

EVALUATION OF A DRAINAGE PROJECT IN SCARP VIII AREA

**a study in Fordwah-Eastern Sadiqia canal
irrigated area of Bahawalnagar District**

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ABSTRACT

Land conditions were studied in 241 900 acres of the SCARP VIII area to appraise drainage problems, predict the impact of drainage improvement on agricultural economy of the area and evaluate the drainage project proposed by WAPDA. The studies indicate that the problem of drainage relates to the area having groundwater table within 2m depth which covers about 50 percent of the canal commanded area (CCA) (207 300 acres). About 87 percent of the affected area (43.5 percent of CCA) is assessed as suitable for agricultural development after drainage, while the rest of it is not economically drainable. About 31 percent of the affected area (15.5 percent of CCA) is expected to be naturally drained by construction of drainage works in the adjoining lower area. This leaves behind only 58 600 acres, constituting about 56 percent of the affected area, or 28 percent of CCA, as the "effective drainage area" i.e., the area which requires installation of a drainage system in the project area.

The provision of a drainage system in the "effective drainage area" of 58 600 acres is expected to benefit about 193 700 acres of the irrigated land in the study area and bring about Rs. 1 655.579 million as added agricultural income at the current price level over a period of 40 years. Comparing it with the present worth of costs for execution and maintenance of the project during that period it yields a benefit-cost ratio of 1.56:1 and the net present worth (NPW) of the project is estimated at Rs.595.212 million. Extrapolation of the evaluation results obtained from the study area to the whole project area (311 972 acres) yields the same benefit-cost ratio but NPW of Rs.771.658 million. This leads to the conclusion that the project would be economically feasible if the installation of drainage system is restricted to the "effective drainage area".