FRESHWATER ECOSYSTEM

TATA SUSTAINABILITY MONTH, JUNE 2021

smart ecosystem restoration

WHAT IS IT?

Freshwater ecosystems are a subset of Earth's aquatic ecosystems.

THEY INCLUDE LAKES, PONDS, RIVERS, STREAMS, SPRINGS, BOGS, AND WETLANDS

and are characterised by a lower salt content as compared to marine ecosystems. Fresh water is vital to human life and wellbeing.

LESS THAN THREE PERCENT OF OUR PLANET'S WATER IS FRESH WATER,

and less than half of that is available as a liquid; the rest is locked away as ice in polar caps and glaciers.

WETLANDS ARE DEFINED AS AREAS OF LAND THAT ARE EITHER TEMPORARILY OR PERMANENTLY COVERED BY WATER.

Some of India's biggest and most well-known lakes like Wular in Kashmir, Koleru in Andhra Pradesh, and Vembanad in Kerala are a part of freshwater wetland ecosystems in India

WHY IS IT IMPORTANT?

SUPPLY FOOD, WATER AND ENERGY
to billions of people & businesses

PROTECT US FROM DROUGHTS
through perennial rivers, and from floods, by channelling and draining excess water

PROVIDE UNIQUE HABITAT FOR MANY PLANTS AND ANIMALS,
including one-third of all vertebrate species

HOW IS IT DEGRADED?

POLLUTION
Chemicals from industries & agriculture, plastics & untreated sewage

OVER-EXTRACTION
Indiscriminate extraction of fresh water for domestic, agricultural and industrial use, leading to acute shortages

OVER-FISHING
Rampant fishing disturbs aquatic lifecycle

SAND-MINING
Canalisation and mining for sand and gravel

CLIMATE CHANGE
Frequent droughts and floods as a result of climate change further degrade the affected ecosystems as they are less resilient

HOW BAD IS THE SITUATION?

About two-thirds of the world's population may suffer from freshwater shortage by 2025

One in three freshwater species are threatened with extinction

WHAT CAN BE DONE TO RESTORE IT?

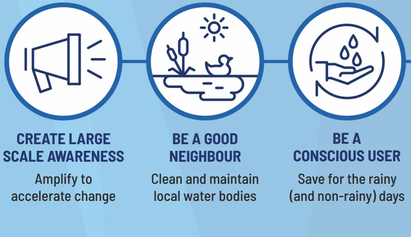
1 ADOPTING A HOLISTIC APPROACH TO FRESHWATER ECOSYSTEM RESTORATION
take into account watershed's flow & terrain local demand & supply, causes of pollution, impact on species supported by the waterbody, etc.

2 IMPROVING WATER QUALITY
treat all wastewater before discharge & prevent plastics & chemicals from contaminating water bodies.

3 RESTORING WATER CONNECTIVITY
with better designed dams, maintaining minimum flows

4 CAPPING EXTRACTION
specially fishing and mining

WHAT CAN MY ORGANIZATION DO?



CREATE LARGE SCALE AWARENESS
Amplify to accelerate change

BE A GOOD NEIGHBOUR
Clean and maintain local water bodies

BE A CONSCIOUS USER
Save for the rainy (and non-rainy) days

- Measure & manage organization's own water footprint
- Prevent over-extraction
- Develop alternate sources of water
- Treat sewage waste responsibly
- Aim to be Zero Liquid Waste Discharge units

WHAT CAN I DO TO HELP?

USE WISELY & RESPONSIBLY

Don't let fresh water go to waste

Don't flush sanitary waste down toilets

Take care of your plastic waste while camping or holidaying by riverside

Use spray washers/ nozzles

Setup rainwater harvesting in your society

Sources: **Conservation.org** https://www.conservation.org/priorities/fresh-water | **UNEP** https://www.decadeonrestoration.org/types-ecosystem-restoration/freshwaters | **National Geographic** https://www.nationalgeographic.org/article/freshwater-ecosystem/