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**Participatory management of irrigation systems  
in the Philippines: An impact assessment**

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1997**

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in Agricultural Systems and Management  
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## ABSTRACT

Increased national food production is an objective underlying irrigation development in the Philippines. As the population increases, so does food demand. Irrigation is an integral component of agricultural development to meet this growing food demand. Farmer participation has been shown to be a key factor in the successful development of irrigation, although other factors must be combined with participation in order to ensure successful outcomes. This study attempted to find out how farmer-managed irrigation systems impacted on the socio-economic conditions of rural people in the Iloilo Province of the Philippines.

Two levels of respondents were interviewed for the study: 15 representatives of Irrigator Associations (IAs) and 144 farmers from four of these associations in the Iloilo Province. The surveys were conducted in January and February 1996. The survey data were evaluated relative to a conceptual model that comprised four sets of factors (socio-economic/demographic, physical, management and attitudinal) to explain the area under irrigated rice, a proxy variable for management participation.

The farmers in all four irrigation systems had an average age of  $49 \pm 12$  years. The farm size was generally small ( $1.07 \pm 1.51$  ha) but the area of irrigated rice owned and leased by farmers averaged to  $1.23 \pm 0.25$  ha. Rice farming provided more than 80% of the household income in the study area. This helped to support  $3.8 \pm 2.3$  children per household. Socio-economic/demographic and physical factors were significantly ( $P < 0.05$ ) associated with management and attitudinal factors. Variables included in a multiple regression model collectively explained 53% of the variation in the irrigated rice area. Other than farm size, distance of the homestead from the main water source, participation in resolving conflicts with officers of the IA and attendance of IA meetings were significant explanatory variables in the model. It is recommended that similar studies of other regions where irrigation is widely used be undertaken and that this include situations where participatory approaches are not adopted. The role of women in irrigation activities should be quantified, as it was not actively explored in the current study.

**Keywords:** Irrigation development, participation, factors, irrigated rice area.

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