Sub Theme 4: Tropic Clean: Advancing Water Purification and Sanitation for Sustainable Environments

Background: Pollution of water resources from natural and anthropogenic sources is threatening the health of communities and their environment. Natural sources of contamination are known to introduce substances such as arsenic and fluoride to drinking water. Domestic and industrial wastewater introduce nutrients, heavy metals and other pollutants to water bodies causing eutrophication with impact on aquatic life. Many tropical regions experience problems with treatment of waste water, resulting in continued degradation of surface and ground water resources. Accumulation of toxic substances such as heavy metals along the food chain is threatening aquatic life and humans. Research has developed different ways of dealing with the water pollution problem.

Objective: This theme will provide a platform for scientists and practitioners to present and discuss their most recent research, innovations, trends, and challenges related to pollution control and prevention of water resources.

The following topics are invited:

- Emerging technologies for water purification and treatment
- Sanitation of water pollution by means of natural and biological systems such as constructed wetlands, pond systems etc.
- Circular economy and pollution control
- Water quality assessments
- Defluoridation of water supply
- Materials for water purification
- Emerging water contaminants including PFAS
- Faecal sludge treatment
- Management and Resource recovery from wastewater

Keywords: Water, sanitation, pollution, Fecal sludge, Surface water, Ground water. Emerging contaminants.

Invited Keynote speaker: Prof. Karoli Njau