



## INTERNATIONAL TRAINING ON MONITORING MICROBIAL QUALITY OF WATER

Online Lectures (11<sup>th</sup>-28<sup>th</sup> February, 2022) & Hands-On Training (March, 2022)

Under the auspices of ONWARD (Open Network on Water-Related Diseases) project, an international training course is being organised on monitoring microbial quality of water using remote sensing and *in-situ* measurements.

### WHAT IS THE PURPOSE OF THE TRAINING?

Climate variability and change, occurrences of extreme weather events and anthropogenic pressures on the environment, all contribute to growth and dispersal of pathogens, leading to outbreaks of water-associated diseases such as cholera, malaria and dengue. The United Nations Sustainable Development Goals (SDG) dealing with health, climate, and life below water recommends an integrated approach to maintain high water quality. From monitoring the water bodies via satellite remote sensing to new techniques for identifying and isolating pathogens, there has been much advancement in our capability to monitor microbial water quality.

With this course, we aim to create a link between Indian researchers and international experts on water quality monitoring and generate highly skilled manpower in the area. The lectures will be offered by experts who are highly experienced in the subject. You will leave this course with a clear understanding of not only what happens in the water body in your backyard, but also why and how to test the water and how to avoid infections from water-borne diseases.

### WHO IS ORGANISING THE TRAINING?

The training programme is being organised as part of the capacity building activity of the network project ONWARD (<http://www.onwardnetwork.net>) which is funded by Global Challenges Research Fund (GCRF), UK and is led by Dr. Shubha Sathyendranath (PML, UK) and Dr. Milton Kampel (INPE, Brazil). It is dedicated to developing a network of scientists and stakeholders sharing a common interest in better understanding of environmental controls on outbreaks of water-related diseases; the role of societal engagement in countering it; and in forecasting, early warning and risk mapping of water-associated diseases through the use of remote sensing, field observations and mathematical modelling. Our vision is to enable cost-effective, regularly updated, geo-referenced early warning for areas vulnerable to water-associated diseases, which in turn will enable preventive measures to be deployed in a timely manner to minimise disease outbreaks. It is an open network committed to promote better dialogue and collaboration among experts from all relevant disciplines and with stakeholders, including the general public. Through the project, we intend to bring together experts from fields related to water associated diseases such as microbiologists, remote-sensing scientists, medical practitioners, and social scientists. A series of webinars are being organised as part of the activities of ONWARD.

### WHAT IS THE STRUCTURE OF THE TRAINING?

The training will have two parts:

1. **Online tutorial lecture series (February 2022):** Webinars by experts spread out over 15 days (one lecture per day). The lecturers include globally renowned microbiology and remote sensing experts- to name a few :

<b>Dr. Antarpreet Jutla</b>	[University of Florida, USA]
<b>Prof. Rita Colwell</b>	[University of Maryland, USA]
<b>Dr. Willie Wilson</b>	[Plymouth Marine Laboratory, UK]
<b>Dr. Shubha Sathyendranath</b>	[Plymouth Marine Laboratory, UK]
<b>Dr. Nicholas Thomson</b>	[The Wellcome Trust Sanger Institute, UK]
<b>Dr. Astrid Von Mentzer</b>	[The Wellcome Trust Sanger Institute, UK]
<b>Dr. Craig Baker Austin</b>	[Centre for Environment, Fisheries and Aquaculture Science (CEFAS), UK]

2. **Technical hands-on session (March 2022):** 7 days practical training (in person) at Enfy Lifesciences (<http://enfylifescience.com>) a state-of-the-art microbiology laboratory in Kochi, Kerala, India.

### WHO CAN ATTEND?

Early career researchers (including doctoral students and post-doctoral scientists) who have a basic knowledge of microbiology.

200 participants will be allowed to attend the online tutorial lecture series, and 10-15 persons shortlisted from the webinar attendees based on selection criteria will be given practical training at the Enfy laboratory. Only participants from Kerala will be allowed to attend the practical training owing to COVID related travel restrictions.

### TRAINING DATES

- Webinars will run from 11 to 28 February 2022
- One lecture per day including Saturdays
- One-hour duration from 1400 – 1500 hrs UTC (7.30 – 8.30 pm IST)
- Practical training in March 2022
- One day boat trip for sampling in the Vembanad Lake
- 7 days training on various techniques

### HOW TO APPLY?

Interested candidates may apply for the training programme by filling the form given below:

<https://forms.gle/1uv13XJipYxLWkmWA>

Last date for Registration : 25<sup>th</sup> January 2022

For queries, contact:

**Dr. Nandini Menon N**, Principal Scientist,  
Nansen Environmental Research Centre India.  
[menonnandini.n@gmail.com](mailto:menonnandini.n@gmail.com),  
[onward.gcrf@gmail.com](mailto:onward.gcrf@gmail.com)

