

Water resources in India

Water is an important resource. It is utilised by human population in various ways. In India, the main use of water is in irrigation. Domestic water consumption and use of water in industries is also very important. In domestic water consumption water is utilised in various domestic activities, the most important being drinking. Drinking water is also called potable water. Potable water is the water which is safe for drinking also for food preparation. In most of the developed countries tap water is considered as potable water.

Black Water: the wastewater containing faecal matter and urine from bathrooms and toilets is called the Black Water.

Grey water: wastewater without faecal matter discharged from sinks, washing machines and bathtubs is called grey water.

In India the main source of water is the monsoons. India thus is a monsoon land. But the monsoons are limited only to 3-4 months of the year that is from July to September.

The sources of water All the different sources of water in India, can be classified into three main types:

- 1. Surface water** the surface water is mainly in the various rivers of the country. As far as the various river systems in India are concerned there are 14 major river systems 44 medium river systems and 55 minor river systems. Among the 14 major river systems, Brahmaputra, Kaveri, Ganga, Godavari, Indus, Krishna, Mahanadi, Narmada, Sabarmati, Tapi, subarnarekha etc. are the most important. They share 83% of the drainage basin, Apart from them, the median and minor river systems are fast flowing and are particularly dependent on monsoon. They usually originate in the coastal mountains of the major rivers. As most of the rivers in India are monsoon-fed, there is a great shortage of surface water during the dry months of the Year. Rivers have also been classified two types:
Perennial rivers and peninsular rivers.
Perennial rivers these are those rivers which flow all the year round. They originate from glaciers and snow on mountains move downward and reach the plains. Examples : Indus, Ganga, Brahmaputra and their tributaries.
Peninsular rivers These rivers arise from Peninsular India (central India, Eastern ghats, Western ghats etc.). These rivers are rain fed, and are seasonal or non- perennial in nature. Examples : Mahanadi, Godavari, Krishna, Cauvery, Narmada, Tapi etc. And their tributaries.
- 2. Groundwater resources** groundwater is an important resource in India. It is present inside the earth in the water table. Earlier it was available through the wells dug by civilizations. Now, this water is available by the use of pumps or boring. Due to the uncertain nature of the monsoons now-a-days, irrigation in India especially depends on the ground water. Not only that, even the domestic usage of water is also dependent on groundwater. But the groundwater resources are only well developed in Northern and coastal plains. According to an estimate the groundwater

resource of India is roughly around to 210 billion cubic metres. The groundwater resource keeps on recharging by the process of infiltration and seepage.

- 3. Water bodies** Besides the surface water sources and the groundwater resources water bodies found all over the Indian subcontinent also serve as an important resource of potable water. These water bodies include reservoirs, lakes, wetlands mangroves, ponds etc. Major lakes in India include Pulicat lake, Kolleru lake, Pangong, Chilika, Kuttanad lake, Sabhar salt lake, Pushkar lake. India is a signatory of Ramsar convention. 46 Ramsar wetlands have been identified in India. Bhoj, Chandra taal, sundarban etc.

Water budget is an accounting of all the water that flows into and out of a project area.

In spite of such large surface and groundwater resources, India today faces acute water crisis.