AMRIT Technology

Source: PIB

Why in News?

Recently, the **Ministry of Jal Shakti** has shed light on the progress of the **Jal Jeevan Mission** and the **Arsenic and Metal Removal by Indian Technology (AMRIT).**

What is AMRIT Technology?

- The technology was developed by the **Indian Institute of Technology (IIT) - Madras.** It is designed for the **removal of arsenic and metal ions** from water, addressing water quality issues.
- The technology utilizes **nano-scale iron oxy-hydroxide,** which selectively removes **arsenic** when water passes through it.
- AMRIT is applicable for both **domestic and community-level water purification.**
- The technology aligns with the broader goals of the **Jal Jeevan Mission**, which aims to provide safe and potable tap water to rural households in India.
- The technology has been recommended by the **'Standing Committee'** of the Department of Drinking Water and Sanitation for consideration in addressing water and sanitation challenges.

Note

- Arsenic is a natural component of the earth's crust and is widely distributed throughout the environment in the **air, water and land.** It is **highly toxic in its inorganic form.**
- Long-term exposure to arsenic from drinking water and food can cause **cancer and skin lesions.** Chronic poisoning of arsenic can cause **Blackfoot disease (BFD),** which affects the blood vessels in the lower limbs.

What is the Jal Jeevan Mission?

- **About:**
  - Jal Jeevan Mission, launched in 2019, is envisioned to **provide safe and adequate drinking water** through individual household tap connections by 2024 to all households in rural India by **Sustainable Development Goal- 6 (Clean Water and Sanitation for all).**
  - It envisages a supply of **55 liters of water per person per day** to every rural household through **Functional Household Tap Connections (FHTC) by 2024.**
  - The Government of India also launched the **Jal Jeevan Mission (Urban)** which has been designed to provide universal coverage of water supply through functional taps in all 4,378 statutory towns of India.
- **Objectives**
  - Securing tap and sewer connections.
  - Rejuvenation of water bodies.

    - Creating a circular water economy.
- **Progress of the Jal Jeevan Mission:**
    - **In August 2019, only 16.8% of rural households had tap water** connections. By **December 2023, this increased to around 71.51%.**
    - All 378 arsenic-affected habitations awaiting tap water supply reported to have received safe drinking water through Community Water Purification Plants (CWPPs).

UPSC Civil Services Examination Previous Year Question (PYQ)

Mains

Q. What is water stress? How and why does it differ regionally in India? **(2019)**