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## Approaches and Impacts of Participatory Irrigation Management (PIM) in Complex, Centralized Irrigation Systems — Experiences and Results from the Jordan Valley

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### Abstract

Participatory Irrigation Management (PIM) is a key term in the toolbox of current approaches to improve the efficiency and performance of water resource management. Experiences from several countries indicate that introducing participatory elements in the relationship between decision makers on water resources and end users of water is an essential process in the complex set-up of successful water resources management. The differences between the applied participatory approaches support the assumption that PIM cannot be transferred from one situation to another without modifications. Published guidelines on elements and procedures in participation put their focus on general applicability, but the successful implementation of PIM in a specific case crucially depends on its sensible adaptation to the local situation.

Water resource management in the Jordan River's east bank underwent significant changes since the 1960s and became a highly centralised irrigation system under the control of the governmental Jordan Valley Authority (JVA). The social structure of the farming population developed alongside the reorganisation, but weakened tribal bonds in favour of the economic independence of individual families. Efforts towards an improved utilisation of water by introducing participatory elements in water resources management thus have to cope with complex incentive structures of individuals on the level of farmers' communities and within the administration. The implementation of a concept, which relies on four years of analyses on socially acceptable mechanisms in the Jordanian context and the evaluation of former - less successful - approaches, now yield its first positive results. Major economic effects are decreasing maintenance costs of the pressurized conveyance system, a higher security of water supply through the therewith improved reliability of the system and the increase of cultivated areas due to a lower share of buffer zones within irrigation plots, which were a part of farmers' reaction against the risk in water supply. Major social effects originate from the improved and more transparent communication structures, which reduce the number of conflicts between farmers and the need for interventions of governmental authorities in local disputes.

**Keywords:** Jordan, participatory irrigation management, PIM