

**REPUBLIC OF THE PHILIPPINES**

**BANGSAMORO  
INFRASTRUCTURE NEEDS  
SURVEY  
IN  
THE REPUBLIC OF THE PHILIPPINES**

**FINAL REPORT**

**March 2019**

**JAPAN INTERNATIONAL COOPERATION AGENCY**

**CTI ENGINEERING INTERNATIONAL CO., LTD.**

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**Exchange Rate**

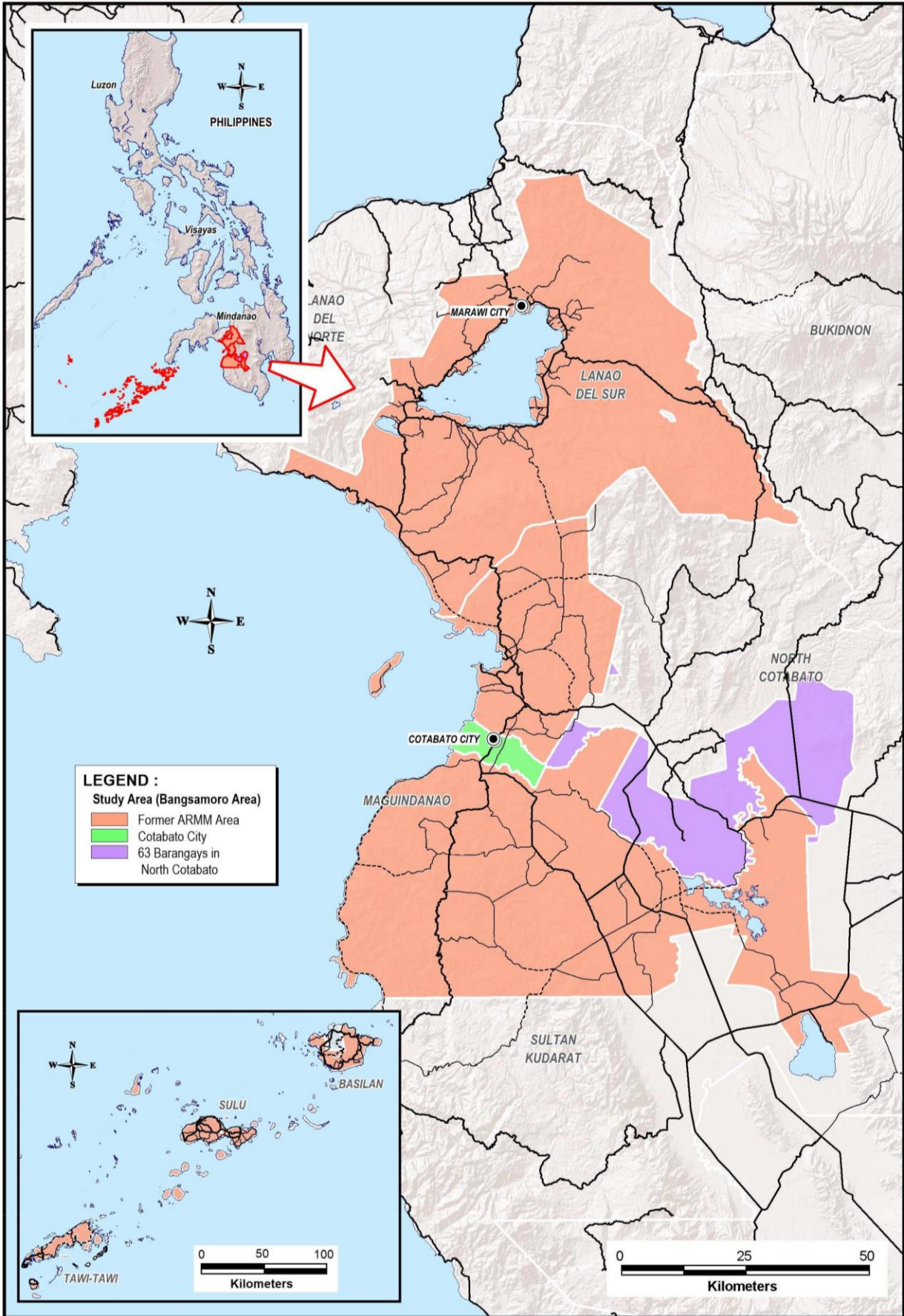
March 3, 2019

1 USD = 111.87 YEN

1 USD = 51.78 PhP

1 YEN = 0.46 PhP

Source: Central Bank of the Philippines



**Location Map of the Study Area**



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## ABBREVIATION

|              |   |
|--------------|---|
| ARMM         | : Autonomous Region in Muslim Mindanao                              |
| BARMM        | : Bangsamoro Autonomous Region in Muslim Mindanao                   |
| BOL          | : Bangsamoro Organic Law  |
| BDA          | : Bangsamoro Development Agency                                     |
| BDP          | : Bangsamoro Development Plan                                       |
| BDPT         | : Bangsamoro Development Planning Team                              |
| BTA          | : Bangsamoro Transition Authority                                   |
| BTC          | : Bangsamoro Transition Commission                                  |
| CAB          | : Comprehensive Agreement on Bangsamoro                             |
| CHD          | : Center for Humanitarian Dialogue                                  |
| CRMC         | : Cotabato Regional and Medical Center                              |
| CRRP         | : Comprehensive Rehabilitation and Recovery Program for Marawi City |
| DBM          | : Department of Budget and Management                               |
| DENR         | : Department of Environment and Natural Resources                   |
| DFR          | : Draft Final Report  |
| DPWH-ARMM    | : Department of Public Works and Highways – ARMM                    |
| DPWH-Central | : Department of Public Works and Highways – Central                 |
| ESMF         | : Environmental and Social Management Framework                     |
| FAB          | : Framework Agreement on Bangsamoro                                 |
| FPA          | : Final Peace Agreement   |
| F/R          | : Final Report  |
| GDP          | : Gross Domestic Product  |
| GRDP         | : Gross Regional Domestic Product                                   |
| GOJ          | : Government of Japan   |
| GOP          | : Government of the Republic of the Philippines                     |
| HDI          | : Human Development Index   |
| ICC          | : Investment Coordinating Committee                                 |
| IC/R         | : Inception Report  |
| IDB          | : Infrastructure Development Budget                                 |
| IEE          | : Initial Environmental Examination                                 |
| IP           | : Indigenous People   |
| IT/R         | : Interim Report  |
| JICA         | : Japan International Cooperation Agency                            |
| KII          | : Key Informant Interview   |
| LGUs         | : Local Government Units  |
| MILF         | : Moro Islamic Liberation Front                                     |
| MinDA        | : Mindanao Development Authority                                    |
| MNLF         | : Moro National Liberation Front                                    |
| NEDA         | : National Economic Development Authority                           |
| NGO          | : Non-Governmental Organization                                     |
| O&M          | : Operation and Maintenance   |
| OPAPP        | : Office of the Presidential Adviser on the Peace Process           |
| OSCC-ARMM    | : Office of Southern Cultural Communities-ARMM                      |
| PIP          | : Public Investment Program   |
| PPA          | : Programs, Projects and Activities                                 |
| PRDP         | : Philippine Rural Development Projects                             |
| REZA         | : Regional Economic Zone Authority                                  |
| ROW          | : Right of Way  |
| RPDO-ARMM    | : Regional Planning Development Office-ARMM                         |
| SDF          | : Special Development Fund  |
| TESDA        | : Technical Education and Skills Development Authority              |
| UBDP         | : Unified Bangsamoro Development Plan                               |
| UPMO         | : Unified Project Management Office                                 |



# **Chapter 1 Outline of the Study**

## **1.1 Background of the Study**

After more than forty (40) years of conflict, the Comprehensive Agreement on Bangsamoro (CAB) was signed between the Government of the Philippines (GOP) and Moro Islamic Liberation Front (MILF) in March 2014 and the establishment of Bangsamoro Autonomous Government was recognized. The Organic Law for the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) which enabled the establishment of autonomous government was signed by the President on July 27, 2018.

A plebiscite was held in January 21 and February 6, 2019 to ratify the Organic Law and to determine areas of the BARMM. The territorial jurisdiction of BARMM is now composed of five (5) provinces (Maguindanao, Lanao del Sur, Basilan, Sulu, Tawi-Tawi), three cities (Marawi City, Lamitan City plus the newly joined Cotabato City), 116 municipalities and the newly joined 63 barangays of North Cotabato Province. Bangsamoro Transition Authority (BTA) was organized in February 2019.

The Japanese Government has been providing various supports for achievement of peace, rehabilitation and development of the Bangsamoro Region and will continue to strongly support the development of the area. Due to the long-lasting conflict, the Bangsamoro Region is the least developed area in the country. Poverty incident of the area is higher by two (2) times than the national averages; such condition is one of the reasons why some people tend to support some radical groups. In order to avoid such movement, strengthening of governance of the Bangsamoro Government and improvement of people's lives must be achieved. Infrastructure development is one of the most immediate actions to realize such objective. With the anticipation of establishment of Bangsamoro Government, JICA has been implementing "Comprehensive Capacity Development Project for the Bangsamoro" since 2013 which aims to support institutional and organizational establishment. The project also assisted preparation of Bangsamoro Development Plan (BDP). In line with recommendations of BDP, JICA has been providing technical and financial assistance to recommended projects by BDP such as "Project for Improvement of Equipment for Power Distribution in Bangsamoro Area" (2017), "Preparatory Survey for Road Network Development Project in Conflict-Affected Areas in Mindanao", etc.

BDP was prepared mainly by Bangsamoro Development Agency (BDA) with the JICA assistance. Since Bangsamoro Transition Authority (BTA) will be organized not only by MILF but also including Moro National Liberation Front (MNLF), Indigenous People, non-Muslim people and others, therefore, new comprehensive BDP needs to be prepared.

Under above circumstances, this study intends to assess infrastructure development needs, prepare draft infrastructure development plan and recommend about three (3) projects to be urgently implemented by Japanese Government assistance.

## **1.2 Objectives of the Study**

Infrastructure development needs will be identified through information collection, analysis of existing data/information and interviews to key persons. Identified infrastructure projects will be prioritized. Implementation feasibility of high priority projects (about 3 projects) will be assessed and basic study of selected projects will be undertaken to make necessary recommendations.

## **1.3 Study Area**

The study area is the entire BARMM which is composed of five provinces - Maguindanao, Lanao del Sur, a part of North Cotabato, Basilan, Sulu and Tawi-tawi – and the city of Cotabato.

## 1.4 Study Methodology

The methodology is as follows:

### a. Review of existing development plans to identify proposed projects and programs

Under this activity, various development plans prepared by different entities for Bangsamoro were collected and reviewed. Upon review, it was observed that some of the Provincial Development Plans were old. In this particular case, concerned province was requested to submit their priority projects. The following development plans for Bangsamoro were collected:

- i. Bangsamoro Development Plan 1
- ii. Bangsamoro Development Plan 2
- iii. ARMM-Regional Development Plan (2017-2022)
- iv. MNLF Development Framework for the Bangsamoro
- v. MILF List of Projects in the Six Camps
- vi. OPAPP List of Projects for Conflict-affected Areas and ARMM
- vii. Lanao del Sur Provincial Development Plan
- viii. Maguindanao Provincial Development Plan
- ix. Basilan Provincial Development Plan
- x. Sulu Provincial Development Plan
- xi. Tawi-tawi Provincial Development Plan
- xii. North Cotabato Provincial Development + Municipal Development Plan of the 6 municipalities where the 63 baranagays are located
- xiii. Region 12 – Regional Development Plan (for Cotabato City projects + 63 barangays)
- xiv. Cotabato City Development Plan
- xv. Marawi City’s Comprehensive Rehabilitation and Recovery Program

### b. Undertake Key Informant Interview (KII)

A KII survey was undertaken primarily for two purposes: (i) to know the priority projects by leaders in the region that are expected to play a key role in the upcoming Bangsamoro government and (ii) to identify important projects which are not included in any of the development plan collected. Table 1.4-1 presents the list of agencies and the position of officials interviewed.

Basically, the targets for KII survey were people who have been working for a long time in an agency/entity handling infrastructure development in the ARMM hence they have depth knowledge of infrastructure gaps. Likewise, officials of the MILF who are expected to play a significant role in the new government were included in the list of targets for KII. And since Cotabato City at that time had high probability of joining the BARMM (already joined during the January 21, 2019 plebiscite) and most likely will become the regional center, people working in infrastructure sector were included for KII survey to ascertain infrastructure needs of the city. Key person of other active donors in Bangsamoro were also included primarily to know their areas of interest for intervention as well as to learn from their experience in implementing projects in conflict-affected areas.

**Table 1.4-1 List of Agencies/Entities Subjected for KII Survey**

| Agency/Entity                                      | Position of Interviewed Person   | Date       |
|--|--|------------|
| 1. Cotabato City Local Government Officials        | i. City Mayor<br>ii. City Administrator<br>iii. City Engineer<br>iv. Other officials                                   | 2018.12.03 |
| 2. DPWH-ARMM Officials                             | i. Regional Secretary<br>ii. Director for Services and Chief Planning and Design                                       | 2018.12.03 |
| 3. TESDA-ARMM Officials                            | i. Executive Director<br>ii. TESDA Specialist I/Planning Officer   | 2018.12.04 |
| 4. Metro Cotabato Water District Officials         | i. General Manager<br>ii. Engineering Department Manager   | 2018.12.04 |
| 5. Cotabato Regional and Medical center Officials  | i. Assistant Director, CRMC<br>ii. Chief Nurse<br>iii. Accountant IV   | 2018.12.04 |
| 6. Center for Humanitarian Dialogue's Focal Person | CHD Resource Person  | 2018.12.04 |
| 7. WB's Mindanao Trust Fund-2                      | Team Leader/Coordinator  | 2018.12.04 |
| 8. DPWH-12, Cotabato City District Officials       | i. District Engineer<br>ii. OIC Assistant District Engineer<br>iii. Engr. III, Planning Officer<br>iv. Other officials | 2018.12.05 |
| 9. MNLF's Focal Person                             | MNLF Focal Person; Vice Chairman for Political Affairs   | 2018.12.05 |
| 10. MILF Officials                                 | MILF Chair of the Central Committee  | 2018.12.06 |
| 11. DWPH-Central Office Official                   | Undersecretary for Unified Project Management Office (UPMO)  | 2018.12.06 |

**c. Consolidation and Structuring of the Project Lists**

After the consolidation of project lists taken from (i) existing development plans and (ii) identified by interviewed people under the KII survey, the project list is structured into the following sectors which is based on the industry classifications of the National Statistical Authority (slight modification was made to cover all types of project such as Tourism and Livelihood):

- Road/Bridge
- Airport
- Port
- Railway
- Water Supply
- Waste Management
- Health
- Education
- Agriculture/Fisher
- Drainage/ Flood Control/ Slope Protection
- Environment and Sanitation
- Tourism
- Livelihood
- Project Preparation Studies (masterplan, FS, etc.)

**d. Preparation of Draft Unified Bangsamoro Development Plan**

A Draft Unified Bangsamoro Development Plan was then prepared taking into account the possible amount of fund that may dedicated for infrastructure development. Based on the ratified BOL, the possible sources of fund to finance infrastructure development are (i) Block Grant and (ii) the Special Development Fund. The details of this process are available in Chapter 4.

## Chapter 2 Present Conditions and Needs of Infrastructure Development in the Bangsamoro

### 2.1 Present Socioeconomic Conditions of the Bangsamoro Region

The present socioeconomic status of the region is summarized below. Most of the statistical data are taken from the 2016 Philippine Statistical Yearbook and published by the Philippine Statistics Authority. Although the figures are inferior compared with other regions of the country, it is expected that an upward swing will take place because of improved peace and order situation largely due to impending participation of the MILF in the political process in the region.

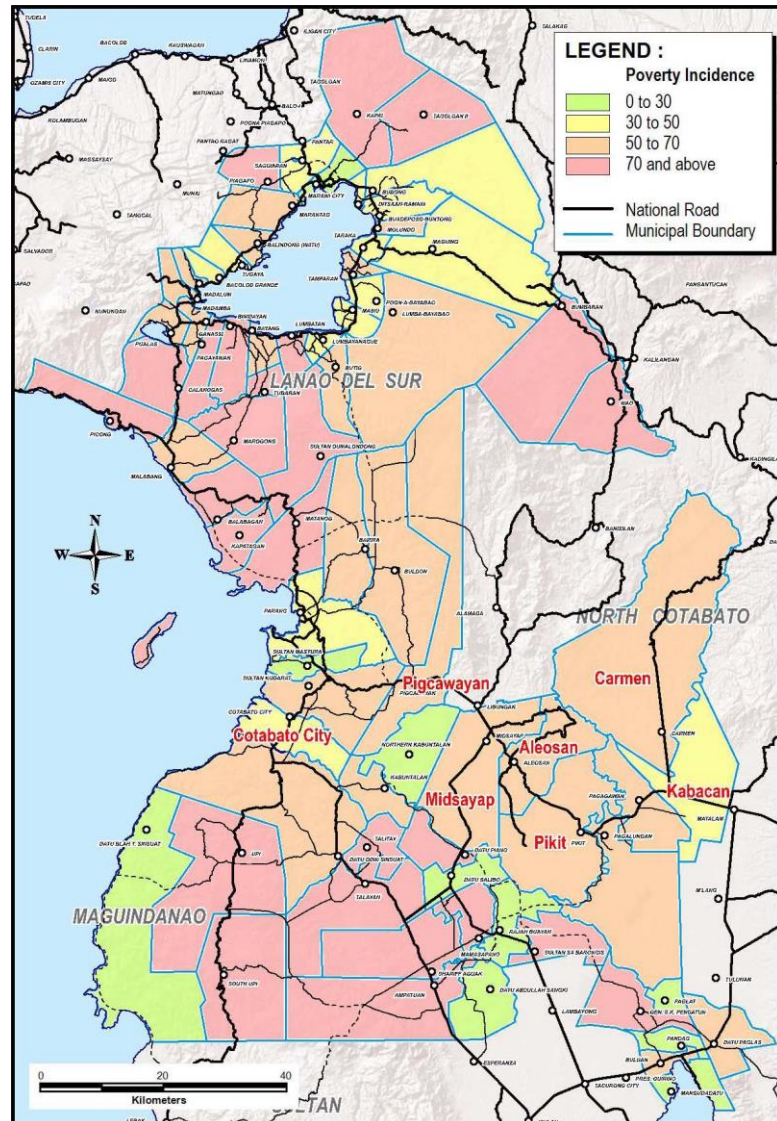
#### a. Demographic Trend

Based on the 2016 Philippine Statistical Yearbook and published by the Philippine Statistics Authority, as of 2015, the total population of ARMM is 3,781,387. Lanao del Sur province has a population of 1,045,429, while Maguindanao province has 1,173,933. The population of the two provinces accounts for 59% of the total population of ARMM.

The average household size is 6.5 persons for Lanao del Sur and 6.0 persons for Maguindanao. Five provinces of ARMM have a similar average household size, and the regional average is 6.1 persons. The regional and provincial average household size is much larger than the national average of 4.4 persons.

The annual average population growth rate of ARMM was 1.51% for the ten years from 2000 to 2010, which was lower than the national average of 1.90%. It increased to 2.98% for the years from 2010 to 2015, which is much higher than the national average of 1.72%. Maguindanao province has experienced fast population growth at an annual average growth rate of 4.22%.

As population grew, the population density of ARMM has also increased from 62 persons/km<sup>2</sup> in 1990 to 103 persons/km<sup>2</sup> in 2015. Still, it is much lower than the national average of 337 persons/km<sup>2</sup> in 2015.



Source: 2012 Municipal and City Level Poverty Estimates, Philippine Statistics Authority, 31 March 2016

Note: Cotabato City joined BARMM; some barangays of Pigcawayan, Midsayap, Aleosan, Pikit, Carmet, Kabacan joined the BARMM during the 21 Jan 2019 Plebescite

**Figure 2.1-1 Municipal Level Poverty Incidence in 2012**

It is much lower than the national average of 337 persons/km<sup>2</sup> in 2015.

Among the five provinces, Lanao del Sur has been the least densely populated. Its population density is only 69 persons/km<sup>2</sup> in 2015.

Cotabato City on the other hand had a population of just 163,849 in 2000 in its land area of 176.0 km<sup>2</sup>, and thus its population density was only 9.3/km<sup>2</sup> in 2000. The city's population increased rapidly to 299,438 in 2015 at a rate of 4.10% per annum in the last 15 years. The growth of the city's population is more dramatic than what had been experienced in the other major cities in Mindanao in the same period (Davao City had 2.38%, Zamboanga City had 2.42%, Cagayan de Oro had 2.57% and General Santos City had 2.48%). This rapid population growth will continue as the prospect of peace has become more realistic in recent years.

### **b. Poverty Incidence**

Poverty incidence as defined by Philippine Statistics Authority is the proportion of families and individuals with per capita income less than the per capita poverty threshold to the total number of families and individuals. Poverty threshold is the minimum income required for a family or individual to meet the basic food and non-food requirements.

The poverty incidence of ARMM has increased from 47.1% in 2006 to 53.7% in 2015 as indicated in the data of the National Statistics Authority. For Lanao del Sur, poverty incidence has dramatically increased from 44.7% in 2006 to 71.9% in 2015. Poverty incidence has also increased for Maguindanao, but at a slower pace, from 54.6% in 2006 to 57.2% in 2015. The poverty incidence of ARMM and the two provinces of Lanao del Sur and Maguindanao has always been much higher than the national average and shows a contrasting trend with the national poverty incidence that has declined from 26.6% in 2006 to 21.6% in 2015.

For the purpose of appreciating the municipal level of poverty of ARMM and the six (6) municipalities where the 63 additional barangays to the territory of BARMM are located, the 2012 data of the National Statistics Authority is still the latest as far as municipal level poverty is concerned and plotted as shown in Figure 1.1. Except the Municipality of Kabacan, poverty level in the other five (5) municipalities is also high which is more than 50%.

### **c. Displacement**

Displacement is another serious issue in ARMM besides poverty incidence. The ARMM region has seen multiple displacement incidents which are mostly caused by armed conflict and clan feud involving internally displaced persons (IDPs) who fled their homes often and for a long period.

According to the United Nations High Commissioner for Refugees (UNHCR) Philippines, around 860,000 persons have been displaced in Mindanao since January 2012, and 21% or 187,000 of them remain displaced mostly in ARMM as of June 2015. These IDPs are among the poorest of the poor mostly belonging to minority groups. Their protection is at risk as they continue to struggle in a vulnerable environment where access to basic services is inadequate: temporary shelters are in most cases in decrepit state, source of livelihood is absent, children's education is interrupted, women's privacy is lacking, and most of all safety and security is uncertain<sup>1</sup>.

For the displacement in Marawi City due to the Marawi siege crisis, UNHCR Philippines quoting DSWD that as of 12 October 2018, there are 63,881 families have already returned to Marawi City while 15,117 families are still displaced. Out of this, 1,958 families are still inside evacuation centers and 11,754 families are home-based IDPs. Another 1,405 families are in transitional shelters (Sagonsongan, Bakwit Village, Angat Buhay, Bahay Pag-asa)<sup>2</sup>.

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<sup>1</sup> UNHCR Philippines' Protracted Displacement ([http://www.protectionclusterphilippines.org/?page\\_id=255#](http://www.protectionclusterphilippines.org/?page_id=255#))

<sup>2</sup> UNHCR Philippines' Mindanao Displacement Dashboard (<http://www.protectionclusterphilippines.org/?p=1712>)



#### **d. Food Security**

Food threshold as defined by Philippine Statistics Authority is the minimum income required for a family or individual to meet the basic food needs, which satisfies the nutritional requirements for economically necessary and socially desirable physical activities. Subsistence incidence is the proportion of families or individuals with per capita income less than the per capita food threshold to the total number of families or individuals.

The subsistence incidence of ARMM has increased from 14% in 2006 to 17% in 2015. Lanao del Sur has the worst subsistence incidence among the five provinces, which has grown from 14.1% in 2006 to 33.2% in 2015. Maguindanao is the second worst province, whose subsistence incidence has increased from 19.1% in 2006 to 22% in 2015.<sup>3</sup>

#### **e. Nutrition**

Poverty keeps people from attaining improvement in their health and nutrition. ARMM registered the highest prevalence of food insecurity, especially in children, which to a large degree can be attributed to the recurrent armed conflict often resulting in displacement and dislocation of families.

The Philippines is one of the countries that account for most of the global burden of malnutrition. It ranks 9th in the countries with the highest burden of stunting, and 10th in the countries with the highest burden of wasting. The situation of ARMM is worse than the national average. As of 2015, ARMM registered 24.9% of underweight while the national average was 21.5%. For stunting, ARMM registered 45.2% while the national average was 30.3%. For wasting, ARMM registered 8.2% whereas the national average was 7.9%. Lanao del Sur and Maguindanao have very high incidence of stunting, 49.0% and 45.6% for 2015, which indicate chronic undernutrition or past nutritional status.<sup>4</sup>

#### **f. Access to Basic Social Services**

Access to basic social services such as drinking water and education is essential for inclusive growth. Access to drinking water and education as examples shows the situation of limited access to social services in ARMM and two provinces of Lanao del Sur and Maguindanao.

With regards to drinking water, the 2010 Census of Population and Housing surveyed sources of drinking water used by households. In the Philippines as a whole, a majority of households use water from sources such as “community water system,” “tubed/piped deep well,” and “bottled water.” By contrast, in ARMM, “dug well” and “lake, river, rain and others” are major sources of drinking water besides community water system. The most popular source is “lake, river, rain and others” in Lanao del Sur and “dug well” in Maguindanao.

With regards to education, the 2015 Census of Population and Housing surveyed household population attending school by age group and sex. In the entire Philippines, over 90% of age groups of 5–9 and 10–14 are attending school. On the other hand, for age group 5–9 in ARMM, population attending school is 77.3% for both sexes, which is lower than the national average by 16.6%. For the age group 10–14 in ARMM, population attending school is 88.2% for both sexes, or 12.3% lower than the national average. Lanao del Sur and Maguindanao have percentages similar to ARMM, indicating limited access to primary and secondary education for children.

#### **g. Gender Equity**

Expanding employment opportunities for women is a key for attaining inclusive growth for women. However, employment growth in the Philippines has not been inclusive for women. The estimated proportion of women’s annual earnings to those of men stands at less than 60%.<sup>5</sup> Women’s labour

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<sup>3</sup> Official Poverty Statistics of the Philippines Full Year 2015, Philippine Statistics Authority

<sup>4</sup> National Nutrition Survey 2015 Updating Survey Result. Food and Nutrition Research Institute, Department of Science and Technology.

<sup>5</sup> Asian Development Bank. (2013). Gender Equity in the Labor Market in the Philippines.

market participation has been lower than men because of multiple factors including inadequate employment and decent work opportunities, domestic labour and care constraints, and social norms.<sup>6</sup>

Thus, in the Philippines, women's labour force participation rate (LFPR), defined as proportion of total labour force to the total household population 15 years and over, is lower than men's. ARMM has the lowest LFPR of all regions.

In the 2016 Gender Statistics on Labour and Employment by the Philippine Statistics Authority, the labour force participation rate by sex for the Philippines and ARMM in 2015 was 63.7% and 54.4%, respectively for both sexes, a close of 77.3% and 77.5% for men, and a wide difference of 50.1% and 31.6% for women.

## **h. Human Development Index**

The Human Development Index (HDI) is a summary measure of human development. It measures the average achievement in a country in three basic dimensions of human development: longevity or a long and healthy life, access to knowledge, and a decent standard of living. These dimensions are measured by a set of indicators that are aggregated into indices. HDI 2012 for the Philippines used life expectancy at birth as an indicator for longevity, mean years of schooling, and expected years of schooling as indicators for knowledge, and per capita income 2012 as an indicator for standard of living. The 2012 HDI value for the Philippines in 2012 is 0.644. HDI of ARMM provinces are all much lower than the national average of 0.644. Among all the provinces in the country, Lanao del Sur, Sulu, and Maguindanao are the worst three with regard to HDI.<sup>7</sup>

## **i. GRDP and Economic Sector**

In 2016, the gross regional domestic product (GRDP) of ARMM was PhP 103.93 Billion at current prices, which accounts for 0.7% of the Philippines' GDP. ARMM's economy rebounded in 2016 after a negative growth in the previous year. Nevertheless, the growth rate of 0.3% for 2015–2016 is the lowest among the regions, and -0.4% for 2014–2015 was the only negative growth recorded. The region's annual growth in the last several years has been slower than the rest of the Philippines.

The key industries in ARMM are agriculture, hunting, forestry and fishing. The agriculture sector contributes 56.3% of GRDP of the region in 2016, while the industry sector accounts for 5.7% and the service sector accounts for 38.0%. ARMM remains an agriculture-based economy. However, over the last several years, growth rates of the agriculture sector have been lower than the industry and service sectors. The agriculture sector's contribution to the regional economy has come down from 64.4% in 2009 to 56.3% in 2016, leading to slow economic growth of the region.<sup>8</sup>

## **j. Income**

In 2015, the average annual family income of ARMM was approximately PhP 139,000. In comparison, the average annual family expenditure for the same year was PhP 111,000. Hence, families in ARMM have annual savings of PhP 28,000 on average. The family income, expenditure and savings of ARMM are the lowest among all the regions, and far below the national average of PhP 267,000 for income, PhP 215,000 for expenditure, and PhP 52,000 for savings.

Adjusted for the inflation for the two reference years using the 2006 prices, the average annual family income in 2015 would be PhP 89,000, while the average annual family income in 2012 would be PhP 91,000. ARMM and Caraga (Region XIII) are the only two regions that have the adjusted average family income in 2015 below the one in 2012.<sup>9</sup>

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<sup>6</sup> Philippine Statistics Authority. (2016). 2016 Gender Statistics on Labor and Employment.

<sup>7</sup> Philippine Statistics Authority. PSA and HDN Jointly Release the Preliminary Estimates of the 2012 Human Development Index.

<sup>8</sup> Philippine Statistics Authority. <https://psa.gov.ph/regional-accounts/grdp/data-and-charts>

<sup>9</sup> 2012 and 2015 Family Income and Expenditure Survey, Philippine Statistics Authority

## **k. Expenditure**

In 2015, on average, 59.0% of the total annual family expenditures in ARMM was spent on food. The lowest income class families and the highest income class ones spent lower percentage of income on food compared to middle income class ones. For the lowest income class families, their expenditure on other basic needs such as house rent/rental value, water, electricity, gas and other fuels had higher percentages than other income classes. Adjusted for the inflation for the two reference years using the 2006 prices, the average annual family income in 2015 would be PhP 89,000, while the average annual family income in 2012 would be PhP 91,000. ARMM and Caraga (Region XIII) are the only two regions that have the adjusted average family income in 2015 below the one in 2012.<sup>10</sup>

## **l. Labor Force and Employment**

In 2015, about half of the families in ARMM earned more than 75% of the family income from agriculture. Middle income classes of PhP 60,000–99,999 and PhP 100,000–249,999 have higher percentages of families whose agriculture income accounts for over 75% of total family income.

In January 2017, the total number of employed persons in ARMM was 974,000 with 769,000 men and 205,000 women. Workers in the agriculture sector comprised the largest proportion of the population who were employed, making up 60.3% of the total employed population. Workers in the service sector registered the second largest group accounting for 35.1% of the total employed. Workers in the industry sector made up the smallest group registering 4.6% of the total employed population.<sup>11</sup>

## **2.2 Present Development Level of Infrastructure**

The primary sources in the review of the present development level of infrastructure in the region are the following: (i) 2015 World Bank-assisted Bangsamoro Development Plan-1, (ii) 2016 JICA-assisted study “Bangsamoro Development Plan-2” and (iii) ARMM-Regional Development Plan (2017-2022). These documents are supplemented by the interview with key stakeholders in the Bangsamoro carried out by the JICA Study Team in Cotabato City from December 3 to December 14, 2018. Both efforts (review and interview) pointed to the need to address the infrastructure gaps in the region by constructing (in some cases, improvement of the existing facility like port) more roads, schools, water supply system, hospitals and other basic infrastructure needed to improve lives of the people and to facilitate economic activities.

In the presentation of the current situation of the different sectors covered by the study, when availability of data allows, a comparison of the region against the rest in the country is compared to understand the gap between the two.

### **a. Roads and Bridges**

In general, administration of roads in the Philippines is classified into five (5) categories: National Road, Provincial Road, City Road, Municipal Road and Barangay Road. National road is administered by the DPWH-National while national road within the territory of the Bangsamoro is administered by the DPWH-ARMM whose legal basis are RA 9054 (Organic Act) and other existing laws (e.g. Executive Order No. 426 dated 12 October 1990).

#### **Road density**

The Bangsamoro region’s road density (0.10) remains the lowest in the Country, which is not even a half of the national average (0.25). Another 800 km of national roads are necessary to reach the average of Mindanao (0.17) as indicated in the 2016 JICA-assisted study titled “Bangsamoro Development Plan-2”.

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<sup>10</sup> 2015 Family Income and Expenditure Survey, Philippine Statistics Authority

<sup>11</sup> January 2017 Labour Force Survey. Philippine Statistics Authority

### **Pavement rate**

In the same JICA-assisted report, it was noted that the pavement rate of national roads in the region improved from 76.8% in 2007 to 81.9% in 2013. However, this is still below the national average of 83%. To reach the national level, paving another 179 km of national roads with gravel or earth surface is necessary. Provincial roads in the region are mostly gravel- or earth-surfaced, which account for 79% (1,680 km) of the total length. This remains a major development issue to be addressed in the coming years. Municipal roads are also mostly surfaced with gravel or earth (80% of the total or 1,680 km). Barangay roads and FMRs are also mostly surfaced with gravel or earth (4,824 km of which only 0.2% has gravel surface).

### **Road condition of paved national road**

Based on the IRI survey undertaken by DRIMS (Dynamic Response Intelligent Monitoring System) in 2015 under the 2016 JICA-assisted study titled “Bangsamoro Development Plan-2”, 53% of the total length of national road covered by the survey was in poor condition (462.09 km).

### **Missing links**

There are five missing links (155.4 km in total length), which prevent access to wide area in the region, as identified by the 2016 JICA-assisted project. Likewise, these missing links affect mobility of communities in these areas. At least two (2) of the missing links are covered by the 2018 JICA-assisted project titled “Road Network Development Project in Conflict-affected in Mindanao” (SP 2 – Tapian-Lebak Coastal Road (62.6km) and SP 6 - Parang-Balabagan Road (35.3km)). The possibility of construction of these two missing links are high since Exchange of Notes (E/N) had been signed between the Government of Japan and the Government of the Republic of the Philippines last February 10, 2019.

### **b. Port**

There are thirteen (13) major ports in the Bangsamoro. Of these, one (1) port which is the Polloc Port is administered by the Regional Economic Zone Authority (REZA). The other twelve (12) major ports are under the Regional Ports Management Authority (RPMA) and the Philippine Ports Authority. Other minor ports in the Bangsamoro are administered by LGUs. The 13 major ports are as follows:

- i. Polloc Port, Maguindanao
- ii. Malabang Port, Lanao del Sur
- iii. Lamitan Port, Basilan
- iv. Isabela Port, Basilan
- v. Jolo Port, Sulu
- vi. Panamao Port, Sulu
- vii. Siasi Port, Sulu
- viii. Sapa-sapa Port, Tawi-tawi
- ix. Simunul Port, Tawi-tawi
- x. Bongao Port, Tawi-tawi
- xi. Sibutu Port, Tawi-tawi
- xii. Sitangkai Port, Tawi-tawi
- xiii. Mapun Port, Tawi-tawi

In terms of cargo throughput, the major ports are Polloc Port (Maguindanao), Isabela Port (Basilan), Jolo Port (Sulu), and Bongao Port (Tawi-tawi).

### **c. Airport<sup>12</sup>**

Mindanao has three (3) international airports located in Davao City, General Santos City and Zamboanga City. Bangsamoro has no international airport.

Bangsamoro however has one principal class I airport located in Awang Datu Odin Sinsuat, Maguindanao; two principal class II airports located in Sanga-Sanga, Tawi-Tawi and Jolo, Sulu, and two community airports in Malabang in the province of Lanao del Sur, and Cagayan De Sulu (Mapun), Tawi-Tawi. There is a newly established feeder airport in the municipality of Wao which is now operational. In terms of administration, these airports are administered by the Civil Aviation Authority of the Philippines (CAAP), a body under the Department of Transport (DOTr) responsible for operations of all airports in the country except international airports.

### **d. Water Supply<sup>13</sup>**

There is no comprehensive assessment of the current situation of water supply in the ARMM. In the ARMM-Regional Development Plan (2017-2022) however, the following watersheds are identified as major source of water in the region (including domestic use and potable water supply): Lake Lanao Watershed Forest Reserve, Kabulnan Watershed, South Upi Watershed Forest Reserve and Dimapatoy Watershed Forest Reserve. Dimapatoy Watershed is the main source of water supply of Cotabato City and neighboring municipalities. Likewise, per interview with Dir. Danilo Ong of DPWH-ARMM, it was learned that DPWH-ARMM has contracted out a local consultant to undertake a comprehensive survey to determine the current condition of water supply in the ARMM. The survey has started in November 2018 and it will be completed by the end of January 2019.

In the BDP-1, it was revealed that in terms of percentage of households with access to improved safe water supply, the 2011 figures are as follows: 82.6% of the entire households in the country have access to improved safe water supply, 86.8% for the entire households in Mindanao and only 57.1% for the entire household in the ARMM (32.4% of which are Level 1). Based on the data of RPDO, ARMM data in 2016 however deteriorated to 53.57%. Among the provinces and cities of ARMM with access to safe water supply, the 2016 data are as follows: 51.9% in Lanao del Sur, 61.81% in Maguindanao, 58.91% in Sulu, 70.57% in Tawi-tawi, 43.71% in Lamitan City (Basilan), and 24.06% in Marawi City.

### **e. Health**

Based on the ARMM-RDP (2017-2022), it was learned that a total of 50 hospitals are operating in the ARMM of which 24 hospitals are government hospitals and under the DOH-ARMM. Four are DOH retained hospitals, two are military hospitals, and one is financed through a congressional development fund while 19 are privately owned. At present, there is no regional hospital in ARMM and no provincial hospital in the provinces of Basilan and Lanao del Sur.

While ARMM is governed by the district health system, the referral system remains uncoordinated. There is no facility in ARMM which serves as a tertiary referral center. Two DOH Central-retained hospitals - Amai Pakpak Medical Center and Cotabato Regional and Medical Center – serve Marawi City and Lanao del Sur, and Maguindanao respectively. On the other hand, patients from island provinces of Basilan, Sulu, and Tawi-tawi are referred to Zamboanga City Medical Center. In

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<sup>12</sup> International airports are airports capable of handling international flights. Airports in this category include airports that currently are serving or have previously served international destinations. Principal airports are airports that only serve domestic destinations. There are two types: Class 1 principal airports capable of serving jet aircraft with a capacity of at least 100 seats and Class 2 principal airports capable of serving propeller aircraft with a capacity of at least 19 seats. Community airports are airports that are used primarily for general aviation. Most feeder airports are in this category.

<sup>13</sup> In the Philippines, water systems are classified into three levels:  
Level I, stand-alone water points (e.g., hand pumps, shallow wells, rainwater collectors);  
Level II, piped water with a communal water point (e.g., bore wells, spring systems);  
Level III, piped water supply with a private water point (e.g., a household service connection)

emergency and complicated cases, people access the health services of private facilities in cities outside of ARMM.

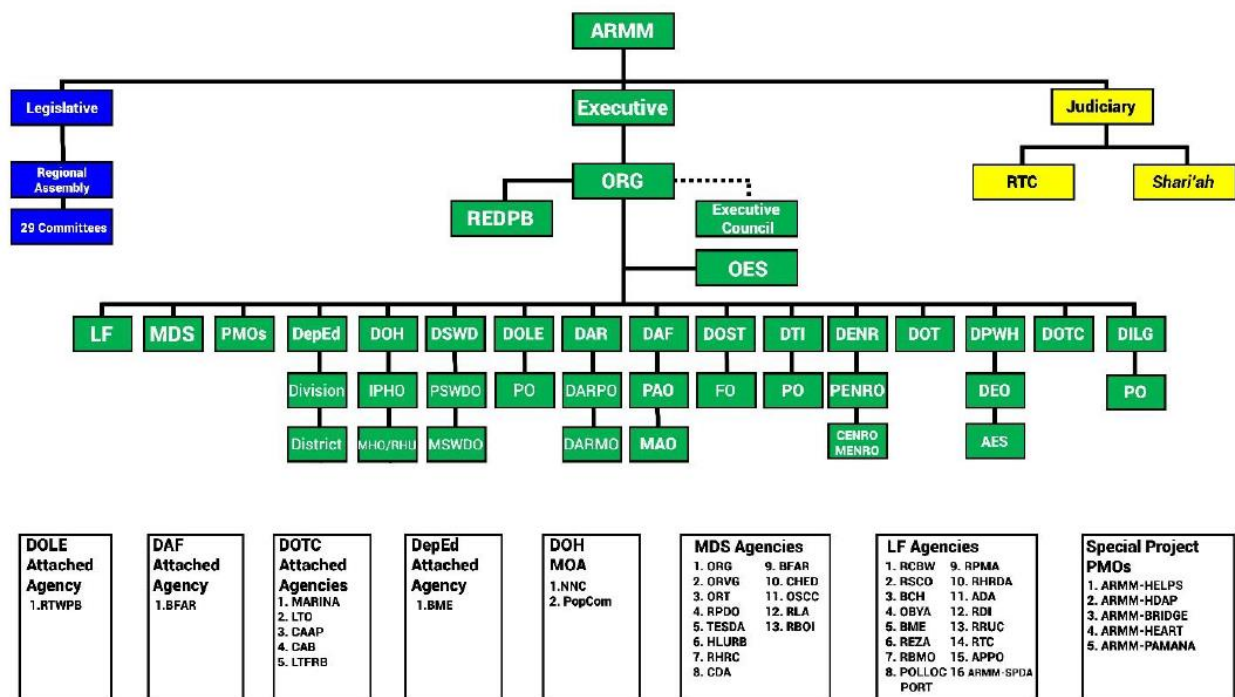
**f. Education**

The 2017-2022 ARMM-Regional Development Plan has the following to describe the state of education in the region: “ARMM has the lowest education performance in both elementary and secondary levels. The region shows poor performance on basic education indicators, as evidenced by low participation rates, low preparedness for school, and low elementary and secondary school performance. Unstable peace and order condition, family feuds, inadequate and dilapidated school buildings, and insufficient armchairs, textbooks, and teaching aids explain low education performance in ARMM. Moreover, insufficient resources and the limited support for capacity building adversely affect the morale of teachers.”

**2.3 Infrastructure Administration in the ARMM**

**a. Organization Structure of the ARMM**

The organizational structure of the ARMM is depicted in Figure 2.3-1. It has three (3) branches: (i) the legislative branch, (ii) the executive branch, and the (iii) judiciary including the Shari’ah legal system. The executive branch is headed by a Regional Governor and Vice Governor and supported by the Executive Secretary and Regional Secretaries or heads of the different agencies/bureaus.



Source: ARMM Transition Report, Main Report, Book I, RPDO, 2019

**Figure 2.3-1 Organization Structure of the ARMM**

## b. Infrastructure Budget of the ARMM

Table 2.3-1 presents the budget of the ARMM in the last three years. In the said table, the following are observed:

- From the budget of just over PhP 9 Billion in 2010, the budget of the region reached PhP 24 Billion in 2015. And by 2018, the region's budget reaches PhP 33 Billion. Per DBM data, the budget for 2019 is PhP 32 Billion.
- Of the total budget, capital outlays or budget allocated for project implementation reaches PhP 10 Billion in 2016. The largest budget handled by the region for infrastructure development is about PhP 14 Billion in 2018. In view of possible infusion of substantial fund for infrastructure development into the Bangsamoro which could go as far as PhP 40 Billion, there is a need to considerably expand the capacity of the region in project implementation.
- Of the over PhP 14 Billion budget for infrastructure development, 71% or PhP 10 Billion of the fund were implemented through the DPWH-ARMM. Hence the said agency should be further strengthened since in the coming years, most of the projects will be handled by the said Department.

**Table 2.3-1 Budget of the ARMM (2016-2019)**

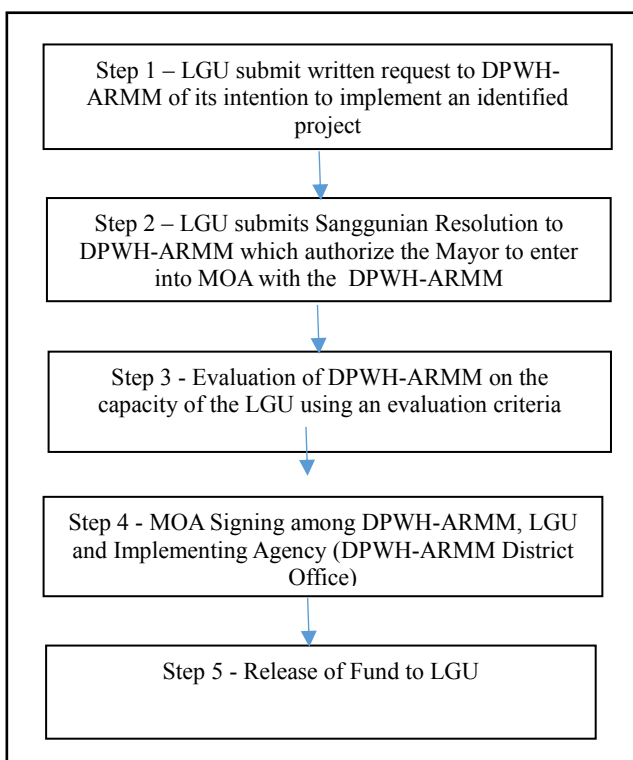
| <b>Item</b>  | <b>2016</b>  | <b>2017</b>  | <b>2018</b>  | <b>2019</b>  |
|--|--------------|--------------|--------------|--------------|
| 1. Personnel Services (PS)                         | 40.5%        | 47.4%        | 43.8%        | N.A.         |
| 2. Maintenance and Other Operating Expenses (MOOE) | 19.6%        | 11.8%        | 14.2%        | N.A.         |
| 3. Capital Outlay (Budget for Projects)            | 39.9%        | 40.8%        | 42.0%        | N.A.         |
| <b>Total (PhP Billion)</b>                         | <b>27.38</b> | <b>33.47</b> | <b>33.47</b> | <b>32.00</b> |

Source: National Expenditure Program, DBP website (<https://www.dbm.gov.ph>)

**c. Project Implementation Methods**

Since implementation of the majority of the projects are under the DPWH-ARMM, the implementation method of the said Department is studied. In essence, there are three modes of project implementation practiced by the DPWH-ARMM which are: (i) By Administration, (ii) By Contract and (iii) By Memorandum of Agreement with the concerned LGU. Although less usual that (i) and (ii), MOA with LGU's mode of implementation has its legal basis in the R.A. 9184 (The Revised Implementing Rules and Regulations (IRR) of Republic Act No. 9184 (Government Procurement Reform Act) which allows the capable LGU to implement DPWH infrastructure project. At DPWH-National, the Secretary issued D.O. 62 titled "Revised Guideline for the Implementation of DPWH Projects (by Administration of by Contract) by Local Government Unit" last April 2018 to further clarify the procedure when the third mode of project implementation is pursued. At the DPWH-ARMM, Figure 2.3.2 illustrates the process when the third option is pursued.

In 2018, interview with the officials of the DPWH-ARMM revealed that of the 470 projects implemented by the Department, 75.1% (353) were implemented by Contract and more than 100 projects (24.9%) were implemented by the capable LGUs in their respective area. High number of projects being implemented means that more capable engineers are needed by the Department to prepare project preparation such as undertaking of infrastructure planning, feasibility studies, detailed design, project bidding, project implementation and monitoring.



Source: Interview with DPWH-ARMM

**Figure 2.3-2 Procedure of MOA with LGU mode of Project Implementation**

**Table 2.3-2 Number of Projects Implemented per Mode of Implementation (2015-2018)**

| Mode of Implementation | No. of Projects |      |      |      | Appropriation (in Million) |           |           |           |
|------------------------|-----------------|------|------|------|----------------------------|-----------|-----------|-----------|
|                        | 2015            | 2016 | 2017 | 2018 | 2015                       | 2016      | 2017      | 2018      |
| By Administration      | 372             | 328  | -    | -    | 6,907.72                   | 6,394.86  | -         | -         |
| By Contract            | 20              | 20   | 674  | 353  | 1,081.50                   | 1,036.39  | 10,333.52 | 7,281.12  |
| By MOA with LGU        | 79              | 94   | -    | 117  | 2,093.78                   | 2,572.57  | -         | 2,822.70  |
| Total                  | 471             | 442  | 674  | 470  | 10,083.00                  | 10,003.82 | 10,333.52 | 10,103.82 |

Source: DPWH-ARMM, 21 February 2018



## **2.4 Issues and Needs of Infrastructure Development**

The issues affecting infrastructure development are identified through review of existing plans such as ARMM-Regional Development Plan (2017-2022), Bangsamoro Development Plan 1 and 2, and other development plans. This process is supplemented by KII interview with relevant stakeholders in the area conducted from December 3 to December 14, 2018. As indicated in the said review and interview, the big disparity of infrastructure supply between the BARMM and other regions in the country is clearly noticeable. This means that for the BARMM to catch with the rest of the regions and to assist the growth of its economy, much effort is needed to expand its infrastructure. Below summarized the infrastructure issues affecting the development of the region.

### **a. Roads and Bridges**

In general, the road network of Bangsamoro is less developed compared with the other regions of Mindanao which means substantial length of roads need to be constructed. Below are the summary of issues confronting road sector.

- Limited supply of road means there are wide area without access to services available in the urban areas or market centers. A supply of 800km of new national road is needed to reach Mindanao average.
- Road surface of provincial roads are still mostly gravel (or earth surfaced). During the 2015 IRI survey by DRIMS under the JICA assistance, out of 921.09 km of provincial roads in the mainland ARMM, only 492.7 km were accessible by vehicle.
- Municipal roads are also mostly surfaced with gravel or earth (80% of the total or 1,680 km). Barangay roads and FMRs are also mostly surfaced with gravel or earth (4,824 km of which only 0.2% has gravel surface) as mentioned by the 2016 JICA-assisted BDP-2.
- In Cotabato City – which serves as the regional center of the Bangsamoro and this role of the city is expected to continue in view of the decision of its residents to join the BARMM during the January 21, 2019 plebiscite- the coastal area of the city and neighbouring municipalities lacked good road connection to allow development of the coastal areas and facilitate smooth movement of people and goods.

### **b. Port**

The current infrastructure issues facing the four (4) major ports of the ARMM were reviewed based on the analysis made in the 2016 JICA-assisted BDP-2. In essence, all the four major ports required physical improvement.

#### **Polloc Port (Maguindanao)**

- In general, the main berth is still in good condition however the following structures and facilities were observed to be damaged and required attention: corroded upper portion of piles, exposed and corroded re-bars, some damaged fenders and bollards.
- In terms of cargo volume, the trend is going up. For instance, in 2012 the volume of cargoes (total of inbound and outbound) was only 296,354 metric ton but rose to 639,119 metric ton in 2017 or an AAVR of 21% in the last four years. This volume is close to the highest recorded cargo volume handled by the port in 1992 which was 742,923 metric ton.
- The ARMM Regional Economic Zone Authority (REZA) prepared a study title “Master Plan and Feasibility Study for the Upgrading/Expansion of Polloc Port” in 2018 for target year of 2028 (short-term) and 2043 (long-term). Two alternatives of port development were prepared costing about PhP 5.25 Billion for Alternative 1 and PhP 5.60 Billion for Alternative 2.

#### **Isabela Port (Basilan)**

- Deterioration of port facilities such as concrete slabs, piles which require urgent rehabilitation for the safety of port operation and lack of expansion for back-up area.
- Due to lack of expansion for back-up area, the Provincial Government purchased a land for development of a new port. Based on the above, development plan for the new port was developed by PPA (Philippine Port Authority) under the 2012 “Masterplan for Selected Ports in Southern Mindanao”. The master plan includes 1<sup>st</sup> Phase development and 2nd Phase development for the target year of 2008 and 2022, respectively. The port facilities for the general cargo and passenger

vessels in one area and fast craft vessels in the other area are separately provided. The berthing for the fast craft vessels are exclusively for their use. The close storage facilities or transit sheds shall be provided behind the wharf with a wide road. A passenger terminal building and parking area for vehicles are provided behind the fast craft berth.

#### **Jolo Port (Sulu)**

- Deterioration of port facilities including superstructure of the pier, exposed reinforcing bars (heavily corroded), cracked concrete piles among.
- Based on the above, a port development plan for implementation in two phases (1<sup>st</sup> Phase 2019; 2<sup>nd</sup> Phase 2030) was prepared by the PPA (Philippine Port Authority) in 2000 titled “Masterplan for Selected Ports in Southern Mindanao”.
- The rough cost estimate including 1<sup>st</sup> Phase and 2<sup>nd</sup> Phase is about USD 20.25 Million

#### **Bongao Port (Tawi-tawi)**

- The existing facility of the port is considered almost saturated in its capacity. To mitigate the situation, an expansion plan of the port is prepared which would cost about USD 3.59 Million.
- But ultimately, the plan of the Provincial Government is to construct a new port with eco-zone located in Barangay Malasa (Sanga-sanga island) in the north east. This new port will cost about USD 10.70 Million.

### **c. Airport**

Like the study of port, the study of airport in the Bangsamoro heavily relies on the analysis made in the 2016 JICA-assisted BDP-2 and supplemented by the data from the ARMM-Regional Development Plan (2017-2022). The three primary airports of Bangsamoro also needs significant improvement to cater growing number of passengers.

#### **Awang Airport (Cotabato City) – Principal Class 1**

- By 2020, the airport expected to handle more than 500,000 passengers which means that facility expansion is required in accordance with the expected air traffic demand. One of the challenges is the difficulty to expand the existing runway from the current 1,820 m to 2,200 m runway to service A320. Extending the runway is difficult due to significant height difference or faulting between both ends of the runway and surrounding areas.
- Distance between runway and apron taxiway shall follow international standards for 4C, which is the airport classification category of A320 aircraft currently under operation. This required expansion is impossible under the current situation as the apron is surrounded by Passenger Terminal Building, Vehicle Parking Area and other buildings.
- BDP-2 revised the masterplan study by KOICA (Korea International Cooperation Agency) and proposed an airport development until 2030 by phasing.
- Phase 1 (2020) recommended for several improvements such as expansion of apron area, installation of airfield lightning, relocation of passenger terminal building on the opposite side, construction of control tower, etc. The cost is estimated to be in PhP 1.98 Billion.
- Phase 2 (2030) recommended further expansion of the Passenger Terminal Building and site preparation. Phase 2 is estimated to cost about PhP109 Million

#### **Jolo Airport (Sulu) – Principal Class 2**

- By 2020, the airport is expected to handle over 20 thousand passengers. Although no issues are identified with the runway length as long as the airport services only turboprop (TP), a further expansion of the Passenger Terminal Building and other improvements are necessary.
- Based on the KOICA masterplan and adopted by the BDP-2, a phased development is recommended for Jolo Airport.
- Phase 1 (2020) calls for improvement of airside facilities, landside facilities and installation of x-ray machine and metal detector among others.

- Phase 1 is estimated to cost about PhP 74.3 Million; Phase 2 (2025) = PhP 108.9 Million (cost is mainly for runway overlay)

#### **Sanga-sanga Airport (Tawi-tawi) – Principal Class 2**

- By 2020, the airport is expected to handle over 30 thousand passengers and several improvement measures were proposed such as expansion of runway to meet the runway length to service small jet planes.
- Phase 1 (2020) recommended for improvement of airside facilities (runway extension, runway widening, taxiway system, apron expansion, etc.) and landside facilities (expansion of passenger terminal area, cargo terminal area, vehicle parking area, etc.), installation of x-ray machine and metal detector among others. The estimated cost for Phase 1 is about PhP 845.11 Million
- Phase 2 (2025) recommended improvements are composed of expansion of Passenger Terminal Building among others. The estimated cost is about PhP 68.75 Million

#### **d. Water Supply**

Like the other sectors such as road, port and airport, the water sector of the BARMM also needs significant improvement in terms of infrastructure. The following are the major issues in water supply in the ARMM:

##### **Mainland ARMM (Maguindanao and Lanao del Sur)**

- Although there are many possible sources of water supply such as rivers and underground water table, the sector is less developed. As mentioned in the ARMM-RDP (2017-2022), only 51.9% households in Lanao del Sur have access to safe water and 61.83% in Maguindanao. In Marawi City which host the Lanao lake, only 24.06% have access to safe water.
- DPWH-ARMM is currently studying the possibility of tapping the Malaik River to supply water to the municipalities in the south of the lake such as Poona Bayabao, Butig, Lumbayanague, Lumbatan, Bayang among others.

##### **Island Provinces (Basilan, Sulu, Tawi-tawi)**

- The water supply situation in the island provinces is equally problematic. In Sulu, as mentioned in the BDP-1, only 58.91% households have access to safe water, 70.57% in Tawi-tawi and although no data for Basilan, the city Lamitan has 43.71%.
- While the water supply problems in Basilan and Sulu is largely due to less developed water infrastructure, Tawi-tawi has both the problems of less developed water infrastructure and lack of underground water since the islands are rocky and could not hold water for long.
- To facilitate rapid development of water infrastructure (level 1 and 2), the Regional Secretary of the DPWH-ARMM is requesting for donation of a mobile Deep Well Drilling machine for easy construction of deep wells in remote areas.
- Interview with DPWH-National Usec. Emil Sadain revealed that there are possible two sources of water supply in Tawi-tawi which are not currently exploited: a) Spring water in Languyan Municipality and b) Spring Water in Panglima Sugala.

##### **Cotabato City**

- Drinking water in the city is provided by the Metro Cotabato Water District (MCWD). According to the officials of MCWD, currently, only 34,640 household of Cotabato City have water connection representing 49% of the total households of the city or 26 barangays out of 37 barangays of the city.
- The rapid pace of development in the city such as construction of new hotels and shopping malls will further expose the limited supply of water.
- Some of the major problems of MCWD are as follows: lack of financial capital for expansion, dilapidated pipes/old pipes (30-35 years old), erosion which requires river bank protection in one of the sources of water (Dimapatoy River), frequent power failure which affect generation of water supply, scaling which reduces diameter of pipe by 25% (from 16 inches to 12 inches).

### e. Health

The health sector of BARMM also needs substantial improvement to address the growing needs of the sector. The following infrastructure issues were identified to strengthen the said sector:

- There are still need to construct 16 Rural Health Unit (RHU) to complete the target of 1 RHU per municipality as stated in the ARMM-RDP (2017-2022).
- At barangay level, there are still need to construct 1,883 Barangay Health Station (BHS) to complete the target of DOH-ARMM of constructing 2,490 BHS across the region as mentioned by the ARMM-RDP (2017-2022).
- **Amai Pakpak Hospital and Medical Center** –rehabilitation of the center damaged by the Marawi siege and provision of lost equipment remains a high priority for the government.
- **Cotabato Regional and Medical Center (CRMC)** – located in Cotabato City, the center’s clients are almost split from two – 50% from ARMM and 50% from Region 12. Interview with the officials of the hospital reveals that the center lacks enough bed for patients as well as equipment/tool necessary to provide good health services. Likewise, the center needs Dialysis Center for Kidney, Halfway House (Patients Watchers Shelter), HIV/AIDS Treatment Center, and Infrastructure for Violence against Women and Children (VAWC) Survivors.

### f. Education

The following infrastructure issues affecting provision of good educational services (based on the review of ARMM-RDP 2017-2022) are as follows:

- Crowding in public school classrooms, especially in secondary schools. The standard Classroom-Student Ration (CSR) in the Philippines is 1 classroom for every 45 students (1:45) under the RA 7880. Basilan has a 1:53 CSR, Maguindanao has 1:52 CSR.
- Rehabilitation of existing school buildings
- Overall, ARMM is in need of 1,725 classrooms to meet the CSR
- ARMM has an average of 2:1 pupil-to-seat ratio. There is a need for procurement of additional seats to meet the standard of 1:1
- 2016 data indicates that there are 585 barangays (23.5%) without public elementary schools (33.7% in Sulu and 13.4% in Maguindanao).
- For ARMM-TESDA, the following infrastructure issues were identified:
  - i. Regional Manpower Development Center (Sultan Kudarat) – dormitory for trainees and replacement of outdated equipments/tools
  - ii. Provincial/City Manpower Development Center (Marawi City) – training center building, dormitory and equipment/tools
  - iii. Provincial Training Center (Basilan) – training center, dormitory, equipment/tools

## **Chapter 3 Implementation Status of the Infrastructure Development Projects in Bangsamoro Region**

### **3.1 Implementation Status of Bangsamoro Development Plan-1**

When the Bangsamoro Development Plan (BDP-1) was completed in 2015, it was heralded as a new dawn in Bangsamoro where the MILF became the only revolutionary group in the world which produced a development plan. Initially, BDP-1 did not include the Investment Plan. However, later on, through the efforts of various sectors both in public and private, a detailed Investment Plan was formulated covering 2014-2016. According to the Investment Plan, the identified projects was about PhP 225.65 Billion. However, only PhP 116.21 Billion were funded by the government and the funding gap was about PhP 109.45 Billion as shown in Table 3.1-1.

**Table 3.1-1 Investment Program (2014-2016) of the BDP-1**

| Thematic Area  | Lead Agency/<br>Partner | Cost of BDA Proposed Projects (in Php Million) |                  |                   |                   | GPH Funded (in Php Million) |                  |                  |                   |
|--|-------------------------|--|------------------|-------------------|-------------------|-----------------------------|------------------|------------------|-------------------|
|  |                         | 2014   | 2015             | 2016              | Total             | 2014                        | 2015             | 2016*            | Total             |
| <b>I. Economy and Livelihood</b>                                       |                         | 1,941.49                                       | 5,913.85         | 10,022.18         | 17,877.52         | 2,216.55                    | 2,063.88         | 4,392.69         | 8,673.11          |
| Agriculture  |                         | 283.92   | 1,135.68         | 1,419.60          | 2,839.20          | 363.27                      | 617.00           | 892.22           | 1,872.49          |
| Provision / Distribution of Seeds and Planting Materials               | DA                      | 75.00  | 300.00           | 375.00            | 750.00            | 87.11                       | 264.32           | 282.83           | 634.26            |
| Extension Support, Education and Trainings                             | DA                      | 108.52   | 434.08           | 542.60            | 1,085.20          | 52.16                       | 80.39            | 86.01            | 218.56            |
| Provision of Agricultural Equipment and Facilities                     | DA                      |  |                  |                   | -                 | 206.54                      | 241.83           | 258.76           | 707.13            |
| Research and Development   | DA                      |  |                  |                   | -                 | 16.12                       | 24.98            | 258.76           | 299.86            |
| Market Development Services  | DA                      |  |                  |                   | -                 | 1.34                        | 5.48             | 5.86             | 12.67             |
| Awards and Subsidies*  | DA                      | 100.40   | 401.60           | 502.00            | 1,004.00          |                             |                  |                  | -                 |
| Fisheries  |                         | 135.75   | 543.00           | 678.75            | 1,357.50          | 111.35                      | 159.78           | 170.96           | 442.08            |
| Provision of Fisheries Production Support Services                     | DA-BFAR                 | 3.00   | 12.00            | 15.00             | 30.00             | 51.93                       | 67.15            | 71.85            | 190.93            |
| Provision of Agricultural Equipment and Facilities                     | DA-BFAR                 | 41.85  | 167.40           | 209.25            | 418.50            | 36.07                       | 72.51            | 77.58            | 186.15            |
| Extension Support, Education and Trainings Services                    | DA-BFAR                 | 90.90  | 363.60           | 454.50            | 909.00            | 13.36                       | 10.12            | 10.83            | 34.30             |
| Resource Rehabilitation - Planting of mangrove propagules              | DA-BFAR                 | -  | -                | -                 | -                 | 10.00                       | 10.00            | 10.70            | 30.70             |
| Livelihood   |                         | 436.06   | 1,074.44         | 1,554.11          | 3,064.61          | 656.17                      | 131.25           | 123.27           | 910.69            |
| Capacity Building/Training/Financing/ Feasibility Studies              | DTI                     | 32.29  | 304.60           | 442.11            | 779.00            | 28.31                       | 16.70            | 16.70            | 61.71             |
| Postharvest Facilities (DAR)*  | DAR                     | 267.86   | 410.00           | 537.64            | 1,215.50          | 267.86                      | 86.82            | 103.36           | 458.04            |
| Roads and Bridges (DAR)*   | DAR                     | 75.51  | -                | -                 | 75.51             | 75.51                       | -                | -                | 75.51             |
| Social Infrastructure (DAR)*   | DAR                     | 34.00  | 92.24            | 189.36            | 315.60            | 185.40                      | 24.52            | -                | 209.92            |
| Production and Marketing Support Services (DAR)*                       | DAR                     | 26.40  | 267.60           | 385.00            | 679.00            | 99.08                       | 3.21             | 3.21             | 105.50            |
| Irrigation Systems*  | NIA/DAR                 | 1,085.76                                       | 3,160.73         | 6,369.72          | 10,616.21         | 1,085.76                    | 1,155.85         | 3,206.24         | 5,447.86          |
| <b>II. Physical Infrastructure</b>                                     |                         | 13,167.12                                      | 41,312.57        | 87,018.85         | 141,498.54        | 19,183.53                   | 18,128.95        | 19,532.98        | 56,845.47         |
| Roads  |                         | 5,225.00                                       | 30,069.31        | 61,544.80         | 96,839.11         | 10,304.84                   | 12,956.67        | 4,649.12         | 27,910.62         |
| National roads*  | DPWH                    | 5,225.00                                       | 5,054.69         | 2,459.77          | 12,739.46         | 5,225.00                    | 3,467.32         | 78.72            | 8,771.04          |
| Local Roads*   | ARMM                    | -  | 8,658.63         | 34,551.02         | 43,209.65         | 2,069.79                    | 9,339.35         | 1,586.86         | 12,996.00         |
| Barangay Roads (FMR)*  | DA/DAR/DPWH             | -  | 16,356.00        | 24,534.00         | 40,890.00         | 3,010.05                    | 150.00           | 2,983.54         | 6,143.59          |
| Airports*  | DOTC                    | -  | 204.38           | 306.57            | 510.95            | 54.70                       | 263.25           | -                | 317.95            |
| Seaports*  | DOTC                    | 70.00  | 923.60           | 1,894.00          | 2,887.60          | 70.00                       | 923.60           | -                | 993.60            |
| Flood Control  | DPWH                    | -  | 3,958.10         | 5,973.40          | 9,931.50          | 556.00                      | 512.17           | -                | 1,068.17          |
| Power*   | DOE                     | 7,872.12                                       | 6,157.18         | 17,300.08         | 31,329.38         | 8,197.99                    | 3,473.27         | 14,883.86        | 26,555.12         |
| <b>III. Social Services</b>  |                         | 662.90   | 13,629.95        | 40,648.02         | 54,940.87         | 10,399.91                   | 17,522.88        | 15,576.89        | 43,499.68         |
| Education  | DepED                   | 171.30   | 4,293.95         | 6,269.62          | 10,734.87         | 2,386.25                    | 4,969.04         | 3,071.62         | 10,426.91         |
| Basic education (DepEd)*   | DepEd                   | 171.30   | 4,246.20         | 6,198.00          | 10,615.50         | 2,386.25                    | 4,921.29         | 3,000.00         | 10,307.54         |
| Scholarships*  | CHED                    |  | 47.75            | 71.62             | 119.37            |                             | 47.75            | 71.62            | 119.37            |
| Health*  | DOH                     | 396.10   | 1,584.40         | 1,980.50          | 3,961.00          | 418.60                      | 531.72           | 840.05           | 1,790.37          |
| Domestic Water and Sanitation*   | DILG                    |  | 4,393.60         | 6,590.40          | 10,984.00         |                             | 4,068.67         | 4,068.67         | 8,137.35          |
| Housing*   | NHA                     | -  | 3,000.00         | 3,210.00          | 6,210.00          | 64.78                       | 20.00            | 21.40            | 106.18            |
| Social Protection*   |                         | 95.50  | 358.00           | 22,597.50         | 23,051.00         | 7,530.28                    | 7,933.45         | 7,575.14         | 23,038.87         |
| Financial Risk Protection (PhilHealth Coverage)*                       | PhilHealth              | 3.00   | 12.00            | 15.00             | 30.00             | 56.56                       | 422.22           | 422.22           | 901.00            |
| Social Pension   | DSWD                    |  |                  |                   | -                 | 141.30                      | 141.30           | 151.19           | 433.79            |
| Supplementary Feeding Program  | DSWD                    |  |                  |                   | -                 | 118.73                      | 118.73           | 127.05           | 364.52            |
| Recovery and Reintegration Program for Trafficked Persons <sup>1</sup> | DSWD                    |  |                  |                   | -                 | 0.33                        | 0.20             | 0.41             | 0.95              |
| Sustainable Livelihood Program   | DSWD                    |  |                  |                   | -                 | 7.98                        | 325.03           | -                | 333.01            |
| Pantawid Pamilyang Pilipino Program                                    | DSWD                    |  |                  |                   | -                 | 6,496.07                    | 6,043.61         | 6,043.61         | 18,583.30         |
| Grassroots Participatory Budgeting                                     | DSWD                    |  |                  |                   | -                 | 106.07                      | 106.52           | -                | 212.59            |
| Sajahatra Bangsamoro Program   | DSWD                    |  |                  |                   | -                 | 91.25                       | -                | -                | 91.25             |
| Cash for Work  | DSWD                    | 84.00  | 336.00           | 420.00            | 840.00            | 7.34                        | -                | -                | 7.34              |
| Reintegration Program for Sabah Deportees                              | DSWD                    |  |                  |                   | -                 | 494.22                      | 750.00           | 802.50           | 2,046.72          |
| Labor market intervention  | DOLE                    | 6.00   |                  |                   | 6.00              | 6.70                        | 5.50             | 6.00             | 18.20             |
| SP for Vulnerable Groups (Women, IDPs)                                 | DSWD                    | 2.50   | 10.00            | 22,162.50         | 22,175.00         | 3.72                        | 20.33            | 22.15            | 46.20             |
| <b>IV. Environment and Natural Resources</b>                           |                         | 300.10   | 1,226.75         | 1,500.48          | 3,027.32          | 188.59                      | 1,169.41         | 361.08           | 1,719.07          |
| Forest and Watershed Management  | DENR                    | 120.10   | 480.40           | 600.50            | 1,201.00          | 88.35                       | 102.28           | 65.87            | 256.50            |
| Solid Waste Management and Urban Ecosystem                             | DENR                    | 81.82  | 327.28           | 409.10            | 818.20            | -                           | 1.00             | 20.00            | 21.00             |
| Climate Change Adaptation and DRRM                                     | DENR                    | 22.62  | 90.46            | 113.08            | 226.15            | 90.75                       | 72.16            | 9.24             | 172.15            |
| Coastal and Marine Resource Management                                 | DENR                    | 1.92   | 34.05            | 9.60              | 45.57             | 1.93                        | 63.99            | 258.66           | 324.58            |
| Eco-tourism  | DENR                    | 45.04  | 180.16           | 225.20            | 450.40            | 2.76                        | 2.00             | -                | 4.76              |
| Biodiversity Conservation  | DENR                    | 9.40   | 37.60            | 47.00             | 94.00             | 3.50                        | 36.33            | 4.63             | 44.46             |
| Environmental Governance   | DENR                    | 19.20  | 76.80            | 96.00             | 192.00            | 1.30                        | 891.65           | 2.67             | 895.62            |
| <b>VI. Culture and Identity</b>  |                         |  | 858.51           | 1,287.76          | 2,146.27          |                             | 26.70            |                  | 26.70             |
| <b>V. Governance and Justice</b>                                       |                         |  | 1,721.50         |                   | 1,721.50          |                             | 1,000.00         |                  | 1,000.00          |
| <b>VII. Security*</b>  |                         |  | 2,690.68         | 1,752.62          | 4,443.30          |                             | 2,690.68         | 1,752.62         | 4,443.30          |
| <b>GRAND TOTAL</b>   |                         | <b>16,071.60</b>                               | <b>67,353.80</b> | <b>142,229.91</b> | <b>225,655.32</b> | <b>31,988.57</b>            | <b>42,602.50</b> | <b>41,616.25</b> | <b>116,207.33</b> |

Source: BDA, December 2018

## 3.2 Implementation Status of Bangsamoro Development Plan-2

A succeeding development plan called Bangsamoro Development Plan-2 (BDP-2) was produced in 2016. As far as BDP-2 is concerned, there has been some progress in the implementation of the identified programs and projects. The most notable progress achieved is in the roads and bridges sector where ten (10) sub-projects with a total of 110.23 km have been completed by the DPWH-ARMM. Likewise, there are six (6) sub-projects with a total of 119.94km currently under construction by the DPWH-ARMM. For other sectors such as port, airport, irrigation, agriculture, environment and tourism, a further effort is needed to ascertain the status of the programs and projects. Table 3.2-1 shows the status of the projects.

**Table 3.2-1 Implementation Status of identified Projects in the BDP-2**

| Sector  | Project Name  | Current Status                 | Estimated Cost (PhP) |
|---|---|--------------------------------|----------------------|
| <b>I Broad-based inclusive development initiative</b>             |   |                                |                      |
| Roads/Bridges   | Labor-based road rehabilitation and maintenance project         | Proposed                       | 13,680,000,000       |
| <b>II Concerted pump prime initiative</b>                         |   |                                |                      |
| <b>II-1 Artery roads upgrading project (173.3 km)</b>             |   |                                |                      |
| Roads/Bridges   | Molundo-Bumbaran-Wao Road                                       | Proposed                       | 790,000,000          |
| Roads/Bridges   | Parang– Barira–Butig–Lumbayanague Rd.                           | Proposed                       | 1,210,500,000        |
| Roads/Bridges   | Matanog–Barira–Alamada–Libungan Rd                              | For implementation by Yen Loan | 1,167,100,000        |
| Roads/Bridges   | Pagalungan–Mamasapano–Shariff Aguak Rd                          | Proposed                       | 1,719,000,000        |
| Roads/Bridges   | Biraddali–Parangan Road   | Proposed                       | 1,374,900,000        |
| Roads/Bridges   | Languyan Coastal Road   | Proposed                       | 1,187,600,000        |
| Roads/Bridges   | Kamagong Road   | Proposed                       | 168,100,000          |
| Roads/Bridges   | Seratang–Dungon Road  | Proposed                       | 342,300,000          |
| Roads/Bridges   | Lapid–Lapid–Batu–Batu Road                                      | Completed                      | 181,400,000          |
| <b>II-2 Missing links development project (82.5 km)</b>           |   |                                |                      |
| Roads/Bridges   | Parang-Balabagan Road   | For implementation by Yen Loan | 1,028,000,000        |
| Roads/Bridges   | Sta. Clara–Tumahubong–Sumisip Road                              | On-going                       | 1,482,600,000        |
| Roads/Bridges   | Kamangaan–Tumahubong–Sumisip Road                               | Proposed                       | 785,600,000          |
| <b>II-3 Ring roads/bypass roads development project (67.3 km)</b> |   |                                |                      |
| Roads/Bridges   | Marawi City Ring Road   | For implementation by Yen Loan | 836,300,000          |
| Roads/Bridges   | Parang Bypass/East Diversion Road                               | For implementation by Yen Loan | 563,400,000          |
| Roads/Bridges   | Feasibility Study on Construction of Greater Cotabato Ring Road | Proposed                       | 1,152,900,000        |
| Roads/Bridges   | Construction of Isabela Bypass Road                             | Proposed                       | 957,100,000          |
| <b>II-4 Corridor link roads improvement project (571.5 km)</b>    |   |                                |                      |
| Roads/Bridges   | Baluno–Balas Coastal Road                                       | Proposed                       | 492,900,000          |
| Roads/Bridges   | Sumagdang–Kumalarang Road                                       | Proposed                       | 199,900,000          |
| Roads/Bridges   | Kumalarang–Pangasaan Road                                       | Proposed                       | 757,900,000          |
| Roads/Bridges   | Kumalarang–Lumbang Road   | Proposed                       | 120,400,000          |
| Roads/Bridges   | Lumbang–Mahayhay Road   | Proposed                       | 682,400,000          |
| Roads/Bridges   | Kanas–Baiwas Road   | Proposed                       | 541,800,000          |

| Sector   | Project Name                              | Current Status                 | Estimated Cost (PhP) |
|--|---|--------------------------------|----------------------|
| Roads/Bridges  | Parangbasak–Guinanta Road                 | Proposed                       | 304,700,000          |
| Roads/Bridges  | Tipo-Tipo–Al Barka Circumferential Road   | Proposed                       | 255,300,000          |
| Roads/Bridges  | Kulay Bato–Tuburan Proper Road            | Proposed                       | 460,400,000          |
| Roads/Bridges  | Lamitan–Tuburan Road                      | Proposed                       | 411,900,000          |
| Roads/Bridges  | Ganassi–Tubud Road                        | Proposed                       | 288,300,000          |
| Roads/Bridges  | Madalum Road                              | Proposed                       | 188,600,000          |
| Roads/Bridges  | Marawi–Kapai Road                         | Proposed                       | 442,300,000          |
| Roads/Bridges  | Malabang–Lumba–Caunayan Road              | Proposed                       | 1,108,800,000        |
| Roads/Bridges  | Piagapo–Marantao–Balindong Road           | Proposed                       | 439,900,000          |
| Roads/Bridges  | Alip–Lumoyon Road                         | On-going                       | 1,390,300,000        |
| Roads/Bridges  | Tapian–Lebak Coastal Road                 | For implementation by Yen Loan | 331,300,000          |
| Roads/Bridges  | Makir–Sibutu Road                         | Proposed                       | 356,800,000          |
| Roads/Bridges  | Tamontaka–Tapian Road                     | Completed                      | 158,700,000          |
| Roads/Bridges  | Sibutu–Blensong–Nuro Road                 | On-going                       | 356,800,000          |
| Roads/Bridges  | Nuro–Pinansaran Road                      | On-going                       | 524,400,000          |
| Roads/Bridges  | Ligawasan Road                            | Proposed                       | 412,600,000          |
| Roads/Bridges  | Ramongaob–Pandan–Pilar–Itao San Jose Road | Proposed                       | 396,300,000          |
| <b>II-5 Bangsamoro economic corridor development project (75 km)</b> |   |                                |                      |
| Roads/Bridges  | Ganta—Libungan Road                       | Completed                      | 926,800,000          |
| Roads/Bridges  | Maganoy–Lebak Road                        | Proposed                       | 478,100,000          |
| Roads/Bridges  | Tabiran–Ganta Road                        | Completed                      | 375,800,000          |
| Roads/Bridges  | Silangkan Pob.–Indanan Road               | Completed                      | 190,700,000          |
| Roads/Bridges  | Jolo–Silangkan Road                       | Completed                      | 277,900,000          |
| Roads/Bridges  | Mampallam–Jolo Road                       | Proposed                       | 444,700,000          |
| Roads/Bridges  | Seit-Tayuagan–Camp Andres Road            | Proposed                       | 252,600,000          |
| Roads/Bridges  | Kulay Kulay–Karungdong Road               | Completed                      | 110,800,000          |
| Roads/Bridges  | Karungdong–Pitogo Road                    | On-going                       | 146,300,000          |
| Roads/Bridges  | Pitogo–Niyog Niyog Road                   | Proposed                       | 129,200,000          |
| Roads/Bridges  | Karungdong–Niyog Niyog Road               | Completed                      | 156,600,000          |
| Roads/Bridges  | Pitogo–Sucuban Road                       | Proposed                       | 225,400,000          |
| Roads/Bridges  | Camp Andres–Sucuban Road                  | Completed                      | 136,400,000          |
| Roads/Bridges  | Sucuban–Lahing Lahing Road                | Proposed                       | 156,000,000          |
| Roads/Bridges  | Tandu Batu–Lahing Lahing Road             | Proposed                       | 249,400,000          |
| Roads/Bridges  | Patao–Kabungkol Road                      | Proposed                       | 562,900,000          |
| Roads/Bridges  | Seit-Kansipat–Tandu Batu Road             | Proposed                       | 275,500,000          |
| Roads/Bridges  | Camp Andres–Lahing Lahing Road            | Completed                      | 402,200,000          |
| Roads/Bridges  | Bilaan–Panglima Estino Road               | Proposed                       | 421,100,000          |
| Roads/Bridges  | Kabungkol–Kulay–Kulay Road                | Proposed                       | 104,800,000          |
| Roads/Bridges  | Punay–Seit Road                           | Proposed                       | 59,800,000           |
| Roads/Bridges  | Parang–Talipao Road                       | Proposed                       | 234,000,000          |
| Roads/Bridges  | Taglibi–Pansol Road                       | Proposed                       | 263,300,000          |
| Roads/Bridges  | Pahut–Swangkagang                         | Proposed                       | 41,100,000           |
| <b>Airport</b>   |   |                                |                      |



| Sector                          | Project Name  | Current Status          | Estimated Cost (PhP) |
|---------------------------------|---|-------------------------|----------------------|
| Airport                         | Cotabato airport improvement project                                  | Proposed                | 2,092,637,000        |
| Airport                         | New Bangsamoro airport establishment project                          |                         |                      |
| Airport                         | Jolo Airport Development Project                                      | Proposed                | 181,182,000          |
| Airport                         | Sanga-sanga Airport Development Project                               | Proposed                | 913,868,000          |
| <b>Seaport</b>                  |   |                         |                      |
| Seaport                         | Polloc port upgrading project   | Proposed                | 3,098,479,122        |
| Seaport                         | Bongao Port Improvement Project                                       | Proposed                | 3,587,655            |
| Seaport                         | Construction of New Bongao Port in Brgy Marasa, Bongao                | Proposed                | 10,690,401           |
| Seaport                         | Jolo Port Improvement Project   | Proposed                | 20,255,218           |
| Seaport                         | Isabela Port Improvement Project                                      | Proposed                |                      |
| <b>Power</b>                    |   |                         |                      |
| Power                           | Power supply system maintenance improvement project                   | Proposed                | 235,101,263          |
| Power                           | Low-Head Hydro Power Plant Development Project (Tawi-Tawi)            | Proposed                |                      |
| Power                           | Mini hydro power development project                                  | Proposed                |                      |
| Power                           | Aquamarine farming with solar power pilot project                     | Proposed                |                      |
| Power                           | Biomass power generation project                                      | Proposed                |                      |
| <b>Water Supply</b>             |   |                         |                      |
| Water Supply                    | Small water purification/distribution project                         |                         |                      |
| <b>Study/Concept/ Promotion</b> |   |                         |                      |
| Study/Concept/Promotion         | Abubakar integrated area development project                          | Proposed                |                      |
| Study/Concept/Promotion         | Central Mindanao integrated area development project                  | Proposed                |                      |
| Study/Concept/Promotion         | Basilan integrated area development project                           | Proposed                |                      |
| Study/Concept/Promotion         | Greater Cotabato City urban infrastructure development project        | Proposed                | 216,000,000          |
| Study/Concept/Promotion         | Jolo and Bongao urban functions upgrading project                     | Proposed                |                      |
| Study/Concept/Promotion         | Urban hierarchy establishment project                                 | Proposed                |                      |
| Study/Concept/Promotion         | Polloc freeport and ecozone development project                       | Proposed                | 270,000,000          |
| Study/Concept/Promotion         | Special employment zone development project                           | Proposed                | 216,000,000          |
| Study/Concept/Promotion         | Abaca industrial cluster development project                          | Proposed                | 131,000,000          |
| Study/Concept/Promotion         | Rubber industrial cluster development project                         | Proposed                |                      |
| Study/Concept/Promotion         | Bangsamoro disaster risk reduction and management project             | Proposed                | 162,000,000          |
| Study/Concept/Promotion         | Comprehensive Study on Flood Control for Mindanao River Basin         | Proposed                | 216,000,000          |
| Study/Concept/Promotion         | Rio Grande de Mindanao and Tamontaka River Flood Control System       | Proposed for China asst | 5,186,000,000        |
| Study/Concept/Promotion         | Buluan River Flood Control System                                     | Proposed                | 1,288,000,000        |
| Study/Concept/Promotion         | Pulangi River Flood Control System including Repair of Tunggol Bridge | On-going                | 673,000,000          |
| Study/Concept/Promotion         | Ambal Simuay River Flood Control System                               | Proposed for China asst | 1,634,000,000        |
| Study/Concept/Promotion         | Ala River Flood Control System  | On-going                | 743,000,000          |
| Study/Concept/Promotion         | Mindanao River Basin Flood Forecasting and Warning System             | Proposed                |                      |

| Sector                        | Project Name   | Current Status | Estimated Cost (PhP) |
|-------------------------------|--|----------------|----------------------|
| Study/Concept/Promotion       | Mindanao River Basin Urgent Flood and Sediment Control Project                                   | Proposed       |                      |
| <b>Agriculture/Fishery</b>    |  |                |                      |
| Agriculture/Fishery           | Agrarian reform communities strengthening project  | Proposed       |                      |
| Agriculture/Fishery           | Agricultural cooperatives empowerment project  | Proposed       | US\$16.533 M         |
| Agriculture/Fishery           | Coco products industrial development project   | Proposed       | 162,000,000          |
| Agriculture/Fishery           | Coffee industrial cluster development project  | Proposed       |                      |
| Agriculture/Fishery           | Goat-based integrated farming project  | Proposed       |                      |
| Agriculture/Fishery           | Poultry-based integrated farming project   | Proposed       |                      |
| Agriculture/Fishery           | Plantation crops mixed farming project   | Proposed       |                      |
| Agriculture/Fishery           | Mixed field crops farming project  | Proposed       |                      |
| Agriculture/Fishery           | Open pollinated seed production center establishment project                                     | Proposed       | 82,000,000           |
| Agriculture/Fishery           | Halal industry promotion project   | Proposed       | 300,000,000          |
| Agriculture/Fishery           | Organic agriculture promotion project  | Proposed       |                      |
| Agriculture/Fishery           | Open market development project  | Proposed       |                      |
| Agriculture/Fishery           | Cold chain facilities installation project   | Proposed       | 680,000,000          |
| Agriculture/Fishery           | Solar powered fish market development project  | Proposed       | 310,000,000          |
| Agriculture/Fishery           | Fresh water aquaculture development project  | Proposed       | 590,000,000          |
| Agriculture/Fishery           | Marine aquaculture development project   | Proposed       | 750,000,000          |
| Agriculture/Fishery           | Seaweed culture development project  | Proposed       | 650,000,000          |
| Agriculture/Fishery           | Small scale irrigated crop intensification project   | Proposed       |                      |
| Agriculture/Fishery           | Multi-purpose small scale irrigation development project   | Proposed       |                      |
| Agriculture/Fishery           | IP Village Agriculture/Agro-Processing Project   | Proposed       | 72,000,000           |
| Agriculture/Fishery           | Livestock Breeding and Dispersal Program   | Proposed       |                      |
| <b>Environment/Sanitation</b> |  |                |                      |
| Environment/Sanitation        | Efficient waste collection and recycling project   | Proposed       | 19,000,000           |
| Environment/Sanitation        | National Greening program enhancement project  | Proposed       | 71,400,000           |
| Environment/Sanitation        | Bamboo planting project  | Proposed       | 16,000,000           |
| Environment/Sanitation        | Dimapatoy watershed management project   | Proposed       | 74,000,000           |
| Environment/Sanitation        | Non-wood forest products research project  | Proposed       | 2,000,000            |
| Environment/Sanitation        | Community-based forest management project  | Proposed       | 2,000,000            |
| Environment/Sanitation        | Community-based coastal resources management project   | Proposed       | 300,000,000          |
| Environment/Sanitation        | Marine surveyance strengthening project  | Proposed       | 260,000,000          |
| <b>Tourism and others</b>     |  |                |                      |
| Tourism and others            | Agricultural finance expansion project   | Proposed       |                      |
| Tourism and others            | Diet improvement campaign in rural areas project   | Proposed       |                      |
| Tourism and others            | Facilitation of communications between the Bangsamoro government, LGUs, and local people project | Proposed       |                      |
| Tourism and others            | Participatory development planning and implementation project                                    | Proposed       |                      |
| Tourism and others            | Comprehensive SMEs support measures project  | Proposed       |                      |
| Tourism and others            | Halal industry promotion project   | Proposed       |                      |

| Sector             | Project Name  | Current Status | Estimated Cost (PhP) |
|--------------------|---|----------------|----------------------|
| Tourism and others | Establishment of quality standards and criteria for export products project | Proposed       |                      |
| Tourism and others | Bangsamoro investment window project  | Proposed       |                      |
| Tourism and others | Development of regulatory framework of Islamic finance project              | Proposed       |                      |
| Tourism and others | Strengthening judicial system for land issues project                       | Proposed       |                      |
| Tourism and others | Plantation development overseeing institution project                       | Proposed       |                      |
| Tourism and others | Peace-building support strategy   | Proposed       |                      |
| <b>Irrigation</b>  |   |                |                      |
| Irrigation         | Bangsamoro national irrigation systems improvement project                  | Proposed       |                      |
| Irrigation         | Communal irrigation systems (CIS) support project                           | Proposed       |                      |
| Irrigation         | Small scale irrigated crop intensification project                          | Proposed       |                      |
| Irrigation         | Multi-purpose small scale irrigation development project                    | Proposed       |                      |

Note 1: Status is confirmed through interview with DPWH-ARMM officials

Note 2: Proposed = proposed project by the BDP-II (i.e. project identified in the BDP-II and yet to be implemented)

Note 3: For Implementation by Yen Loan = part of the Road Network Development Plan for Conflict-affected Areas in Mindanao which will be funded thru Yen Loan from Japan

Note 4: Some projects identified in the Plan lacks indicative cost hence the blank cell in the table

### 3.3 JICA's Activities in Infrastructure Development in the Bangsamoro

JICA has been assisting the Bangsamoro region long before the final peace agreement was signed in 2014. Its comprehensive assistance covers economic development, community development, governance and contribution to attaining peace in the area as shown in Figure 3.2-1. Recently, JICA is implementing the following projects in Bangsamoro Region:

- a. The Programme for the Support for Rehabilitation and Reconstruction of Marawi City and its Surrounding Areas (2018)

This Yen 2 Billion (roughly PhP 948 Million) Programme Support aims to support rehabilitation and reconstruction of Marawi City and its Surrounding Areas through infrastructure projects identified under the CRRP (Comprehensive Rehabilitation and Recovery Plan).

- b. The Road Network Development Project in in Conflict-Affected Areas in Mindanao (2017)

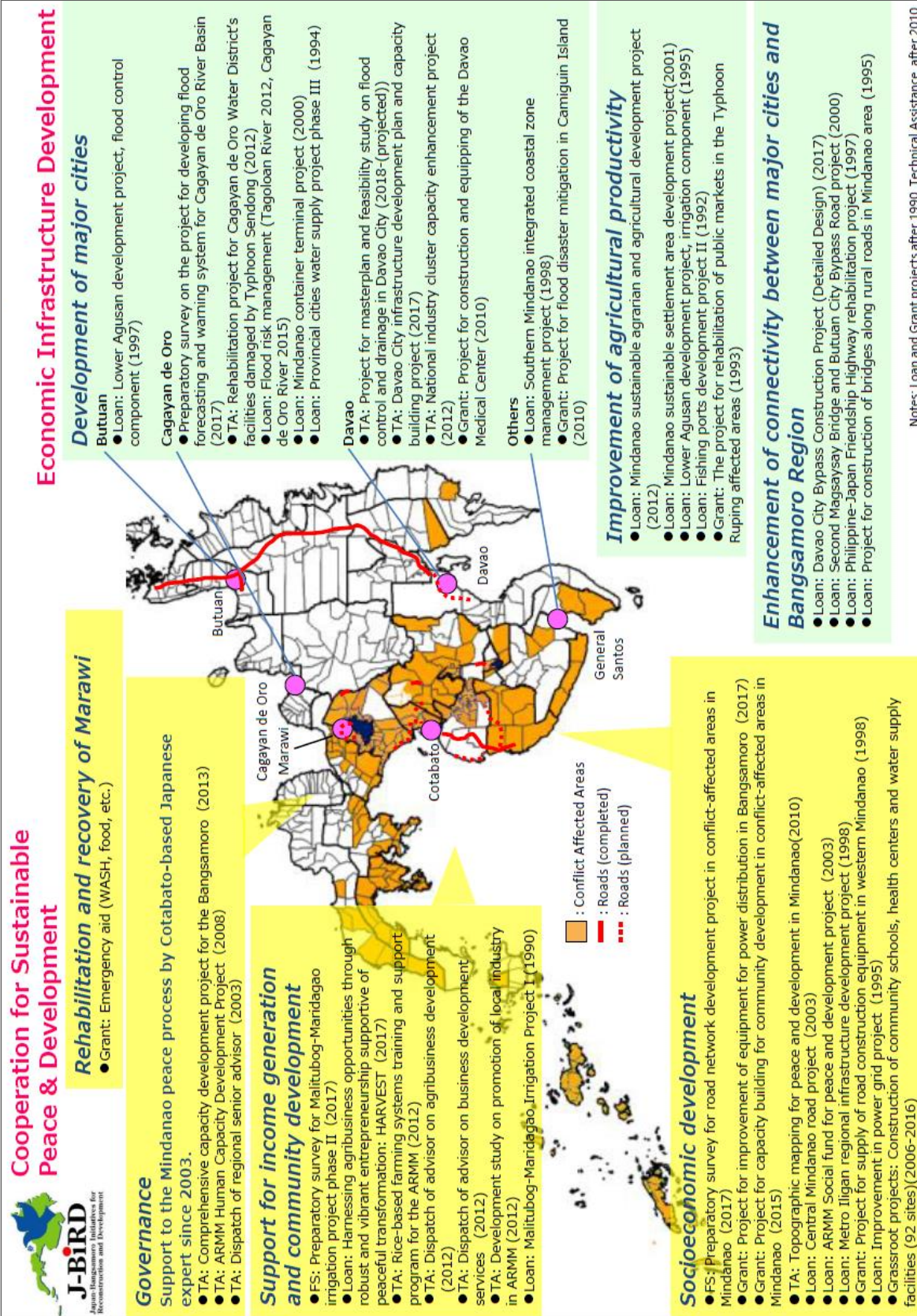
This Study covered six (6) sub-project roads with a total length of about 150 km all located in the Bangsamoro. The objective is to expand the transportation network in the Bangsamoro which lagged by about 800km of road supply compared with other regions in Mindanao. By enhancing the reach of the network, access to markets and social services of the communities in the conflict-affected areas will substantially improve.

- c. The Project for Improvement of Equipment for Power Distribution in Bangsamoro Area (2017)

This Yen 771 Million Grant Aid Project involves provision of power distribution equipment for six (6) electric cooperatives that distribute power in the Bangsamoro region. The project will improve the power distribution grid, which is expected to increase the possible power transmission capacity by approximately 1.4 times while reducing the power distribution loss, the length of power outages and other such problems.

d. The Project for Community Development in Conflict-affected Areas in Mindanao (2015)

This Grant Aid Project involves construction of three (3) farm-to-market roads with a total length of about 22 km and located in the Municipalities of Bumbaran, Alamada and Datu Paglas. These roads contribute in improving the living standards of the communities within the influence area and promotes agricultural development.



Source: Homepage of the Ministry of Foreign Affairs of Japan (<https://www.mofa.go.jp/files/000303423.pdf>) accessed on December 2018

Figure 3.3-1 JICA's Activities in Bangsamoro and Mindanao

### 3.4 Other Donors' Activities in the Bangsamoro

There are other donors active in the Bangsamoro which provide support to the different needs of the region. As far as support to infrastructure is concerned, the following are the majors:

#### a. ADB's Emergency Assistance for Reconstruction and Recovery of Marawi City

The USD 408 Million loan includes a USD 300 Million quick disbursing loan to finance selected programs, projects, and activities under the government's Bangon Marawi Comprehensive Rehabilitation and Recovery Program covering local governance and peacebuilding, housing and settlement, business and livelihood, and social services. A second loan of \$100 million will finance the reconstruction and rehabilitation of damaged infrastructure in the city, including about 25 kilometers of roads and 1,700 meters of bridges and viaducts.

#### b. ADB's Improving Growth Corridors in Mindanao Road Sector Project

Although majority of the sub-projects are located in Zamboanga Peninsula, three sub-project bridges are located in Tawi-tawi Province of the ARMM. This project will be funded through the USD 380 Million loan from the ADB. The three bridges have a total length of 775 lineal meters and currently in detailed design stage.

#### c. World Bank's Mindanao Trust Fund - II

This project started in April 2018 and will end by April 2019. The project has two components which are: (i) Socio-economic infrastructure and (ii) alternative learning center. The target areas for implementation are the six (6) acknowledged major MILF camps spread in Lanao del Sur, Lanao del Norte, North Cotabato, and Maguindanao. Some of the socio-economic infrastructure includes farm-to-market roads, solar dryers, water systems (level 2), post-harvest facilities among others.

#### d. World Bank's Philippine Rural Development Projects (PRDP)

This project which started in 2014 and will close by 2021 targets farm-to-market roads and other community facilities like warehouses and dryers to increase rural incomes and enhance farm and fishery productivity in the targeted areas.

**Table 3.4-1 Example Project in the ARMM under PRDP**

| Sector              | Project Name  | Location                   | Project Outline      | Current Status | Cost (PhP M) |
|---------------------|---|----------------------------|----------------------|----------------|--------------|
| Roads/Bridges       | Concreting of Baluno Panunsulan-Calvario FMR (8.100 km)   | Isabela City, Basilan      | Concreting of road   | Proposed       | 151.12       |
| Roads/Bridges       | Concreting of Brgy. Parian Kayaw Pait Rugasan Kutah Parang Mantang Farm to Market Road (8.360 km) | Lugus, Sulu                | Concreting of road   | Proposed       | 134.99       |
| Roads/Bridges       | Concreting of Saldang-Katipunan FMR (4.200 km)  | Panglima Sugala, Tawi-tawi | Concreting of road   | Proposed       | 42.45        |
| Roads/Bridges       | Concreting of Samberen-Gadungan-Cabuan FMR  | Parang, Maguindanao        | Concreting of road   | Proposed       | 68.39        |
| Roads/Bridges       | Concreting of Barangay Pantar (3.800 km)  | Piagapo, Lanao del Sur     | Concreting of road   | Proposed       | 50.14        |
| Seaport             | Construction of Lahad Dampong Fish Landing (300.000 sq.m)   | South Ubian, Tawi-tawi     | Construction of port | Under Review   | 6.00         |
| Agriculture/Fishery | Goat Multiplication, Fattening and Marketing  | Buluan, Maguindanao        | Goat Multiplication  | On-going       | 2.80         |

## Chapter 4 Draft Unified Bangsamoro Development Plan (2019-2022)

### 4.1 Consolidation of Various Development Plans for Bangsamoro

#### 4.1.1 Procedure in Consolidation of Various Development Plans

Consolidation and integration of various development plans prepared by different entities for Bangsamoro were reviewed. Projects, Programs and Activities (PPAs) identified in these Plans are collected and integrated. The level of details of the PPAs are in varying degrees owing to the fact that each Plan was prepared by different entity. Upon review of the PPA list, it was realized that providing details of each project to reach the level of details of Public Investment Program (PIP) format by the NEDA was not achievable. Hence it was decided that a table format that resemble as close as possible to the Public Investment Program (PIP) format by the NEDA will be prepared.

Similarly, a Key Informant Interview (KII) was undertaken to several key stakeholders in Bangsamoro from Dec. 3 to 14, 2018 as shown in Table 4.1-1. The intention was to gather important projects from the perspective of these stakeholders which are not captured by the reviewed Plans. Likewise, this process gave an idea what sectors and what projects they think are urgently needed to implement by the coming government.

**Table 4.1-1 List of Reviewed Plans and Entities Subjected for KII**

| List of Development Plans  | Note  |
|--|---|
| <ol style="list-style-type: none"> <li>1. Bangsamoro Development Plan 1</li> <li>2. Bangsamoro Development Plan 2</li> <li>3. ARMM-Regional Development Plan (2017-2022)</li> <li>4. MNLF Development Framework for the Bangsamoro</li> <li>5. MILF List of Projects in the Six Camps</li> <li>6. OPAPP List of Projects for Conflict-affected Areas and ARMM</li> <li>7. Lanao del Sur Provincial Development Plan</li> <li>8. Maguindanao Provincial Development Plan</li> <li>9. Basilan Provincial Development Plan</li> <li>10. Sulu Provincial Development Plan</li> <li>11. Tawi-tawi Provincial Development Plan</li> <li>12. North Cotabato Provincial Development Plan + Municipal Development Plan of the 6 municipalities where the 63 barangays are located</li> <li>13. Cotabato City Development Plan</li> <li>14. Marawi City's Comprehensive Rehabilitation and Recovery Program</li> </ol> | <p>For Provincial Development Plan (PDP), some provinces do not possess updated PDP. In this case, they were requested to submit their list of priority projects. This list is included in the consolidated list.</p> |
| List of Entity Subjected for Key Informant Interview (KII)   |   |
| <ol style="list-style-type: none"> <li>1. Cotabato City Government Officials</li> <li>2. DPWH-ARMM Officials</li> <li>3. TESDA-ARMM Officials</li> <li>4. Metro Cotabato Water District Officials</li> <li>5. Cotabato Regional and Medical center Officials</li> <li>6. Center for Humanitarian Dialogue's Focal Person</li> <li>7. WB's Mindanao Trust Fund-2 Official</li> <li>8. DPWH-12 Cotabato City District Officials</li> <li>9. MNLF's Focal Person</li> <li>10. BDA Officials</li> <li>11. MILF Officials</li> <li>12. DWPH-Central Office Officials</li> <li>13. TESDA-Central Office Official</li> </ol>  |   |

Likewise, the JICA Study Team collaborated with the Bangsamoro Development Planning Team (BDPT) which is tasked by the Central Committees of MILF and MNLF to prepare a Unified Bangsamoro Development Plan (UBDP). BDPT is composed of planners from MILF and MNLF and assisted by the Center for Humanitarian Dialogue (CHD). Between December 4-6, both planning leaders of MILF and MNLF including the Focal Person of the CHD were met by the JICA Study Team to explore possible areas of collaboration. Another meeting took place in January 15, 2019 in Davao



City where areas of collaboration is further clarified. While the BDPT will prepare the upper level of the UBDP (i.e. background, rationale, goal and objectives, strategies), the JICA Study Team will come up with the PPAs that are based on the PIP of NEDA.

#### 4.1.2 Consolidated List of Various Development Plans

The consolidated list contains 6,067 PPAs with a cost of about PhP 397 Billion and available in Attachment 1. The list is then further standardized and structured into Short-term (2019), Medium-term (2020-2022) and Long-term (2023-beyond). The above structure took into account the duration of the incoming Bangsamoro Transition Authority (BTA) which is expected to serve from 2019 to 2022.

### 4.2 Draft Unified Bangsamoro Development Plan

#### 4.2.1 Budget Estimate for Infrastructure Development

##### a. Estimated Infrastructure Budget of BARMM

The consolidate list in Section 4.1 includes all the projects identified in the different plans. Not all the projects can be implemented in the 3-years Transition Period due to budget ceiling and the project list is simply too many. In the preparation of the Unified Bangsamoro Development Plan (UBDP), projects are prioritized and available budget envelope of the BARMM were taken into account.

In accordance with Republic Act No. 11054 which is known as the Bangsamoro Organic Law, the Bangsamoro Autonomous Region in Muslim Mindanao is allocated two (2) types of national budget, namely Special Development Fund (SDF) and Block Grant (BG):

SDF : 5 Billion Php per year for 10 years

BG : 5% of the net national internal revenue tax collection of the Bureau of Internal Revenue and the net collection of customs of the Bureau of Customs. According to the Department of Budget and Management (DBM), Block Grant will be about 72 to 80 Billion Php. In this project, it is assumed that BG will be 75 Billion Php in Year 2019. BG will be used for 1) Personnel Services (PS), 2) Maintenance and Other Operating Expenses (MOOE), and 3) Capital Outlay (CO). It is assumed under this Study that 40% to 50% of BG will be allocated to the infrastructure development.

Total Budget to be allocated to Infrastructure Development

|                                |                                     |
|--------------------------------|-------------------------------------|
| SDF (Special Development Fund) | : 5 Billion Php per year            |
| BG (Block Grant)               | : 30 ~ 37.5 Billion Php (Year 2019) |
| <b>Total</b>                   | <b>35 ~ 42.5 Billion Php</b>        |

It is assumed that total budget for infrastructure development will be 40 Billion Php for Year 2019. It is also assumed that infrastructure development budget from BG will increase by 5% annually. Annual infrastructure development budget from 2019 to 2022 is assumed as shown in in Table 4.2-1.

**Table 4.2-1 Estimated Infrastructure Budget: 2019 – 2022**

Unit: Billion Php

| Budget Source                  | 2019        | 2020        | 2021        | 2022        |
|--------------------------------|-------------|-------------|-------------|-------------|
| SDF (Special Development Fund) | 5.0         | 5.0         | 5.0         | 5.0         |
| BG (Block Grant)               | 35.0        | 36.7        | 38.6        | 40.5        |
| <b>Total</b>                   | <b>40.0</b> | <b>41.7</b> | <b>43.6</b> | <b>45.5</b> |

Source: Estimate of JICA Study Team

##### b. Budget Allocation to Each Infrastructure Sector

Project lists from different development plans for Bangsamoro were consolidated and presented in Attachment 1, which can be understood as the infrastructure development needs of BARMM. It is assumed that the infrastructure development budget estimated in Section 4.2-1 will be allocated to each “infrastructure sector” in accordance with the “needs”. Proposed budget allocation ration to each infrastructure sector is estimated as shown in Table 4.2-2.



**Table 4.2-2 Proposed Budget Allocation Ratio to Each Infrastructure Sector**

| Sector                                  | Total Project Needs |                           | Percentage  | Proposed Budget Allocation to each sector | Allocated Budget to each sector (Year 2019) |
|---|---------------------|---------------------------|-------------|---|---|
|   | No. of Projects     | Cost                      |             |   |   |
| Roads/Bridges                           | 3,431               | 208,258,745,028.98        | 61.05%      | 60.00%                                    | 24,000.00                                   |
| Airport                                 | 20                  | 5,179,087,000.00          | 1.52%       | 1.50%                                     | 600.00                                      |
| Port                                    | 396                 | 14,288,912,396.00         | 4.19%       | 4.30%                                     | 1,720.00                                    |
| Railway                                 | 1                   | -                         | 0.00%       | 0.00%                                     | -   |
| Water Supply                            | 812                 | 8,102,864,856.00          | 2.38%       | 2.50%                                     | 1,000.00                                    |
| Waste Management                        | 18                  | 1,319,280,000.00          | 0.39%       | 0.40%                                     | 160.00                                      |
| Health                                  | 197                 | 52,990,455,182.95         | 15.53%      | 15.60%                                    | 6,240.00                                    |
| Education                               | 184                 | 13,639,673,484.07         | 4.00%       | 4.60%                                     | 1,840.00                                    |
| Agriculture/Fishery                     | 196                 | 15,729,466,089.00         | 4.61%       | 4.70%                                     | 1,880.00                                    |
| Drainage/Flood Control/Slope Protection | 480                 | 9,631,753,742.00          | 2.82%       | 3.00%                                     | 1,200.00                                    |
| Environment and Sanitation              | 38                  | 1,517,634,947.04          | 0.44%       | 0.50%                                     | 200.00                                      |
| Tourism                                 | 41                  | 6,550,760,000.00          | 1.92%       | 1.90%                                     | 760.00                                      |
| Livelihood                              | 94                  | 1,492,543,038.00          | 0.44%       | 0.50%                                     | 200.00                                      |
| Project Preparation Studies             | 60                  | 2,415,150,000.00          | 0.71%       | 0.50%                                     | 200.00                                      |
| <b>Total</b>                            | <b>5,968</b>        | <b>341,116,325,764.04</b> | <b>100%</b> | <b>100%</b>                               | <b>40,000.00</b>                            |

Source: JICA Study Team

### c. Areal Allocation of Infrastructure Development Budget

Areal allocation of infrastructure development budget is proposed to be determined in consideration of land area and population as shown in Table 4.2-3. Lanao del Sur Province has the highest share of the budget (32.7%) and closely followed by Maguindanao Province (28.2%). The 63 barangays which newly joined the BARMM has a share of 2.5% of the 2019 budget which translate to Php 983 Million.

**Table 4.2-3 Areal Allocation of Infrastructure Development Budget for Fiscal Year 2019**

2019 Infrastructure Budget = Php 40 Billion

| Province/City                    | Land Area (sq. km) |             | Population       |             | Square Root of (Land Area x Population) |             | Areal Budget Allocation in 2019 (Million Php) |
|----------------------------------|--------------------|-------------|------------------|-------------|---|-------------|---|
|                                  | Area               | %           | Pop              | %           | Area x Pop                              | %           |   |
| Maguindanao                      | 9,968.31           | 26.7%       | 1,173,933        | 27.5%       | 108,176                                 | 28.2%       | 11,274  |
| Cotabato City                    | 176.00             | 0.5%        | 299,438          | 7.0%        | 7,260                                   | 1.9%        | 757   |
| Lanao del Sur                    | 15,055.51          | 40.4%       | 1,045,429        | 24.5%       | 125,457                                 | 32.7%       | 13,075  |
| Basilan (excluding Isabela City) | 3,453.42           | 9.3%        | 346,579          | 8.1%        | 34,596                                  | 9.0%        | 3,606   |
| Sulu                             | 4,547.16           | 12.2%       | 824,731          | 19.3%       | 61,239                                  | 16.0%       | 6,382   |
| Tawi Tawi                        | 3,626.55           | 9.7%        | 390,715          | 9.1%        | 37,642                                  | 9.8%        | 3,923   |
| North Cotabato (63 barangays)    | 462.72             | 1.2%        | 192,324          | 4.5%        | 9,434                                   | 2.5%        | 983   |
| <b>Total</b>                     | <b>37,289.67</b>   | <b>100%</b> | <b>4,273,149</b> | <b>100%</b> | <b>383,804</b>                          | <b>100%</b> | <b>40,000</b>                                 |

Source: JICA Study Team

### d. Budget Allocation to Province/City by Infrastructure Sector

Based on the process discussed in Sections 4.2-1, budget allocation in 2019 fiscal year to Province/City by infrastructure sector is estimated as shown in Table 4.2-4. Budget allocations for fiscal year 2020, 2021 and 2022 are presented in Table 4.2-5, Table 4.2-6 and Table 4.2-7 respectively.

**Table 4.2-4 Budget Allocation to Province/City by Infrastructure Sector for Fiscal Year 2019**

Unit: Million Php

| Sector                                    | Proposed Budget Allocation to each sector (Note-1) | Budget Allocation to Provinces by Sector (Year 2019) |               |               |                                  |          |           |                               |           |
|---|--|--|---------------|---------------|----------------------------------|----------|-----------|-------------------------------|-----------|
|   |  | Maguin-danao   | Cotabato City | Lanao del Sur | Basilan (excluding Isabela City) | Sulu     | Tawi Tawi | North Cotabato (63 barangays) | Total     |
|   |  | 11,274   | 757           | 13,075        | 3,606                            | 6,382    | 3,923     | 983                           | 40,000    |
| Roads/Bridges                             | 60.00%   | 6,764.48   | 453.95        | 7,845.08      | 2,163.36                         | 3,829.38 | 2,353.85  | 589.90                        | 24,000.00 |
| Airport                                   | 1.50%  | 169.11   | 11.35         | 196.13        | 54.08                            | 95.73    | 58.85     | 14.75                         | 600.00    |
| Port                                      | 4.30%  | 484.79   | 32.53         | 562.23        | 155.04                           | 274.44   | 168.69    | 42.28                         | 1,720.00  |
| Railway                                   | 0.00%  | -  | -             | -             | -                                | -        | -         | -                             | -         |
| Water Supply                              | 2.50%  | 281.85   | 18.91         | 326.88        | 90.14                            | 159.56   | 98.08     | 24.58                         | 1,000.00  |
| Waste Management                          | 0.40%  | 45.10  | 3.03          | 52.30         | 14.42                            | 25.53    | 15.69     | 3.93                          | 160.00    |
| Health                                    | 15.60%   | 1,758.77   | 118.03        | 2,039.72      | 562.47                           | 995.64   | 612.00    | 153.37                        | 6,240.00  |
| Education                                 | 4.60%  | 518.61   | 34.80         | 601.46        | 165.86                           | 293.59   | 180.46    | 45.23                         | 1,840.00  |
| Agriculture/ Fishery                      | 4.70%  | 529.88   | 35.56         | 614.53        | 169.46                           | 299.97   | 184.39    | 46.21                         | 1,880.00  |
| Drainage/ Flood Control/ Slope Protection | 3.00%  | 338.22   | 22.70         | 392.25        | 108.17                           | 191.47   | 117.69    | 29.49                         | 1,200.00  |
| Environment and Sanitation                | 0.50%  | 56.37  | 3.78          | 65.38         | 18.03                            | 31.91    | 19.62     | 4.92                          | 200.00    |
| Tourism                                   | 1.90%  | 214.21   | 14.38         | 248.43        | 68.51                            | 121.26   | 74.54     | 18.68                         | 760.00    |
| Livelihood                                | 0.50%  | 56.37  | 3.78          | 65.38         | 18.03                            | 31.91    | 19.62     | 4.92                          | 200.00    |
| Project Preparation Studies               | 0.50%  | 56.37  | 3.78          | 65.38         | 18.03                            | 31.91    | 19.62     | 4.92                          | 200.00    |

Note-1: % Share based on project needs. See Table 4.2-2

Source: JICA Study Team

**Table 4.2-5 Budget Allocation to Province/City by Infrastructure Sector for Fiscal Year 2020**

Unit: Million Php

| Sector                                    | Proposed Budget Allocation to each sector (Note-1) | Budget Allocation to Provinces by Sector (Year 20120) |               |               |                                  |          |           |                               |           |
|---|--|---|---------------|---------------|----------------------------------|----------|-----------|-------------------------------|-----------|
|   |  | Maguin-danao  | Cotabato City | Lanao del Sur | Basilan (excluding Isabela City) | Sulu     | Tawi Tawi | North Cotabato (63 barangays) | Total     |
|   |  | 11,767  | 790           | 13,647        | 3,763                            | 6,662    | 4,095     | 1,026                         | 41,750    |
| Roads/Bridges                             | 60.00%   | 7,060.43  | 473.81        | 8,188.30      | 2,258.00                         | 3,996.92 | 2,456.83  | 615.71                        | 25,050.00 |
| Airport                                   | 1.50%  | 176.51  | 11.85         | 204.71        | 56.45                            | 99.92    | 61.42     | 15.39                         | 626.25    |
| Port                                      | 4.30%  | 506.00  | 33.96         | 586.83        | 161.82                           | 286.45   | 176.07    | 44.13                         | 1,795.25  |
| Railway                                   | 0.00%  | -   | -             | -             | -                                | -        | -         | -                             | -         |
| Water Supply                              | 2.50%  | 294.18  | 19.74         | 341.18        | 94.08                            | 166.54   | 102.37    | 25.65                         | 1,043.75  |
| Waste Management                          | 0.40%  | 47.07   | 3.16          | 54.59         | 15.05                            | 26.65    | 16.38     | 4.10                          | 167.00    |
| Health                                    | 15.60%   | 1,835.71  | 123.19        | 2,128.96      | 587.08                           | 1,039.20 | 638.78    | 160.08                        | 6,513.00  |
| Education                                 | 4.60%  | 541.30  | 36.33         | 627.77        | 173.11                           | 306.43   | 188.36    | 47.20                         | 1,920.50  |
| Agriculture/ Fishery                      | 4.70%  | 553.07  | 37.12         | 641.42        | 176.88                           | 313.09   | 192.45    | 48.23                         | 1,962.25  |
| Drainage/ Flood Control/ Slope Protection | 3.00%  | 353.02  | 23.69         | 409.41        | 112.90                           | 199.85   | 122.84    | 30.79                         | 1,252.50  |
| Environment and Sanitation                | 0.50%  | 58.84   | 3.95          | 68.24         | 18.82                            | 33.31    | 20.47     | 5.13                          | 208.75    |
| Tourism                                   | 1.90%  | 223.58  | 15.00         | 259.30        | 71.50                            | 126.57   | 77.80     | 19.50                         | 793.25    |
| Livelihood                                | 0.50%  | 58.84   | 3.95          | 68.24         | 18.82                            | 33.31    | 20.47     | 5.13                          | 208.75    |
| Project Preparation Studies               | 0.50%  | 58.84   | 3.95          | 68.24         | 18.82                            | 33.31    | 20.47     | 5.13                          | 208.75    |

Note-1: % Share based on project needs. See Table 4.2-2

Source: JICA Study Team

**Table 4.2-6 Budget Allocation to Province/City by Infrastructure Sector for Fiscal Year 2021**

Unit: Million Php

| Sector                                    | Proposed Budget Allocation to each sector (Note-1) | Budget Allocation to Provinces by Sector (Year 20121) |               |               |                                  |          |           |                               |           |
|---|--|---|---------------|---------------|----------------------------------|----------|-----------|-------------------------------|-----------|
|   |  | Maguin-danao  | Cotabato City | Lanao del Sur | Basilan (excluding Isabela City) | Sulu     | Tawi Tawi | North Cotabato (63 barangays) | Total     |
|   |  | 12,285  | 824           | 14,248        | 3,929                            | 6,955    | 4,275     | 1,071                         | 43,588    |
| Roads/Bridges                             | 60.00%   | 7,371.17  | 494.67        | 8,548.68      | 2,357.38                         | 4,172.83 | 2,564.96  | 642.81                        | 26,152.50 |
| Airport                                   | 1.50%  | 184.28  | 12.37         | 213.72        | 58.93                            | 104.32   | 64.12     | 16.07                         | 653.81    |
| Port                                      | 4.30%  | 528.27  | 35.45         | 612.66        | 168.95                           | 299.05   | 183.82    | 46.07                         | 1,874.26  |
| Railway                                   | 0.00%  | -   | -             | -             | -                                | -        | -         | -                             | -         |
| Water Supply                              | 2.50%  | 307.13  | 20.61         | 356.20        | 98.22                            | 173.87   | 106.87    | 26.78                         | 1,089.69  |
| Waste Management                          | 0.40%  | 49.14   | 3.30          | 56.99         | 15.72                            | 27.82    | 17.10     | 4.29                          | 174.35    |
| Health                                    | 15.60%   | 1,916.50  | 128.61        | 2,222.66      | 612.92                           | 1,084.94 | 666.89    | 167.13                        | 6,799.65  |
| Education                                 | 4.60%  | 565.12  | 37.92         | 655.40        | 180.73                           | 319.92   | 196.65    | 49.28                         | 2,005.03  |
| Agriculture/ Fishery                      | 4.70%  | 577.41  | 38.75         | 669.65        | 184.66                           | 326.87   | 200.92    | 50.35                         | 2,048.61  |
| Drainage/ Flood Control/ Slope Protection | 3.00%  | 368.56  | 24.73         | 427.43        | 117.87                           | 208.64   | 128.25    | 32.14                         | 1,307.63  |
| Environment and Sanitation                | 0.50%  | 61.43   | 4.12          | 71.24         | 19.64                            | 34.77    | 21.37     | 5.36                          | 217.94    |
| Tourism                                   | 1.90%  | 233.42  | 15.66         | 270.71        | 74.65                            | 132.14   | 81.22     | 20.36                         | 828.16    |
| Livelihood                                | 0.50%  | 61.43   | 4.12          | 71.24         | 19.64                            | 34.77    | 21.37     | 5.36                          | 217.94    |
| Project Preparation Studies               | 0.50%  | 61.43   | 4.12          | 71.24         | 19.64                            | 34.77    | 21.37     | 5.36                          | 217.94    |

Note-1: % Share based on project needs. See Table 4.2-2

Source: JICA Study Team

**Table 4.2-7 Budget Allocation to Province/City by Infrastructure Sector for Fiscal Year 2022**

Unit: Million Php

| Sector                                    | Proposed Budget Allocation to each sector (Note-1) | Budget Allocation to Provinces by Sector (Year 20122) |               |               |                                  |          |           |                               |           |
|---|--|---|---------------|---------------|----------------------------------|----------|-----------|-------------------------------|-----------|
|   |  | Maguin-danao  | Cotabato City | Lanao del Sur | Basilan (excluding Isabela City) | Sulu     | Tawi Tawi | North Cotabato (63 barangays) | Total     |
|   |  | 12,829  | 861           | 14,878        | 4,103                            | 7,263    | 4,464     | 1,119                         | 45,517    |
| Roads/Bridges                             | 60.00%   | 7,697.45  | 516.56        | 8,927.08      | 2,461.73                         | 4,357.54 | 2,678.50  | 671.26                        | 27,310.13 |
| Airport                                   | 1.50%  | 192.44  | 12.91         | 223.18        | 61.54                            | 108.94   | 66.96     | 16.78                         | 682.75    |
| Port                                      | 4.30%  | 551.65  | 37.02         | 639.77        | 176.42                           | 312.29   | 191.96    | 48.11                         | 1,957.23  |
| Railway                                   | 0.00%  | -   | -             | -             | -                                | -        | -         | -                             | -         |
| Water Supply                              | 2.50%  | 320.73  | 21.52         | 371.96        | 102.57                           | 181.56   | 111.60    | 27.97                         | 1,137.92  |
| Waste Management                          | 0.40%  | 51.32   | 3.44          | 59.51         | 16.41                            | 29.05    | 17.86     | 4.48                          | 182.07    |
| Health                                    | 15.60%   | 2,001.34  | 134.31        | 2,321.04      | 640.05                           | 1,132.96 | 696.41    | 174.53                        | 7,100.63  |
| Education                                 | 4.60%  | 590.14  | 39.60         | 684.41        | 188.73                           | 334.08   | 205.35    | 51.46                         | 2,093.78  |
| Agriculture/ Fishery                      | 4.70%  | 602.97  | 40.46         | 699.29        | 192.84                           | 341.34   | 209.82    | 52.58                         | 2,139.29  |
| Drainage/ Flood Control/ Slope Protection | 3.00%  | 384.87  | 25.83         | 446.35        | 123.09                           | 217.88   | 133.92    | 33.56                         | 1,365.51  |
| Environment and Sanitation                | 0.50%  | 64.15   | 4.30          | 74.39         | 20.51                            | 36.31    | 22.32     | 5.59                          | 227.58    |
| Tourism                                   | 1.90%  | 243.75  | 16.36         | 282.69        | 77.95                            | 137.99   | 84.82     | 21.26                         | 864.82    |
| Livelihood                                | 0.50%  | 64.15   | 4.30          | 74.39         | 20.51                            | 36.31    | 22.32     | 5.59                          | 227.58    |
| Project Preparation Studies               | 0.50%  | 64.15   | 4.30          | 74.39         | 20.51                            | 36.31    | 22.32     | 5.59                          | 227.58    |

Note-1: % Share based on project needs. See Table 4.2-2

Source: JICA Study Team

## 4.2.2 Format of the Draft Unified Bangsamoro Development Plan

The format of the Draft Unified Bangsamoro Development Plan (2019 – 2022) is shown in Table 4.2-8 which is based in the NEDA’s PIP. The Draft Unified Bangsamoro Development Plan (2019-2022) is shown in Attachment 2. Sub-chapter outcomes (main chapter outcome in the table above) are shown below which were developed by the Bangsamoro Development Planning Team.

**Table 4.2-8 Format of Draft Unified Bangsamoro Development Plan: 2019-2022**

| Project Title | Mother Agency | Main Chapter Outcome | Expected Output | Spatial Coverage | Region | Mode of Implementation | Implementation Period | INVESTMENT TARGETS (in PhP Actual Amount) |      |      |      |            | Total (2019-2022) |
|---------------|---------------|----------------------|-----------------|------------------|--------|------------------------|-----------------------|---|------|------|------|------------|-------------------|
|               |               |                      |                 |                  |        |                        |                       | 2019                                      | 2020 | 2021 | 2022 | After 2023 |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |
|               |               |                      |                 |                  |        |                        |                       |   |      |      |      |            |                   |

Source: JICA Study Team

### Sub-Chapter Outcome

|            |  |
|------------|--|
| Outcome 1: | Poverty Incidence reduced to 25% by 2030.  |
| Outcome 2: | Improved health condition of the Bangsamoro and other inhabitants.   |
| Outcome 3: | Bangsamoro people equipped with appropriate education participating effectively constructive, social, political and economic activities. |
| Outcome 4: | Foundation of Bangsamoro regional economy established.   |
| Outcome 5: | Sustained economic growth in the Bangsamoro.   |
| Outcome 6: | Maintained ecological balance and sustainable resources utilization.   |
| Outcome 7: | Foundation for good governance in the Bangsamoro established eliciting public trust and confidence.                                      |
| Outcome 8: | Peaceful and secured Bangsamoro communities.   |
| Outcome 9: | Bangsamoro acclaiming identity, culture developed patrimony.   |

Source: Bangsamoro Development Planning Team