



UNESCO Regional Training Workshop on Emerging Pollutants in Water Resources in Latin America and the Caribbean

Venue:
Main Auditorium “Inés Joekes”
Institute of Chemistry - University of Campinas

Date:
6 - 7 December 2018

Programme
(November 2018)

Organized by
UNESCO International Hydrological Programme - International Initiative on Water Quality (IIWQ)
In collaboration with
UNESCO Office in Brasilia
UNESCO Office in Montevideo

Co-hosted by
University of Campinas – Institute of Chemistry (IQ-UNICAMP)
Environmental Chemistry Division - Brazilian Chemistry Society (DAMB-SBQ)

In the framework of
UNESCO Project on “Emerging Pollutants in Wastewater Reuse in Developing Countries”
Funded by Sweden



DAY 1 (06 December 2018)

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| 8:00 am | <i>Registration</i> | |
| Opening ceremony (Gisela Umbuzeiro, member of UNESCO-IHP - IIWQ, chair) | | |
| 9:00 am | Opening speeches | Sarantuyaa Zandaryaa (UNESCO) Marco A. Zezzi Arruda (IQ-UNICAMP) Marco Grassi (INCTAA) Cassiana Montagner, organizer (SBQ) |
| | Overview of the training objectives, programme, participants and survey questionnaire | |
| Session 1: Water quality for the achievement of the SDGs (Gisela Umbuzeiro, member of UNESCO-IHP - IIWQ, chair) | | |
| 10:00 am | Water quality for the achievement of SDGs: <ul style="list-style-type: none"> • The contribution of UNESCO-IHP International Initiative on Water Quality (IIWQ) • UNESCO-IHIP IIWQ Project on Emerging Pollutants in Wastewater Reuse in Developing Countries | Sarantuyaa Zandaryaa UNESCO International Hydrological Programme (IHP) - International Initiative on Water Quality (Paris, France) |
| 10:30 am | Water Quality: Historical development of water quality degradation, economic and human health consequences, new challenges for 21st century | Jose Galizia Tundisi , USP, Brazil |
| 11:00 am | Some Conclusions in the Progress of IANAS-UNESCO publication on "The Challenges of Water Quality in the Americas" | Katherine Vammen , IANAS-UNESCO, UCA-IICN, Nicaragua |
| 11-11:30 am | Tea & coffee break & group photo | |
| Session 2: Emerging pollutants: Types, sources and the fate in the aquatic environment (Cassiana C. Montagner, UNICAMP, chair) | | |
| 11:30 am | Emerging pollutants in water resources <ul style="list-style-type: none"> • Introduction, definitions, classes • Sources and fate in the environment • Endocrine disrupting compounds and other potential effects • Metabolites and transformations products • Prioritization • Examples of emerging pollutants in water | Daniel Wunderlin , UNC, Argentina |

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| 11:50 – 12:00 | Case study 1: <i>Emerging contaminants in waters of São Paulo state of Brazil</i> | Gisela Umbuzeiro , member of IIWQ, Experts Advisory Group da UNESCO-IHP, Brazil |
| 12:00 – 12:10 | Case study 2: <i>Monitoramento de Compostos Glicocorticoides nas Águas Superficiais do Estado de São Paulo</i> | Wálace Anderson de Almeida Soares , CETESB, Brazil |
| 12:10 – 12:20 | Case study 3: <i>Studies carried out in Guatemala on emerging substances in water</i> | Cinthya Rivera , Facultad de Ciencias Químicas y Farmacia, Universidad de San Carlos de Guatemala |
| | <i>Questions and answers and interactive discussion</i> | |
| 12:30 – 2:00 pm Lunch | | |
| Session 3: Monitoring emerging pollutants in water and wastewater (Theodore B. Henry, HWU, chair) | | |
| 2:00 pm | Monitoring of emerging pollutants in the environment <ul style="list-style-type: none"> • Definition and understanding of monitoring • Monitoring strategy (global, national and local) • Target and non-target compounds • Data collection and application • Transboundary water quality monitoring • Case studies/examples | Fernando F. Sodr e , UNB, Brazil |
| 2:20 – 2:30 pm | Case study 4: <i>New trends in chemical analysis of emergent pollutants from Colombian hospital wastewater plant in sludge and water samples</i> | Milton Rosero Moreano , UC, Colombia |
| 2:30 – 2:40 pm | Case study 5: <i>Monitoring PPCPs in a couple of rivers in Quito, Ecuador / Development of an emergent material to remove two PPCPs from water</i> | Luis Cumbal-Flores , UFA, Ecuador |
| 2:40 – 2:50 pm | Case study 6: <i>Presence of pesticides, veterinary drugs and PPCPs in surface water samples from Brazil</i> | Renato Zanella , UFSM, Brazil |
| 2:50 – 3:00 pm | Case study 7: <i>Occurrence and fate of emerging pollutants in the rural and urban environments, experiences in Mexico</i> | Carlos Duran , UNAM, Mexico |
| 3:00 – 3:10 pm | Case study 8: <i>Emerging contaminants as chemicals markers of wastewater discharge in surface freshwater</i> | Pedro Fadini , UFSCAR, Brazil |
| 3:10 – 3:20 pm | Case study 9: <i>Chemical Pollution Monitoring in Caribbean Small Island States</i> | Kareem Charlemagne , EHS, CARPHA, Saint Lucia |

DAY 2

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| 8:00 am | <i>Registration</i> | |
| 8:30 am | Welcome remarks & overview of Day 1 programme | |
| Special presentation (Cassiana C. Montagner, UNICAMP, chair) | | |
| 8:45 – 9:00 am | Monitoring water quality using Earth Observation: UNESCO-IHP IIWQ World Water Quality Portal (www.worldwaterquality.org) | Sarantuyaa Zandaryaa UNESCO International Hydrological Programme (IHP) - International Initiative on Water Quality |
| Session 5: Microplastics (Ernani Pinto Junior, USP, chair) | | |
| 9:00 – 9:20 am | Microplastics <ul style="list-style-type: none"> • What are microplastics? • Sources, occurrence and levels in different water sources • Potential health risks • Examples of initiatives for managing microplastics in the environment | Theodore B. Henry , Heriot Watt University, UK |
| 9:20 - 9:40 am | All plastics in the environment are alike? <ul style="list-style-type: none"> • Useful life of plastics. • Consumption of plastics. • Who are they? • After using, are they all alike? • What they become after being discarded? | Marco Aurélio De-Paoli , UNICAMP, Brazil |
| 9:40 – 9:50 am | Case study 14: <i>UNESCO-IHP IIWQ case study: Preliminary assessment of microplastics in freshwater environments at the global level</i> | Sarantuyaa Zandaryaa UNESCO International Hydrological Programme (IHP) - International Initiative on Water Quality |
| 9:50 – 10:00 am | Case study 15: <i>Occurrence and distribution of microplastics in surface water of a tropical coastal system (Guanabara Bay, SE Brazil)</i> | Glauca P. Olivatto , UNICAMP, Brazil |
| 10:00- 10:10 am | Case study 16: <i>Microplastics: the challenge of heterogeneity</i> | Walter Rugeri Waldman , UFSCar, Brazil |
| 10:10- 10:20 am | Case study 17: <i>Are Caribbean micro plastics being generate elsewhere?</i> | Denise Borrero , Panama |

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| | <i>Questions and answers and interactive discussion</i> | |
| 10:30-11:00 am Tea & coffee break | | |
| Session 7: Assessment of human and ecosystem health hazards and risks of emerging pollutants (Marco Grassi, UFPR, chair) | | |
| 11:00 – 11:20 am | What's going wrong with the nitrogen cycle in the world? | Luis A. Martinelli , CENA-USP, Brazil |
| 11:20 – 11:40 am | Eutrophication and emerging toxins | Ernani Pinto Junior , USP, Brazil |
| 11:40-11:50 am | Case study 18: <i>Interdisciplinary study of the interaction between environment and health of rural women in Uruguay</i> | Deborah Keszenman , UdelaR, Uruguay |
| 11:50-12:00 am | Case study 19: <i>DNA damage as a tool to assess environmental quality in Paraguay</i> | Jaime Alfredo Segovia Abreu , UCA Paraguay |
| 12:00-12:10 am | Case study 20: <i>Environment, health and safety in the textile Industry</i> | Federico Moncada , Honduras |
| | <i>Questions and answers and interactive discussion</i> | |
| 12:30 - 2:00 pm Lunch | | |
| Session 8: Managing emerging pollutants: Policies and regulations (Gisela Umbuzeiro, member of UNESCO-IHP - IIWQ, chair) | | |
| 2:00 2:20 pm | Review of international, regional and country level policies, regulations and initiatives on emerging contaminants | Marina Jakomin , Dirección de Política Hídrica y Coordinación Federal. Secretaría de Infraestructura y Política Hídrica. Ministerio del Interior, Obras Públicas y Vivienda, Argentina |
| 2:20 2:30 pm | <i>Questions and answers and interactive discussion</i> | |
| 2:30 – 4:00 pm | World Café: Roundtable group discussions: Challenges and opportunities for addressing water quality and emerging pollutants <ul style="list-style-type: none"> • Group 1 : Awareness raising about emerging pollutants, Moderators & Rapporteur • Group 2 : Research priorities on emerging pollutants, Moderators & Rapporteur • Group 3 : Policy priorities and the socioeconomic dimension of emerging pollutants, Moderators & Rapporteur | |

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| 4:00- 4:30 pm | Plenary discussion: Presentation of main points of group discussions |
| 4:30 – 4:40 pm | Questionnaire |
| Closing ceremony | |
| 4:40 pm | Workshop conclusions and key messages |
| | Awarding of Certificates of Participation |
| | Closing |