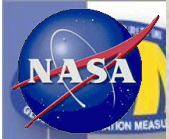




Freshwater: A Precious Resource



**Developed by the
Global Precipitation
Measurement mission
Education and Public
Outreach Team**



Floods submerge 475 Assam villages

Blue Gold: Have the Next Resource Wars Begun?

Drought situation is serious, says Centre

New Delhi: Rejecting members' demand for full central control over calamity relief, the government on Friday announced in the Lok Sabha it would provide all possible assistance, including postponement of farm loan recovery in 12 drought-affected states, to mitigate the plight of people.

Replying to a two-day debate on drought and floods in various parts of the country, agriculture minister Ajit Singh said the onus of such relief was on states as they alone were in a position to identify the areas worst affected by natural calamities.

Termining the drought situation as "very serious", he said among the badly hit were western Uttar Pradesh, Bundelkhand area, Rajasthan, Haryana and Andhra Pradesh.

farmers in affected areas. The minister said the Centre was also ready to release the next instalment of CRF, which would be due only in October, if states utilised it properly. If CRF is inadequate, steps would be taken to provide help under the National Calamity Contingency Fund, he said.

Regarding the demand for waiving and writing off loans, he said he was in the process of discussing the matter with the finance minister as it involved much wider arena and different authorities.

Singh said the Centre had already held a stock-taking meeting with 12 drought-affected states and it was decided to set up a co-ordinated relief effort.

the 'food for work' programme to states facing acute resource crunch. Stating that food output would be adversely affected due to drought conditions caused by poor monsoon, Singh said substantial damage had already been caused to coarse cereals like bajra, oilseeds and pulses. Paddy prospects would also be affected, though it may recover to some extent if rainfall takes place in the next 10 days, he said.

On the criticism that the meteorological department had forecasted monsoons, he said there were so many variables that it was difficult to predict.



A train is stranded after encountering heavy flooding on the tracks in Mumbai on Wednesday.

Many states in state of worry over late rains



Daily Times-News

Little Rain Seen In Near Future



The Daily Times-News

Pros And Cons Presented On Solving City's Water Problem



The Daily Times-News

Emergency Water Lines Available



'Waterless Tuesday' Project Is Planned

Relief pledge to farmers

Rain rewrites record books

THE BIG WET

THE BEST AUSTRALIAN PLEASING January 28, 2000

Wow! What a washout

Damage bill mounts as rain goes on

Wow! What a washout

By JERRY BRADMAN

It is believed for the first time in the history of the world that rain has fallen in every part of the world. The rain has been so heavy that it has washed away the roads, bridges, and everything in its path. The rain has been so heavy that it has washed away the roads, bridges, and everything in its path. The rain has been so heavy that it has washed away the roads, bridges, and everything in its path.

Grim task for farmers after big downpour

By JERRY BRADMAN

Farmers are facing a grim task after a big downpour. The rain has washed away the roads, bridges, and everything in its path. The rain has been so heavy that it has washed away the roads, bridges, and everything in its path. The rain has been so heavy that it has washed away the roads, bridges, and everything in its path.



High water overtakes downtown Cedar Rapids, thousands evacuated in unprecedented flood. Power loss widespread; water in short supply.



High water overtakes downtown Cedar Rapids, thousands evacuated in unprecedented flood. Power loss widespread; water in short supply.



SOLID



LIQUID

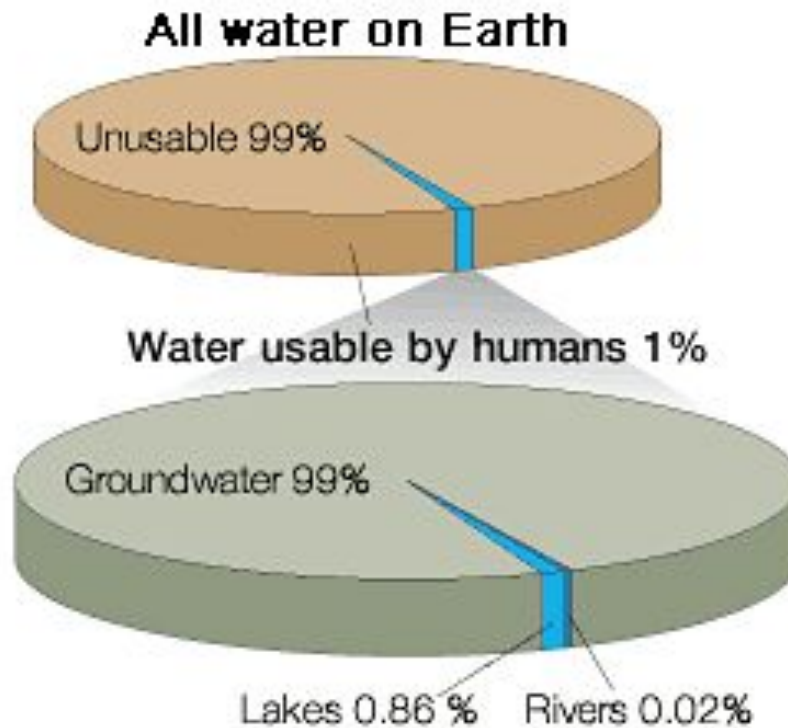


GAS

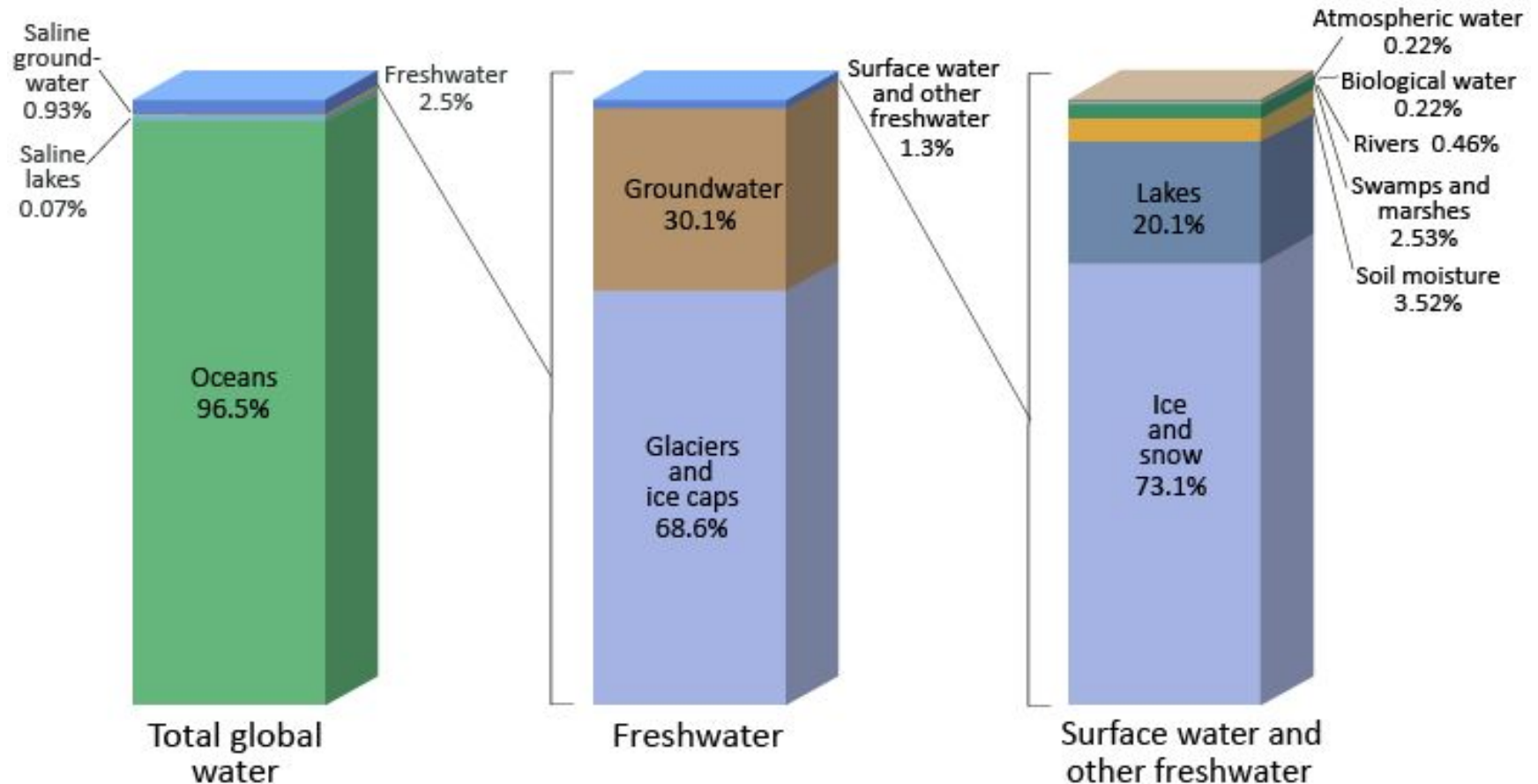
How much of Earth's water is freshwater?

We will make a model of Earth's freshwater.

1. Take the plastic cup, and imagine that the cup is a model of Earth's surface.
2. Fill up ~ 75% with water. This represents how much of Earth's surface is covered with water.
3. Take out one eye-dropper of water, and place it in the small medicine cup. This represents how much of Earth's water is freshwater- ~ 2.5%
4. Take one drop of this water- this represents how much freshwater is easily accessible to us!



Distribution of Earth's Water



Source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, *Water in Crisis: A Guide to the World's Fresh Water Resources*.



In addition to home use, freshwater is used for transportation, agriculture, heating and cooling, industry, livestock, and many other purposes. That one percent of water is primarily used in eight different ways, or categories:

- *Domestic.* Residential home indoor and outdoor use, such as drinking, cleaning, and watering lawns
- *Public supply.* Public and commercial buildings, such as schools and restaurants
- *Irrigation.* Watering systems for farms that grow food

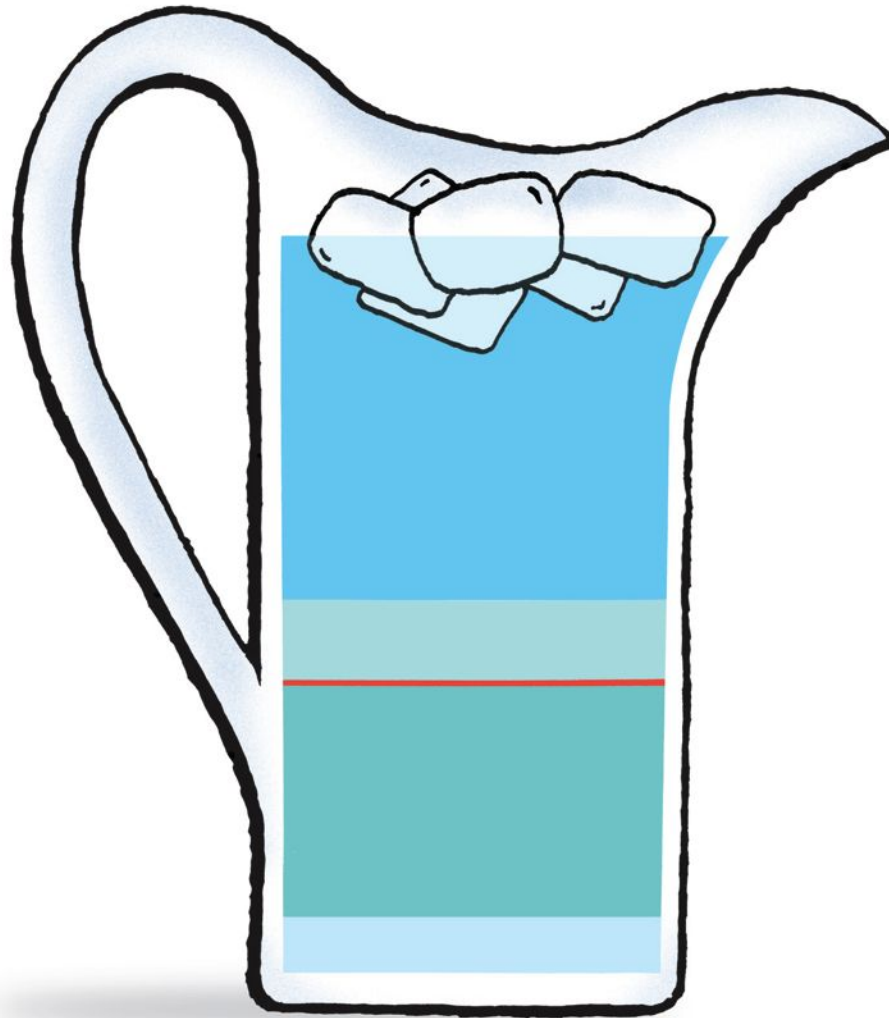
Thermoelectric 49%

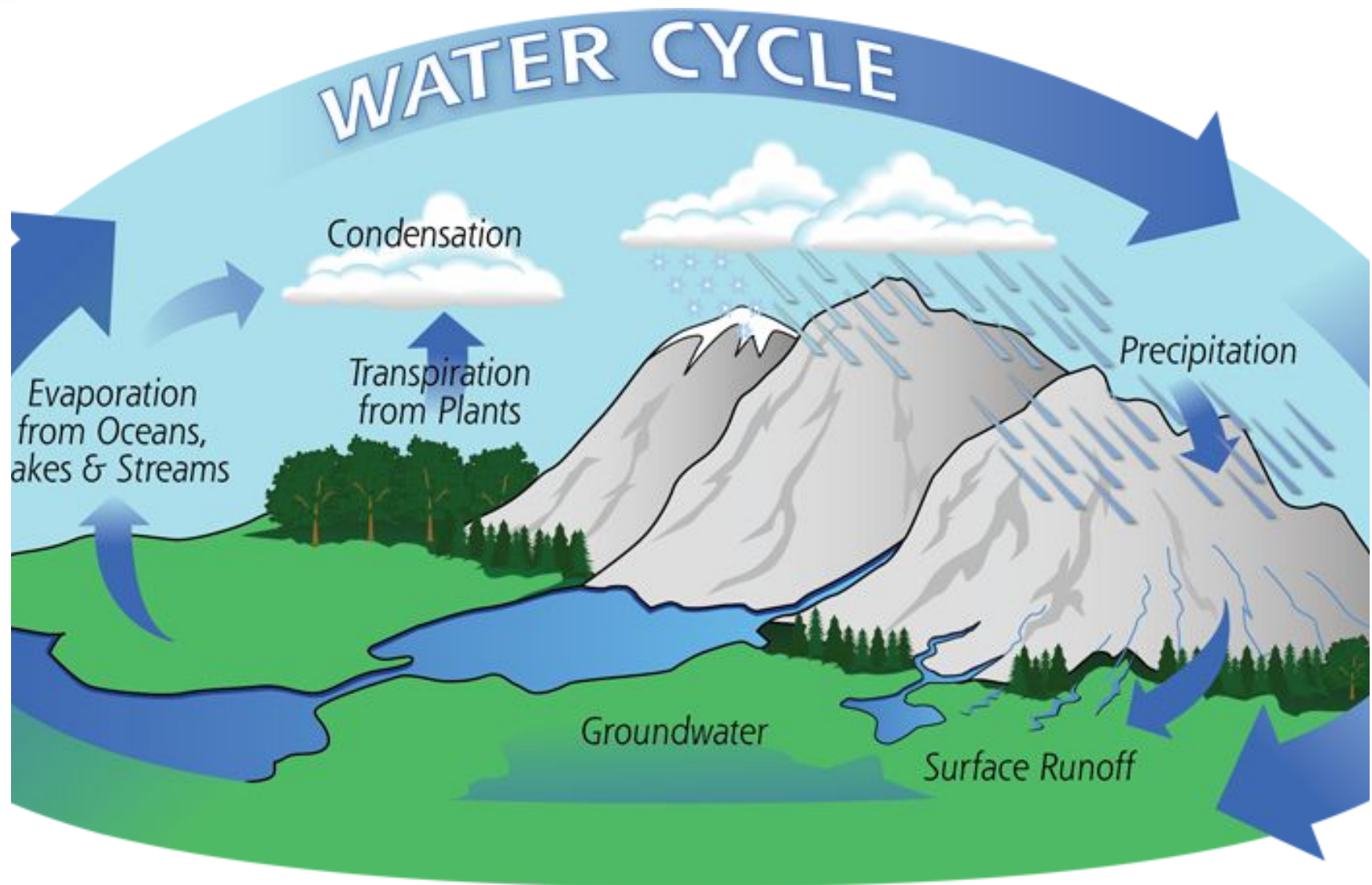
Public Supply 11%

Domestic 1%

Irrigation 31%

Other- 8%: Mining 1%, Industrial 4%, Aquaculture 2%, Livestock 1%





- Rain gauges- not evenly distributed, none over oceans, measures at local level which varies widely
- Weather radar- ground-based, not evenly distributed, not over oceans, measures at local level
- Satellites: operational and research, global level
NOAA, NWS- operational: predicting, forecasting
NASA- research:
 - Impact of climate change on freshwater availability
 - Impact of global rainfall on natural disasters: drought, tropical cyclones, landslides, etc...
 - World health concerns: water-borne disease, water availability, etc...