**Development**

* According to the **UN World Water Development Report**, **2003**
1. **96.5** per cent of the total volume of world’s water is estimated to exist as oceans and only **2.5 per** cent as **freshwater**
2. Nearly **70** per cent of this freshwater occurs as **ice sheets** and **glaciers** in **Antarctica, Greenland and the mountainous regions of the world**
3. India receives nearly **4 per cent** of the **global precipitation** and **ranks 133** in the world in terms of water availability per person per annum
4. The total renewable water resources of India are estimated at **1,897 sq** km per **annum**
* Freshwater is mainly obtained from **Precipitation**, **Surface run off** and **Ground water**
* Freshwater is continually being renewed and recharged through the **hydrological cycle**.
* All water moves within the hydrological cycle ensuring that water is a **renewable** resource
* The availability of water resources varies over space and time, mainly due to the **variations in seasonal** and **annual precipitation**.
* Water scarcity in most cases is caused by **over-exploitation**, **excessive use** and **unequal access to water** among different social groups
* According to **Falkenmark**, a **Swedish expert**, water stress occurs when water availability is between 1,000 and 1,600 cubic metre per person per year
* Causes of water scarcity include Growing population, Growing of water intensive crop, Expansion of irrigation facilities, Individual wells and tube wells in farms and, Industries.
* In India **hydro-eclectric power** contributes approximately **22 per cent** of the total **electricity** produced
* In the first century B.C., **Sringaverapura** near **Allahabad** had sophisticated water harvesting system channelling the flood water of the river Ganga
* During the time of **Chandragupta Maurya**, dams, lakes and irrigation systems were

extensively built

* Evidences of sophisticated irrigation works have also been found in Kalinga, (Odisha), Nagarjunakonda (Andhra Pradesh), Bennur (Karnataka), Kolhapur (Maharashtra), etc.
* In the **11th Century**, **Bhopal Lake**, one of the largest artificial lakes of its time was built
* In the 14th Century, the tank in **Hauz Khas**, Delhi was constructed by **Iltutmish** for

supplying water to Siri Fort area

* Dams are built not just for irrigation but for electricity generation, water supply for domestic and industrial uses, flood control, recreation, inland navigation and fish breeding
* **Dams** are now referred to as **multi-purpose projects** where the many uses of the impounded water are integrated with one another
* **Hirakud** project in the **Mahanadi** basin
* Most dams have a section called a **spillway** or **weir** over which or through which

it is intended that water will flow either intermittently or continuously.

* Dams are **classified** according to **structure**, **intended purpose** or **height**.
* Based on **structure** and the **materials** used, dams are classified as **timber dams**, **embankment** **dams** or **masonry** dams, with several subtypes.
* According to the height, dams can be categorised as **large dams** and major dams or alternatively as low dams, medium height dams and high dams
* Jawaharlal Nehru proudly proclaimed the dams as the ‘temples of modern India, the
* reason being that it would integrate development of agriculture and the village economy with rapid industrialisation and growth of the urban economy.
* Flooding of Damodar river known as the river of sorrow
* Resistance to Dam projects has primarily been due to the large-scale displacement of local communities
* Narmada Bachao Andolan or Save

Narmada Movement is a Non

Governmental Organisation (NGO) that

mobilised tribal people, farmers,

environmentalists and human rights

activists against the Sardar Sarovar Dam

being built across the Narmada river in

* Gujarat.

It originally focused on the

environmental issues related to trees that

would be submerged under the dam

water. Recently it has re-focused the

aim to enable poor citizens, especially

the oustees (displaced people) to get

full rehabilitation facilities from

* the government