



# AMRIT Technology

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## 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)**

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