

Agriculture and Forestry in Pakistan (6)

Part 6: Future agriculture and forestry in Pakistan and technical co-operation of Japan

With a view to considering how agricultural development should be achieved in arid lands, in the last five articles of this series we have discussed various forms of agriculture in Pakistan, which make use of the natural environmental characteristics of different areas. The table below summarizes problems and current measures taken against such problems in each area discussed.

	Problems	Measures taken
Irrigation farming in the plains	Water logging and soil salinization due to the wearing out and decline in efficiency of irrigation facilities	Repair work on irrigation facilities and a nation-wide project to improve drainage systems
Flood farming at the foot of the mountains	Soil erosion and depletion of pasture and farm lands due to overgrazing and flooding	Comprehensive river basin management by introducing water harvesting agriculture and improving vegetation cover
Karez farming in Baluchistan	Dying out of traditional irrigation techniques due to decline or depletion of water in Karez	Introduction of well irrigation and dam construction for groundwater conservation
Forestry in Punjab	Increased demand for forest resources and decrease in riverine forests due to flood control	Conservation of the remaining forests, plantation and introduction of alternative fuels

As seen above, different regions have different problems, and different measures are being taken accordingly. Moreover, there are some problems that occur in several regions at one time. A typical example of such a problem is the destruction of irrigation systems in the plains due to floods in the mountain foot areas. In this case, effective use of rainfall in the upper basin would serve to prevent the destruction of irrigation systems downstream. What is necessary for dealing with such various problems within and between regions is the introduction of carefully planned farming schemes and fostering agricultural engineers who can sustain such schemes in the long term.

Pakistan is quite advanced in terms of community participatory farming schemes, the most well known of which is the Aga Khan Village Support Project. This project is often cited as a pioneering and successful example of a rural development project with its focus on the aspect of social development. Here the main actors in the project are the beneficiaries themselves: the project can be started only with the consent of the beneficiaries, and it has to be moved forward with their full involvement in activities such as construction, management and repair work etc. This imbues beneficiaries with a strong sense of involvement, which leads to their willingness to bear costs and provide labour. Moreover, today the project is getting some good staff members who are capable of coordinating community activities in the beneficiaries' local languages, and at the same time producing project reports in English. In the river basin conservation pilot project in Mithawan (see AAINews Vol. 21), staff members who have gained experience in the Aga Khan Village Support Project are playing an important role. The excellent contribution of Pakistani forestry staff to plantation projects in the Middle East also suggests the availability of highly skilled technical staff in Pakistan.

The issues of sustainable use of natural resources in arid and semi-arid lands, as well as the improvement of the local environment for living and production activities, are likely to become more and more important in the future. At the same time, with regard to Japan's technical co-operation, issues such as participatory development, environment and WID (Women in Development) are being seen as increasingly important. There are calls that Japan's technical co-operation should change its orientation from the mere investment in infrastructure to the development of human resources. Pakistan has problems which are peculiar to dry areas, and the training and education of farmers and agricultural project staff is seen as a major task in order to counter such problems. Therefore, it is meaningful to have Japanese experts working for technical co-operation in rural development with capable local staff who have field experience, for the development of technologies applicable to dry lands, as well as for advancement of participatory development schemes.