

The world needs to stop taking water for granted

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Context: Sustainable water management is critical to address impending food and nutrition security threats

Introduction:

The theme for World Food Day (October 16) this year — 'Water is Life, Water is Food' — calls for urgent action in managing water wisely.

Water availability affects every aspect of human life, especially food and nutrition security. For instance, about 60% of India's net sown area is rainfed, contributing to 40% of the total food production.

Water, Crop production and Climate change:

1. About 40% of the planet's total land area is degraded, leaving farmers with less productive land. Small-scale farmers, who make up more than 80% of farmers globally, are especially affected as they often lack access to finance, technology and irrigation to maintain a level of production that can sustain their livelihood.
2. Extreme weather events and variability in water availability are severely affecting agricultural production, changing agro-ecological conditions and shifting growing seasons. Changes in rainfall and higher temperatures also affect crop productivity, reducing food availability.
3. The Government of India has assessed the impact of climate change in 2050 and 2080 using climate projections and crop simulation models. Without adaptation measures, rainfed rice yields in India are projected to reduce by 20% in 2050, and by 47% in 2080 scenarios, while irrigated rice yields are projected to decline by 3.5% in 2050 and 5% in 2080 scenarios. Wheat yields are projected to decrease by 19.3% in 2050 and 40% in 2080, while kharif maize yields could decline by 18% and 23%.
4. Irrigation can also be an effective measure to make agriculture more resilient, and in most cases, enable farmers to transform their livelihoods by growing, consuming and selling high-value crops such as nutritious fruits and vegetables. In this context, the WFP supports soil and water conservation, the building or fixing of irrigation canals, dams, ponds, and dykes, as well as flood barriers through food assistance in exchange for labour.

Climate Change Adaptation:

1. The FAO also supports the sustainable transformation of agrifood systems and climate-smart agriculture practices to improve water-use efficiency. It supported the farmer

water school programme in Uttar Pradesh, which helped smallholder farmers. At the same time, the Andhra Pradesh Farmer Managed Groundwater Systems project reached out to 638 habitations in seven drought-prone districts, that included a hydrological monitoring programme.

2. Similarly, IFAD has enshrined climate change adaptation in its core strategies.
3. It set ambitious targets in terms of leveraging climate financing to mitigate climate change by addressing the adverse impacts of agriculture and helping farmers to adapt to the increasing volatility of weather conditions, by investing in the restoration and preservation of soil health, water resources and merging modern technologies with indigenous knowledge systems to build productive and resilient production systems and value chains. IFAD-supported projects in Maharashtra, Odisha, Uttarakhand, Nagaland and Mizoram

Way forward:

1. To achieve global food and nutrition security, political commitment is needed as much as concrete investment.
2. The needed policies and investments must promote:
 - Innovative and proven technologies that allow farmers to increase their productivity,
 - adapt to climate change and become more resilient to shocks;
 - environmentally and socially sustainable and financially viable irrigation and water management strategies;
 - reduce their climate footprint of agricultural production, as well as bio-hazards and environmental pollution;
 - bring sanitation and drinking water supplies closer to rural households;
 - adopt efficient food and water recycling strategies and strengthen institutional arrangements and capacity for sustainable and equitable water regulations, management, access and ownership.

