WHO Chemical Safety - Activity Report 2018

This document presents a summary of WHO Headquarters Chemical Safety activities undertaken in 2018.

It covers the following areas:

1. Implementation of the WHO Chemicals Road Map
2. Chemical Risk Assessment Network.
5. Poisons Prevention, Information and Management.
7. Promoting Health in International Conventions and Agreements.

A list of WHO/IPCS publications is given in Annex 1 and a list of WHO/IPCS Events in 2018 7 is given in Annex 2.

1. IMPLEMENTATION OF THE WHO CHEMICALS ROAD MAP

Through Decision WHA 70(23) in 2017, the World Health Assembly approved the road map to enhance health sector engagement in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond. Following this and as requested by the road map, WHO commenced establishment of the WHO Global Chemicals and Health Network to facilitate implementation of the road map. This work continued in 2018. In parallel, WHO developed a prioritized implementation plan, focusing on those road map activities identified for WHO Secretariat action and those where requests for country support were envisaged.

As of December 2018, over 70 Member States had joined the WHO Global Chemicals and Health Network with forty-one participating Member States attending the inaugural meeting of the Network held 5-8 November, 2018 in Geneva, Switzerland. The meeting led to the identification of common challenges successes, and opportunities for collaboration in the implementation of the roadmap; greater awareness of health impacts of chemicals and the importance of health ministry participation in chemicals management at the national, regional and global levels; and the role of the health sector in international chemicals discussion and in the beyond 2020 discussions. The meeting concluded with Member States recommending the network to meet again, face-to-face, in 2020 to finalize the plans for the beyond 2020 period.

Following publication of the Road Map Brochure in 2017 in 6 languages, a Road Map Workbook was published in 2018 in 6 languages, aiming to support countries to identify their priority activities and plan implementation.

WHO continued to support Member States in their participation in the intersessional process to prepare recommendations for the Strategic Approach and the sound management of chemicals and waste by convening health sector side meetings at the second meeting of the intersessional process held 13-15 March 2018 in Stockholm, Sweden respectively. In addition, WHO hosted panel discussions on the road map during the Strategic Approach Regional meetings in advance of the second meeting of the intersessional process.

WHO’s technical work to implement road map activities included publication of updated estimates of the burden of disease attributable to chemicals. In 2016, 1.6 million lives were
lost due to exposures to selected chemicals. Data are however only available for a small number of chemical exposures and people are exposed to many more chemicals.

Information on other activities to implement the road map is provided in the following sections of this report.

- WHO Global Chemicals and Health Network Concept Note
  https://www.who.int/ipcs/WHOChemicalsHealthNetwork_conceptnote.pdf
- WHO Chemicals Road Map Workbook.
  https://apps.who.int/iris/bitstream/handle/10665/273136/9789241513630-eng.pdf?ua=1
- The public health impact of chemicals: Knowns and Unknowns. 2018 Data addendum (English)

2. CHEMICAL RISK ASSESSMENT NETWORK

2.1 Network Management and Meetings

During 2018 there were 85 institutions in the Network from 49 countries, and the process renewing participation in the Network (for a further 4 year period) was started.

Activities relating to chemical risk assessment methodology were taken forward under the umbrella of the Network covering a number of topics. In addition to a meeting on methodology development, activities were also undertaken on immunotoxicity of nanomaterials, systematic review methods and identification of emerging risks from chemicals. Details of these activities are presented in the relevant sections below.

Network Participants were kept informed by bimonthly broadcast emails and three Newsletters. Details about the Chemical Risk Assessment Network were presented to the inaugural meeting of the Global Chemicals and Health Network held in November 2018. A meeting of Network participants was also convened in the margins of the Congress of Toxicology in Developing Countries (CTDC10) in Belgrade, Serbia in April 2018. This meeting, attended by 30 participants from 15 Network institutions who were attending the conference, discussed the Network Capacity Building Strategy (see below).

Details of Network membership and the ongoing activities are presented on the dedicated Network web pages.

- WHO Chemical Risk Assessment Network web pages
  http://www.who.int/ipcs/network/en/
- WHO Chemical Risk Assessment Network activities web page
  http://www.who.int/ipcs/network/activities/en/
- WHO Chemical Risk Assessment Network meetings web page
  http://www.who.int/ipcs/network/about/en/index2.html

2.2 Capacity Building in Chemical Risk Assessment

The Strategic Plan for enhancing chemical risk assessment capacity in WHO Chemical Risk Assessment Network participants was officially launched at the 10th Congress of Toxicology in Developing Countries (CTDC), 18 – 21 April 2018, Belgrade. The Strategic Plan operationalizes capacity building related actions of the WHO Chemicals Road Map to
enhance health sector engagement in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond. In particular, it includes actions to strengthen national institutional capacities to address health threats from chemicals and on filling gaps in knowledge and methodologies for risk assessment.

A Steering Group was formed to coordinate and to provide advice to WHO on the various capacity building projects taking place under the Strategic Plan 2018-2020. Two teleconferences of the Steering Group were organized (i) to establish the group and agree on the Terms of References; and (ii) to review proposed projects and initiate actions under the Plan.

At the 2nd Steering Group meeting, action was agreed to establish a forum and to build a network of trainers (Community of Trainers), share experience from providing training in risk assessment, share training material and inspire and support new trainers.

In collaboration with Health Canada, two webinars were organized under the umbrella of the WHO Chemical Risk Assessment Network and its Strategic Plan including on (i) Exposure, Hazard and Risk Assessment Approaches and Tools for Existing Substances at health Canada. 102 persons attended from 36 countries; and (ii) Canada’s Human Biomonitoring Program and the Use of Biomonitoring Data in Risk Assessments. 63 persons attended from 21 countries.

Another Network activity was initiated on existing methodologies and tools for the prioritization of chemicals for risk assessment. The overall objective of the project is to assist Network institutions based in developing countries in assisting them to identify and prioritize chemicals and settings within their jurisdiction and/or context through the use of existing tools and resources. A Working Group (WG) was established which is co-chaired by Health Canada and the Ministry of health, Belarus. The main tasks of the project in its first phase is: 1) to elucidate the needs of developing countries through a survey; 2) to create a repository of existing resources to identify and prioritize chemicals through a survey; and 3) to evaluate the existing resources and make recommendations as to whether there is a gap in existing tools and a need for the development of new tools to meet the needs of institutions based in developing countries.

In 2018, the EC-supported IOMC Toolbox project entered into its third phase entitled “IOMC Toolbox project on decision making in chemicals management: From design to action”. In addition to re-designing, broadening the content and making the Toolbox more user friendly, the new phase will have a capacity building component including workshops to train policy makers and key professionals of chemicals in developing countries and countries with economies in transition on the public health management of chemicals and related tools developed by IOMC Participating Organizations. In 2018, WHO organized the National Training workshop to Enhance the Health Sector Role in the Management of Chemicals, 17-19 December 2018, Cairo, Egypt. The event attracted 26 participants from central authorities in Cairo and 10 Governorates within Egypt. Most of the participants were from the Ministry of Health other participants were from the Ministry of Environment, Ministry of Agriculture, Military, Occupational Health, and Civil Protection.

Face to face training: A number of activities have been supported to strengthen risk assessment capacities in countries and to introduce and promote the use of the WHO Human Health Risk Assessment Toolkit, including:
• International Training Course on Environmental and Health Risk Assessment and Management of Toxic Chemicals, 7–18 December 2018, Bangkok, Thailand.
• National Training workshop to Enhance the Health Sector Role in the Management of Chemicals, 17-19 December 2018, Cairo, Egypt.

3. TOOLS FOR ASSESSING CHEMICAL RISKS

3.1 The WHO/IPCS Harmonization Project

The WHO/IPCS “Project on the Harmonization of Approaches to the Assessment of Risk from Exposure to Chemicals” (commonly referred to as the “Harmonization Project”) aims to harmonize global approaches to risk assessment through both increased understanding and agreement on basic principles, and to develop international guidance documents on specific issues.

One function of the WHO Chemical Risk Assessment Network is to facilitate the sharing of information on developments in chemical risk assessment methodology between institutions. Significant developments are shared between topic experts through dedicated mailing lists for experts in Network institutions. During 2018, sharing of information in this way continued on the topics of Mode of Action and on Combined Exposures.

A meeting to review WHO chemical risk assessment methodology guidance and provide recommendations for future Network activities was convened in Ottawa, Canada in July 2018. The meeting discussed a draft overview of several key methodology documents (prepared in response to a suggestion from the 2017 Network Meeting held in Parma, Italy) and the experiences of several institutions were presented. The recommendations for new Network activities relating to risk assessment methodology development such as information guides for existing methods and webinars to increase understanding of particular topics will be taken forward during 2019.

Network Meeting on Chemical Risk Assessment Methodologies, 9-11 July, 2018

A framework on systematic review in chemical risk assessment is under development. The aim of the framework is to be a concise, high-level document which will introduce the topic of systematic review, provide a practical perspective on when and when not to conduct a systematic review, and give an overview of the tools and resources available. A group of authors with experience of conducting systematic reviews in different countries is collaborating to draft the framework which should be published during 2019.

One of the objectives of the WHO Chemical Risk Assessment Network is to assist in the identification of emerging risks to human health from chemicals. An organizing committee of Network Participants was convened and met regularly by teleconference during 2018 to organize a mapping exercise and survey of existing systems and to plan a workshop on emerging risks from chemicals, to be held in February 2019. The workshop will bring together approximately 50 participants from the Network and from existing surveillance systems to review the mapping exercise and to identify possible collaborative activities to take forward in the future.

3.2 Environmental Health Criteria (EHC) and other Methodology Documents
Under the umbrella of the Chemical Risk Assessment Network, and with the WHO Collaborating Centre at RIVM, work continued on an Environmental Health Criteria Document on *Principles and Methods for assessing the risk of immunotoxicity associated with exposure to nanomaterials*. During 2018 the draft document was edited, for publication in 2019.

During 2018, WHO/IPCS collaborated with two other WHO Units (the Vector Ecology and Management Unit and the Prequalification Team – Vector Control Group) to revise the existing generic risk assessment models for vector control products. The models for Insecticide-treated Nets, Indoor Residual Spraying, Space Spraying and Larviciding and Mollusciciding were revised and published following an online peer review and expert consultation. In addition, new generic risk assessment models for Insecticide-treated Clothing, Skin-applied Repellents and Household Insecticides were drafted, peer reviewed and discussed at an expert meeting held 29-31 August, 2018 in Helsinki, Finland. These new generic risk assessment models will be published during 2019.

4. HEALTH IMPACTS OF CHEMICALS

4.1 International Chemical Safety Cards (ICSCs)

WHO work on the International Chemical Safety Cards (ICSCs) continues to be a major point of collaboration with the International Labour Organization (ILO). ICSCs are available for approximately 1700 chemicals.

The ICSC collection is disseminated via a web-based interface (https://www.ilo.org/dyn/icsc/showcard.listCards3) which is linked directly to the underlying database. This means that the up-to-date version of each ICSC is immediately available via a single source, and this mechanism has replaced the diverse sources of ICSCs used in the past. There are currently ten language versions available (English, Spanish, French, Finnish, Hungarian, Italian, Japanese, Polish, Russian and Chinese), which can be searched directly using the link above. Additional language versions of the ICSCs are continuously under development.

GHS classifications continue to be made for new and updated ICSCs. The corresponding hazard statements, signal words and symbols are included on the ICSCs. To date, GHS classifications have been included on 633 ICSCs.

A peer review meeting for the ICSCs was held 14–18 May 2018, at which 48 ICSCs were revised.

4.2 IPCS INCHEM website (http://www.inchem.org)

This website, hosted on behalf of WHO/IPCS by the Canadian Centre for Occupational Health and Safety (CCOHS), enables WHO/IPCS to disseminate its collections of risk assessment documents and the ICSCs to a wider audience. The INCHEM collection is long
established and ranks highly in internet search engine results, as well as allowing powerful search options within the collections.

During 2018 there were 1.19 million page-views on the INCHEM web site from 572 000 users in 782 000 sessions, with 13% of users being repeat visitors. Approximately 36% of sessions (283 000) accessed the INCHEM collection either directly or via links from other web sites, with the remaining 64% reaching the site via a search engine. These statistics demonstrate that the INCHEM collection is a very well established internet data source, with many direct users or referrals from other web sites.

The INCHEM collection is also included within the databases which can be searched via the OECD eChemPortal [www.oecd.org/ehs/eChemPortal].

### 4.3 Advocacy on Chemicals of Public Health Concern

The WHO project on Chemicals of Public Health Concern aims to raise awareness, advocate for action, and facilitate access to tools for action on selected chemicals or groups of chemicals of major public health concern has been updated regularly. These are: (a) arsenic; (b) asbestos; (c) benzene; (d) cadmium; (e) highly hazardous pesticides; (f) inadequate or excess fluoride intake; (g) lead; (h) mercury; (h) major air pollutants; and (i) polychlorinated dibenzodioxins and dioxin-like compounds. The primary target group is decision-makers from WHO Member States.

A web entry point provides easy access to the range of WHO resources on each of the 10 chemicals. The resources include: short documents for decision makers; tools for action; norms and guidance values; educational material; and further information (such as WHO assessments, burden of disease information, fact sheets and other information).

In 2018, web information on the 10 chemicals was updated regularly to include newly developed materials. In 2018, a process was initiated to update a number of the short information documents for decision-makers.


### 4.4 Classification of Pesticides by Hazard

The WHO Recommended Classification of Pesticides by Hazard was first published in 1975, and has been revised and reissued with new and updated information every few years. This WHO publication has gained wide international acceptance, in particular among developing countries. The *International Code of Conduct on the Distribution and Use of Pesticides* has been adopted by WHO since 2014. The WHO Classification document plays a significant role in the identification of Highly Hazardous Pesticides (HHPs), which are a key aspect of many of the principles in the Code. The WHO Classification also plays a significant role in two Guideline documents which support the Code – one on the management of Highly Hazardous Pesticides (the FAO/WHO Joint Meeting on Pesticides Management (JMPM) Guideline on Highly Hazardous Pesticides) and the other on Good Labelling Practice for pesticides.

WHO continues to contribute to the FAO/WHO/UN Environment Strategy on Highly Hazardous Pesticides in the context of SAICM, which was referred to in the ICCM4 resolution on HHPs. WHO contributed to the activities relating to HHPs of the FAO/WHO Joint Meeting on Pesticides Management (JMPM) during 2018, including intersessional work and attending the meeting convened in October 2018, and also contributed to the ongoing development of the FAO Pesticides Registration Toolkit.
An update of the WHO Recommended Classification of Pesticides by Hazard, with acute toxicity data from evaluations of 61 new pesticides, will be published during 2019.

5. POISONS PREVENTION, INFORMATION AND MANAGEMENT

5.1 Network of poisons centres

The poisons centre directory on the WHO Global Health Observatory was updated with the addition of two new poisons centres (in Pakistan and India).

Global Health Observatory: poisons centres
http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

Technical support was provided to the WHO Regional Office for Africa for the establishment of the African Network of Poison Control Centres.

Additional training was arranged for personnel from the poisons centre at the Government Chemist Laboratory Authority (GCLA) in Dar Es Salaam, United Republic of Tanzania. The training was provided by the Centre for Radiation, Chemical and Environmental Hazards at Public Health England and the National Poisons Information Service UK in the context of a capacity building project for a new poisons centre in Ethiopia. This took place in December 2018.

Work started on updating the WHO publication Guidelines for Poison Control. The revision is being coordinated by the WHO Collaborating Centre for the Public Health Management of Chemical Exposures, with the support of the UK National Poisons Information Service. WHO has convened an international working group to provide input and review.

5.2 WHO Guidelines for the Prevention and Management of Lead Poisoning

The draft of the guidelines for the management of lead exposure underwent external peer review during 2018 and is now being revised before finalization and submission to the WHO Guidelines Review Committee.

Work also continued on the guidelines for the prevention of lead poisoning, with the completion of systematic evidence reviews on educational interventions for people working with lead and on the use of risk questionnaires as a screening tool. Further work will be carried out in 2019.

5.3 Global Alliance to Eliminate Lead Paint

Work has continued on the implementation of resolution II/4B of the International Conference on Chemicals Management on eliminating lead from paint through the initiative established by WHO jointly with UN Environment, known as the Global Alliance to Eliminate Lead Paint (short name: the Lead Paint Alliance).

The overall goal of the Lead Paint Alliance is to prevent children’s exposure to lead through paints containing lead and to minimize occupational exposures to lead in paint. The broad objective is to phase out the manufacture and sale of paints containing lead and eventually to eliminate the risks that such paints pose.

WHO, in partnership with UN Environment, is monitoring progress in eliminating lead paint through periodic surveys of Member States. During the summer, WHO carried out a new
survey of countries to find out the current status of laws on lead paint, and published updated information in WHO Global Health Observatory. As of September 2018 only 71 countries had confirmed that they have legally-binding controls on lead paint.

Global Health Observatory: Regulations and controls on lead paint
http://www.who.int/gho/phe/chemical_safety/lead_paint_regulations/en/

WHO coordinated the sixth international lead poisoning prevention week, which took place on 21 to 27 October. The aim of the campaign was to raise awareness worldwide about lead poisoning and to encourage action to eliminate the use of lead in paint. WHO, in collaboration with UN Environment, US EPA and IPEN, developed a revised campaign resource pack and a range of campaign materials, including posters, infographics, web banners, flyers and FAQs. All materials were published in the six UN languages (Arabic, Chinese, English, French, Russian and Spanish). Social media, particularly Twitter and Facebook, were used to provide key messages about lead hazards. Campaign organizers registered 82 events in 50 countries in a special data collection tool on the WHO website. Events focused on education about the health effects of lead and on the need for protective national legislation. The events took the form of university lectures, school classes, radio programmes, meetings with different stakeholders, appeals to legislators, and different media events among others. A large array of materials was distributed.

A report will be published in February 2019 and posted on the WHO website.

Campainer profiles were the following:

- 3 Academic institutions
- 11 Governments (local/national)
- 2 Healthcare institutions
- 57 Non-Government Organizations
- 8 ‘Other’
The Global Environment Facility (GEF) agreed to fund a four-year project on lead paint with the aim of increasing the number of countries with lead paint laws by at least 40. WHO has been working with UN Environment on preparatory work for the implementation of the project. UN Environment is the executing agency for this project and WHO is one of the executing partners. The project will formally start in January 2019 and in preparation WHO
has written to ministries of health in 77 countries to invite their participation. This complements letters sent by UN Environment to environment ministries.

Further information on the GEF project can be found on the UN Environment website at https://www.unenvironment.org/explore-topics/chemicals-waste/what-we-do/emerging-issues/global-alliance-eliminate-lead-paint-8.

A side event on lead paint was organized during the Third Inter-Ministerial Conference on Health and Environment in Africa, which took place on 6–9 November 2018. In the African region only six countries have lead paint laws and the side event was very well attended. The strategic action plan for 2019–2029 agreed by ministers includes support for the work of the Lead Paint Alliance, in particular by enacting national legislation to ban lead in paint.

6. CHEMICAL INCIDENTS AND EMERGENCIES

6.1 International Health Regulations (2005) (IHR)

The IHR (2005) cover all events of potential international public health concern, including disease outbreaks of known, or suspected, chemical etiology. Countries are required to build national core capacities for surveillance of, and response to, such outbreaks, and can call upon the support of the WHO and the international community to manage the outbreaks.

WHO/IPCS contributed to the further revision of the chemical sections in two IHR capacity assessment tools: the Annual Reporting Tool and the Joint External Evaluation tool. In the case of the latter this included a consultation on applying the tool in special context countries, e.g. small island developing states. WHO/IPCS also contributed to the benchmarking tool that forms part of a new guide and toolkit for countries in developing a National Action Plan for Health Security (NAPHS).

In collaboration with the WHO IHR Team, the Guidance for the Assessment and Notification of Chemical Events under the IHR was reviewed and revised accordingly by the Chemical Events Working Group of the Global Health Security Initiative, which drafted the document initially. The document is being considered as a possible WHO publication. (http://www.ghsi.ca/english/index.asp).

6.2 Responding to Chemical Incidents and Emergencies

In 2018, 20 events were evaluated for their public health significance and the need for technical support by WHO. This evaluation was carried out in conjunction with technical counterparts in the regional offices. Technical support was provided in 9 events, as described below.

- Four deliberate chemical releases in countries: participation in internal risk assessments; updating of technical information on the chemicals concerned; and obtaining advice on exposure biomarkers from an external expert group.

- Contingency planning internally and with regional counterparts for the possible deliberate use of chemicals, as well as other agents, in the Asia-Pacific region. This included advising on protective equipment for WHO staff, and updating guidance for staff on self-protection.
• Following a severe air pollution incident in a country and an official request for WHO support: contribution to the internal evaluation and mission planning.

• Contaminated toy: contribution to the internal risk assessment.

• Outbreak caused by contaminated wine: provision of information on methanol

• Volcanic eruption: provision of information on health impacts and on water contamination.

WHO/IPCS also contributed to the development of an internal standard operating procedure on response to deliberate events.

Guidance for the health sector on chemical release triggered by natural hazard events (Natech events), including leaflets on chemical release resulting from earthquakes, floods and cyclones, was published on the WHO website. Translations into Arabic, Chinese, French, Russian and Spanish are in preparation and will be published in early 2019.

- Chemical releases caused by natural hazard events and disasters: information for public health authorities
- Chemical releases caused by earthquakes
- Chemical releases caused by floods
- Chemical releases caused by cyclones

[https://www.who.int/ipcs/publications/natech/en/](https://www.who.int/ipcs/publications/natech/en/)

The manual for investigating disease outbreaks of possible chemical etiology was substantially revised with the assistance of the WHO Collaborating Centre for the Public Health Management of Chemical Exposures and others at Public Health England. This document will be finalised in 2019.

7. PROMOTING HEALTH IN INTERNATIONAL CONVENTIONS AND AGREEMENTS

7.1 Strategic Approach to International Chemicals Management (SAICM)

Throughout 2018 WHO has supported Member States by convening health sector meetings and workshops to contribute to the Strategic Approach to International Chemicals Management.

WHO continued to support Member States in their participation in the intersessional process to prepare recommendations for the Strategic Approach and the sound management of chemicals and waste by convening health sector side meetings at the second meeting of the intersessional process held 13-15 March 2018 in Stockholm, Sweden respectively. In addition, WHO hosted panel discussions on the road map during the Strategic Approach Regional meetings in advance of the second meeting of the intersessional process.

Health information was provided to UNEP for its Global Chemicals Outlook II, which is to be published in 2019 and submitted to SAICM meetings and the United Nations Environment Assembly.

WHO’s work on the Chemicals Road Map and its technical activities including the SAICM emerging policy issues all contribute to the achievement of SAICM.
7.2 Minamata Convention on Mercury

Work continued on implementation of World Health Assembly Resolution WHA67.11 *Public health impacts of exposure to mercury and mercury compounds: the role of WHO and ministries of public health in the implementation of the Minamata Convention.*

WHO convened the final regional workshop for ministries of health, 9-10 April, in Johannesburg, South Africa. A publication about all of the regional workshops was developed, and made available in 6 languages, to inform readers about the outcomes of the workshops, including the challenges and opportunities confronting health authorities in each region in relation to the Convention’s health-related articles, as well as needs for technical assistance.

Work commenced to develop guidance for countries on strategic planning for implementation of the health-related articles of the Minamata Convention. A draft was prepared and piloted at country workshops in Sri Lanka, 6-8 September and Lao People’s Democratic Republic, 26-28 September. With the feedback received, the guidance was revised and key elements presented at Minamata COP2 in November. Following editing the document will be published in early 2019.

WHO coordinated the preparation of a report on human exposure to mercury based on a systematic review of published biomonitoring data. The full report was published in a scientific journal and a summarised version forms a chapter in the 2018 Global Mercury Assessment being prepared by UN Environment.

WHO contributed to the Minamata Convention expert group on effectiveness evaluation, by providing information and participating in its meeting held 5-6 March, in Ottawa, Canada. WHO also participated in the 2nd Conference of the Parties to the Minamata Convention, held 19-23 November 2018, Geneva, Switzerland, including organizing a health lunchtime event where recent WHO publications were launched.

WHO is a member of the IOMC Mercury Group, which coordinates the work of the IOMC organizations relevant to implementation of the Minamata Convention. This includes activities on Minamata Initial Assessments and National Action Plans for Artisanal and Small-Scale Gold Mining.

Other technical programmes in WHO both at headquarters and in the regions undertook work on the phase down of dental amalgam, medical measuring devices, artisanal and small-scale gold mining, human biomonitoring, the development of training materials, and mercury levels in food.

*Health Sector Involvement in the Minamata Convention on Mercury: Outcomes of WHO regional workshops for ministries of health. (available in 6 languages).*

*A State-of-the-Science Review of Mercury Biomarkers in Human Populations Worldwide between 2000 and 2018*
https://ehp.niehs.nih.gov/doi/full/10.1289/EHP3904
7.3 Rotterdam and Stockholm Convention

The Conferences of the Parties to the Basel, Rotterdam and Stockholm Conventions did not meet in 2018.

7.4 Inter-organization Programme for the Sound Management of Chemicals (IOMC).

The IOMC coordinates the chemicals policies and programmes of its nine Participating Organizations (FAO, ILO, UNDP, UN Environment, UNIDO, UNITAR, WB, WHO and OECD). WHO is the administering agency for the IOMC and provides its Secretariat, as well as participating as a member of the IOMC. In 2018, two regular meetings of the IOMC were held on May, hosted by the World Bank in Washington D.C. and 27-28 November, hosted by ILO in Geneva. An IOMC retreat was held back-to-back with the May meeting and focussed on the role of IOMC beyond 2020. Refer to: http://www.iomc.info for information about IOMC activities.

WHO’s contribution to the IOMC Toolbox project is addressed in section 2.2. In addition the project is managed by WHO. Two meetings of the Project Management Group were convened, in April and October.
LIST OF PUBLICATIONS DURING 2018

**International Chemical Safety Cards (ICSCs):** 48 updated cards were published in 2018. These are listed in the table below.

**WHO Global Chemicals and Health Network Concept Note**  
https://www.who.int/ipcs/WHOChemicalsHealthNetwork_conceptnote.pdf

**WHO Chemicals Road Map Workbook**  
https://apps.who.int/iris/bitstream/handle/10665/273136/9789241513630-eng.pdf?ua=1

**Health Sector involvement in the Minamata Convention on Mercury**  
Outcomes of the World Health Organization regional workshops for ministries of health.  

https://ehp.niehs.nih.gov/doi/full/10.1289/EHP3904

**Data addendum for 2016, Public health impact of chemicals: knowns and unknowns**  

**Chemical releases caused by natural hazard events and disasters: information for public health authorities**  
https://www.who.int/ipcs/publications/natech/en/  
http://apps.who.int/iris/bitstream/handle/10665/272390/9789241513395-eng.pdf

**Chemical releases caused by earthquakes**  

**Chemical releases caused by floods**  

**Chemical releases caused by cyclones**  

https://www.who.int/ipcs/network/Network_Capacity_Building_Strategy.pdf

**Lead campaign website and materials**  
http://www.who.int/entity/ipcs/lead_campaign/en/index.html  
http://www.who.int/ipcs/lead_campaign/objectives/en/  
https://www.who.int/ipcs/lead_campaign/materials/en/

**International Lead Poisoning Prevention Week 2018 resource package**  

**Policy Brief #1 – International Lead Poisoning Prevention Week; 21-28 October 2018**  

**WHO Fact Sheet on Lead Poisoning and Health (updated)**  

**Questions and answers about the International Lead Poisoning Prevention Awareness Campaign (updated) – available in 6 languages**  
https://www.who.int/ipcs/lead_campaign/QA-lead-week-2018-EN.pdf
International Lead Poisoning Prevention Week 2017: report
https://www.who.int/ipcs/lead_campaign/ILPPW_2017_report.pdf

Global Health Observatory: Regulations and controls on lead paint
http://www.who.int/gho/phe/chemical_safety/lead_paint_regulations/en/

Global Health Observatory: poisons centres
http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

Report from WHO Sessions on the WHO Chemicals Road Map
at SAICM Regional Meetings, January – February 2018

Report to Minamata COP2 on cooperation with WHO and ILO

List of International Chemical Safety Cards published in 2018

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<td>2,5-HEXANEDIOL</td>
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<td>290</td>
<td>MANGANESE SULPHATE MONOHYDRATE</td>
<td>10034-96-5</td>
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<tr>
<td>328</td>
<td>SULFAMIC ACID</td>
<td>5329-14-6</td>
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<td>339</td>
<td>2,4-TOLUENE DIISOCYANATE</td>
<td>584-84-9</td>
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<td>352</td>
<td>GLUTARALDEHYDE (50% SOLUTION)</td>
<td>111-30-8</td>
</tr>
<tr>
<td>415</td>
<td>2-BROMO-2-NITRO-1,3-PROPANEDIOL</td>
<td>52-51-7</td>
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<td>420</td>
<td>CHLOROTRIFLUOROMETHANE</td>
<td>75-72-9</td>
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<td>423</td>
<td>CROTONIC ACID</td>
<td>3724-65-0</td>
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<td>446</td>
<td>SODIUM-N,N-DIETHYLDITHIOCARBAMATE</td>
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<td>472</td>
<td>ALUMINIUM PHOSPHIDE</td>
<td>20859-73-8</td>
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<td>486</td>
<td>PIVALIC ACID</td>
<td>75-98-9</td>
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<td>492</td>
<td>HYDROGEN CYANIDE, LIQUEFIED</td>
<td>74-90-8</td>
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<td>ICSC</td>
<td>Chemical</td>
<td>CAS</td>
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<td>622</td>
<td>FENITROTHION</td>
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<td>663</td>
<td>KEROSENE</td>
<td>8008-20-6</td>
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<td>671</td>
<td>POTASSIUM CYANIDE</td>
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<td>703</td>
<td>1-CHLOROBUTANE</td>
<td>109-69-3</td>
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<tr>
<td>746</td>
<td>RHODIUM TRICHLORIDE, TRIHYDRATE</td>
<td>13569-65-8</td>
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<td>756</td>
<td>COPPER 8-QUINOLATE</td>
<td>10380-28-6</td>
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<td>1020</td>
<td>gamma-BUTYROLACTONE</td>
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<td>1118</td>
<td>SODIUM CYANIDE</td>
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<td>1134</td>
<td>SODIUM BISULFITE</td>
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<td>1163</td>
<td>METHANESULFONYL CHLORIDE</td>
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<td>1171</td>
<td>DIBUTYLtin DILAURATE</td>
<td>77-58-7</td>
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<td>1175</td>
<td>POTASSIUM METABISULFITE</td>
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<td>1252</td>
<td>TRIFLUMIZOLE</td>
<td>68694-11-1</td>
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<td>DIAZOMETHANE</td>
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<td>1259</td>
<td>METHACRYLALDEHYDE</td>
<td>78-85-3</td>
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<td>VINYL ETHYL ETHER</td>
<td>109-92-2</td>
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<td>1262</td>
<td>2-METHYL PENTANE</td>
<td>107-83-5</td>
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<td>3-METHYL PENTANE</td>
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<td>BROMUCONAZOLE</td>
<td>116255-48-2</td>
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<td>HEXAFLUMURON</td>
<td>86479-06-3</td>
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<td>1267</td>
<td>FLOCOUMAFEN</td>
<td>90035-08-8</td>
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<td>1269</td>
<td>PYRIPROXYFEN</td>
<td>95737-68-1</td>
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<tr>
<td>1320</td>
<td>TUNGSTEN CARBIDE</td>
<td>12070-12-1</td>
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MEETINGS HELD IN 2018

26 January 2018
WHO/UNEP Meeting on GEF Mercury Project
WHO, Geneva, Switzerland

5 April 2018
IOMC Toolbox Phase III – PMG Meeting
WHO, Geneva, Switzerland

19-21 April 2018
WHO-sponsored sessions and WHO Chemical Risk Assessment Network meeting at the
Congress on Toxicology in Developing Countries (CTDC10)
Belgrade, Serbia

14-18 May 2018
Peer Review Meeting for International Chemical Safety Cards
WHO, Geneva, Switzerland

23 May, 2018
Meeting between the WHO Secretariat and Civil Society on the WHO Chemicals Road Map
WHO, Geneva, Switzerland

9 -11 July 2018
WHO Chemical Risk Assessment Methodology Development meeting
Ottawa, Canada

28-31 August 2018
Expert consultation on WHO risk assessment models for household insecticides,
repellents and insecticide-treated clothing
Helsinki, Finland

6-8 September 2018
WHO Workshop on Prioritization and planning for implementation of the health-
related articles of the Minamata Convention
Colombo, Sri Lanka

26-28 September 2018
WHO Workshop on Prioritization and planning for implementation of the health-
related articles of the Minamata Convention
Vientiane, Lao People's Democratic Republic

27-28 September 2018
Planning meeting for GEF project on elimination of lead paint
WHO, Geneva, Switzerland

2 October 2018
IOMC Toolbox Phase III- 2nd Meeting of the Joint Programme Management Group
WHO, Geneva, Switzerland

21-27 October 2018
International lead poisoning prevention week of action
WHO, Geneva, Switzerland

6-8 November 2018
Inaugural meeting of the WHO Global Chemicals and Health Network
WHO, Geneva, Switzerland

17-19 December 2018
WHO Workshop to enhance the health sector Role in the Management of Chemicals
Cairo, Egypt