

Country Name	Project on Irrigation Scheme Development in Central and Eastern Uganda												
Republic of Uganda													
I. Project Outline													
Background	<p>The agricultural sector is a key sector of the Ugandan economy. It accounted for approximately 20% of GDP (2013) and employed around 73% of the total labor force. Small and subsistence farming with low productivity occupied a dominant share at the farming scale of the country. Further, such farming was dependent on rain-fed conditions which was erratic and unreliable rainfalls in most parts of the country. Over the past many years, the rain-fed farming significantly affected the national food security, hence, it was crucially important to develop the abundantly available water resources to use for agricultural production in a sustainable way. The Central and Eastern regions have the largest cultivated area and production of major crops including rice. JICA has implemented the “Technical Assistance Support to Sustainable Irrigated Agriculture Development Project in Eastern Uganda” (2008-2011), “NERICA Rice Promotion Project” (2008-2011), and “Promotion of Rice Development Project” (2011-2019). Synergistic effects with these supports were expected.</p>												
Objectives of the Project	<p>The project aimed at developing the irrigation scheme development plan for the Central and Eastern Uganda, thereby contributing to improvement of the agricultural productivity in the target area.</p> <p>1. Expected Goals through the proposed plan¹: The agricultural production is increased in the target area.</p>												
Activities of the project	<p>1. Project site: 12 sites for potential irrigation development in Central and Eastern Uganda. 2. Main activities: Preparation of the master plan for 12 sites, implementation of the Pre-Feasibility Study (F/S) at 1 site and F/S at 2 sites, development of guidelines on irrigation development, training of the district technicians on irrigation and resource management, etc. 3. Inputs (to carry out above activities)</p> <table border="0"> <tr> <td>Japanese Side</td> <td>Ugandan Side</td> </tr> <tr> <td>1) Mission members: 16 persons</td> <td>1) Staff allocated: 6 persons</td> </tr> <tr> <td>2) Trainees received in Tanzania: 14 persons</td> <td>2) Equipment: Office space, etc.</td> </tr> <tr> <td>3) Equipment: Meteorological equipment, self-recording rain gauge, etc.</td> <td></td> </tr> <tr> <td>4) Local cost: Survey costs, hiring local consultants, transportation, etc.</td> <td></td> </tr> </table>			Japanese Side	Ugandan Side	1) Mission members: 16 persons	1) Staff allocated: 6 persons	2) Trainees received in Tanzania: 14 persons	2) Equipment: Office space, etc.	3) Equipment: Meteorological equipment, self-recording rain gauge, etc.		4) Local cost: Survey costs, hiring local consultants, transportation, etc.	
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Project Period	May 2014 to December 2016 (Extended period: May 2016 to December 2016)	Project Cost	(ex-ante) 468 million yen, (actual) 520 million yen										
Implementing Agency	Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Ministry of Water and Environment (MWE)												
Cooperation Agency in Japan	NTC International Co., Ltd., Pasco Corporation.												

II. Result of the Evaluation

1 Relevance
<p><Consistency with the Development Policy of Uganda at the time of Ex-Ante Evaluation></p> <p>The project was consistent with the development policy of Uganda at the time of ex-ante evaluation, as agriculture was positioned as a priority sector for the economic development in the “National Development Plan” (2010/11-2014/15) and the “National Development Plan II” (2015/16-2019/20), and irrigation was considered as one of the approaches for increasing agricultural production and productivity.</p> <p><Consistency with the Development Needs of Uganda at the time of Ex-Ante Evaluation></p> <p>23% of the country's land was occupied by water sources such as rivers, lakes and wetlands, and weather conditions were suitable for agricultural production. On the other hand, the average cultivated area per farmer was small, and irrigation facilities were not much developed. Most self-sufficient small-scale farmers were dependent on rain-fed agriculture. Thus, the project was consistent with the development needs of Uganda for development of an overall irrigation development plan.</p> <p><Consistency with Japan's ODA Policy at the time of Ex-Ante Evaluation></p> <p>The project was consistent with Japan's ODA policy for Uganda at the time of ex-ante evaluation, as one of the priority areas was income improvement in the rural areas in the “Country Assistance Policy for Uganda” (2012), and one of the programs was the promotion of rice cultivation.</p> <p><Evaluation Result></p> <p>In light of the above, the relevance of the project is high.</p>
2 Effectiveness/Impact
<p><Status of Achievement of the Objectives at the time of Project Completion></p> <p>By the time of project completion, the Irrigation Scheme Development Plan (ISDP) was developed for the 12 candidate sites, and the feasibility study (F/S) was implemented in Sironko river basin/Acomai site and Atari river basin site and the pre-F/S was conducted in</p>

¹ This goal is expected to be realized through mid-term/long-term time period and therefore is beyond the time frame of this evaluation. Therefore, in principle, it will not be considered within this evaluated.

Namatala site. For capacity development of the personnel of the central and regional governments on the irrigation development plan, training was conducted on 7 modules, including basic GIS (Geographic Information System) training, irrigation project implementation, training in Tanzania, advance GIS training, hydrology and design, design of irrigation facilities, and project evaluation method. A total of 87 engineers were trained.

<Utilization Status of the Proposed Plan at the time of Ex-post Evaluation>

The proposed plan has been utilized by the implementing agency. ISDP was officially approved by MAAIF in 2018, based on which three projects have been implemented by MWE and MAAIF. Through these projects, potential irrigation sites of Ngenge, Acomai and Atari are at different levels of preparation and development. Besides, ISDP has been utilized as the guiding principle for F/S and community engagement for the irrigation schemes development in the country.

<Status of Achievement for Expected Goals through the Proposed Plan at the time of Ex-post Evaluation>

Achievement of the Expected Goal could not be verified. Production of rice in Uganda has increased from 237 thousand ton in 2014 to 246 thousand ton in 2018, but the data specific to Central and Eastern Uganda was not available. Also, based on the increase in the number of rice farmers and processors, it could be assumed that the rice irrigation and production area has been increasing. However, these increases have not been directly attributed to the project, according to the Rice Desk officer of MAAIF, since the positive trend was already on course before the project commenced. Reportedly, they have been results of previous projects such as JICA's "Sustainable Irrigated Agriculture Development Project in Eastern Uganda" (2008-2011), "NERICA Rice Promotion Project" (2008-2011), "Promotion of Rice Development Phase 1 (PRiDe I)" (2011-2016). These are in addition to other rice development projects supported by other Development Partners like the WB and African Development Bank (AfDB).

<Other Impact at the time of Ex-post Evaluation>

The following positive impacts have been confirmed. First, community mobilization and information flow has become easy to date, thanks to the established functions of coordination committees at the site/community and district levels. Second, as an impact related to gender, according to several District Local Government officers, agriculture production was previously mainly done by females, with men being more active from harvest onwards. However, with the increased awareness on the profitability of rice, men and youth began to play an active role in production as well, thus reducing the burden on women.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is high.

Utilization of the Proposed Plan

Aim	Indicators	Results												
(Status of achievement of the Objectives)	1. The Development plan for the target area is developed, and the priority sites are selected.	<u>Status of achievement: Achieved.</u> (Project Completion) - ISDP was developed for the 12 candidate sites, and three priority sites were selected for F/S and pre-F/S.												
	2. F/S is conducted in 2-3 priority sites.	<u>Status of achievement: Achieved.</u> (Project Completion) - F/S was conducted in Sironco/Acomai site and Atari site. Pre-F/S was conducted in Namatala site.												
	3. Capacity of the personnel of the central and regional governments on the irrigation development plan, the facility maintenance plan and the water management plan is developed.	<u>Status of achievement: Achieved.</u> (Project Completion) Training was conducted on 7 modules. Training contents were (a) basic GIS training, (b) irrigation project implementation, (c) training in Tanzania, (d) advance GIS training, (e) hydrology and design, (f) design of irrigation facilities, and (g) method of project evaluation. In total 87 engineers among C/Ps, districts, and universities attended different training.												
(Utilization Status of the Proposed Plan) The irrigation scheme development plan based on the Irrigation Scheme Development Plan based for the Central and Eastern Uganda developed by the project is implemented by the Government of Uganda.	1. The Irrigation Scheme Development Plan for the Central and Eastern Uganda is implemented by the Government of Uganda or other development partner at more than one site.	<u>Status of achievement: Achieved.</u> (Ex-post evaluation) - As of May 2020, the following projects have been implemented. (i) Farm Income Enhancement and Forest Conservation II (FIEFOC II) being implemented by MWE with support from AfDB. Through the project, Ngenge potential irrigation site has been developed as an irrigation scheme, with almost 80% of the works complete. (ii) Agriculture Value Chain Development Project (AVCDP) being implemented by MAAIF with support from AfDB. Through the project, preparations for the development of Acomai potential irrigation site as an irrigation scheme have been on-going. (iii) Project for the Establishment of Irrigation Systems in Atari Basin Area to be implemented by MAAIF with the grant aid technical cooperation of JICA. Through the project, preparations for the development of Atari potential irrigation site as an irrigation scheme have been on-going.												
(Expected Goals through the proposed plan) The agricultural production is increased in the target area.	1. The agricultural productivity (rice, etc.) is improved by more than 10% in the priority development area.	<u>Status of achievement: Not verified.</u> (Ex-post Evaluation) - Rice production has increased in the country, although data for the target area was not available. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> </tr> </thead> <tbody> <tr> <td>Rice production</td> <td>237.01</td> <td>238.19</td> <td>237.39</td> <td>240.99</td> <td>246.53</td> </tr> </tbody> </table>		2014	2015	2016	2017	2018	Rice production	237.01	238.19	237.39	240.99	246.53
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		(thousand ton)					
(Source) MAAIF Statistical Abstract 2018.							
(Source) Project Completion Report and questionnaire surveys from MAAIF and District Local Governments.							
3 Efficiency							
<p>Both the project cost and period exceeded the plan (ratio against the plan: 111% and 122%, respectively). Outputs were produced as planned. In the middle of the project period, there was opposition to the project by community people in the study area, who worried that the project was a ploy to grab their land. In order to solve the standoff, the project established coordination committees at the district and community levels, through which all information concerning project activities and plans was disseminated to the target community members. The project made and exchanged agreements with the target communities to restart the project activities. Thus, it took time more than planned. Therefore, the efficiency of the project is fair.</p>							
4 Sustainability							
<Policy Aspect>							
<p>Promotion of the irrigation scheme development has been prioritized in the “National Irrigation Policy” (2017) jointly developed by MAAIF and MWE and the “Irrigation Masterplan” which was under development at the time of ex-post evaluation, and the “Agriculture Sector Strategic Plan” (2015/16-2019/20).</p>							
<Institutional/Organizational Aspect>							
<p>The organizational setting to implement ISDP has been sustained. Per the National Irrigation Policy, MAAIF has taken the responsibility in on-farm irrigation development aspect while MWE has handled off-farm irrigation development aspects, in addition to water resource and wetland management and development. . At the time of ex-post evaluation, MAAIF was undergoing a restructuring process as part of public sector realignment. At the time of ex-post evaluation, it was expected that the number of staff in charge of irrigation development would increase from about 40 to 100, and an Agricultural Engineer would be assigned for every district which would have technical support from MAAIF. It can be judged that MAAIF has sustained a sufficient number of staff to implement ISDP to some extent, as more technical personnel have been recruited in recent years. As well, MWE has sustained a certain number of staff to implement ISDP, although more recruitment would be needed, according to the Department of Water for Production (DWFP). MWE has established five Regional Water Offices (Central, Eastern, Western, Northern and Karamoja) and equipped them with technical personnel to further promote irrigation development in the country.</p>							
<Technical Aspect>							
<p>MAAIF has continuously organized refresher training courses for its personnel to sustain necessary skills and knowledge to implement ISDP, besides OJT in ongoing irrigation development initiatives, according to the Department of Agricultural Infrastructure, Mechanization and Water for Agricultural Production. Regarding MWE, its staff has sustained technical skills, according to DWFP, as they have applied acquired skills in other irrigation development projects. For further strengthening their skills, MWE would welcome the participation of its personnel in the “Project for the Development of Irrigation Systems in Atari Basin Area” (2018-2023) as OJT. The guidelines developed by the project have been utilized by the district staff of MAAIF and MWE for implementing irrigation development projects. One of them (Guideline for Management, Operation and Maintenance of Irrigation System by Water Users’ Association) was being updated by MAAIF at the time of ex-post evaluation.</p>							
<Financial Aspect>							
<p>MAAIF has secured sufficient budgets for implementation of ISDP introduced by the project. According to MAAIF, the central government has provided budgets and would continue to do so as long as more funds are realized, including those from the World Bank and AfDB.</p>							
<Evaluation Result>							
<p>Therefore, the sustainability of the effectiveness through the project is high.</p>							
5 Summary of the Evaluation							
<p>In the project, the master plan for promoting irrigation scheme development (ISDP) was developed and F/S and pre-F/S were implemented. Since the project completion, ISDP was officially approved, and three projects proposed in ISDP have been implemented. Regarding the project efficiency, both the project cost and period exceeded the plan.</p>							
<p>Considering all of the above points, this project is evaluated to be highly satisfactory.</p>							

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- It is recommended to MAAIF to conduct the national agricultural census. The last such census was done in 2008, and recently each province and district have gathered and managed the information in their own way. If the data on production, productivity, consumption, export, import, PH-Losses, and so on are managed in a unified way, it would be helpful to assess the implemented project effects and make more accurate conclusions for better project planning.

Lessons Learned for JICA:

- The project had initially considered that community people in the study area would understand the project objectives and activities. However, after the project started, they expressed strong opposition to it to the thought that they would be disenfranchised of their land as a result. In order to solve the standoff, the project established coordination committees at the district and community levels through which all information concerning project plans and activities was disseminated to target community members. Actually, these committees helped to not only clear up their misunderstandings but also raise awareness and even engagement which has continued even after the project. For implementing an irrigation project on land owned by the community (people), it is necessary to fully explain the project intention prior to the commencement. It is indispensable to incorporate a consensus-building process into the project activities and desirable to exchange some sort of document that shows consensus.