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AAINews

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Looking back on the DEITEX Project

1. DEITEX as a Project

Syria's land area is about half of that of Japan and has a population of about 20 million. The land is relatively flat, much of it is semi desert and not particularly hospitable at first glance but it is endowed with many ancient ruins. In different parts of the country, one can feel the majestic and noble atmosphere of ancient civilizations. The DEITEX Project was run in the country to make the most of Syria's many natural and cultural features and its dishes which every visitor loves. The Syrians have somewhat similar sensitivities and compassion as the Japanese people. The full name of the project was the Development of Efficient Irrigation Techniques and Extension Project. The project was implemented as phase 1 and 2 from April 2005 to July 2012, and AAI has participated in the activities throughout the duration.

As in most arid areas, water security is the most important and pressing issue for people. In Syria's largest city, Damascus, its population has increased from around 50,000 in the 16th century when the Ottoman Empire ruled the area, to a current level of roughly 4 million people. Even in this city, which was once called the Garden of Eden, water shortage is a dire issue. Other regions were less endowed with water resources from the beginning and water security has been a major issue for many centuries.

Traditional irrigation in Syria
(Left: Zigzag irrigation; Right: basin irrigation)

The average annual rainfall in the country is around 250 mm. Although it has the River Euphrates with an ample water volume flowing through the country, the Euphrates is an international river and there are strict water use agreements between the countries that share its bounty. In Syria, in the 1990s, pump technology introduction for water wells rapidly increased the number of household wells. During the period, the size of irrigation area also increased so fast nationwide. What people also saw was a lowering of the groundwater table and an increase in dried-up wells. The cause was obviously excessive pumping of groundwater, and if the situation was left as such, ground water resources all over the country could have been depleted.

Given the situation, as approximately 90% of water demands of Syria was for irrigation, the Syrian Government decided to promote water saving in irrigation to alleviate the problem of water shortage and resource depletion. Therefore the Government requested the Government of Japan for technical cooperation to implement the project.

How do we achieve water saving in irrigation facilities? It seems that a combination of "carrot and stick" is the most quick and effective strategy to ensure that each farmer controls irrigation water use at an appropriate level. The Syrian Government had established a variety of water use restrictions and penalties however, water use did not go down. According to the "social dilemma" theory, leading and forcing people for societal actions (in this case water saving) tends to incur huge costs for monitoring and control, while reducing people's will to take initiatives for action. In Syria, it also became apparent that enhancement of water saving monitoring and control alone would not achieve the objective.

There are many different reasons for over usage of water. Some may not have necessary knowledge for improving water use efficiency. Some have no awareness of wasting water. Some may know that he/she is wasting water, but feels no need for taking action as using as much water as possible is advantageous for him/her. Therefore the remedial actions are to raise awareness of those who are not aware, and to make people realize that consuming a large amount of water is actually not advantageous for them. In the project, we considered that leading each farmer to understand the merit of water saving and select water saving technologies through extension activities would be the most reliable and sustainable way of achieving water saving objectives. In addition, if forms and methods for water saving to be introduced are seen as "beneficial" to them, the use will spread among the farmers. Therefore, the project promoted understanding of the fact that a shift from traditional irrigation to modern irrigation would lead to water saving, ensuring a variety of incentives for farmers. The project decided to work on extension activities for introducing modern water saving irrigation, with full consideration for appropriate methods and application forms that suited individual farmers' realities and needs.

The project approaches were as follows: (1) review the existing modern irrigation technologies and augment them where certain technologies were lacking; (2) Nurture human resources that could implement the technologies; and (3) develop and operationalize methods and systems for effective extension activities by those who are trained. In particular, in the training and extension activities, the project placed great emphasis on implementing these activities in practical and cooperative ways, based on lessons learned from the past work as well as on clear objectives that are aligned with farmers' needs.

Looking back on the DEITEX Project (continued)

2. Achievements and Lessons Learnt from the Project

Phase 1 of the project targeted three governorates that had serious over usage of water resources for irrigation. Phase 2 focused on 5 governorates adding 2 northern governorates. The activities resulted in various water saving achievements in the fields of research, training and extension. Although one cannot say that water saving irrigation is totally extended, in addition to actual water saving achievements at the project sites, the project established a system for self-sustaining expansion of water saving irrigation technologies.

We organized the technologies, experiences and information on modern water saving irrigation which originally existed in Syria. We verified them in demonstration plots and conducted additional experiments, in order to present them in a manner that is easy for farmers to use. We established outputs-oriented training courses targeting irrigation extension workers, which was new. In addition to nurturing more than 230 certified extension workers, the training implementation cycle was established as part of training program of governorates, to ensure sustainable implementation of training activities. Extension workers repeated model extension activities, using what they had learned in the training courses. This led to the establishment of an extension activity cycle that was appropriate for modern water saving irrigation extension. Tools such as irrigation calendar and water saving irrigation management tools especially developed for farmers, and extension materials left in various brochures and posters etc. will continue to be used. The project also succeeded in digging up "know-how" for improving irrigation and for developing new irrigation systems in the minds of individual extension workers and other counterparts.

Training session as part of the project

A scene from the project Field Day

We learned a lot of lessons from the project. The DEITEX logo is very well known in Syria. This is because the logo is directly linked to the fact that the project is working on water issues, and it was easy for the residents to understand it. This clearly shows the fact that each resident was seeing water issues as things of importance and highly pressing. The project's success very much depends on how compelling and urgent the theme of the project is for people. This is one lesson we learned this time.

DEITEX logo

Extension workers were without appropriate technologies and information for disseminating water saving technology, were without a good idea on extension methods and/or without self-confidence for the work. However, based on practical training received as part of the project work, they started practical extension activities. The project introduced an activity cycle starting from scrutinizing training themes, then moving on to implementation of training for extension workers, extension activities by trained extension workers, and then to achievement of extension objectives. Successful introduction of the results-oriented training and extension method, directly connecting the two, was a major fruit and learning experience from the project.

A "project" is implemented to temporarily augment insufficient functions of an organization. A project is also expected to come up with out-of-the-box thinking and to provide a coordinating function to bring various key entities to work together. Promotion of water saving irrigation cannot be achieved without collaboration between various related organizations and individuals. Fortunately, collaboration between various sectors for research, training and extension was realized well. It made a very good case study where there is traditionally little collaboration between government agencies. One reason for the success was that we were very fortunate to have great counterparts. In addition, the attitude of Japanese members working for the project to respect individual organizations and staff members, without diminishing their roles and responsibilities, had something to do with the achievement. Furthermore, the active use of a coordination role by the project was also considered a major success factor. Given that the project managed to advance collaboration between related organizations, the lesson learned here was that the project has a significant advantage when it comes to maneuvering freely between various related organizations, and of being able to play a role as a link between these organizations.

The project started running the Water-Extensionist Assembly (WEA), aiming to foster friendship and cooperation between extension workers. "Was what the project did something that will be continued and expanded after the project closure?" The answer to the question would clearly show whether a project was meaningful and successful. From this view point, the project established the necessary foundation for further work, such as the provision of necessary equipment, the establishment of systems and the fostering of human resources. It is very much expected that there will be future development and progress, building on the project's work.

The Project aimed to realize efficient irrigation agriculture, building on long years of experiences and accumulated knowledge. If the irrigation agriculture has been destroyed by the civil war, the objectives of the project may be becoming difficult to attain. It will probably be necessary to add an additional process for rehabilitation of the facilities and system.

(By Matsushima August 2012)