

CLASS – 10

SOCIAL SCIENCE

Contemporary India-II

CH-3 : Water Resources

Part – 4

Rainwater Harvesting

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OVERVIEW

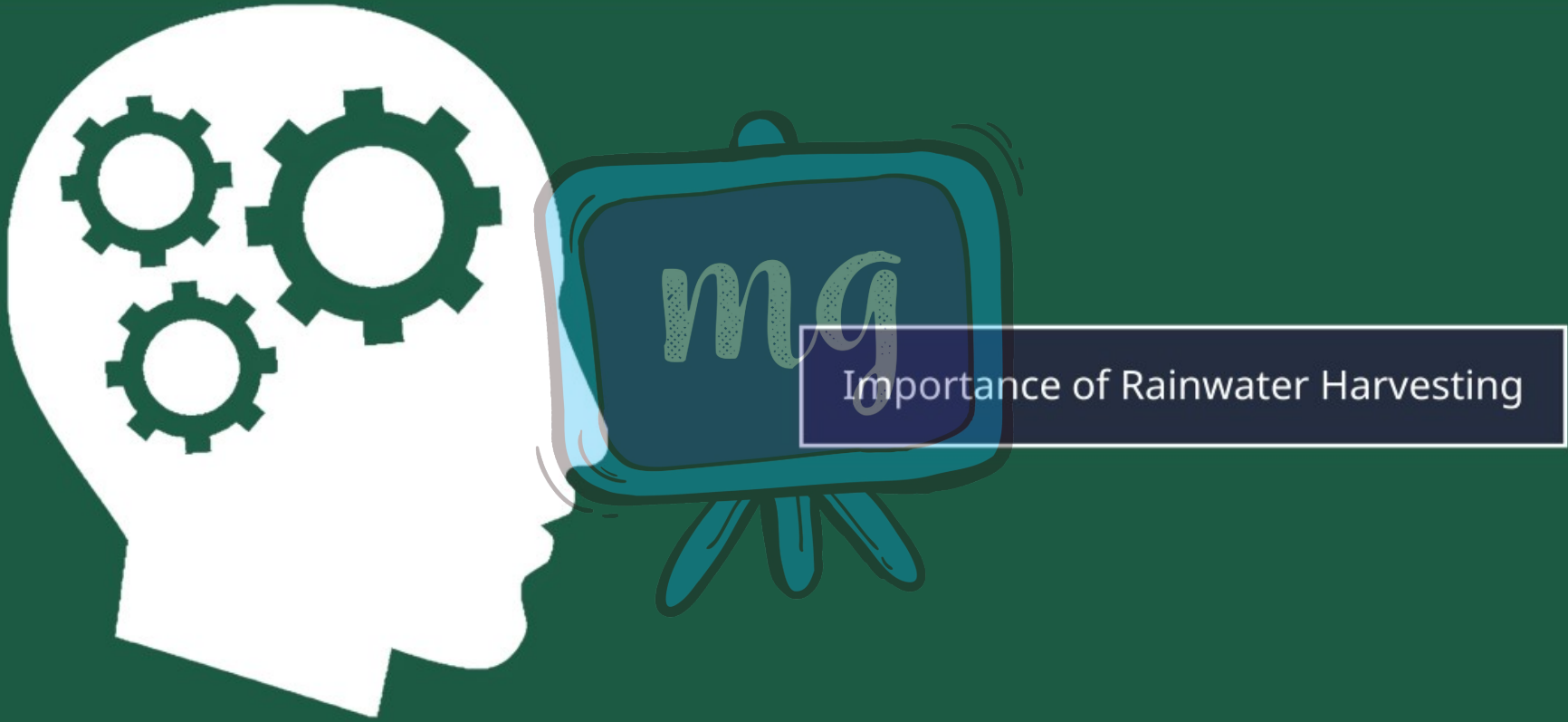
1. Water Resources

2. Multi-Purpose River Projects (DAMS)

3. Challenges of Large Dams

4. Rainwater Harvesting

COMPETENCY BASED LEARNING



RAINWATER HARVESTING

Due to the disadvantages & rising resistance against Dams: -

Water harvesting system is a viable alternative.

(Both socio-economically & environmentally)

ANCIENT INDIA

- ▣ Tradition of water-harvesting system.

- ▣ People had in-depth knowledge of: -

- ✦ Rainfall System ✓

- ✦ Soil Types ✓

▸ People developed techniques to

harvest: -

✦ Rainwater ✓

✦ Groundwater ✓

✦ River water ✓

✦ Flood water ✓



▸ The techniques were developed
according to: -

✦ Local ecological conditions ✓

✦ Water needs ✓✓



HILL AND MOUNTAINOUS REGIONS

- ▮ People built diversion channels for agriculture.

mg ('Guls' or 'Kuls')

- ▮ Particularly in Western Himalayas.

FLOOD PLAINS OF BENGAL

- ▣ People developed inundation channels to irrigate their fields.



ARID AND SEMI-ARID REGIONS

- ▮ Agricultural fields converted into rain fed storage structures.

- ▮ It allowed the water to stand and moisten the soil.

▮ Examples

- ✧ 'Khadins' (Jaisalmer)

- ✧ 'Johads' (Other Parts of Rajasthan)

TANKAS



- Part of the well-developed rooftop rainwater harvesting system.

- Underground Tanks.

- To store drinking water.

- In semi-arid and arid regions of Rajasthan.

(Particularly Bikaner, Phalodi,
Barmer)



- Could be as large as a big room.
- Built inside the main house or the courtyard.
(Almost all the houses)
- Connected to the sloping roofs of the houses through a pipe.

☛ Rain falling on the rooftops would travel down the pipe and stored in the 'tankas'.

☛ 1st spell of rain

✦ Usually not collected.

✦ Used to clean the roofs & pipes.

- ▮ The rainwater can be stored in the tankas till the next rainfall.

- ▮ So, it becomes a reliable source of drinking water, when all other sources are dried up.

(Particularly in Summers)

- ▮ Many houses constructed underground rooms adjoining the 'tanka'.

- ▮ It keeps the room cool.

(So, beat the summer heat)



- Rooftop Rainwater Harvesting
practice is on decline in Western

Rajasthan

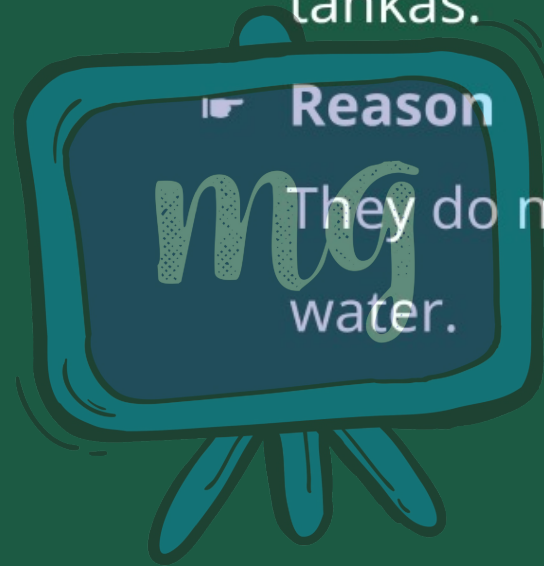
- **Reason**

Plenty of water is available due to
the Indira Gandhi Canal.

- Some houses still maintain the tankas.

- Reason**

They do not like the taste of tap-water.





PALAR PANI (RAINWATER)

**Considered the Purest
Form of Natural Water**

✓✓ ROOFTOP RAINWATER ✓ HARVESTING

1. Rooftop rainwater harvesting is a technique used for the conservation of water.
2. In this technique, the rainwater that has fallen on the roof of houses or buildings is collected in storage or underground tanks through the help of pipes.



3. This also helps us recharge the
groundwater levels



mg





(a) Recharge Through
Hand Pump



(b) Recharge Through
Abandoned Dugwell



SHILLONG

- ▣ Capital of Meghalaya.

- ▣ Places with highest rainfall in world situated at a distance of 55 km. from Shillong.

(Cherapunjee & Mawsynram)

- ▣ Yet, it faces acute shortage of water.

- So, rooftop rainwater harvesting is common practice here.

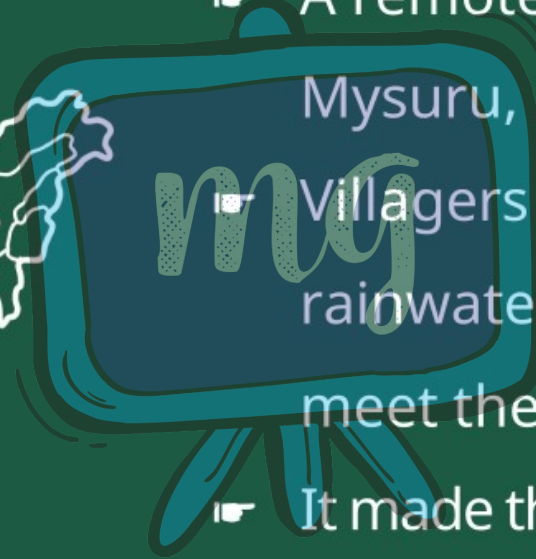
- Around 15-25% of total water requirement of every house comes from rooftop water harvesting.





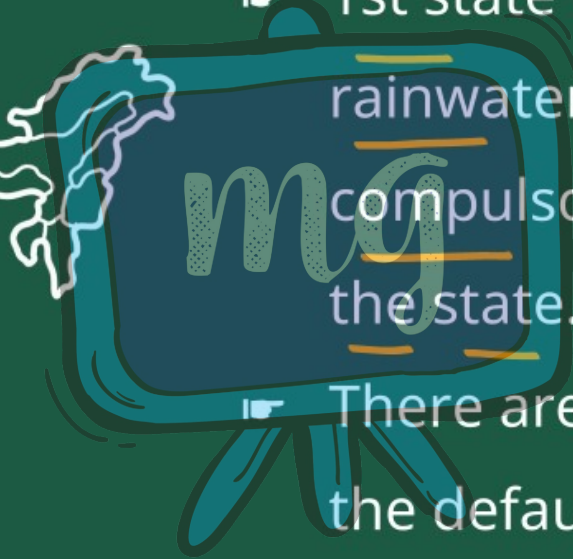
GENDATHUR

- A remote backward village in Mysuru, Karnataka.
- Villagers have installed rooftop rainwater harvesting system to meet their water needs.
- It made this village rich in rainwater.



TAMIL NADU

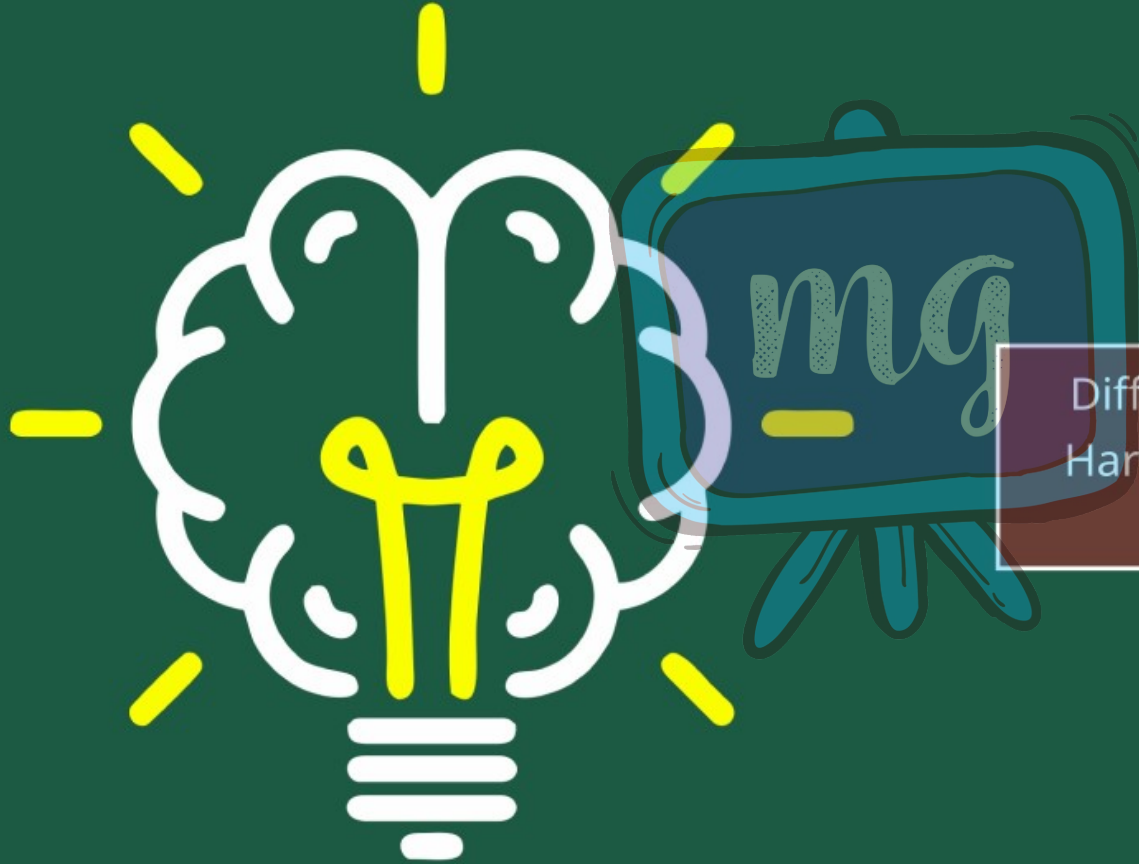
- 1st state in India to make rooftop rainwater harvesting system compulsory to all the houses across the state.
- There are legal provisions to punish the defaulters.



BAMBOO DRIP IRRIGATION SYSTEM

- A 200-year-old system of tapping stream and spring water by using bamboo pipes.
- This irrigation system is prevalent in Meghalaya

LEARNING OUTCOME



Different Techniques of Water
Harvesting System in Different
Regions

ASSESSMENT



1

Rooftop rainwater harvesting has declined in Western Rajasthan primarily due to:

- A Excessive rainfall
- B Availability of canal water
- C Government restrictions
- D None of the above

ASSESSMENT

2

Bamboo drip irrigation system is prevalent in:

- A Manipur
- B Meghalaya
- C Mizoram
- D Madhya Pradesh

ASSESSMENT



3

_____ is the first state in India which has made rooftop rainwater harvesting structures compulsory for all houses across the state..

- A Karnataka
- B Tamil Nadu
- C Maharashtra
- D Andhra Pradesh