

The Status and Institutional Issues of Farmer-Managed Irrigation Systems in China

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FARMER-MANAGED IRRIGATION SYSTEMS in China are those systems where operation and maintenance activities are controlled by mass organizations such as villages and townships.¹¹ As such, they can be divided into two types: 1) farmer participation in the management of large-scale or medium-scale irrigation systems from the tertiary-to-field levels [lateral and sub-lateral canals and farm ditches], while the government bureaucracy manages main and branch canal levels; and 2) farmer management of small-scale systems (less than 3,333 ha) diverting water from rivers, small reservoirs, ponds, dams, and wells. Therefore, despite differences in the size of irrigation systems, ultimately, the farmers participate at some level of irrigation management.

Because the farmers have limited economic and technical capacities the county Water Conservancy Bureau (WCB) in the area supplies technical, material, and financial assistance for small-scale, on-farm projects and for well digging. For example, more than 50-60 percent of the total expenditures for farmer-managed systems in Yucheng County was financed by the government before 1982. Farmers or townships and villages contributed to the remainder of the costs including the imputed cost of labor.

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¹¹[Note: Mr. Ren Hongzun has used a different definition for farmer-managed irrigation systems from that used by other authors in this publication and at the International Workshop on Design Issues in Farmer-Managed Irrigation Systems. His use of the term farmer-managed irrigation systems in this paper actually refers to farmer participation in operation and maintenance of jointly managed irrigation systems. Workshop organizers.]

INSTITUTIONAL SUPPORT OF FARMER-MANAGED IRRIGATION SYSTEMS

The Water Conservancy Bureau has the following responsibilities: 1) It organizes the survey and evaluation of water resources and balances water-resources supply and demand in relation to the Development Plan for the National Economy. 2) It determines the distribution of funds and materials for water projects within its jurisdiction. 3) It organizes the design and construction of small projects and operates and maintains key canals and projects.

Township water-management stations are separate entities from the Water Conservancy Bureau (WCB) of each county. The water-management stations are staffed by people from the county WCB, the township, or farmers. They design some of the simple, small water projects.

In the design process the WCB collects agricultural, meteorological, topographical, and economic data on the proposed project area. After a design paper is completed it is discussed with the beneficiaries -- township and village leaders or representatives of the township's water-management station. Farmers can present their ideas to the Bureau through their mass-organization leaders. However, they are seldom directly involved in the design process.

Initiatives to Encourage Increased Farmer Participation

Although projects at the tertiary level have been built with government investment the labor for construction and maintenance has been borne by the farmers.

After the introduction of the Production Responsibility System, a certain amount of unpaid labor for water conservancy works may be required of each beneficiary. Some farmers prefer to pay US\$1.00 or a little more per labor-day to have another person perform the required work. Some villages or townships collect a labor fee from the beneficiaries based on the assigned labor quota and this fund is used to contract labor to construct and maintain water projects.

Since July 1985 a water-charge system has been set up. Water users are required to pay a fee for the use of irrigation water. The fees are intended to be a main source of funding for farmer-managed irrigation systems. However, the water fee is too low to cover the cost of operation and maintenance. Nevertheless, many water users find it difficult to pay the charges, especially those in the poor, mountainous areas.

To date, a serious shortage of financing exists for the rehabilitation and maintenance of water projects, and it appears that it will be necessary for the government to again increase its investment in farmer-managed irrigation systems.

CONCLUSION

In the past, the government played a strong role in the development of irrigation systems so that the farmers became reliant upon government initiative and support. Irrigation facilities were not used efficiently leading to a waste of resources and financial difficulties. These problems led to a number of economic and institutional reforms in recent years which encourage farmer participation in the design, construction, operation, and management of irrigation systems, at least in policy. Because China's conditions are very complex, finding a single approach and imposing it may be more harmful than helpful. To date, the institutional problem continues while a flexible procedure for increasing farmer participation and agricultural production that fits local conditions is sought.