

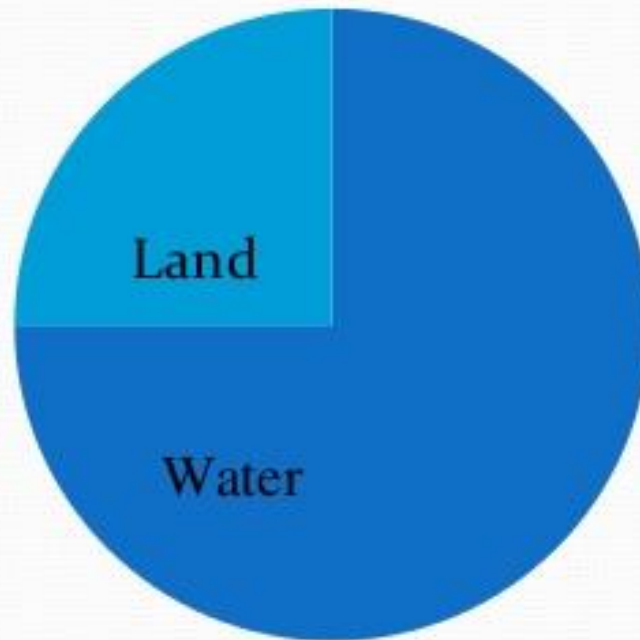
WATER RESOURCES



Water: some facts and figures

- ❖ Three fourth of the earth's surface is covered with water

AREA UNDER LAND AND WATER



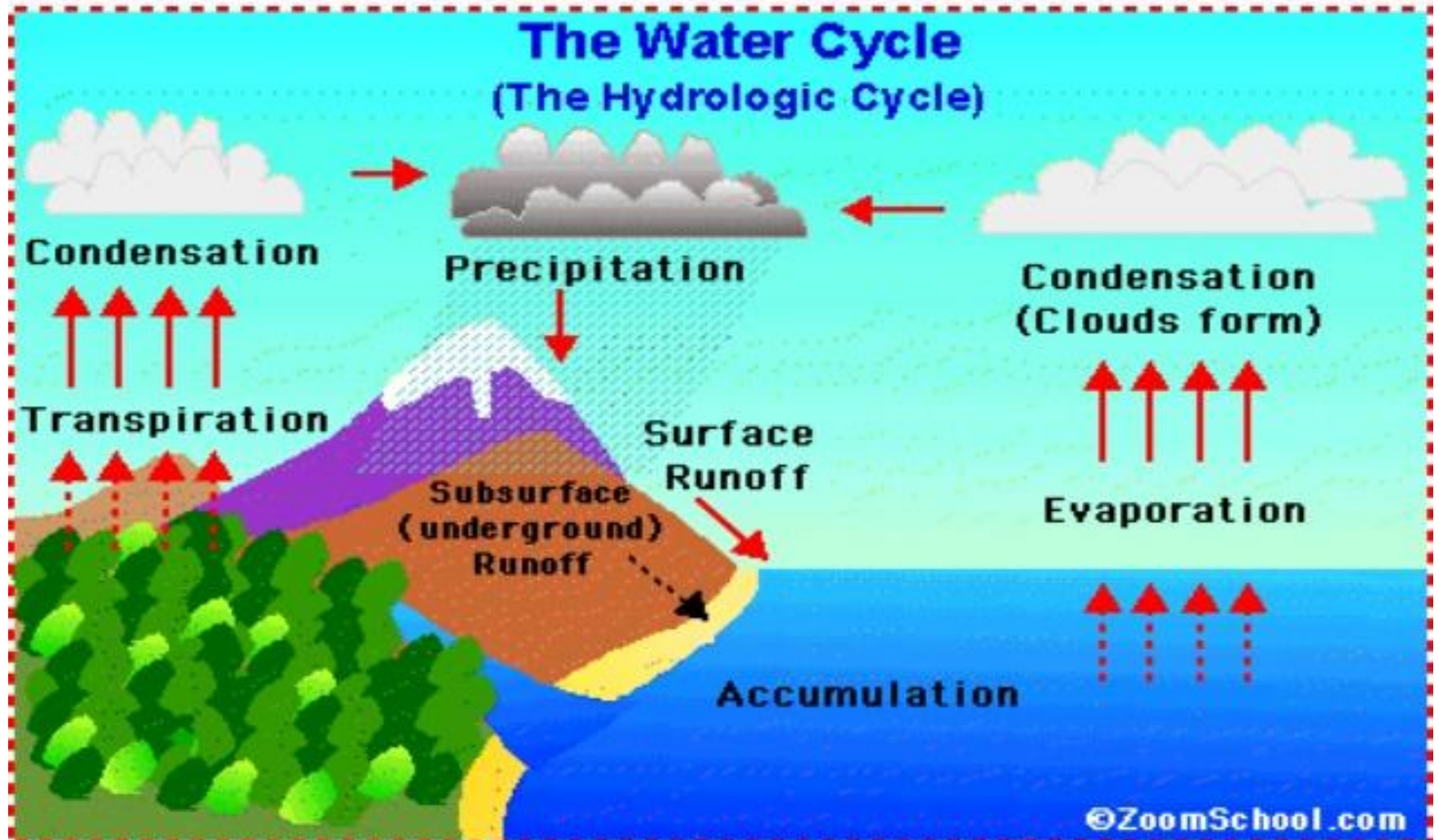
Water: some facts and figures

- ❖ Out of 100% of water **96.5 %** of the total volume of the world's water is **SALINE**
- ❖ **2.5 %** is **FRESHWATER**
- ❖ **70%** of freshwater occurs as **ice** sheets and **glaciers**
- ❖ **29%** as Groundwater

Water: some facts and figures

- ❖ India gets 4% of the global precipitation
- ❖ Land area of India is 2.4% of the world
- ❖ India hold 17% of the world's population

❖ Hydrological cycle ensuring that water is a renewable resource.



Is water renewable resource?



Is water renewable resource?



If the following conditions are Being continued....

- ❖ Industrial waste disposal to water
- ❖ Excessive use of chemical fertilizers
- ❖ Uses of chemical pesticides
- ❖ Rapid Urbanization
- ❖ Over population
- ❖ Global warming -- Drought

➤ India – A Monsoon Country

➤ 100 – 120 days experience monsoon

- ❖ Still facing water scarcity – Why?
- ❖ Growing Population
- ❖ Expanded irrigation
- ❖ Intensive Industrialisation and Urbanisation
- ❖ Hydroelectric Power generation

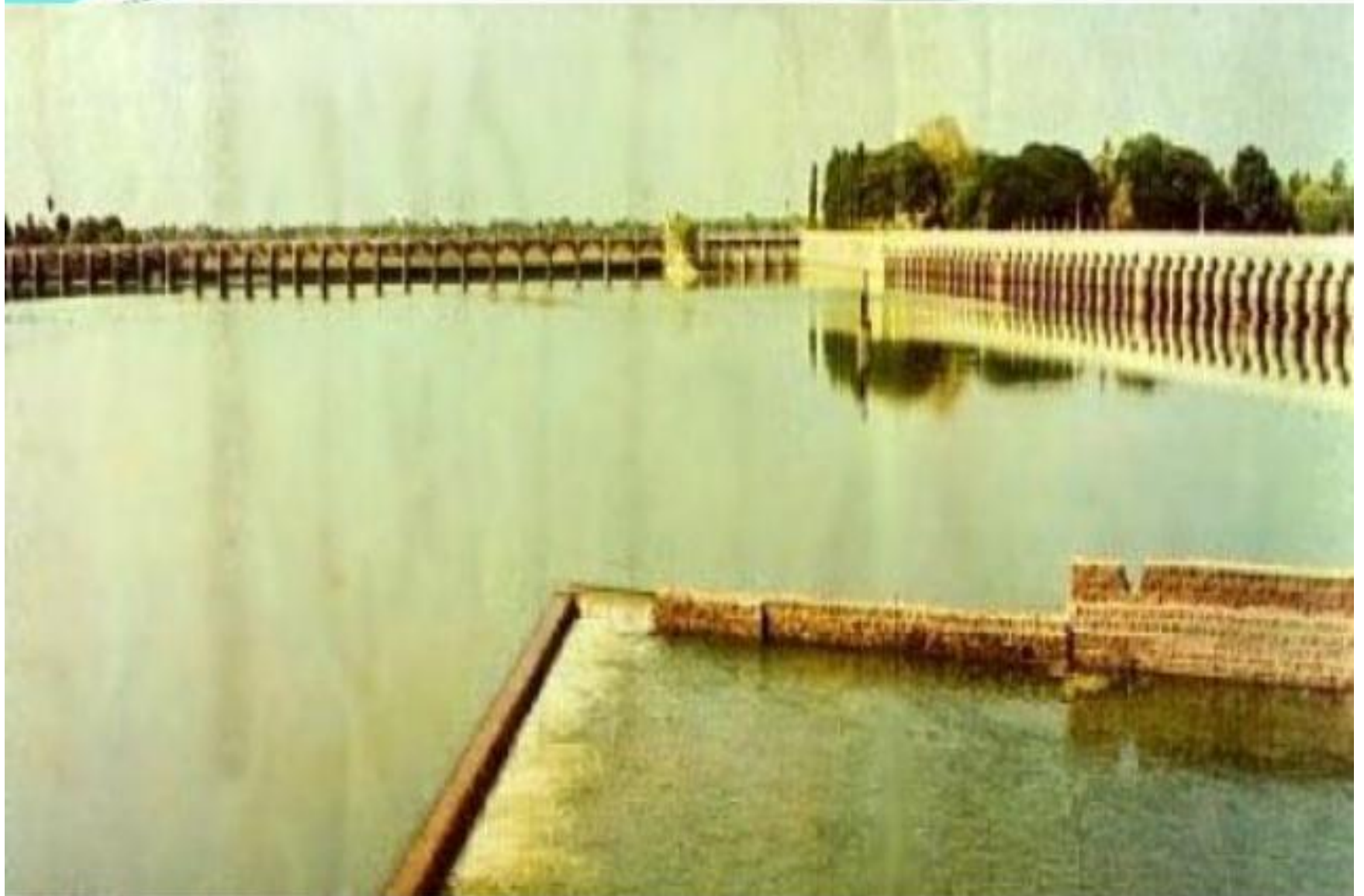
- India has 10360 small and big rivers
- Mawsinram is the wettest place in the world
- Water is sufficiently available - but the quality.... ?

- ❖ Reasons for the bad quality of water..
- ❖ Chemical pesticides and fertilizers
- ❖ Polluted by domestic and industrial waste

➤ Why water resource is needed to be conserved?

- ❖ To ensure healthy life
- ❖ To ensure food security
- ❖ For the continuation of our livelihoods
- ❖ To prevent degradation of our ecosystem

Grant Anicut / Kallanai



GRANT ANICUT or KALLANAI

- ❖ It built on the Kaveri river -- TN
- ❖ By the Cholas king Karikala around the 2nd Century AD
- ❖ It is one of the oldest water regulator structures in the world, which is still in use.

Pringaverapura water harvesting system



- ❖ A sophisticated water harvesting system built in the 1st Century B.C. at Allahabad, UP

Nagrajuna konda –

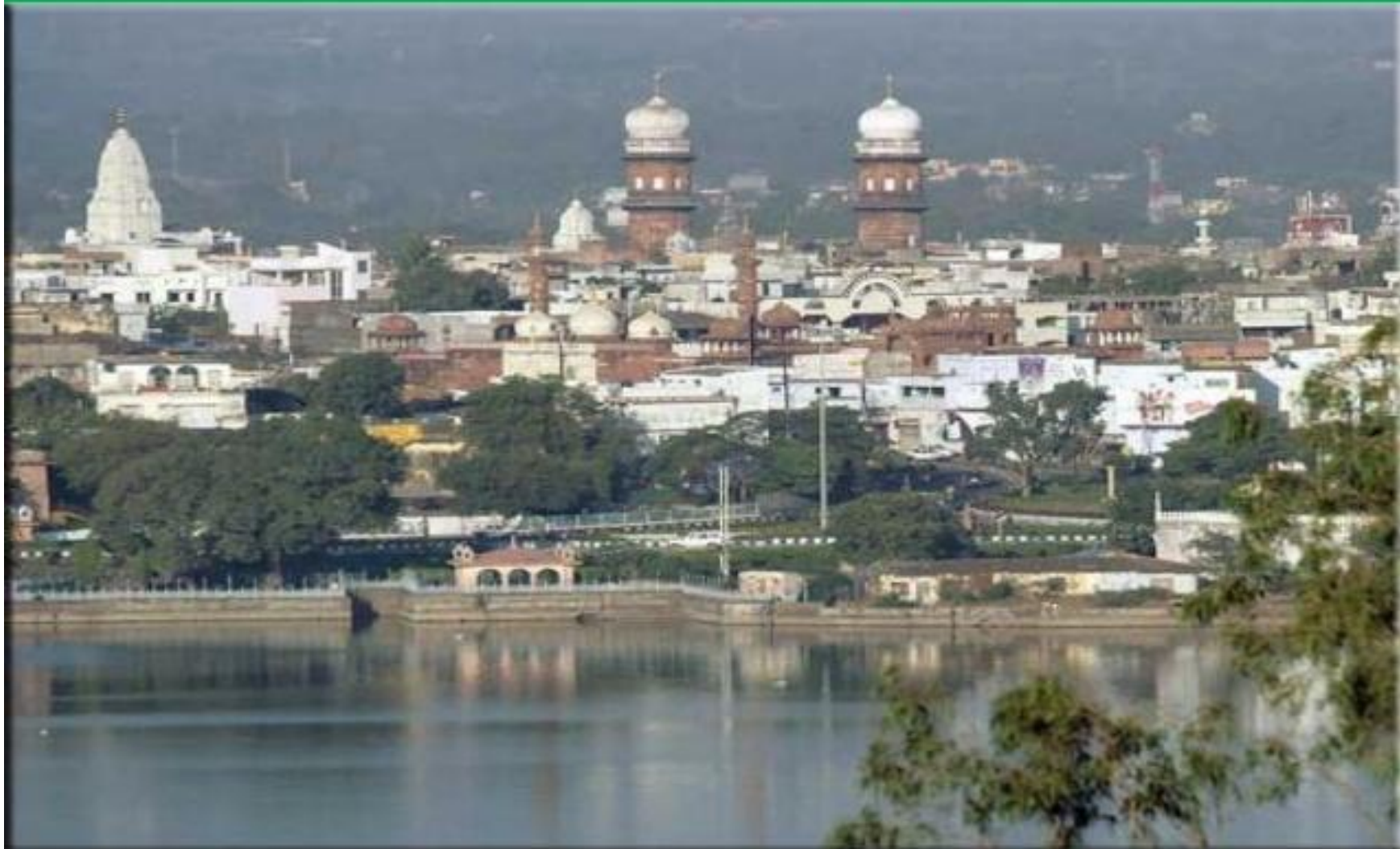
Andhra Pradesh



Nagarjunakonda,
Andhra Pradesh, India

Bhopal lake –

Madhya Pradesh



BHOPAL LAKE – MADHYA PRADESH

- ❖ It is a source of drinking water of the city
- ❖ Built between 1005 – 1055 AD by the Malwa King

HAUZ KHAS –

DELHI



Hauz means Water Tank
Khas means Royal

Royal water tank

- It was built by the Allauddin Khilji – 1296 - 1316- to supply water for the inhabitants of Siri Fort

HAUZ-I- shamsi Built by Iltumish Mehrauli



**Agrasena ki Baoli – Built by Maharajah Agrasena
(more than 5000 years ago)
Rebuilt in 14th century by the Agrawal community**



How do dams help us in conserving and managing water?

Dams were traditionally built to impound rivers and rainwater that could be used later to irrigate agricultural areas.

What are the different uses of the modern dams?

Irrigation

Electricity generation

Domestic and industrial uses

Flood control

Recreation

Inland navigation

Fish breeding

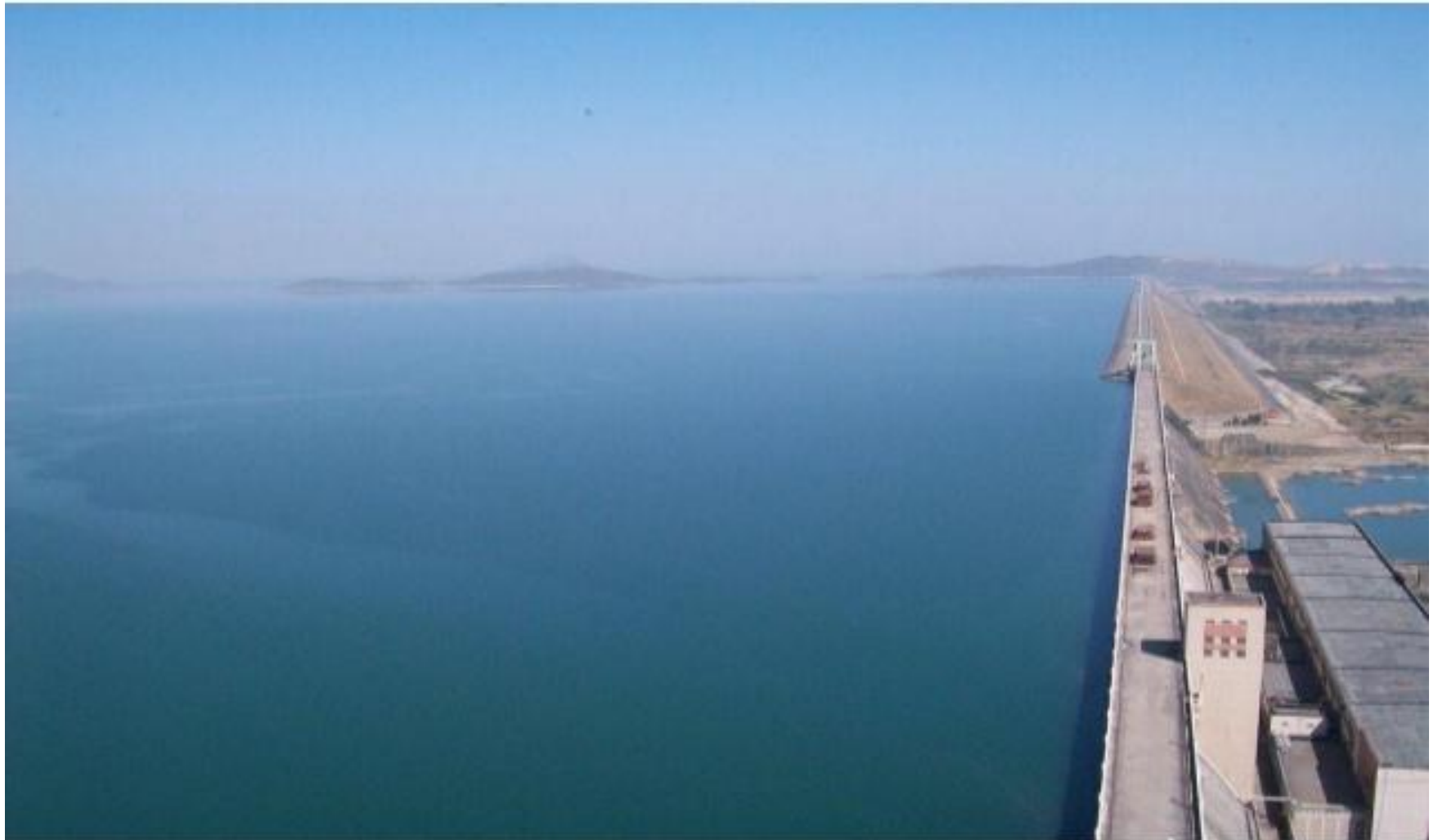
The biggest dam in India: TEHRI on Bhagirathi river



The highest dam in India: Bhakra Dam on Sutlej river



The longest dam in India: the Hirakud on Mahanadi river



Why multi-purpose projects and large dams have come under great controversy?

- Regulating and damming of river affect their natural flow causing poor sediment flow and excessive sedimentation at the bottom of the reservoir.
- It controls the migration of aquatic fauna
- It makes submergence of the existing vegetation

Why multi-purpose projects and large dams have come under great controversy?

- It leads large scale displacement of local communities
- It destroys habitat of millions of flora and fauna
- It leads the degradation of soil due to the continuous irrigation

Who are the beneficiaries of Multi-purpose projects?

- The landowners
- Large farmers
- Industrialists
- Few urban centers

Inter-state water disputes

- Kaveri river water dispute between Karnataka and Tamil Nadu
- Disputes have been started since 1870 between Princely State of Mysore and Madras Presidency

Inter-state water disputes

- Krishna river water dispute between Karnataka, Andhra Pradesh and Maharashtra
- Maharashtra – 303 KM
- Karnataka -- 480 KM
- Andhra Pradesh – 517 KM

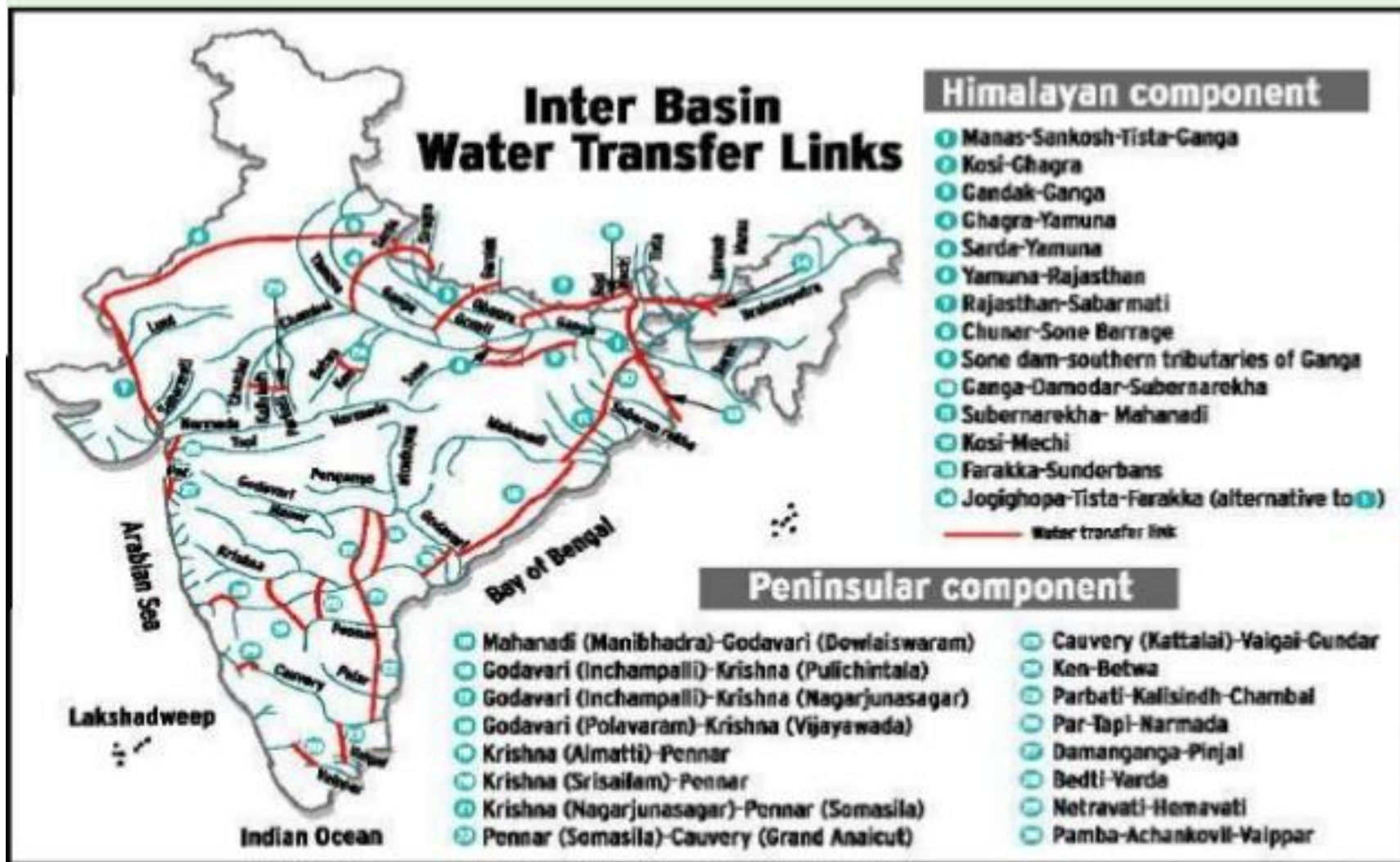
Inter-state water disputes

- Yamuna river water disputes among UP, Haryana and Delhi
- Godavari river water disputes among Maharashtra, AP, Karnataka, MP, Odisha and Chhattisgarh

Inter-national water disputes

- Indus river water disputes between India and Pakistan
- Kosi river water disputes between India and Nepal
- Brahmaputra water disputes between India and China

River inter-linking project in India



River inter-linking project in India

- Aim of river linking project -- Transfer of water from surplus to water deficit areas in the country.
- Disadvantages
 - Huge investment needed for the infrastructure
 - It leads to the disorder of physical settings
 - Leads to the causes of natural disaster
 - It causes the irreparable damage of the ecosystem
 - Habitat destruction

SAVE WATER



**THE WORLD
IS IN
YOUR HANDS**