



WHO Chemical Safety - Activity Report 2016

This document presents a summary of WHO Headquarters Chemical Safety activities undertaken in 2016.

It covers the following areas:

1. Chemical Risk Assessment Network.
2. Tools for Assessing Chemical Risks (chemical risk assessment methodologies).
3. Health Impacts of Chemicals (chemical risk assessments).
4. Poisons Prevention, Information and Management.
5. Chemical Incidents and Emergencies.
6. 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 2016 is given in [Annex 2](#).

1. CHEMICAL RISK ASSESSMENT NETWORK

1.1 Network Management and Meetings

During 2016 the membership of the Network increased to 72 participants (on an institutional basis) from 40 countries. Several activities were taken forward under the umbrella of the Network in the areas of methodology for chemical risk assessment and capacity building. Topics under methodology included Mode of Action, Combined Exposures, chemical-specific adjustment factors, immunotoxicity of nanomaterials and systematic review in chemical risk assessment. Capacity building activities included a workshop and a scheme for training fellowships. Details of these activities are given in the relevant sections below.

Network Participants were kept informed by bimonthly broadcast emails and three published Newsletters during 2016. Following on from the introductory webinar on systematic review at the end of 2015, a further webinar illustrating two case studies for systematic review was held in May 2016, with at least 40 attendees. A framework on systematic review in chemical risk assessment is now being developed, as described below.

The Network Coordinating Group, consisting of the leads for each of the Network activities, met by teleconference six times during 2016. This group facilitates coordination of Network activities, reviews progress and considers overarching issues. During 2016 the Coordinating Group started to plan the 2017 Network Meeting (to be held in June 2017, hosted by the European Food Safety Authority in Parma, Italy).

Under the umbrella of the Network, a workshop on human biomonitoring to support chemical risk assessment was held in November 2016 in Bangkok, Thailand. The workshop

participants included representatives of 11 Network institutions, and the workshop provided a forum to exchange information and facilitate future collaboration on human biomonitoring activities, especially in low resource settings.

In preparation for a new Network activity on the identification of new and emerging risks of chemicals, a presentation was delivered at the 2016 Annual Meeting of the International Society of Exposure Science (ISES 2016), 13 October 2016, in Utrecht, The Netherlands.

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>

1.2 Capacity Building in Chemical Risk Assessment

- **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, December 2016, Bangkok, Thailand.
- **Workshop:** The workshop on human biomonitoring (described above) was attended mainly by participants from low and middle income countries, and included a significant element of strengthening capacity for undertaking human biomonitoring activities in low resource settings.

2. TOOLS FOR ASSESSING CHEMICAL RISKS

2.1 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.

Two collaborative forums have been established under the umbrella of the WHO Chemical Risk Assessment Network, one on the topic of Mode of Action and the other on Combined Exposures. These groups provide a forum for Network Participants to share information about their activities on the topic, and to coordinate activities as necessary. The groups consist of experts from institutions which are leading the development of new methods in these topic areas. Both groups meet several times per year via teleconference.

Another Network activity was the project to review the use of WHO guidance on Chemical-Specific Adjustment Factors (CSAFs) in the ten years since publication in 2005

(Harmonization Project Document No. 2 http://apps.who.int/iris/bitstream/10665/43294/1/9241546786_eng.pdf). The working group reviewed more than 100 examples of use (or attempted use) of CSAF identified from literature searches and a call for data. An analysis was undertaken which focussed on the methodology used and the lessons learned from the examples. A write-up of the analysis was drafted into a manuscript for a journal article, peer reviewed at a WHO expert meeting in June 2016 and was submitted for publication.

A working group consisting of Network Participants was formed to write a framework on systematic review in chemical risk assessment. 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. Rather than offering a prescriptive method, the framework will provide a general overview of how to conduct a systematic review. The working group met several times during 2016 and aims to publish the framework during 2017.

2.2. 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*. A drafting group meeting, convened at RIVM, Bilthoven, on 30 March -1 April 2016, reviewed and revised a draft document. The drafting group continued to work through 2016 to prepare a version for public and peer review, planned for 2017.

3. HEALTH IMPACTS OF CHEMICALS

3.1 Chemical Risk Assessment Documents

- **Malathion:** Following the evaluation of malathion by the IARC monograph programme in 2015, the implications of the IARC monograph conclusions with respect to the WHO recommended uses of malathion for disease vector control were examined. Risk assessments for the WHO recommended uses were commissioned, and the assessments were considered by a WHO expert meeting held 16-17 May, 2016. The meeting report assisted WHO Units concerned with vector control to provide advice to Member States on the use of malathion in vector control programmes.

& Use of malathion for vector control
http://apps.who.int/iris/bitstream/10665/207475/1/9789241510578_eng.pdf

3.2 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 (<http://www.ilo.org/dyn/icsc/>) 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 is replacing the diverse sources of ICSCs used in the past. The diverse collections of language versions are

similarly being replaced by this single source. There are currently eight language versions available, with a further four languages being translated.

GHS classifications continue to be made for new and updated International Chemical Safety Cards (ICSCs). The corresponding hazard statements, signal words and symbols are included on the ICSCs. To date, GHS classifications have been included on 525 ICSCs.

A peer review meeting for the ICSCs was held 31 October to 3 November 2016, at which 43 ICSCs were revised.

ICSCs continue to be available through the INCHEM website (www.inchem.org).

& International Chemical Safety Cards.
<http://www.ilo.org/dyn/icsc/>

3.3 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 2016 there were 1.15 million visits to the INCHEM web site, with 26% of visitors (300,000) being repeat visitors. Approximately 33% of visitors (380,000) accessed the INCHEM collection either directly or via links from other web sites, with the remaining 67% 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].

3.4 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 2016, web information on the 10 chemicals was updated regularly to include newly developed materials.

& 10 Chemicals of Major Public Health Concern web site.
http://www.who.int/ipcs/assessment/public_health/chemicals_phc/en/index.html

3.5 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, 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 and the other on Good Labelling Practice for pesticides. The Guideline on Highly Hazardous Pesticides was published by the FAO/WHO Joint Meeting on Pesticides Management (JMPM) in April 2016. WHO/IPCS made a significant contribution to the technical content of this Guideline. This Guideline was also intended to compliment the FAO/WHO/UNEP Strategy on Highly Hazardous Pesticides in the context of SAICM, which was referred to in the ICCM4 resolution on HHPs.

4. POISONS PREVENTION, INFORMATION AND MANAGEMENT

4.1 Poisons Information and Management

A report on the health hazards associated recycling used lead acid batteries, drafted in 2015, has been extensively revised and was finalised.

4.2 Network of poisons centres

Two papers were published as off-shoots of the SAICM¹ Quick Start Programme (QSP) project to assess the feasibility of a subregional poisons centre in East Africa that was completed in 2014. The first paper proposed a model for poisons centre operations in Africa and was co-authored with WHO. The second concerned the epidemiology of poisoning in east Africa and was based on one of the QSP project components carried out by staff at the poisons centre in Zimbabwe.

& Marks C et al. A promising poisons information centre model for Africa. *AFJEM*. 2016; 6(2):64-69
<http://www.sciencedirect.com/science/article/pii/S2211419X15001354>

& Tagwireyi D et al. Pattern and Epidemiology of Poisoning in the East African Region: A Literature Review. *J Toxicol*. 2016; Article ID 8789624.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5108859/pdf/JT2016-8789624.pdf>

A visit was made to the new poisons centre at the Government Chemical Laboratory Agency (GCLA) in Dar Es Salaam, United Republic of Tanzania, on 14 September 2016, to assess its progress. Recommendations were made for providing additional support to the centre, however, some funding is needed for this.

¹ Strategic Approach to International Chemicals Management

The poisons centre directory on the WHO Global Health Observatory was updated with the addition of 3 new poisons centres (China Hong Kong SAR, Lebanon and the Philippines) and extensive revision of poisons centre listings for the USA and the Islamic Republic of Iran.

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

4.3 WHO Guidelines for the Prevention and Management of Lead Poisoning

The guidelines for the management of lead poisoning were further revised with the addition of recommendations for nutritional interventions. These were discussed at a meeting of the guideline development group on 5-7 December in London, UK. These guidelines will be published in 2017. Work also continued on the guidelines for the prevention of lead poisoning, including a review on screening interventions and on methods for mapping sources of lead exposure. Further work will be carried out in 2017.

4.4 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 UNEP, 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.

Work commenced on an Action Plan for the work of the Alliance in 2016-2017 jointly developed by UNEP, WHO and the Chair of the Alliance's Advisory Group (the US EPA), in consultation with the Advisory Group for the Alliance.

WHO/IPCS, in partnership with UNEP, is monitoring progress in eliminating lead paint through a survey of Member States. A database and map have been created in the WHO Global Health Observatory that shows the status of legally-binding controls on lead paint. This is updated periodically as new information becomes available. As of December 2016 only 63 countries had confirmed that they had 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/IPCS participated in two regional workshops to promote the establishment of legal controls on lead paint. The first workshop was for central and eastern European and central Asian countries, held on 19–20 May, in Chişinău, Republic of Moldova. The second was for east African countries, held on 13–14 September, in Dar es Salaam, United Republic of Tanzania. Details and documents for both meetings can be found on the UNEP website.

& Central and Eastern Europe and Central Asia Regional Workshop on the Establishment of Legal Limits on Lead in Paint

<http://web.unep.org/chemicalsandwaste/leadpaintalliance/events/central-and-eastern-europe-and-central-asia-regional-workshop-establishment-legal-limits-lead>

& East Africa Workshop on the Development of National and Regional Regulations and Standards on Lead in Paints
<http://web.unep.org/chemicalsandwaste/leadpaintalliance/events/east-africa-workshop-development-national-and-regional-regulations-and-standards-lead-paints>

WHO/IPCS also participated in a Lead Paint Alliance webinar held on 29 August. The purpose of the webinar was to provide information to Alliance partners and other interested parties on work being done by the Alliance and on progress towards the 2020 target that all countries should have in place legal controls on lead paint. A question and answer session was also held. There were 74 participants in the webinar.

Work continued on the Lead Paint Alliance Advisory Group toolkit to assist countries in establishing and implementing legally binding controls on lead paint. WHO/IPCS contributed to new modules on conducting blood lead prevalence studies and on carrying out environmental investigations for lead exposure. These will shortly be added to the online toolkit. In addition, modules on lead in paint, the health effects of lead, analysis of lead in blood and in paint, and conducting awareness campaigns were revised.

& Toolkit for Establishing Laws to Control the Use of Lead in Paint
<http://web.unep.org/chemicalsandwastes/noleadinpaint/toolkit>

WHO/IPCS coordinated the fourth international lead poisoning prevention week, which took place this year from 23 to 29 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 UNEP, US EPA and IPEN, developed a campaign pack and a range of campaign materials, including posters, infographics, web banners, flyers and FAQs, in all six UN languages (Arabic, Chinese, English, French, Russian and Spanish). A video message in English, French and Spanish was also prepared. These materials were disseminated via campaign webpages on the WHO website. Social media, particularly Twitter, were also used to provide key messages about lead hazards. WHO participated in a one-hour global Twitter chat on lead, together with UNEP and US EPA. Campaign organizers were able to register their events in a special data collection tool on the WHO website.

Events and activities took place in 100 cities in 47 countries, including launching reports of national surveys of lead in paint, competitions, statements of support for the objectives of the Lead Paint Alliance, public demonstrations, public information campaigns, social media campaigns, and scientific conferences. These events were organized by non-governmental organizations, paint manufacturers, academic institutions and government ministries. Events took place in schools, universities, shopping centres, medical centres, community centres and on the street. A short report of the 2015 lead-week was published in January 2016. A report about the 2016 lead-week activities is in preparation and will be published on the IPCS website in early 2017.

& Fact Sheet on Lead Poisoning and Health (updated) – available in 6 languages
<http://www.who.int/entity/mediacentre/factsheets/fs379/en/index.html>

- & Questions and answers about the International Lead Poisoning Prevention Awareness Campaign (updated) – available in 6 languages
http://www.who.int/ipcs/lead_campaign/QandA_lead_week_2016_en.pdf?ua=1
- & 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/
- & International Lead Poisoning Prevention Week 2015: report
http://www.who.int/ipcs/lead_campaign/Report_ILPPW2015_25Jan16.pdf?ua=1

WHO/IPCS carried out an analysis of performance during 2013–2015 against the Lead Paint Alliance business plan indicator on countries with national awareness campaigns about the risks of lead paint. This showed that the 2020 target of 40 countries having awareness campaigns was already met, but noted the need to keep up the momentum of country engagement with International Lead Poisoning Prevention Week until 2020.

- & The International Lead Poisoning Prevention Week: a progress report on achievement of the Business Plan indicator, 2013-2015
http://www.who.int/ipcs/assessment/public_health/Lead_Paint_Alliance_business_plan_indicator_ILPPW_evaluation.pdf?ua=1

5. CHEMICAL INCIDENTS AND EMERGENCIES

5.1 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.

In 2016, chemical event experts were identified to join IHR Joint External Evaluation (JEE), missions in Pakistan, Lebanon and Jordan. JEEs are intended to assess country capacity to prevent, detect, and respond to public health threats independently of whether they are naturally occurring, deliberate, or accidental.

http://www.who.int/ihr/publications/WHO_HSE_GCR_2016_2/en/

5.2 Responding to Chemical Incidents and Emergencies

In 2016, 21 events were evaluated for their public health significance and the need for technical support by WHO/IPCS. This evaluation was carried out in conjunction with technical counterparts in the regional offices. Technical support was provided in 12 events, as described below.

- Five outbreaks of unknown cause, where WHO/IPCS provided an assessment of the likelihood of a chemical cause and suggested possible lines of investigation.
- One deliberate chemical release involving the setting on fire of oil wells and a sulphur stockpile, resulting in the generation of toxic combustion products for several weeks. This event had a transboundary impact. WHO/IPCS liaised with other agencies involved in response, particularly the Joint Environment Unit of the United Nations Environment Programme and the Office for the Coordination of Humanitarian Affairs, worked with

regional office colleagues on the risk assessment of the events and provided technical information for both countries.

- Four natural or technological events resulting in the release of chemicals into the environment. WHO /IPCS liaised with other agencies involved in response, worked with regional office colleagues on the risk assessment of the events and provided technical information.
- One threat of intentional poisoning. WHO/IPCS provided links to WHO information to deal with the poisoning.
- One vector-borne disease outbreak (zika) that required intensive use of pesticides, giving rise to the risk of poisoning among workers applying pesticides as well as the general public. WHO/IPCS assisted with the risk assessment of pesticide application and contributed to the development of occupational health guidance.

Also in the context of the zika virus outbreak, WHO/IPCS provided technical support to the International Health Regulations (IHR) Secretariat for an expert meeting and updated guidance on the use of insecticides for disease vector control in aircraft (aircraft disinsection).

A document for the health sector on chemical release triggered by natural hazard events (NaTech events) is close to finalisation and will be published in 2017.

Substantial progress has been made on a manual for investigating disease outbreaks of possible chemical etiology. This work is being coordinated by the WHO Collaborating Centre for the Public Health Management of Chemical Incidents in Cardiff, UK.

WHO/IPCS participated in the 4th Meeting of the Inter-Agency Coordination Group on Industrial and Chemical Accidents, on 15 April 2016 in Geneva, Switzerland. The purpose of this meeting was to share information about activities and to identify areas for collaboration and synergy. The input of meeting participants was sought on guidance documents on technological hazards being developed under the Sendai Framework for Disaster Risk Reduction.

6. PROMOTING HEALTH IN INTERNATIONAL CONVENTIONS AND AGREEMENTS

6.1 Strategic Approach to International Chemicals Management (SAICM)

In 2016, WHO continued to work on strengthening the engagement of the health sector in implementation of SAICM. In particular, a resolution was brought forward to and adopted by the 69th World Health Assembly entitled *The role of the health sector in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond*. The Secretariat prepared the necessary report to support the Assembly in making its decision.

& A69/19: Role of the health sector in the sound management of chemicals.
http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_19-en.pdf

The resolution called on WHO to develop, in consultation with Member States and others, a road map for the health sector at the national, regional and international levels towards achieving the 2020 goal and contributing to relevant targets of the 2030 Agenda for Sustainable Development. The WHO Secretariat was requested to present the road map to the Seventieth World Health Assembly.

Accordingly, a draft road map was prepared by the Secretariat. An electronic consultation, involving a survey, on the draft was held from 9 August to 16 September 2016. The draft road map was revised by the Secretariat in the light of the input received and was made available on the WHO website in November 2016 so that it could be discussed at the 140th Executive Board Meeting in January 2017.

& EB140/33: The role of the health sector in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond.
http://apps.who.int/gb/ebwha/pdf_files/EB140/B140_33-en.pdf

The above report contains an overview of the road map and the results of the consultation process.

In addition the WHO continued to be engaged in SAICM emerging policy issues, including lead in paint, endocrine disrupting chemicals, nanotechnology and manufactured nanomaterials, and e-waste, as required.

6.2 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 participated in the 7th meeting of the Mercury Intergovernmental Negotiating Committee, held in Jordan, Dead Sea, Jordan, 10–15 March 2016.

WHO Regional Offices convened, with Headquarters support, the following workshops:

- From 5-6 October 2016, a workshop for Caribbean countries entitled “Health sector in the implementation of the Minamata convention on mercury” was held in Kingston, Jamaica.
- Workshop for Eastern Mediterranean Region countries on Health and the Minamata Convention, 30 November – 1 December, Amman, Jordan.

Key publications:

& Environmental and occupational health hazards associated with artisanal and small-scale gold mining. Geneva: World Health Organization; 2016
<http://apps.who.int/iris/bitstream/10665/247195/1/9789241510271-eng.pdf>

& Overview of progress in the development of public health strategies on artisanal and small-scale gold mining, including in the context of the Minamata Convention on Mercury: WHO report for Mercury INC7, Document INF7, http://www.mercuryconvention.org/Portals/11/documents/meetings/inc7/English/7_INF7_ASGM_WHO..pdf

& Work of the World Health Organization relevant to the Minamata Convention: August 2014 to December 2015: WHO report for Mercury IN7, Document INF4 Annex III. http://www.mercuryconvention.org/Portals/11/documents/meetings/inc7/English/7_INF4_REV1_cooperation.pdf

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.

6.3 Rotterdam and Stockholm Convention

The Conferences of the Parties to Rotterdam and Stockholm Conventions did not meet in 2016.

6.4 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, UNEP, 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 2016, two regular meetings of the IOMC were held 11-12 May, hosted by UNEP in Geneva and 18-19 November, hosted by UNIDO in Vienna. Refer to: <http://www.iomc.info> for information about IOMC activities.

WHO represented the IOMC at the SAICM Bureau meeting, 16-17 March, in Dead Sea, Jordan.

In 2016, work continued to implement the EC funded IOMC project entitled IOMC Toolbox for decision making in chemicals management – Phase II: Modification, Expansion and Promotion. The IOMC Toolbox is available on the IOMC web page at <http://www.who.int/iomc/en/>. In 2016, the agreement with the EC was revised, including a no-cost extension of the project duration by 12 months to 31 October 2017. The overall objective of the project which commenced on 1 November 2013 is to support implementation of SAICM by promoting the identification and implementation of guidance materials for chemicals management by IOMC Participating Organizations, especially in developing countries and countries with economies in transition. In addition, the EC accepted to support Phase III of the project commencing in the second half of 2017.

The IOMC Toolbox project is managed by WHO. Face-to-face meetings of the Toolbox Project Management Group took place in May and October. In addition, a range of technical activities were implemented by WHO. Finally, WHO commenced development of the proposal for Phase III in collaboration with IOMC Participating Organizations.

LIST OF PUBLICATIONS DURING 2016

International Chemical Safety Cards (ICSCs): 43 updated cards have been published in 2016. These are listed in the table below.

Use of malathion for vector control

http://apps.who.int/iris/bitstream/10665/207475/1/9789241510578_eng.pdf

International Lead Poisoning Prevention Week 2015: report

http://www.who.int/ipcs/lead_campaign/Report_ILPPW2015_25Jan16.pdf?ua=1

WHO Fact Sheet on Lead Poisoning and Health (updated)

<http://www.who.int/entity/mediacentre/factsheets/fs379/en/index.html>

Questions and answers about the International Lead Poisoning Prevention Awareness Campaign (updated) – available in 6 languages

http://www.who.int/ipcs/lead_campaign/QandA_lead_week_2016_en.pdf?ua=1

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/

The International Lead Poisoning Prevention Week: a progress report on achievement of the Business Plan indicator, 2013-2015

http://www.who.int/ipcs/assessment/public_health/Lead_Paint_Alliance_business_plan_indicator_ILPPW_evaluation.pdf?ua=1

Toolkit for Establishing Laws to Control the Use of Lead in Paint: modules on:

- Lead paint and the problem
- Health hazards of lead
- Analytical methods for measuring lead in blood
- Analytical methods for measuring lead in paint
- Conducting blood lead prevalence studies
- Environmental sampling
- Conducting lead awareness-raising campaigns

<http://web.unep.org/chemicalsandwaste/noleadpaint/toolkit>

Global Health Observatory: Regulations and controls on lead paint

http://www.who.int/gho/phe/chemical_safety/lead_paint_regulations/en/

Marks C et al. A promising poisons information centre model for Africa. AFJEM. 2016; 6(2):64-69

<http://www.sciencedirect.com/science/article/pii/S2211419X15001354>

Global Health Observatory: poisons centres

http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

Work of the World Health Organization relevant to the Minamata Convention: August 2014 to December 2015: WHO report for Mercury IN7, Document INF4 Annex III.

http://www.mercuryconvention.org/Portals/11/documents/meetings/inc7/English/7_INF4_RE_V1_cooperation.pdf

List of International Chemical Safety Cards published in 2016

ICSC No.	Chemical	CAS
15	BENZENE	71-43-2
53	LINDANE	58-89-9
163	HYDROGEN CHLORIDE	7647-01-0
181	MONOCROTOPHOS	6923-22-4
183	NITRIC ACID	7697-37-2
194	ROCK WOOL	NONE
195	SLAG WOOL	NONE
226	BERYLLIUM	7440-41-7
235	CHLOROACETIC ACID	79-11-8
237	bis(CHLOROMETHYL) ETHER	542-88-1
240	COPPER	7440-50-8
283	HYDROGEN FLUORIDE	7664-39-3
326	DISODIUM ARSENATE HEPTAHYDRATE	10048-95-0
362	SULPHURIC ACID	7664-93-9
385	BENZ(a)ANTHRACENE	56-55-3
431	DIBENZ(a,h)ANTHRACENE	53-70-3
610	2-NAPHTHYLAMINE	91-59-8
641	o-CHLOROBENZALDEHYDE	89-98-5
648	COPPER (II) ORTHOARSENATE	10103-61-4
672	POTASSIUM PERMANGANATE	7772-64-7
683	1,2,3-TRICHLOROPROPANE	96-18-4
700	TRIPHENYLPHOSPHINE	603-35-0
759	4-AMINOBIIPHENYL	92-67-1
807	TRIDYMIT	15468-32-3
808	QUARTZ	14808-60-7
809	CRISTOBALITE	14464-46-1
931	o-NITROTOLUENE	88-72-2
1008	PHOSPHORIC ACID	7664-38-2
1141	PERLITE	93763-70-3
1144	KAOLIN	1332-58-7
1148	2-MERCAPTOIMIDAZOLINE	96-45-7
1248	SULPROFOS	35400-43-2
1304	DIMETHYL MERCURY	593-74-8
1314	CROCIDOLITE	12001-28-4
1325	BERYLLIUM OXIDE	1304-56-9
1351	BERYLLIUM SULFATE	13510-49-1
1352	BERYLLIUM NITRATE	13597-99-4
1353	BERYLLIUM CARBONATE	66104-24-3
1354	BERYLLIUM CHLORIDE	7787-47-5
1355	BERYLLIUM FLUORIDE	7787-49-7
1447	OLEUM	8014-95-7
1524	1,3-PROPANE SULTONE	1120-71-4
1560	NITROCELLULOSE (less than 12.6% nitrogen)	9004-70-0

MEETINGS HELD IN 2016

30 March – 1 April 2016

Drafting Group Meeting for WHO/IPCS Environmental Health Criteria Document on Principles and Methods for assessing the risk of immunotoxicity associated with exposure to nanomaterials

Bilthoven, Netherlands

10 May 2016

Inter-agency Meeting on Sound Chemicals Management

Geneva, Switzerland

8-9 June 2016

Expert peer review meeting for the Chemical-Specific Adjustment Factors (CSAF) project

WHO-CC NSF, Ann Arbor, Michigan, USA

18 - 20 October 2016

2nd Interagency Meeting on Sound Chemicals Management

Vienna, Austria

31 October-3 November 2016

Peer-review meeting for International Chemical Safety Cards

Geneva, Switzerland

17-19 November 2016

WHO Workshop on Human Biomonitoring (HBM) to Support Chemical Risk Assessment

Bangkok, Thailand

18 November 2016

Permanent Mission information Session on the draft chemicals roadmap (WHA 69.4)

Geneva, Switzerland

21 November 2016

Meeting between Regional Office and HQ colleagues on the draft chemicals road map and other issues

Geneva, Switzerland

30 November - 1 December 2016

EMRO Workshop on Health and the Minamata Convention

Amman, Jordan

5–7 December 2016

Guideline Development Group Meeting: Guidelines for the management of lead poisoning

London, UK