



Partnerships and Global Cooperation for Water: Financing Water Projects for Green Growth

**Dr Ambedkar International Centre, New Delhi
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PRANAB J PATAR, PhD

Chief Executive, Global Foundation (GFAEHW), New Delhi

President, Assam Science Society (Delhi & NCR Branch)

Secretary, TERI Alumni Association, New Delhi

- Member -

Deepor Beel Conservation Society, Govt. of Assam (Governing Council)

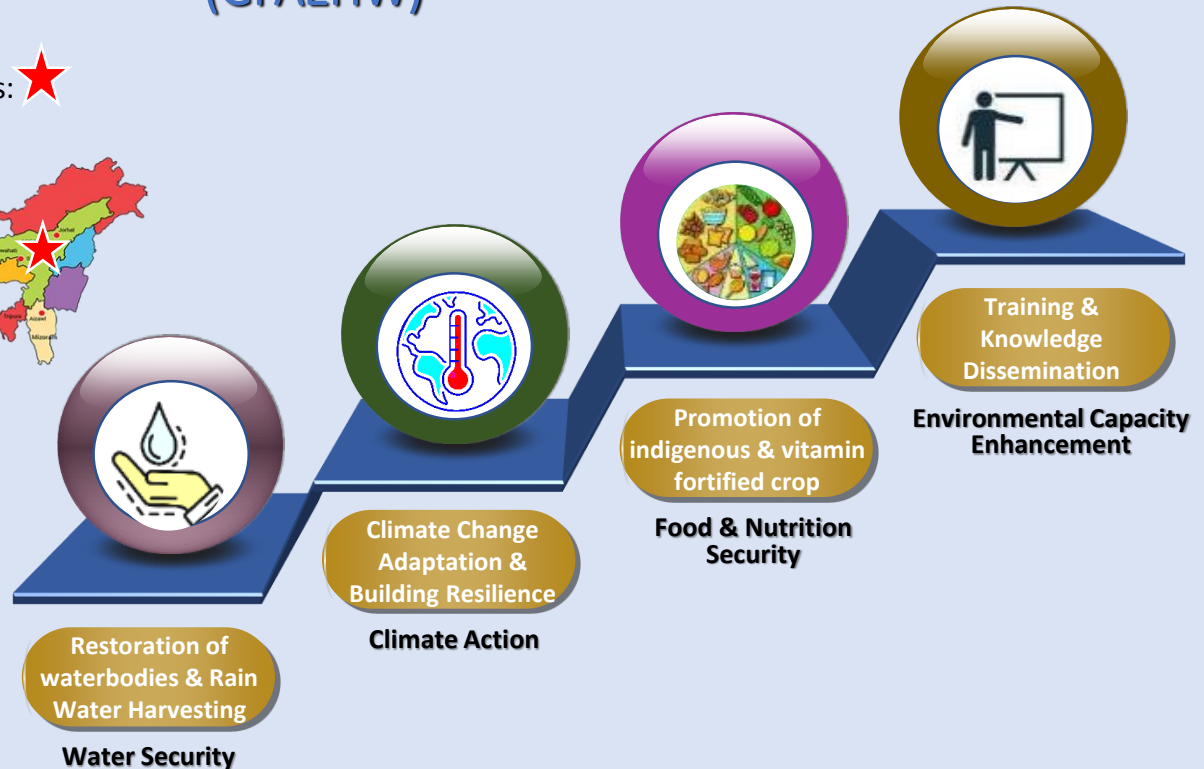
IUCN World Commission on Protected Areas

CoalitionWILD Global Mentorship Program | Indian Science Congress Association

International Council for Circular Economy | Climate Reality Leadership Crop

Global Foundation (GFAEHW)

Office: ★ Projects: ★



National Strategic Alignments:

| National Water Mission | National Mission for Sustaining the Himalayan Eco-system |
| National Mission on Strategic Knowledge for Climate Change | National Nutrition Mission 2018 |



Sustainable Development Goals:

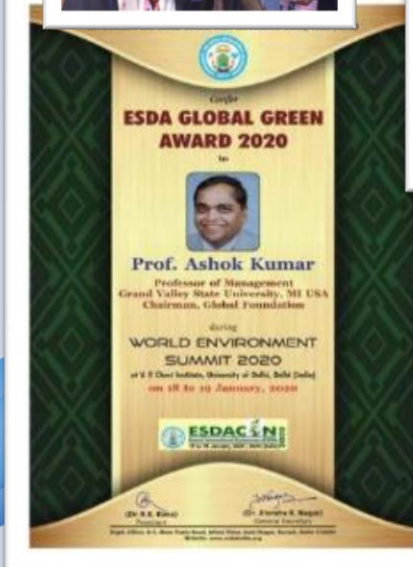
| SDG 2: Zero Hunger | SDG 3 - Good health and well-being |
| SDG 6: Clean Water and Sanitation | SDG 13: Climate Action | | SDG 15: Life on Land |
| SDG 17: Partnerships for the Goals |



Partnerships & Collaborations



Awards & Accolades



Some Concerns



Indian Water Situation

India's Water Crisis: **THE BIG PICTURE**



Source: <https://www.worldbank.org/en/news/feature/2019/12/09/solving-water-management-crisis-india>



Increasing Global Demand

Global Facts & Statistics

Global demand for water will exceed viable resources by **40%** by **2030**, if we continue business as usual.¹

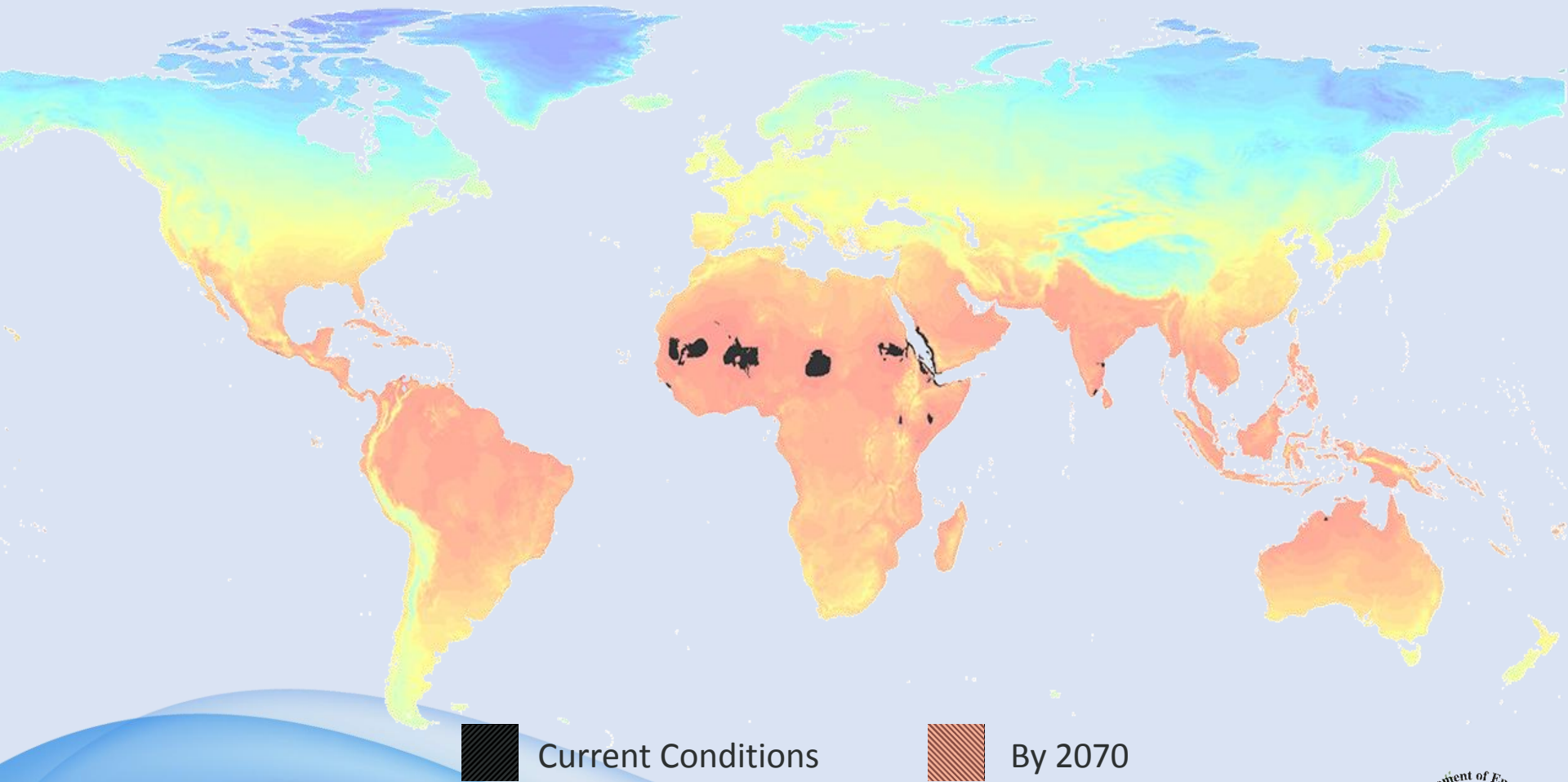
Industry is the **second largest** user of water, behind agriculture.²

Global water demand for manufacturing is anticipated to increase by **400%** by **2050**.³

Realizing a circular economy could globally divert up to **340 million tons** of waste from landfill each year.⁴

By applying circular practices in the near term across the consumer sector,
30% more materials could be recovered.⁵

Un-inhabitability at a Global Scale



Data and Graphic: Chi Xu, et al. "Future of the human climate niche," *PNAS*, May 26, 2020

Source: <https://earthsky.org/earth/global-warming-areas-of-earth-too-hot-for-people/>



India's Response



India is Front-ending the Fight

India Among Top 5 Best
Performing Countries on Climate Change








 **Jumps 2 spots higher,**
and now ranks 8th as per CCPI* 2023


 **Best among G-20 countries**
& among large economies

 **Reflects how India is implementing**
the world's fastest green energy revolution

*Climate Change Performance Index ● ● ●

 **India's Ambitious Policies For Better World**

-  Already on track to meet Net Zero Emissions By 2070
-  Target of renewable electricity capacity of 450 GW
-  Aim of 30% electric vehicle share by 2030
-  Close to achieving Nationally Determined Contribution target of 40% share for non-fossil fuel installed power capacity by 2030



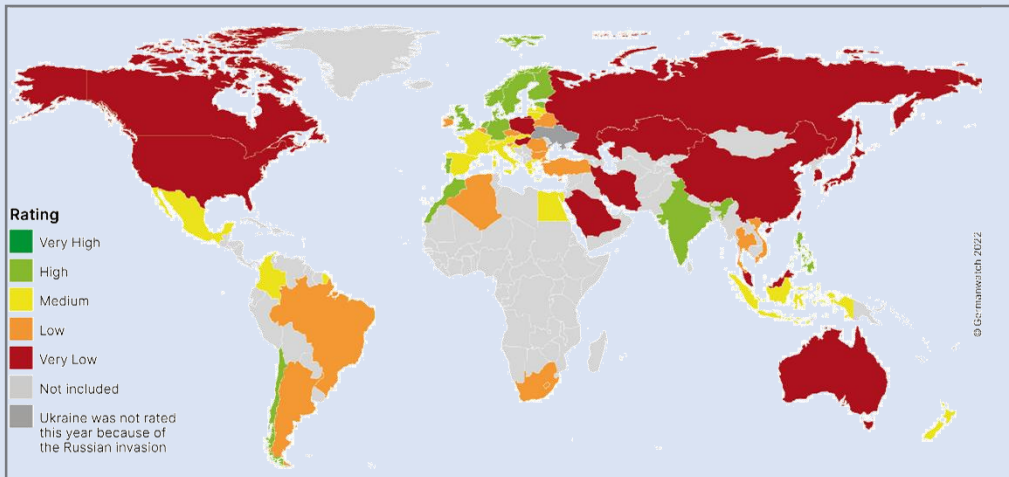
* Information Source: Climate Change Performance Index 2022

Source: <https://pbs.twimg.com/media/FiYfuNhUUAE49bg.jpg> |
https://twitter.com/PIB_India/status/1458430042116005891/photo/1



Is this Action Enough?

THE CLIMATE CHANGE PERFORMANCE INDEX 2023



CLIMATE ACTION TRACKER RATING 2021

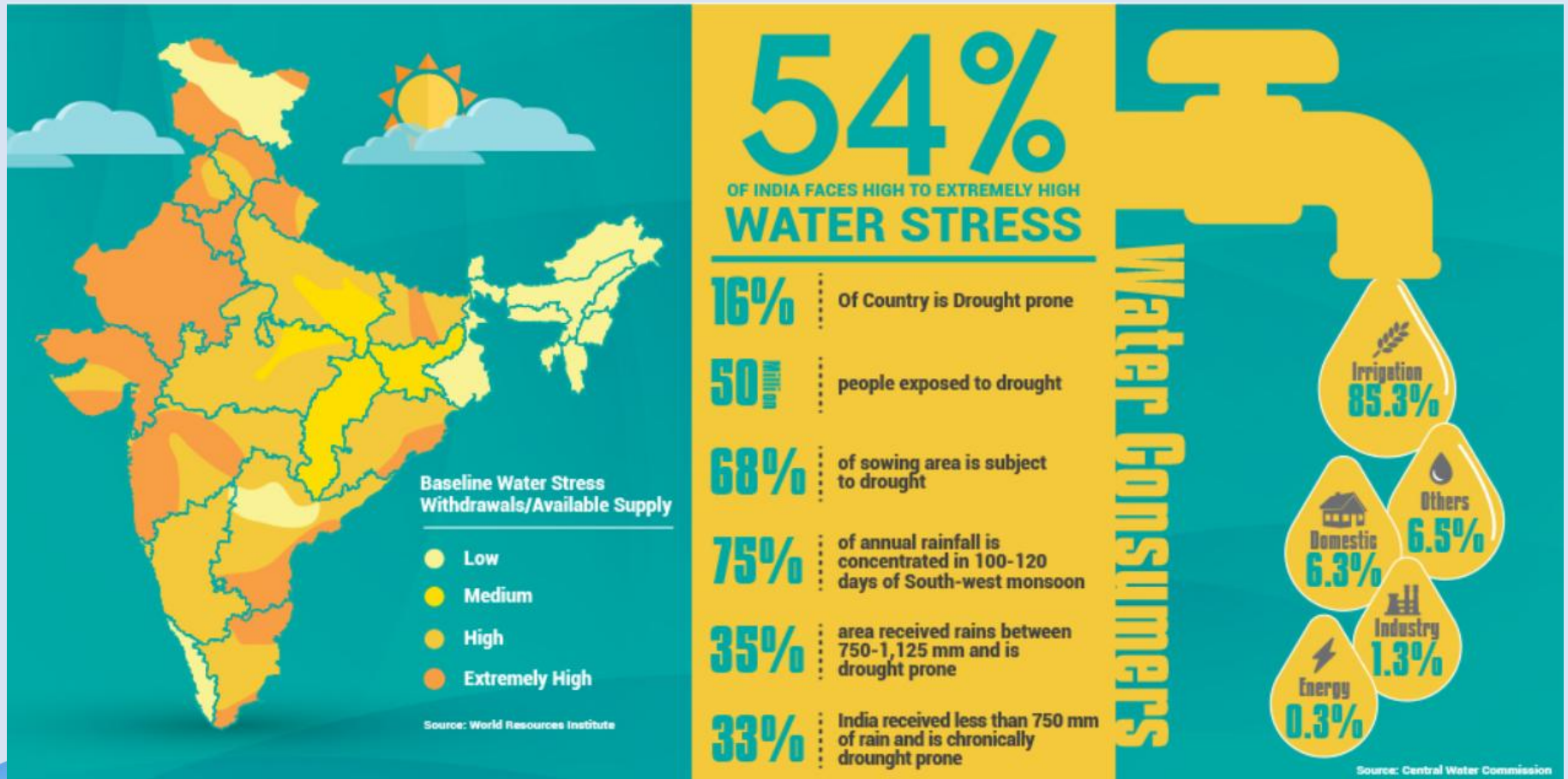
CRITICALLY INSUFFICIENT	HIGHLY INSUFFICIENT	INSUFFICIENT	ALMOST SUFFICIENT	1.5°C PARIS AGREEMENT COMPATIBLE
IRAN	ARGENTINA	CHILE	COSTA RICA	THE GAMBIA
RUSSIA	AUSTRALIA	EU	ETHIOPIA	
SAUDI ARABIA	BRAZIL	GERMANY	KENYA	
SINGAPORE	CANADA	JAPAN	MOROCCO	
THAILAND	CHINA	NORWAY	NEPAL	
	COLOMBIA	PERU	NIGERIA	
	INDIA	SOUTH AFRICA	UK	
	INDONESIA	SWITZERLAND		
	KAZAKHSTAN	USA		
	MEXICO			
	NEW ZEALAND			
	SOUTH KOREA			
	UAE			
	UKRAINE			
	VIET NAM			



Source: <https://newclimate.org/resources/publications/the-climate-change-performance-index-2023> |

<https://www.downtoearth.org.in/news/climate-change/india-s-climate-action-highly-insufficient-new-rating-system-79051>

Understanding Vulnerability



Source: <https://www.iasexpress.net/water-crisis-in-india-upsc-essay/>

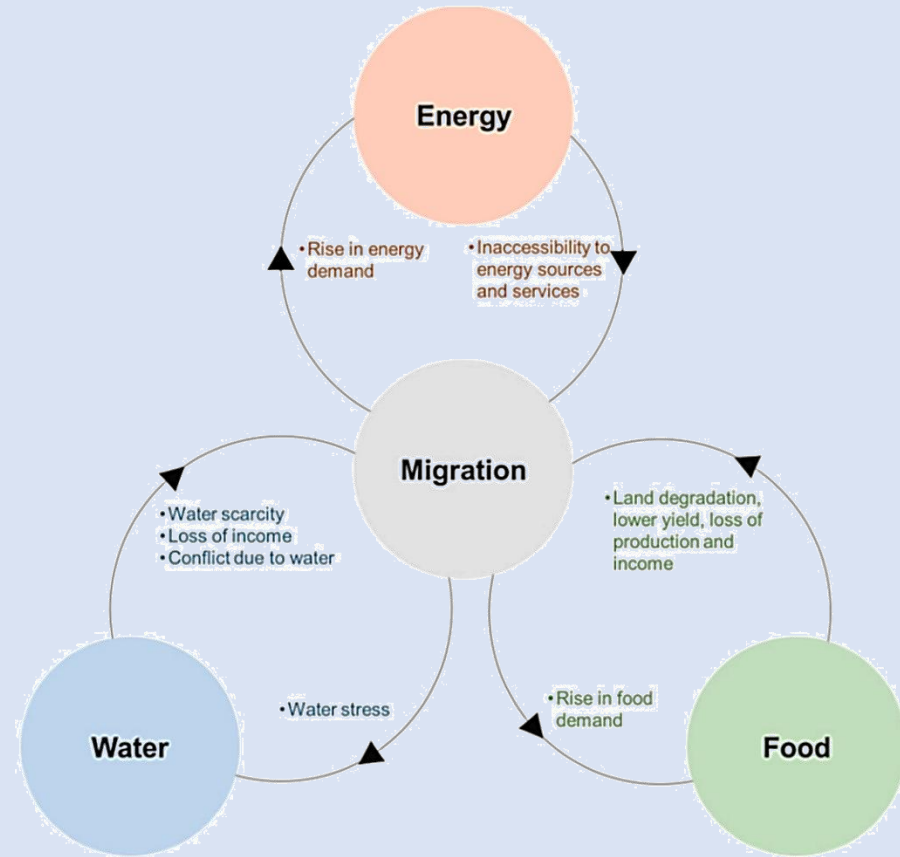
Interconnectedness



Oneness of Life & Environment

The oneness of life and its environment, which means – one can influence and reform it's environment through inner transformation and manifest the desired change in the surrounding. And in the context of our work in the environment sector today, it is only possible to bring about desired change by changing oneself first.

- Nichiren Daishonin's
Buddhism

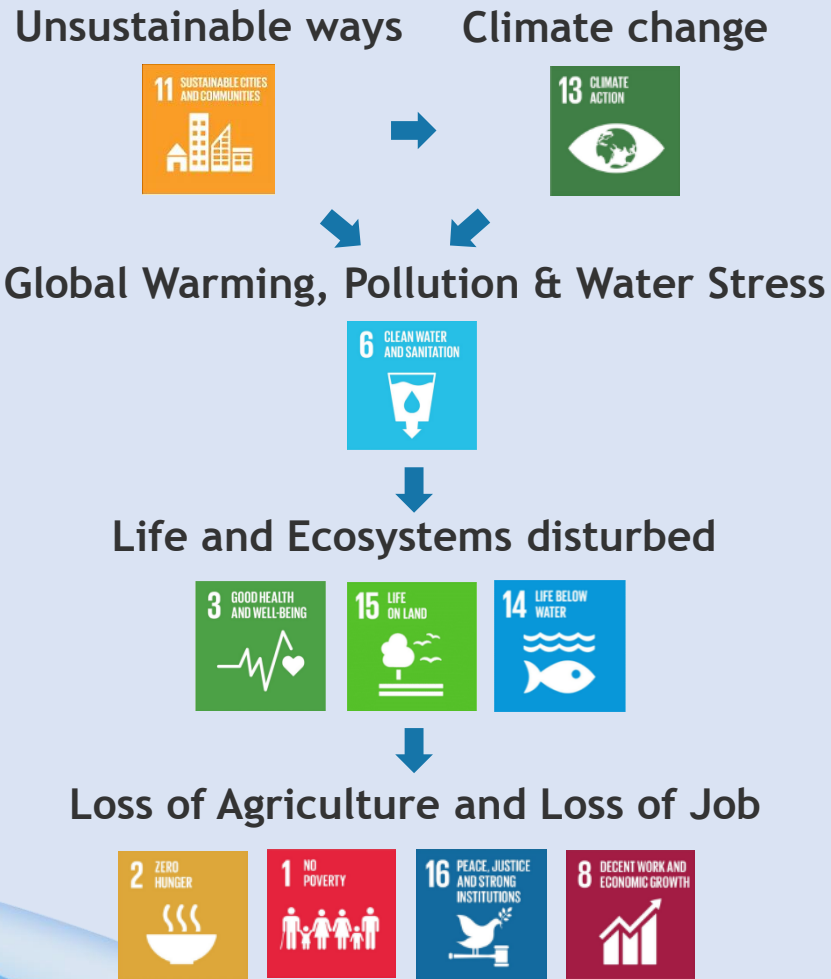


Source: <https://www.mdpi.com/2071-1050/13/16/9402>



Interdependencies

Provisioning Alternatives and
Growing Opportunities



Why Need Collaborative Approach



Unlike many technological fields, a culture of innovation is lacking in the water sector due to their limited direct participation in research and the prioritization of other goals. Water utility companies place public health and provision of water services above innovation.

- Ahmed et al, Water 2023



03 Key Pillars of Global Sustainable Water Management

The Power of Partnerships

- Adopting a participatory and partnered approach towards addressing the complexities of water crisis

Global Cooperation for Water

- The interconnected nature of water resources across borders demands cooperation and collaboration

Financing Water Projects: Approaches and Mechanisms

- Need for financial resources to undertake conservation and restoration of water resources, water infrastructure development and maintenance, treatment and distribution.
- Financing mechanisms – New and Existing e.g. public-private partnerships, grants, loans, and impact investments



Leveraging Financial Tools

These innovative financing mechanisms hold the potential to drive sustainable water management and green growth by attracting capital, promoting efficient resource use, and addressing the complex challenges of water security and environmental protection.

- 1. Green Bonds and Sustainable Finance:** Debt financing where the proceeds are exclusively used for environment project.
- 2. Impact Investment:** Impact investors seek both financial returns and positive environmental or social impacts.
- 3. Public-Private Partnerships (PPPs):** PPP models can be extended to water projects
- 4. Water Trust Funds:** Water trust funds pool financial resources from public and private sectors to support water project.
- 5. Innovative Payment Schemes (Carbon Pricing and Water Trading):** Introducing innovative payment mechanisms like water trading or water markets. Carbon pricing mechanisms can be expanded to include water-related impacts.
- 7. Crowdfunding and Microfinancing:** Small-scale water projects in local communities can be financed through crowdfunding and microfinancing platforms.
- 8. Water Performance Contracts:** Water performance contracts involve third-party organizations investing in water-efficient technologies and infrastructure for clients.
- 9. Blended Finance:** Blended finance combines public and private capital to finance water projects.
- 10. Technology and Data-Driven Solutions:** Advanced technologies like blockchain can enhance transparency and traceability of water-related transactions.
- 11. Corporate Water Stewardship Funds:** Corporations can establish funds dedicated to supporting water-related projects in regions where they operate.
- 12. Ecosystem Services Payment:** Benefits of Ecosystem services valued and paid for by beneficiaries.
- 13. Green Tax Incentives:** Governments can provide tax incentives for businesses that invest in sustainable water management practices, encouraging private sector participation in green growth.
- 14. New International Funding Mechanisms:** can be developed multilateral organisation.



International Water Cooperations

United Nations Water - UN-Water provides a wealth of information and reports on global water-related issues.

World Water Development Report - WWDR Published by UNESCO's World Water Assessment Programme, this report offers comprehensive insights into water-related challenges and solutions.

Global Water Partnership - GWP is an international network that aims to support the sustainable development and management of water resources..

World Bank - Water Global Practice - The World Global Practice offers research, reports, and case studies on financing water projects.

OECD - Water Governance Initiative – It focuses on improving water governance to achieve sustainable and efficient water management.

Global Water Forum – This is a platform for experts to discuss water-related issues.

International Water Association - The IWA is a global network of water professionals, researchers, and practitioners.

Global Environment Facility (GEF) - The GEF provides grants for various environmental projects.

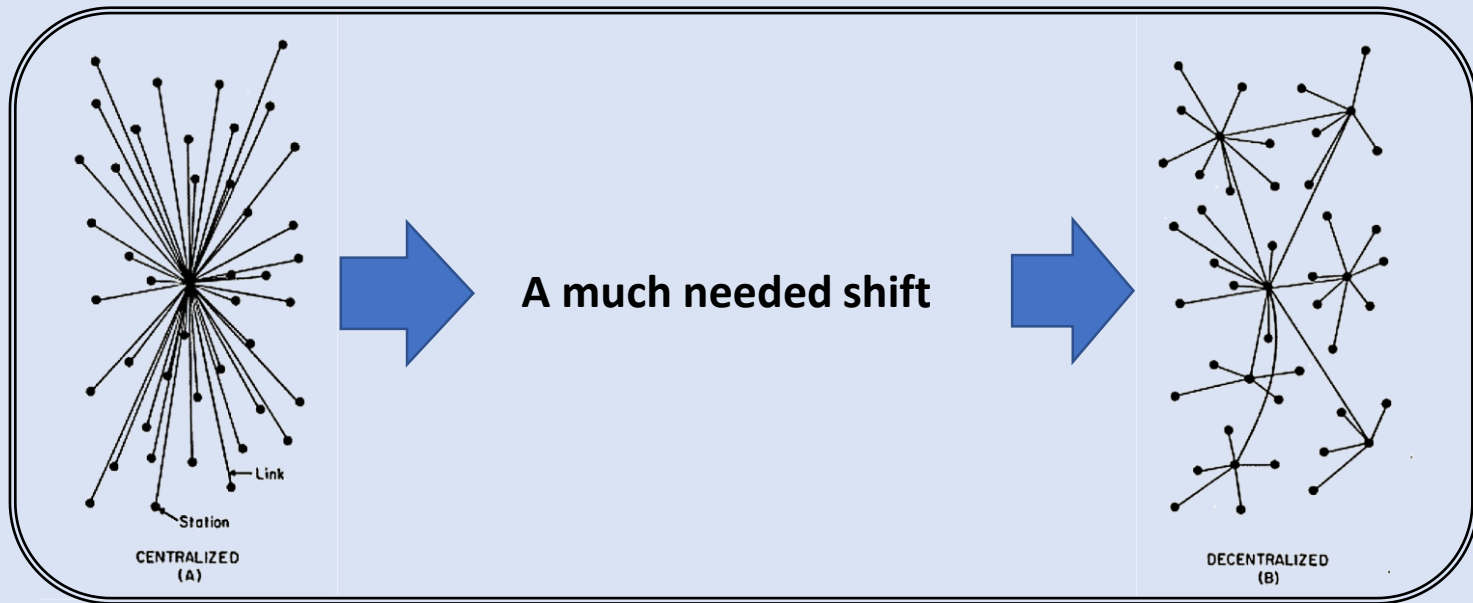
Etc etc....



What More ??



Decentralized Action



- ❖ Mobilize & Engage multiple stakeholder for local action
- ❖ Push Conservation of aquatic ecosystems beyond the Protected Areas Network for a water secure future
- ❖ Identify potential areas for conservation and restore the damaged ecosystems
- ❖ Fix all human-made threats including pollution etc at source by deploying sustainable techs.
- ❖ Solutions that combine TEK & latest S&T innovations.

Adopting Nature-based Solutions

FLOODING



By the end of the century, annual damages from flooding in the U.S. are projected to **increase by 30%**.¹

DROUGHT



1 out of 3 U.S. counties in the lower 48 states face higher risks of water shortages by mid-century.²

COASTAL DAMAGE



50% of Americans live in coastal counties, where water and energy infrastructure are increasingly vulnerable to higher sea levels.³

URBAN HEAT



Climate change will likely lead to **more frequent and severe** heat waves during summer months.⁴

Green Infrastructure Builds Resiliency

1 Vegetation-based green infrastructure practices can mitigate carbon pollution.

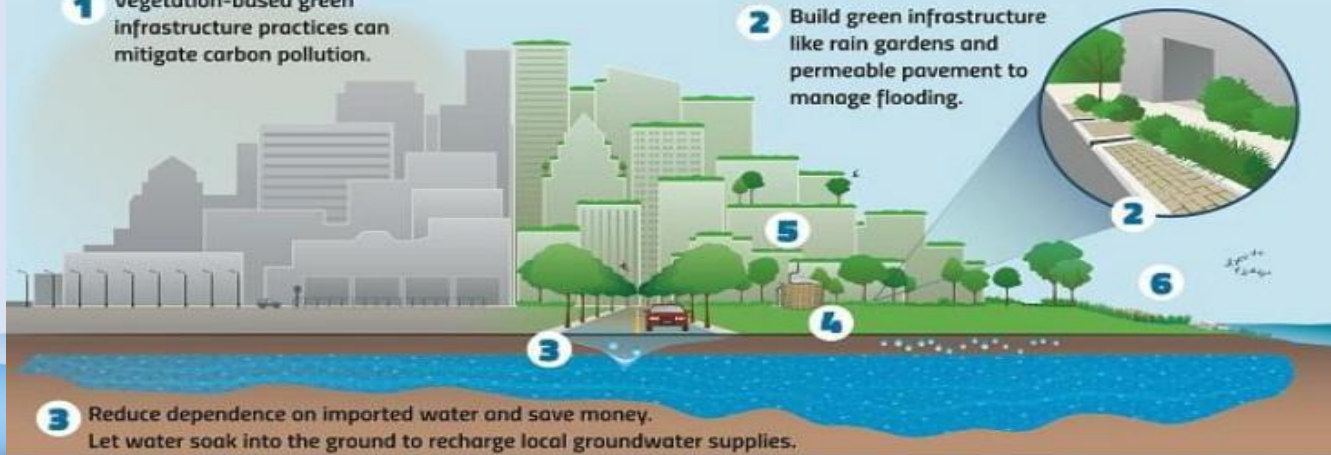
2 Build green infrastructure like rain gardens and permeable pavement to manage flooding.

3 Reduce dependence on imported water and save money. Let water soak into the ground to recharge local groundwater supplies.

4 Keep water local. Capture runoff in cisterns and rain barrels to reduce municipal water use.

5 Plant trees and green roofs to mitigate the urban heat island effect.

6 Use living shorelines, buffers, dunes and marsh restoration to reduce the impact of storm surges.



Local Action Through Collaboration



Ecosystem Restoration

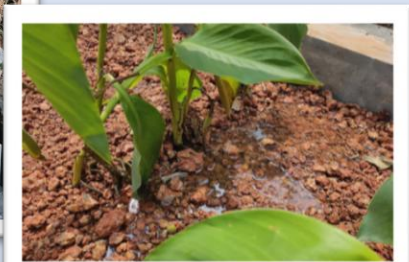


Water Body Rejuvenation



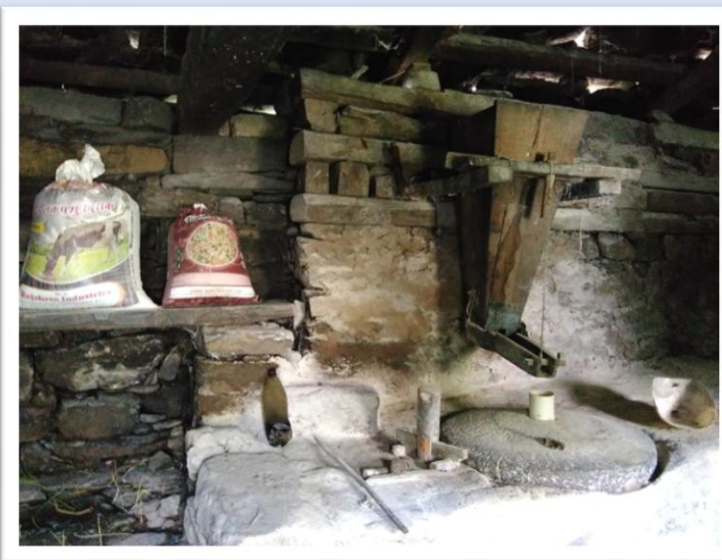
Relevance of Eco-technologies

**Eco-technology at work:
Developing Phytoid based
Constructed Wetlands for
Sewage Treatment at JNTU
Hyderabad**

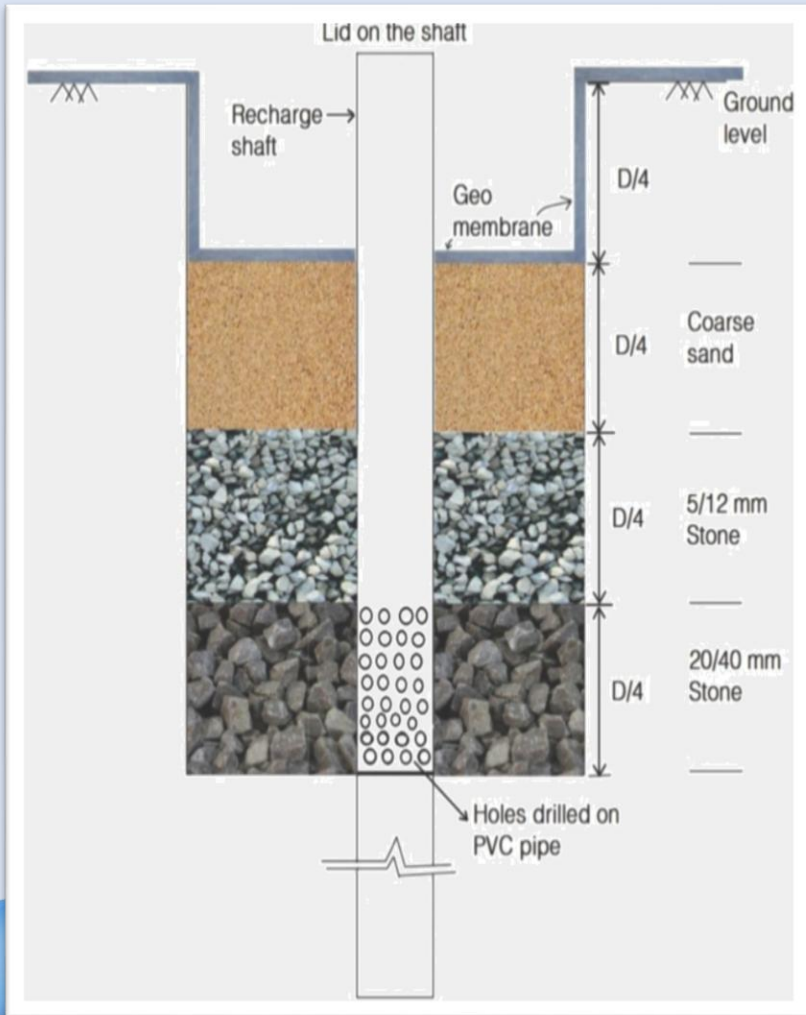


Transformation in Action:
Restoration work at Nayphal in
Ghaziabad with active corporate &
community participation

Reviving Traditional Wisdom



Aquifer Recharge



Glocal Solutions



Water Hyacinth based Livelihood Opportunities

Turning weed into wealth



भिंडावास में मिलेंगे आसाम के आकर्षक बैग और हैंडबैग्स

वन्य प्राणी विभाग की ओर से ग्रामीण महिलाओं को दिलाई जा रही बनाने की ट्रेनिंग

प्रमोद सैनी | इज्जत

भिंडावास आसाम के आकर्षक बैग और हैंडबैग्स बनाने की ट्रेनिंग में शामिल हैं। आसाम के आकर्षक बैग और हैंडबैग्स बनाने की ट्रेनिंग में शामिल हैं। आसाम के आकर्षक बैग और हैंडबैग्स बनाने की ट्रेनिंग में शामिल हैं।

भिंडावास में वीक एंड पर कई आईएस, आईपीएस सहित दूसरे सीनियर अधिकारी व दिल्ली से पर्यटक आते हैं। आसाम के बैग-बास्केट आदि तैयार करने की तमाम संभावनाएं हैं। डॉ. प्रणव ट्रेनर

तैयार करने की तमाम संभावनाएं हैं। डॉ. प्रणव ट्रेनर

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The Power of Community Participation

AN EYE FOR THE MAN WHO SEE THE WORLD IN HIS EYES | VOL. 175 NO. 175 | NEW DELHI | MONDAY, JULY 25, 2022

PAGES 48 | NOIDA/GHAZIABAD | INVITATION PRICE ₹5.50; ₹8.50 WITH ET OR ₹8.50 WITH NAVBHARAT

THE TIMES OF INDIA



INDIA'S LARGEST ENGLISH NEWSPAPER

...How to keep ponds clean? Nyayfal and Morti show the way to others

Anjali Singh | TNN

Ghaziabad: Even as most villagers continue to throw garbage in ponds restored by the GMC, the villagers of Nyayfal and Morti have set a positive example by keeping the restored ponds clean in their respective villages.

In Nyayfal, villagers have planted trees near the pond for its beautification and started educating everyone about the harmful effects of throwing garbage in the pond. Meanwhile, in Morti, the self-motivated villagers have pledged to stop dumping waste in the pond.

KP Singh, a villager of Nyayfal, said, "It has been nearly a year since the GMC restored the pond. Even before the GMC started the work, people had already begun to clean the pond.



Nyayfal villagers have planted trees near the pond to beautify the area

We created a community circle, where we explained to all villagers that if we keep the pond dirty, our groundwater will also get dirty, creating problems because we eventually use that groundwater."

The Nyayfal pond covers an area of nearly 7,600sqm,

and the Global Foundation NGO helped the GMC with its restoration. Dr Pranab J Patar, CEO, Global Foundation NGO, who has been associated with the water sector for over a decade now, said, "Most conservation success stories have demonstrated the power of peo-

ple's participation and community-based approaches. The Nyayfal project is also no different. Locals are conserving this valuable ecosystem, which had been dead for long."

The villagers of Morti village have also taken steps to maintain a clean pond since its restoration last year.

Praveen Prasad, a villager of Morti village, said, "It was the village children who raised awareness about this pond after the restoration work. If we see any garbage in our pond, we clean it up then and there. We don't ask any authority official to do it because we think we are responsible for whatever happens to our pond. After the restoration work, villagers have kept the pond clean, and nobody throws garbage in the pond. We are self-motivated."





Thank You

pranab.patar@gmail.com