

## Summary

I. Outline of the Project		
Country: Ethiopia		Project Title: The Project for Capacity Building in Irrigation Development
Issues/Sector: Agriculture and Rural Development		Cooperation Scheme: Technical Cooperation
Division in Charge: Rural Development Department		Total Cost: 551 million yen
Period of Cooperation	June 2009 – May 2014 (5 years)	Partner Country's Implementing Organization: Oromia Irrigation Development Authority (OIDA) [Changed from former Oromia Water Resources Bureau (OWRB) to Oromia Water Mineral and Energy Bureau (OWMEB) in October 2010 and from OWMEB to OIDA in July 2013.]
		Supporting Organization in Japan Ministry of Agriculture , Forestry and Fisheries
<p>1. Background of the Project</p> <p>Agriculture is one of the Ethiopia's most important sectors for its economy and industry, employing 85% of the working population and accounting for 40% of GDP. The "Growth and Transformation Plan (GTP) 2010/11 - 2014/15" highlights economic development through promotion of the "Agriculture Development-Led Industrialization"(ADLI). Meanwhile, agricultural production in the country depends on traditional technologies in reality. Consequently the country faces low productivity per area and unstable food production and supply.</p> <p>Oromia Region has the largest population of 27.3 million with the largest area of 359 thousand km<sup>2</sup> in the country (2007). In the Region, where 80% of the people stay in its rural areas, improvement of their agricultural productivity has been prevented due to unstable rainfall in low land, soil erosion in rain season in highland, high population density, immaturity of the market and etc. As for the irrigation development, the region had irrigated only 12% of 1.7 million ha of land suitable for irrigated agriculture by 2005. While the regional government has introduced a policy promoting spate irrigation, in which seasonal spate is utilized, in Eastern Oromia, capacity of the technical staff both at regional and zonal levels for irrigation development were not sufficient and considered to be an urgent issue.</p> <p>Under the circumstances above, JICA had conducted technical cooperation in Oromia Region since 'The Study on Meki Irrigation and Rural Development Project in Oromia Region' in 2000. The Project for Irrigation Farming Improvement (IFI) was a technical cooperation</p>		

project between JICA and OWRB as a CP organization from 2005 to 2009. Through the IFI project, there were achievements at on-farm level, such as improvement of farmers' income, organization strengthening of the water user's association, etc. However, it was figured out that irrigation development capacity of OWRB should be enhanced urgently for successful and effective irrigation development in the Region. Then GoE requested a new project for improving irrigation development capacity of OWRB.

In response to the request, JICA in cooperation with OWRB started 'the Project for Capacity Building in Irrigation Development' for five years from June 2009. Through the Project, capacity building of OIDA's experts have been implemented in the following three areas; (1) Water Resource Management, (2) Planning, Design and Construction Management and (3) Facility and Water management.

## 2. Project Overview

### (1) Overall goal

The number of irrigation planning functioning effectively and efficiently is increased in Oromia Region.

### (2) Project Purpose

Capacity of OWMEB in effective and efficient irrigation development and management is enhanced.

### (3) Outputs

- 1) Capacity of OWMEB irrigation experts to develop database and master plan of irrigation water resource for sustainable management is improved.
- 2) Capacity of OWMEB irrigation experts in planning, design and construction management of irrigation projects is improved.
- 3) Capacity of OWMEB irrigation experts on irrigation facility and water management is improved.

### (4) Inputs

Japanese side: Total 551 mil. Yen

Long-term Expert	7	Equipment
Short-term Expert	16	Excluded from local cost 5.1 mil. Birr
Trainees received in Ethiopia*	1,214	Included in local cost 1.7 mil. Birr
in Egypt and Japan	14	Local cost 22.9 mil. Birr
*: Cost for the training in Ethiopia is included in the local cost		

Ethiopian side:

Counterparts	31	
Land, Office space and Car parking space		

Local cost for two training courses	
II. Evaluation Team	
Members of the Evaluation Team	
Mr. Shinjiro Amameishi	Team Leader Director, Arid and Semi-Arid Farming Area Division 1, Rural Development Department, JICA
Mr. Kazuhiko Kitagawa	Irrigation Planning Director, Nishi-Ohou land improvement research and management office, Tohoku regional agricultural administration bureau, Ministry of agriculture, forestry and fisheries
Mr. Shimboku Miyakawa	Evaluation and Analysis Representative, Miyakawa LLC
Mr. Kenichi Matsumoto	Evaluation Planning Deputy Director, Arid and Semi-Arid Farming Area Division 1, Rural Development Department, JICA
Period of Evaluation: 17 November 2013 – 6 December 2013	Type of Evaluation: Terminal Evaluation
III. Results of Evaluation	
1. Project Performance	
(1) Outputs	
The output 1 will be achieved by the end of the Project.	
All of the planned CBID Guidelines and Manuals have been drafted and are expected to be finalized in February, 2014. Using those CBID Guidelines and Manuals, two master plans for irrigation development of Langano Lake Basin and Kaleta River Basin are nearly prepared but another new master plan is unlikely to be fully prepared by the end of the Project. While training programs are still under the process of formulation, four training texts were already prepared and eleven training courses were conducted receiving 377 participants. Based on these experiences, the training programs are likely to be formulated by the end of the Project. According to interviews and questionnaires to the participants, the quality of the training seems satisfactory. Over 10% of the experts of HQ and the four target Zones in the relevant fields conducted the training.	
The output 2 will be almost achieved by the end of the Project.	
All of the planned CBID Guidelines and Manuals have been drafted and expected to be finalized in February, 2014. Those draft guidelines and the manuals were used in OJT of the Project and new irrigation projects of OIDA to some extent. While training programs are still under the process of formulation, twenty six titles of training texts were already prepared and fifteen training courses were conducted receiving 653 participants. Based on these experiences the training programs are likely to be formulated by the end of the Project.	

According to the interviews and questionnaires to the participants, the quality of the training seems to be satisfactory. Over 10% of the experts of HQ and the four target Zones in the relevant fields conducted the training.

The output 3 will be achieved by the end of the Project.

Three out of four planned CBID Guidelines and Manuals have been drafted and expected to be finalized in February, 2014. Remaining last one is in preparation. Those draft guidelines and the manuals were used in OJT of the Project and new irrigation projects of OIDA to some extent. While, training programs are still under the process of formulation, forty four titles of training texts were already prepared and twelve training courses were conducted receiving 639 participants. Based on these experiences the training programs are likely to be formulated by the end of the Project. According to the interviews and questionnaires to the participants, the quality of the training seems to be satisfactory. Enough number of the trainers was prepared.

## (2) Project Purpose

The project purpose is likely to be achieved by the end of the Project, considering the levels of the achievements toward the PDM indicators.

Twelve out of fourteen planned draft CBID Guidelines and Manuals were already recognized as standard documents within OIDA. All the planned CBID Guidelines and Manuals will be finalized and distributed to all the Zones of the Oromia Region by the end of the Project.

Result of questionnaires on uses of the CBID Guidelines and Manuals for irrigation development operation indicated that CBID Guidelines and Manuals were being used in regular work of OIDA HQ and the four target zones.

32 training courses were conducted and 75 titles of training texts were prepared. Training methods and experiences will be recognized and utilized within OIDA when the training program under each Output will be combined together.

## 2. Summary of Evaluation Results.

### (1) Relevance

The relevance of the Project is high since the project has strong consistency with the policies of both countries and an appropriate approach to tackle the issues of responsible organization for irrigation development.

ADLI (Agriculture Development Led Industrialization) strategy has been under

implementation in Ethiopia and is reflected in PASDEP (Plan for Accelerated and Sustained Development to End Poverty) 2005/06 -2009/10 and GTP (Growth and Transformation Plan) 2010/11 -2014/15. Irrigation development is in line with these national plans. GTP notes that agriculture is regarded as a major source of economic growth and ‘improvement of water utilization and expansion of irrigation coverage’ will remain focus areas. Further within WSDP (Water Sector Development Program) 2001-2016 formulated by the Ministry of Water Resources, IDP (Irrigation Development Program) sets ‘Developing capacities for planning, implementing, and operating irrigation projects’, as one of the five objectives.

As for Japan’s aid policy for Ethiopia, agricultural and rural development is one of the major areas. Assistance to irrigation development is placed in ‘Program for Improving Agricultural Productivity’ in this category. Therefore the Project aiming to agricultural development through enhancing irrigation sector is consistent with Japan’s ODA policy.

The implementing organization, currently OIDA, is a government organization which is responsible for the whole process of irrigation development, from planning to operation and maintenance in the Region. While there were strong needs of irrigated water for both the government and farmers to increase agricultural productivity, capacity of the implementing organization was not high. Under such situation, the project approach in which capacity enhancement of the organization is aimed through capacity building of its staff in three outputs is appropriate.

## (2) Effectiveness

Effectiveness is high since the possibility of achieving the project purpose is high as aforementioned in ‘1(2)’ and the causal relation between the project purpose and the three outputs is clear.

The project purpose is likely to be achieved as the targets of the three indicators, that is 1) Dissemination of the guidelines and manuals, 2) Irrigation development according to the guidelines and manuals, and 3) Recognition of the training methods and experiences, are likely to be reached by the end of the project.

Whole stages of irrigation development are covered by the three Outputs in the PDM. Capacity improvement of OIDA’s experts in ‘Development of database and master plan for irrigation development’ under Output 1, ‘planning, design and construction management’ under Output 2 and ‘irrigation facility and water management’ under Output 3 has been contributing to the achievement the Project Purpose. Therefore causal relation between them is clear.

While ‘There is no drastic change of government structure’, that is an important assumption in the PDM, was not fulfilled, as it happened twice, the influences were not serious enough

to affect the achievement of the project purpose.

### (3) Efficiency

Efficiency of the Project is judged medium considering the followings.

#### 1) Positive Factors

-With a few exceptions, most of the target indicators of the outputs will be achieved by the end of the project.

-Technical transfer by Japanese 7 long-term and 16 short-term experts was efficient. Almost all the interviewees and the results of questionnaires appreciated the instruction quality of those Japanese experts

-Most of the equipment was used effectively.

#### 2) Negative Factors

-Lack of the post for water resource planning expert in the initial plan and other reasons caused some delays in the activities in the beginning part of the project. This delay was relieved by additional dispatch of the relevant expert following to the recommendation of the Mid-term Review.

-Objective monitoring on the quality of the training was not carried out regularly.

### (4) Impact

The impact of the Project is high since the overall goal is likely to be achieved and other positive impacts beyond the Project framework have been observed.

The uses of the CBID Guidelines and Manuals for irrigation development in Oromia Region started in 2010 and it has been increasing year by year in the four target Zones.

On the other hand, some of the other government organizations responsible for irrigation development like the ministry of agriculture and related departments of the other Regions showed their interests in the CBID Guidelines and Manuals. In Oromia Region progresses of Water User Associations' (WUA) activities were also observed in the four target Zones.

### (5) Sustainability

Sustainability of the Project is medium. The project has both positive factors and negative factors as follows.

#### 1) Positive factors

-The policy of promoting irrigation development in Ethiopia is likely to continue. Agriculture is regarded as a major source of economic growth and 'improvement of water utilization and expansion of irrigation coverage' will remain focus areas.

-OIDA was established in July, 2013, by merging of Irrigation Water Supply and Drainage

Process Team of OWMEB, Irrigation Extension Process Team of Oromia Agriculture Bureau (OAB) and Scheme Administration Department of Oromia Water Works Construction Enterprise (OWWCE). Activities of the new OIDA are focused on the irrigation development and management more than before.

## 2) Negative factors

-The budget for Irrigation development from the government is not enough to meet the needs in the Region. To expand the use of the CBID Guidelines and Manuals, strengthening the training of the experts and securing the training budget are needed.

-Technical sustainability of water resource planning and management areas in Output 1 seems lower than others, though the skill level of the CPs is not lower. As it is rather new to OIDA, the work experiences of the individual experts and the organization are not much as those of Output 2 and 3. Further experiences and attention are needed for OIDA to keep the same level of sustainability.

## 3. Factors that promoted Realization of Effects

### (1) Factors concerning the Planning

Combination of 'development of actual CBID Guidelines and Manuals', 'course training' and 'OJT' for capacity building of the irrigation experts of OIDA functioned effectively. These three components produced synergy effect on capacity building of the CPs. The first drafts of CBID Guidelines and Manuals, which had been prepared by the Japanese experts, were adjusted and revised to fit to the Oromia environment through OJT. This experience helped the counterparts to understand those documents clearly. Course training offered the necessary knowledge and skills for irrigation development. OJT made those knowledge and skills more practical and facilitated the actual use of the CBID Guidelines and Manuals by the participants. As a result, the linkage of these three components provided effective and practical training environment for the irrigation experts of OIDA and gave them confidence in actual use of the CBID Guidelines and Manuals.

### (2) Factors Concerning the Implementation Process

Though activities to enhance the capacity of WUA are not set in the PDM, involvement of WUA into those for Output 3 was necessary, as the roles of WUAs in water management are very important. The project invited WUAs to the training on water management and supported their activities through OJT. Keeping good relationship with WUAs at the irrigation project sites, irrigation experts at Woreda and Zone levels have improved their skills and knowledge for supporting WUAs.

#### 4. Factors that Inhibited Realization of Effects

##### (1) Factors concerning the Planning

Up to the mid-term review, dispatch of Japanese long-term Expert on water resource planning had not been set in the plan. Without it, the progress of the project in this area had been limited and delay of activities became outstanding. The Mid-term Review identified a need of a Japanese long-term expert in the same field. Following the recommendation by the Mid-term Review, an expert on the field was added then the activities increased the speed.

##### (2) Factors concerning the Implementation Process

The Project experienced organizational restructuring of implementing body twice, from OWRB to OWMEB in the beginning stage and from OWMEB to OIDA in the final year. While this issue is placed as an important assumption in the PDM, the influences of these restructuring to the Project were not serious enough to affect the achievement of the project purpose. But they affected the progress of some activities to a certain extent.

#### 5. Conclusion

The project seems to achieve the project purpose by the end of the project period. There have been a few difficult times with delays of activities and uncertainty about the achievement of the project purpose. But it has got over these difficulties by the hard work and good team work between the Ethiopian counterparts and the Japanese experts.

It is a project in which Relevance, Effectiveness and Impact are high and Efficiency and Sustainability are medium. Relevance is high with consistency with the government policies and appropriateness of the approach. Effectiveness is high with the prospect of the achievement of the Project purpose. Impact is high with high prospect of achieving the overall goal. The approach in which 1) Development of the guideline and the manuals, 2) Training and OJT and 3) Use of the guideline and the manuals are combined, was effective. Dissemination of the CBID Guidelines and Manuals is expected to contribute to the expansion of irrigation service and increase of agricultural production in Oromia.

With a few exceptions, most of the activities will be completed and the Project Purpose will be achieved. Therefore it is judged that the Project should be terminated as planned in May 2014.

Considering the sustainability, the budget of OIDA for irrigation development including the training of the experts is limited when the needs are increasing. So OIDA is expected to try hard to seek finance sources from the donors as well as the government.



The master plan of another new basin is unlikely to be completed within the Project period. In order to maintain and to strengthen their skill level, the Ethiopian side should do it after the Project by themselves.

## 6. Recommendation

(1) Activities to be implemented during the rest of the Project period (until May, 2014)

### 1) Making CBID Guidelines and Manuals

All CBID Guidelines and Manuals should be finalized by February, 2014 and distributed to irrigation experts at Regional and Zonal levels by April, 2014.

### 2) Developing master plans on irrigation water resources

Two master plans on irrigation water resources for sustainable management on a) Langano Lake Basin and b) Kaleta River Basin, both of which are being currently developed, should be finalized. In addition, site selection and data collection of another new master plan should be completed, though relevant activities will start after the Project.

### 3) Completing Shaya irrigation project

Shaya irrigation project, which aims to enhance technical capacity of irrigation experts through the construction of head works, and main and secondary canals, be completed as scheduled in February 2014.

### 4) Developing “Training methods”

In order to make use of CBID Guidelines and Manuals continuously by wider range of irrigation experts, it is strongly recommended that practical training methods including training programmes be developed based on the existing outcomes of the Project such as training texts, CBID Guidelines and Manuals. The training methods should be developed with particular attention to the financial and technical applicability by the Ethiopian side.

### 5) Training and workshops

All remaining training and workshops should be conducted as planned.

(2) Expected activities after completion of the Project period

### 1) Securing sufficient budget

- Sufficient allocation of the Government budget

Due to lack of financial resources by the Ethiopian side, there are a lot of irrigation project which have not yet been reached commencement, though proposals have been already prepared. Considering the importance of irrigation development and also enhancement of irrigation technical capacity, it is strongly recommended that OIDA should make the strenuous efforts to secure sufficient budgets for irrigation development including both a) construction of physical infrastructures and b) activities for technical capacity enhancement.

- Collaboration with the donor-funded projects

There are some development partners (donors), which are providing and/or planning to provide assistance for irrigation development in Oromia Region. It is strongly recommended that possibility of collaboration with donor-funded projects be explored to leverage their projects for the promotion of quality irrigation development and also enhancement of technical capacity of irrigation experts simultaneously by utilizing CBID Guidelines and Manuals.

## 2) Continuous implementation of technical enhancement activities

- Organizing technical trainings for irrigation experts

It is expected that based on the training methods, technical enhancement activities should be implemented for irrigation experts at Region, Zone and Woreda such as a) technical trainings/workshops, b) on-the-job-trainings at irrigation project sites, c) sharing good experiences through exchange site visits and publishing a kind of newsletters, etc.

- Utilizing CBID Guidelines and Manuals

It is expected that CBID Guidelines and Manuals be distributed to the wider range of irrigation experts in Oromia Region and to the private sector including Contractors and Consultants. The trainings should also be organized.

- Monitoring the utilization of CBID Guidelines and Manuals

OIDA is expected to monitor how CBID Guidelines and Manuals are utilized by irrigation experts through regular meetings, interviews and questionnaires, and accumulate points to be revised. If necessity arises in the future, each guideline and manual is expected to be updated by the Ethiopian side.

- Developing a new master plan on irrigation water resources on at least one water basin

In order to further strengthen the technical capacity regarding the development of master plan on irrigation water resources for sustainable management, another new master plan is expected to be developed by utilizing the experience of developing two master plans (Langano Lake Basin and Kaleta River Basin) within the six months after the completion of the Project.

## (3) Keeping efforts in the enhancement of irrigation technical capacity by Ethiopian side

It was found that Ethiopian side was very keen to enhance irrigation technical capacity of irrigation experts at Regional, Zonal and Woreda level. In promoting quality irrigation development in sustainable way, it is expected that the efforts in the enhancement of irrigation capacity be made by the Ethiopian side even after the completion of the Project through a) promotion of irrigation projects as many as possible and b) activities of technical capacity enhancement such as training/workshop, practical site visits, OJT and others. In particular technical capacity enhancement activities should be carried out in sustainable

way by officially placing these activities as one of the OIDA's duties.

## 7. Lessons Learned

### (1) Combination of 'Guidelines', 'Training' and 'OJT' for Capacity Building in Irrigation Sector

Combination of 'development of actual guidelines', 'course training' and 'OJT' for capacity building of the irrigation experts functioned effectively. These three components produced synergy effect. The first draft of CBID Guidelines and Manuals, which had been prepared by the Japanese experts, were adjusted and revised to fit to the Oromia environment jointly by the CPs and the Japanese Experts through OJT. This experience helped the counterparts to understand those documents clearly. Course training offered the necessary knowledge and skills for irrigation development and OJT made those knowledge and skills more practical and facilitated the actual use of the guidelines and the manuals by the participants. The linkage of these three components provided effective and practical training environment for the irrigation experts of Oromia and gave them confidence in actual use of the CBID Guidelines and Manuals. Existence of the CBID Guidelines Manuals will help the Ethiopian Experts to use, maintain, and expand the appropriate skills for irrigation development.

### (2) Prompt Decision on adding Japanese long-term expert

In the beginning of the project, dispatch of a water resource planning expert was not planned. As a result, the progress of the project in this area, had been limited, then delay of activities became outstanding. After the Mid-term Review, a Japanese long-term expert for water resource planning was added then the activities increased the speed. If this addition was not taken in this timing, the possibility of achieving the project purpose would have been very low. Prompt decision on adding Japanese long-term expert functioned effectively and revitalized the Project.