



General Studies-3; Topic: Conservation, environmental pollution and degradation

Conserving Fresh water sources

Introduction

- While we are still in the grip of the COVID-19 pandemic, which is airborne, we have forgotten that another such blight could well come from contaminated water.
- Indiscriminate human activity is often the reason for environmental degradation and pandemics.

Present Status

- NITI Ayog and WaterAid, have found that over 70% of India's surface and groundwater is contaminated by human and other waste and is likely to carry viruses.
- The practice of keeping animals locked together for mass production of meat produces an artificial environment that can birth mutations in erstwhile dormant viruses.
- Earlier, in the wild, animals were far away from human habitats. The viruses they harboured remained isolated.
- But today's practices can spawn viruses that can easily transfer to the human population.

A source of virus

- Once the virus has found its way into the human population, it is bound to proliferate in wastewater.
- In England, Wales and Scotland, several wastewater samples were tested and were found to carry traces of SARS-CoV-2.
- Remnants of the virus have also been detected in raw sewage across Sydney.
- Research at the University of Stirling in Scotland indicates that the SARS-CoV-2 virus can spread through sewage water.

- This is an alarming prospect for us as river water or lake water, which carries human waste, sewage, and toxic waste, can be a very generous host for viruses.
- A huge section of the population in India uses polluted water from sources like rivers, lakes, or groundwater for drinking.

Decontaminating our water bodies

- Decontaminating our water bodies and groundwater could take several decades.
- The Rhine river in Germany, after 50 years of cleaning and stopping the inflow of pollutants and human waste, is still not fit for drinking.
- The Indian government has announced 'Nal se Jal' scheme to provide drinking water connections to every rural household by 2024.
- Since most of the water sources are contaminated, the only way to purify water is through reverse osmosis (RO).
- But though RO removes contaminants, it also takes out all the healthy minerals and nutrients required by the human body.
- This is an unhealthy and exorbitantly priced proposition.
- To neutralise the virus, we would need an ultraviolet aquaguard treatment, but it is costly.

Faulty Development Model

- We have destroyed our natural living resources in our rush for development.
- Our development model is always focused on artificial infrastructure, building highways, industrial plants, high-rise structures.
- In doing this, we kill our natural resources.
- As a result, we are running out of natural infrastructure at an alarming pace.
- Developed countries have stable landscapes and populations whereas India has a growing population, which means there will be growing consumption.

Freshwater sources

- There are two unpolluted fresh water sources left in the country.
 - The first is the water lying below our forests;
 - Second is the aquifers that lie below the floodplains of rivers.
- Both these sources provide natural underground storage and are renewable.
- The rains provide natural recharge year after year and it is this recharge which can be used to water our cities and towns.
- The aquifers underlying forests can provide healthy mineral water purely for drinking purposes.
- The river floodplains are a great source of water for cities.
- The Yamuna floodplains in Delhi already use such a scheme to provide water to a million people each year.

Way Forward

- There is no technological substitute for living natural resources like pristine natural water and soil.
- This means that we must conserve and use our natural living resources.
- The water beneath our forests is as good as natural spring water.
- We must safeguard it for our own lives and for future generations.
- Forests and floodplains must be declared as water sanctuaries.
- Such schemes work with nature rather than against it.
- It is important to remember that these evolutionary resources, once lost, will be lost forever. If we don't realise this, it will only be our loss.