



WHO Virtual Capacity Building Course on contaminated sites and health

Bonn School on Environment and Health

3 – 24 November 2022

Version date

06 July 2022

Scope and purpose

Across the WHO European Region, the urban population is growing steadily and demand for land is rapidly increasing. Revitalizing and/or remediating industrial sites and contaminated land presents an opportunity for sustainable urban development, and can help in reducing the pressure on undisturbed land resources. However, redevelopment of contaminated sites may cause continued environmental and health consequences if contamination risks are not properly managed or remediated.

This capacity building course aims to provide information on the investigation, risk assessment and redevelopment of contaminated sites as a part of either environmental management, health protection or urban planning and renewal. Specifically, it aims to provide information on the health and environmental impacts to be considered during site assessment, remediation and redevelopment projects, and to present good practice and relevant approaches to support effective, healthy and sustainable management of contaminated sites affecting local environments. Underestimating the complexity may result in project failures or planners will hesitate to start up such projects.

Although the large diversity among urban contaminated sites, the process of remediation and redevelopment entails some basic elements which should be kept in mind. This course summarizes basic knowledge on the management and redevelopment of contaminated sites. Validated experiences and methodological approaches will be shown on how to identify and characterize the site and its environment and health impacts. Based on this exploration, building blocks for a successful, safe and sustainable redevelopment will be provided, also covering aspects such as legal frameworks, risk communication and public participation.

This course offers key messages to support the work of local decision-makers, planners, practitioners, researchers and civil society organizations.

The Bonn EH School 2021 already included a module on contaminated sites that was embedded in the overall course structure as one of four technical themes.

Feedback surveys for the 2021 School indicated that contaminated sites still represent a large gap of knowledge at national and subnational environment and health authorities. In addition, many eastern European Member States expressed the belief that contaminated sites is an ignored public health challenge in their countries. The proposed virtual training course therefore aims to expand the facilitation of knowledge from the 2021 School by establishing a separate, independent capacity-building course that is based on elements of the 2021 curriculum, covering some additional topics and providing more time to go in depth for some of the most relevant themes.

Course objectives

The overall objective of the capacity building course is to facilitate technical skills and procedural knowledge supporting evidence-based decision-making on contaminated sites and their environmental, health and equity impacts. This will be achieved through the following learning objectives:

- 1) raising awareness of the environmental and health-related challenges related to contaminated sites across Europe;
- 2) strengthening technical capacities at national as well as subnational level on addressing health impacts of contaminated sites (risk assessment, health impact assessment, risk communication, remediation, redevelopment);
- 3) enhancing interaction and collaboration capacities between different disciplines and sectors and strengthen EH advocacy skills; and
- 4) applying and validating theoretical knowledge by self-learning elements using Problem-Based Learning and role games.

Expected outcome of the course

The expected outcomes of the course are:

- increased awareness of contaminated sites issues and related health aspects;
- awareness of methods, tools and legal frameworks related to contaminated sites;
- acquisition of knowledge and capacities on risk assessment and risk management of contaminated sites;
- clear understanding of the approaches and priorities for the redevelopment of contaminated sites; and
- improved abilities to identify stakeholders and involve the local community.

Target audience

This capacity building course is tailored towards staff of public authorities with an experience of 2 to 5 working years, coming from

- national ministries, institutions and decision-making entities covering environment, spatial planning, waste management and health, or
- subnational authorities involved with planning and decision-making on environment, spatial planning, waste management and health at regional or local level.

A minimum level of familiarity with basic epidemiological and environmental concepts is a pre-requisite, as is a basic command of conventional tools like MS Word, Excel and Zoom.

Course format and language

The course follows a problem-based learning approach (PBL) and will consist of 7 course days with three 90-minute sessions each. It will take place on Tuesdays and Thursdays, spread over four weeks from 3 to 24 November 2022. Details on the sessions and their content can be found in Annex 1.

A mandatory preparation meeting will be held on 20 October 2022. Participants can choose two different time slots at 9.00 or 10.45 CET.

The lectures of the course will be held in English, with simultaneous Russian interpretation (including Russian slides). Working groups for the self-learning during the practice sessions will be established to work in either English or Russian. The work sheets established in the practice session can be submitted in both English and Russian. However, most reading material for preparing for the courses is available in English only.

The total time participants will have to devote for the course modules (excluding the preparation meeting) is expected to be 32 hours.

In addition, several hours of preparation and reading time may have to be expected before and during the course. In total, a full-week work load of at least 40 hours should therefore be planned for the time between 1 and 24 November 2022.

Active participation in a minimum of 80% of the course sessions and working groups is required to obtain a WHO Certificate of Attendance (see details in Annex 2).

For a Certificate of Training a successful passing of 80% of the final test is required in addition.

The course is designed for a maximum of 30 participants. It will consist of technical lectures, open discussion sessions, and group work (4–6 people per group). Participants will be encouraged to actively engage in interactive discussions and exchanges.

The first day of the workshop will be designed as an introduction to the thematic area of the course and will give an overview of the expected group work project. On the last day, 24 November 2022, the course will conclude with a role game, an open feedback session and the optional final exam.

Application for the course

The deadline for submitting a course application is 09 September 2022 (the application form is available in English at <https://extranet.who.int/dataformv3/index.php/185521?lang=en> and in Russian at <https://extranet.who.int/dataformv3/index.php/185521?lang=ru>). Applicants should have a working experience of 2-5 years in a related subject area.

The application form includes a short motivation statement, describing why the participant wants to attend the course, what the expectations are, and how the acquired knowledge could help in daily practice. The application form also requires confirmation that applicant and supervisor are aware of the time requirements for course participation, including a supervisor support form that needs to be uploaded with the application (see Annex 3).

The course is designed for 30 participants. If more than 30 applications are received, WHO will consider country diversity and sectoral diversity of participants to enable a broad course audience from various backgrounds.

Due to the limited number of places available a selection of participants will be done. WHO will inform the participants about their participation in the course by latest 23 September 2022. A copy of the message will be sent to the supervisor for information.

Annex 1: Course content overview (provisional)

Grey boxes represent orientation and evaluation sessions

Yellow boxes represent practice session times for the working groups, to work on the PBL tasks

Blue boxes represent the sessions used for the preparation and implementation of the final role game

Green boxes represent lecture sessions

	Thursday, 20 October Orientation Day (two alternative time slots available)	Thursday, 3 November DAY 1 - Introduction module
9.00-10.30 Session 1	Briefing and preparation session A a. introduce course content and structure b. present attendance rules c. provide briefing on OneDrive and Zoom functionality for course documents d. Any other business	Introduction session I • Environmental health issues and contaminated sites: framing the problem • The need for site investigation to plan follow up action and assess economic aspects
10.45-12.15 Session 2	Briefing and preparation session B a. introduce course content and structure b. present attendance rules c. provide briefing on OneDrive and Zoom functionality for course documents d. Any other business	Introduction session II • State of knowledge and data repository related to contaminated sites in Europe • Presentation of PBL case study scenario applied throughout all course lectures and for all work sheets
12.30-14.00 Session 3		Practice session in small groups, based on work sheet prepared by lecturer(s) Filled work sheets to be uploaded by end of working day for review and feedback

	Date: Tuesday, 8 November DAY 2 – Health Impact Assessment (HIA) module	Date: Thursday, 10 November DAY 3 - Risk Assessment and Management Framework module
9.00-10.30 Session 1	Epidemiological approaches • Epidemiological approaches and surveillance	Risk assessment • Risk assessment / Human health risk assessment and contaminated sites
10.45-12.15 Session 2	HIA and EIA approaches • Contaminated sites and impact assessment (HIA and Health in Environmental Assessments)	Risk assessment interpretation • Use of human health risk assessment to inform decision-making for the management of contaminated sites
12.30-14.00 Session 3	Practice session in small groups, based on work sheet prepared by lecturer(s) Filled work sheets to be uploaded by end of working day for review and feedback	Practice session in small groups, based on work sheet prepared by lecturer(s) Filled work sheets to be uploaded by end of working day for review and feedback

	Date: Tuesday, 15 November DAY 4 - Legal and practical approaches module	Date: Thursday, 17 November DAY 5 - Redevelopment and communication module
9.00-10.30 Session 1	Legal frameworks and tools <ul style="list-style-type: none"> • Legal / regulatory framework, instruments and tools 	Redevelopment stages and practice examples <ul style="list-style-type: none"> • Steps in redevelopment of contaminated sites
10.45-12.15 Session 2	Exposure assessment / HBM <ul style="list-style-type: none"> • Objectives and principles of HBM and its value for exposure assessment and decision-making 	Stakeholders and communication aspects <ul style="list-style-type: none"> • Engaging with stakeholders • Stakeholder engagement and communication in practice
12.30-14.00 Session 3	Practice session in small groups, based on work sheet prepared by lecturer(s) Filled work sheets to be uploaded by end of working day for review and feedback	Practice session in small groups, based on work sheet prepared by lecturer(s) Filled work sheets to be uploaded by end of working day for review and feedback

	Date: Tuesday, 22 November DAY 6 - Equity module / Role game preparation	Date: Thursday, 24 November DAY 7 - Role game module / Final evaluation
9.00-10.30 Session 1	Environmental justice aspects <ul style="list-style-type: none"> • Environmental justice and inequalities related to contaminated sites 	Role game preparation <ul style="list-style-type: none"> • Preparation time to compile key points, arguments, etc. for following "public hearing"
10.45-12.15 Session 2	Practice session in small groups, based on work sheet prepared by lecturer(s) Filled work sheets to be uploaded by end of working day for review and feedback	Role game "Public hearing on a local contaminated site" <ul style="list-style-type: none"> • Moderated public hearing of a urban council meeting on the PBL case study scenario • Statements by different stakeholders • Discussion • Council decision
12.30-14.00 Session 3	Role game preparation <ul style="list-style-type: none"> • Introduction of role game exercise • Provision of different roles (on remediating/redeveloping a CS) to different groups • Preparation time and reading of role game documents 	Feedback and final test session 12.30-13.30: <ul style="list-style-type: none"> • Feedback by participants on course design and content • Feedback by lecturers and coordinators • Final notes by WHO and certificate display 13.30-14.00: <ul style="list-style-type: none"> • Optional final online test (multiple choice)

Annex 2: Course and certificate of attendance requirements

Application requirements

- 2-5 years of working experience in areas related to urban planning, environment and health.
- Availability for all course sessions (total workload ca. 40 hours)
- Participants must ensure they have appropriate internet access, and a microphone/speaker combination that allows for high-quality interaction during the Zoom sessions (e.g. USB headset).
- Note that Zoom will be used for the virtual course sessions. The OneDrive platform will be used for exchange of documents and course materials, including the upload of the work sheets after the practice sessions.
- Application for the 30 available course slots will have to be submitted by 9 September 2022. WHO will inform accepted applicants by 23 September of their participation.

Certificate of Attendance requirements

The below table shows the requirements for obtaining a formal certificate of attendance.

Course content	Required attendance	Required participation
1 preparatory session to brief participants about the course structure, logistics and the learning platform	Mandatory session, held on 20 October 2022, must be attended	<ul style="list-style-type: none"> • Open camera • Full name indicated in the Zoom sessions • Active participation through chat function and questions
11 course sessions with lecturers (each 90 minutes)	At least 9 course sessions must be attended	<ul style="list-style-type: none"> • Open camera • Full name indicated in the Zoom sessions • Active participation through chat function and questions
6 practice/self-learning sessions based on a task sheet to work on in small working groups (each 90 minutes)	At least 5 practice sessions must be attended	<ul style="list-style-type: none"> • Active contribution through submitting at least 5 filled task sheets • Full name indicated in the Zoom sessions • Listed as active working group member on at least 5 task sheets which are assessed as “satisfactory” by the lecturer
3 role game sessions to provide a practical application of the course content as a final exercise	All 3 role game sessions must be attended	<ul style="list-style-type: none"> • Active contribution to the role game preparation and implementation in all 3 sessions • Full name indicated in the Zoom sessions • Being listed as active contributor on the role model contribution (document or presentation)
1 final feedback session	Should be attended	<ul style="list-style-type: none"> • Participants to provide comments and feedback on the course
22 course sessions total	18 courses (80%) must be attended	Only courses with satisfactory level of contribution will be counted for attendance

Certificate of Training requirements

In addition to the requirements of the Certificate of Attendance described above, successful passing of 80% of the final test on 24 November 2022 is required.

Annex 3: Supervisor support form

Every application needs to include this form to indicate the support of the applicant's supervisor.

To the secretariat of the Bonn School on Environment and Health

I hereby confirm my support to the course application of

[Mr/Ms/Dr/Prof] [Name of applicant]

for the capacity building course "Contaminated sites and health"

I am aware that participation in the course will consist of a total of 7 course days taking place on Tuesdays and Thursdays, 9.00–14:00 CET, spread over four weeks from 3 to 24 November 2022, and that it will include a preparation meeting on 20 October 2022 with mandatory participation either in the session from 9.00–10.30 CET or 10.45–12.15 CET.

[Mr/Ms/Dr/Prof] [Name of supervisor]

Signature of the supervisor

Date and stamp of the institution/organization