Making Better Use of Water Resources

What is the issue?

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The comparison betweenthe need for food security against the requirements of water for drinking and sanitation becomes inevitable as an estimated 3,000 to 5,000 litres of water is used to produce 1 kg of rice.

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Where does the solution lie?

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- India is among the **most inefficient agriculture producers** in the world and almost all the major crops consume large quantities of water.
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- According to **the 2030 Water Resources group (WRG) report,** by 2030, India will be able to meet only 50% of its projected demand of 1,498 billion cubic meter (m3) of water.
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- Agriculture consumes 83% of India’s water resources.
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- India’s inefficiency in using water itself offers the scope for improvement, without the necessity for any dramatic interventions.
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- Modest measures and technologies that have proved successful, if adopted in India, can lead to significant improvements in water sustainability.
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What must be the focus areas?

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- A principle objective of the **National Water Mission** is to increase water

use efficiency by 20%.
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- **Water footprint -**According to a 2010 report of the UNESCO, water footprint (the ratio of total volume of water used to the quantity of production) of rice production in India is 2,020 M3 a year compared with 970 M3 a year in China a year.
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- This means we use more drop per crop than most other countries.
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- Thus, farmers can look for better yields through methods other than increased water use.
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- **Higher yields –** Through a combination of higher yielding varieties, better agronomic practices, and improved agriculture extension services, higher yields can be achievedusing the same amount of water.
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- **Biotechnology –**A recent vision document from the ICAR has a clearly defined the objective of sustainable increase in agriculture productivity through **genetic improvement of food crops.**
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- **Micro-irrigation –**Drip irrigation in India has a potential to cover 37 million hectares by 2030 (2.5 m.ha in 2005).
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- Drip irrigation is relevant not only for horticulture crops but also for water intensive crops like sugarcane and cotton.
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- **National Mission on Micro-Irrigation** study shows a saving of up to 40% in sugarcane and cotton respectively.
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- **Agronomic practices –**An example of this practice is **direct seeding of rice.**
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- A study shows 12% - 33% lower irrigation water use in direct seeded rice than in flooded transplanting.
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- What is missing is the **singular focus** that is required to address a sustainability challenge of this magnitude.
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What is National Water Mission?

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- The National Water Mission under the National Action Plan for Climate Change envisages the following five goals.
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- **Goal 1:** Comprehensive water data base in public domain and assessment of the impact of climate change on water resource.
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- **Goal 2:** Promotion of citizen and state actions for water conservation, augmentation and preservation.
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- **Goal 3:** Focused attention to vulnerable areas including over-exploited areas.
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- **Goal 4:** Increasing water use efficiency by 20%.
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- **Goal 5:** Promotion of basin level integrated water resources management.
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Source: Business Line

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