAAM, unfortunately, toilet facilities are often times far from sanitary, if they exist at all. As few public sewage systems are available in the area, toilet facilities require “proper management” to maintain sanitary conditions. Unmanaged sewage can make a bad situation worse by contaminating drinking water. The current, unacceptably low number of toilet facilities and the poor quality of many existing facilities in CAAM must be given more attention.

Chart 5.2-15 Type of Toilet in CAAM (%)

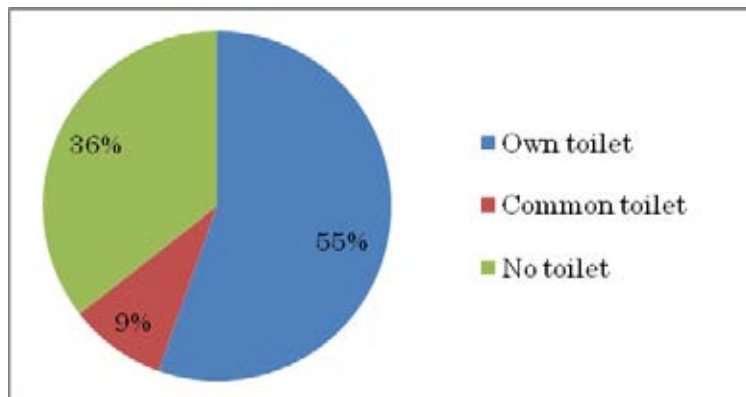
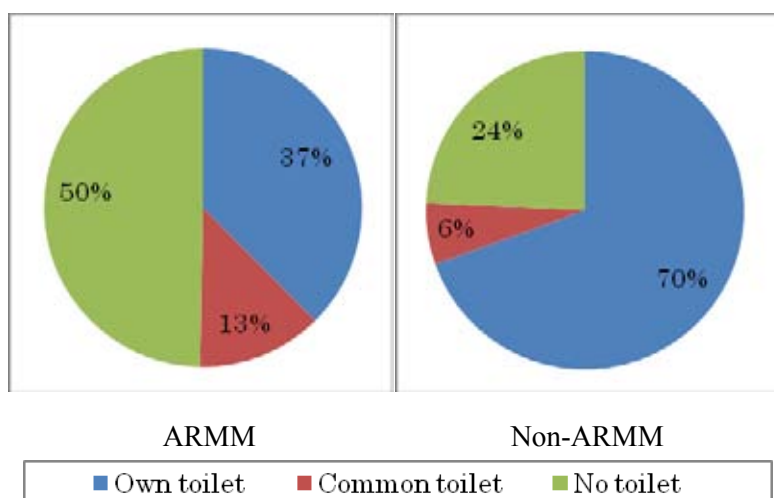


Table 5.2-8 Types of Toilet facilities by Province (%)

Province name	Own toilet	Common toilet	No toilet
Lanao del Norte	51%	10%	39%
Lanao del Sur	37%	17%	46%
Compostela Valley	85%	8%	8%
Davao Oriental	74%	3%	22%
Maguindanao	37%	13%	50%
North Cotabato	74%	4%	22%
South Cotabato	79%	7%	15%
Sarangani	59%	6%	35%
Shariff Kabunsuan	44%	5%	51%
Sultan Kudarat	68%	8%	23%
Zamboanga del Norte	63%	4%	33%
Zamboanga del Sur	76%	8%	16%
Zamboanga Sibugay	72%	6%	22%
Basilan	31%	12%	57%

Chart 5.2-16 Types of Toilet facilities in CAAM; ARMM and Non-ARMM (%)



(9) Water

Public water service provided by the National Water Service (NWS) and Local Water Utility Service (LWUS) is extended to only 24% of the total population in CAAM (See Chart 5.2-17).

Three natural sources of water; (*Wells with Hand pump, Open Well, and Spring*); collectively account for 70% of the total water supply in the region. Wells with *Hand pumps* and *Open well* water sources are very common because they are simple and inexpensive. But the water quality is not always good. *Spring* water which comes in fourth after the *LWUS* is a major source of water especially in mountainous areas. From Figure 5.2-7, it appears that people in central Mindanao rely more on *Hand pump* well water than in the Zamboanga area where *LWUS* is more available. CAAM are rich in water resources, but the issue is treatment. There is no assurance that water in CAAM barangays is considered potable by the national quality standards.

Chart 5.2-17 Water Sources in CAAM (%)

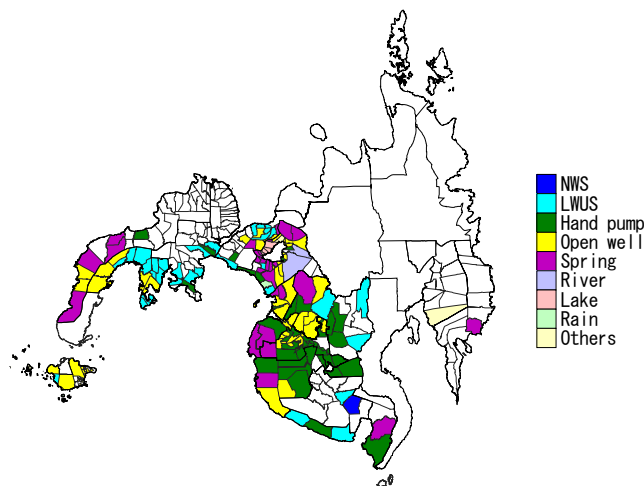
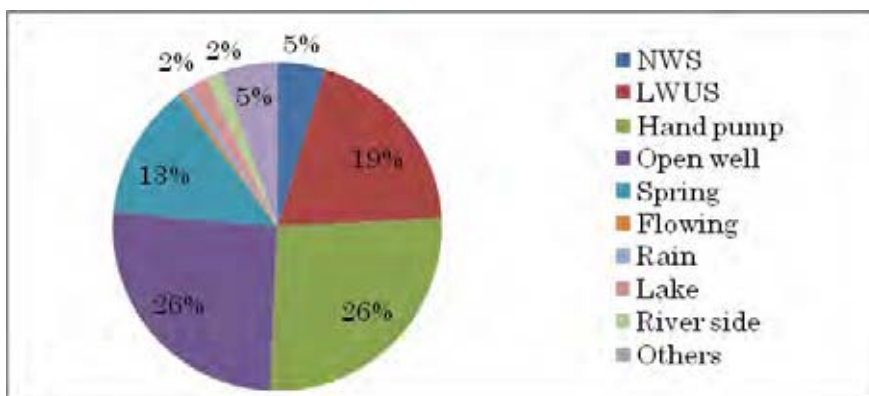
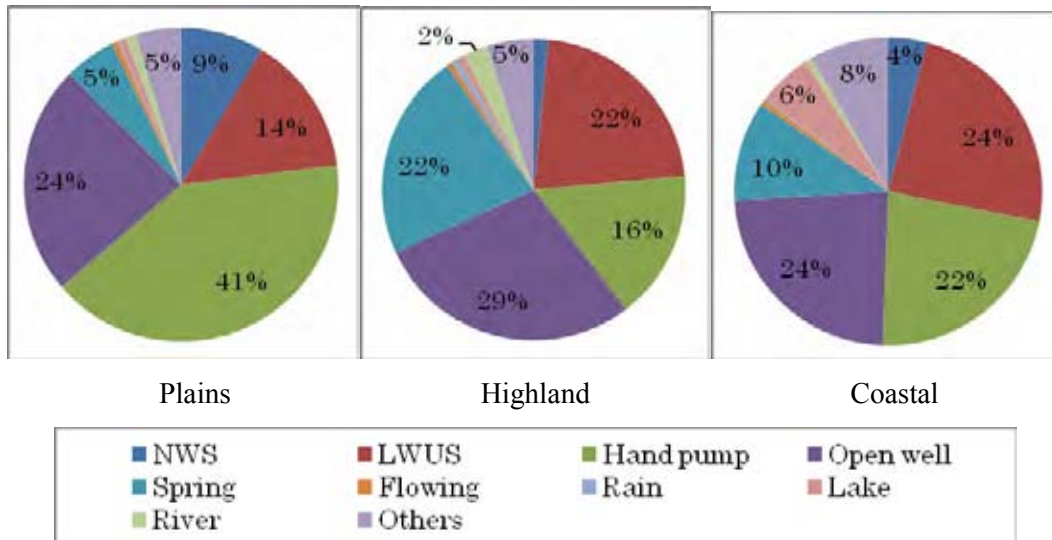


Figure 5.2-7 Major Water Source by Municipality

Looking at water as it relates to the topographical types, it is evident that most people rely on *Hand pump* sources in the *Plains* areas while people in *Highland* areas rely more on *Spring* water (see Chart 6.2-18). On the other hand, *Coastal* areas have the largest proportion of *Public Water Services*. Some barangays in the *Coastal* areas also depend on *Lake* water. It is important to note that barangays along large lakes are also categorized as *Coastal* in this study.

Open well water also represents a very large proportion; a quarter of the total; throughout the three topographical types. This is most likely due to the fact that it is the cheapest way to get water in all areas.

Chart 5.2-18 Water Sources by Geographical Type (%)



(10) Electrification

Electricity is currently supplied to 58% of the CAAM but, Maguindanao, Shariff Kabunsuan and Basilan have provincial electrification rates below 50% (See Figure 5.2-8, Table 5.2-9). As expected, correlation analysis showed a negative correlation between the degree of electrification and the distance from a national road. A positive correlation was shown between the road condition – that is the pavement ratio – and electrification. Understandably, road conditions have an effect on rural electrification as the extension of electrical cables follows the road network as it expands and improves.

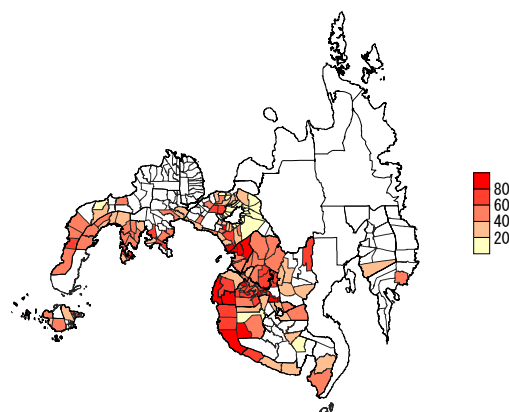


Figure 5.2-8 No Electrification Ratio by Municipality

Table 5.2-9 Electrification Ratio by Province (%)

Province name	Electricity	No Electricity
Lanao del Norte	62%	38%
Lanao del Sur	78%	22%
Compostela Valley	78%	22%
Davao Oriental	59%	41%
Maguindanao	32%	68%
North Cotabato	56%	44%
South Cotabato	82%	18%
Sarangani	62%	38%
Shariff Kabunsuan	47%	53%
Sultan Kudarat	55%	45%
Zamboanga del Norte	59%	41%
Zamboanga del Sur	55%	45%
Zamboanga Sibugay	59%	41%
Basilan	47%	53%

(11) Incidence of Conflict

As Mindanao still remains under conflict, the data concerning the numbers of hostile incidences and IDPs vary, depending on when data were collected. The figures in Table 5.2-10 are data as of February 2007 for central Mindanao and the southern part of Lanao del Sur. For other provinces, the data are current as of August 2008. Figure 5.2-9 and Figure 5.2-10 are consistent with the fact that more fighting incidences have been recorded in Lanao del Sur, Lanao del Norte, Maguindanao and North Cotabato since 2000.

Consequently, larger numbers of IDPs and incidences of damaged infrastructure are reported, as compared to other regions. The survey also shows that, after the category of Houses, School Buildings were the most affected by the conflict. More than 75,000 IDPs are still forced to live out of their home barangays even a few years after their evacuation. It also reveals that some IDPs have changed their residence for good.

Tragically, in the CAAM, conflicts have been increasingly taking place since July 2008. Thus a much larger number of conflict incidences would have been recorded, with a profound increase in the number of IDPs, if the same survey had been conducted more recently.

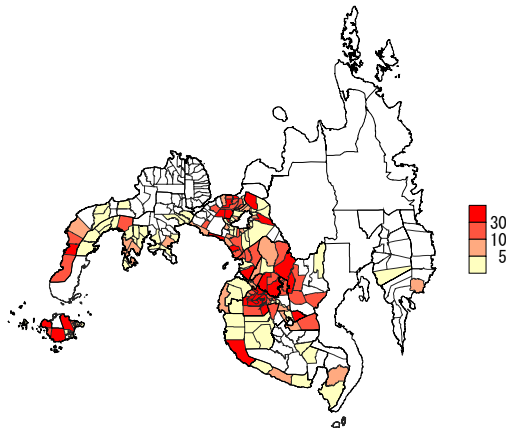


Figure 5.2-9 Number of Conflicts per Municipality

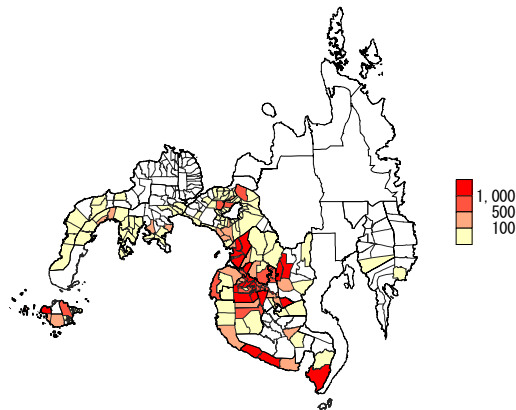


Figure 5.2-10 Remaining IDPs per Municipality

Table 5.2-10 Conflict Frequency and Number of Damaged Infrastructure by Province

Province name	Conflict frequency	Conflict per Barangay	Schools	Health facilities	Bridges	Roads	Houses	Remaining IDP
Lanao del Norte	363	1.4	19	2	7	17	86	822
Lanao del Sur	428	0.4	43	2	11	15	86	2,086
Compostela Valley	4	0.3	0	0	0	0	1	0
Davao Oriental	8	0.8	0	0	0	0	1	0
Maguindanao	568	2.0	44	13	11	19	121	34,489
North Cotabato	417	1.0	35	10	8	17	87	8,437
South Cotabato	6	0.2	0	0	0	0	2	463
Sarangani	16	0.2	0	0	0	0	6	37,41
Shariff Kabunsuan	174	0.8	14	0	2	9	26	19,456
Sultan Kudarat	150	0.7	16	3	8	8	34	2,283
Zamboanga del Norte	94	0.6	3	0	0	1	25	30
Zamboanga del Sur	15	0.1	0	1	1	1	5	419
Zamboanga Sibugay	43	0.1	1	2	0	4	7	598
Basilan	187	1.0	29	3	5	8	29	3,019

(12) Barangay Development Plan (BDP)

The basis for barangay development is the Barangay Development Plan. The BDP consists, at least in principle of a mid-term development plan and an annual budget plan. The survey found that 1,345 barangays or 38% of the total number investigated had no BDP at all (see Figure 5.2-11). Of the barangays that had a BDP, 60% were completed with the support of MPDC, and the rest were supported by donors and NGOs, including CIDA, UNDP and the Asia Foundation. Among these, the Field Teams found that many BDPs were simply requests for internal revenue allotments (IRA) which could not be granted without a mid-term development plan. Further, many BDPs were frequently too out-dated to be meaningful whatsoever for the development of their barangays. It must be assumed that the actual number of barangays having functional BDPs is much smaller than the survey results imply.

In the course of the field survey, considerable differences were observed in terms of governance among barangays, even though there is generally little difference in available budgets. Some barangays were successful in providing basic social services at their health centers and schools. Others did not provide any services, and lacked even the most basic facilities; such as even a barangay hall, which is one of the most basic facilities for barangay governance. The Field Teams also observed a few cases in which IRAs were not spent in accordance with the IRA request.

In essence, BDPs in CAAM have the two serious issues; 1) many BDPs are merely an ad-hoc budget request without a long term plan, 2) the IRA is not disbursed according to the BDPs in some barangays. In terms of future development in CAAM, these governance issues should be seriously addressed so that they can be resolved.

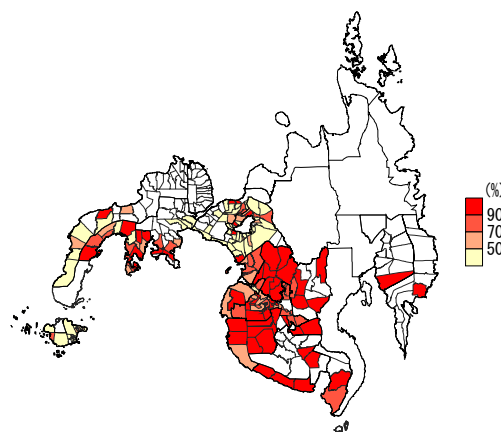


Figure 5.2-11 BDP possession ratio by Municipality (%)

(13) Development Project

The number of on-going, hard (infrastructure) development projects was 1,748 or 0.5 projects per barangay, while the number of completed projects was 7,659 or 2.2 projects per barangay. Lanao del Sur and North Cotabato had more projects in the past. As for on-going projects, Zamboanga Sibugay has the largest number (see Table 5.2-11 and Figure 5.2-12). The major project types shown in Chart 5.2-19 are listed as roads, the water supply and education in both on-going and past categories. These types are identical to the prioritized development needs analyzed in this survey.

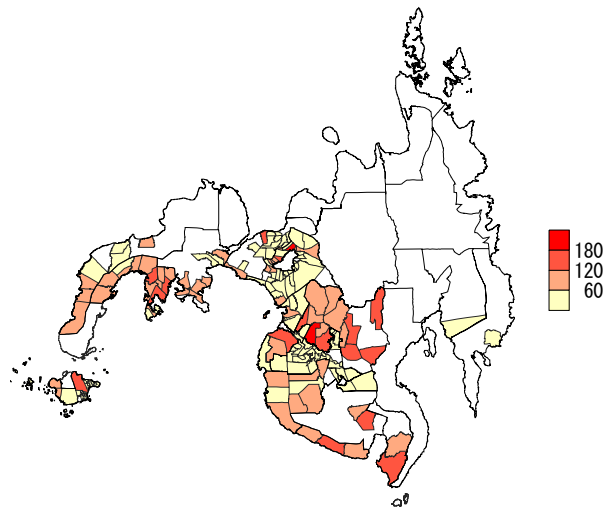
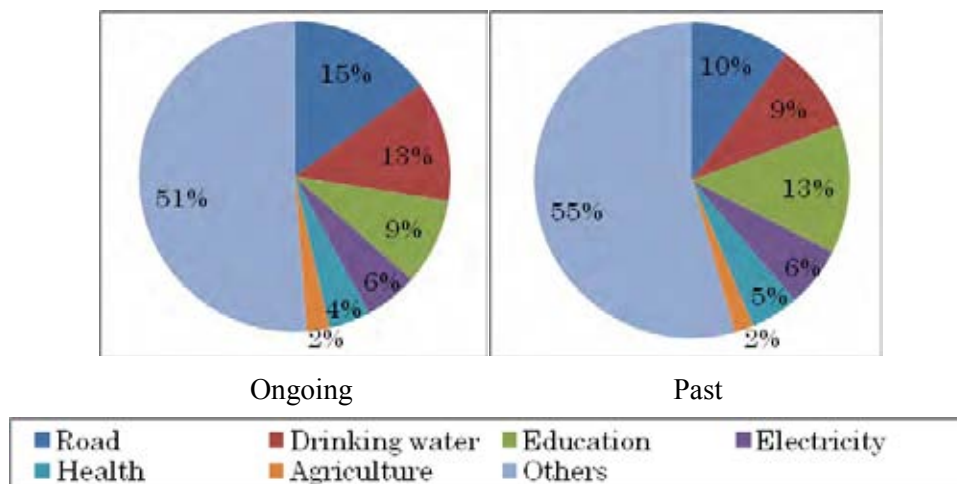


Figure 5.2-12 Number of Development Projects (Hard) by Municipality

Table 5.2-11 On-Going and Completed Hard Development Projects by Province

Province name	Hard (On-Going)		Hard (Completed)	
	Total	Per Barangay	Total	Per Barangay
Lanao del Norte	39	0.2	477	1.7
Lanao del Sur	151	0.1	1731	1.4
Compostela Valley	19	1.5	10	0.8
Davao Oriental	8	0.8	20	1.6
Maguindanao	155	0.6	378	1.2
North Cotabato	138	0.3	1,443	3.1
South Cotabato	84	2.2	181	4.4
Sarangani	144	1.5	423	4.0
Shariff Kabunsuan	158	0.8	458	2.0
Sultan Kudarat	60	0.3	538	2.1
Zamboanga del Norte	110	0.7	375	2.2
Zamboanga del Sur	197	0.9	361	1.5
Zamboanga Sibugay	417	1.1	921	2.2
Basilan	69	0.4	343	1.8
Total	1,748		7,659	

Chart 5.2-19 Type of Development Project (Hard)



The average number of soft projects such as social preparation and skills training, per barangay is less than that of hard projects. The number of ongoing projects is 874 or 0.2 per barangay. The number of past projects is 2,615 or 0.7 per barangay (see Table 5.2-12). Consistent with the larger number of hard projects in Lanao del Sur, North Cotabato and Zamboanga Sibugay, the number of soft projects is also higher in these areas (see Figure 5.2-13). There may be two reasons: i) many soft projects such as institutional develop have been implemented for the management of hard projects, and ii) barangays with more hard projects had also been eager for, or supported with, more soft projects.

As for the on-going projects, Lanao del Sur and Zamboanga Sibugay have a higher number of soft projects as well. Basilan has a very low number in both categories probably due to the lack of security, be it real or perceived. The majority of the soft projects were aimed at Institutional Development as shown in Chart 5.2-20. Besides Institutional Development, soft projects tended to be designed for income generation while hard projects focused more on infrastructure to meet basic human needs. It is worth noting that projects for Education and Peace Advocacy are increasing in their category of on-going projects.

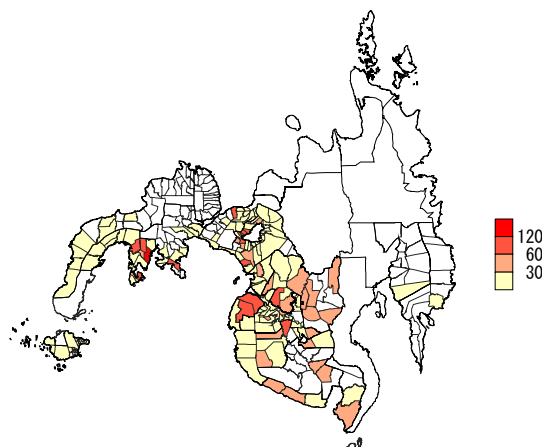
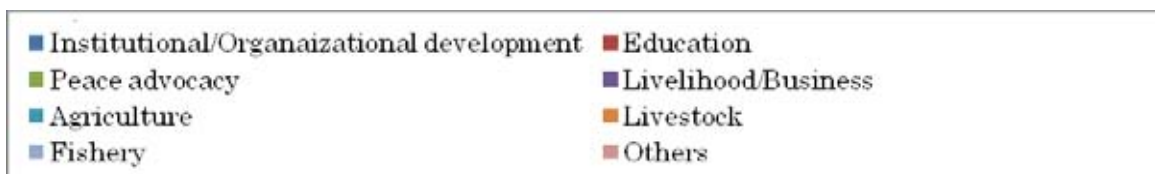
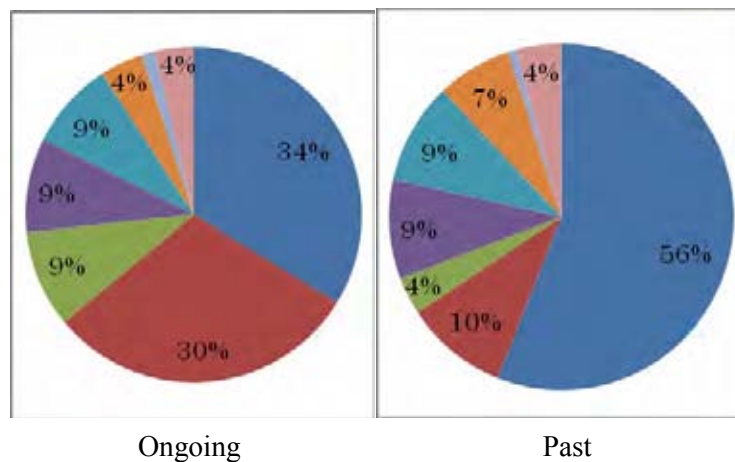


Figure 5.2-13 Number of Development Projects (Soft) by Municipality

Table 5.2-12 Development Projects by Province (Soft)

Province name	Soft (On-Going)		Soft (Past)	
	Total	Per Barangay	Total	Per Barangay
Lanao del Norte	16	0.1	74	0.3
Lanao del Sur	263	0.3	452	0.4
Compostela Valley	0	0	2	0.2
Davao Oriental	1	0.1	7	0.7
Maguindanao	78	0.3	260	0.9
North Cotabato	51	0.1	450	1.1
South Cotabato	15	0.4	63	1.7
Sarangani	23	0.2	124	1.3
Shariff Kabunsuan	81	0.4	271	1.3
Sultan Kudarat	69	0.3	245	1.1
Zamboanga del Norte	26	0.2	59	0.4
Zamboanga del Sur	41	0.2	84	0.4
Zamboanga Sibugay	189	0.5	484	1.2
Basilan	21	0.1	40	0.2
Total	874		2,615	

Chart 5.2-20 Types of Development Projects (Soft)



(14) People Organization (PO)

Figure 5.2-14 and Table 5.2-13 shows the trend concerning POs in CAAM. The average number of POs per barangay is 1.3, but there are possibly more POs since some might not be identified by barangay officials. The survey also found that more than 90% of POs were undertaking some activities, though only 27% were considered “very active.” Interestingly, the number of POs had a significant correlation with some indicators of barangay development. For example, the number of POs is positively correlated with the number of development projects, and the number of community facilities such as day care centers and health centers.

In contrast, the same is negatively correlated with the size of the Muslim population. Although it is hard to accurately explain the causal relationship between these factors, some hypotheses are:

- i) The existence of more development projects facilitate organizing POs because of the need to manage these projects, and the more POs in turn help launch more new projects.
- ii) The activeness of POs requires good barangay governance, which appears to be comparatively weak in Muslim areas. The functional governance of a barangay helps it to realize more development projects, and to use the budget effectively and equitably.

In any case, it may be safe to conclude that the existence of working POs in a barangay is at least casually associated with effective barangay management and development.

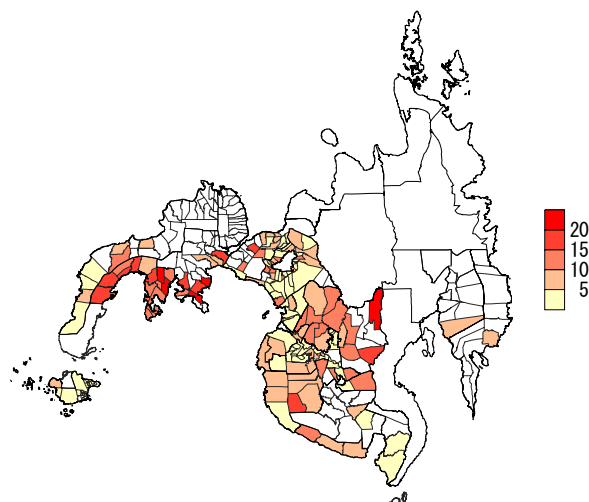


Figure 5.2-14 Number of POs per Barangay

Table 5.2-13 People’s Organizations / Community Organization (%)

PO	Per Barangay	Very Active	Active	Not Active	Active Ratio
4,579	1.3	1,227	2,909	443	90%