

## **Impact of Watershed Development Programme: Experiences and Issues**

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*Water management in irrigated area is quite a different task as compared to that under rainfed regions. Here it becomes essentially a component of resource planning. Watershed management programmes undertaken with the government and non-governmental initiatives have shown excellent results towards resource conservation, as well as, monitoring the use rates. The present paper applies a system approach framework to analyse the impact of watershed management in Maharashtra. The paper gives a complete framework for such analysis and discusses a case study of the National Watershed Development Programme of Maharashtra. The impact analysis helped in bringing out the positive externalities and point out towards the minimisation of entropy in the production process. The paper concludes on a need for conducive institutional structure to achieve this.*

Seed, water and fertilizer technology of mid-sixties helped to enhance the food production quite rapidly leading to the much needed food security. One of the important fall-outs of the new technology was the wide regional differentials in the pattern of growth. Bhalla and Tyagi (1989) underscored the differential patterns and such phenomenon can be ascribed to the uneven growth in infrastructural development as well as natural constraints for adoption of the technology (CHH Rao, 1990). The bypassed regions not only depicted low growth but also posed a challenge for the agricultural technocrats. It was strongly felt that proper management of natural resources towards obtaining a sustainable and steady growth in productivity can help to overcome the major constraints of the bypassed regions. These regions exhibited broadly four types of constraints (Deshpande and Reddy, 1991, a). Firstly, the natural resource base of the regions was quite weak and could no longer sustain the existing growth pattern. Secondly, degradation of soils, forest and water resources compelled the population to depend largely on the non-traditional economic activities which caused a further drag on these resources. Thirdly, with the falling incremental income levels, investments, in farming as well as enhancing the natural resource base, decelerated both from private and public sources. Lastly, the interlinkage of the constraints led to a vicious circle, strongly eroding the sustainability and further degradation in the economic structure.

Establishing the management of an inter-dependent system of resources confined to a well defined resource region can only become the solution for the present problems. Water and land are the two basic resources which interact with bio-system and thus, programme of proper management of this system should lead to optimum production along with least environmental damage. Watershed is defined as a drainage area of which the run-off leads to a single water body (a river, a lake or a stream) (Tolley and Riggs, 1961 and Tamhne, 1967 and Barrow, 1987). It is an eco-system or