

Sub-Theme: Water for People and Planet

Topic: Water and Human Health

Background:

Groundwater, which is the primary source of drinking water in the country, is increasingly affected by geogenic contaminants such as fluoride and arsenic, as well as anthropogenic pollutants including nitrates, pesticides, and industrial effluents. Further, surface water bodies are equally vulnerable due to untreated sewage discharge, urban runoff, industrial waste, and improper solid waste disposal leading to toxic leachate. In addition, climate change, emerging contaminants such as micro-plastics, pharmaceutical residues, and PFAS pose complex challenges that call for stronger monitoring systems and updated national standards.

Objective:

- To deliberate on scientific evidence linking water quality parameters with health outcomes.
- To review and update existing water quality (WQ) standards and policy frameworks.
- To enhance monitoring frameworks for timely detection, risk assessment and management of conventional and emerging water quality for early warnings & evidence-based decision.
- To promote preventive climate-resilient approaches to WQ management for public health.
- To strengthen inter-sectoral coordination and institutional convergence.
- To develop actionable recommendations for improving national standards, governance mechanisms, and implementation strategies for safe and sustainable water management.

Suggested Sub-Topics:

- Occurrence, sources, and public health impacts of water contaminants.
- Monitoring, surveillance, and data integration and alarm for water-related health issues.
- Remedial measures, treatment technologies, and community engagement for safe water.
- Policy, governance, & institutional convergence for safe, climate-resilient water management.

Expected Outcome:

- Consolidate technical inputs for strengthening national water quality standards.
- Recommendations for surveillance and monitoring for preventive water quality management.
- Identification of research gaps and priority areas, and dissemination of best practices.
