‘Catch the rain’ campaign - Water Use Efficiency

What is the issue?

- On World Water Day (March 22), Indian PM launched a campaign named ‘Catch the rain’, under the Centre’s flagship Jal Shakti Abhiyan.
- In this context, here is an overview on Indian agriculture’s water efficiency.

What is the ‘Catch the rain’ campaign?

- Under this campaign, drives to make check dams, water harvesting pits, rooftop RWHS (rain water harvesting system), etc will be made.
- Other measures to be taken up with the active participation of people include -

i. removal of encroachments and de-silting of tanks to increase their storage capacity
ii. removal of obstructions in the channels which bring water to them from the catchment areas, etc
iii. repairs to step-wells
iv. using defunct bore-wells and unused wells to put water back to aquifers, etc

- To facilitate these activities, states have been requested to open “Rain Centers” in each district.
- This centre acts as a technical guidance centre to all in the district as to how to catch the rain, as it falls, where it falls.
- Under the initiative, all water bodies in the districts are to be enumerated (checked with revenue records) and encroachments to be removed.

How is India's water usage scenario?

- **Central Water Commission’s** assessment of water availability using space inputs (2019) sheds light on this.
- Accordingly, India receives mean annual precipitation of about 3,880 billion cubic metres (bcm).
- But it utilizes only 699 bcm (18%of the above).
- The rest is being lost to evaporation and other factors.
- The demand for water is likely to be 843 bcm in 2025 and 1,180 bcm by 2050.
- Notably, these targets are not beyond reach.

- It only requires being focused and following an appropriate strategy.
- The need is to not only ‘catch more rain’ but also manage demand of water better.
- **UN’s report** on Sustainable Development Goal-6 (SDG-6) - Clean water and sanitation for all by 2030 - also notes on this.
- As per this, India achieved only 56.6% of the target by 2019, indicating the need to move much faster.
- **Composite Water Management** Index of Niti Aayog (2019) shows that 75% households in India do not have access to drinking water on their premises.
- India is ranked 120th amongst 122 countries in the water quality index.
- It is identified as a water-stressed country.
- Its per capita water availability is declining from nearly 5,000 cubic metre (m3)/year in 1951 to around 1,500 m3 in 2011.
- This is likely to go down further to 1,140 m3 by 2050.
- All these hint at a worrying picture of India in the water front.

What is the right approach now?

- Agriculture uses about 78% of India’s freshwater resources.
- As India develops, the share of drinking water, industry, and other uses is also likely to rise.
- The need of the hour is thus to produce ‘more crop per drop.’
- It requires not just increasing land productivity measured as tonnes per hectare (t/ha) but also maximising applied irrigation productivity measured as kilograms or Rs per cubic meter of water (kg/m3).

How is the irrigation scenario?

- For decades, there had been large public and private investments in irrigation.
- However, only about half of India’s gross cropped area (198 million hectares) is irrigated.
- Groundwater contributes about 64%, canals 23%, tanks 2% and other sources 11% to this irrigation.
- This results primarily from the skewed incentive of free or highly subsidised power.
- This is particularly the case in the northwestern belt of India, the erstwhile seat of the Green Revolution.
- Over-exploitation of groundwater has made this region one amongst the three top water-risk hotspots.
    - The others being northeastern China and southwestern US (California).
- Overall, about 1,592 blocks in 256 districts in India are either critical or overexploited.

What is to be done?

- If water is to be used more wisely in agriculture, two crops - rice and sugarcane - deserve special attention.
- These two crops consume almost 60% of India's irrigation water.
- While Punjab scores high on land productivity of rice, it is at the bottom with respect to applied irrigation water productivity.
- Similarly, in case of sugarcane, irrigation water productivity in Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu is only a third that of Bihar and UP.
- Thus, there is a need to realign cropping patterns based on a per unit of applied irrigation water productivity.
- Technologies exist that can produce the same output with almost half the irrigation water in these two crops.
- Drip-irrigation is one of the options that is showing promising outcomes.
- Direct Seeded Rice (DSR) and System of Rice Intensification (SRI) can also save 25-30% of water compared to traditional flood irrigation.
- But, for technological solutions to make headway, pricing policies of agri-inputs should be put on the right track.
- Farmers should also be incentivised for saving water.
    - E.g. Punjab government, along with the World Bank and J-PAL, has launched certain pilots under its Paani Bachao Paise Kamao policy.
    - It is to encourage rational use of water among farmers.
    - Under the initiative, water-meters are installed on the farmers' pumps.
    - If they save water/power compared to what they have been using (taken as entitlement), they get paid for those savings, with direct transfers to their bank accounts.
- It is thus time to switch from highly subsidised pricing of water, power, and even fertilisers, to direct income support on a per hectare basis.
- Water and power need to be priced as per their economic value or at least to recover significant part of their costs to ensure sustainable agriculture.
- Also, investment policies should help farmers with newer technologies and innovations.

Source: Financial Express

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