



The Effectiveness of Farmer Participation in Alleviating Poverty

Field Survey:
Philippines: January-April 2004
Pakistan: March 2004

External Evaluator: KRI International Corp.

Outline and Objectives

In developing countries, about 70% of poverty-stricken population is living in rural areas, and enhancement of agricultural productivity is an important issue to be tackled to secure their living. However, as only 20% of the agricultural land is irrigated, most farmers are doing farming in precarious conditions with low productivity depending on rainwater, and susceptible to climate changes. In these countries, particularly Southeast and South Asian countries, ODA loans totaling over 1 trillion yen were provided to support irrigation projects. In many cases, end facilities are operated and managed by beneficiary farmers, and therefore farmers' participation at each project stage (participatory approach) is important. In this evaluation covering the Philippines and Pakistan, the relation between the participatory approaches and their effects (farmers' collective actions at the operation and maintenance stage) was quantified as much as possible, and the benefits brought by the participatory approaches to farmers and the executing agency were analyzed.

Throughout the evaluation process beginning with the preparation stage, JBIC shared information and exchanged opinions with Asian Development Bank (ADB), which also conducted similar evaluation of irrigation and other projects supported by ADB.

Evaluation Result

1 Evaluation Method

Preparatory approaches and effects of the project

In an irrigation project, usually beneficiary farmers organize irrigation associations to engage in operation and maintenance of end facilities including lateral canals and turnout service areas that are commissioned by the executing agency such the National Irrigation Administration. It is known that their activities affect the project effects such as the increase in agricultural production. In this evaluation, correlation among the executing agency's activities to raise farmers' involvement at each project stage (trainings and conducting explanatory meetings, etc. hereafter referred to as ("participatory approaches"), farmers' participatory behaviors in response to such approaches (participation in training and construction works, etc. hereafter referred to as "beneficiaries activities"), and farmers' collective actions at the operation and maintenance stage after the project completion (following the cropping calendar and water distribution schedule, etc. hereafter referred to as collective actions) were analyzed by a statistical method, and effects of the participatory approaches were quantified.

Benefits of participatory approaches

The correlation between costs and benefits was analyzed by examining how the costs of the participatory approaches shouldered by farmers are related to the benefits, such as the increase in agricultural production and how the participatory approaches by the executing agency lead to the benefits for the executing agency, such as the reduction in expenditures for operation and maintenance and increase in collections irrigation service fees after the project completion.

2 Evaluation Results, Lessons Learned and Recommendations

(1) Surveys covering 60 irrigation associations and 1,800 members on 11 National Irrigation Systems in 3 regions in Visayas, the Philippines

Participatory approaches and project effects

According to the results from the quantitative analysis in the Philippines, such participatory approaches as 'Training' and 'Involvement in Construction' at the re-strengthening stage as well as the current operation and maintenance stage were verified as effective, through beneficiaries' activities at each stage, in enhancing collective actions for the present operation and maintenance activities. While, no significant correlation was found between the participatory approaches and beneficiaries activities at the irrigation associations' establishment stage. However, with respect to the establishment stage, several points were arisen in the workshops with the NIA and irrigation associations. Those are: 1 it is advisable to start the implementation of participatory approaches approximately 8 to 12 months prior to entering into system operation if participatory approaches are to be effective; 2 it is important to inform the project benefits clearly to the beneficiaries, particularly in case the irrigation association is established one year or more prior to entering into system operation. In addition, it is also arisen in the workshops that 'Involvement in Construction' contributes to an early solution of right-of-way issue.

As for the meetings at the current operation and maintenance stage (i.e. maintenance schedule, cropping calendar, and water distribution schedule), the quantitative analysis found positive correlations between participatory approaches and beneficiaries' activities, while no correlation between beneficiaries' activities and collective actions. In this connection, it was found in the workshops that, though members of the irrigation associations attend the meetings, some of them are inactive in taking collective actions. To accommodate this situation, useful measures are needed to make 'attendance in meetings' effective in enhancing collective actions.

The study also verified several external factors affecting to the current collective actions. Regarding the appropriate size of irrigation associations, it is advisable to consider the size in terms of both water management (the smaller is advantageous) and financial aspect (the larger is advantageous). While, it is advisable to consider how to encourage the irrigation associations adjacent to urbanized area, likely of low dependency rate on rice production, since they are not easy to be encouraged in collective actions due to the economic situation. (for example, collaborative assistances such as introduction and promotion of cash crops).

Benefits of participatory approaches

With respect to irrigation associations, it is verified that the rice production in dry season increases as the farmers' opportunity cost for beneficiaries' activities increases.

As for the NIA's participatory approaches cost, it is found that irrigation service fees' collection amount generally increases as the NIA's cost increase. Also found is that irrigation associations with Joint System Management contract perform better than those without it in irrigation service fees' collection.

(2) Survey covering 60 water users associations in the irrigated area around Jhelum River in Punjab Province, Pakistan Participatory approaches and project effects

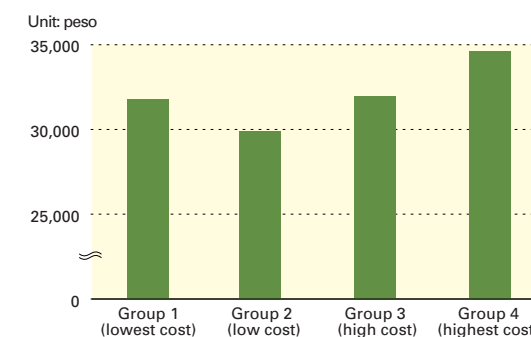
It was verified that participatory approaches at the re-strengthening stage and size of water users associations as an external factor affect the present level of the collective actions. Furthermore, informal cooperative relationships being rooted in the social background are conceivably affecting the present collective actions among the farmers.

3 Other issues

The evaluation results were offered to the executing agencies and beneficiaries as feedback that may provide suggestions on the participatory approaches.

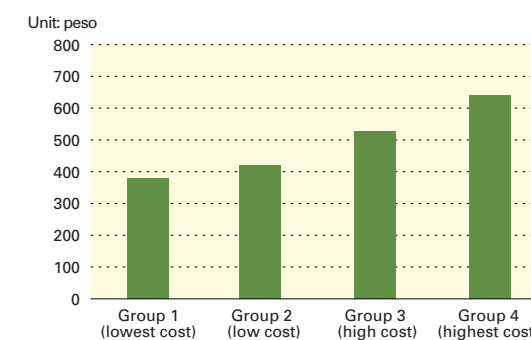
The evaluation of the participatory approach by ADB qualitatively shows that a properly planned participatory approaches help ensure sustainability of the project by improving the ownership structure of beneficiaries. Also it is advised that a sufficient time period be secured for discussions with parties concerned including beneficiaries when scheduling, and that beneficiaries be involved in construction works.

Correlation between the costs of farmers' participation and average rice yield per ha (in the dry season)



60 associations were divided into 4 groups to analyze the correlation between the cost of farmer's participation and the average rice yield per ha. The result shows that groups incurring higher participation costs get more yields, except for the relation between Group 1 and Group 2.

The cost of participatory approach by the executing agency and the average collected amount of water irrigation service fees (in the dry season)



60 associations were divided into 4 groups to analyze the correlation between the cost of participatory approaches, by the executing agency and the average collected amount of water irrigation service fees. The result shows that the more spent in participatory approaches, the more irrigation service fees are collected.



The workshop at National Irrigation Administration (NIA) Regional Office VII and VIII for officials of NIA. It was learned that timing of participatory approaches should be started about 8-12 months prior to operation.



The workshop for irrigation associations of the Gibuga national irrigation system in Region VIII. It was recognized that the involvement of farmers in construction works contributes to an early solution of right-of-way issue.



A canal in the irrigated area around the upper stream of Jhelum River in Punjab Province, Pakistan. Within the surveyed water users association, farmers cooperate with each other by coordinating hours of water distribution when the cropping season is drawing near.



In the survey of the water users association in Bhikhi Village in Mandhi Bahauddin District, Punjab Province, the size (covering area and number of members) of the association and history that lead up to the establishment, situation of cropping, water securing before and after the project implementation, and collective actions were examined.