

Hybride course on

# Hazardous Waste Management

1 September – 11 November, 2016

Delft, The Netherlands



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



UNESCO-IHE  
Institute for Water Education



BASEL CONVENTION



Technische  
Universität  
Berlin



## Hazardous Waste Management

**Hazardous waste arises from industrial and commercial activities and at the consumer levels. Management of this waste stream is a specific challenge for Low- and Middle-income countries because of the high impact on human health and the environment if not treated properly. Moreover, it requires cost-intensive measures and infrastructure.**

**Best practice cases show that hazardous waste or its negative impacts can be minimized or prevented by effective governance as well as organizational and technical measures requiring from actors along the value chain a general awareness, specific knowledge and technical knowhow.**

**The ISWA Working Group on Hazardous Waste and UNEP recognized in the 1990s the need for capacity building in the field of hazardous waste management and subsequently developed the Training Resource Pack (TRP), published in 2002. Presently ISWA, together with UNIDO and UNEP, is updating the TRP training materials and will make it accessible to a wider public as the TRP+.**

**The TRP+ will assist educators and professionals in organizing training programmes and in producing project documents on Hazardous Waste.**

## Hazardous Waste Management Course 2016

The Hazardous Waste Management course (HWM2016) is organized jointly by UNESCO-IHE, Technische Universität Berlin, ISWA, UNEP and UNIDO. The course gives participants the opportunity to become knowledgeable about current practices and state-of-the-art developments as well as the organizational and legislative framework to prevent and handle hazardous

waste. The course gives practitioners the opportunity to share, discuss and develop case studies from their own professional experience.

### **Strategic objectives**

The objective of the Hazardous Waste Management course 2016 is to develop an educational and lifelong learning concept addressing the management of hazardous waste in particular for Low- and Middle-income countries. This activity seeks to employ modern didactical tools and methods to enable trans-disciplinary problem solving skills.



## Course Design

**HWM2016 consists of three phases: I - online starting up, II - physical presence, and III - online completion. The three phases form one package of which the heart is formed by the physical presence phase. This is a rather dense phase for which the participants need to prepare themselves in the starting up phase and which can only be fully finalized in the completion phase.**

### The online starting-up phase September 1-30, 2016

The HWM2016 course starts with a formal video meeting in which staff and participants introduce each other, the course concept and approach are explained and the course self-activity basis is outlined. In this video meeting the case studies will take a central place. The time requirement for this phase is at least 30 hours.

The tasks for the online starting-up phase relate to:

**S1. National legislation on HW** is the starting point of HW management. Therefore, the participants are requested to complete and return the provided questionnaire (referenced) of the National Legislation of their country for further processing before September 25.

**S2. A national HW mass flow** determines the extent of the HW issue in a country. Therefore, participants are requested to make a documented effort to establish the mass flow of generated HW and its fate.

**S3. National case study on HW** will play a central role in applying the learned material to a real case of national importance. The submission of a case study is part of the required application materials and participants will continue working out the details of the case study following the advice by the mentors. Eventually, the case is to be presented in writing and illustrated with photographic materials and with local/ national publications.

**S4. Understanding the taught materials** is key. Therefore, participants study the electronically provided reading materials.





## The physical presence phase

**October 3-14, 2016**

The physical presence phase takes place in Delft, the Netherlands. A full two weeks program consists, as main elements, of

- 2 days Generation & Prevention of HW,
- 1 day of Basel Convention,
- 2 days of Excursions,
- 1 days of Logistics and Handling of HW,
- 2 days of Technology for the management of HW.

The knowledge transfer by the teaching experts takes place primarily in the morning (4h). In the afternoon, the acquired knowledge will be processed and integrated

into the case studies by the participants, under the guidance of the experts. For that the individual case studies will play an important role with the clear objective of

- evaluating the acquired knowledge for implementation in the case study, and
- having a visible output from the course for the outside world.

This emphasizes the importance of the participants making a serious effort in bringing the right case study materials to the course, such as reprints from national papers, photographs, videos and other “proves”.

Ideally, the case studies result in short videos, colorful brochures, publications, etc., of interest for the general public and experts in the field. Moreover, other methods of knowledge proliferation may be discussed, such as Online Video Presentations (OVPs) while different methods may all take place in the context of a Community of Practice (CoM).

Between the two times 5 working days of the physical presence phase it is proposed to organize a social event on October 8; a visit to Amsterdam with boat trip through the Canals of Amsterdam and a joint dinner in one of Amsterdam’s great restaurants.

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## The online completion phase

**October 17 - November 11, 2016**

In this phase the participants will focus on completing two tasks, qualifying for successful completion of the course.

### **C1. Finalizing the individual<sup>1</sup> case study**

in such a way that the end result allows distribution of the hazardous waste case and the approaches to solving the case. This

can be in the form of a 1) colorful brochure, 2) a short video, 3) a formal publication, 4) etc. The idea is that the result allows the participant-producers to take the case beyond the course.

### **C2. Working out a special topic**

The title of the special topic, the approach to be taken, the definition of the end result, and the evaluation thereof is previously to be agreed upon with one of the experts.

1) Individual in this context may also mean that activities are worked out by two or maybe three participants of the course.



## Participants

The organizers target maximum 24 carefully selected participants preferably from Low- and Middle-income countries having:

- at least a BSc-degree in science, technology or engineering;
- a background and practical experience in (hazardous) waste management.

Participants will

- work with leading experts in the field of HWM;
- interact in small groups on adopting solutions for certain HWM challenges;
- develop adapted solutions to hazardous waste problems in the global as well as their local/national context;
- produce an educational video to promote HWM solutions globally;
- build a global network with practitioners working in the field of hazardous waste management.

Active participation in and contribution to the course is an important issue. To that end, participants are required to prepare and submit, with the registration/application materials, a description of an “own” local or

national Hazardous Waste case. This case will subsequently be worked on during all phases of the course, resulting in an end product well representing the case.

## Contents

The HWM course will, amongst others, cover the following subjects:

- Fundamentals and environmental impacts of hazardous waste;
- Resource efficiency and waste avoidance;
- Treatment technologies and management practices for hazardous waste;
- Legislative aspects of hazardous waste management, e.g. Basel Convention;
- Case studies.

Active participation in and contribution to the course is an important issue. To that end, participants are required to prepare and submit, with the registration/application materials, a description of an “own” local or national Hazardous Waste case. This case will subsequently be worked on during all phases of the course, resulting in an end product well representing the case.





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<b>Place</b>	Delft, The Netherlands
<b>Date</b>	1 September – 11 November, 2016
<b>Participants</b>	Max 24 professionals in (Hazardous) Waste Management. Gender and geographic balance will be taken into account.
<b>Application</b>	For online application go to <a href="http://www.unesco-ihe.org/short-courses">www.unesco-ihe.org/short-courses</a> and select Hazardous Waste Management.
<b>Language</b>	English
<b>Course fee</b>	EUR 2,850. This includes excursions to HWM facilities in the Netherlands & all course facilities & materials (available electronically)
<b>Certificate</b>	A certificate of course completion will be awarded to all those who actively participate in the entire course.

## The course organization and implementation committee consists of

- Prof. Dr. Vera Susanne Rotter, Technische Universität Berlin,
- Mr. Jean-Paul Leglise, Chair of the ISWA Working Group on Hazardous Waste,
- Mr. Matthias Kern, Senior Programme Officer, Secretariat of the Basel, Rotterdam and Stockholm Conventions, UNEP,
- Ms. Jiao Tang MSc, senior staff ISWA,
- Mr. Eirik Wormstrand, member of the ISWA Working Group on Hazardous Waste,
- Assoc. Prof. Dr. Maarten A. Siebel, UNESCO-IHE.

## Further information

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