



## Actionable Messages

**Message 1:** Nature-based solutions, such as change in the cropping pattern, are required so that nature's strength can be used for the benefit of humankind.

**Message 2:** In India, only a handful of glaciers are regularly visited and monitored; so, there is a need for an action plan where the various sources of water are monitored at the basin level while adopting a river basin management approach.

**Message 3:** Institutions must be created to empower and channelize the issues so that someone's gain does not become another's loss. It is easy to highlight all the bad practices but the focus should be on good practices.

**Message 4:** Lifestyle changes can be part of nature-based solutions to fight climate change.

**Message 5:** The need of the hour calls for both long- and short-term goals and cross policy intervention to address the issues on the interlinkages between water, biodiversity, ecosystem, and agriculture.

## Narrative

The thematic track session titled, “Water Management for Climate Resilience, Biodiversity, and Food Security” was conducted as part of the World Sustainable Development Summit (WSDS) - the annual flagship initiative of The Energy and Resources Institute (TERI). The aim of the session was to address the water-food-energy-ecosystem nexus via water for sustainable development and water for climate, resilience, and environment.

The session started with the welcome remarks by **Dr. Syamal Kumar Sarkar, Distinguished Fellow, Water Resources Division, TERI**, who highlighted the interconnection between water and climate change by talking about the melting of glaciers in the central Asian region, and the need to restore and protect water and water-related ecosystems. In the panel discussion, views were recorded about the issues of management of water and the need of change in behaviour of individuals and institutes in the context of preparing action plans for water management and its related sectors. The session followed an interview-style discussion with **Ms. Kamilla Kristensen Rai, Counsellor, Delegation of the European Union to India**, as moderator, who set the context. The speakers presented their views on the following questions:

- What are the key instances or examples which indicate the strength of the interlinkages between ecosystem, biodiversity, agriculture, and water?
- What ‘nature-based solutions’ are available which can help in reducing the stress on this interlinkage and may ensure an integrated resource security?
- What coordinated policy responses are needed that could address the challenges influencing the interlinkages so that resilience could be built among communities?

**Prof. A.K. Gosain, Director, INRM Consultants Pvt Ltd**, mentioned that climate change implications are happening and will happen in future, thereby affecting our water resources. He emphasized the deteriorating ground water table due to discrepancy in water demand and water availability of our rivers and vice versa. He also mentioned the reducing number of rainy days but with increased intensity of rainfall which leads to flash floods. Crops cannot sustain such variations in the availability of water, thereby resulting in crop failures. Further, he mentioned that there is a need of basin-level hydrological models that can assess the amount of water needed for a particular task. His keywords were ‘convergence and integration of sectors’.

**Dr. Jyoti Nale, Project Advisor, India-EU Water Partnership, GIZ-India**, expressed her views on nature-based solutions to tackle the issues of water management. To increase the availability of water, what is important is conservation, restoration, and protection. She emphasized on growing crops which are resilient to changes in climate, such as millets, which is a heat-tolerant crop and can be grown in very less water as compared to rice. She also mentioned that lifestyle changes can be a nature-based solution to fight climate change. Her keywords were ‘optimal use of water for individuals’.

**Mr. Suresh Babu, Director of Rivers, Wetlands and Water Policy programme, WWF-India**, spoke about the management of inland water resources and managing the water available for various water-dependent sectors through policy approach. He mentioned the ‘Amrit Dharohar’ scheme, which aims to conserve wetlands by promoting their optimal use; ‘Jal Shakti Abhiyaan’, which aims at conservation of water and rain harvesting. His keywords were ‘rivers and wetlands hold the key for our adaptation strategies’.

**Mr. Kees Bons, Strategic Advisor, Deltares, The Netherlands**, emphasized on taking responsibility as consumers and coming up with solutions which are in harmony with nature. Over usage of chemical-based pesticides can lead to the destruction of biodiversity as such practices also harm the important biological foundation of our ecosystem, that is insects. His keywords were ‘fight nature and it fights back’.

**Dr. Roshni Arora, Applied Freshwater Scientist, The Nature Conservancy, India**, connected virtually and shared her insights. She mentioned that we need to develop shared measures, shared goals on safeguarding the ecosystem but their impact will take time to show on ground, so we must have patience while practising sustainable management of water. Her keywords were ‘interlinkages between ecosystem, biodiversity, agriculture, and water’.

## Making Words Count @WSDS 2023

“	<p>It is important to highlight the challenges and opportunities influencing the synergy between ecosystems, biodiversity, agriculture, and water availability.</p> <p style="text-align: right;"><b>Ms. Kamilla Kristensen Rai</b> <b>Counsellor, Delegation of the European Union to India</b></p>
“	<p>There is an interconnection between water and climate change due to the melting of glaciers in the central Asian region and there is a need to restore and protect water and water-related ecosystems.</p> <p style="text-align: right;"><b>Dr. Syamal Kumar Sarkar</b> <b>Distinguished Fellow, Water Resources Division, TERI</b></p>
“	<p>While discussing climate-related issues, we have to first resolve the complications of water interactions and generate information which we can use for negotiation, and that is where science must step in. What we need for water management is convergence and integration of sectors.</p> <p style="text-align: right;"><b>Prof. A.K. Gosain</b> <b>Director, INRM Consultants Pvt Ltd</b></p>
“	<p>Nature-based solutions are required for the sustainable usage of water, such as growing millets and adoption of lifestyle changes by humans. There has to be an optimal use of water for all individuals to ensure better water management.</p> <p style="text-align: right;"><b>Dr. Jyoti Nale</b> <b>Project Advisor, India-EU Water Partnership, GIZ-India</b></p>
“	<p>For better water management, several solutions exist, but these get divided at various levels, so we need to articulate what is there for us in the basket of solutions and use that appropriately. Rivers and wetlands hold the key for our adaptation strategies.</p> <p style="text-align: right;"><b>Mr. Suresh Babu</b> <b>Director of Rivers, Wetlands and Water Policy programme, WWF-India</b></p>
“	<p>If we fight nature, it will fight back; so, what we need is to use the strength of nature and use that for the benefit of our own kind. We need to protect the areas where the nature is still at its best as these areas are restoration areas for insects and animals, and we should not encroach them any further.</p> <p style="text-align: right;"><b>Mr. Kees Bons</b> <b>Strategic Advisor, Deltares, The Netherlands</b></p>
“	<p>We should develop shared measures, shared goals on safeguarding the ecosystem, but their impact on ground will take time to show. Interlinkages between freshwater ecosystems, wetlands and rivers, and interlinkages between different departments will solve the issues of water management.</p> <p style="text-align: right;"><b>Dr. Roshni Arora</b> <b>Applied Freshwater Scientist, The Nature Conservancy, India</b></p>