



WHO Chemical Safety - Activity Report 2012

This document presents a summary of WHO Chemical Safety activities undertaken in 2012.

It covers the following areas:

1. Health Impacts of Chemicals (including Concise International Chemical Assessment Documents (CICADs), International Chemical Safety Cards (ICSCs), Advocacy on Chemicals of Public Health Concern and the WHO Classification of Pesticides by Hazard.
2. Tools for Assessing Chemical Risks (including the IPCS Harmonization Project; Environmental Health Criteria Documents) and Strengthening Global Collaboration in Chemical Risk Assessment.
3. Poisons Prevention, Information and Management, including the development of WHO guidelines on Lead.
4. Chemical Incidents and Emergencies.
5. International Conventions and Agreements, including SAICM and mercury.

A list of WHO/IPCS publications is given in [Annex 1](#) and a list of WHO/IPCS Events in 2012 is given in [Annex 2](#).

1. HEALTH IMPACTS OF CHEMICALS

1.1 Concise International Chemical Assessment Documents (CICADs) and other Risk Assessment Documents

The CICAD under development for Chromium(VI) compounds (CICAD No.78) was updated and revised during 2012 following an extensive response to the public and peer review which was undertaken. As of the end of 2012, this document is being prepared for publication.

The human health risk assessment of the use of the insecticide DDT in indoor residual spraying for disease vector control was published in hard copy format during 2012 as part of the Environmental Health Criteria Series (EHC No. 241). Since this EHC on DDT was finalized, periodic (annual) literature reviews have been undertaken to ensure that WHO will be in a position to provide up-to-date information to the Conference of the Parties of the Stockholm Convention on Persistent Organic Pollutants when DDT is discussed in Spring 2013.

New publications continue to be disseminated through the IPCS web site, direct mailing to institutions worldwide, and on the INCHEM web site, free-of-charge (<http://www.inchem.org>).

1.2 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 have been translated into 24 languages and are available on the Internet in 17 languages via the web sites of ILO and participating institutions.

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 350 ICSCs.

The English language version of the ICSCs are now available via a web-based interface (<http://www.ilo.org/dyn/icsc/>) which is linked directly to the underlying database, hence the latest version of each ICSC is now immediately available. During 2012, the publication of ICSCs in other languages directly via the web interface (using an automated process) has been pilot tested with two languages. The translation of the underlying dictionary of sentences and parameters has also been largely completed for two other languages. The translation process will continue to be developed during 2013, with further languages and new methods for disseminating the ICSCs introduced (for example via mobile devices).

A total of 38 ICSCs were created or revised at a peer review meeting, 4 to 8 June 2012. The ICSC Compiler's Guide which sets out the list of standard sentences on identity, hazardous effects and precautionary statements was updated via a working group meeting to better align with the criteria used in the GHS, especially in the areas of carcinogenicity, mutagenicity and reproductive effects.

ICSCs continue to be available through the INCHEM web site (www.inchem.org) and the web sites of participating institutions such as US NIOSH (www.cdc.gov/niosh/ipcs/icstart.html).

1.3 IPCS INCHEM web site (<http://www.inchem.org>)

This web site enables IPCS to disseminate its collections of risk assessment documents to a wider audience. The number of unique visitors to the web site in 2012 were in excess of 1.5 million, with 23% of them returning.

1.4 Chemicals of Public Health Concern and Burden of Disease

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. 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 2012, web information on the 10 chemicals was updated taking into account newly developed materials.

http://www.who.int/ipcs/assessment/public_health/chemicals_phc/en/index.html

1.5 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. In 2010 the document was updated to incorporate an updated classification scheme based on the Globally Harmonized System for Classification and Labelling (GHS) as the starting point for allocating pesticides to a Hazard Class. This revised WHO Classification document was used in 2012 as the basis for certain provisions in the update of the *FAO/WHO International Code of Conduct on the Distribution and Use of Pesticides*, in particular for the identification of Highly Hazardous Pesticides. The WHO Classification will also play a significant role in two Guideline documents being developed to support the revised Code – one on the management of Highly Hazardous Pesticides and the other on Good Labelling Practice for pesticides. WHO will be working with FAO to take these activities forward.

1.6 Food Safety-related assessments

The JECFA and JMPR programmes are undertaken by the Department of Food Safety and Zoonoses (FOS), and are therefore not reported in detail here.

Evaluations of the FAO/WHO Joint Expert Committee on Food Additives are available free-of-charge on the Food Safety web site at <http://www.who.int/foodsafety/chem/jecfa/publications/en/index.html>; toxicological monographs are also available on the INCHEM web site (<http://www.inchem.org>).

Evaluations of the FAO/WHO Joint Meeting on Pesticide Residues are available free-of-charge on the Food Safety web site at <http://www.who.int/foodsafety/chem/jmpr/publications/en/index.html> and also on the INCHEM web site.

2. TOOLS FOR ASSESSING CHEMICAL RISKS AND STRENGTHENING GLOBAL COLLABORATION IN CHEMICAL RISK ASSESSMENT

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.

A summary report on Harmonization Project activities in 2012 follows. The resulting publications are provided at the end of Section 2.1.

- **Risk Assessment of Combined Exposures to Multiple Chemicals.** This activity developed a high level tiered framework for assessing the combined risk from exposure to one or more agents via all relevant routes and pathways and to review approaches employed to date in different sectors (e.g., pesticides, industrial chemicals, therapeutics) and disciplines (e.g., consumer exposure, occupational exposure, environmental exposure). The Framework was published in early 2011. In 2012, the WHO/IPCS Framework and related case studies were presented and discussed at a WHO-sponsored Continuing Education Course at EUROTOX 2012 in Stockholm on 17 June.

- **Guidance for Immunotoxicity Risk Assessment.** The final WHO/IPCS guidance on immunotoxicity risk assessment for chemicals, along with a series of illustrative case studies, was published in 2012. The WHO guidance and illustrative case studies were presented and discussed at a WHO-sponsored Continuing Education Course at EUROTOX 2012 in Stockholm on 17 June 2012.
- **Mode of Action.** The Mode of Action Steering Committee met regularly by teleconference to provide a platform for institutions to implement a plan of work relating to A. Update of the Mode of Action Framework Guidance; B. Development of Case Studies; C. Implementation of MOA in category approaches; D. Education; and E. Development of an MOA Database. A WHO convened Writing Group met at the Joint Research Centre (JRC) in Ispra from 14 to 16 February 2012, and subsequently by teleconference to develop a manuscript for an update of the WHO/IPCS Mode of Action Framework. By December 2012, the manuscript was in final editing and will be submitted for publication in a Journal in early 2013.
- **Principles of Characterizing and Applying PBPK Models in risk assessment.** A group of experts that participated in the development of the WHO/IPCS 2010 guidance on "Principles of Characterizing and Applying PBPK Models" co-authored a Journal article that will promote uptake and use of the WHO/IPCS guidance. The article has been submitted for publication.
- **Characterizing and Communicating Uncertainty in Hazard Assessment.** A WHO Drafting Group met regularly by teleconference to further develop draft guidance on this subject. A workshop to peer review the guidance is planned for 2013.
- **Identifying Early Life Stages for Characterizing Chemical Exposures.** This activity is developing practical tools for countries to explicitly consider early life stages in chemical risk assessment. Draft materials were released on the WHO web site in December 2011, for comment by 31 January 2012. The draft document was presented and discussed at a WHO Risk Assessment Workshop held in Bonn, Germany on 28 March 2012. Comments received during the web and Workshop consultations were considered by a drafting group, and the manuscript is in the final stages of development prior to publication.
<http://www.who.int/ipcs/methods/harmonization/areas/lifestages/en/index.html>
- **Interpreting Effects that may be modest or adaptive.** An initial draft document was developed addressing the interpretation of effects in toxicity studies that may be modest or adaptive, which was passed to a working group of the Joint Meeting on Pesticide Residues for consideration and further development.

New publication(s) issued in 2012:



Harmonization Project Document No. 10: Guidance for Immunotoxicity Risk Assessment for Chemicals

http://www.who.int/ipcs/methods/harmonization/areas/guidance_immunotoxicity.pdf

2.2. Environmental Health Criteria (EHC) and Other Methodology Documents

In 2012, work continued to prepare the EHC on Dermal Exposure which is a complementary document to the EHC 235 on Dermal Absorption. After the expert review meeting in 2011, major revisions of some sections of the document were made in 2012. Finalization of the EHC is now planned for 2013.

During 2012, WHOPEs and IPCS updated and published (via the WHOPEs web site) a revised version of the generic risk assessment model for insecticide-treated nets. The revised model makes use of updated databases for improved input data to the models, and takes account of technological advances such as the development and use of factory-treated long-lasting insecticidal nets.



Generic risk assessment model for insecticide-treated nets

http://whqlibdoc.who.int/publications/2012/9789241503419_eng.pdf

A WHOPEs/IPCS risk assessment model for use of insecticides in aircraft disinsection is under development. This aims to assist Member States to implement the International Health Regulations (2005), Annex 5 Specific Measures for Vector-Borne Diseases, which states that where there are methods and materials advised by WHO for disinsection, these should be employed. During 2012 the risk assessment model was finalized by an Expert Meeting held at Imperial College London from 10 to 12 January, and evaluations using the model were conducted for a number of products currently marketed or proposed for use in aircraft. The risk assessment model and the product evaluations are undergoing editing and will be published during 2013.

2.3 Strengthening Global Collaboration in Chemical Risk Assessment, including networking and capacity building.

A 2nd WHO Meeting on Strengthening Global Collaboration in Chemical Risk Assessment, was held in Bonn, Germany from 29 to 30 March 2012, endorsed the establishment of a WHO chemical risk assessment network to provide a forum for identification of gaps, needs and emerging issues, scientific exchange and collaboration on risk assessment activities, identification of resources and mutual support. The meeting called for an initial Steering Group to be convened by WHO to assist in developing a business plan as well as a strategic plan to lay out and implement the steps required to establish the network, ideally over the following twelve months. In order to maintain momentum and continue to move forward during this planning, the initial Steering Group was also invited to initiate and facilitate the coordination of short-term concurrent activities.

Prior to the Bonn meeting, on 28 March, a Workshop on Risk Assessment Methodologies was convened to present and discuss a number of WHO/IPCS chemical risk assessment methodologies.

Following the Bonn meeting, an initial Steering Group comprising two core groups was established. One core group has developed a business plan for the network, which will be published on the occasion of the 2013 formal launch of the network. Another core group established criteria for, and selected a number of, initial short-term activities for which project plans are currently being developed. These include provision of a source of information (database or web portal) for risk assessment training activities to promote cooperation and reduce duplication of effort, as well as mapping of international risk assessment tools, to facilitate their uptake and use and identify gaps for further work.



Report of the 2nd WHO/IPCS Meeting on Strengthening Global Collaboration in Chemical Risk Assessment, 29-30 March 2012, Bonn, Germany
http://www.who.int/ipcs/about_ipcs/networks/gra_report/en/index.html

A number of activities have been conducted and supported to strengthen risk assessment capacities in countries and to introduce and promote the use of the WHO Human Health Risk Assessment Toolkit, including:

- 2nd WHO/IPCS Meeting on Strengthening Global Collaboration in Chemical Risk Assessment, 29-30 March 2012, Bonn, Germany.
- National workshop for building capacity to control and manage hazardous chemicals and wastes at the ports, 2-4 May 2012, Mombasa, Kenya.
- Regional training workshop on environmentally safe transboundary movement of hazardous chemicals and wastes, 18-20 June 2012, Mauritius.
- National workshop for building capacity to control and manage hazardous chemicals and wastes at the ports, 18-20 July 2012, Darussalam, Tanzania.
- Continuing Education Course (CEC) on the WHO Human Health Risk Assessment Toolkit for Chemical Hazards, Conference on Toxicology in Developing Countries (CTDC), 10 September 2012, Bangkok, Thailand.
- Introductory level training on risk assessment and risk management, Asia Pacific Economic Cooperation (APEC), 7-8 November 2012, Bangkok, Thailand.
- Post-Graduate Education in Environmental Toxicology, Technology and Management on Health/Environment Risk and Impact Assessment, Chulabhorn Research Institute, 18-19 December 2012, Bangkok, Thailand
- Work continued in 2012 on the SAICM QSP Project to develop course materials and a distance learning tool (DLT) for the assessment of risk from the use of chemicals, which aim to support SAICM's capacity building efforts in developing countries. The WHO Human Health Risk Assessment Toolkit will be an integral part.

3. POISONS PREVENTION, INFORMATION AND MANAGEMENT

3.1 Poisons Information and Management

WHO/IPCS arranged the submission of a proposal for fomepizole to be added to the WHO Essential Medicines List (EML). This proposal will be considered by the 19th Expert Committee on the Selection and Use of Essential Medicines, which will meet in April 2013. Fomepizole is used in the treatment of methanol and ethylene glycol poisoning. Mass methanol poisonings occur regularly in a number of countries and are associated with a high mortality and a high level of sequelae. The alternative antidote is ethanol, however, its side effects complicate treatment. Fomepizole, while more expensive, is easier to use, particularly in low-resource settings, and has fewer side effects.

3.2. Network of poisons centres and INTOX

A SAICM Quick Start Programme (QSP) project on assessing the feasibility of a subregional poisons centre in East Africa started in January 2012. This project is being implemented by WHO HQ and the Regional Office for Africa (AFRO), in collaboration with the Zambian Environmental Management Agency. The project is scheduled to end in June 2013. A literature review has been carried out to gather information on the epidemiology of poisoning and on health systems and mechanisms of funding in the 16 countries in the subregion. Consultations have been held in four countries that are being looked at in depth (Kenya, Tanzania, Zambia and Zimbabwe) in order to find out about attitudes to a sub-regional centre and views about its feasibility. A survey is currently underway in the 12 other countries in the sub-region.

Eight subscriptions to the INTOX Data Management System were provided to poisons centres in developing countries and countries with economies in transition. At present, 14 poisons centres are using this system.

3.3 WHO Guidelines for the Prevention and Management of Lead Poisoning

Work is continuing on the development of WHO guidelines for the prevention and management of lead poisoning. The project is at the stage of conducting systematic evidence reviews for the interventions selected by the Guideline Development Group.

Booklets on the analysis of lead in blood and on the analysis of lead in paint, have been translated into Chinese, French and Spanish and published on the IPCS web site. These documents provide a brief overview of the most commonly used analytical methods. They aim to inform environmental and public health personnel and policy makers, who are not laboratory specialists but who may need to develop plans for lead screening and abatement programmes, including decisions about analyses.



Brief Guide to Analytical Methods for the Measurement of Lead in Blood
http://apps.who.int/iris/bitstream/10665/77912/3/9789245502135_chi.pdf
http://apps.who.int/iris/bitstream/10665/77915/1/9789242502138_fre.pdf
http://apps.who.int/iris/bitstream/10665/77917/1/9789243502137_spa.pdf



Brief Guide to Analytical Methods for the Measurement of Lead in Blood
http://apps.who.int/iris/bitstream/10665/77911/3/9789245502128_chi.pdf
http://apps.who.int/iris/bitstream/10665/77914/1/9789242502121_fre.pdf
http://apps.who.int/iris/bitstream/10665/77916/1/9789243502120_spa.pdf

4. CHEMICAL INCIDENTS AND EMERGENCIES

In 2012, over 40 events were evaluated for their public health significance and the need for technical support by WHO/IPCS. Significant support was provided in 26 events, as follows:

- Five disease outbreaks of unknown cause, where WHO/IPCS consulted with its clinical toxicology network and provided technical input to the assessment of etiology. A toxicology laboratory was identified for one of the outbreaks.
- One environmental and one complex emergency, where input on potential chemical issues was provided for the public health risk assessment, as well as advice on management.

- Three requests for assistance on assessing the possible environmental health impact of extraction and/or processing of minerals, where WHO/IPCS provided guidance to Regional Office colleagues, including links to other experts.
- Three chemical releases, where WHO/IPCS supported Regional Office assessment and response, including facilitating links with other relevant organizations.
- Four mass poisonings with methanol, where WHO/IPCS provided technical input on assessment and management, including links to sources of external expertise.
- Eight events involving contaminated products where WHO /IPCS contributed to the risk assessment.
- Assessment of one product giving rise to severe illness as a result of a particular circumstance of use and communication of this risk to other Member States.

WHO/IPCS participated in an international meeting about the mass lead poisoning in Nigeria, held in Abuja from 9 to 10 May, that aimed to maintain awareness of this continuing problem. Together with WHO Country Office colleagues, WHO/IPCS held a number of advocacy meetings to try and accelerate the development of a lead laboratory and treatment centre in Zamfara State.

In 2012, IPCS has supported the establishment of the International Training Centre (ITC) for the public health management of chemicals. The ITC has been set-up by the WHO Collaborating Centre, Cardiff, as an international training centre as part of the University of Wales Institute Cardiff's International Training Centre. It is a collaboration between the HPA, UWIC, Public Health Wales and Cardiff University with the support of IPCS. The ITC uses training material developed in 2011 which, in turn, is based on the WHO Manual for the Public Health Management of Chemicals.

Other activities undertaken to raise awareness about the public health impact of chemical incidents and to promote the above-mentioned WHO manual include presentations at the following meetings (see also section 2.3):

- National workshop for building capacity to control and manage hazardous chemicals and wastes at the ports, 2-4 May 2012, Mombasa, Kenya.
- Regional training workshop on environmentally safe transboundary movement of hazardous chemicals and wastes, 18-20 June 2012, Mauritius.
- National workshop for building capacity to control and manage hazardous chemicals and wastes at the ports, 18-20 July 2012, Darussalam, Tanzania.
- Continuing Education Course (CEC) on the WHO Human Health Risk Assessment Toolkit for Chemical Hazards, Conference on Toxicology in Developing Countries (CTDC), 10 September 2012, Bangkok, Thailand.
- Post-Graduate Education in Environmental Toxicology, Technology and Management on Health/Environment Risk and Impact Assessment, Chulabhorn Research Institute, 18-19 December 2012, Bangkok, Thailand.

Continued contributions were made to the WHO Training Course on Securing Global Health: International Health Regulations (IHR) implementation course to raise awareness and train about chemical events and the IHR, Veyrier du Lac, France, 30 January to 10 February 2012. (<http://www.who.int/ihr/training/ihrcourse/en/index.html>).

Regular coordination meetings were attended with partners involved in the prevention and management of chemical incidents and emergencies, including the Global Health Security Initiative (GHSI) and its Working Group on Chemical Events, UNEP, and relevant NGOs.

5. IMPLEMENTATION OF INTERNATIONAL CONVENTIONS AND AGREEMENTS, INCLUDING SAICM

Activities in 2012 focused on implementation of the Strategic Approach to International Chemicals Management (SAICM), the Global Alliance to Eliminate Lead Paints, the International Health Regulations, negotiations for a mercury treaty, the IOMC and the GHS as outlined below.

5.1 Strengthening the support, awareness and the need for engagement of the health-sector in the Strategic Approach to International Chemicals Management (SAICM).

Work in 2012 included:

- Finalizing the draft strategy for strengthening the engagement of the health sector in SAICM implementation prepared pursuant to resolution II/8 of the second session of the International Conference on Chemicals Management. The strategy was adopted by the third session of the International Conference on Chemicals Management held in Nairobi, Kenya from 17 to 21 September 2012.
- Increasing awareness about the draft strategy through WHO regional offices, networks of WHO collaborating centres and forums such as the WHO Global Forum of Government Chief Nursing and Midwifery Officers.
- Participation as a member of the SAICM Quick Start Programme Trust Fund Implementation Committee (meetings 9 May 2012, Geneva and 28 to 29 November 2012, New York) and SAICM Executive Board 7 to 8 May 2012, Geneva. WHO is an Executing Agency for nine Quick Start Programme projects and is involved in coordinating these projects through Headquarters, Regional and Country offices, as appropriate.
- Direct contribution to the work of the SAICM secretariat through the provision of a WHO staff member, until 30 September 2012. In 2012, a particular focus of the work was preparing for and supporting the third session of the International Conference on Chemicals Management with responsibility for coordination of the work on reporting on implementation of SAICM, and health-sector engagement. In 2012, data collected from stakeholders was analysed to assist the Conference to evaluate progress in implementing the Strategic Approach with a view to reviewing progress against the target that by 2020 chemicals will be produced and used in ways that minimize significant adverse impacts on human health and the environment.
- In addition to managing nine QSP projects, WHO is contributing technical expertise to three SAICM QSP projects, including:
 - (i) a project on the development of course materials and a distance learning tool (DLT) for the assessment of risk from the use of chemicals to support SAICM's capacity building efforts in developing countries. Project lead is with the Chulabhorn Research Institute, Bangkok, Thailand; and

(ii) a project on training on risk assessment of chemicals at national level in a global context a training courses in Ghana. Project lead is with the International Panel on pollution Control (IPCP), Zurich, Switzerland.

5.2 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.

The overall goal of the Global Alliance to Eliminate Paint 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. The Business Plan for the Global Alliance to Eliminate Lead Paint was finalized which provides a road map describing the strategies, milestones and means of achieving the goals and objectives of the Global Alliance. The Business Plan was published on the web site in Chinese, English, French and Spanish. The Operational Framework for the Alliance has also been published on the web site in English, French and Spanish.

The second meeting of the Global Alliance to Eliminate Lead Paint was held in Bangkok, Thailand from 9 to 11 July 2012. A particular focus of the 2012 forum was to present the Business Plan, welcome new and potential contributors to the work and to discuss practical ways of achieving business plan priorities.

An interim Advisory Group for the work of the Global Alliance met by teleconference on five occasions in 2012. A working group was established to develop and implement a proposal for an international day of action on the prevention of lead poisoning with an initial focus on eliminating lead paint. The Working Group met in Washington D.C. on 30 November 2012 to further plan the international day of action and global awareness campaign which will take place during the week of 21 to 25 October 2013. The workplan for this event is now being implemented. .

Outreach and advocacy work during 2012 included holding a side event at the third session of the International Conference on Chemicals Management, and discussion of the Business Plan of the Global Alliance with WHO regional offices and networks of collaborating centres as well as those known to be working on lead issues.



Business Plan for the Global Alliance to Eliminate Lead Paint; available in Chinese, English, French, Russian and Spanish.

http://www.who.int/ipcs/assessment/public_health/gaelp/en/index.html



Operational Plan for the Global Alliance to Eliminate Lead Paint; available in English, French and Spanish.

http://www.who.int/ipcs/assessment/public_health/gaelp/en/index.html



Report of the 2nd meeting of the Global Alliance to Eliminate Lead Paint 9-11 July 2012, Bangkok, Thailand (in press).

5.3 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 the detection and surveillance of such outbreaks, and can call upon the support of the WHO and the international community to manage the outbreaks. In 2012, the chemical safety team continued its contribution to strengthen core capacities in countries related to IHR (see also section 4).

The deadline for putting in place national core capacities was June 2012. However, 60% of member States have requested an extension to 2014. In order to better understand the specific needs of countries, the WHO IHR team held a series of regional meetings in 2012. WHO/IPCS participated in the regional meeting for Eastern Mediterranean countries held in Rabat, Morocco from 12 to 15 November. At this meeting, countries identified significant gaps in the capacities needed for surveillance of, and response to, chemical events, a lack of poisons centres, and poor coordination between relevant national authorities.

WHO is a collaborating partner in a European project called ASHT III, which commenced in June 2012. This project is funded under the European Union (EU) Public Health Programme and is managed by the United Kingdom Health Protection Agency (HPA). It aims to further develop work carried out under ASHT I and II to implement an EU-wide alerting system for chemical release. The alert system, called RAS-CHEM, uses poisons centres as sentinels. RAS-CHEM includes a mechanism for informing WHO of IHR-relevant events. Under ASHT III, the project will: develop a toxidrome matrix tool for RAS-CHEM to improve the early detection of chemical events; produce Chemical Emergency Medical Management (CEMM) sheets for the treatment and management of chemical casualties; and will evaluate the feasibility of establishing a 'network of experts' to monitor toxicological data reported to RAS-CHEM, and to produce CEMM sheets in response to emerging health threats. The CEMM sheets make reference to a number of WHO products, including the International Chemical Safety Cards, the WHO global directory of poisons centres and the WHO Manual on the Public Health Management of Chemical Incidents.

5.4 Mercury Treaty Negotiations

UNEP-convened negotiations for a legally binding international treaty on mercury commenced in June 2010. WHO participated in INC4 held in Punte del Este, Uruguay, from 25 to 29 June 2012. WHO contributed technical information for the INC, including a submission of key WHO information on mercury, which was published on the official meeting documents web page.

The WHO Information Document on Mercury in Skin Lightening Products was translated into the five additional UN languages, published on the IPCS web site, and made available to the INC. The Information Document was utilized by the media (press and television) during 2012, raising awareness about the hazards of these products.



WHO Submission for Mercury INC4: Index to Key Information from the World Health Organization

<http://www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/INC4/Submissions%20from%20IGOs/WHO%20Submission%20to%20INC4%2019%20June%202012.pdf>



Mercury in Skin Lightening Products, WHO Information Document (2011), published in 2012 in Arabic, Chinese, French, Russian and Spanish
http://www.who.int/ipcs/assessment/public_health/mercury/en/index.html

5.5 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 2012, two regular meetings of the IOMC were held from 10 to 11 May, hosted by UNEP in Geneva, and from 27 to 28 November, hosted by UNDP in New York. Refer to: <http://www.iomc.info> for information about IOMC activities.

5.6 Globally Harmonized System for Classification and Labelling (GHS)

Updates on the work being undertaken by WHO to implement the GHS were provided to the UN Sub-Committee of Experts on the GHS (UNSCEGHS) at meetings during 2012. This included the continuing addition of GHS classifications to ICSCs (350 chemicals) and promoting the availability of GHS classifications for chemicals via the OECD eChemPortal. WHO staff continue to participate in the work of UNSCEGHS correspondence groups on precautionary information and on development of a global list of GHS classified chemicals.

LIST OF PUBLICATIONS DURING 2012

Harmonization Project Document Series

Harmonization Project Document No. 10: Guidance for Immunotoxicity Risk Assessment for Chemicals

http://www.who.int/ipcs/methods/harmonization/areas/guidance_immunotoxicity.pdf

International Chemical Safety Cards (ICSCs)

38 new and updated cards have been published in 2012. These are listed in Appendix 1.

Other

Operational framework for the global alliance to eliminate lead paint (in English, French and Spanish)

http://www.who.int/ipcs/assessment/public_health/gaelp/en/index.html

Business plan for the global alliance to eliminate lead paint (in Chinese, English, French, Russian and Spanish)

http://www.who.int/ipcs/assessment/public_health/gaelp/en/index.html

Mercury in skin lightening products (in Arabic, Chinese, French, Russian and Spanish)

http://www.who.int/ipcs/assessment/public_health/mercury/en/index.html

WHO Submission for Mercury INC4: Index to Key Information from the World Health Organization

<http://www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/INC4/Submissions%20from%20IGOs/WHO%20Submission%20to%20INC4%2019%20June%202012.pdf>

Brief guide to analytical methods for the measurement of lead in blood (in Chinese, French and Spanish)

http://www.who.int/ipcs/assessment/public_health/lead/en/index.html

Brief guide to analytical methods for the measurement of lead in paint (in Chinese, French and Spanish)

http://www.who.int/ipcs/assessment/public_health/lead/en/index.html

Generic risk assessment model for insecticide-treated nets

http://whqlibdoc.who.int/publications/2012/9789241503419_eng.pdf

List of International Chemical Safety Cards published in 2012

<u>ICSC No.</u>	<u>new/upd</u>	<u>Substance</u>	<u>CAS</u>
3	update	Lead chromate	7758-97-6
5	update	Paraquat dichloride	1910-42-5
21	update	Carbon dioxide	124-38-9
45	update	Ethylene dibromide	106-93-4
58	update	Dichloromethane	75-09-2
80	update	1,1,2-Trichloroethane	79-00-5
109	update	Methyl bromide	74-83-9
123	update	Ceramic fibers (aluminosilicate)	None
157	update	Glass wool	None
161	update	Hexachlorophene	70-30-4
275	update	Formaldehyde	50-00-0
276	update	Furfural	98-01-1
329	update	Talc (silica and fibre free)	14807-96-6
376	update	Antipyrine	60-80-0
382	update	Benomyl	17804-35-2
509	update	Methyl iodide	74-88-4
593	update	Trimethyl borate	121-43-7
695	update	Formaldehyde (37% solution, methanol free)	50-00-0
794	update	Furfuryl alcohol	98-00-0
811	update	Zinc chromate	13530-65-9
937	update	Phenothiazine	92-84-2
1036	update	Ammonium oxalate	1113-38-8
1159	update	Tetrahydrofurfuryl alcohol	97-99-4
1168	update	2,3-Butanedione	431-03-8
1184	update	Calcium chloride (anhydrous)	10043-52-4
1192	update	Calcium	7440-70-2
1193	update	Calcium carbonate	471-34-1
1200	update	Sodium sulfite	7757-83-7
1246	update	Picloram	1918-02-1
1249	update	Hydrogenated terphenyls	61788-32-7
1324	update	Aluminium fluoride (anhydrous)	7784-18-1
1401	update	Calcium silicate (non-fibrous, <1% crystalline silica)	1344-95-2
1689	update	Bis(pentabromophenyl)ether	1163-19-5
1732	new	Dimethylfumarate	624-49-7
1748	update	3-Methylbutanal	590-86-3
1764	new	Cyfluthrin	68359-37-5
1766	new	Methiocarb	2032-65-7
1769	new	Glass fibres	None

MEETINGS HELD IN 2012

10-12 January 2012

Technical meeting on generic human health risk assessment model for Insecticides used in aircraft disinsection

London, United Kingdom

14-16 February 2012

Harmonization of approaches to the assessment of risk from exposure to chemicals: Mode of Action Writing group meeting

Ispra, Italy

28-30 March 2012

Second WHO Meeting on Global Collaboration in Chemical Risk Assessment: Strengthening Capacity Building and Networking, with associated Workshop

Bonn, Germany

4-8 June 2012

Peer-review meeting for International Chemical Safety Cards

Bologna, Italy

17 June 2012

WHO Continuing Education Course on Risk Assessment of Immunotoxicity for Chemicals and WHO/ILSI Continuing Education Course on Risk Assessment of Combined Exposures to Multiple Chemicals EUROTOX 2012

Stockholm, Sweden

9-11 July 2012

Second meeting of the Global Alliance to Eliminate Lead Paint

Bangkok, Thailand

12 September 2012

WHO Symposium: Environmental burden of disease in developing countries: from evidence to action, Conference on Toxicology in Developing Countries (CTDC)

Bangkok, Thailand

24-26 October 2012

International Chemical Safety Cards: Compiler's Guide Committee meeting

Geneva, Switzerland

30 November 2012

Working Group - 2013 International Day of Action on Lead in Paint

Washington D.C., USA