

# United Nations Water Development Report

The UN World Water Development Report 2023 has presented a grim outlook, highlighting the significant disparity that must be bridged to achieve the UN's SDG objective of providing access to clean water and sanitation to everyone by 2030.

- The UNESCO World Water Assessment Programme coordinates the production of the WWDR (World Water Development Report) on behalf of UN-Water, and UNESCO publishes it.
- This yearly report is unveiled every year on World Water Day, which is celebrated on 22nd March.

## UN World Water Development Report 2023

- Around 10% of the world's population resides in nations that experience significant or extreme water scarcity. Additionally, up to 3.5 billion people face water scarcity conditions for at least one month each year.
- The report highlights that 26% of the world's population doesn't have access to safe drinking water and 46% lack access to basic sanitation.
- As per the report, water usage has grown by approximately 1% each year for the last 40 years, and it is expected to rise at a similar pace until 2050, driven by population growth, changing consumption patterns, and socio-economic development.
- The report indicated that due to climate change, areas that currently have abundant water, such as Central Africa, East Asia, and parts of South America, will experience an increase in seasonal water scarcity. In contrast, regions already grappling with water shortages, such as the Middle East and the Sahara in Africa, will have their water scarcity situation exacerbated.
- Floods in tropical regions have increased four times, while floods in the mid-latitudes of the north have risen by 2.5 times since 2000.
- According to the report, it is more challenging to determine the trends in droughts. However, it suggested that most areas could experience a surge in the severity or occurrence of droughts and heat waves due to climate change.
- The most significant contributor to water pollution is untreated wastewater. Additionally, globally, 80% of wastewater is released into the environment without undergoing any treatment. Furthermore, in numerous developing nations, the figure stands at almost 99%.

### Suggestions given by the report:

- It could cost between \$600 billion to \$1 trillion annually to meet the water-related UN goals. However, it has also emphasized the significance of forming partnerships with governments, investors, financiers, and climate change communities to ensure that investments are directed towards environmental sustainability and providing access to clean water and sanitation to the 2 billion individuals who lack it and the 3.6 million who need sanitation.
- Agriculture consumes 70% of the world's water resources, and to ensure sustainability, there must be increased efficiency in crop irrigation. He highlighted the benefits of drip irrigation, which saves water, and when adopted, allows more water to be available for urban centres.

### Some additional measures for water conservation:

- **Install water-efficient appliances:** Consider upgrading to water-efficient appliances, such as low-flow showerheads, faucets, and toilets, which can save significant amounts of water.
- **Reuse greywater:** Reuse greywater from sinks, showers, and washing machines for landscaping purposes to conserve water.
- **Rainwater harvesting:** One of the oldest and most widely practised water conservation methods in India is rainwater harvesting. It involves collecting and storing rainwater during the monsoon season in ponds, tanks, and underground reservoirs for later use in irrigation, drinking, and other purposes.
- **Traditional irrigation systems:** India has a long history of traditional irrigation systems, such as the **Kuhl system in the Himalayan region**, which involves diverting water from mountain streams through a network of canals and tunnels to irrigate fields.
- **Indigenous water conservation practices:** Many indigenous communities in India have developed their own unique water conservation practices, such as the **Zabo system in Nagaland**, which involves building small earthen dams across streams to divert water into irrigation channels.

### Steps taken by the Indian government to preserve water:

- **Jal Shakti Abhiyan:** The Jal Shakti Abhiyan is a flagship program launched by the Indian government in 2019 to conserve and manage water resources. The program focuses on water conservation, rainwater harvesting, groundwater recharge, and watershed development.
- **National Water Mission:** The National Water Mission was launched in 2011 with the aim of reducing water consumption, increasing water use efficiency, and ensuring equitable distribution of water resources across the country.
- **Clean Ganga Mission:** The Clean Ganga Mission is a flagship program launched by the Indian government in 2014 to clean up the Ganga river and its tributaries. The program focuses on sewage treatment, riverfront development, and afforestation.
- **Atal Bhujal Yojana:** The Atal Bhujal Yojana is a groundwater management scheme launched by the Indian government in 2019. The program aims to promote sustainable groundwater management practices in seven water-stressed states in India.
- **Swachh Bharat Abhiyan:** The Swachh Bharat Abhiyan is a cleanliness drive launched by the Indian government in 2014. The program aims to promote cleanliness and hygiene in urban and rural areas, which in turn helps to reduce water pollution.
- **National River Conservation Plan:** The National River Conservation Plan is a program launched by the Indian government in 1995 to clean up polluted rivers in the country. The program focuses on reducing industrial pollution, sewage treatment, and riverfront development.

### The World Water Development Report 2018 is Titled Nature-Based Solutions (NBS) for Water

1. The report was released on the World Water Day during the 8<sup>th</sup> World Water Forum.
2. The report aims at addressing the contemporary water management challenges across various sectors, in particular, sustainable cities, disaster risk reduction, agriculture and water quality.
3. Nature-based solutions refer to the sustainable management and use of nature for tackling societal and environmental challenges. Water security, food security, water pollution, climate change, disaster risk and human health are some of the challenges.

### How can Nature-Based Solutions be Used for Addressing Water Problems?

4 different Nature Based Solutions are given below, which could be used for tackling water problems.

### **Managing the Availability of Water**

The water availability could be managed by switching to eco-friendly agricultural practices such as conservation tillage, drip irrigation etc. Eco-friendly systems of water storage could be adopted. Ex: recharge of groundwater, natural wetlands etc.

### **Water Quality Management through Efficient Environment Management**

The water quality could be improved with proper management of forests, wetlands, grasslands, soil, recycling nutrients, capturing and retaining pollutants, rehabilitation of ecosystem services etc.

### **Water-Related Risks and Disaster Management**

Nature-based solutions such as water retention by the management of overland flow and infiltration could be practiced, thereby creating space for water storage through the floodplains.

### **Enhancement of Water Security**

Improvement in the availability of water and the quality of water while simultaneously generating environmental, social and economic benefits and reducing the water-related risks would lead to the enhancement of water security.

### **Challenges in Using Nature-Based Solutions**

There are certain limitations with respect to the performance of Nature Based Solutions. For example, NBS application at large scale would require huge investments. Moreover, it requires cooperation and coordination among various stakeholders which could be difficult to achieve. There is also a lack of awareness among the policy makers, regional planners etc, as to what nature based solutions can offer. There also remains a historical inertia against Nature Based Solutions due to the dominance of grey infrastructure solutions.

### **Conclusion:**

- Water conservation is a critical global issue that requires a concerted effort from all nations. The United Nations Sustainable Development Goals (SDGs) provide a framework for countries to work towards ensuring access to clean water and sanitation for all.
- India, with its large population and growing water scarcity, has implemented several initiatives to preserve water resources, including the Jal Shakti Abhiyan, National Water Mission, and Clean Ganga Mission.
- These efforts are aligned with international initiatives such as the Paris Agreement on Climate Change and the 2030 Water Resources Group. However, more needs to be

done to address the growing water crisis, and collaboration between nation and stakeholders is crucial to achieving SDG 6 and ensuring a sustainable future for all.