II.B.1. Ecological Management of Water Resources for Sustainable Development in India

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Different parts of the country have uneven water utilization. The difference is very much noticed between some regions with mainly pollution problems, on the other hand, and poverty-stricken tropical and sub-tropical regions with more extreme climates, rapid population growth, significant environmental vulnerability in terms of water scarcity and by/or erosion and soil degradation and severe developmental problems on the other. In the later regions environmental protection is a fundamental and necessary prerequisite for sustainable development.

In view of water's pivotal role in bio-mass production water security has been an important factor. Integrated soil/water management on catchment basis should be considered as essential in order to secure the best possible use of the available rainfall. Water harvesting and integrated land water management is not new in India. In rural areas water harvesting should be seen as part of an integrated program for sustainable development of land and water resources on a watershed basis whose objective is to improve total bio-mass output. Major institutional policy and technological initiatives are required to ensure an efficient socially equitable and environmentally sustainable management of country's water resources.

This paper tries covering various aspects of environmental and ecological ways of conservation of both surface and ground water sources. Moreover, it also tries to explain the relevance of traditional wisdom in the context of ecological and environmental friendly approach of water resources management for sustainable development in India.