PROJECT: NIRJHAR

AN INTEGRATED PROJECT FOR GRADE VII

BY,
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GRADE VII - C

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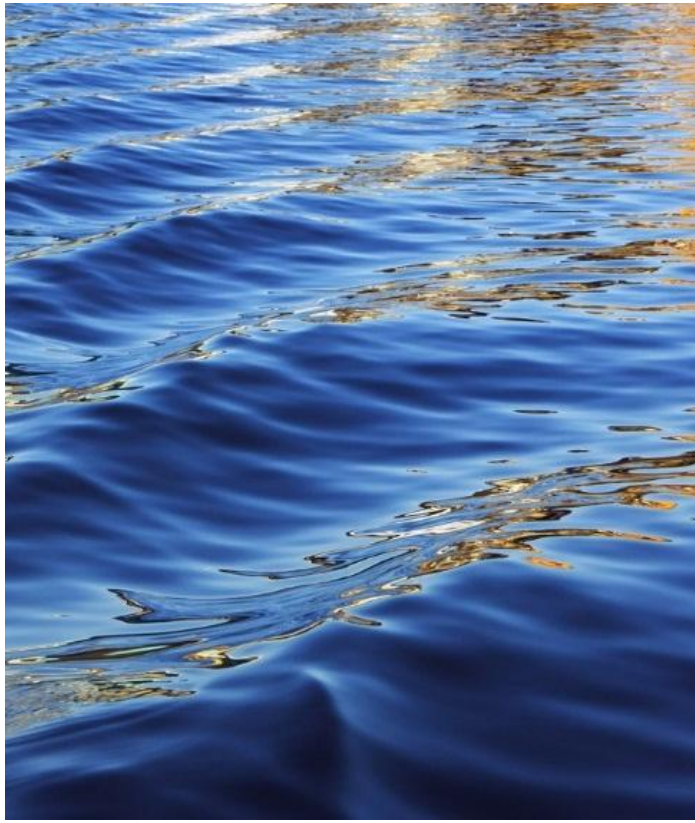

S.SC HOLIDAY HOMEWORK

By,
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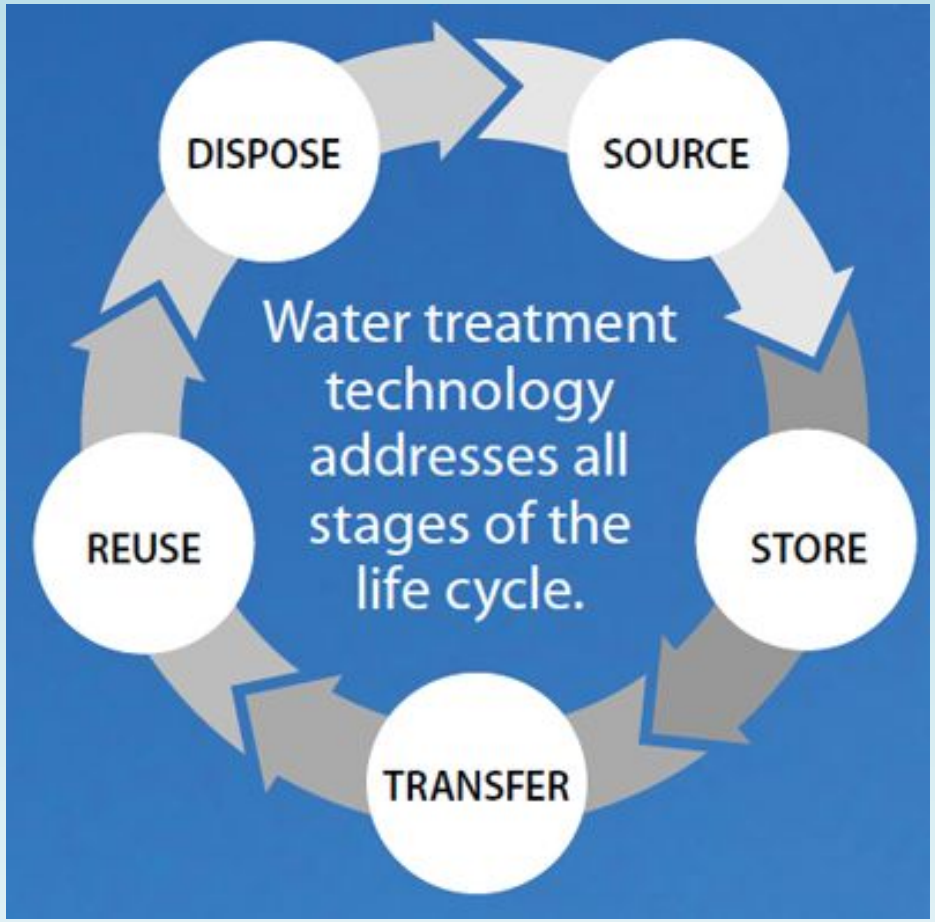
Grade - VII C

What is Water Management?



Water resource management is the activity of planning, developing, distributing and managing the optimum use of water resources. It is a sub-set of water cycle management. Water is essential for our survival.

WHAT MEASURES WERE ADOPTED BY OUR ANCESTORS FOR MANAGING WATER AS A RESOURCE?

Jhalara - Jhalaras are typically rectangular-shaped stepwells that have tiered steps on three or four sides. These stepwells collect the subterranean seepage of an upstream reservoir or a lake. Jhalaras were built to ensure easy and regular supply of water for religious rites, royal ceremonies and community use. The city of Jodhpur has eight jhalaras, the oldest being the Mahamandir Jhalara that dates back to 1660 AD.

2. TAANKA

Taanka - Taanka is a traditional rainwater harvesting technique indigenous to the Thar desert region of Rajasthan. A Taanka is a cylindrical paved underground pit into which rainwater from rooftops, courtyards or artificially prepared catchments flows. Once completely filled, the water stored in a taanka can last throughout the dry season and is sufficient for a family of 5-6 members. An important element of water security in these arid regions, taankas can save families from the everyday drudgery of fetching water from distant sources.

3.KUND

Kund - A kund is a saucer-shaped catchment area that gently slope towards the central circular underground well. Its main purpose is to harvest rainwater for drinking. Kunds dot the sandier tracts of western Rajasthan and Gujarat. Traditionally, these well-pits were covered in disinfectant lime and ash, though many modern kunds have been constructed simply with cement. Raja Sur Singh is said to have built the earliest known kunds in the village of Vadi Ka Melan in the year 1607 AD.

4. KHADIN

Khadin - Khadins are ingenious constructions designed to harvest surface runoff water for agriculture. The main feature of a khadin, also called dhora, is a long earthen embankment that is built across the hill slopes of gravelly uplands. Sluices and spillways allow the excess water to drain off and the water-saturated land is then used for crop production. First designed by the Paliwal Brahmins of Jaisalmer in the 15th century, this system is very similar to the irrigation methods of the people of ancient Ur (present Iraq).

5. KUHLS

Kuhls - Kuhls are surface water channels found in the mountainous regions of Himachal Pradesh. The channels carry glacial waters from rivers and streams into the fields. The Kangra Valley system has an estimated 715 major kuhls and 2,500 minor kuhls that irrigate more than 30,000 hectares in the valley. An important cultural tradition, the kuhls were built either through public donations or by royal rulers. A kohli would be designated as the master of the kuhl and he would be responsible for the maintenance of the kuhl.

MATHS HOLIDAY HOMEWORK

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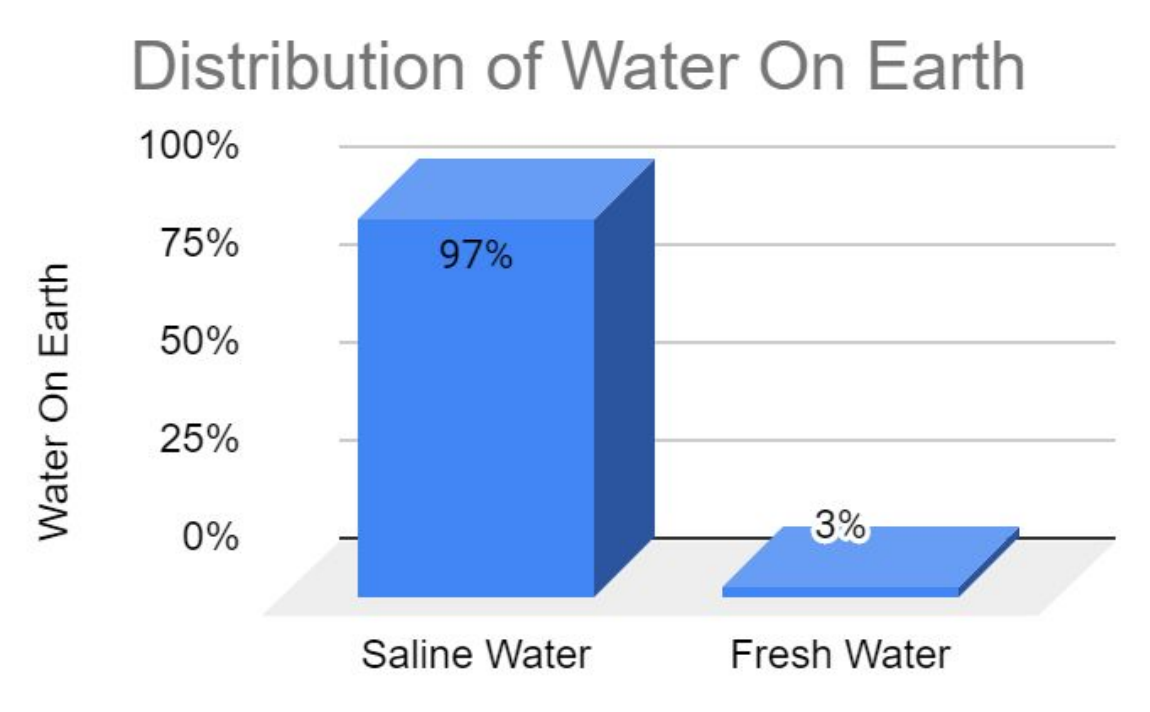
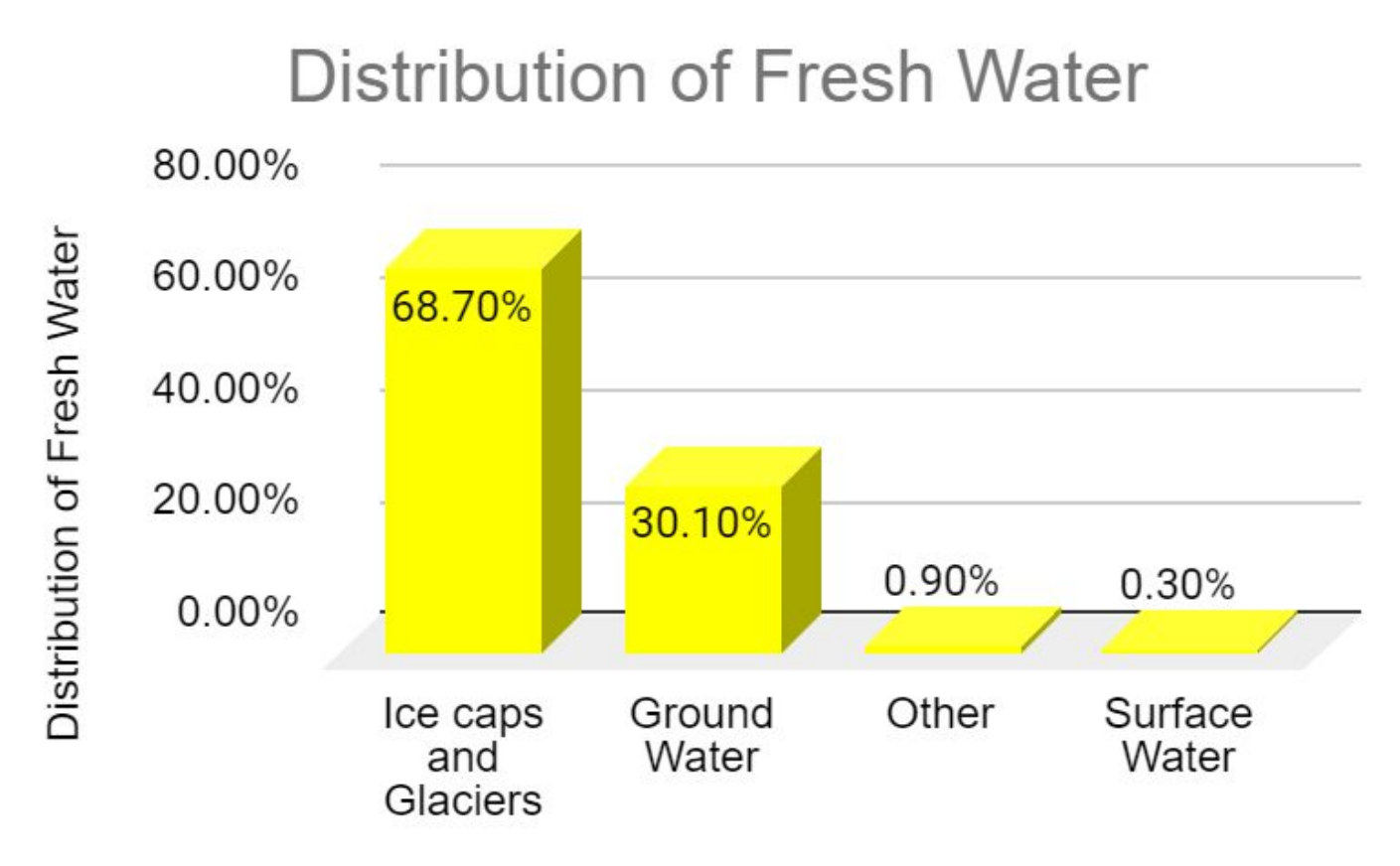
Distribution of Water on Earth:



Saline Water - 97%

Fresh Water - 3%

Distribution of Freshwater:



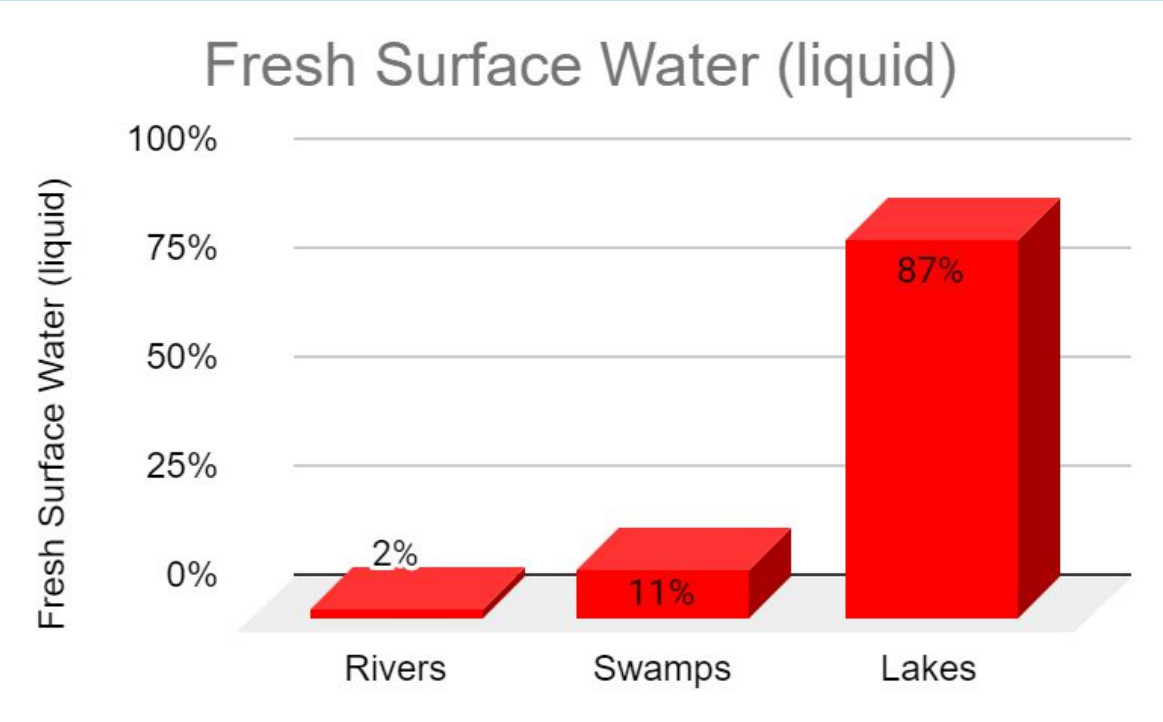
Ice caps & Glaciers - 68.7%

Ground Water - 30.1%

Other - 0.9%

Surface Water - 0.3%

Distribution of Fresh Surface Water (liquid)



Rivers - 2%

Swamps - 11%

Lakes - 87%

SCIENCE HOLIDAY HOMEWORK

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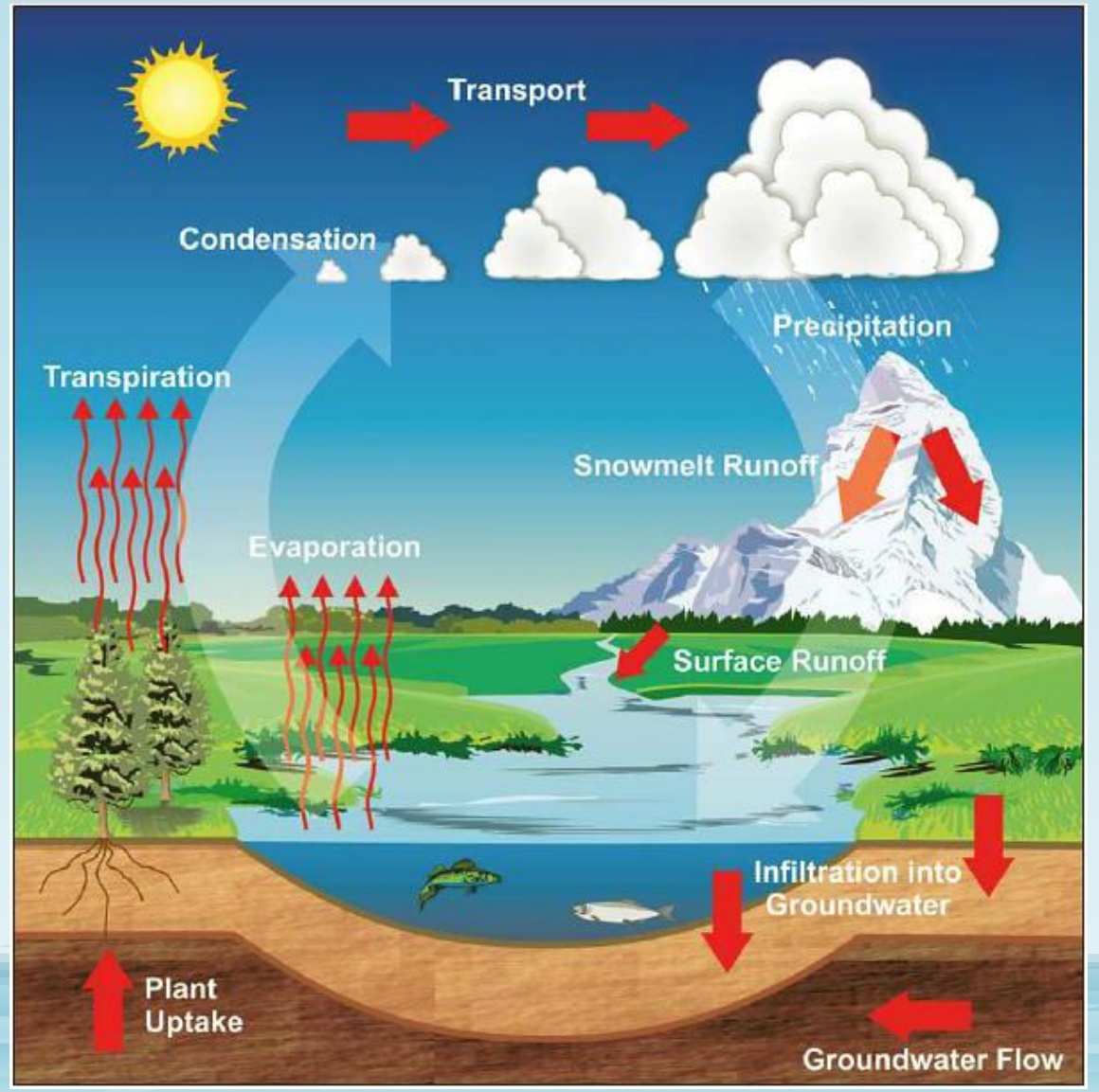
How Is Pollution Disturbing Water Cycle?

- The tiny aerosol particles or **pollutants** from burning fossil fuel and vegetation — cut down the amount of heat reaching the ocean, which initiates the **cycling** of **water** vapour. The researchers think the aerosols may be 'spinning down' the **hydrological cycle** of the planet.
- During water cycle, when the **ocean water evaporates** into the atmosphere it comes in contact with the **pollution in the atmosphere** which creates acid in the atmosphere. When it rains this **acid reaches down** to the earth surface as **acid rain**. When the water cycle starts again the acid water which came out of the acid rain is used again for rain.
- When factory **waste is disposed** of into water, all these **chemicals mix up** with the water and then the **same water (mixed with chemical)** is evaporated and then precipitate.

WATER CYCLE


Transport
Condensation
Precipitation
Transpiration
Snowmelt Runoff
Evaporation
Surface Runoff
Infiltration into Groundwater
Plant Uptake
Groundwater Flow

What is Watershed Management?

Watershed management is the process of creating and implementing plans, programs, and projects to sustain and enhance watershed functions that affect the plant, animal, and human communities within a watershed boundary. The watershed is the area of land that drains or sheds water into a specific receiving waterbody, such as a lake or a river. Watershed management encompasses the process of implementing land use practices and water management practices to protect and improve the quality of the water and other natural resources within a watershed by managing the use of those land and water resources in a comprehensive manner.

Is Watershed Management practiced in India? If yes, how many watersheds are there in India?

Watershed management has been taken up under different programmes launched by Government of **India**.

There are **nine states** that are **participating** in this program- **Andhra Pradesh, Chattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana**.

There are **3237 watersheds** developed in **India**.

ENGLISH HOLIDAY HOMEWORK

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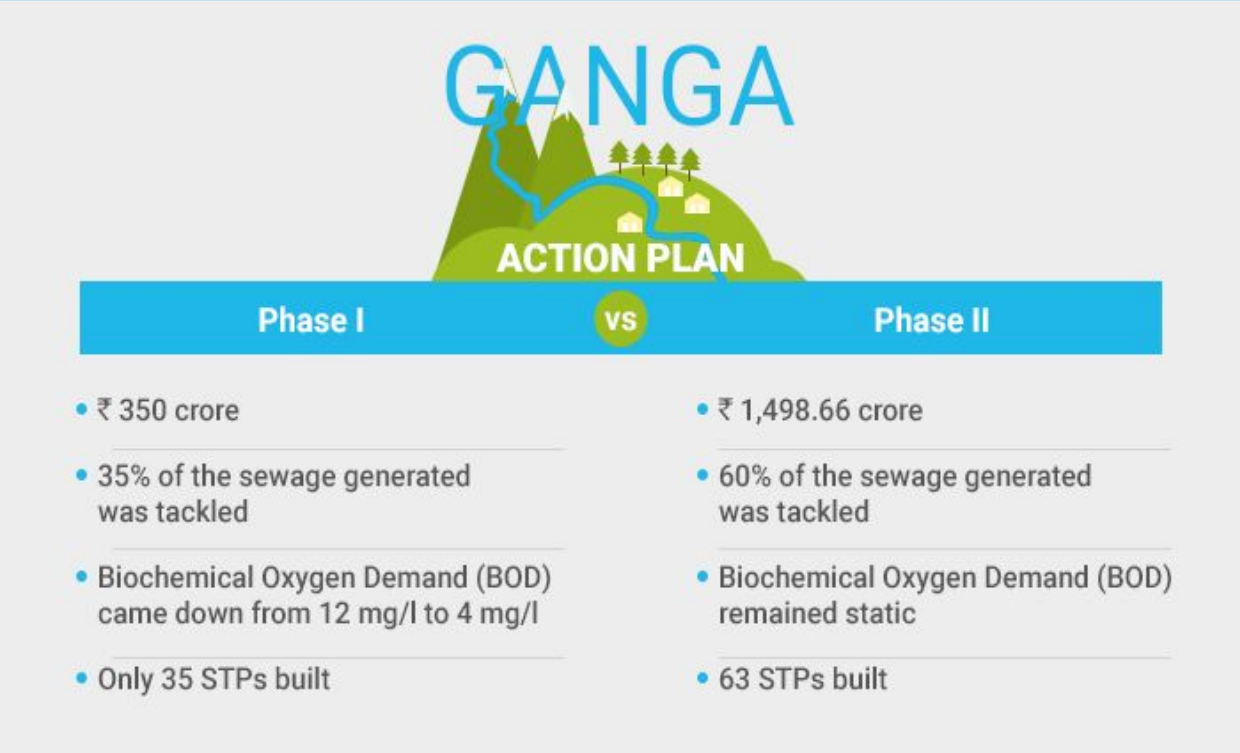
What is the Ganga Action Plan?

The Ganga Action Plan was, launched on 14 Jan. 1986 by the then Prime Minister of India Shri Rajeev Gandhi, with the main objective of pollution abatement of the river Ganga, to improve the water quality by interception, diversion, and treatment of domestic sewage, and to identify grossly polluting units to prevent.



My views on Ganga Action Plan:

- I think that Ganga Action plan launched by the government in 1986 was a good initiative because as Ganga is a holy river many rituals are performed in Ganga and there is a lot of waste piling up in Ganga making it dirty.
- By this programme we will be able to clean Ganga fully and make it pollution free.
- As the river will become pollution free the water can be used for many different works like for irrigation, household works etc.

Failure of Ganga Action plan:

There are several reasons why Ganga Action Plan didn't get any success and became a failure:

Weakness of Design aspects of GAP:

1. Limited Scope of Issues Addressed
2. Inadequacy of Standards of Water Quality
3. Influence of Aid on Choice of Technology
4. Inappropriate Technological Choices for Treatment
5. Inappropriate Policy of Discharging
6. Lack of a Clear Policy-Legal and Institutional Framework

CONTINUE IN NEXT SLIDE->

Weakness of Implementation:

1. Political Motivations behind the GAP
2. Inordinate Delays in Creating Assets
3. Partial Coverage for Collection, Conveyance and Treatment of Sewage across Cities in the River-Basin
4. Over-Designed STPs

Weakness of Operation and Maintenance:

1. Irregular Maintenance
2. Sub-Optimal Functioning of the Assets
3. Unclear, Unviable Financial Models

CONTINUE IN NEXT SLIDE->

Weakness of Monitoring, Evaluation and Regulation:

1. Neglect of Monitoring of Important Aspects Other Than the River Quality
2. Failure to Utilize Available Monitoring Data
3. Failure in Controlling Industrial Pollution
4. Weak Monitoring by Central Institutions
5. Failure in Establishing Citizen’s Monitoring Committees
6. Flaws in the Design of Citizen’s Monitoring Committees

THANK YOU!!