

Future Trends in Water Resource Development in India to Strengthen Rural Economy Through Development of Irrigated Agriculture

V M Ranade*

Large reservoir based multipurpose irrigation projects became a reality in India only after Independence. Besides providing the much needed water input to agriculture it facilitated hydroelectricity generation that led to extensive use of pump sets in agriculture. Opposition against large dams started when people evicted from dam area could not be properly rehabilitated and the height of the dams posed a threat to the environment and increased the probability of earthquakes etc. A report on Dams and Development prepared by World Commission on Dams and released in 2000 came out heavily against the construction of large dams. In the present paper the author argues that large dams are a necessity in India and they have to be continued. Small dams and micro irrigation schemes should also be given a try.

Despite the efforts to bring wasteland under agriculture, total land under the plough in the country had continually been on the decline because of various pressures on the agricultural land for its nonagricultural use. During the last 50 years, productivity and therefore, labour employment potential per hectare of rainfed land has not increased noticeably. Most of the rural economy and additional employment generation has been borne directly or indirectly by the growth of irrigated agriculture. The scope of development of water resources to promote irrigated agriculture in the country has been constrained by the magnitude of precipitation and its characteristics, topography, geology and geomorphology of the state/region/valley.

Rainfed cultivation had been and is still being practiced at the subsistence level. Despite advancements in agriculture by way of improved seeds, chemical fertilizers, insecticides, better cultural practices etc. there has not been much improvement in the productivity of rainfed cultivation and, therefore, in the net returns to the farmers. The very same inputs could, however, be very effective in improving land productivity and net income to the farmer when associated with an input of assured water for the crop. Increase in the land under irrigated agriculture by means of surface and sub-surface water exploiting schemes have helped in meeting food grain demands of a rising population and in achieving food grain self-sufficiency in the sixties. Labour requirement per hectare of irrigated land is much more than that required for rainfed cultivation and employment is sustained over a larger portion of the year. The possibility of setting up agro-based processing industries in semi-urban areas because of increased productivity has the potential to create many job opportunities for semi-skilled and skilled labour. Irrigation projects thus form the nuclei of development in the rural sector and initiate the multiplier effect by promoting secondary and tertiary industries/trading/ business etc, thereby creating further more job opportunities. It also curbs the tendency of rural population to migrate to cities in search of livelihood. Migration of rural population to cities increases the location-specific domestic water demand, making construction of large captive/multipurpose reservoirs obligatory. Large reservoirs have exploited water resources in the valley optimally and economically. Small reservoirs and groundwater

* Former Irrigation Secretary, Government of Maharashtra.