

## Impact of Water Crisis on Global Economy

### Why in news?

Recent report by Global Commission on the Economics of Water, predicts that by 2050, the lower-income countries will suffer GDP losses due to water crisis.

### What is the status of global water crisis?

- **Water crisis** - Annual per-capita water availability of less than 1700 cubic meter is considered as water stress condition.
- Whereas annual per-capita water availability below 1000 cubic meters is considered as a water scarcity condition.
- **UN report** - By 2050 nearly 4 billion people could live in areas under severe water stress.
- **Status in India** - The average annual per capita water availability for year 2021 and 2031 has been assessed as 1486 cubic meter and 1367 cubic meter respectively.
- **SDG 6** - It seeks to ensure the availability and sustainable management of water and sanitation for all.

*The Global Commission on the Economics of Water was launched in 2022 by the Government of the Netherlands and facilitated by the OECD.*

### What are the factors leading to global water crisis?

- **Weak economic practices** - Over-exploitation of water resources in manufacturing and infrastructure sector.
- **Unsustainable land use** - Deforestation, urban sprawl, and improper agricultural practices disrupt water cycles, reduce groundwater recharge, and increase water scarcity.
- **Persistent mismanagement of water resources** - Over-extraction, inefficient irrigation, and pollution worsen water availability, depleting clean water sources.
- **Adversely changing climate** - Rising temperatures, changing rainfall patterns, and melting glaciers intensify droughts, floods, and water shortages.

*Agriculture accounts for roughly 70% of freshwater withdrawals, followed by industry (about 15%) and domestic (or municipal) uses (about 12%).*

### What are the impacts of waters crisis?

- **Imbalance in global water cycle** - It is vital for generating rainfall, as well as for

mitigating climate change and ensuring economic stability.

- **Agricultural loss** - More than half the world's food production will be at risk of failure within the next 25 years.
- **Impact on human development** - Water scarcity directly affects health, food security and poverty alleviation.
  - Increases the vulnerability of communities to health issues due to lack of clean water.
- **Hindrance to SDG** - Without sufficient water, efforts to achieve key SDGs are compromised.
- **Affects economic growth** - The combined effects of climate change and water scarcity could account for 15% GDP loss in lower-income countries and 8% in higher income countries by 2050.

### What are suggested measure by the report to tackle water crisis?

- **Redefine water governance** - The report offered a new perspective on just access to water for dignified life, adequate nutrition and consumption requires a minimum of about 4,000 liters per person per day.
- According to the World Health Organization (WHO), 50- 100 liters per day is required to meet essential health, hygiene needs.
- **Shift in perspective** - To properly recognize water scarcity and take water as public commodity rather than a personally owned commodity
- **Revolutionizing the food systems** - Increase agricultural productivity using regenerative agriculture to reduce water usage by one-third.
  - Shifting 50% of global cropland to regenerative agriculture by 2050.
- **Conserving natural habitats** - Act seriously to meet the 30% target for the restoration of degraded forests and inland water ecosystems
- **Establishing a circular water economy** - Reduce the strain on natural water resources by recycling wastewater to make it up 8% of freshwater annually.
- **Enabling sustainable innovation** - Such as precision irrigation, to improve efficiency and reduce waste.
- **Payment for Ecosystem Services (PES)** - Which provides a monetary value to ecosystem services such as water purification and climate regulation.
- PES provides incentives for conserving ecosystems that play a vital role in maintaining water cycles
- **Establishment of a Global Water Pact** - To promote international cooperation and innovative financing for water management.

## Green Water Conservation

- Fresh water is classified into blue water and green water,
- **Blue water** - Encompassing surface and groundwater.
- **Green water** - Refers to moisture in soils and vegetation.
- **Part of hydrological cycle** - Green water flows into the soil, runs into rivers, lakes, and the ocean and evaporated to atmosphere.
- This is important since almost half of the rain falling over land originates from green water.
- A stable supply of green water is linked to stable patterns of rainfall, itself critical to economies and livelihoods.
- Deforestation, agricultural or urban expansion in one area can disrupt rainfall in another.
- It also helps in carbon sequestration and mitigation of climate change.
- So, it is essential to conserve regeneration of green water.

### What are the measures taken by Indian government?

- **Jal Jeevan Mission** - Aimed at providing tap water to every rural household by 2024.
- **AMRUT 2.0** - To ensure water supply in statutory towns across the country.
- **Pradhan Mantri Krishi Sinchayee Yojna** - For optimal usage of water in agricultural irrigation.
- **Atal Bhujal Yojna** - Sustainable management of groundwater resources in water stressed blocks.
- **National Perspective Plan** - To improve water availability by transferring water from surplus basins to deficit basins.
- **Sahi Fasal** - Encouraging farmers to grow water efficient crops.
- **Mission Amrit Sarovar** - Developing and rejuvenating 75 water bodies in each district.
- **Catch the Rain** - Water conservation and rainwater harvesting to improve ground water table.

### What lies ahead?

- To create a Global data infrastructure for better predictions of water-related risks and enabling informed policy decision.
- Mission-driven approach that engages all stakeholders to work in achieving common goal to tackle water crisis.
- Restoring Ecosystems by investment in green water conservation.

### References

1. [Down To Earth| Impact of Water Crisis Across the Globe](#)
2. [PIB| Per Capita Water Availability](#)