

# ADVANCED LABORATORY TRAINING ON PATHOGEN ANALYSIS IN WASTEWATER AND FAECAL SLUDGE

Dates of training:

30 November - 4 December, 2021

Language: English

Venue: Anil Agarwal Environment Training Institute (AAETI), Nimli, Rajasthan

Last Date to Apply:

20 November, 2021



Faecal Sludge Management (FSM) is an evolving field with continual development and improvement happening in research methodologies. Faecal Sludge contains large amounts of microorganisms, mainly originating from the faeces. These microorganisms can be pathogenic, and exposure to untreated faecal sludge constitutes a significant health risk to humans, either through direct contact, or through indirect exposure. This course focuses on some of the recent advances in laboratory analysis of detection and enumeration of indicator pathogens present in the faecal sludge and wastewater. This training is part of the Centre for Science and

Environment and Bill Melinda Gates Foundation collaboration on FSM in India. In-house experts and lab scientists from CSE's Environment Monitoring Laboratory (EML) will guide participants through the sessions and help them learn lab analysis using state-of-the-art equipment and methods. The hands-on approach for the programme means that participants get to perform the lab experiments on their own and can enhance their skills while working on some of the best equipment and protocols in their class. The training will be held in CSE's residential campus in Nimli, near Alwar, Rajasthan.

#### WHAT YOU WILL LEARN

- Introduction to faecal sludge management
- Faecal sludge treatment approaches and technologies
- Methodologies of safe and proper sample collection and processing
- Laboratory skills on analysis of pathogens in faecal sludge and wastewater

#### **METHODOLOGY**

Highly interactive hands-on training:

- Interactive input presentations
- Field visit and sample collection, storage and transportation for microbial analysis
- Hands-on exercises
- Microbial (faecal coliform, E. coli) analysis of faecal sludge and wastewater by MPN method
- Helminth eggs enumeration in faecal sludge by AmBic method
- Bacteriophage (F+) enumeration in wastewater by plaque forming unit (PFU) method
- Enumeration of Clostridium perfrin-

- gens spores in wastewater by colony count method
- Enumeration of Salmonella spp. in faecal sludge and wastewater by MPN method
- Individual and group assignments

#### WHO CAN APPLY

- A minimum of 1 year experience in the WASH /FSM/ Waste Management Sector
- University/College researchers/Scientists with Microbiology background
- Mangers or technicians in the Govt. and Pvt. water/wastewater testing laboratory

#### **BENEFITS**

- A certification on successful completion of training
- Laboratory analytical skills development

# **COURSE FEE AND FACILITIES:**

Eligible candidates will be provided with scholarship for this training by CSE. This support will also cover the cost of stay, including all meals.

### **TRANSPORTATION**

Participants shall only be provided ground transport for Delhi to AAETI (training venue) and back to Delhi. Participants need to bear the cost of their travel to reach Delhi and back to their hometown.

## **COVID PROTOCOLS**

- Preference will be given to fully vaccinated (2 doses) candidates
- People above 60 years of age, with co-morbidity and individuals bearing any symptoms of COVID-19, pregnant women and lactating mothers must not attend the training programme at AAFTI
- Social distancing and wearing masks is compulsory while in groups. Trainees are encouraged to proactively disclose their health status including fever/cough/sore throat/influenza like symptoms, to the training coordinators/AAETI Administrator

#### **REGISTRATION DETAILS**

Apply at: www.cseindia.org

# **COURSE COORDINATOR**

#### Dr. Vinod Vijayan

Senior Research Scientist, vinod\_v@cseindia.org Phone: +91 9099115193

# COURSE ORGANISERS

# Mr. Arvind Singh Senger

Senior Research Scientist, arvindsingh.senger@cseindia.org Phone: +91 8879948011

# Dr. Kalyana Chakravarthy Sama

Research Scientist,

sama.kalyanachakravarthy@cseindia.org Phone: +91 9849661107