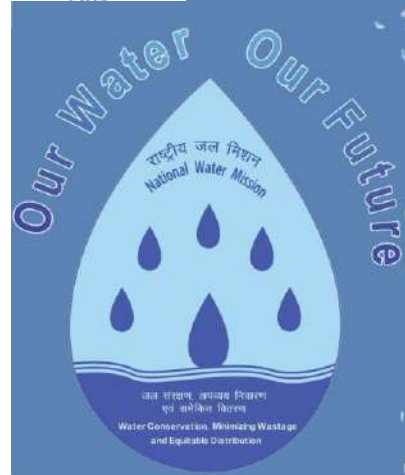


Water Conservation and Rainwater Harvesting



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Jal Shakti Abhiyan



Water conservation and rainwater harvesting



Renovation of traditional and other water bodies/tanks



Reuse water and recharge structures



Watershed development

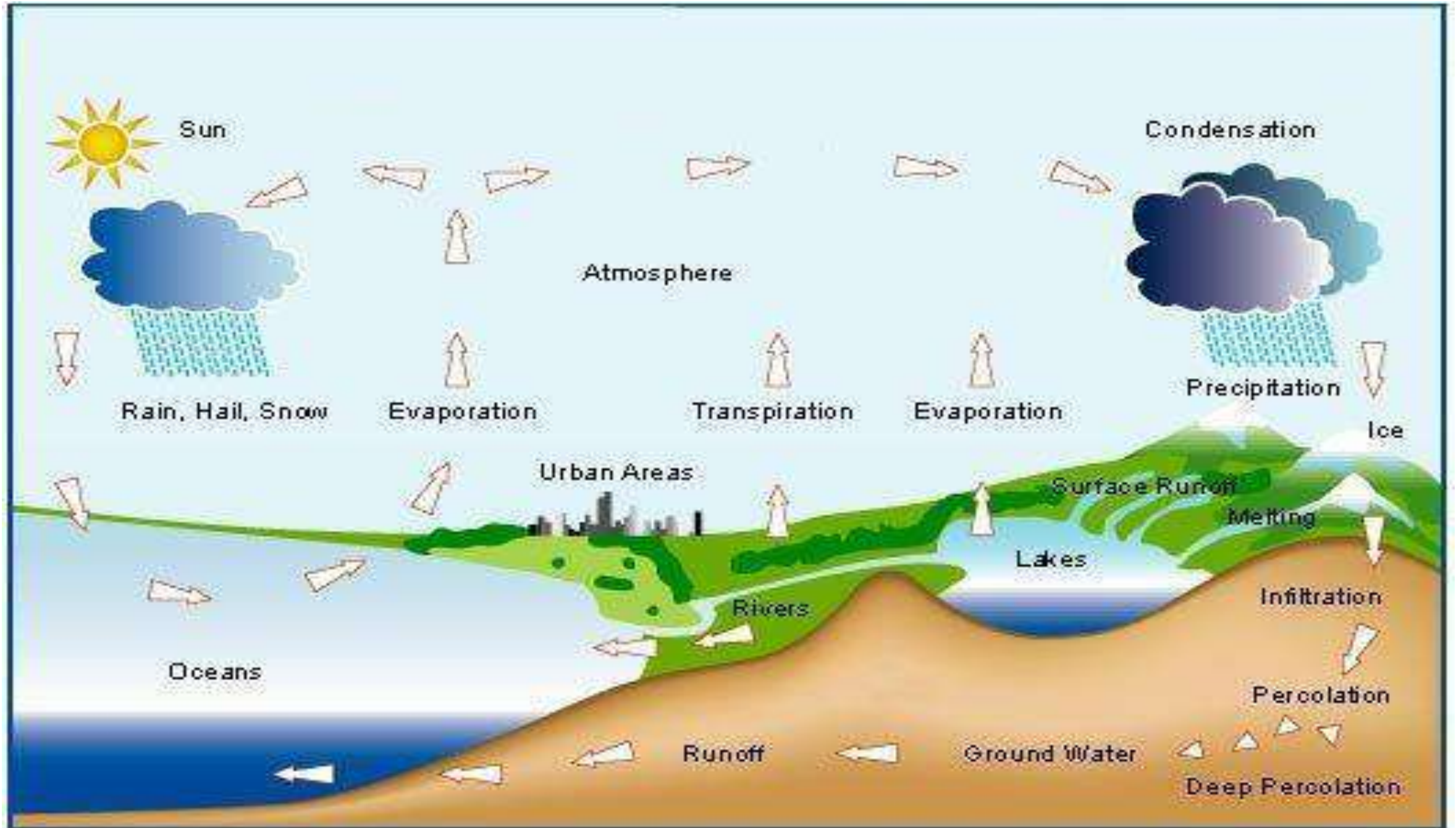


Intensive afforestation

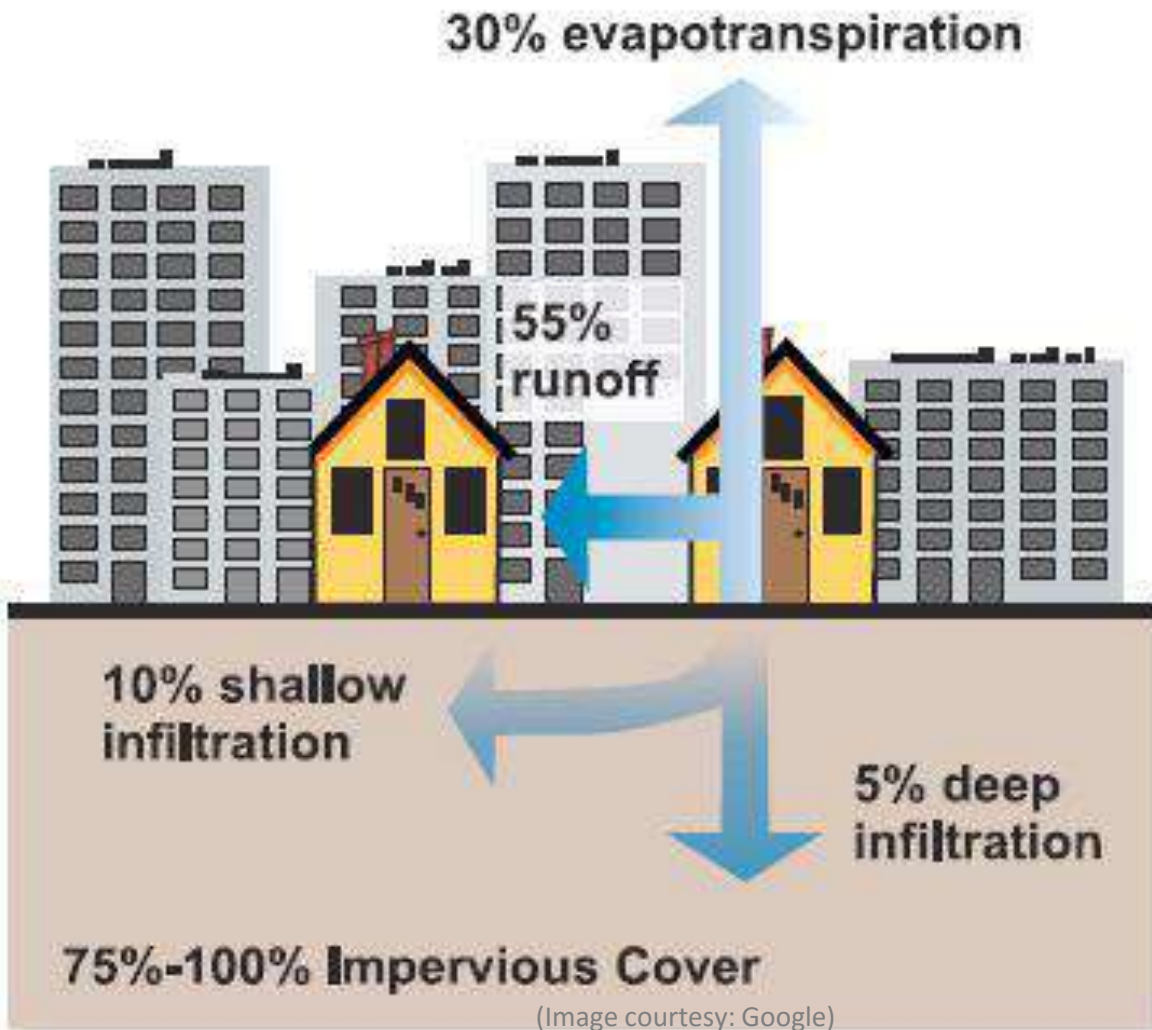
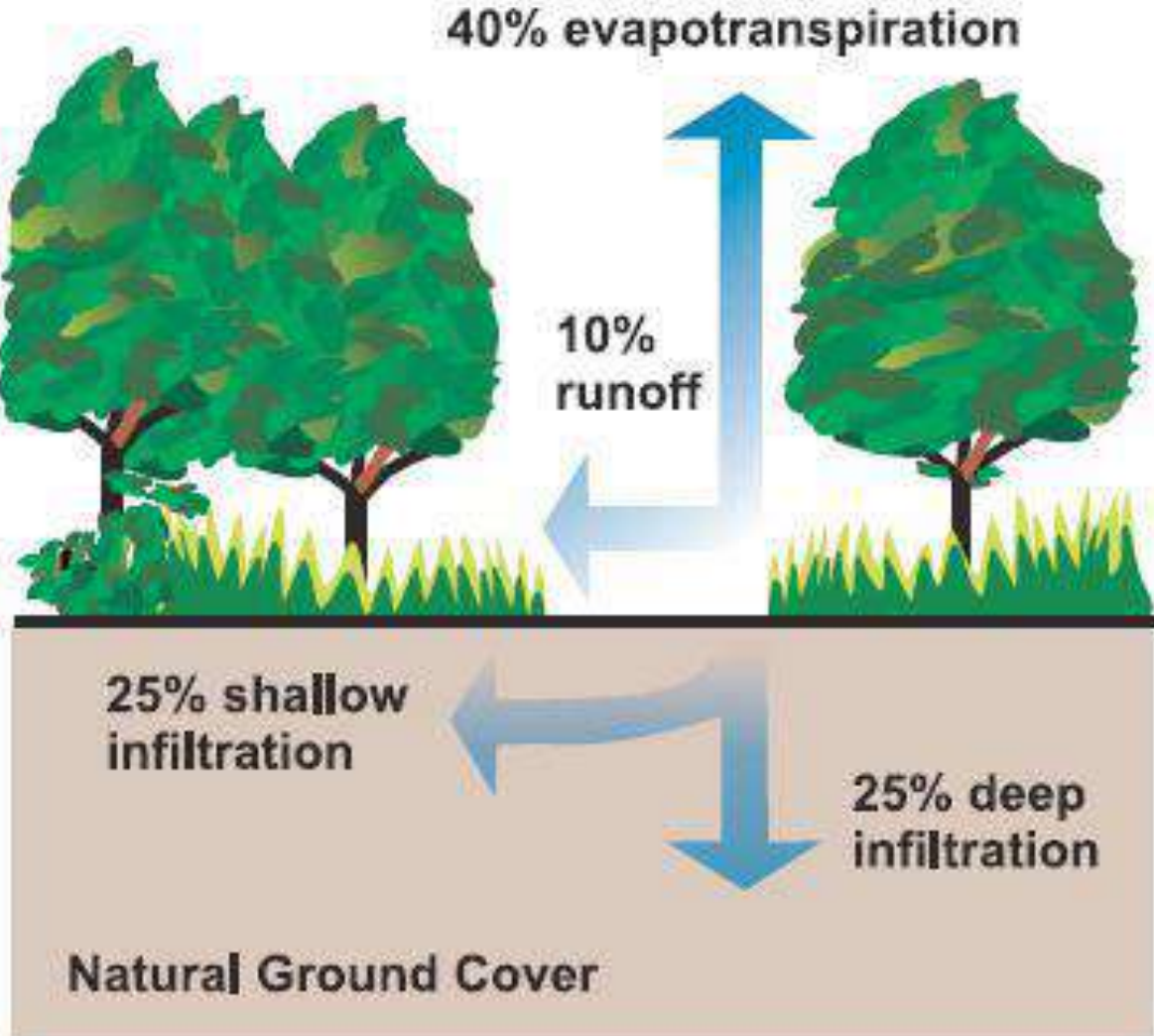
Focused on integrated demand and supply-side management of water at the local level, including creation of local infrastructure for source sustainability

Catch the rain, where it falls, when it falls

The Water (Hydrologic) Cycle



Green and Blue Spaces (Recreate/Rejuvenate)





The Problem:
Why water
conservation?



Forbes

EVERY DROP COUNTS

Annual water availability per person in India (cubic metres)

1,820 1,545 1,341 1,140



2001

2011

2025*

2050*

© news18creative

*Estimates; source: Lok Sabha reply

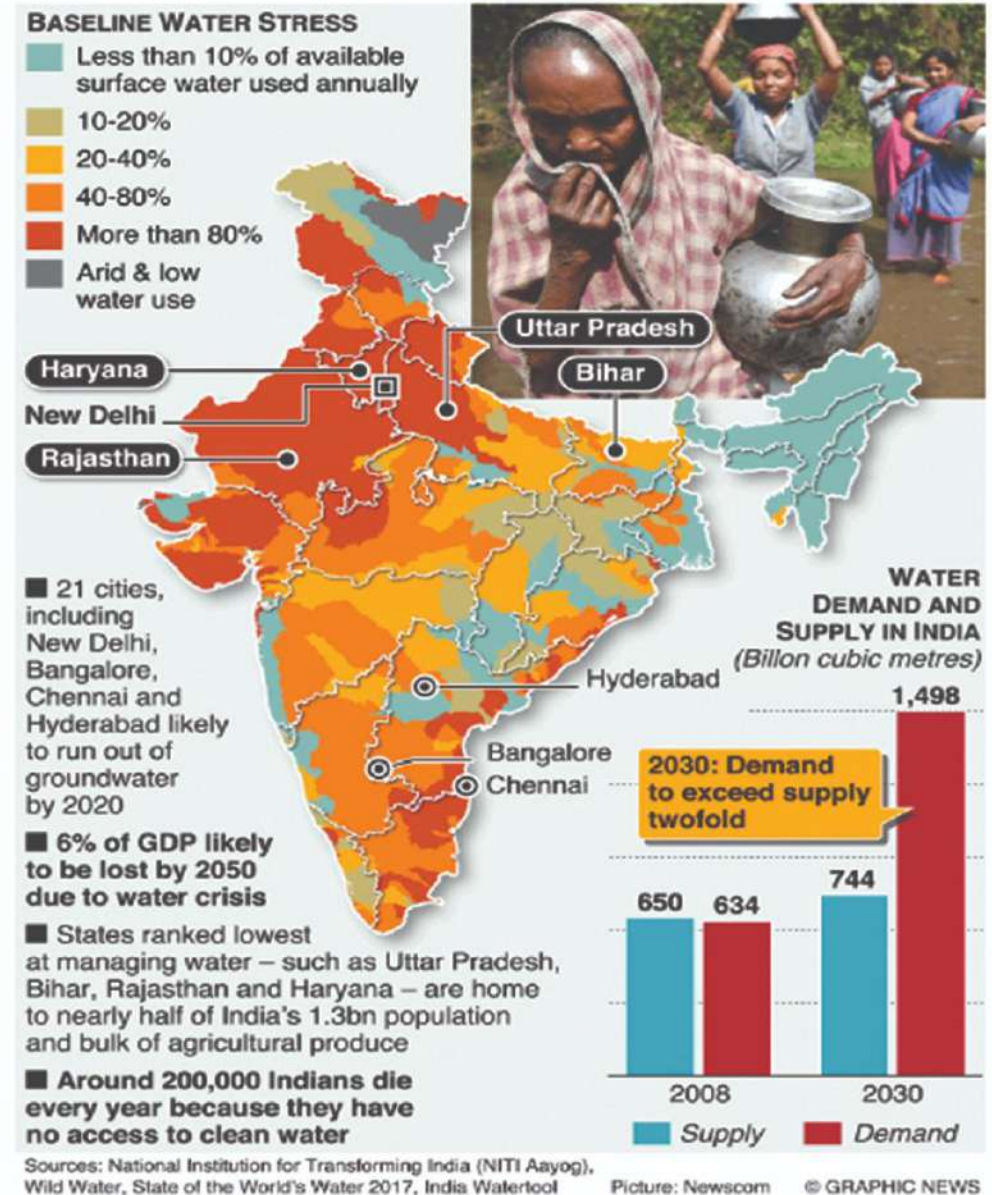
Water Stress

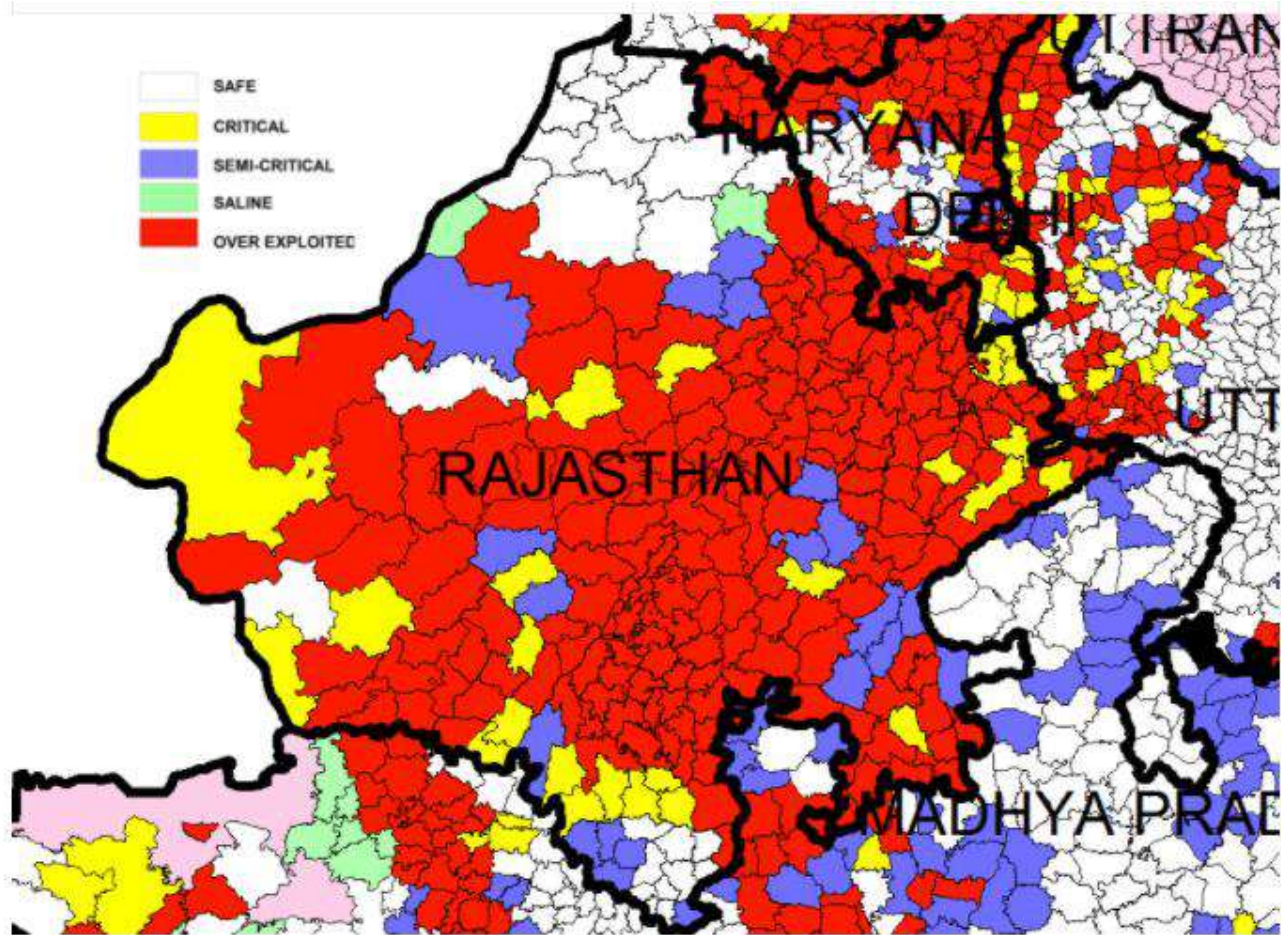
Area of the country as % of world area	2.4%
Population as % of world population (Census, 2011)	17.1%
Water as % of world water	4%
Average annual rainfall (India Meteorological Dept.)	1160 mm (world average 1110 mm)
Range of distribution	150-11690 mm
Range Rainy days	5-150 days

Source: Water Resources Information System of India

India on brink of worst-ever water crisis

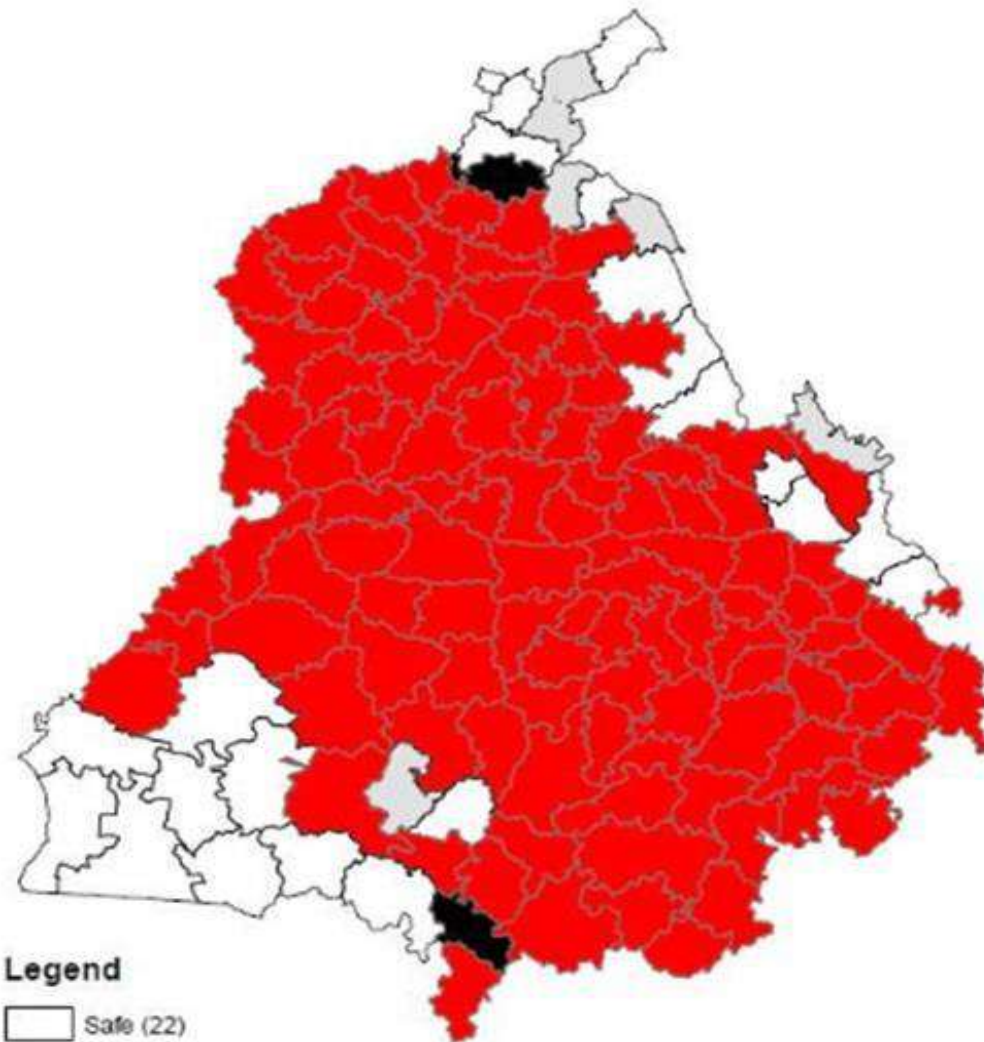
India is suffering from the worst water crisis in its history with some 600 million people facing acute water shortage. The crisis will worsen as demand is projected to be twice the available supply by 2030





Source: Central Ground Water Board

CATEGORISATION OF GROUND WATER ASSESSMENT UNITS
IN PUNJAB STATE
(2017)

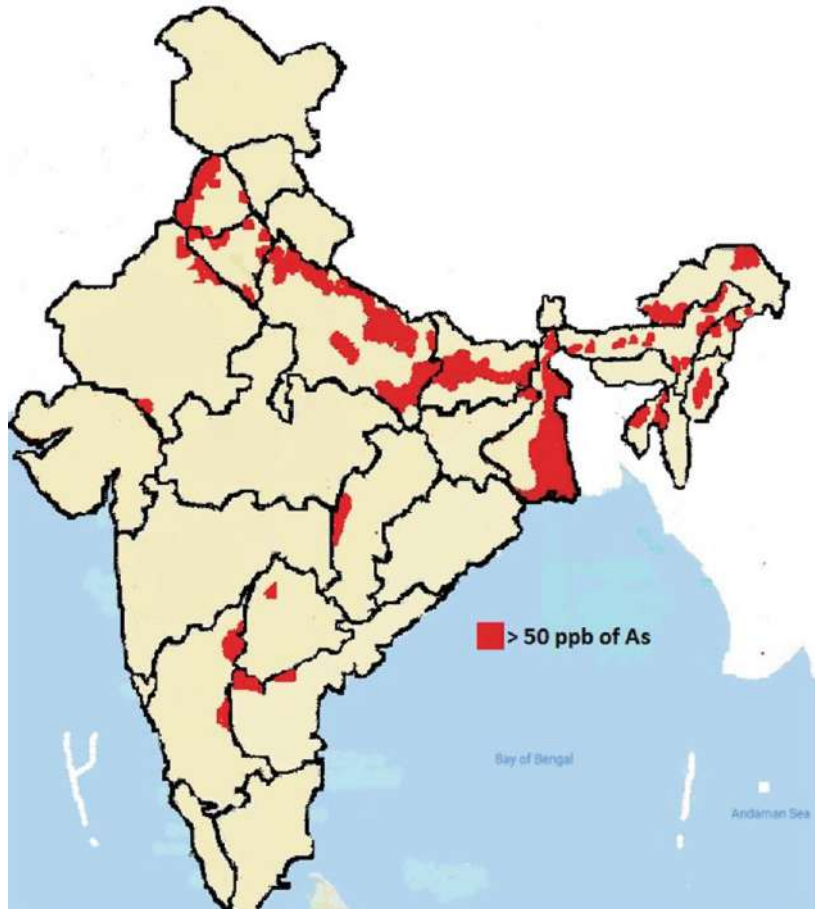


Legend

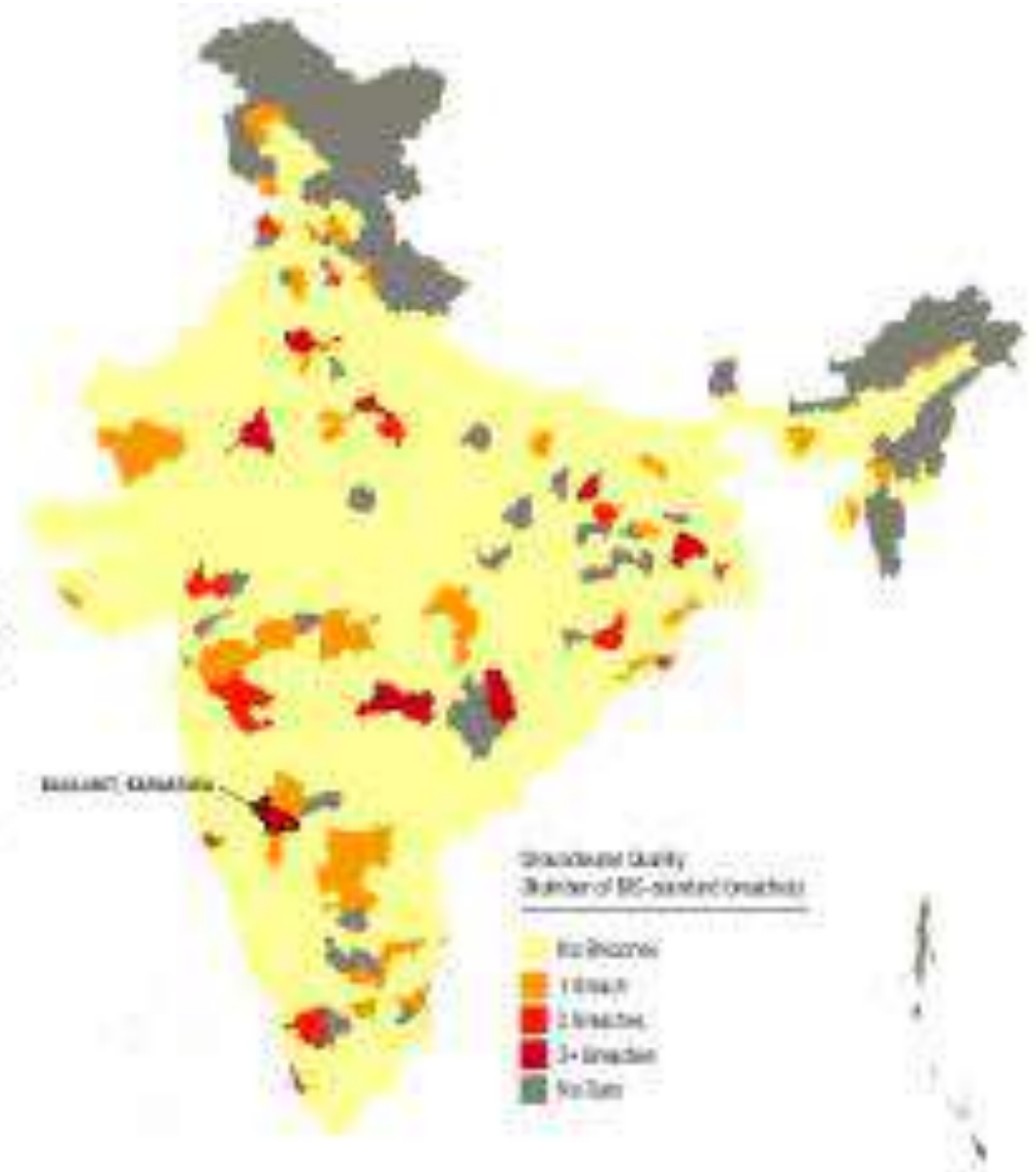
- Safe (22)
- Semi Critical (5)
- Critical (2)
- Over-Exploited (109)



The Status of Arsenic Contamination in India



More than
100
MILLION
People Live
in Areas of
Poor Water
Quality



ACCESS TO PIPED WATER

% of rural households with piped water supply

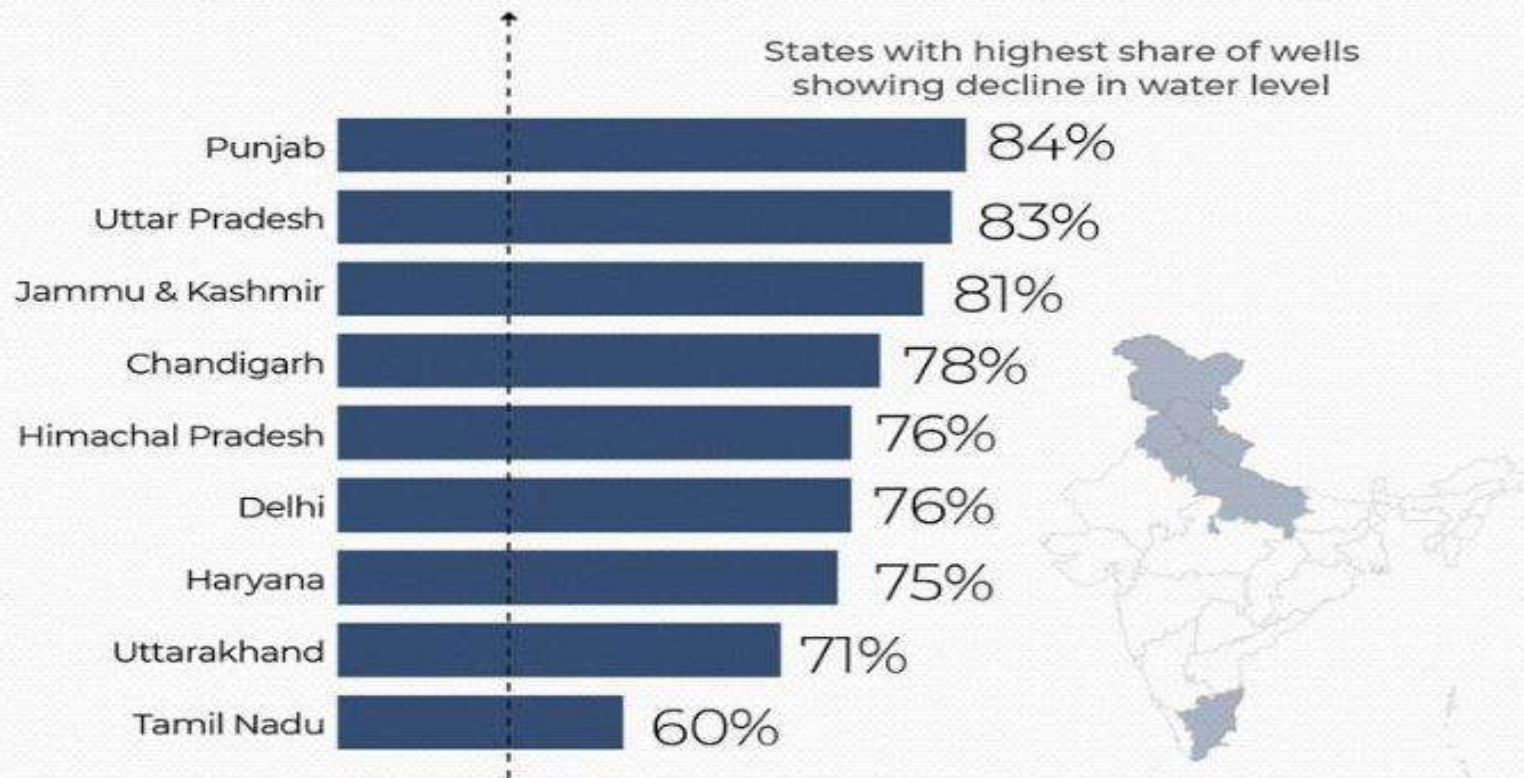


SIKKIM	99.34
GUJARAT	78.46
HIMACHAL PRADESH	56.27
HARYANA	53.47
PUNJAB	53.28
PUDUCHERRY	50.35
KARNATAKA	43.81
MAHARASHTRA	38.44
TELANGANA	33.53
ANDHRA PRADESH	33.52
JAMMU & KASHMIR	30.02
TAMIL NADU	29.74
KERALA	16.75
MIZORAM	15.74
UTTARAKHAND	14.32
RAJASTHAN	12.38
MADHYA PRADESH	12.2
ANDAMAN & NICOBAR	10.15
ARUNACHAL PRADESH	9.09
CHHATTISGARH	8.93
JHARKHAND	5.75
MANIPUR	5.58
NAGALAND	4.89
ODISHA	3.94
TRIPURA	3.18
ASSAM	2.21
BIHAR	1.88
UTTAR PRADESH	1.33
WEST BENGAL	1.31
MEGHALAYA	0.95
GOA	0

As in June 2019

FALL IN GROUND WATER LEVEL

52% of India's wells show a fall in water level



Based on water level data for 2018 vs the decadal average (2008-2017)
Source: Lok Sabha reply



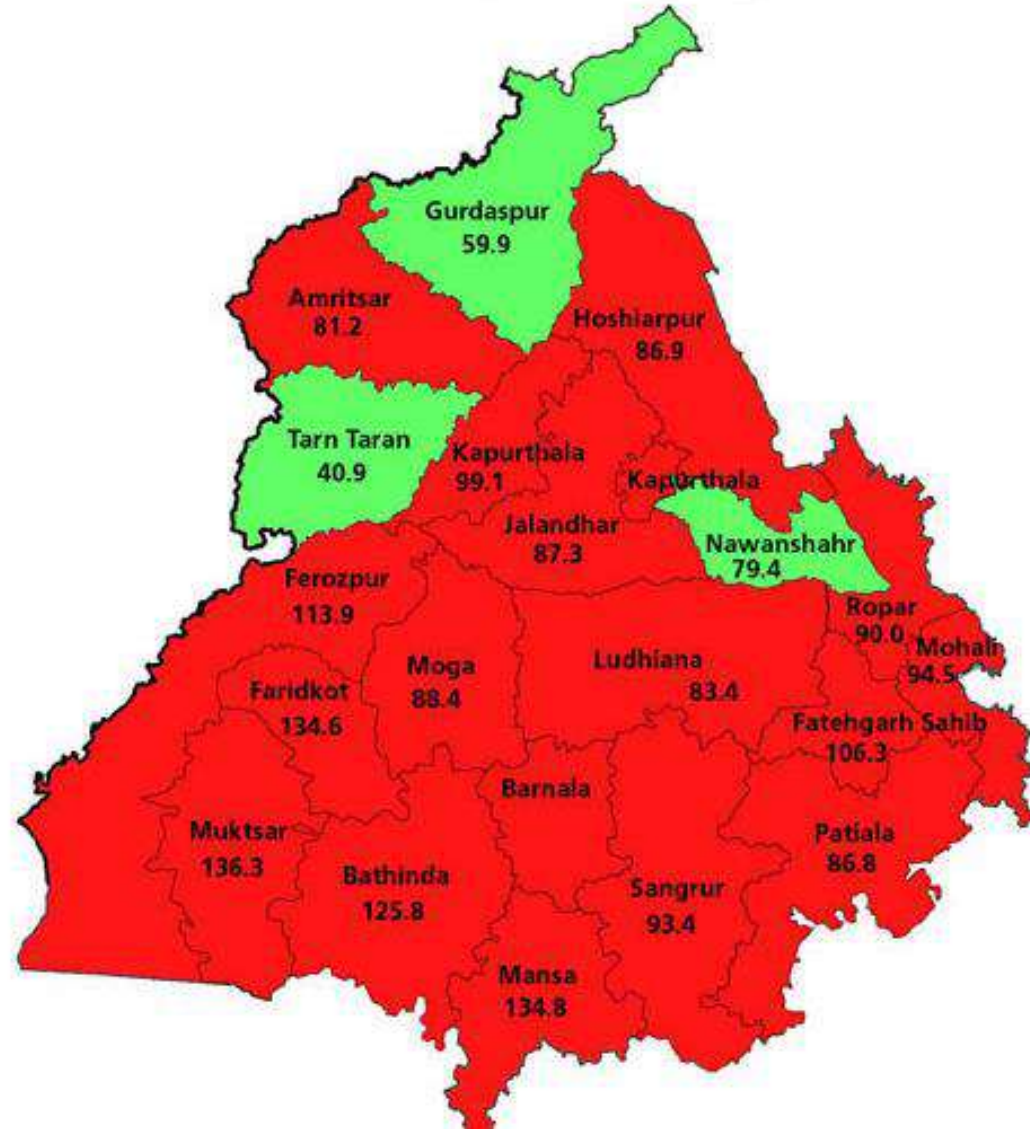
Average annual rainfall in Punjab



Punjab, cancer capital of India

Government survey shows cancer cases in the state exceed national average

Cancer prevalence (per 100,000 population)



Jaipur: Now, new mud pumps for flood-like situations

TNN | Updated: Aug 18, 2020, 10:04 IST



A-

A+



People wade through waterlogged road at Paanch Batti in Jaipur.

JAIPUR: In a bid to tackle flood-like situations in future the district administration is planning to purchase **new mud pumps** (used for pumping out muddy water) through the state disaster response fund. District collector Antar Singh Nehra on Monday announced the release of compensation amount of Rs 1 lakh each from the Chief Minister's relief fund for the families of the four

persons, who died due to heavy rains on August 14.

A health crisis

- Forty-five per cent of India's children are stunted and 600,000 children under the age of five die each year, largely because of inadequate water supply and poor sanitation. (UNICEF, FAO)



An economic crisis

Loss of productivity to water and sanitation related diseases costs many countries up to 5% of GDP (WHO 2012)



A women's crisis

Women spend 150 million workdays every year for fetching water (UN Water)



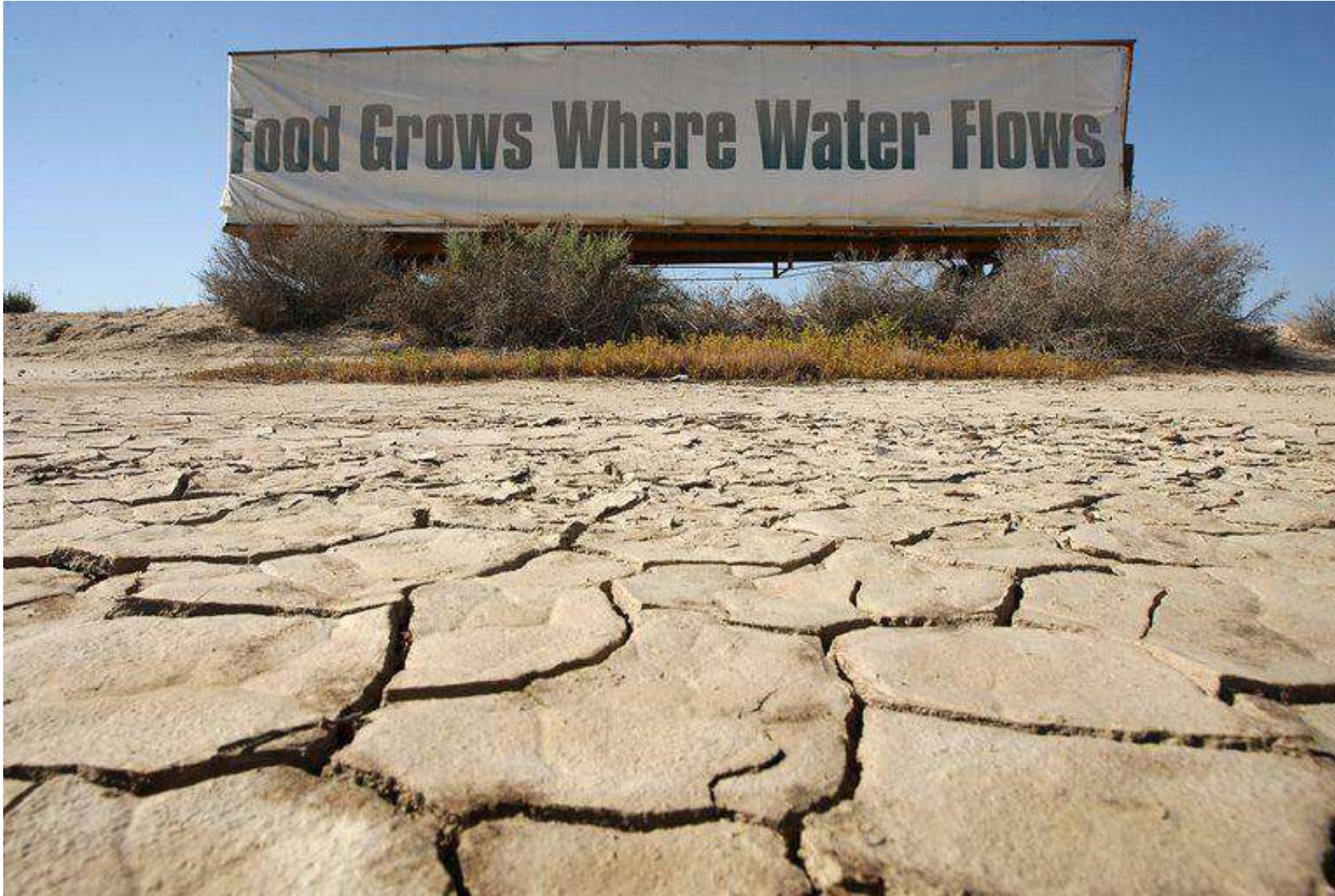
An education crisis

Children are often responsible for collecting water to help their families.



A hunger crisis

The Global hunger index 2020 report has placed India at 94th position among 107 countries



What we have? – A rich traditional water management knowledge

A Baoli in Ferozshah Kotla, New Delhi



Jhalara, Rajasthan



Ahar Pynes of South Bihar



Tanka from Rajasthan



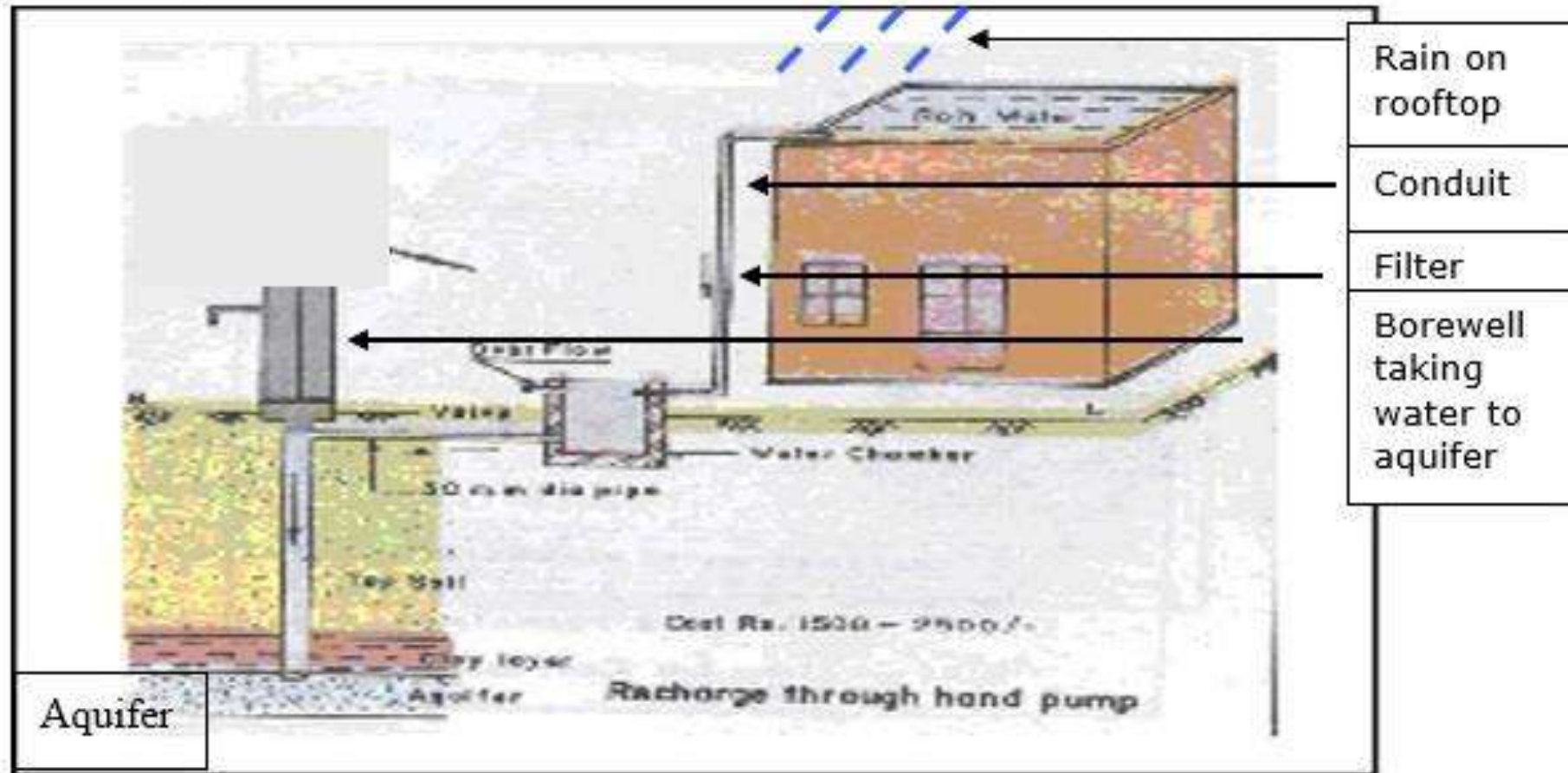
A Johad in Rajasthan



Tank System in Tamilnadu

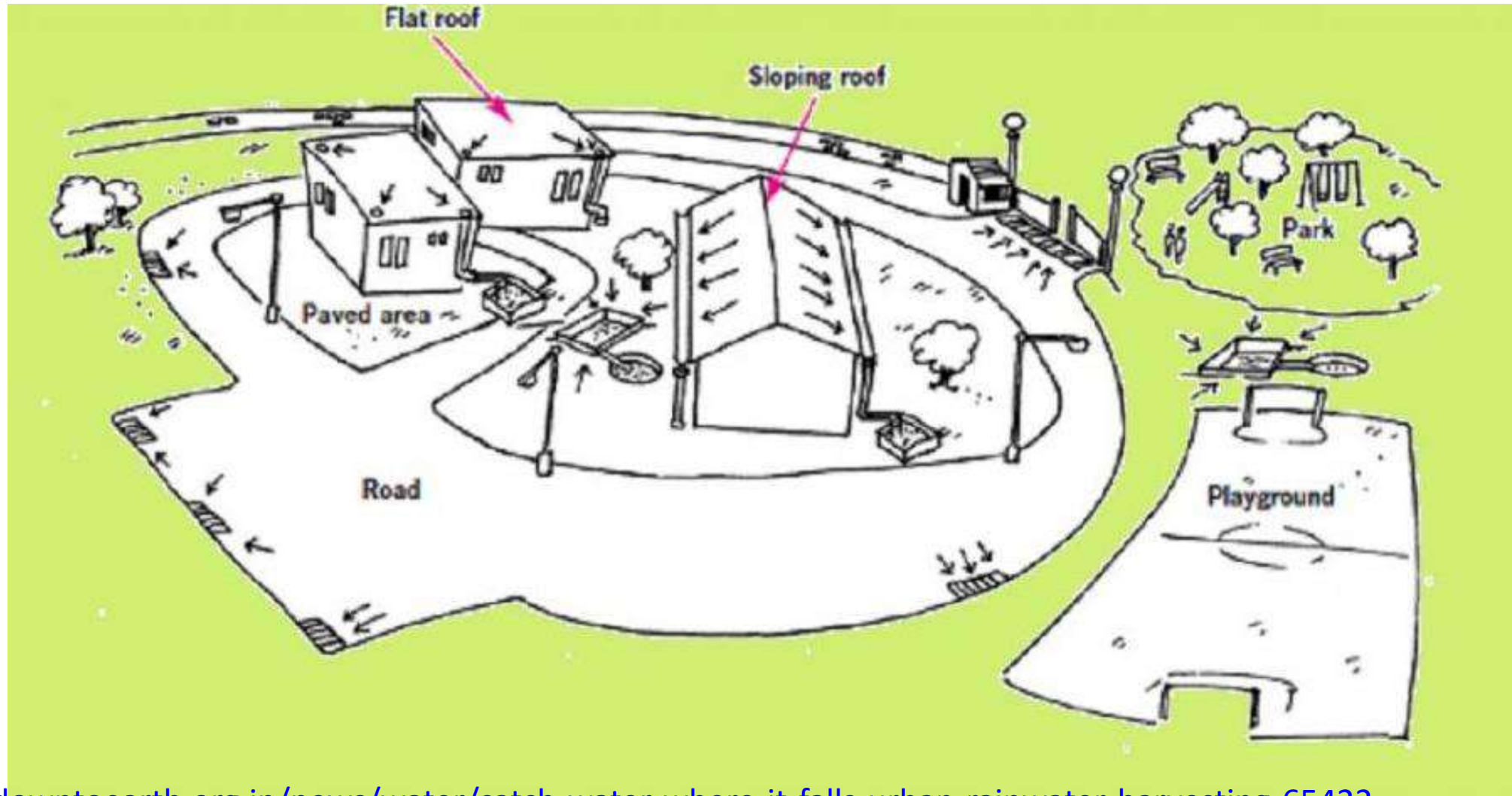


Rainwater harvesting



The catchments

- The catchment is a structure or land area that is used to collect rainwater and drain run-off.
- Can be either paved (roofs, courtyards, roads, etc) or unpaved (lawns, playgrounds, open spaces, etc).





Diversion Bunds



Tie Ridging



Contour Farming



Farm Ponds

https://nwa.mah.nic.in/sdmc/rwh/02_methods.htm



Use of Abandoned dugwells



Gabion Check Dam

<https://www.youtube.com/watch?v=IWRRyP4jnis>

<https://www.youtube.com/watch?v=IVMI9QyWnDQ>

<https://www.youtube.com/watch?v=8daU3fyukFQ>

<https://www.youtube.com/watch?v=yuyBT-7wgzo>

Action:

How can NYK Youth fellows contribute?

- **Public awareness and sensitization**

- Posters, banners and other publicity material
- Street plays, songs and Slogans
- Awareness on Traditional Water Wisdom using Folk Performers
Bahurupiya, Acrobats

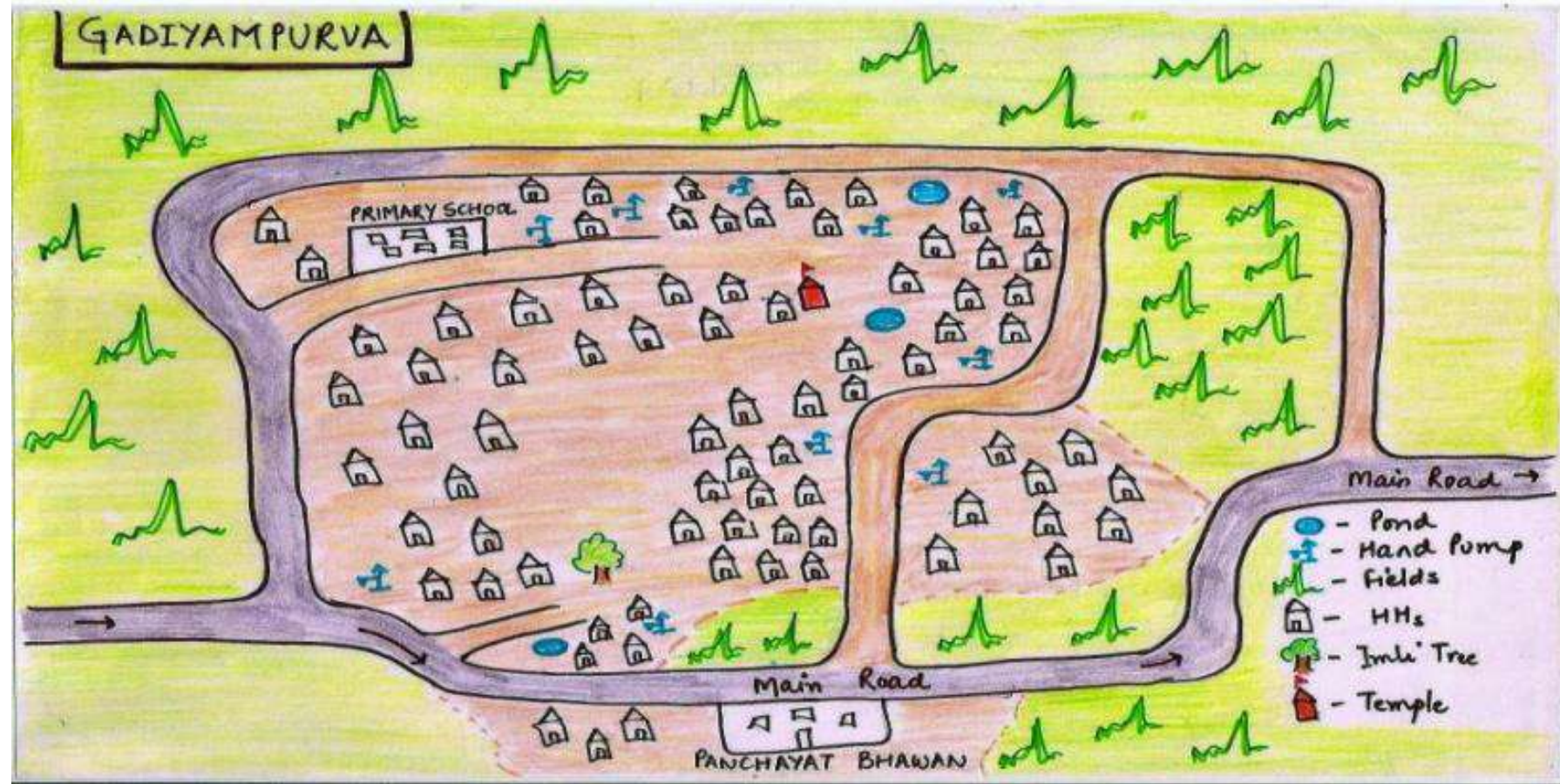
<https://www.youtube.com/watch?v=JEkPS5m8rBY>

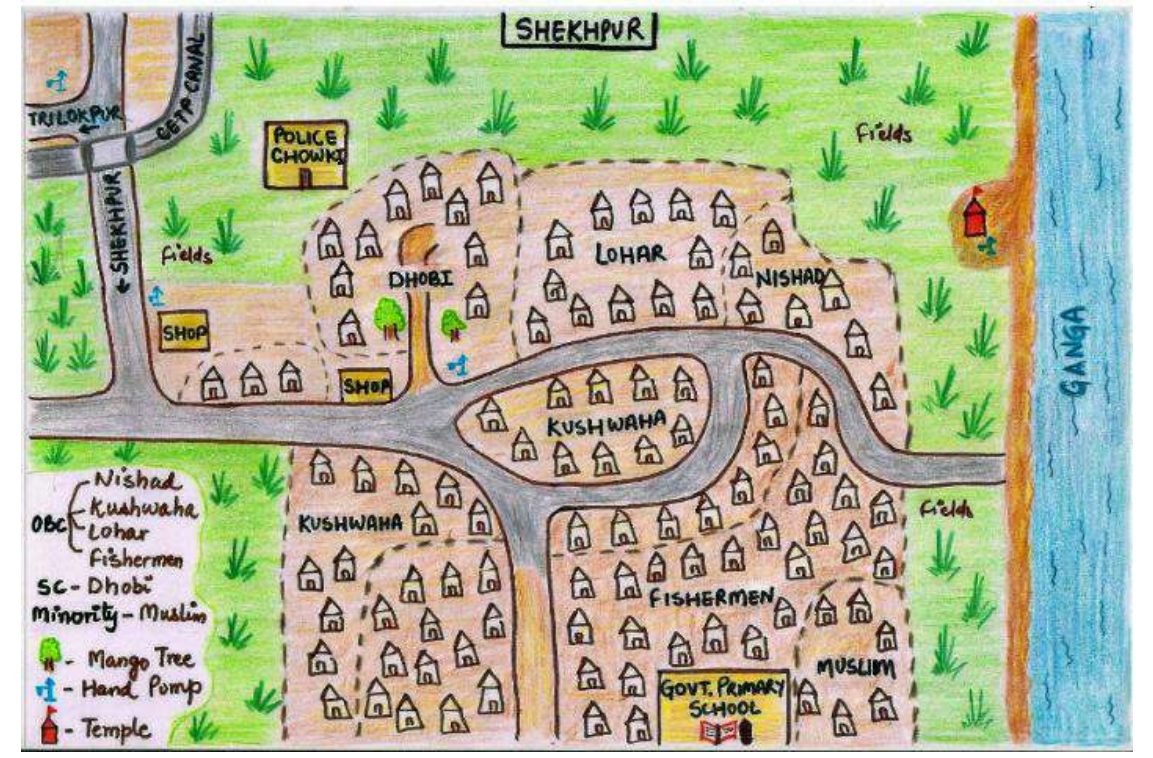
- Walking the tight rope for water

<https://www.youtube.com/watch?v=4qgbJ0vfn-Y>

Resource Mapping - Major Water Repositories with GPS points – Geotag app

- Traditional water bodies
- Man-made reservoirs
- Lakes and rivers
- Springs
- Forests, fields
- Wetlands





Documentation

- Government schemes to promote water conservation –RWH and revival of traditional ponds
- Basic Data on the village visited (Google forms) <https://forms.gle/HXardnSM1zGNx7Cv8>
 - Name of the state, district and village
 - Name and contact number of the youth fellow
 - Name and contact of Sarpanch
 - Number of Houses
 - Population
 - Public buildings – School, Panchayat office, Community Center, Primary health care center
 - Average rainfall
 - Soil type (Sandy, Loamy, Clayey, Mixed)
 - Topography (Plain/ Hilly)
 - Number of ponds/lakes/wetlands/well/government borewells and condition (clean, silted, filled with garbage)
 - Water User Association /Jal Samiti/Pani Panchayat/ Other groups details if present

Establishing an Information Center



- **Jal Shakti Kendra/ Water Knowledge Center**
 - One stop information hub on water conservation (**A helpline number**)
 - Who to approach for Rainwater harvesting?
 - What will be the cost?
 - How much water can I harvest ?
 - Any support from the government?
 - Any information manual?
 - How do I maintain the structure? etc



IDEAS

+ ACTION

= CHANGE

