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## **Eldon R. Rene**

IHE-Delft Institute for Water Education

Eldon R. Rene is currently working as a Senior Lecturer at IHE-Delft, Institute of Water Education, The Netherlands. He has a PhD in Chemical Engineering from IIT Madras (India). Eldon's broad research interests are related to the development of biological treatment processes for wastewater and waste-gas treatment, resource recovery, and the use of artificial intelligence tools for environmental monitoring and environmental process control. He is the Managing Editor of the journal "Reviews in Environmental Science and Bio/Technology", the Associate Editor of the "Journal of Environmental Engineering (ASCE)" and editorial board of "Bioresource Technology Reports". Eldon is the two time recipient of the "Young Scientist Award" conferred by the Challenges in Environmental Science and Engineering Conference (CESE) organizers in Sydney (Australia) and Kaohsiung (Taiwan), respectively. Previously, for his post-doctoral research stays, he was awarded the "Juan de la Cierva" fellowship by the Ministry of Science and Innovation (Spain), and the "Brain Korea 20 (BK20) Fellowship" from the South Korean government. For the years 2018 and 2019, he has recently been awarded Research Fund for International Young Scientists by the National Natural Science Foundation of China (NSFC). As a part of his educational campaign and capacity building activities on improving scientific writing skills for non-English speaking researchers, he regularly conducts scientific writing workshop at all the major conferences. Since 2016, he has taught more than 700 MS, PhD students and young staff members during specialized events/workshops. He is also affiliated as a life member at the International Forum on Industrial Bioprocesses (IFIBiop).

## **Piet N. L. Lens**

IHE-Delft Institute for Water Education

Piet N. L. Lens is Professor of Environmental Biotechnology at IHE-Delft, Institute for Water Education (The Netherlands), Professor of New Energy Technologies at National University of Ireland (NUI Galway, Ireland) and Professor of Bioengineering at Tampere University of Technology (TUT, Finland). Prof. Lens obtained his Ph.D in Environmental Engineering from Ghent University (Belgium). He is the founding Editor-in-Chief of the review journal "Reviews in Environmental Science and Bio/Technology" and founding editor of the IWA Publishing series "Integrated Environmental Technology". He is the initiator of the Marie Curie Training Site "Sulfur and Metals - HEMEP", the Erasmus Mundus Joint Doctoral programme

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"Environmental Technologies for Contaminated Soils, Sediments and Solid Waste (ETeCoS<sup>3</sup>)", the Marie Skłodowska-Curie Innovative Training Networks (ITN-EJD) PhD programme on Advanced Biological Waste-to-Energy Technologies (ABWET) and the Erasmus Mundus Master Course on "International Master of Science in Environmental Technology (IMETE)". His research focuses on biofilms, sulfur biotechnology, metal speciation, bioavailability and removal, natural treatment systems, anaerobic wastewater and waste gas treatment for resource recovery and reuse.

## **Erick de Jong**

IHE-Delft Institute for Water Education

Erick de Jong holds a M.A degree in Educational and Organisational Psychology (1985) and he is working as an Educational Policy Advisor of IHE-Delft. His main responsibilities concern the development and implementation of educational policies and academic quality assurance (QA). He is co-author of various Strategic Plans of the Institute and advises the rectorate and programme committees of IHE-Delft on all academic matters. He has thorough knowledge about many educational systems used in the world, and the accreditation of education programmes. Mr. De Jong has intensively dealt with the renewal of IHE-Delft's Master programmes and the development of joint programmes with international partners. In the framework of these partnership programmes, Mr. De Jong assists institutes throughout the world in curriculum development, course design, and reviewing didactical concepts. He carries out curriculum development and didactic training programmes for IHE-Delft staff as well as for academic staff from partner institutes. These courses focus on curriculum development and didactical skills, and organizational and institutional IHE-Delft. These course are organized both at the partner institutes and IHE-Delft.

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## **QUALITY ASSURANCE (QA) IN HIGHER EDUCATION: THE IHE-DELFT EXPERIENCE WITH MSc AND PHD PROGRAMS**

*Author:*

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### **ABSTRACT**

IHE Delft Institute for Water Education is the largest international graduate water education facility in the world and is based in Delft, the Netherlands. The Institute confers fully accredited MSc degrees, and PhD degrees in collaboration with partner universities. Since 1957, the Institute has provided graduate education to more than 15,000 water professionals from over 162 countries, the vast majority from the developing world. The Institute offers a unique combination of applied, scientific and participatory research in water engineering combined with natural sciences, social sciences and management and governance. The institute has played an instrumental role in developing the capacities of water sector organizations in the Global South, not least by strengthening the efforts of other universities and research centres to increase the knowledge and skills of professionals working in the water sector.

In this presentation, the quality assurance (QA) system of the institute will be described with regard to education. Examples of many years of good practice and experience in educational activities related to course coordination and management, MSc degree programs and PhD programs will be highlighted. The presentation will focus on three examples where QA is being practiced: (i) Short course on Industrial Resource Management and Cleaner Production, (ii) MSc in Environmental Science with specialization in Environmental Science and Technology, and (iii) the Advanced Biological Waste-to-Energy Technologies (ABWET) PhD program, an Marie Skłodowska-Curie Innovative Training Networks - Early Joint Doctorate (ITN-EJD) offered with partner institutes from Italy, France and Finland.

The QA system of IHE-Delft consists of the following parts: a vision on education and the quality of education, education concept, policies governing the QA procedure, the QA framework and the QA calendar and plan-do-check-act (PDCA) cycles. Concerning the ABWET PhD program, the delivery of a joint doctoral degree and quality control is facilitated by the Finnish partner, Tampere University of Technology (TUT). Two joint boards have been set up for joint monitoring and assessment, i.e. the supervisory board and the QA committee. The presentation will facilitate a lot of discussions, share the best QA practices, resources and experiences from IHE-Delft and its partner institutes.

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