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IMPACT OF LEADERSHIP ON WATER MANAGEMENT

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Communities with a relatively equal distribution of power and influence and high percentage of people organized as influentials, are considered rather appropriate for cooperative projects like watercourse improvement and maintenance than those dominated by a few powerful people. The watercourse on which the executive committee members (leaders) were having high power/influence were well maintained. The association between power/influence and caste dominance was significant. The farmers desired that their leaders should be educated, member of National or Provincial Assembly/District Council, or having high relations with government officials.

INTRODUCTION

The farmers of Pakistan are served by the largest irrigation system. About forty thousand miles of canals deliver water to approximately ten million hectares through outlets (Moghas) to watercourse (Khals) to farmers fields. The percentage of water lost in watercourse has been estimated to range from 5 – 65 per km. The losses along the watercourse from the Mogha to the field are high in Pakistan, especially on tubewell augmented watercourses. The losses (seepage, wastage, evapotranspiration of weeds) frequently range from 30 to 50% of flow at the Mogha. Seepage is considered here to be that water which is infiltrated from the channel cross – section down into the soil profile and eventually to water table. Wastage is the loss occurring to the ground surface either by over topping, slow seepage through the sides, breakage of bund at Nakkas or weak areas and optional losses.

A major problem is the lack of knowledge to operate and maintain it properly. It has been shown that in order to mitigate water losses through proper maintenance of their watercourse, the farmers do not mobilize enough of collective efforts (Mirza, 1975). The studies by Lowdermilk *et al.* (1978) and Mirza and Merry (1979) revealed that individually farmers were using some kind of water control options of which majority was illegal. The Government of Pakistan started looking for measures to control the problem of water losses. On the basis of survey reports, the government launched an "Institutional Programme of On Farm Water Management" (OFWM) for the improvement of watercourses on cost sharing basis. The start of any water course improvement is based on joint efforts of the water users on that particular watercourse. Alongwith the improvement of the watercourses, this programme also aims at training the farmers in improved crop and water management techniques including optional water application rates and timing and precision of land levelling to permit uniform application of irrigation water. In order to achieve the objectives of "On Farm Water Management" the Government of the Punjab promulgated a "Water Users Association Ordinance" in April, 1981. Thereafter the rehabilitation of watercourses was supposed to take place after organizing the beneficiaries under this ordinance. Before the improvement of a watercourse, a Water Users Association is formed to work as a management body. The structure of Water Users Association consists of two bodies; general body consists of water users in the association. It elects the offices of second body i.e. watercourse committee. The

function of this committee is to manage the association according to its creation documents and supervise construction and maintenance of the physical structure. The government provides technical advice and material (bricks, cement and cement water control structures). The water users on a watercourse are expected to provide all labour and keep the watercourse well maintained after it has been built.

The objective of the Water Users Association is to organize the farmers for joint efforts regarding their common welfare on the basis of improvement of watercourse. Thus watercourse committee plays an important role among share holders for the maintenance of their watercourse.

Equality of influence on all sections of watercourse, or concentration of influence at the middle and tail, seems to be conductive to successful cooperation for watercourse improvement. If the influential people stand to gain substantially, they are more likely to support and get others to support the project: In view of the above, it seems important to study the impact of leadership on water management on scientific lines, because the success of any development programme like watercourse improvement depends to a great extent upon cooperation and interaction of various social groups.

METHODOLOGY

Ten watercourses which were improved at least two years ago were selected randomly, five from SCARP and five from Non – SCARP areas of Faisalabad district. Thus the study was confined to the Water Users Association, each in the following villages:

SCARP: Chak No. 39/GB; 75/GB; 192/RB; 198/RB; and 216/RB

Non – SCARP: Chak No. 2/JB; 70/JB; 204/RB; 226/RB and 253/RB

On each watercourse, fifteen farmers were selected randomly. The sample thus comprised 150 farmers, 75 each from SCARP and Non–SCARP area. Personal interviews were conducted to collect the data, and the data were statistically analysed.

RESULTS AND DISCUSSION

Fisher's Exact Probability Test was computed to judge the association between power/influence and impact on water management (Table1). The value of Fisher Exact Probability (.0333) was less than .05, therefore, it was concluded that there was a relationship between leadership scores and the impact on water management and the hypothesis that "higher the power/influence score of leadership on watercourse, the greater would be its impact on water management" was upheld.

Table 1. Relationship between power/influence and impact on water management

Power/Influence average score	Impact score		
	0 – 2	3 – 5	Total
Above 35 less than 40 (low)	2	1	3
40 to 44 (high)	1	6	7
Total	3	7	10

Chi–Square results in Table 2 indicate that association between power/influence and caste dominance is significant. It may therefore be concluded that the hypothesis "leaders from the dominant caste tend to possess greater power/influence" was upheld. The data indicate that numerical dominance of a particular caste has much importance in rural set up. Dominance of a caste as a factor in decision making is supported by Mirza (1975). He reported that when there were two or more major agricultural castes of equal influence, it became difficult to organize the members.

Table 2. Association between power/influence and caste dominance

Power/ influence	Caste							
	Dominant caste I		Dominant caste II		All other castes		Total	
	No.	%	No.	%	No.	%	No.	%
Low	7	36.84	4	33.33	1	5.27	12	24.00
Medium	7	36.84	1	8.33	10	52.63	18	36.00
High	5	26.32	7	58.34	8	42.10	20	40.00
Total	19	100.00	12	100.00	19	100.00	50	100.00

$x^2 = 10.43$; $P > .05$ at 4 df.

Respondents were asked about the qualities of an ideal leader. Half of the respondents wished that their leader should be educated. Data in Table 3 show that those

Table 3. Attributes of an ideal leader

Attributes	SCARP		Non – SCARP		Total	
	n_1	%	n_2	%	$n_1 + n_2$	%
Educated	30	40	45	60.00	75	50.00
Member of Assmbly/District Council	21	28	22	29.33	43	28.67
Having high relations with Govt. officials	24	32	8	10.67	32	21.33
Total	75	100	75	100.00	150	100.00

who favoured that their leaders should be members of Assembly/District Council were 28.67 %, followed by 21.33 % who liked that their leaders should have high relations with government officials so that they could influence others. Education was considered important by 60% farmers in Non – SCARP area, while relations with government officials were considered important by 32 % in SCARP area.

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