

## Summary Sheet for Result of Evaluation Study after the Project

1. Outline of the Project	
Country: Islamic Republic of Afghanistan	Project title: The National Agricultural Experiment Stations Rehabilitation Project in the Islamic Republic of Afghanistan
Issue/Sector: Agricultural/ Rural Development	Cooperation scheme: Technical cooperation project
Division in charge: Paddy Field Based Farming Area Division 2, Rural Development Department	Total cost (at the time of evaluation): 950 million yen
Period of Cooperation	(R/D): April 20, 2005 (Extension): July 19, 2010 – March 2011
	(F/U): (E/N):
	Partner Country's Implementing Organization: Ministry of Agriculture, Irrigation, and Livestock (MAIL) Supporting Organization in Japan: Ministry of Agriculture, Forestry and Fisheries (MAFF)/ Japan Association for International Collaboration of Agriculture and Forestry (JAICAF)
Related Cooperation:	
<p>1-1 Background of the Project</p> <p>In Afghanistan, irrigated land and agricultural facilities have been destroyed or abandoned as a result of more than 20 years of conflict. Furthermore, agricultural production has significantly decreased mainly due to the drought in the last several years. Agricultural restoration/development is positioned as one of the seven pillars in the Afghanistan National Development Strategy (ANDR) completed in May 2008 and restoration of agriculture is a key issue in the fight against poverty in this country, where 85% of the population is engaged in agriculture.</p> <p>In order to ensure sustainable agriculture, it will be necessary to establish a system for the acquisition and accumulation of fundamental scientific knowledge for agricultural production, to conduct experiment and researches to disseminate and communicate information, and to establish a system for technology development and extension support. In the past, 20 national agricultural experiment stations dispersed across the country, including the 3 Central Agricultural Experiment Stations (CAES) in Kabul and the 2 facilities in the premises of the MAIL, were playing such roles but their functions have diminished considerably due to the destruction of facilities and outflow of human resources, which are the direct effects of the long-standing conflict. Since these experiment stations are under the supervision of the Agricultural Research Institute of Afghanistan (ARIA), it requested a technical cooperation project "National Agricultural Experiment Stations Rehabilitation Project (NARP)" in order to re-establish the systems for agricultural experiments and researches, technology development, and extension support services at the level of experiment stations.</p> <p>1-2 Project Overview</p> <p>This Project aims to improve the research and technology development capabilities as well as the extension support services in Afghanistan, so that the Agricultural Research Institute of Afghanistan (ARIA) and the National Agricultural Experiment Station can function as core institutions for the improvement of agricultural productivity.</p> <p>(1) Overall Goal</p>	

Research Department and CAES are able to play a central role for improvement of agricultural production.

(2) Project Purpose

The research and technology development of Research Department and CAES are strengthened, as well as their function as extension support services.

(3) Outputs

1. The facilities, equipment and information management system concerning research and technology development are rehabilitated.
2. The personnel concerning research and technology development are improved in their capacity.
3. The network in and outside the country concerning research and technology development is built.

(4) Inputs (at the time of evaluation): total cost 950 million yen

1) Japanese side:

Long-term Expert: 8 persons	Equipment: 73 million yen
Short-term Expert: 27 persons	Local cost: 236 million yen
Trainees received: 25 persons	Other

2) Afghan side:

Counterpart: 34 persons  
 Land and Facilities:  
 Local cost: 22.18 million afghani (approximately 41.92 million yen, 1 afghani = 1.89 yen)  
 Office supplies, utility costs

II. Evaluation Team

Members of Evaluation Team	(Specialized field: name, title) Team Leader: Mr. Satoru Hagiwara, Senior Advisor, Rural Development Department, Japan International Cooperation Agency (JICA) Planning and Management: Mr. Hiroyuki Tanaka, Assistant Director, Paddy Field Based Farming Area Division 2, Rural Development Department, JICA Evaluation Analysis: Dr. Hideaki Higashino, Senior Consultant, RECS International Inc.	
Period of Evaluation	November 9 – November 30, 2010	Type of Evaluation: Terminal

III. Results of Evaluation

3-1 Confirmation of Results

3-1-1 Achievement of the Project Purpose

The achievement of the Project Purpose is judged to be moderate to high based on the achievement of the indicators.

<Indicator 1. Annual Review Meeting (ARM) is conducted by the initiative of the Agricultural Research Institute of Afghanistan (ARIA).>

Since its introduction in January 2008, ARM has been held once every year and ARIA is now able to plan, manage, and review the meeting independently.

*<Indicator 2. By January 2010, technologies will be developed from half of the selected research subjects at sub-program level.>*

Seven out of ten sub-programs reached a satisfactory level. Significant research achievements include seven wheat varieties and three potato varieties that were newly developed and registered between 2007 and 2010.

*<Indicator 3. By January 2010, regular activities, such as seminars/workshops, to disseminate the research results will be conducted jointly with the extension department.>*

Although some seminars and workshops have been organized by the Project, just a part of them were planned or conducted jointly with the extension department, and the institutional framework to conduct joint activities with the department has not been fully established yet.

### 3-1-2 Achievement of the Outputs

Expected outputs were achieved as planned.

#### Output 1.

*<Indicator 1-1. Counterpart staffs are able to formulate rehabilitation plan of agricultural experiment stations.>*

The Japanese Experts and Afghan counterpart staffs have jointly set up the strategy to rehabilitate the National Agricultural Experiment Stations.

*<Indicator 1-2. Facilities and equipment are properly installed and operated in ARIA and CAES.>*

Proper installation of facilities and equipment was confirmed at Terminal Evaluation.

*<Indicator 1-3. Information management system is properly installed and effectively used for research activities. >*

Information management system has been properly installed but has not yet been used on a full-scale basis yet for research activities.

#### Output 2.

*<Indicator 2-1. By the end of 2006, relevant research subjects will be selected for technology development.>*

37 relevant research subjects were selected by the end of 2006.

*<Indicator 2-2. By January 2010, research results (progress) will be compiled into reports according to the "Research Guidelines" in terms of sub-sub program level. >*

It was confirmed that the research results have been compiled based on the Guidelines.

*<Indicator 2-3. By January 2010, at least two researchers of each department of ARIA will have the capability of explaining research results to stakeholders (farmers, extension officers, etc.)>*

It has been confirmed that 20 researchers in 11 department of ARIA are capable of explaining research results to the stakeholders.

#### Output 3

*<Indicator 3-1. At least one joint activity for priority research subjects is conducted by the initiative of ARIA every year.>*

Three joint research activities have been conducted since the beginning of the Project in collaboration with the International Center for Improvement of Maize and Wheat (CIMMYT), International Fertilizer Development Center (IFDC), and Food and Agriculture Organization of the United Nations (FAO).

### 3-2 Summary of Evaluation Results

#### (1) Relevance of the Project is high.

Agriculture is a key sector in Afghanistan where about 80% of the population lives in rural areas and it is crucial to strengthen an agriculture sector. In order to improve agricultural productivity in Afghanistan, it is necessary to develop various technologies in which CAES take an extremely important role. Development of various technologies also meets the needs of the Afghan farmers. Agriculture and rural development are priority issues in the Afghanistan National Development Strategy (ANDS) which aims to achieve poverty reduction and livelihood diversification. Improvement of agricultural productivity is also prioritized in the agricultural strategy of the MAIL. Therefore, the Project is in line with the strategies of the Afghan government. Moreover, since the Japanese government is providing assistance based on the diverse development needs of Afghanistan, including agriculture and rural development, the Project is also in alignment with the assistance policy of the Japanese government.

#### (2) Effectiveness is moderate-high.

The Project Purpose and Outputs are considered to be moderately achieved, based on the degree of achievement of the indicators. Although some activities were delayed due to the relocation of the soil laboratory which was constructed in the first half of the Project, from Darulaman Experiment Station to Badam Bagh Experiment Station at the request of the Afghan side, the Afghan side actively made efforts to recover the delay. However, the overall effectiveness was evaluated as moderate-high because insufficient achievements have been identified for some indicators (including joint implementation of workshops and seminars with the extension department).

#### (3) Efficiency is low.

Japanese Inputs, namely, allocation of the Experts for transfer of technology, training of counterpart staffs in Japan and in Iran, rehabilitation of experiment stations, and local cost assistance, were considered effective for the capacity development of Afghan counterpart staffs. However, the transfer of the soil laboratory, at the request of the Afghan government, and subsequent delay in the reestablishment of the facility caused delay of some project activities and also hampered other inputs to be made appropriately (e.g. facility development costs and dispatch of experts, etc.). But the activities were accelerated in the latter half of the cooperation period and the Outputs were accomplished satisfactorily. While the Afghan side had allocated about 38 counterpart staffs for the implementation of the activities, some inefficient cases were reported, such as resignation of 4 staffs immediately after their return from the trainings in Japan.

#### (4) Impact

Negative impacts of the Project have not been confirmed at the time of the Terminal Evaluation.

Positive impacts leading to the achievement of the Overall Goal have been confirmed as below.

- Some farmers in Balkh province have adopted the newly developed melon fly prevention techniques.

- After the inauguration of the soil laboratory, many neighboring farmers visited the laboratory for diagnosis of samples or consultation.
- With the support of FAO, breeder seed production plans have been developed for the new wheat varieties that have been registered as recommended varieties, and production have started for some of them.

Although there is a time lag between development of new technologies and their adoption, the above-mentioned cases suggest that the Project Purpose will be achieved.

(5) Sustainability is moderate.

In terms of institutional sustainability, the MAIL explained that the MAIL had a plan to strengthen the quality and quantity of researchers and obtained financial support commitment from other organizations.

Financial sustainability should be ensured for a certain period of time by above-mentioned financial support committed from other donors. However, ensuring sustainability based on the country's own budget is considered extremely difficult.

From the technical perspective, about 20 researchers have improved their abilities and are currently capable of conducting their research independently.

### 3-3 Factors that Promoted Realization of Effects

#### (1) Factors Concerning Planning

- 1) Development of research plan, provision of facilities, materials and equipment to experiment stations, technical trainings for researchers, guidance by Japanese experts, and other inputs have resulted in a significant increase of experiments and researches.
- 2) Conducting experiments and researches by implementing the necessary activities in a sequential process (development of a research strategy→decision of the experiment and research theme→implementation of the experiment and research→verification of the results→reporting) has contributed to the achievement of the Project Purpose.

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

Although functional improvement of the agricultural experiment stations will require capacity building of many researchers, it will be difficult to target all of them for technical transfer. Therefore, the Project employed the method of developing the capacity of key researchers (including trainings in Japan), who will then be expected to transfer the technology to the other researchers. This method was effective and resulted in an increased number of researchers who can independently conduct experiments and researches. In addition, the method of teaching routine procedures of experiments and researches through OJT was also established.

At the time of the mid-term review, it was pointed out that the prolonged transfer of the MAIL and the experiment stations were becoming an impediment in securing sufficient time for researches. This problem was initially considered unsolvable by the Afghan side, but weekly meetings started to be held and research reports were produced after adopting the alternative proposal of improving the laboratories. It had also been pointed out that the English skills of the researchers needed improvement. After addressing this issue, the test results were improved by 20 points compared with the result obtained immediately after the mid-term review.

### 3-4 Factors that Impeded Realization of Effects

#### (1) Factors Concerning Planning

Due to the relocation of the Darulaman Experiment Station during the project period, development of infrastructure and equipment installation was partially delayed, hampering the trainings and research activities which required those facilities. Furthermore, local security situation prevented appropriate dispatch of Japanese experts and the Project plan had to be partially modified. Apart from these incidents, the activities were generally implemented according to the plan.

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

Project management was troubled by slow responses of the MAIL, frequent organizational changes, and increasing complexity of the roles played by the Afghan side in the implementation of the Project. However, the effects on the achievement of the Project Purpose were minimized by making efforts to strengthen mutual understanding through daily communication.

### 3-5 Conclusion

By assessing the activity achievements and the current progress, it was judged that the initial Project Purpose is achievable. Therefore, the evaluation team concluded that it is appropriate to terminate the Project in March 2011, as planned.

### 3-6 Recommendations

#### (1) Actions to be taken before the termination of the Project

- 1) Regarding the power supply for the soil laboratory (Badam Bagh Experimental Station), a switchboard should be installed urgently to ensure stable power supply.
- 2) From the perspective of sustainability, it is recommended to make efforts on preparation of appropriate proposals to secure budget allocation from the MAIL and/or other fund resources.
- 3) Regarding the Information Management System introduced by NARP, the contents of the database should be improved to promote the effectiveness of research and experiment works.
- 4) The status of application and propagation of the technologies introduced under the Project should be monitored. It will be necessary to collaborate with the Extension Department to collect the following information.
  - (i) Status of seed production/distribution of the newly developed wheat varieties.
  - (ii) Status of application of bagging technology for a melon fly prevention.
  - (iii) Farmers' evaluation of the disseminated technologies.

#### (2) Actions to be taken by the Afghan side after the termination of the Project

- 1) Most of the researchers currently belong to the Research Department (MAIL) and are commuting from the MAIL to the experiment stations by bus. Therefore, their actual working hours is approximately 4 to 5 hours. It will be necessary to secure sufficient working hours for experiments and researches so the MAIL is recommended to re-examine the current attendance management system as well as the transportation service system.
- 2) In order to improve the productivity of the farmers, it is important to disseminate the research results to the farmers. For future dissemination of research results, it will be necessary for the

Research Department and Extension Department to work in close collaboration to strengthen extension support services.

- 3) The function of the existing 14 provincial experiment stations should be strengthened, so that researches can be conducted by taking local needs into consideration.
- 4) ARIA should continue to offer English courses in order to make further improvement of the researchers' command of English.

### 3-7 Lessons Learned

#### <Utilization of Local Human Resources>

In countries where security is not ensured, such as Afghanistan, timely dispatch of Japanese experts may be difficult; therefore, it will be necessary to consider the employment of locally available human resources as one of the core members of projects, for example as a project facilitator.

### 3-8 Follow-up status

Nothing in particular.