

# Resource Management with Zero Waste Approach (Part – III) Water Resource

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## Abstract

Water is essential for all living beings on this planet. With increase in human population along with agricultural and industrial activities, the water resource is becoming scarce particularly in the developing countries like India. The anthropogenic activities are to a great extent responsible for the scarcity of clean water. Due to modern agricultural activities, rapid urbanization and mushroom growth of industries, a major portion of water resources both on surface and in the ground are getting polluted by their solid wastes and effluents. The anthropogenic activities responsible for the scarcity of water also include disappearance of wetlands, climate change, irregularity of rainfall and above all extravagance in use of water. In view of this, it has become necessary to develop and utilize scientifically the water resource with zero waste approach. In this review paper, some general methods of water conservations have been outlined. The water conservation measures in three major sectors namely agriculture and agro industries, mining and mineral processing industries and urban habitation have been described and discussed in detail with particular reference to India. In order to solve the water scarcity, the need for proper planning of water resource development and management projects, have been outlined. In order to judiciously utilize the water resource, the importance and justification for pricing of water has been stressed. In the conclusion, certain major projects for mitigating the water crisis have been suggested. It is felt that, in a water stressed country like India, the people in general and the government in particular should take necessary steps to implement various water resource management projects to avoid the disastrous situation in near future.

**Keywords:** Water resource, anthropogenic activities, water scarcity, water conservation, integrated water resource management, agricultural sector, industrial sector, urban sector, water projects in India, water valuation, zero waste approach.