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Capacity Development of Engineers and Technology Transfer: Within the Framework of Iraq Reconstruction Assistance

Iraq is said to be the first country in the world where intensive agriculture began, exploiting the abundant water resources of the Tigris and Euphrates. In the past, Iraq was an advanced nation for irrigation agriculture. However, Iraq has been facing a number of problems such as decreased water flow in the two rivers due to increased water resource use in Turkey and Syria and the construction of new dams upstream. Other problems include deteriorating irrigation and drainage facilities and decreased water availability due to inappropriate resource management. In order to assist Iraq's efforts to solve these problems, the Japanese Government, through the JICA, has been providing technical assistance to the country as part of the overall post war reconstruction assistance. Japan's cooperation entails support to enhance water management techniques to realize effective use of water in irrigated farms and to increase crop production, the formation of water users associations, and technical cooperation necessary to disseminate technologies.¹⁾

The Iraqi engineers who participated in our training course were mainly young promising engineers from the central and local governments. Their specialties ranged from cultivation, soil, extension, irrigation and drainage technology, and they will be the backbone of Iraq's future irrigation agriculture. Our assignment this time aimed to develop the capacity of the trainees in the field of irrigation agriculture. We organized lectures, practical exercises and visits for them to enable them to learn cultivation techniques under irrigation, facility operation and the theory of water users association. In addition, with the trainees, we assumed an irrigation project in Iraq and collected the information required for implementation, requesting the Iraqi trainees to investigate and collect information that was lacking.

The Iraqi trainees were highly motivated. There always were questions at lectures, and we constantly felt their proactive attitude as they tried to absorb as much information as possible. During field visits, they did note many things down in their notebooks, take photographs, ask many questions and put forward requests for future training. As we cannot enter Iraq at the moment, the only sources of information for formulating a project for Iraq in a remotely controlled way was through documents brought by the trainees and their own acquired knowledge. We felt quite frustrated not to be able to see, hear and feel Iraq directly, when providing training in Iraq's neighbouring country.

After the old regime collapsed, I hear many qualified engineers have been leaving Iraq. Insecurity in the country also continues. The trainees who were participating in the course, ensured that their families were safe over the phone. By spending time with them, I realized that participating in training can be a task that requires significant efforts and decisions. In this study, capacity development activities are to be implemented through a series of training sessions related to irrigation agriculture. I sincerely hope that the new capacity will not only be accumulated as a personal benefit, but also will benefit other engineers and farmers in their areas. I also hope that I will be able to go to Iraq to support the people in their own country. (By Zaitsu, July 2006)



Listening to participants at a water users association meeting



A scene from our training



During a field visit with the trainees

¹⁾ As entry to Iraq is currently restricted, irrigation agriculture capacity development activities for Iraqi nationals were conducted in Jordan, using technical resources in Jordan and other neighbouring countries.

New Series: Coordination between Technical Cooperation and Training Activities

Part 1 – Introduction

Various training programs in different technical cooperation fields are perceived to be increasingly important, in terms of building human capacity and resources. Within development studies and technical cooperation projects in the agricultural field in developing countries, training and extension are becoming important components. For instance, in the project on the extension of saving water in irrigated agriculture we currently implement in the Syrian Arab Republic, the core of our program is training and extension activities related to water saving irrigation techniques. We think that it is very important to utilize experiences and knowledge accumulated through training activities conducted in Japan. This means that it is necessary to wisely link technical cooperation activities outside Japan with training activities in Japan.

In the previous issues of the AAI News, we introduced technical cooperation activities under various schemes such as dispatch of experts and development studies. In the past, JICA had the dispatch program section and training program section within the organization, and different program sections were dealing with different schemes. Apart from the project type technical cooperation, the organizational structure made it highly difficult to ensure collaboration between various schemes. Since then, JICA's organizational structure has improved and the programmatic approach was adapted, resulting in recognition of the importance of coordination between schemes. Furthermore, in recent years, JICA has been actively promoting coordination between schemes within a technical cooperation project. This creates favourable conditions to promote improved coordination between technical cooperation activities outside Japan and training activities inside Japan.

In the AAI News, from Vol. 43 to 48, we introduced our efforts towards training activities. We introduced our agricultural training activities at the JICA Tsukuba center in Japan, and stressed the importance of post-training follow up activities. Ws also touched upon the ripple out effects of the counterpart training activities as part of development studies and expert dispatch projects. Moreover, we suggested a wide range of utilization of facilities that are established and run in developing countries through the Japanese Government's technical cooperation. In the conclusion of the series, we emphasized that the combination of technical cooperation and training activities should be actively considered and implemented.

Based on our experiences gained through diverse activities, the following are the different types of coordination that are possible between future technical cooperation and training activities. This new series aims to make useful suggestions that can be used for future projects, looking at actual examples for each coordination type.

Coordination Type	Content
Follow up Type	Based on our experience in the Tajikistan Vegetable Cultivation Course and Southern African Vegetable and Upland Crops Cultivation Technique Course, we would like to explore the possibilities of nurturing grassroots technical cooperation activities through follow up activities for the former trainees in their countries.
Coordination with technical cooperation projects	For example, in the Project on the Reconstruction of Agricultural Experimental Stations in Afghanistan, providing training in advance for future staff of the experimental stations to be rebuilt will lead to extremely efficient project implementation.
Training in a third country	In countries whose environments differ greatly from Japan, such as arid and semi-arid areas, we should consider effective use of facilities that were established and run with Japanese cooperation, as well as programs with a third-country training component.
Multiple program Type	Instead of implementing activities according to different schemes, we should examine possibilities of developing a program which comprehensively promotes various schemes including technical cooperation and training activities.

New Series: Reconsideration of Support Activities for Agriculture and Farmers – Comparison between Syria and Japan

Part 1 – Introduction

We have visited a large number of rural areas in many countries around the world through our normal company duties and through our grass roots level activities with the establishment of the Muscat Fund (see AAI News Vol 49 for example activities). During our visits, we have had ample opportunity to see farmers and farming activities, and to listen to their problems, hear about their challenges, as well as their requests for certain kinds of assistance. Farming systems in different regions have been formed and influenced by the historic contexts and social backgrounds of their particular areas. Farmers' ways of thinking and their situations also differ very much from each other. Our activities can be described as various forms of assistance, such as technical support and mechanism creation for farmers in different situations and with different farming systems, based on certain key words such as livelihood improvement, income increase, and production technology improvement. It is vital to explore and select the most effective and efficient ways to assist the farmers, taking into consideration regional and individual differences and the diversity of farming and farmers. This issue has been our challenge in providing assistance to farmers in other countries with varied traditions, however, it has also been a source of motivation in our work.



Engineers from Syria receiving a lecture on the agricultural improvement and extension system in Japan during a counterpart training program. There were active and solid exchanges between the tutor and trainees in this small group seminar.

On the other hand, in Japan, support to Japan's agriculture and farmers includes policy formulation, subsidy administration, cultivation technology guidance and lifestyle improvement projects. Most agricultural support activities were implemented by the public sector such as the national and local public sector institutions, however, today there is an increasing participation from private sector companies. Projects by the national government and local public sector organizations include agricultural extension activities, research & experiment, and land improvement projects. In addition, support for agricultural cooperatives that aim at reciprocal support and collaboration is considered in a broad sense as a way of assisting agriculture and farmers, as well as supporting corporate agricultural associations that are established to increase collective profits through collaborative agricultural production. Furthermore, in recent years, new types of support activities are increasingly prominent such as various movements and support for farmers by NPOs and citizens' organizations.

This trend is also seen abroad where we mainly work. The type of assistance for the agricultural sector is shifting from the traditional agricultural development approach that aims to increase productivity, to the agricultural community development approach placing more emphasis on improving the livelihoods and environment of a particular area as a whole. Today's agricultural community development projects aim for holistic regional development, with agricultural technology still as a foundation, but also embracing a wide range of sectors such as medicine, health and education based on the community participation principle. However, in developing countries, we often experience the general lack of, or insufficient systemic and legislative aspects of, agricultural policies due to delays in the consolidation of a government administration base and due to a shortage of capable technicians. Given this situation, our challenge in cooperation activities is how to ensure that farmers and residents in farming communities, who should be the direct beneficiaries, can reap the fruits of our support.

Before this series was conceived, we had a chance to have good discussions with Japanese farmers and people working in the agricultural sector when we joined two Syrian counterparts on their study trip around Japan. The Syrian trainees said that the impression and knowledge they gained through their agricultural site visit in Japan was highly beneficial to them. The trip prompted them to look at Syria from different perspectives, having provided a chance for them to reflect on agriculture and problems of farmers in their own country from a far-away foreign country. We, who accompanied them during the field trip and shared their experience in Japan, reconfirmed that it is possible to ensure that information and experience gained in training courses in Japan can be fed back to developing countries. In this series, we would like to discuss individual types of agricultural support activities such as agricultural extension, research and experiment, agricultural cooperative and land improvement, within the framework of overseas assistance in the agricultural sector in developing countries. In our discussion, we would like to reflect on the fundamental and basic issues of different forms of assistance. We think that support activities for agriculture and farmers in Japan and their many accumulated achievements and experiences can be linked more actively to our assistance in developing countries so that lessons learned can be utilized at a practical level. In particular, we would like to compare various perspectives and examine water saving irrigation extension projects currently implemented in Syria and the existing Japanese experiences and knowledge, while reconsidering the reality and problems of Japan's support to agriculture and farmers, as well as its future challenges and potential.

Mini Series: From the Small Window of a Nomadic Society (2)

Nomadic Livestock Farmers in Mongolia and the Market Economy

Following our report in AAI News Vol. 47, we would like to provide an update on our support to dairy product shipments targeting nomadic livestock farmers in Mongolia. In the previous report, we introduced, as a case study, a project to develop a product distribution base for the Burdene retreat for kidney ailment sufferers. The challenge in Burdene was achieving the effective utilization of grasslands which were either not utilized or were poorly utilized. This second case study is on an effort of the farmers to ship and sell their products on their own under the current market economy with no cooperative system in place for collecting milk. Making good use of the existing rail infrastructure, they directly sell the products without using the wholesaler called "Change". In this way, we could aim to maximize the benefits to the livestock farmers without them losing a margin to the wholesaler. In addition, it is also an important point that the diary product sales can create a third source of cash income to the nomadic farmers. This could in turn help in solving the problems of on-going income generation activities such as cashmere production and meat sales. For example, the income from cashmere and meat has large seasonal variations, and the strong emphasis on goat meat production also places a large amount of environmental pressure on grassland vegetation.

Moreover, much of the milk and diary products sold in markets in Ulan Bator, the capital city of Mongolia, and other cities, is imported from other countries. This is despite the fact that there are more than 30 million livestock with a national human population standing at approximately 2.8 million and that there is abundant production and consumption of milk and diary products in rural homes located in the Ger grassland areas. It is very likely that this is because collection, storage and distribution of domestic milk is difficult due to a lack of social infrastructure. The imported milk products brought in by air or railway can better withstand the long-distance transport process. However, I believe that "Tsagaan Idee" or "white food" (the traditional milk and milk products produced in Ger) can create definite demand in urban areas as long as a certain level of hygiene and quality control is assured. Even if mass transport may be difficult, it should be very possible to deliver the taste of traditional food, which many urban consumers remember as the taste of their mothers, competing well with the imported milk whose taste is difficult to praise. Traditional food possesses scarcity value and it is expected that additional value is



Processed fermented camel milk produced in Erdene County (Photo by the Erdene County Office)

added at markets. We expect that Gobi camel products would be at a premium and therefore traded at even higher prices. The challenge is how to transport the camel milk economically, effectively and safely, when only 1-2 liters per day (per camel) is milked by highly limited labour available within livestock farming households.



Camel Festival held each January in Dornogobi Prefecture (Photo by the Erdene County Office)

Fortunately, through JICA's development study work, we have met a number of livestock farmers in Erdene County of the Dornogobi Prefecture who are highly enthusiastic about shipping and selling camel milk and dairy products by themselves. Officials at the County Office are bent on establishing a camel milk brand as part of a movement to develop one brand product per county. Responding to our Mongolian friends' enthusiasm, we hope to continue to visit Gobi at a grassroots level, in order to join them in their efforts to solve the complicated production and distribution related problems.