

AAINews

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Conservation and Efficient Use of Water Resources

The world today is facing a water crisis. Half of the global population does not have access to safe water, while problems of water shortage and increasing flood-related disasters are getting more and more serious. To this background, the Third World

first water forum of this century in Asia, was held in Japan. A large number of people involved in/working on all sorts of water-related issues got together to share their knowledge and experience beyond and across their specialized fields. As already reported in AAI News Vol.35, AAI started providing technical assistance for promotion of water saving irrigation farming in Syria, which is facing a critical problem of water resources depletion. The work has been continued since then with experts sent to Syria from AAI.

The province of Baluchistan, in the northwestern part of Pakistan, depends largely on groundwater for water supply for farming and daily use, and traditional karezes and wells are still now widely in use. Thanks to such water sources, fruit cultivation, mainly of apples, developed in the area around the Quetta Basin. However, lately the groundwater level has been lowering every year, and the depletion of groundwater resources has started adversely affecting agricultural production. Therefore today it has become crucial to introduce water saving irrigation technology to sustainably manage water resources and to secure water for farming. In this context recently AAI participated in development activities in Baluchistan with the main objectives of introducing water saving methods employed in other arid areas, studying the current situation of water saving farming technology in Baluchistan, and planning some technical cooperation programmes for the future.

Through information exchange with relevant agencies/organizations as well as the field trip, the following facts became clear. For one thing, although delay action dams have been constructed one after another for the purpose of water resources conservation, due to poor watershed management in the catchment areas and insufficient systems for monitoring groundwater levels, the actual contribution of such dams is unclear. In terms of water use efficiency, the modern irrigation systems such as drip irrigation have not been introduced widely, because of the fixed-rate system of electricity costs, lack of proper irrigation equipment, and so forth. It has also become clear that training for engineers, extension activities for farmers, as well as linkage of research and training/extension are necessary. Moreover, it was learned that, in order to realize such activities efficiently, it is critical to strengthen/empower and systematize the relevant organizations and the collaboration among them, as well as to introduce and ensure the participatory approach through working with local grassroots/citizens' groups.

The list of problems and tasks identified in Baluchistan has a lot in common with that in Syria, where we are currently working on water saving agriculture. For instance, in Syria it was found necessary to improve monitoring of water resources and data analysis, and for this technical cooperation is already being provided. Also the domestic manufacturing of irrigation equipment including drip-lines is encouraged for the purpose of a cheaper and more affordable supply of such equipment. Moreover, the current technical cooperation programme is focusing on creating demonstration plots for training farmers and agricultural extension workers, as well as on research based on specific problems faced on the ground. Needless to say different countries have different conditions and requirements. However, it should also be true that more effective technical cooperation can be realized by transferring some of the experience gained in one country to another, to work towards the common objective of water conservation. (By Hiroyasu Ohnuma in Baluchistan, Pakistan, May 2003)



Apple orchard outside Quetta City



Construction of a delay action dam



Drip irrigation system at a pilot farm

Grassroots Collaboration, AAI's approach

Part 6 The Goals of Grassroots Cooperation

In the current series so far we have reported on some cases of so-called “grassroots cooperation” undertaken by AAI as its original activity (Muscat Fund activity), in order to consider the meaning, challenges and the future direction of grassroots cooperation. These cases can be summarized as follows:

Type of Cooperation	Activity Summary	Key Words
Collaboration with local NGOs (Zimbabwe)	Various projects for rural community support in collaboration with local community-based organizations (NGOs)	- Community-based organization - Ownership of local people
Collaboration between experts and Japan Overseas Cooperation Volunteers (JOCV) (Syria)	Interaction and collaboration between experts and JOVC volunteers with different expertise and affiliations	- Strategic use of JOCV volunteers - Face-to-face assistance
Interaction with local community organizations (Oman)	Support for introduction of beekeeping techniques and small-scale greening projects through interaction with local women's groups and organizations for the physically disabled	- Environmental conservation activities by local people - Mutual support by local cooperatives
Preliminary study for agricultural rural development (Laos)	Preliminary study of the potentials of agricultural rural development in Laos to serve the local communities in a true sense	- Unhurried interaction - Team-building and understanding of the real needs - Activities initiated and conducted by the local people themselves

The important points which are common in these activities are that they stress the importance of locally based work and “ownership” of these activities by the local community (the local community's initiative), and that these activities are started from the point of understanding the real needs. For so-called participatory projects carried out in developing countries, the consent and active (as opposed to passive) participation of local people is one of the key factors which determines the success and failure of the projects. However, in reality there are often such cases where local people are passively mobilized under the name of participatory development. In other words, the top-down approach under the guise of bottom-up is prevalent.

Incidentally, one of the recent trends of grassroots cooperation (or participatory development) is the prioritization of poverty alleviation as a main goal. As a popular solution for this goal, income generating activities and use of micro-credit is encouraged. True, there is the reality of acute poverty in developing countries, and that is a big problem which should not be overlooked. However, is it the right way to proceed to resort to the approach based on the market economy system, in which everybody has to compete with each other to gain more and more “wealth”? Does that really lead to the reduction of poverty and improvement of livelihood of the poor as a whole? Doesn't that actually lead to the creation and widening of the gap between the rich and the poor? Also, is there a good enough remedy for the “losers” who are bound to be created in the “competition” promoted by the developers, and do they ensure some form of “safety net” measures in case the “investment” in the micro credit scheme fails?

Considering the potential danger of such a market economy approach, it seems necessary to rethink the role and meaning of traditional locally based systems of mutual support, such as “yui” and “kou” practiced in Japan in the past. Introduction of a modern version of such traditional systems, for instance local currency, may be considered, along with other forms of participatory and grassroots cooperation to build up local mutual support systems. “From competition to co-existence” should be the key concept when we think of the goal of participatory development and grassroots cooperation (i.e. when we try to answer the question “What is participatory development for?”).

Re-examination of Development Study

Part 6: What is Development Study for? Switching the Mind to the Programmatic Approach

Through the past five articles of this series we have discussed the role, challenges and the future direction of development study based on our experiences gained thus far. Specifically, we have talked about (i) the need to shift from the 'hard' approach focusing on material construction to the 'soft' project approach aiming to build up systems/organizations with more flexibility, (ii) introduction of pilot study/project to verify the direction of community-led sustainable development activities and use of local resources, (iii) agricultural rural development study by way of PRA and PCM as participatory methods to properly understand the local needs, and the importance of opinion exchange among the survey team members, and (iv) the preliminary study which plays an important role in determining the direction of the development study which follows.

Now, what have we understood through such discussions? What we notice at the bottom line of the previous discussions is how important it is to dig out the real needs in the local community and consider the way to formulate/improve projects based on such needs. As stated at the beginning of this series, the purpose of development study is defined as "to support the establishment of the development plan of various public projects which are useful for the social and economic development of developing countries." However, after all, it should aim at fulfilling the need to improve livelihoods and the living environment of targeted local communities. Apart from development study, there are other schemes such as dispatch of experts, project type technical cooperation, training and provision of equipment, but what they aim at eventually is just the same.

In this series we have considered the role and challenges of development study, and discussed what development study can do to fulfill the local needs in an appropriate manner. To put it simply, up to now development studies always tended to be accompanied by a certain clear vision of 'output' even before the study started, and the data would be collected and analyzed and reports written to align with such pre-existing visions. However, as development projects are being 'softened' and the number of studies has been increasing to verify the effect of the projects, in recent years it is becoming difficult to draw up a 'blue print' with a clear vision of the study outcome beforehand. In such circumstances, the function and meaning of development studies should also be revised. In doing so it is important to go back to the basic question: "What is it for?" Needless to say, development study is just one means to achieve something. Development study should be used if it is proved to be the most effective method to achieve a certain goal, but if there are better means to achieve the same goal, there is no reason to stick to development study. In other words, the idea that development study is the only scheme should be discarded. Instead it should be seen as part of the programmatic approach which cannot be formulated within the framework of development studies alone. It should be offered along with other schemes while trying to find out what should be done in order to meet the needs of local people. And if development study is found to be the most desired scheme as a result it can be used with an expectation for the best performance. In applying development study, collaboration as incentive for local community participation, collaboration within the framework of partnership with the local community, and joint and participatory collaboration with no distinction between those supporting and supported, should be stressed. Probably it is high time to go back to the basic question of "What is it for?" not only in terms of development study but also of international cooperation and development aid themselves.

While it was not mentioned in the current series, the relationship between JICA and its consultants should also be discussed, as it should go beyond the mere contractual relationship and should work as equal partners in conducting development studies. Other issues which need to be discussed may include: request-based project implementation (some non-request-based systems are also being considered lately); and flexible application of technical staff and their specialized fields as well as budgets to meet various needs deriving from the increasing number of 'soft' projects.



Verification study by local people in Mauritania



Soil survey in Oman

Mini-Series: Work and life in farms - Various movements in Japan

Part 3: ‘Shizen-Nou’ (Natural Farming) and Ogawa Town’s Challenge to Cyclic Farming

Lately I took part in the rice nursery building activity organized by “Shizen-nou manabi-no-kai (natural farming study group) Okayama.” Following Mr. Yoshikazu Kawaguchi, the natural farming practitioner, this group aims at learning and promoting the natural farming method. “Shizen-nou” (natural farming) is a farming method started by Mr. Kawaguchi when he fell ill due to agro-chemicals. This method tries to follow the order of nature by not eliminating weeds and insects purposefully and resorting to no fertilizer, agro-chemicals and ploughing (though mowing is ok). Mr. Kawaguchi has practiced this method for over two decades (after two decades of being engaged in modern farming earlier). Here ‘natural’ does not imply simple gathering nor untended cultivation, but it is a farming method which does intervene with nature unless necessity dictates. Five days before my visit, Mr. Kawaguchi had conducted a demonstration, instruction and lecture on paddy preparation and rice cultivation for 120 participants. It is their fifth year of practicing natural farming on the rented paddy field of 0.1 ha. With their non-ploughing scheme they remove the naturally grown grasses first, then place rice seedlings on the soil, before planting the grasses back on the soil. I would not say that this is the perfect method under any conditions. However, as one of the creatures relying on Mother Nature for our livelihood, we human beings cannot say “100% Yes” when asked whether it is 100% right to resort to such types of agricultural method which controls crops with agro-chemicals. Apart from this group there are over 20 places across Japan where natural farming is being taught and promoted, and also there are farmers who practice this method of farming.

Ogawa Town lies in the centre of Saitama Prefecture, next to Chichibu Mountain Range in the west. It used to be a major production site for hand-made Japanese paper, which was a local traditional craft. Some 20 farmers in this town, including Mr. Yoshinori Kaneko, who has been practicing organic farming since 1971 and those who have learned under his guidance, form “Ogawa Town Organic Farming (Production) Group”. The group has been trying cyclic farming. This time I took part in their “open day”, which they hold on the second Saturday of every month to publicize the town’s cyclic farming-related activities and techniques to outsiders. Apart from the local food self-sufficiency through collaboration between organic farmers and consumers, the activities that this group are carrying out include (i) weeding of paddy fields using *Aigamo* ducks, (ii) production of compost from fallen leaves collected from nearby settlements, (iii) production of natural eggs from free-range poultry breeding, (iv) home raising of rice seedlings and seedling exchange events, (v) production of cereals other than rice, (vi) well digging by the “Kazusa-bori” method, (vii) various attempts to achieve energy self-sufficiency under the initiative of the NPO “Ogawa-machi fuudo katsuyou centre (Ogawa town landscape centre)”, such as: bio-gas system (technology to produce methane gas (i.e. fuel) and anaerobic fermented liquid fertilizer (i.e. organic fertilizer) from organic matters such as excretions of livestock or remnants of agricultural products.); vegetable diesel fuel (VDF): alternative fuel for diesel engines made from waste oil from cooking (tempura making), which emits only one third of the black smoke compared with that produced by real diesel, and no NOx; greenhouses using timber derived from selective logging; charcoal making; use of firewood stoves; collaboration with local industries to process locally grown organic products to produce local specialty agricultural products (e.g. sake, dry noodles), etc. The local government of Ogawa Town is very supportive of these activities. It provides the infrastructure cost of biogas plants and also helps collect kitchen garbage for organic fertilizer production from some 60 households.

Before the 1960s, when farmers used to keep livestock even on tiny farms and the primary industry including self-sufficient small-scale farming-cum-stockbreeding was still the main industry of the country, the society was self-sustaining and sustainable with materials naturally flowing and circulating without waste. Those days passed and agriculture became modernized with the introduction of farming machines, chemical fertilizers and agro-chemicals, and this new style of agriculture has become the norm today. However, the above attempts trying to go back to natural ways of farming seem to suggest that our future depends on such sustainable cyclic farming in harmony with nature, with a minimum use of modern artificial devices.



Rice nursery making in natural farming



Running the tractor using vegetable diesel fuel



Bio-gas & liquid fertilizer tank