

INTRODUCTION

Water is an essential commodity required by all the living species at one step or the other in the completing their life cycle. Humans attribute to the maximum use of water among all the living beings for their daily activities. Water resources are limited and get reduced everyday due to the lack of proper management and conservation practices. India has been recognized far and wide for ages for her water harvesting and management practices throughout the world. India has a rich tradition of water management practices through proper harvesting techniques of rainwater. However, due to the rapid urbanization and industrialization the traditional methods of harvesting rainwater are long forgotten. Only a few states in the country such as some parts of Rajasthan, Gujarat, Tamil Nadu, Andhra Pradesh, Karnataka, Uttar Pradesh, North Eastern States practice the traditional way of harvesting rain water through traditional natural water resources structures. There are several other reasons for the depletion of ground water in our country namely adverse changes in the environment, scanty and uneven rainfall patterns, increasing population pressure and migration result in over exploitation of the groundwater resources for various uses every day. Natural distribution of groundwater resources i.e. availability of groundwater over the different regions across the country is uneven due to the kaleidoscopic diversity in topography. The traditional ways of harvesting rain water were very efficient. The ground water that we extract today for our usage was probably harvested thousands of years ago by our ancestors. In those days water was everybody's business unlike today when water has been left solely at the mercy of government. Today, especially in towns, water is taken for granted and the city corporations run by the government are blamed for its unavailability. As a result the entire heritage, both cultural and technological, lies as abandoned.

Today a major fresh water crisis is shadowing upon our country gradually. The crisis is obviously due to the widening gap between the demand and supply due to improper management. Effects of climate change on water resources are also a great concern all over the globe and need proper adaptation measures. In 1951, the per capita availability of water was 5177 m³. In 2001 it stood at approximately 1820 m³ per capita per year and is predicted to reduce further to 1341 m³ in the year 2025 and 1140 m³ in the year 2050. In addition to the above said reasons, there are several other manifestations of the increasing water crisis in the country. These are depleting groundwater tables, polluted surface and groundwater, disputes for the ownership of river water and the natural calamities. Migration of population and the competition over the limited supplies of water for alternative usage in agriculture, industry, recreation and maintenance of environmental quality have become intense as the time passes by. Over-extraction of groundwater further adds to the crisis and groundwater depletion.

1. Figures derived from STRATEGIC PLAN FOR MINISTRY OF WATER RESOURCES, Gol (February 2011)

A number of our freshwater ecosystems such as lakes, ponds etc. have degraded over the period of time due to anthropogenic (manmade) activities. With the advancement in the technology, India developed ways to extract water out of the hard rock areas, which has undoubtedly provided water for millions of people. Yet, at the same time, the number of energized wells drilled for the irrigation purpose also increased apace. Modernization and changing lifestyle of the urban population also led to the increased demand for fresh water.

In the present times, a need arises to educate fellow beings about the water conservation and proper management for sustainable human benefit. Water can be made available to everybody, what matters is how judiciously do they use it and how safe is it for them. Each individual's behaviour affects the life of many other people. So if water is not used sensibly by one person, it harms many other people dependent on his behaviour.

In the above light, this manual is a tool to create awareness and sensitization on water conservation and management amongst different sections of the society.