

Topical Day | Aquatic microbiota in or near nuclear facilities: insights, discoveries, solutions

September 12, 2019 | Bedford Hotel, Brussels, Belgium

Programme

08:15 – 08:45 h	Registration and welcome coffee
08:45 – 09:00 h	Welcome
	<i>Hildegard Vandenhove, Institute Manager Environment, Health & Safety, SCK·CEN, Belgium</i>

Session 1: Outdoor waterbodies | Bioremediation of discharged radionuclides Chair: Hildegard Vandenhove, SCK·CEN, Belgium

09:00 – 09:30 h	Some like it hot Microbial colonisation of natural and engineered environments in the nuclear fuel cycle
	<i>Jonathan Lloyd, Dalton Nuclear Institute, University of Manchester, United Kingdom</i>
09:35 – 10:05 h	Microbiological analysis and <i>in situ</i> bioremediation of near-surface aquifers nearby a mothballed radioactive waste repository
	<i>Alexey Safonov, Frumkin Institute Radioecology, Moscow, Russia</i>
10:10 – 10:40 h	Green organisms to the rescue: the potential of cyanobacteria, algae, and higher plants for the remediation of radioactively contaminated waters
	<i>Paul Janssen, SCK·CEN, Belgium</i>
10:45 – 11:15 h	Break & poster session

Session 2: Indoor waterbodies | Biofilm and biofouling control Chair: Natalie Leys, SCK·CEN, Belgium

11:15 – 11:45 h	Biofouling in cooling water systems Control and consequences
	<i>Pauliina Rajala, VTT, Finland</i>
11:50 – 12:20 h	Culture dependent and independent analysis of early stage biofilm-forming bacterial communities in the near-shore waters of the Kalpakkam nuclear power station, South-East coast of India
	<i>Subba Rao Toleti, Bhabha Atomic Research Centre, Mumbai, India</i>
12:25 – 13:00 h	Effect of radiation and temperature on the microbial community in the cooling water of a nuclear reactor
	<i>Valérie Van Eesbeeck, SCK·CEN & UCL, Belgium</i>
13:00 – 14:00 h	Sandwich lunch & poster session



Session 3: Microbial analysis of aquatic environments

Chair: Paul Janssen, SCK•CEN, Belgium

14:00 – 14:30 h	Microbial analysis of aquatic environments The microbial ecology of Sellafield's outdoor spent fuel ponds <i>Lynn Foster, University of Manchester, United Kingdom</i>
14:35 – 15:05 h	Critical point analysis and biocide treatment in a microbiologically contaminated water purification system of a power plant <i>Erika Tóth, Eötvös Loránd University, Budapest, Hungary</i>
15:10 – 15:40 h	Integrated flow cytometry and metagenomic analysis of managed freshwater ecosystems <i>Ruben Props, Ghent university, Belgium</i>
15:45 – 16:15 h	Break & poster session
16:15 – 16:45 h	Bioinformatic pipelines for metagenomics and metagenetics analysis of nuclear installation samples <i>Mohamed Mysara, SCK•CEN, Belgium</i>
16:50 – 17:20 h	Metaproteomics for deciphering biomass contributions and functions of complex aquatic microbiota <i>Jean Armengaud, Joliot Institute & CEA, France</i>
17:25 – 17:40 h	Conclusions & closure <i>Natalie Leys, Head of Unit Microbiology, SCK•CEN, Belgium</i>
17:40 – 19:00 h	Reception

