



OPCW Update on International Chemical Education and Science

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OPCW

- = Implementing body for the Chemical Weapons Convention,
- = Oversees the global endeavour to permanently and verifiably eliminate chemical weapons.

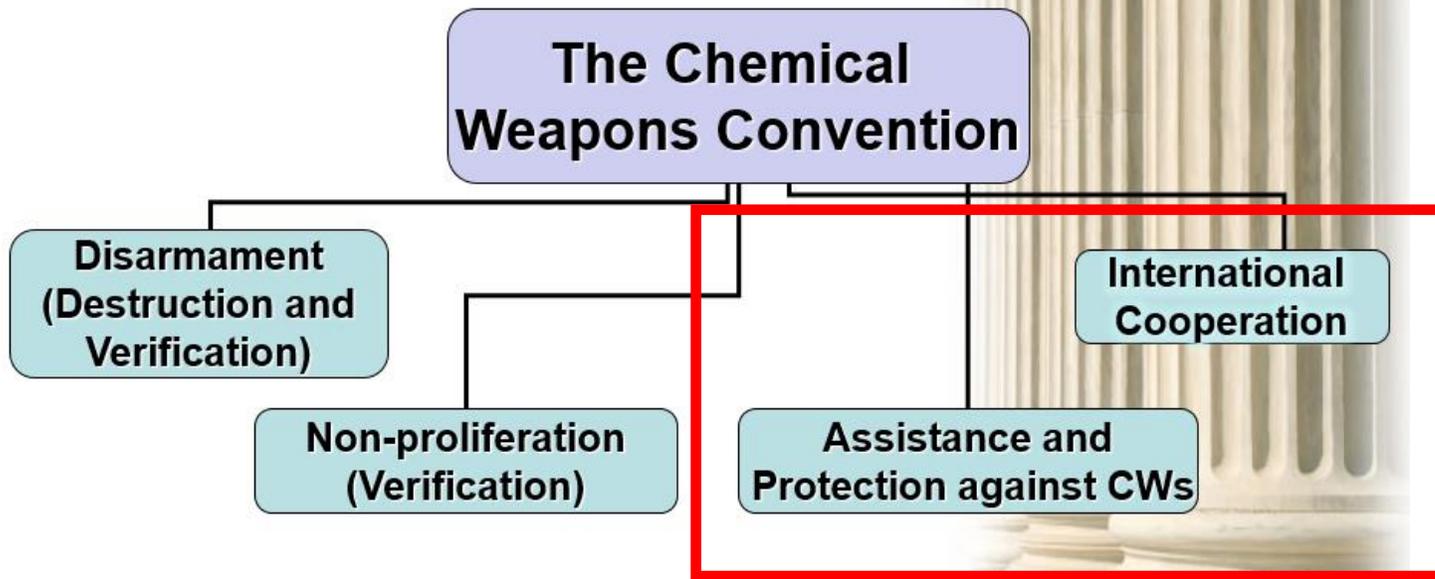
OPCW by the Numbers

- 193 States committed to the Convention (CWC)
- 98% of the global population live under the protection of the Convention
- 100% of the chemical weapons stockpiles declared by possessor States have been verifiably destroyed



OPCW

Core Activities of the OPCW



- Conference of the States Parties
- Executive Council
- Technical Secretariat >
- Subsidiary Bodies >

SUBSIDIARY BODIES

- Advisory Body on Administrative and Financial Matters
- Confidentiality Commission
- Scientific Advisory Board**
- Advisory Board on Education and Outreach**



OPCW Scientific Advisory Board

16.12.2024

HZS ČR

Scientific Advisory Board (SAB)

SAB is made up of 25 independent experts from OPCW Member States

Role

- Assess and report to the Director-General developments in scientific and technological fields that are relevant to the Convention.
- **SAB provides advice on technical matters** related to the implementation of the Convention, including on co-operation and assistance to the Technical Secretariat.



SAB Temporary Working Group „On Chemical Forensics“

OPCW
Organisation for the Prohibition of Chemical Weapons

Sarah Clapham
Peter Hotchkiss
Office of Strategy and Policy

Introduction to chemical forensics



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Applications of chemical forensics

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Analytical equipment

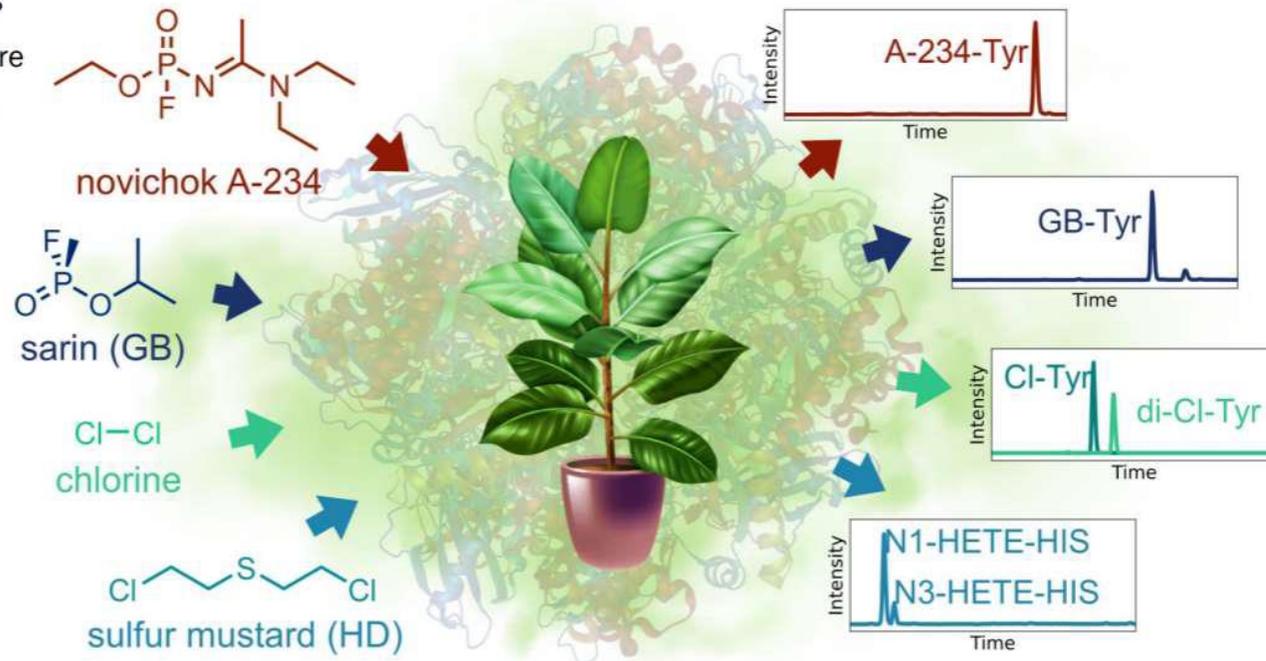
Focus on chromatography-based
techniques

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SAB Temporary Working Group „On Analysis of Biotoxins“

› Is it possible to detect biomarkers of CWAs in plants after exposure?

- › Various types of CWAs
- › Vapor & liquid exposure
- › Various plant species
- › Stability



Analysis of Biotoxins

Report of the Scientific Advisory Board's
Temporary Working Group



SAB/REP/1/23
April 2023



[5] M. de Bruin-Hoegée, et al., Verification of exposure to chemical warfare agents through analysis of persistent biomarkers in plants, Analytical Methods. 15 (2023) 142–153.

SAB Temporary Working Group „On Investigative Science and Technology“



ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS

Working Together For a World Free of Chemical Weapons

Temporary Working Group on Investigative Science and Technology

Reporting to the Scientific Advisory Board (SAB), the Temporary Working Group (TWG) will in particular consider the following questions:

Question 1:

Which methods and capabilities used in the forensic sciences could usefully be developed and/or adopted for Chemical Weapons Convention-based investigations?



Question 2:

What are the best practices and analysis tools used in the forensic sciences for effectively cross-referencing, validating, and linking together information related to investigation sites, materials collected/analysed, and individuals interviewed?



Question 3:

What are the best practices for management of data collected in investigations, including compilation, curation, and analytics?



Question 4:

What are the best practices for the collection, handling, curation and storage, and annotation of evidence?



Question 5:

Which technologies and methodologies (whether established or new) allow point-of-care and non-destructive measurements at an investigation site to help guide evidence collection?



Question 6:

Which technologies and methodologies (whether established or new) can be used in the provenancing of chemical and/or material samples collected in an investigation?



SAB and „Artificial Intelligence“

AI could offer many benefits to the OPCW's work, helping to achieve its mission of a world free of chemical weapons

Conference

- Highlighted the transformative potential of AI in advancing the peaceful uses of chemistry, and strengthening chemical safety and security.
- Recognised the threats and challenges that the misuse of AI may pose to the object and purpose of the CWC, including the potential use of AI by non-state actors and terrorist groups.



OPCW Advisory Board on Education and Outreach

16.12.2024

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Advisory Board on Education and Outreach (ABEO)

ABEO is made up of 15 independent experts from OPCW Member States

Role

- ABEO provides **specialised advice in areas of education** and outreach relevant to the OPCW's mandate.
- ABEO identifies global education and outreach activities.
- ABEO goal is to make education materials accessible to audiences in order to benefit the broadest range of target stakeholders.





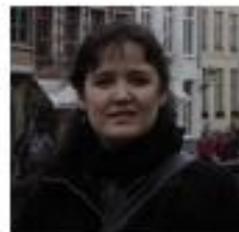
**Prof. Rocael
Hernández
Rizzardini
(Guatemala)**



**Dr. Craig
Cormick
(Australia)**



**Mr. Shahab
Ud Din
(Pakistan)
Chairperson
2022**



**Dr. Graciela
Alicia González
(Argentina)
Vice-
Chairperson
2022**



**Prof. Mohd
Jamil Maah
(Malaysia)**



**Prof. Magda Lidia
Bauta Solés
(Cuba)**



**Dr. Jason
Openo
(Canada)**



**Dr.
Ladislava
Navratilová
(Czech
Republic)**

ABEO MEMBERS

**Prof.
Christopher
Daase
(Germany)**



**Prof.
Janefrances
Ngozi Ihedioha
(Nigeria)**



**Dr. Richard Guthrie
(United Kingdom)**



**Dr. Supawan
Tantayanan
(Thailand)**



**Prof. Vicente
Garrido
Rebolledo
(Spain)**



**Dr. Nezha
Barakate
(Morocco)**



**Prof Ying Zhou
(People's
Republic of
China)**



ABEO

Enhancing understanding of the work of the OPCW through education materials for students, educators, civil society, and policymakers



E-Learning

Online educational modules for National Authorities and stakeholders associated with the implementation of the Chemical Weapons Convention.



Multiple Uses of Chemistry

Exploring the beneficial uses, misuses, and abuses of multi-use chemicals; monitoring abuses, and responding to this global problem.



The Fires Project

The OPCW's Short Documentary Video Project



Open Day

Once a year OPCW opens its doors to the general public as part of the International Open Day organised by The Hague Municipality.



Advisory Board on Education and Outreach



Temporary Working Group (TWG) on e-learning



OPCW Modules for Universities



Strategic plan



ABEO

3 e-Learning Modules for Universities

Objective: raise awareness of the OPCW and its mission first and foremost among professors and, through them, among students at universities

Three e-Learning modules to be made available to professors and other teaching staff at universities, notably in scientific disciplines and social sciences

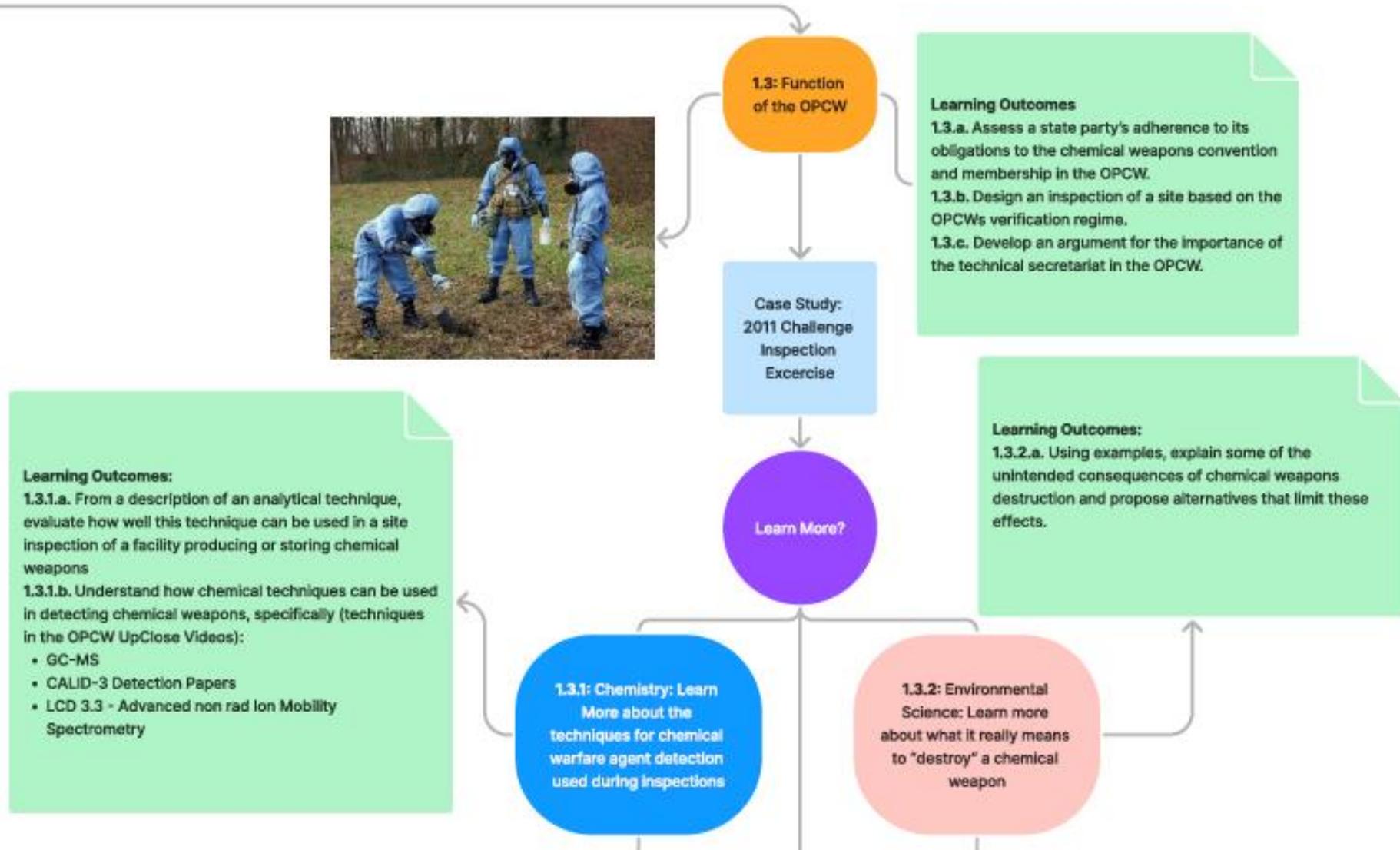
- **Module 1: The OPCW and its Mission**
- **Module 2: History of Chemical Weapons; What are Chemical Weapons?**
- **Module 3: Chemical Safety, Security & Ethics**

Available at:

https://learn.opcw.org/pluginfile.php/3768/mod_resource/content/1/Educator%20Resources%20-%20OPCW%20Modules%20for%20Universities.pdf



ABEO: OPCW Modules for Universities



Learning Outcomes
1.3.a. Assess a state party's adherence to its obligations to the chemical weapons convention and membership in the OPCW.
1.3.b. Design an inspection of a site based on the OPCW's verification regime.
1.3.c. Develop an argument for the importance of the technical secretariat in the OPCW.

Learning Outcomes:
1.3.1.a. From a description of an analytical technique, evaluate how well this technique can be used in a site inspection of a facility producing or storing chemical weapons
1.3.1.b. Understand how chemical techniques can be used in detecting chemical weapons, specifically (techniques in the OPCW UpClose Videos):
• GC-MS
• CALID-3 Detection Papers
• LCD 3.3 - Advanced non rad Ion Mobility Spectrometry

Learning Outcomes:
1.3.2.a. Using examples, explain some of the unintended consequences of chemical weapons destruction and propose alternatives that limit these effects.

Content Topics

- Case studies
- Learning outcomes
- Learn more about ...
- Stop and Think / Topics for discussion
- Short test



ABEO: OPCW Modules for Universities



Home Dashboard My courses



Course Grades Competencies Enrol me in this course

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General

Announcements

Educator's Guidebook

Survey

The OPCW and its mission

Lesson 1.1 Bringing the wo...

Lesson 1.2 Inside the OPCW

Lesson 1.3 Mandate of the ...

Branch 1.1.1 Advances in c...

Branch 1.1.2 Need for inter...

Dashboard Courses Education OPCW and its mission

Set of three introductory modules on the OPCW and its mission

General

Collapse all



Announcements



Educator's Guidebook



ABEO: OPCW Modules for Universities

Halabja Memorial

The Halabja Memorial, which is also in the gardens surrounding the OPCW's headquarters, commemorates the victims of the chemical weapons attack that took place on 16 March 1988 in the town of Halabja in Iraq. Many people lost their lives, among them women and children. Survivors have suffered severe long-term damage to their health. The memorial was presented to the OPCW by the Government of Iraq in 2014.



ABEO Strategic Plan

16.12.2024

HZS ČR

ABEO Strategic Plan

Proposal of Strategies

1. Cultivate strategic partnerships
2. Improve the reach of OPCW's e-learning activities
3. Chemical Safety Curriculum Integration
4. Develop a "Bluebook" of Relevant Experts and Institutions
5. Public Awareness Campaigns
6. Capacity Building for First Responders
7. Youth Engagement and Innovation
8. Translation of Tools and Materials into OPCW Official Languages
9. Enhance Knowledge, Expertise, and Skills of States Parties



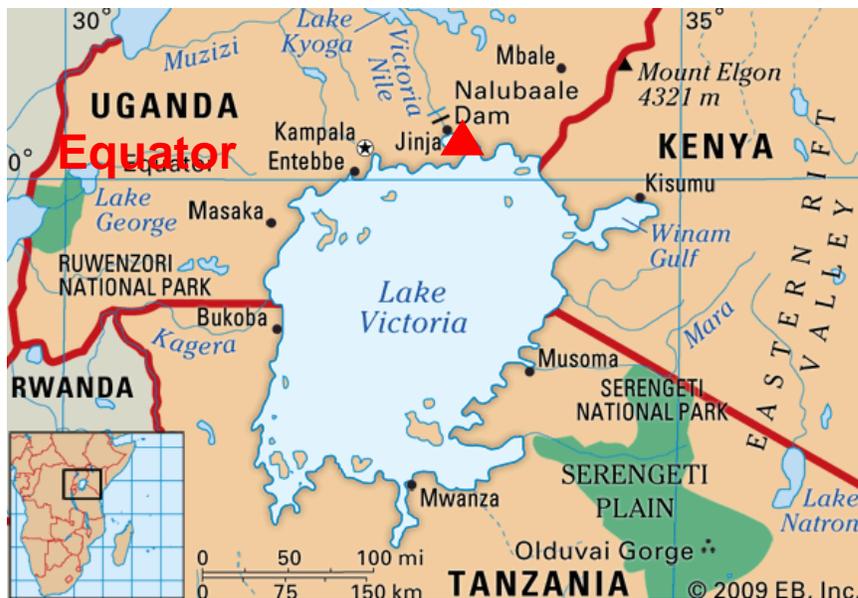
Capacity Building for First Responders Role of the Population Protection Institute

Population Protection Institute

Capacity-Building & Educational Project for First Responders in East-African Region

- Started in 2014 as a part of the OPCW programme “Strengthening chemical emergency response, planning and management for the EAC Partner States“
- **Operational training for first responders** aimed at chemical response
- Training methodology developed by **Population Protection Institute** (Czech Republic)
- Participants from Burundi, Kenya, Rwanda, Tanzania, Uganda, DRC
- Financial and technical support: CZE + UK
- Training locality: Uganda, Jinja (military centre URDCC)
- Trainings annually (except Covid-19) from 2016

Locality: Jinja, Uganda



Photos from Operational Training in Uganda



Example of team development: **Instructor** and **assistant instructor** explain sampling procedure to **participants** under supervision of **EAC expert** (Jinja 2023)



OPCW – The Hague Award

To preserve the legacy of the Nobel Peace Prize (OPCW awarded in 2013), the OPCW established the „OPCW-The Hague Award“ in collaboration with the Municipality of The Hague in 2014.

PPI received the **OPCW-The Hague Award** for significant contributions to achieving a world free of chemical weapons in 2022



New APB (Assistance and Protection Branch) OPCW Strategy Educational Events for First Responders

New APB OPCW Strategy ASSISTANCE AND PROTECTION TRAINING CYCLE (2024 – 2025)

1. Online Foundation Course / July 2024
2. **Hands-On Basic Course / October 2024, Germany**
3. Online Course on the Emergency Response Guidebook (ERG), CAMEO Chemicals, and Incident Command System (ICS) / March 2025
4. **Hands-On Integrated Advanced Course and Exercise / May 2025, PPI, Czechia**
5. Follow-Up Seminar / June 2025



How to Apply for OPCW Events

Way how to attend OPCW courses

Go to OPCW website: www.opcw.org

- Log in
- Click on Calendar / Eventus
- Choose a course
- Confirmation from National Authority is required

Possibility to work / participate in the OPCW events

East Europe region has one of the smallest representation at the OPCW

Online

Online regional seminar on the Chemical Weapons Convention and chemical safety and security management for Member States of the OPCW in the Eastern European region

ICB-EE-ICM-2024-CSSM

Accepting registrations

Last day open 21/11/2024

Conclusion

Youth generation

Work internationally = take your chance to learn and travel

Learn to balance a dream and a job, until your dream becomes your job

WORK WITH US

Our Internal Vision

Diversity & Inclusion

Employment

Internships

Business Opportunities



The banner features the OPCW logo on the left, which consists of a globe with a chemical flask and a leaf. To the right of the logo, the text 'OPCW' is displayed in a large, bold font, with 'Organisation for the Prohibition of Chemical Weapons' written below it in a smaller font. At the top right of the banner, there are language options: العربية, 中文, ENGLISH, FRANÇAIS, РУССКИЙ, and ESPAÑOL. The background of the banner is a photograph of an industrial facility with several large, vertical storage tanks and complex piping. In the foreground, two workers wearing hard hats and safety gear are visible. Overlaid on the center of the banner is the text 'Working together for a world free of chemical weapons' in a large, white, sans-serif font. Below this text, a smaller paragraph reads: 'As the implementing body for the Chemical Weapons Convention, the OPCW, with its 193 Member States, oversees the global endeavour to permanently and verifiably eliminate chemical weapons.'



Thank you for your attention

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