

# Economics of Irrigation In Water-Scarce Regions : Study of Maharashtra

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## CHAPTER I

### The Problem

1.1 Irrigation is crucial to the development of agriculture in India. It is necessary in order to ensure stability in crop production and fuller exploitation of cultivable land in all seasons. It is also necessary in order to derive and sustain benefits from biological improvements in crops, and technological improvements in cropping.

1.2 However, available estimates of potential total water resource for India as a whole show that it is in short supply compared to the requirements for irrigation[1] In 1980-81, 49.585 m/ha of crop land, constituting only about 28 per cent of the total crop land (28.61 per cent of the gross cropped area, and 27.66 per cent of the net cropped area) in India was irrigated. The ultimate irrigation potential from all sources, surface and underground, is estimated, in the Seventh Five Year Plan document, to be 113.5 m/ha of gross cropped area. Assuming the 1980-81 intensity of irrigation, this implies that nearly 60.6 per cent of the gross cropped area, or about 63.3 per cent of the net cropped area in the country, can ever be irrigated. (Ref. Table 1.1)

1.3 While the all-India figure highlights the overall inadequacy of water for irrigation, the regional picture shows wide differences in this regard. The state-wise data, in Table 1.1, show that in the states of Assam, West Bengal, Bihar, U.P., Haryana and Punjab, covering the Brahmaputra valley and the Indo-Gangetic plains, all the net sown area (or almost all of it) can ultimately be provided with irrigation. On the other hand, in the states of Rajasthan, Gujarat, Maharashtra and Karnataka the ultimate potential net irrigated area is expected to be between 25 and 40 per cent of total net sown area and between 30 and 40 per cent of gross cropped area, presuming the existing intensity of cropping on irrigated land. This percentage is only marginally higher for Madhya Pradesh, around 50 per cent. The states of Tamil Nadu, Andhra Pradesh and Orissa show a still higher percentage, between