

Republic of the Philippines

Ex-Post Evaluation of Japanese ODA Loan Project
ARMM Social Fund for Peace and Development Project

External Evaluator: Yasuhiro Kawabata,
Sanshu Engineering Consultant

0. Summary

The objective of the project was to provide the basic social services, increase job opportunities, particularly in the agricultural and fishery industries, and promote the sustainable development through accelerating employment by implementing the local community-driven small-size infrastructure development in the Autonomous Region in Muslim Mindanao (ARMM), thereby contributing to reducing poverty. Regarding the project planning and approach for the project implementation (particularly, the methodology of project management and assurance of sustainability of the project), at the appraisal stage problems and their countermeasures to be taken when the “Community-Driven Development (CDD) approach” was adopted, needed to be examined/verified in detail. However, the project has been highly relevant with the Philippine development plan and needs, as well as Japan’s ODA policies. Its relevance is therefore considered high. Regarding the efficiency, although the project cost was lower than planned, the project period significantly exceeded the plan. Therefore, efficiency of the project is fair. Regarding the effectiveness, number of beneficiaries by the project was not originally estimated at the appraisal stage under the Community Development Assistance (CDA) program, which is among two components of the project, and it was merely assumed that number of targeted barangays¹ would be 200 and that number of subprojects would be 400. Number of barangays to which assistance was actually provided under the CDA component is 358 with a total of 707 subprojects, which are both about 1.8 times of the originally planned. Thus, it is considered that number of beneficiaries by the project has substantially increased. Under another component, Strategic Regional Infrastructure (SRI) program, 31 subprojects (including sectors of transport, health, education and water/sanitation) were implemented, and the project well contributes to enhancement and improvement of the basic social services. Results of the Impact Study demonstrate that the project has provided the positive impacts (improvement or enhancement was made comparing the status before the project) to access to the educational facilities (number of nursery and elementary schools per 1,000 residents) and usage rates of toilets at the barangay level and that improvement was also observed in the various sectors/aspects including income/expenditure, road conditions,

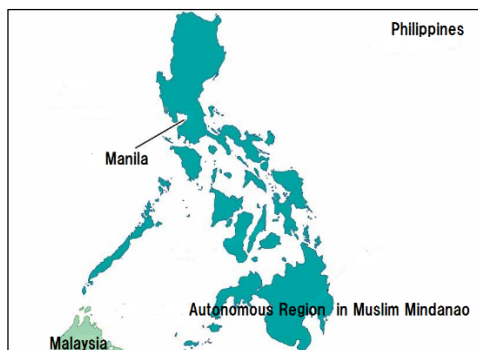
¹ Barangay is the minimum local government unit, which includes municipalities and towns.

access to markets and education/health facilities (travel time), wells/water supply system and usage ratio of toilets, security (conflict among clans), and trust to other clans and religious groups, and administrators of the central government at the household level. Number of employment created in the project targeted regions is unknown. Regarding the poverty reduction in ARMM, which was considered as a project objective (impact), since alleviation and improvement of poverty have not been quantitatively confirmed, contribution to poverty alleviation by the project is considered to be minimal. The project has to some extent achieved its objectives. Therefore, effectiveness and impact of the project are fair.

Regarding the operation and maintenance of the project, since no latest information (particularly on the amount spent for the operation and maintenance work, which is needed for examination and assessment of the financial aspects) on the CDA program, which is the main component of the project was available, it is difficult to examine the institutional, technical and financial aspects of the project. Regarding the SRI program, no problems have been observed in the institutional, technical and financial aspects. Therefore, sustainability of the project effects is fair.

In light of the above, this project is evaluated to be partially satisfactory.

1. Project Description



Project Location



Mother and Child Pavilion/Maguindanao Provincial Hospital

1.1 Background

Mindanao, an island in the southern Philippines is geographically close to Indonesia and Malaysia, and a number of Muslim people inhabit. It has high development potential, being endowed with abundant natural resources, vast stretches of arable land and climate suitable for farming with less typhoon attack. Between the anti-government Islamic groups/their supporting organization and the Philippine government, an armed conflict has continued for the past more than 40 years, and the security situation has been unstable. Consequently, the regional economy has been devastated and 32% of the poor households

in the Philippines reside in Mindanao. Particularly, in ARMM, which is located in the southwestern area of Mindanao and was hard-fought field, the poverty incidence among families was more than 68.8% (in 2000).

Institutional strengthening of the ARMM government as well as restoration of security, increase of income-earning opportunities, and development of economic infrastructure have been considered urgently addressed issues in order to promote the economic development in the southwestern areas of Mindanao and to enhance the living standard of inhabitants.

1.2 Project Outline

The objective of the project was to provide the basic social services, increase job opportunities, particularly in the agricultural and fishery industries, and promote the sustainable development through accelerating employment by implementing the local community-driven small-size infrastructure development in ARMM, thereby contributing to reducing poverty. The location of the project site is shown in Figure 1.



Figure 1 Location of Project Site

Loan Approved Amount/ Disbursed Amount	2,470 million yen/2,365 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	March 2003/December 2003
Terms and Conditions	For civil work and consulting services: Interest Rate: 2.20%, Repayment Period: 30 years (Grace Period: 10 years) Conditions for Procurement: general untied
Borrower / Executing Agency(ies)	Government of the Philippines/Autonomous Region in Muslim Mindanao Social Fund Project Management Office (ARMM Social Fund PMO)/Autonomous Region in Muslim Mindanao Government
Final Disbursement Date	December 2012 (originally April 2011)
Main Contractor (Over 1 billion yen)	n/a
Main Consultant (Over 100 million yen)	Katahira & Engineers International (Japan) JV/Asian Consultant (Japan) /Development & Construction Center, Inc. (Philippines)/Kalasag Development Initiatives Foundation (Philippines)
Feasibility Studies, etc.	Feasibility Study (Philippine Government, August 2002)
Related Projects	Technical Assistance: • ARMM Human Capacity Development Project (May 2008 - March 2013) • Rice-Based Farming Technology Extension Project for the Autonomous Region in Muslim Mindanao (ARMM) (April 2012 – March 2017) Other international agencies: • World Bank: Special Zone of Peace and Development Social Fund Project, 1998 The project was cofinanced by the World Bank (WB) and Canadian International Development Agency (CIDA)

2. Outline of the Evaluation Study

2.1 External Evaluator

Yasuhiro Kawabata, Sanshu Engineering Consultant

2.2 Duration of Evaluation Study

Duration of the Study: November 2014 – October 2015
Duration of the Field Study:
January 4 – 21, 2015, March 25 – April 11, 2015

2.3 Constraints during the Evaluation Study

The field study for the project was conducted by collecting data and information through analyzing responses to the questionnaire and interviews made by the local consultant, since the external evaluator could not visit ARMM and could not directly talk with the executing agency due to security reasons. Since the Project Management Office (PMO) for the project was closed by the end of May 2014², collection of the information was made through informal contact with the former PMO management staff by a local consultant.

3. Results of the Evaluation (Overall Rating: C³)

3.1 Relevance (Rating: ③⁴)

3.1.1 Relevance to the Development Plan of the Philippines

Soon after the Arroyo Administration started in January 2001, the “Mid-Term Development Plan 1999-2004” was reviewed, and a new “Mid-Term Development Plan 2001-2004” was established. Under four priority strategies (liberalization/streamlining of economy, modernization of agricultural/fishery sectors, consideration to vulnerable groups, and enhancement of political and social moral) in the Development Plan, 13 important agendas were selected: 1) stabilization of macro economy and sustainable economic development with justice; 2) creation of employment opportunities; 3) social development and human resource development; 4) protection of vulnerable groups; 5) development of agricultural and fishery industry and farming community; 6) promotion of competition of industry and services; 7) development of tourism; 8) promotion of public and private partnership; 9) dissolution of digital divide (a gap between those who have ready access to information and communication technology and those that don't); 10) correction of disparity between regions; 11) urban development; 12) security keeping/Mindanao development; and 13) improvement of governance. Regarding “12) security keeping/Mindanao development” among the agendas, needs were emphasized particularly on: i) establishment of policy framework for pursuing peace; ii) analysis of fundamental factors for conflict/obstacles for peace; and iii) establishment of strategic approach for sustainable development taking into account the forementioned two items.

² Source: document provided by JICA

³ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁴ ③: High, ② Fair, ① Low

(Source: ODA Public Relations document, ODA Individual Evaluation Reports)

Under the current “Mid-Term Development Plan 2011-2016”, the following agendas are to be addressed in order to achieve the inclusive growth: good governance, promotion of investment, infrastructure development by the PPP scheme, social security reforms, enhancement of tax collection capacity, peace building/national security and others. Regarding “peace building/national security” among the above mentioned agendas, in “Chapter 9: Peace and Security” of the Development Plan, it is stated that the government shall exert all efforts to win peace and ensure national security in order to promote national development. Of security concerns, the most pressing issue is the internal conflict in Southern Philippines, especially those with large Muslim population. In “Mindanao Strategic Development Framework (2010-2020)”, it is stated that while efforts toward resolving the conflict in Mindanao have gained initial success, the challenge now is to mobilize shared responsibilities between the government and citizenry to sustain the gains in addressing the peace situation.

At the appraisal and ex-post evaluation stages, the implementation of the project conforms to the development policies of the Philippine Government.

3.1.2 Relevance to the Development Needs of the Philippines

At the appraisal time, the government identified that “poverty alleviation”, “peace and security” and other agendas were national strategies, and considered that recovery of security was essential in order to promote economic development particularly in the southwestern region in Mindanao and consequently improve the living standard of people. The Poverty Incidence among Families in ARMM as of 2000 was 68.8%, and coverage of the water supply system in ARMM (1997) was 24.5%, while the national average was 65.3%.

Thus, prompt return of refugees, who evacuated from areas where the security situation had been long deteriorated due to the conflict between the government and anti-government Islam and communist groups, provision of basic social services to the poor, and increase of employment opportunities, particularly in the agricultural and fishery industries were considered essential. It is important to aim at peace in the short term and to support self-reliance of residents in the medium and long run. Thus, development of economic infrastructure focusing on the transport infrastructure for promotion of economic activities in and outside the region, and institutional strengthening/reform of the ARMM government, which is the core body for the regional development were considered issues to be urgently addressed.

At the ex-post evaluation stage, agendas to be addressed in the next three years (2013-2016) are listed in “ARMM Regional Development Plan Mid-Term Update

2013-2016”:

- 1) Increase Poverty Incidence: According to the study made by ARMM, the Poverty Incidence in the region increased from 39.9% in 2009 to 48.7% in 2012.
- 2) Inadequate Infrastructure Support Facilities: Poor infrastructure affects the quality of life and often contributes to mortality and morbidity of vulnerable sectors especially women and children.
- 3) Inadequate Delivery of Social Services in hard to reach areas: Despite development interventions being implemented, there is still inadequate delivery of social services in far-flung areas. A number of barangays still have no Day Care Centers⁵, school buildings, and Health Centers.

The project which aims at poverty alleviation by providing basic social services conforms to the development needs at the appraisal and ex-post evaluation stages.

3.1.3 Relevance to Japan's ODA Policy

Under “the Medium-Term Strategy for Overseas Economic Cooperation Operations” (to be applied to the period between April 2002 and March 2005), which was effective at the appraisal stage, seven sectors/fields including “more efforts to address poverty alleviation”, “development of the foundation for economic growth”, “assistance to environment improvement/pollution protection, and “assistance to human resource development” are listed as priority sectors/fields under the ODA loan projects, and Asia was still identified to be a priority area. Regarding “more efforts to address poverty alleviation”, participation in the decision making process of the poverty groups was considered an essential factor and collaboration with NGOs needed to be made.

In the “Country Assistance Strategy for Philippines”, issued in October 2002, it is stated that assistance for promotion of economic infrastructure (transport and energy sectors) development, which is a controlling factor for growth, for development of agriculture/farming villages aiming at alleviation of gaps (poverty alleviation and correction of regional gaps), and for improvement of fundamental services such as health cares and water/sanitation system targeting at the poor would be promoted. The project conforms to the basic infrastructure development aiming at the economic growth, poverty alleviation and correction of regional gaps, which are listed as priority agendas in the above mentioned two policies.

3.1.4 Appropriateness of Project Planning and Approach

According to the JICA relevant documents, the objective of the project was to provide

⁵ Facilities where senior citizens and patients including disabled people can receive treatment and rehabilitation by attending during the day time.

the basic social services, and increase job opportunities, particularly in the agricultural and fishery industries, in ARMM, where the poverty issues have been expanding/worsened due to aftermath of blistering battle in Mindanao, thereby contributing to reducing poverty and assisting the sustainable development as well. Accordingly, the project has been highly relevant with the Philippine development plan and needs, as well as Japan's ODA policies.

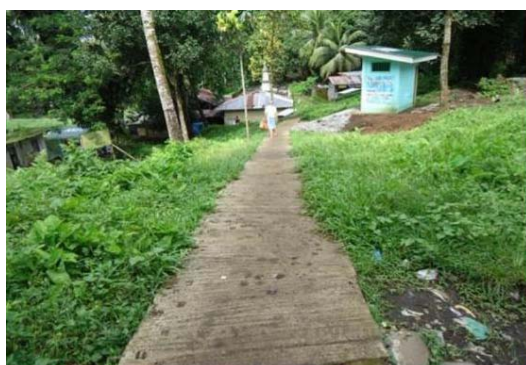
In ARMM, where the project is located, there are about 2,400 barangays. The Community Development Assistance (CDA) program, which is one of project components was originally planned to be implemented in 200 barangays by JICA and in 500 barangays by the World Bank (WB). According to the Implementation Completion and Results Report (ICRR) of the World Bank, it was anticipated that implementation of any development project in ARMM would be difficult and dangerous. Furthermore, it was reported that some parts of the region remained *de facto* under the control of armed separatist groups in 2002. Thus, the Community-Driven Development (CDD) approach, in which the community people are directly engaged (Community people are mainly responsible for selection of subprojects, implementation of the projects and maintenance upon completion of the project) was considered an important strategy, and was adopted. Since the project was to be parallel-financed by WB and CIDA, it is appreciated that the CDD approach was also adopted to the CDA program, which was to be financed by JICA at appraisal.

Since the CDA program was originally planned to be implemented in 200 barangays (with a total of about 400 subprojects), two issues particularly needed to be thoroughly examined: i) difficulties of the project management by JICA including assessment and treatment of problems regarding issues on safeguard, procurement, and financial management during the project implementation; and ii) assurance at appraisal on sustainability (institutional setup for operation and maintenance, technical capacity, financial sources for operation and maintenance) of the assisted subprojects after the project was completed. Although these issues are assessed in the following evaluation sections, some problems are observed with respect to effectiveness and sustainability. The "CDD approach" was adopted to the project, which aimed at poverty alleviation and is located in the special region. However, it seemed that the planning/strategy adopting a so-called "Sector Loan⁶ type", in which targeted subprojects are not identified at the

⁶ A type of loans, in which targeted subprojects have not been necessarily identified at appraisal, and are to be selected based on the established criteria after a project commenced, and replacement of subprojects can be made as needed during the project implementation. In this case, during the project implementation, selected subprojects need to be assessed in terms of safeguard/procurement/financial management, and institutional arrangements/capacity (technical and financial) of the entity/organization, who would be responsible for operation and maintenance after the project was completed need to be assessed and verified.

project commencement, should have been more carefully considered.

Regarding the project planning, and approach during the project implementation (particularly on project management methodology and assurance of the project sustainability), issues and their countermeasures when the “Community-Driven Development approach” was adopted, should have been more examined/verified in detail at the appraisal stage. However, the project has been highly relevant with the Philippine development plan and needs, as well as Japan’s ODA policies. Its relevance is therefore considered high.



Concrete Pathway
Malabang, Lanao del Sur



Concrete Tire Path
Tubaran, Lanao del Sur

3.2 Efficiency (Rating: ②)

3.2.1 Project Outputs

The project was parallel-cofinanced by the World Bank (WB) and Canadian International Development Agency (CIDA) and consisted of the following 4 components. Each agency was responsible for the components as shown below.

- 1) Community Development Assistance program: (JICA and WB): (construction and rehabilitation of roads, water supply systems, educational/medical facilities, post-harvest facilities and others)
- 2) Strategic Regional Infrastructure (SRI) program: (JICA and WB): (rehabilitation of roads, construction of regional centers, vocational training centers and others)
- 3) Peace Building: (CIDA): (educational program for peace, campaign for human rights, establishment of a peace center and others)
- 4) Institutional Strengthening and Assistance for Governance (ISAG): (JICA, WB, CIDA): (financial assistance to ARMM Government and Local Government Units (LGUs), and strengthening of project management capability)

Regarding CDA program, originally JICA and WB were to assist 200 barangays and

500 barangays totaling 700 barangays, respectively among 2,400 barangays. The assignment for which JICA was responsible under the Institutional Strengthening and Assistance for Governance was consulting services on subproject formulation and project supervision of the components under the JICA responsibility among both of SRI and ISAG components.

The original and actual output of the project is shown in Table 1.

Table 1 Output (Original and Actual)

	Project Scope at Appraisal Stage	Project Scope at Project Completion														
1) CDA	<p>a) Non-infrastructure support: provision of training to community groups and facilitators and technical assistance</p> <p>b) Development of small-scale infrastructure: provision of equipment and civil work for construction, improvement, and rehabilitation of social and economic infrastructure (targeting 200 barangays with a total 400 sub-projects)</p> <p>Barangays targeted under the CDA program were to be selected based on the following four criteria: 1) poverty level (30%); 2) degree of conflict-affectedness (40%); 3) complementarity with other government programs (20%) and 4) Local Government Unit (LGU) commitment (10%). The selection and prioritization of infrastructure at the community level was to be made by each barangay, and selection of infrastructure was to be made among the short listed infrastructure subprojects at the community level. The assisted amount to each barangay was in principle less than 1.5 million peso for two subprojects. However, the above mentioned criteria were to be revised as needed incorporating the results of the pilot projects, and were to be defined in the operational manual, which was to be prepared under the project.</p>	<p>a) as planned</p> <p>b) Number of actual barangays targeted: 358 Number of subprojects: 707 Direct or indirect beneficiaries: 600,000 Number of subprojects implemented by sector is shown as follows:</p> <table style="margin-left: 40px;"> <tr> <td>Agriculture:</td> <td style="text-align: right;">134</td> </tr> <tr> <td>Education:</td> <td style="text-align: right;">274</td> </tr> <tr> <td>Health:</td> <td style="text-align: right;">54</td> </tr> <tr> <td>Social development :</td> <td style="text-align: right;">25</td> </tr> <tr> <td>Transport:</td> <td style="text-align: right;">139</td> </tr> <tr> <td>Water supply and sanitation:</td> <td style="text-align: right;">81</td> </tr> <tr> <td style="text-align: center;">Total:</td> <td style="text-align: right;">707</td> </tr> </table> <p>The average construction cost of a subproject is 730,000 peso (about 1.5 million yen).</p>	Agriculture:	134	Education:	274	Health:	54	Social development :	25	Transport:	139	Water supply and sanitation:	81	Total:	707
Agriculture:	134															
Education:	274															
Health:	54															
Social development :	25															
Transport:	139															
Water supply and sanitation:	81															
Total:	707															
2) SRI	<p>Targets: Under the guidance of the ARMM government, trans-regional infrastructure spreading over a few barangays and local government units was to be strategically developed.</p> <p>Originally proposed subprojects included the following 31 subprojects.</p> <ul style="list-style-type: none"> • ARMM Assembly Building • Kabunsuan Cultural Complex • Provincial Social Welfare and 	<p>Among 33 subprojects after the program was revised, a subproject was canceled during the implementation, and a project was not approved by JICA so that only 31 subprojects have been completed. In order to optimize the use of completed subprojects, necessary equipment was additionally procured and distributed to 8 subprojects.</p> <p>Among the originally proposed 31 subprojects, only 3 projects were completed as planned, and the</p>														

	<ul style="list-style-type: none"> Development Center (6) • Rehabilitation of Arterial Highways (national road) (8km) • Concreting of rural roads (provincial road) (4.5km) • Municipal Assembly Hall (7) • ARMM Business Assistance Center • ARMM Regional Testing Center • ARMM Information Management Center (2) • Provincial Integrated Health Center (2) • ARMM DTI Building • ARMM Cultural Center • ARMM Sports Center • Paving Macador Circumferential Road (25km) • Provincial Training Center (2) • ARMM Agrarian Justice and Library • ARMM Research & Development Center 	<p>remaining subprojects were implemented after changes/replacement was made. The completed 31 subprojects are as follows:</p> <ul style="list-style-type: none"> • Road improvement/rehabilitation (4) • Provincial hospital • District hospitals (3) • DOST-ARMM Integrated Regional Standards and Testing Laboratory • DAF-ARMMIARC Training Center • Mother and Child Pavilion • Local Government Center (4) (The executing agency counts 4 subproject as one subproject. • Causeway Wharf (2) • Rehabilitation of National High School (12) • Rehabilitation/improvement of ports (2) • Construction of water system (2) • Provincial Social Welfare Livelihood and Social Development Center <p>The average construction cost of subprojects is 9.88 million peso (about 20.44 million yen)</p>
Consulting Services	<ol style="list-style-type: none"> 1) Assistance in procurement (including detail designs of SRI subprojects) 2) Construction supervision 3) Assistance in project management 4) Evaluation and monitoring of project impacts 5) Technical assistance for promotion of participation mechanism 6) Environmental management 7) Procurement audit <p>Experts: 278M/M (local consultants) Assistants: 104M/M</p>	<p>as planned</p> <p>Experts: 561.25M/M Assistants: 290.24M/M</p>

Source: documents provided by JICA, Responses to the questionnaire

Note 1: Number of subprojects actually assisted by the World Bank under CDA program was 2,777 in 1,260 barangays. (Source: World Bank Implementation Completion and Results Report)

Note 2: Number of subprojects actually assisted by the World Bank under SRI program was 13, and they included facilities related to sectors of health, education, human empowerment and social services, and port facilities. (Source: World Bank Implementation Completion and Results Report)

Number of barangays to which assistance was actually provided under the CDA program is 358 with a total of 707 subprojects, which are both about 1.8 times of the originally planned. Reasons for increase are: i) Since subprojects were not identified at the appraisal stage, cost estimates were made to the higher side; ii) During the project implementation, Japanese yen appreciated by about by 15% and saving accrued. Increase of subprojects was made taking into account the needs of the project area, and it is considered appropriate.

Regarding subprojects under the SRI program, the field condition, priority, and the project scope were reviewed after the project commenced, and 31 subprojects shown in

the box under “Project Scope at Project Completion” in the above table were implemented.

The reason for substantial changes of subprojects is replacement of subprojects due to change of project sites because of security or accessibility issues. Particularly, after Maguindanao incident⁷ occurred in November 2009, subprojects, which had not yet commenced, were partially replaced. Replacement of subprojects was concurred by JICA. Moreover, replacement was made based on the results of inventory surveys of each facility and the demand analysis undertaken after the project commenced. Thus, replacement of subprojects is considered appropriate.



Local Government Center
Datu Abdullah Sangki, Maguindanao



Shariff Aguak Maguindanao High School

3.2.2 Project Inputs

3.2.2.1 Project Cost

The total estimated project cost at appraisal (assisted by three agencies) was 8,782 million yen, of which the JICA assisted portion was estimated at 3,022 million yen and the planned Japanese ODA loan was 2,470 million yen. The actual project cost of the JICA assisted portion was 2,836 million yen, of which the Japanese ODA loan was 2,365 million yen. The actual project cost was lower than planned, and is equivalent to 94% of the planned cost. However, in the local currency (peso), the planned project cost was 1,029 million peso, and the actual cost was 1,139 million peso, which is equivalent to 111% of the planned cost. (Exchange rates: at appraisal 1 US\$ =119 yen, 1 peso = 2.4yen; Average during project implementation (2006 – 2012): 1 peso = 2.07 yen)

The total project cost estimated at appraisal includes the project cost assisted by three agencies. The World Bank provided additional financing of US\$ 30 million (the original loan amount was US\$40.6 million) in August 2010 after the project commenced, and the

⁷ Incident in which in relation to Election of a Governor, 58 supporters of a candidate were allegedly kidnapped and killed by an opponent candidate group.

CDA component was substantially expanded. However, the detailed project scope and bill of quantities of the WB-financed component at appraisal and at project completion are unknown. The original amount of CIDA financing was US\$7.8 million. However, the actual amount spent, and the project scope and bill of quantities at project completion are also unknown. Thus, it is not feasible to properly compare the planned and actual total project cost assisted by three agencies. Since the project was parallel-financed by three agencies, it is more reasonable to compare costs before and after the project by separating the JICA-financed component.

Table 2 Comparison of Project Cost (Planned and Actual)
(JICA-funded portion)

(unit: million yen)

Category	Planned		Actual	
	Total		Total	
	Total	ODA loan	Total	ODA loan
• Community Development Assistance	1,276	1,276	1,506	1,339
• Strategic Regional Infrastructure	782	782	793	716
• Physical contingency	206	125	-	-
• Governance assistance (consulting services)	287	287	310	310
• Administration	216	0	165	0
• Taxes	255	0	62	0
Total	3,022	2,470	2,836	2,365

Source : documents provided by JICA,

Exchange rates: at appraisal 1 US\$ =119 yen, 1 peso = 2.4yen,

Average during project implementation (2006 – 2012): 1 peso = 2.07 yen

Price escalation: foreign currency 1.6%/year, local currency 5.9%/year

Physical contingency: 10%

Cost estimate made: August 2002

3.2.2.2 Project Period

The originally planned project period was from December 2003 (signing of the Loan Agreement) to December 2007 (civil work completion) with a total period of 49 months. The actual project period was from December 2003 to December 2012 (loan closing/completion of civil work) with a total period of 108 months, or equivalent to 220% of the plan. Thus, the project period was much longer than planned. (Reference only: If the total period of 15 months, by which the progress of designs and civil work for the SRI component was delayed due to deterioration of security and declaration of a state of martial law, is excluded, the project period is 93 months, or equivalent to 190% of the plan.)

Construction of the last procurement batch under CDA program commenced in

October 2011 and ended in December 2012, while construction of the last batch under SRI program commenced in January 2011 and ended in November 2012. Thus, under the implementation of the project applying “Sector Loan type”, the project was continued until the loan amount was fully disbursed by the loan closing date.

Table 3 Comparison of Project Cost (Planned and Actual)

	Planned (at L/A signing)	Actual	
Selection of consultant	October 2003 - May 2004	December 2003 - September 2005	
Consulting services	June 2004 - September 2008	October 2005 - December 2012	
Community Development Assistance (CDA) Batch 1 (40 barangays) Batch 2 (60 barangays) Batch 3 (60 barangays) Batch 4 (40 barangays)	February 2004 - September 2008 February 2004 - September 2005 October 2004 - September 2006 October 2005 - September 2007 October 2006 - September 2008	Community Development Assistance Batch 1 (18 barangays) Batch 2 (68 barangays) Batch 3 (124 barangays) Batch 4 (116 barangays) Batch 5 (32 barangays)	July 2006 - December 2012 July 2006 - March 2009 February 2007 - March 2009 February 2008 - December 2010 November 2009 - December 2011 October 2011 - December 2012
Strategic Regional Infrastructure (SRI) Batch 1 Batch 2 Batch 3 Total (28 subprojects)	November 2003 - July 2007 November 2003 - July 2005 December 2004 - July 2006 December 2005- July 2007	Strategic Regional Infrastructure Batch 1 (7 subprojects) Batch 2 (8 subprojects) Batch 3 (9 subprojects) Batch 4 (9 subprojects) Procurement of equipment	June 2006 - December 2012 June 2008 - June 2010 February 2009 - February 2011 June 2010 - February 2012 January 2011 - November 2012 August 2011 - October 2012

Source : documents provided by JICA, ,

Note 1: Regarding the project implementation period at the planning stage, the exchange of note was planned to be signed in January 2003. However, the actual date when the exchange of note was signed, is March 28, 2003, and the loan agreement was signed on December 11, 2003.

Note 2: The project period of the SRI component includes that for designs, tendering and construction.

Main reasons for expansion of the project period are as follows:

- 1) Since the budget allocation to the executing agency was delayed due to financial deterioration of the Philippine Government at the commencement of the project, the process for consultant selection was delayed against the originally planned schedule by about 17 months. The contract for consulting services was approved by the Government in July 2005, and the contract was signed in September 2005.
- 2) Regarding the CDA program, at the commencement of the project the budget allocation was delayed. (The special account, needed for withdrawal of loans was made available only in May 2007 due to delay of budget allocation, and then the project commenced.) The originally targeted 200 barangays were increased to 358 barangays and the number of procurement batches was increased to 5 batches as well, resulting in delay of about 53 months.
- 3) Regarding the SRI program, approval of subprojects was delayed by about 48 months in total because of the following reasons: i) allocation of budget was delayed. (The special account, needed for withdrawal of loans and execution was made available

- only in December 2007.); ii) change of institutional organization of the ARMM government; and iii) review of proposed subprojects list by the new administration.
- 4) Due to deterioration of security and declaration of a state of martial law, entry to the project sites by ARMM government staff, consultants and contractors was banned twice (August 2008 - July 2009, and November 2009 – February 2010) during the project period. This resulted in 15 months delay in the progress of designs and construction work for the SRI program.

The project period was delayed by 59 months because of combined reasons mentioned above.

Number of barangays to which assistance was actually provided under the CDA program is 358 with a total of 707 subprojects, which are both about 1.8 times of the originally planned. Regarding subprojects under the SRI component, the field condition, priority, and the project scope were reviewed after the project commenced, and 31 subprojects shown in the box under “Project Scope at Project Completion” in the above table were implemented.

The project cost was lower than planned, but the project period was substantially longer than planned. Therefore, efficiency of the project is considered fair.

3.2.3 Results of Calculations of Internal Rates of Return

Since subprojects to be undertaken under the project were not identified before the project, calculation of EIRR for the whole project was not feasible. Thus, regarding the CDA component, for which the need surveys were completed at the appraisal stage and in which potential subprojects could be easily identified, EIRRs were calculated to a limited extent⁸.

- 1) Agricultural roads: EIRR : 22%
- 2) Portable water supply: EIRR : 30%
- 3) Post harvest facilities: EIRR : 13%

EIRR at the ex-post evaluation for the 2,627 subprojects implemented under the CDA program financed by the World Bank is 14.5%⁹.

At the appraisal stage, EIRRs for the JICA-financed subprojects were not calculated. Since relevant data on costs and benefits needed to calculate the EIRRs was not provided by the executing agency, EIRRs at the ex-post evaluation stage are not recalculated.

⁸ Source: WB Project Appraisal Document

⁹ Source: WB’s Implementation Completion and Results Report

3.3 Effectiveness¹⁰ (Rating: ②)

The operational indicator established at the appraisal stage was number of beneficiaries due to improvement of access to the socioeconomic infrastructure, which was constructed/improved under the project. As effect indicators, number of employment created and improved poverty incidence were considered. Regarding the analysis/evaluation on effectiveness, number of beneficiaries due to improvement of access and number of employment created are considered to be a basic indicator, and examination on these indicators were made.

3.3.1 Quantitative Effects (Operation and Effect Indicators)

(1) Beneficiaries due to improvement of access

At the appraisal stage, number of beneficiaries due to improvement of access to the socioeconomic infrastructure, which was constructed/improved under the project was considered to be an operational indicator. However, subprojects under the CDA program were not identified, and it was merely assumed that number of targeted barangays would be 200 and that number of subprojects would be 400. Thus, the baseline for the number of beneficiaries was not established. The actual numbers of beneficiaries due to improvement of access are as shown in Table 4.

Table 4 Actual Numbers of Beneficiaries due to Improvement of Access
(Community Development Assistance)

Sector of subprojects	Number of subprojects completed	Number of beneficiaries (persons)	Remarks (main impacts)
Agriculture	134	21,068	Increase in value of agricultural products
Education	274	104,626	Reduction of commuting time and costs by pupils, decrease of risk during commuting, boost interest to go to school
Health	54	39,415	Improvement of access to health care facilities with less transporting cost and shorter travel time
Social Development	25	3,463	Development of learning abilities and socialization for pre-school children
Transport	139	66,679	Improvement of access to and from school and trade centers by pupils and commuters
Water and Sanitation	81	34,968	Improvement of access to portable water and better sanitation practices
Total	707	270,219	

Source: Responses to a Questionnaire

Note: Number of targeted barangays was 358.

Since the baseline and benchmark numbers on beneficiaries are unknown,

¹⁰ Sub-rating for Effectiveness is to be put with consideration of Impact.

comparison with the actual number of beneficiaries is not feasible. However, since the number of actually assisted barangays is 358 and the number of subprojects implemented is 707, both resulting in 1.8 times increase of the originally planned. Thus, it is considered that number of beneficiaries by the project has substantially increased than expected.

Number of beneficiaries by the WB-assisted subprojects is about 988,500 (in the targeted 1,260 barangays with a total number of 2,777 subprojects).

As previously mentioned, number of employment created and improved poverty incidence were considered as effect indicators, and indicators were to be reviewed during the project implementation. Finally, selected indicators, and their baseline/benchmarks had to be concurred by JICA. However, whether or not the concurrence was made is unknown.

(2) Number of employment created in the project area

In the document provided by JICA, it is stated that local residents were hired as warehouseman, porter/cargo handlers, health workers, teachers and administrative staff at the newly constructed or improved facilities after the project was completed. However, actual numbers of employment are unknown.

3.3.2 Qualitative Effects

As a qualitative effect, enhancement of basic social services was anticipated¹¹.

Under the CDA program of the project, 707 subprojects (including sectors of agriculture, education, health, social development, transport and water/sanitation) in 358 barangays were implemented. Under the SRI program, 31 subprojects (including sectors of transport, health, education and water/sanitation) were implemented, and the project greatly contributes to enhancement and improvement of the basic social service (including commuting time and costs by pupils, risk during commuting, access to health care facilities with less transporting cost and shorter travel time, access to and from school and trade centers by pupils and commuters, and access to portable water and better sanitation practices)¹².

3.4 Impact

3.4.1 Intended Impacts

3.4.1.1 Poverty incidence

Regarding poverty incidence, which was expected to be improved by implementation

¹¹ At the appraisal stage, the following three items were anticipated: 1) enhancement of basic social service; 2) enhancement of living standards of residents; and 3) poverty alleviation. Two items except the first item are considered as an impact and are to be discussed in the following section.

¹² Source: document provided by JICA

of the project, contribution of the project was examined by the following two indicators.

- (1) Ratio of households, which gain less income than poverty threshold (Poverty Incidence among Families)

Table 5 Poverty Incidence among Families (estimated)

	2006	2009	2012
Philippines: %	21.0	20.5	19.7
Poverty threshold (peso/year)	13,357	16,871	18,935
ARMM: %	40.5	39.9	48.7
Poverty threshold (peso/year)	12,647	16,683	20,517

Source: Table 1 Full Year Official Poverty Statistics, National Statistical Coordination Board

Note: There are about 2,400 barangays under 118 municipalities in ARMM. The project covers all 118 municipalities including 1,618 barangays (358 JICA-assisted, and 1,260 WB-assisted, occupying about 67% of barangays in ARMM). Barangays, not assisted by JICA nor WB were also assisted by other donors or Philippine Government, and all the barangays were assisted by any donors or agencies.

- 2) Magnitude of Poor Families

Table 6 Magnitude of Poor Families (estimated)

Unit: families

	2006	2009	2012
Philippines	3,809,283	4,036,915	4,214,921
ARMM	205,834	212,494	271,355

Source: Table 1 in 2012 Full Year Official Poverty Statistics, National Statistical Coordination Board

Above Tables 5 and 6 show that ratio of households, which gain less income than poverty threshold (Poverty Incidence among Families) in ARMM has increased from 40.5% at commencement of the project (2006) to 48.7% at completion of the project (2012). So no improvement to poverty alleviation (numerically) has been observed despite of project implementation. Detailed analyses are needed to examine factors for increase of ratio of households, which gain less income than poverty threshold in ARMM.¹³ Since alleviation and improvement of poverty have not been confirmed in

¹³ The reason for increase of poor households in ARMM seems partly that the consumer price index (particularly food) in ARMM rose and the poverty threshold in ARMM went up to 20,517 peso/year, higher

terms of quantitative indicators, contribution to poverty alleviation by the project is considered to be limited.

3.4.1.2 Summary of results of the Impact Study

It was originally planned that during the implementation of the ex-post evaluation assignment, an impact study was to be simultaneously implemented and the results¹⁴ were to be incorporated into this report. The purposes of the Impact Study were to assess rigorously the impact of the extent to which the CDA program of the project assisted by JICA on: 1) poverty alleviation of the target area (increase of income and expenditures); 2) access to public services (education and health); 3) peace building (decrease of number of conflicts occurred, enhancement of social capital such as social trust and cohesion) and 4) others, by using the statistical methodology of econometrics (Although the concrete effect indicator to measure the impact on the abovementioned “3) peace building” was not set at the stage of project planning, the impact on this aspect was also assessed as a part of the study). Under the impact study, the following two surveys were implemented targeting barangays, which were included in the JICA’s “Barangay Data Base” in Maguindanao Province and Lanao Del Sur Province in ARMM.

- i) Barangay Survey : collection and analysis of data on socio-economic indicators at the barangay level
- ii) Household Survey : collection and analysis of data on socio-economic indicators and psychosocial indicators at the individual (household) level

Under the Impact Study, the Treatment Group in areas where JICA was in charge and the Control Group in the corresponding municipalities were subject to study and analysis. Due to the budget constraints and security reasons in the islands, the study target areas were limited to both Lanao Del Sur and Maguindanao Provinces.

(1) Sampling method

1) Barangay Survey

Barangays located in ARMM, which were included in the barangay database,

than the national average (18,935 peso/year) even though it is also because of deterioration of security and resettlement of residents due to conflict and disaster. However, since the ratio of households, which gained less income than the poverty threshold decreased even though the poverty threshold rose on a nationwide basis, increase of rate of poor households cannot be explained only by rise of poverty threshold in ARMM due to rise of consumer price index.

¹⁴ Design and analysis of the Impact Study was undertaken by an econometrics expert, other than an external evaluator for the ex-post evaluation of the project.

which was prepared under the study¹⁵ JICA conducted in the past, and were not subject to financing by the World Bank were targeted. Then, the JICA officer in charge conducted the sampling work. Consequently, the following barangays in the Treatment and Control Groups were selected.¹⁶

- Treatment Group: 231 barangays which were included in the project (Among barangays included in the Treatment Group, a barangay was excluded from the analysis due to a deficit in the data. The total sample size is 230.)
- Control Group: Among 611 barangays in which no subproject was implemented under the JICA project, and the World Bank was not involved either, 230 barangays, which have almost the same “Prioritization Scores¹⁷” comparing with treatment barangays within the same municipality were selected as control barangays.

2) Household Survey

From the Treatment and Control Groups targeted for the Barangay Survey, a total of 1,500 households were selected. Firstly, from 231 barangays under the Treatment Group and 230 barangays under the Control Group, 50 barangays each were randomly selected. Then, from each barangay, 15 households were randomly selected. (However, since a barangay, in which a survey was not possible due to security reasons and a corresponding barangay were excluded from the analysis and evaluation, data of 735 households each in the Treatment and Control Groups totaling 1,470 households was analyzed.¹⁸

(2) Results of Impact Study

Results of the Impact Study demonstrate that the project has provided the positive impacts in the aspects of access to the educational facilities and usage rates of toilettes

¹⁵ JICA Development Study Type Technical Cooperation Project, “The Study for Socio-Economic Reconstruction and Development of Conflict-Affected Area in Mindanao ” (2007-2009)

¹⁶ Regarding the analytical methodology, the Difference-In-Difference (DID) method, in which the difference between the baseline and endline (this study) data in the treatment and control groups was compared, was applied.

¹⁷ Total score assessed and calculated according to the following four criteria, which are defined in the operational manual, prepared under the project: insufficient level of infrastructure (40 %); inflow of domestic displaced persons (20 %); population and ratio of families in which a woman is a householder (20 %); and distance from the poblacion of the municipality and deterioration level of roads (20 %).

¹⁸ Since no baseline data by household was available at the analytical work stage, a typical Propensity Score Matching (PSM) was adopted. Analysis by the Ordinary Least Squares method in which matching at the household level is not done, was also made.

at the barangay level. Specifically, number of nurseries and elementary schools per 1,000 persons in the treatment barangays is higher than that in the control barangays by 0.2 schools, and the usage rate of toilettes in the treatment barangays is also higher by 9%. Under the household level survey, assessment was made targeting all the households and lowly-educated households (the educational level attained by a household head is lower than the elementary school graduate). As a result, improvement was also observed in the various sectors/aspects including income/expenditure, road conditions, access to markets and education/health facilities (travel time), wells/water supply system and usage rates of toilets, security (conflict among clans), and trust to other clans and religious groups, and administrators of the central government at the household level. Regarding indicators, for which results are statistically significant and sound (the result is stable under several estimating methodologies), usage rates of wells and water supply system in the treatment households are higher than those in the control households by 10%, while those of toilets are higher by 12-14%. Regarding the travel time (for one way) to each facility, the time to elementary schools and health facilities was shortened by 12-15 minutes, and that to the nearest market was shortened by about 10 minutes. Particularly, regarding accessibility to markets, ratio of households who perceive that roads have been passable through the year, and road condition has been good is higher by 12-14% and the travel cost has been reduced by 4 peso per way. The results demonstrate that the number of households in the Treatment Group, which were negatively affected by conflict among clans (Rido) for the past one year is lower than that in the Control Group by about 4%, and that the number of households in the Treatment Group, which answered that they could trust administrators of the central government is higher by about 3%.

Results of assessment on the lowly-educated households demonstrate that they are almost similar to the above mentioned results, and particularly sound and significant results were confirmed in the aspects of income and expenditures (consumption). More specifically, the income of people engaged in manufacturing, commercial/business, and other sectors in the treatment households has been increased, and consequently the total income has increased by 1,100-1,600 peso per year (about 7-10% of annual income). Regarding the expenditures (consumption), positive impacts are also observed in terms of costs for food, medical care, education and social /recreation, and consequently the total expenditures by the treatment households have been higher by 1,100-1,300 peso per year. Since the low-educated households generally tend to belong to the poor layer with low income, results above mentioned hint that the subject project has contributed to alleviation of poverty in the targeted regions. Moreover, in the lowly-educated households, the ratio of out-of-school children (to elementary school) in the treatment

households has been significantly lower by 4-5%. Thus, it is considered that the enrollment rate at elementary school has increased through improvement of access to schools and economic condition. The assessment also shows that the rate of participation to the community activities by the treatment households is higher by 3%.

Indicators and units used in the analysis under the Impact Study are as shown in Table 7.

Table 7 Main Indicators and Units used in the Analysis under the Impact Study

<p>Barangay Survey : Access to educational facilities: Number of nursery, elementary and junior high schools per 1,000 residents Usage ratio of toilets: Ratio of households who use private or public toilets</p> <p>Household Survey : Income/expenditure: Income and expenditure per person Road condition: Evaluation of road condition on five-point scale Access to markets and educational/health facilities: Travel time (minutes) to markets, nurseries, elementary/junior high schools and health facilities Wells/Water supply system: Are water supply system or wells used as a water resource? Or, are ponds/streams used as a water resource? Is a water supply facility located within 250 meters from home? Is it difficult to receive water supply regularly? Assessed using the above 4 indicators (usage ratio) Usage ratio of toilets: Usage ratio of private/public toilets Security (conflict among clans): Damages by conflict among clans (Rido) for the past one year (damages or no damage) Trust to other clans and religious groups: Level of trust to inside and outside of the belonged group is assessed on 4-point scale. Trust to administrators of the central government: Trust is assessed on 4-point scale. Health condition: Number of family members who complained of any medical problems for the past half a year. Number of persons who had fever among them, and/or number of persons who had diarrhea. Rate of school attendance by children: Rate of out-of-school children who do not attend school even though they have reached the schooling age for each educational level. Community activities: Ratio of experience of participation in any community groups (cooperative society of production, organization for women/youth/senior citizens) and barangay gathering.</p>

Source: Impact Study Report,

On the other hand, impacts by the project on the health condition including number of family members who have poor physical condition were not confirmed both in all households and the lowly educated households. Since indicators on health condition are affected by various social economic factors, these are unlikely outcome indicators, which can be improved simply by building health centers and others. Results demonstrate that not only assistance by hardware aspects such as development of infrastructure made under the project, but also various activities including assistance by

soft aspects such as enlightenment activities for health care and education are essential in order to achieve the expected impacts.

3.4.2 Other Impacts

(1) Impacts on the natural environment

At the appraisal stage, the targeted subprojects to be undertaken were not identified. According to the “Environmental Guidelines (October 1999)”, the project was classified as Category B¹⁹, taking into account the sector to be targeted, geographical features and project characteristics as well as the reasons mentioned below.

- 1) Since the CDA program is for rehabilitation of the existing facilities and development of small size infrastructure, and subprojects which would greatly affect the environment and residents are excluded at the selection process, no particular impacts would be generated.
- 2) Under the SRI program, subprojects which would greatly affect the environment are excluded at the selection process, and subproject would be assessed from the viewpoint of environmental aspect at the feasibility study stage, no particular impacts would be generated.

When implementing subprojects, an Initial Environmental Examination (IEE) was to be conducted as needed, and required procedures including securing Environmental Compliance Certificate (ECC) or Certificate of Non-Coverage (CNC) were to be undertaken.

Thus, no impacts to natural and social environment by implementing the project were particularly foreseen.

Since the size of each subproject under the CDA program is small, no adverse environmental impacts have generated during the project implementation. Under the SRI program, no adverse environmental impacts have generated as well. During the project implementation, required procedures for the environmental aspect including undertaking an Initial Environmental Examination (IEE), and securing Environmental Compliance Certificate (ECC) or Certificate of Non-Coverage (CNC) were properly taken as needed with an assistance by the consultant, who was employed for the project.

According to JICA Philippines Office, when the contract value per procurement is less than 500 million yen (the contract value of all subprojects is less than 500 million yen), the procurement and safeguard aspects of the subproject was reviewed/cleared at the stage of submission of a contract for the subproject by the executing agency. No

¹⁹ Category B: Applied to the project, in which unfavorable impacts to be made to the environment and community are considered smaller compared with Category A (applied to the project, in which seriously unfavorable impacts to be made to the environment and community).

particular problems on these aspects have been reported.

(2) Land Acquisition and Resettlement

At the appraisal stage, under the new construction and improvement work for infrastructure such as roads, irrigation and water system, no resettlement was anticipated except sites where work extends beyond the current right-of-way and a small number of residents need to be resettled.

Under the CDA program, work of all the subprojects were implemented within the existing right-of-way during the project implementation, and no land acquisition nor resettlement did occur. All the subprojects under the SRI were new construction or rehabilitation/improvement within the existing right-of-way as well, and thus no land acquisition/resettlement occurred. Exception is resettlement of residents due to improvement of Lamitan Port, which involved construction of a new terminal building. Houses for 47 households and 6 small shops, which were located in the compound formally owned by Port of Lamitan were relocated to the land owned by Lamitan City, which is about 700 m away from the port. Compensation for resettlement was properly made by Lamitan City according to the Philippine local laws, and no problem has occurred. Compensation involved provision of about 80 m² land per household, compensation with the amount equivalent to the residual value of the house demolished, and assistance grant for a new house. The total compensation amount paid for resettlement was about 750,000 peso.



Water and Sanitation Facilities
Malabang, Lanao del Sur



Water System with three Faucets
Madalum, Lanao del Sur

(3) Other Positive and Negative Impacts

During the project implementation, the project addressed the poverty and gender issues, and the community-driven implementation was planned, particularly encouraging

preferential participation of women and widows at the project formation and planning stages, and incorporating the people's need.

The community-driven development approach, under which the community directly participates in the project has been applied to the CDA program, and people's need has been incorporated.

In some parts of the project targeted regions, vulnerable groups and indigenous people reside and their participation in the project was essential. It is reported that Teduray tribe who occupies about 90% in Barangay Tobak, Maguindanao showed active participation after the project commenced²⁰.

Number of beneficiaries by the project (CDA program) was not originally estimated, and it was merely assumed that number of targeted barangays would be 200 and that number of subprojects would be 400. However, number of barangays to which assistance was actually provided under the CDA component is 358 with a total of 707 subprojects, which are both about 1.8 times of the originally planned. Thus, it is considered that number of beneficiaries by the project has substantially increased. Under the SRI program, 31 subprojects (including sectors of transport, health, education and water/sanitation) were implemented, and the project well contributes to enhancement and improvement of the basic social service. Results of the Impact Study demonstrate that the project has provided the positive impacts (improvement or enhancement was made comparing the status before the project) to access to the educational facilities (number of nursery and elementary schools per 1,000 residents) and usage rates of toilets at the barangay level and that improvement was also observed in the various sectors/aspects including income/expenditure, road conditions, access to markets and education/health facilities (travel time), wells/water supply system and usage ratio of toilets, security (conflict among clans), and trust to other clans and religious groups, and administrators of the central government at the household level. Number of employment created in the project targeted regions is unknown.

Regarding the poverty reduction, which is the project objective, since alleviation and improvement of poverty has not been quantitatively confirmed, contribution to poverty alleviation by the project is considered to be minimal.

The project has achieved its objectives at a limited level. Therefore, effectiveness and impact of the project are fair.

3.5 Sustainability (Rating: ②)

3.5.1 Institutional Aspects of Operation and Maintenance

²⁰ Source: document provided by JICA

The executing agency during the project implementation was Autonomous Region in Muslim Mindanao Social Fund (ARMM Social Fund). However, ARMM Social Fund was abolished in 2014. ARMM is now in transition to Bangsamoro Transition Authority. The authority is to be established by mid-2015 and “Bangsamoro Government” will be founded by 2016.

At the appraisal stage (2003), operation and maintenance of the CDA component was to be managed by community groups, Local Government Units (LGUs) and line agencies, and maintenance costs were to be secured by persons in charge of these entities. Organizations, which are now responsible for operation and maintenance are as shown in Table 8.

Table 8 Agencies/Offices responsible for Operation and Maintenance of Facilities under the CDA Program

Facility	Agency/Office
School Buildings	ARMM Education Department
Day-Care Center	Municipal Social Welfare Office
Health Station	Municipal Health Office
Multi-purpose Center	Barangay Council
Water Supply System	Barangay Council, Barangay Water Supply and Sanitary Office, Regional Office, People’s Organization
Concrete Tire Paths/Footbridges	Barangay Council
Warehouse/Solar Dryers	Community Groups/ People’s Organization

Source: Responses to the Questionnaire

Note 1: The project target area in ARMM includes 5 Provinces, 113

Cities, and 358 Barangays.

Operation and maintenance of the SRI program was to be managed by line agencies (e.g. Department of Agriculture, Department of Education and Department of Health), and maintenance costs were to be allocated every year as part of the government budget of ARMM. Organizations, which are now responsible for operation and maintenance are as shown in Table 9.

Table 9 Agencies/Offices responsible for Operation and Maintenance of Facilities under the SRI Program

Facility/Project	Agency/Office
Road improvement/ rehabilitation	Department of Public Works and Highways District Office, City Engineering Office, Provincial Engineering Office, ARMM Regional Economic Zone Administration
Provincial Hospital	Provincial Government
District Hospital	ARMM Department of Health
DOST-ARMM Integrated Regional Standards and Testing Laboratory Center	ARMM Department of Science and Technology
DAF-ARMMIARC Training Center	ARMM Department of Agriculture and Food
Mother/Child Pavilion	Provincial Government

Local Government Center	Municipality
Causeway/wharves	ARMM Regional Ports Management Authority, Municipality
Rehabilitation of National High School	ARMM Department of Education
Port Rehabilitation and Improvement	ARMM Regional Ports Management Authority, Municipality
Water Supply Systems	Municipality, Barangay
Provincial Social Welfare Livelihood Development Center	Provincial Government Social Welfare Livelihood Office

Source: Responses to the Questionnaire

Organizations and entities, which are responsible for operation and maintenance of facilities under the CDA program and those for SRI program are shown in Table 8 and in Table 9, respectively. Number of organizations and entities involved in operation and maintenance is quite numerous, and no information on the institutional setup and allocation of assigned staff of each organization and entity was provided by the executing agency. Thus, it is difficult to assess appropriateness of the institutional setup and allocation of assigned staff of relevant organizations and entities.

Thus, sustainability on the institutional aspects of operation and maintenance is considered to be fair.

3.5.2 Technical Aspects of Operation and Maintenance

Operation and maintenance of subprojects completed under the CDA program of the project is to be in principle undertaken by the responsible entities according to the “Operation and Maintenance Manual” for each sector, which was prepared by each community during the project implementation. Training on application of the “Operation and Maintenance Manual” to the relevant agencies/offices has been undertaken through seminar-workshops. However, the technical capacity of each agency/entity (LGU, Barangay Committee, Regional Office, People’s Organization) could not be assessed due to lack of information.

Regarding operation and maintenance of 31 subprojects completed under the SRI program, responsible agencies/offices, which are technically highly qualified and have staffs who have taken professional training, have been utilizing the “Operation and Maintenance Manual”, which was prepared during the project implementation. In addition, the financial management system has been strictly abided by regulations of the central government²¹.

Since no information on the technical capacity and skills of organizations and entities (LGU, Barangay Council, Regional Office, People’s Organization and others), responsible for the CDA program was provided by the executing agency, it is difficult to assess appropriateness of the technical capacity and skills. However, regarding the SRI

²¹ Source: document provided by JICA

program, staffs in charge are technically highly qualified and the “Operation and Maintenance Manual” has been utilized. The financial management system has been also strictly abided, and no problem has been reported.

Since no information on the technical capacity for operation and maintenance of the CDA program is available, sustainability on the technical aspects of operation and maintenance is considered to be fair.

3.5.3 Financial Aspects of Operation and Maintenance

Since the scope of subprojects under the CDA program is small (the average construction cost is 730,000 peso or about 1.5 million Japanese yen), cost for operation and maintenance was to be in principle borne by each responsible agency/office as shown in Table 8. It is reported that community groups and people’s organizations, which hardly raise funds, can request the subsidy for the cost required for the operation and maintenance work based on the “Operation and Maintenance Manual” to the Barangay/Municipal Office.

In the document provided by JICA, the operational status of 707 subprojects constructed/improved under the CDA program as of the end of 2012 is shown. The operational status by year of completion of work is shown in Table 10.

Table 10 Operational Status of Subprojects under the CDA Program

Unit: subprojects

Year of completion of work		2007	2008	2009	2010	2011	2012
Years of operation as of 2012		5	4	3	2	1	Commencement of operation
Operational status	Functional	37 (80.4%)	107 (85.6%)	172 (85.1%)	218 (90.5%)	16 (84.2%)	74 (100%)
	Semi-functional	1	10	4	11	0	0
	Non-functional	6	5	10	4	3	0
	No updates/Not validated	2	3	15	8	0	0
	Privately used	0	0	1	0	0	0
	Total	46	125	202	241	19	74

Note: Numbers in () show the ratio of subprojects “under operational” among all the subprojects for each year.

Table 10 shows that about 80% of subprojects, which were completed 5 years ago are

still functional even in 5 years after completion and that about 85% of subprojects, which were completed within the past 4 years have been functional. It seemed that entities including LGUs, Barangays and People’s Organizations, responsible for operation and maintenance have spent the appropriate maintenance budget taking into account the operational status shown in the above table. However, the actual amount spent for the operation and maintenance work per year after the project completion is unknown.

Under the above mentioned Impact Study, interview surveys on the operational status and usage frequency of facilities under the CDA program were made against the barangay captains of the Treatment Group in both target Lanao del Sur and Maguindanao provinces. Responses covered 487 facilities.

Table 11 Operational Status and Usage Frequency of Infrastructure Facilities

Unit: subprojects

Type of Infrastructure Facilities	Operation Status: good Usage Frequency: High	good medium	good low	poor non-functional	Total
Agriculture	133	20	0	1	154
Multi-purpose Hall	83	32	6	3	124
Roads/Bridges (Transport)	51	4	0	1	56
Schools/Education	51	2	1	1	55
Water Supply (Water Supply and Sewage)	22	11	5	8	46
Health/Medical Services	21	2	0	1	24
Public Toilets (Water Supply and Sewage)	12	5	0	1	18
Others	9	0	0	1	10
Total	382 (78.4%)	76 (15.6%)	12 (2.5)	17 (3.5)	487 (100.0)

Table 11 demonstrates that 94% (78.4 + 15.6) of all the facilities still keep good condition and are well utilized. However, although two facilities including community centers and water supply system have no problems in the facility itself, it is reported that there are 29 facilities (6% of all the facilities), which have not been utilized nor operational due to breakdown. The main reasons are: breakdown of equipment and lack of power supply regarding the water supply system; and the facility has been used for private purpose in case of community center.²²

JICA conducted an Ex-Post Monitoring Study, focusing on part of subprojects implemented in Maguindanao, Lanao del Sur, Basilan and Tawi-Tawi from May to October 2014 by entrusting the study to a local consulting firm. Subprojects, assessed

²² Source: Impact Survey Report, March 2016

under the study include 58 under the CDA component (subprojects which were classified as “not functional” or “no updates” at the project completion in December 2012 were mainly selected as samples) and 29 under the SRI component (about 95% of the SRI component). Assessment was made by evaluating the status at the project completion (2012), the status as of ex-post monitoring (2014), and prospects for sustainability. Assessment results of subject subprojects under the SRI program are shown in Table 12.

Table 12 Assessment Results of Subprojects under the SRI Program

Status as of ex-post monitoring (2014)			Prospects for sustainability		
Status	Subprojects	%	Prospect	Subprojects	%
Fully functional	8	28	High	12	41
Functional	17	59	Moderate	11	38
Limited functional	4	13	Low	6	21
Total	29			29	

Note 1: “Status” indicates whether or not it is functional at this moment.

Note 2: “Prospect” is evaluated in terms of combined organization/financial, political, and technical aspects.

Note 3: “Functional” means the operational status with some minor problems (e.g. allocation of operational staff is insufficient)

Note 4: “Limited functional” means the status in which a subproject is partly underutilized for its intended purposes (e.g. A main component has not been utilized. Some parts of facilities need urgent repairs. Structural defects have been found. A road is still not connected to the main road.)

As shown in Table 12, the operational status of sample-selected subprojects at this moment indicates that 87% of subprojects are either “fully functional” or “functional”, and 79% of subprojects are considered either “high” or “moderate” in terms of sustainability. The document provided by JICA states that the SRIs have shown to have a more dynamic operation and maintenance structure and that this is shown in the ability of the SRI management to generate more supporting funds from other sectors in the community, from Municipal/Provincial LGUs and even from national government agencies. However, the actual amount spent for maintenance work per year after the project completion is unknown.

As mentioned above, regarding the CDA program in ARMM, about 80% of subprojects, which were completed 5 years ago are still functional even in 5 years after completion and that about 85% of subprojects, which were completed within the past 4 years have been functional. It is reported that 94% of facilities located in both Lanao del Sur and Maguindanao provinces, which are targets under the Impact Study have good

conditions and have been utilized at the time when the survey was implemented. It seems that entities including LGUs, Barangays and People’s Organizations, responsible for operation and maintenance have spent the appropriate maintenance budget taking into account the operational status shown in the above table. However, the actual amount spent for the operation and maintenance work per year after the project completion is unknown. Regarding the SRI program, the operational status of sample-selected subprojects at this moment indicates that 87% of subprojects are either “fully functional” or “functional”, and 79% of subprojects are considered either “high” or “moderate” in terms of sustainability. This fact supports that the SRI management secures funds appropriately from other sectors in the community, from Municipal/Provincial LGUs and even from national government agencies.

3.5.4 Current Status of Operation and Maintenance

Status of subprojects under the CDA program as of project completion (December 2012) is shown in Table 13.

Table 13 Status of Subprojects under the CDA Program

Status	Subprojects	%
Functional	624	88.3
Semi-functional	26	3.7
Not functional	28	4.0
No updates/ not validated	28	4.0
Privately used	1	0
Total	707	

Source: document provided by JICA

Note: “Semi-functional” means the status in which a subproject is not necessarily utilized for its intended purposes.

As shown in Table 13, at the project completion, 92% of all the subprojects were functional (including semi functional) and the outcome of the project has been achieved. However, the operational status at this moment, which is two years after project completion is not known since enough information is not available²³.

On the other hand, all the subprojects (100%) under the SRI program were functional at the project completion (December 2012). Even in two years after the project completion (2014), 87% of subprojects are either “fully functional” or “functional”.

²³ By mid-January 2015, the local consultant team visited 13 barangays and inspected the project sites. However, since a crash involving death of 44 policemen took place on January 25, 2015 in Mamasapano, Maguindanao, the security in the project sites was extremely worsened, and thus the field inspection, which was scheduled for later days was cancelled by recommendation of the executing agency.

(Even the remaining 13% of subprojects have been functional with some limitation.) Thus, it is considered that subprojects have been appropriately operated/maintained.

Regarding the operation and maintenance of the project, since no latest information (particularly on the amount spent for the operation and maintenance work, which is needed for examination and assessment of the financial aspects) on the CDA, which is the main component of the project was not available, it is difficult to examine the institutional, technical and financial aspects of the project. Regarding the SRI, no problems have been observed in the institutional, technical and financial aspects. Therefore, sustainability of the project effects is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objective of the project was to provide the basic social services, increase job opportunities, particularly in the agricultural and fishery industries, and promote the sustainable development through accelerating employment by implementing the local community-driven small-size infrastructure development in the Autonomous Region in Muslim Mindanao (ARMM), thereby contributing to reducing poverty. Regarding the project planning and approach for the project implementation (particularly, the methodology of project management and assurance of sustainability of the project), at the appraisal stage problems and their countermeasures to be taken when the “Community-Driven Development (CDD) approach” was adopted, needed to be examined/verified in detail. However, the project has been highly relevant with the Philippine development plan and needs, as well as Japan’s ODA policies. Its relevance is therefore considered high. Regarding the efficiency, although the project cost was lower than planned, the project period significantly exceeded the plan. Therefore, efficiency of the project is fair. Regarding the effectiveness, number of beneficiaries by the project was not originally estimated at the appraisal stage under the Community Development Assistance (CDA) program, which is among two components of the project, and it was merely assumed that number of targeted barangays would be 200 and that number of subprojects would be 400. Number of barangays to which assistance was actually provided under the CDA component is 358 with a total of 707 subprojects, which are both about 1.8 times of the originally planned. Thus, it is considered that number of beneficiaries by the project has substantially increased. Under another component, Strategic Regional Infrastructure (SRI) program, 31 subprojects (including sectors of transport, health, education and water/sanitation) were implemented, and the project well contributes to enhancement and improvement of the basic social services. Results of the Impact Study demonstrate that the project has provided the positive impacts

(improvement or enhancement was made comparing the status before the project) to access to the educational facilities (number of nursery and elementary schools per 1,000 residents) and usage rates of toilets at the barangay level and that improvement was also observed in the various sectors/aspects including income/expenditure, road conditions, access to markets and education/health facilities (travel time), wells/water supply system and usage ratio of toilets, security (conflict among clans), and trust to other clans and religious groups, and administrators of the central government at the household level. Number of employment created in the project targeted regions is unknown. Regarding the poverty reduction in ARMM, which was considered as a project impact, since alleviation and improvement of poverty have not been quantitatively confirmed, contribution to poverty alleviation by the project is considered to be minimal. The project has to some extent achieved its objectives. Therefore, effectiveness and impact of the project are fair.

Regarding the operation and maintenance of the project, since no latest information (particularly on the amount spent for the operation and maintenance work, which is needed for examination and assessment of the financial aspects) on the CDA program, which is the main component of the project was available, it is difficult to examine the institutional, technical and financial aspects of the project. Regarding the SRI program, no problems have been observed in the institutional, technical and financial aspects. Therefore, sustainability of the project effects is fair.

In light of the above, this project is evaluated to be partially satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

Regarding the CDA program, organizations and entities, responsible for operation and maintenance involve quite a number of LGUs, Community Groups and People's Organization, and targeted subprojects also cover even 6 sectors. Thus, it is difficult to provide recommendations common to all the relevant organizations and entities. Regarding the SRI program, it is recommended that agencies/offices responsible for operation and maintenance of each subproject continue to allocate appropriate budget for maintenance.

4.2.2 Recommendations to JICA

Regarding the CDA program, it is recommended that appropriateness of adoption of the CDD approach, problems and points to be improved when applied to the similar projects in future are examined/verified by selecting study targets more scientifically and increasing number of survey target samples (about 30% of subprojects since the executing agencies involve LGUs, Community Groups and People's Organization, and targeted

subprojects also cover even 6 sectors.) in order to more objectively assess/verify results of application of the CDD approach.

4.3 Lessons Learned

Appropriateness of project implementation by “Sector Loan type”

In the project implementation of a small scale infrastructure development project in the conflict area applying the CDD approach and so-called “Sector Loan type”, complication/difficulty of the portfolio management of a project by a lender during the project implementation, and verification/assurance of sustainability after the project completion (institutional setup for operation and maintenance, technical capacity and financing/sources) are major issues to be considered (at appraisal). Under the SRI, which was implemented simultaneously with the CDA program, target subprojects were identified to some extent at the commencement of the project (Although changes were made during the project implementation, a feasibility report for each subproject was also submitted). Thus, sustainability of the project was assured to some extent since agencies and offices, which have higher technical capacity in the field and staffs who took professional training, are responsible for maintenance. Thus, it is recommended that a so-called “Project Loan”, which was applied to the SRI program, and in which target subprojects can be identified, and its sustainability after the project completion can be also examined/assessed at appraisal, needs to be considered to the future similar projects.

Comparison of the Original and Actual Scope of the Project

Item	Original	Actual														
1. Output 1) Community Development Assistance (CDA)	1) Non-infrastructure support: provision of training to community groups and facilitators and technical assistance 2) Development of small-scale infrastructure: provision of equipment and civil work for construction, improvement, and rehabilitation of social and economic infrastructure (targeting 200 barangays with a total 400 sub-projects)	1) as planned 2) Number of actual barangays targeted: 358, Number of subprojects: 707 Direct or indirect beneficiaries: 600,000 Number of subprojects implemented by sector is shown as follows: <table data-bbox="975 573 1342 786"> <tr><td>Agriculture:</td><td>134</td></tr> <tr><td>Education:</td><td>274</td></tr> <tr><td>Health:</td><td>54</td></tr> <tr><td>Social development :</td><td>25</td></tr> <tr><td>Transport:</td><td>139</td></tr> <tr><td>Water supply and sanitation:</td><td>81</td></tr> <tr><td>Total:</td><td>707</td></tr> </table> The average construction cost of subprojects is 730,000 peso (about 1.5 million yen).	Agriculture:	134	Education:	274	Health:	54	Social development :	25	Transport:	139	Water supply and sanitation:	81	Total:	707
Agriculture:	134															
Education:	274															
Health:	54															
Social development :	25															
Transport:	139															
Water supply and sanitation:	81															
Total:	707															
2) Strategic Regional Infrastructure (SRI)	Under the guidance of the ARMM government, trans-regional infrastructure spreading over a few barangays and local government units was to be strategically developed. Originally proposed subprojects included the following 31 subprojects. <ul style="list-style-type: none"> • ARMM Assembly Building • Kabunsuan Cultural Complex • Provincial Social Welfare and Development Center (6) • Rehabilitation of Arterial Highways (national road) (8km) • Concreting of rural roads (provincial road) (4.5km) • Municipal Assembly Hall (7) • ARMM Business Assistance Center • ARMM Regional Testing Center • ARMM Information Management Center (2) • Provincial Integrated Health Center (2) • ARMM DTI Building • ARMM Cultural Center • ARMM Sports Center • Paving Macador Circumferential Road (25km) • Provincial Training Center (2) • ARMM Agrarian Justice and Library • ARMM Research & Development Center 	Among the originally proposed 31 subprojects, only 3 projects were completed as planned, and the remaining subprojects were implemented after changes/replacement was made. The completed 31 subprojects are as follows: <ul style="list-style-type: none"> • Road improvement/rehabilitation (4) • Provincial hospital • District hospitals (3) • DOST-ARMM Integrated Regional Standards and Testing Laboratory • DAF-ARMMIARC Training Center • Mother and Child Pavilion • Local Government Center (4) (The executing agency counts 4 subproject as one subproject.) • Causeway Wharf (2) • Rehabilitation of National High School (12) • Rehabilitation/improvement of ports (2) • Construction of water system (2) • Provincial Social Welfare Livelihood and Social Development Center The average construction cost of subprojects is 9.88 million peso (about 20.44 million yen)														
3) Consulting Services	1) Assistance in procurement (including detail designs of SRI subprojects) 2) Construction supervision 3) Assistance in project management	as planned														

	4) Evaluation and monitoring of project impacts 5) Technical assistance for promotion of participation mechanism 6) Environmental management 7) Procurement audit Experts: 278 M/M (only local consultants) Assistants: 104 M/M	Experts: 561.25 M/M Assistants: 290.24 M/M
2. Project Period	December 2003 – December 2007 (49 months)	December 2003 – December 2012 (108 months)
3. Project Cost		
Amount paid in Foreign currency	unknown	unknown
Amount paid in Local currency	unknown	unknown
Total	3,022 million yen	2,836 million yen
Japanese ODA loan portion	2,470 million yen	2,365 million yen
Exchange rate	1 Peso = 2.4 yen (as of August 2002)	1 Peso = 2.07 yen (average between 2006 and 2012)