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**Progress and challenges towards the achievement of the 2020 goal of sound chemicals management: regional and sectoral achievements, strengths and challenges in the context of working towards the objectives of the Strategic Approach Overarching Policy Strategy**

# Report by the World Health Organization on the engagement of the health sector in the Strategic Approach to International Chemicals Management

## Note by the secretariat

The secretariat has the honour to circulate, for the information of participants, a report received from the World Health Organization on the engagement of the health sector in the Strategic Approach to International Chemicals Management (see annex). The report is reproduced as received by the secretariat, without formal editing.

* SAICM//ICCM.4/1

# Annex

## Report by the World Health Organization on the engagement of the health sector in the Strategic Approach

## I. Introduction

1. This paper provides recent examples of international and regional engagement of the health sector in sound chemicals management facilitated by WHO, as well as reviews the work of relevant networks and collaborating centres. It is an updated version of **SAICM/OEWG.2/INF/17** and complements the national level reports analysed in document **SAICM/ICCM.4/3** ("Summary report on progress in SAICM implementation 2011-2013: report by the Secretariat") and the report on WHO activities in **SAICM/**ICCM.4/INF/2 ("Activities of the Inter-Organization Programme for the Sound Management of Chemicals to support SAICM Implementation").

2. WHO and health sector engagement with SAICM regional meetings can be found in the relevant reports of those meetings.

## II. WHO consultation with health sector stakeholders on priorities related to the 2020 goal

3. In June and July 2015, WHO conducted an online survey amongst governmental and non-governmental health-sector stakeholders in the sound management of chemicals, to collect views on health-related priorities and activities related to the 2020 goal. The survey was widely distributed to WHO health contacts and SAICM Focal Points. An analysis of the views collected are presented in SAICM/ICCM.4/INF/11 Priorities of the health sector towards achievement of the 2020 goal of sound chemicals management - Results of WHO consultation for consideration by ICCM4 in finalizing the Overall orientation and guidance for achieving the 2020 goal of sound management of chemicals.

## III. Engaging the Health Sector in SAICM Emerging Policy Issues

4. The WHO, in collaboration with a range of partners, seeks to actively engage the health sector in a number of SAICM "emerging policy issues" (EPIs). For more detailed information related to activities on EPIs, please consult document SAICM/ICCM.4/9 as well as related Information Documents.

***Lead in paint***

5. The Global Alliance to Eliminate Lead Paint (GAELP) is a cooperative initiative jointly led by WHO and UNEP, with each leading activities relevant to its mandate. Health sector engagement has included:

(a) The 2013 International Week of Action on Prevention of Lead Poisoning (20-26 October 2013), involving 44 countries and more than 100 cities[1];

(b) The third meeting of the Global Alliance to Eliminate Lead Paint (GAELP) held on 24 September 2014 in conjunction with a Workshop on Establishing Legal Limits on Lead in Paint, 22-23 September 2014 at WHO Regional Office for South-East Asia in New Delhi, India. The workshop included one day of presentations and discussion on health aspects, and WHO supported the participation of health ministries[2];

(c) The 2014 International Week of Action on Prevention of Lead Poisoning (19-25 October 2014) raised awareness worldwide about lead poisoning. Participants were provided with information and communication materials that could be adapted to fit individual events and outreach efforts[3;] and

[1] http://www.who.int/entity/ipcs/lead_campaign/outcomes_2013.pdf?ua=1

[2]http://www.unep.org/chemicalsandwaste/LeadCadmium/PrioritiesforAction/LeadPaints/GAELPWorkshop/tabid/1036780/Default.aspx

[3] http://www.who.int/ipcs/lead_campaign/en/

(d) In April 2015 during the Earth Day celebration in Washington DC , UNEP Good will Ambassador Don Cheadle with UNEP, EPA, PAHO/WHO and the paint industry urged governments to eliminate lead in paint. The event attracted more than 300,000 people and millions of viewers on line. [4]

***Endocrine-disrupting chemicals (EDCs)***

6. WHO has continued to work with UNEP, OECD, and others to implement cooperative actions for the workplan on EDCs stemming from an ICCM-3 resolution in 2012. In order to facilitate engagement of the health sector in the EDC issue and bringing together Ministries of Health and other public health institutions, researchers and NGOs, WHO convened an expert meeting in Bonn, Germany from 7-8 July 2014 to discuss exposure and disease surveillance methodologies for health risk assessment of EDCs (the meeting report is available from the WHO Europe web site).[5]

7. WHO continues to implement the health-related aspects of the collaborative workplan, including actions in follow-up to the July 2014 meeting. Information will be disseminated through scientific journals, capacity building will take place engaging WHO Collaborating Centres[6] and medical professionals' societies.

***Nanotechnology and manufactured nanomaterials***

8. WHO is currently developing Guidelines on "Protecting Workers from Potential Risks of Manufactured Nanomaterials" (WHO/NANOH)[7], which will engage the occupational health sector – a sector that will need to play a leading role in implementation of the Guidelines.

9. In October 2014, the International Agency for Research on Cancer (IARC) evaluated the carcinogenic potential of carbon nanotubes (see also paragraph 27).[8]

10. A multi-sectoral workshop held in Bonn, Germany, in December 2012 on "Nanotechnology and human health: Scientific evidence and risk governance" reviewed and discussed the current state of knowledge concerning the established, suspected, and potential health risks and impacts of nanotechnology.[9]

11. The WHO Chemical Risk Assessment Network has initiated a project to develop an Environmental Health Criteria document on 'Principles and methods for assessing the risk of immunotoxicity associated with exposure to nanomaterials'. The publication will present the current state of the science of testing nanomaterials for immune system toxicity and will put forth strategies for assessing the risk for immune mediated health effects.

***Hazardous substances within the life cycle of electrical and electronic products ("e-waste")***

12. In consideration of the impact on health of vulnerable populations, WHO in collaboration with UNEP, PACE, UNU, WHO Collaborating Centres and other stakeholders established an informal network on e-waste. Network activities have included: a pilot study in Thailand, looking at levels of heavy metals in children living and studying near e-waste sites; a systematic literature review looking at health outcomes related to e-waste exposure; a meeting in June 2013 at WHO Headquarters in Geneva where WHO and partners identified gaps that need urgent attention; a series of publications in health journals; a special section on e-waste in the children's environmental health WHO/UNEP monthly newsletter; a joint UNU and WHO survey to identify the perceived risks associated with e-waste; a network website; an e-waste case study was included in the WHO/UNEP publication

[4] http://bit.ly/1HoIefZ

[5] http://www.euro.who.int/__data/assets/pdf_file/0004/274387/Identification-risks-endocrine-disrupting-chemicals-overview-en.pdf?ua=1

[6] WHO collaborating centres are institutions such as research institutes, parts of universities or academies, which are designated by the Director-General to carry out activities in support of the Organization's programmes. Currently there are over 700 WHO collaborating centres in over 80 Member States: http://www.who.int/collaboratingcentres/en/

[7] http://www.who.int/occupational_health/topics/nanotechnologies/en/

[8] http://monographs.iarc.fr/ENG/Meetings/index.php

[9] http://www.euro.who.int/en/health-topics/environment-and-health/health-impact-assessment/publications/2013/nanotechnology-and-human-health-scientific-evidence-and-risk-governance

"State of the Science of Endocrine Disrupting Chemicals" (2013); a training module on e-waste and child health [10].

# IV. Regional Level Activities and Initiatives

13. At the regional level, WHO regional offices often lead activities related to SAICM and chemicals and waste management that engage many different parts of the health sector, encourage collaboration with non-health sectors in responding to chemical events, and undertake analyses about health-sector engagement. In some regions, there are also dedicated initiatives on health and environment that include significant elements related to SAICM and chemicals and waste management.

***Africa***

14. In 2014 the WHO regional office for Africa (AFRO) conducted a comprehensive assessment survey with a view to identifying the chemicals that are of major public health concern in the region, assessing the public health hazards associated with the chemicals, understanding the distribution of the burden of chemical risks across the region, and evaluating the existing chemical management systems[11]. The assessment noted that it is usually reported that the responsibility of chemicals management in Africa lies within different sectors and in most cases there is lack of a mechanism for coordination and collaboration among the sectors. Thus, the development of intersectoral coordination mechanisms for the management of chemicals was recommended as a priority.

15. The 2010 Luanda Commitment identified chemical management as one of the top health and environment priorities to be addressed to accelerate the implementation of the 2008 *Libreville Declaration on Health and Environment in Africa*. In this regard, the WHO and UNEP Joint Task Team (JTT) for the implementation of the Libreville Declaration developed in 2012 a framework to reduce chemicals risks to human health and the environment in Africa.[12] This framework was endorsed by the African Ministerial Conference on the Environment in October 2013. The framework makes note of, inter alia:

- Effective implementation and enforcement of both the Strategic Approach to International Chemicals Management and the chemical-related international conventions requires that the policies of the health and environment sectors are aligned with each other, and that there exist strong institutional mechanisms to facilitate collaboration with other sectors and greater integration of the sound management of chemicals into the broader development agenda.

***Europe***

16. In June 2015, a meeting on the "Implementation of Strategic Approach to International Chemicals Management in health sector and health sector priorities to 2020 goal in the WHO European Region" was held in Bonn, Germany. The meeting focused on actions at national and regional level to implement SAICM health sector strategy and priorities to reach 2020 goal. The main topics discussed by national focal points on health-related aspects of chemical safety, SAICM national and regional focal points, representatives of international and non-governmental organizations included health sector role and main challenges for its involvement in chemicals management at the national level and national frameworks needed to respond these challenges, strengthening of human resources in the health sector, facilitation of inter-sectoral cooperation, and priority areas and actions till 2020. The outcomes of the meeting are included in the WHO report on *Priorities of the health sector towards achievement of the 2020 goal of sound chemicals management - Results of WHO consultation.*

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[10] http://www.thelancet.com/journals/langlo/article/PIIS2214-109X%2813%2970020-2/fulltext
http://www.thelancet.com/journals/langlo/article/PIIS2214-109X%2813%2970101-3/abstract
http://www.niehs.nih.gov/research/programs/geh/geh_newsletter/assets/docs/feb14_spotlight_508.pdf
http://download.thelancet.com/pdfs/journals/lancet/PIIS0140673613614658.pdf?id=410a13c7e856fa01:70c69497:13ff41212cf:-30b81374190568145
https://www.qcmri.uq.edu.au/media/1438/Geneva%20Declaration%20final.pdf

[11] http://www.afro.who.int/en/clusters-a-programmes/hpr/protection-of-the-human-environment/phe-publications/4690-chemicals-of-public-health-concern-in-the-african-region.html

[12] "African Programme to reduce chemical risks to human health and the environment", AMCEN/14/REF/4.

17. From 17-19 October 2012, a meeting on "Health aspects of chemical safety: Strategic directions for action of the WHO Regional Office for Europe" was held in Bonn, Germany. The purpose of the meeting was to assess the capacities of WHO European Member States to address the health-related aspects of chemical safety, identify gaps and set priorities for action at the regional level, and identify the need for assistance from the WHO Regional Office for Europe to facilitate the implementation of the Parma Declaration commitments, relevant World Health Assembly resolutions and international agreements.[13] The meeting was attended by representatives of health and other ministries (e.g. environment).

18. In March 2013, an awareness-raising and training workshop for South-eastern European countries on "Capacity-building in the public health management of chemical incidents and IHR implementation" was held in Belgrade, Serbia. The aim was to raise the awareness of decision-makers about the need to build capacity and partnerships in the area of chemical incidents, and provide training for health and other professionals involved in the prevention of, preparedness for and response to such events. The implementation of the IHR in the area of chemical safety was discussed in relation to the requirements of other relevant international agreements on facilitating multisectoral cooperation. Among others, the workshop recommended that:

multidisciplinary training sessions emphasizing the roles and responsibilities of the main responders would help in building a harmonized approach to the management of acute chemical events at the national and regional levels, and facilitate the coherent and effective implementation of relevant international agreements, including IHR.[14]

19. A 2014 WHO-EURO report on "Health sector involvement in chemical management at national level: review of current practice"[15] presents practical examples of health-sector involvement in chemicals management in selected countries, including legislative arrangements, research projects, the collection and dissemination of information, awareness-raising practices, and approaches to the education and training of medical professionals. This information can be used by professionals in the health and other sectors in connection with planning action for the implementation of the SAICM Health Sector Strategy. Key findings of the paper include, *inter alia*:

(a) The current situation vis-à-vis health-sector involvement in, and the implementation of, chemicals management varies significantly among countries around the world. Current information collected from different sources demonstrates that the role and responsibilities of the health sector should be defined in national legislation;

(b) In order that health-sector input into national chemicals management may be effective, action must be taken in six principle areas, namely: (1) awareness raising; (2) risk assessment; (3) capacity building and resilience; (4) information collection and dissemination; (5) intersectoral communication and collaboration and effective working; and (6) international leadership and coordination; and

(c) There should be significant health-sector involvement in the development of interagency policies, plans and programmes for national chemicals management so that it can perform its important role in risk assessment, health-impact assessment, monitoring, control and surveillance.

20. In the 2010 *Parma Declaration on Environment and Health*, ministers of health and of environment of the 53 Member States of the WHO Regional Office for Europe pledged to reduce the adverse health impact of environmental threats in the next decade.[16] Through the Declaration and Commitment to Act, participating governments agreed, *inter alia*, to contribute to the Strategic Approach to International Chemicals Management (SAICM) and requested increased research on the use of nanoparticles in products and nanomaterials.

On 28–30 April 2015 in Haifa, Israel, high-level country representatives and international, intergovernmental, and nongovernmental organizations, as well as other stakeholders in the

[13] http://www.euro.who.int/__data/assets/pdf_file/0019/184402/e96794.pdf

[14] http://www.euro.who.int/__data/assets/pdf_file/0007/236158/E96960.pdf

[15] http://www.euro.who.int/__data/assets/pdf_file/0020/242660/Health-Chemical-Web_Final.pdf

[16] http://www.euro.who.int/en/health-topics/environment-and-health/Climate-change/publications/2010/protecting-health-in-an-environment-challenged-by-climate-change-european-regional-framework-for-action/parma-declaration-on-environment-and-health

Environment and Health Process, evaluated the progress and gaps on the environment and health goals set in the Parma Declaration and identified provisionally eight main themes for the preparation of the next ministerial Conference: air, water and sanitation, energy, chemicals, food, waste, cities and disasters/climate change. Progress and gaps in chemical safety area are outlined in the following report: "Improving environment and health in Europe: how far have we gotten?" [17]

21. While many of the activities listed in this paper contribute towards the implementation of the Parma Declaration, meetings were convened in 2012 on specific topics related to the Parma Declaration, including a multi-sectoral meeting in April 2012 on "Biomonitoring-based indicators of exposure to chemical pollutants" held in Catania, Italy, to define a list of biomarkers for the proposed WHO survey in the general population and inhabitants of areas contaminated by the petrochemical industry. In 2015, WHO/Europe published a report "Human biomonitoring: facts and figures" which summarizes the available human biomonitoring (HBM) data in the WHO European Region with a focus on children's exposures. The report provides background information on the principles and applications of HBM, summarizes results of recently conducted international and national surveys and research projects, provides summaries of temporal trends and spatial patterns for specific pollutants, and outlines major accomplishments, data gaps and priority environmental health issues based on the analyses of HBM data[18].

***Latin American and the Caribbean***

22. At a 14 June 2013 meeting in Montevideo, Uruguay, Health Ministers of Mercosur and Associated States declared their commitment to proactively participate in the development and implementation of conventions related to the chemical safety, in particular: Stockholm, Basel, Rotterdam, GHS, SAICM, and the Minamata Convention as part of the governance structures to ensure sustainable chemicals management. Specific roles and responsibilities for the health sector were identified, including information dissemination, attention to vulnerable populations and surveillance, and working in a multi-sectoral environment.[19]

23. At the 19th Meeting of the Forum of Ministers of Environment for Latin America and the Caribbean, held in Los Cabos, Mexico in March 2014, WHO/PAHO made a presentation on Health and the Minamata Convention on Mercury.[20]

24. WHO/Pan American Health Organization facilitated a regional bilingual discussion session on 7 July 2015 on the WHO survey on health priorities and activities for the SAICM 2020 goal on sound management of chemicals. The main topics discussed during the webinar included capacity building, inter sectoral collaboration, use of participatory methods for community engagement in environmental health issues, and investigation of teratogenic effect in areas where pesticides are heavily used.

***Asia–Pacific***

25. A WHO *Regional Workshop on Chemical Safety* was held from 24-26 June 2013 at the Chulabhorn Research Institute, Thailand with the objective of developing a regional implementation plan for the WHO South-East Asia region on the health-related aspects of chemical safety.[21] Over 70 participants in the workshop were drawn from ministries of health, ministries of environment and other government agencies, inter-governmental and regional bodies and non-governmental bodies active in chemical safety. The Workshop concluded on some of the priority actions needed to achieve the 2020 goal of sound chemicals management including continued multi-sectoral and multi-stakeholder approaches, strengthened collaboration with technical and academic institutions, and improved networking and engagement with poisons centres in the region. SAICM focal points from the region participated in the meeting and an informal one-day meeting of the SAICM Asia-Pacific regional coordinating group was also held to facilitate formalisation of this group.

[17] http://www.euro.who.int/en/media-centre/events/events/2015/04/ehp-mid-term-review/publications/improving-environment-and-health-in-europe-how-far-have-we-gotten

[18] http://www.euro.who.int/en/media-centre/events/events/2015/04/ehp-mid-term-review/publications/human-biomonitoring-facts-and-figures

[19] SAICM/RM/LAC.4/INF/11

[20] http://www.pnuma.org/forodeministros/19-mexico/documentos.htm

[21] http://www.searo.who.int/entity/occupational_health/about/regional_workshop/en/

26. The *Regional Forum on Environment and Health in Southeast and East Asian Countries* is a cross sectoral political initiative that brings together national policy makers from the environment and health ministries of 14 South-East and East Asian countries.[22] It was established by Ministers of Health and Environment in 2004 and has a joint UNEP/WHO secretariat. It aims to strengthen the cooperation of the ministries responsible for environment and health within the countries and across the region by providing a mechanism for sharing knowledge and experiences, improving policy and regulatory frameworks at the national and regional level, and promoting the implementation of integrated environmental health strategies and regulations. There are five thematic working areas, including chemicals and wastes.

27. The Third Ministerial Meeting of the *Regional Forum* was held 9-10 September 2013 in Kuala Lumpur, Malaysia. Major decisions made and agreed in the meeting were i) adoption of the Kuala Lumpur Declaration on Environment and Health, ii) adoption of the Report on Governance, Impact, Partnerships, and Sustainable Financial Mechanism by the Chair and Vice Chair of the Regional Forum, iii) adoption of the Framework for Cooperation of the Regional Forum with new features on structures and functions, establishment of a Scientific Panel and a Knowledge Network, and iv) agreement on widening the membership of the Regional Forum.

**Text Box 1: South-East Asia Regional Conference on Lead Poisoning**

This Conference was held 24-25 October 2013 in New Delhi, India, as part of the first International Lead Poisoning Prevention Week in collaboration with Toxics Link, Maulana Azad Medical College and Lata Medical Research Foundation and co-sponsored by WHO. The Conference served as a platform for the sharing of information and sensitizing key authorities on the adverse effects of lead and on the prevalence of lead in paint in several countries in the region. Participants included governmental representatives from India, Sri Lanka, Thailand, Maldives and Myanmar and non-governmental organizations, academics, and medical institutions. A 15-point action plan was developed to further accelerate action to eliminate lead from paint in the region[23].

***Eastern Mediterranean***

28. A regional forum in Amman, Jordan, 8-9 December 2014, took place to discuss the implementation of the regional strategy on health and the environment. The meeting was organized with joint participation of ministries of health and ministries of environment from about 20 Member States, WHO and international and regional experts. The overall objective of the strategy is to support countries of the Region in their concerted efforts to reduce the burden of morbidity, disability and premature mortality caused by environmental risks, by:

(a) Reducing environment-related communicable diseases;

(b) Controlling environmental risks for noncommunicable diseases and injuries;

(c) Protecting the most vulnerable population groups from environment-related diseases; and

(d) Strengthening the resilience of the health system and reinforcing the capacities for emergency preparedness and response.

29. The strategy provides a framework of action in the period 2014–19 and identifies seven environmental health priorities including chemical safety[24].

30. WHO's regional Centre for Environmental Health Action (CEHA) and UK-MED (UKIETR) have been conducting a fifth round of chemical exposure and trauma care (CeTC) trainings. This standardized capacity-building course aims to train stakeholders in management of chemical incidents, and was developed because of an increasing number of humanitarian and technological emergencies in the Eastern Mediterranean Region and the need to train health professionals on preparing for, and

[22] http://www.environment-health.asia/index.cfm

[23] http://toxicslink.org/?q=content/south-east-asia-regional-conference-lead-poisoning-24th-25th-october-2013

[24] http://applications.emro.who.int/docs/RC_Techn_paper_2013_tech_disc_1_15013_EN.pdf?ua=

responding to, events with public health consequences. As such, over the past 18 months more than 200 health professionals, decision-makers, as well as environmental health specialists from ministries of health in the Region have been trained[25].

31. Regional stakeholder meetings for WHO Eastern Mediterranean Region countries regarding implementation of IHR core capacities were held in Rabat, Morocco, in November 2012 and Amman, Jordan, in December 2013. At these meetings, 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. The Amman meeting involved about 60 participants from 18 countries representing Ministries of Health, IHR National Focal Points, Ministries of Environment, and Civil Defense and Protection. Among others, the following findings were highlighted:

(a) Responding to chemical events is a multi-sectoral responsibility that requires inputs from a wide range of governmental and non-governmental bodies;

(b) The health sector may not necessarily be the lead agency in all aspects of chemical event management; however, the designated IHR national focal point has the responsibility of ensuring the presence of national capacities for the rapid and efficiently coordinated response to chemical events; and

(c) Certain relevant chemicals' management capacities may be available to countries through other multilateral environmental agreements such as: SAICM, the Basel, Rotterdam, Stockholm, and Minamata Conventions, certain ILO Conventions, the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and the Chemical Weapons Convention.

# V. Thematic networks and technical collaboration

32. The WHO also seeks to engage the health sector in SAICM-related work, as well as engage other sectors in the health-sector activities on chemicals, through a range of networks and technical collaborations on a variety of themes.

## (a) Risk assessment

33. WHO established in 2013 a Chemical Risk Assessment Network of institutions to improve chemical risk assessment globally.[26] The first meeting of the Network took place 8-10 October 2014, in Paris, France and was attended by 55 chemical risk assessment institutions from 29 countries. Themes addressed included: directions in the science of risk assessment; priorities for development of risk assessment methodologies; means to scale up capacity building; and means to coordinate work among institutions on topics of common interest. Technical issues discussed included: use of biomonitoring information in chemical risk assessment; identification of emerging risks; evaluating and expressing uncertainty; and implementation of systematic review approaches in chemical risk assessment. Among others, the meeting supported establishment of an international coordinating forum on combined exposures to chemicals and the creation of a sub-Network for developing country participants that will enable sharing of exposure scenario information relevant to developing country situations.

34. The WHO Pesticide Evaluation Scheme (WHOPES) was set up in 1960. WHOPES promotes and coordinates the testing and evaluation of pesticides for public health. It functions through the participation of representatives of governments, manufacturers of pesticides and pesticide application equipment, WHO Collaborating Centres, and research institutions.[27]

35. The International Agency for Research on Cancer (IARC) is a part of WHO working with interdisciplinary working groups of expert scientists to evaluate chemicals for their carcinogenic risk to humans, providing important health information that is acted upon by many health authorities. IARC holds numerous review meetings each year.[28] Recent meeting topics include: ambient air

[25] http://www.emro.who.int/ceha/ceha-news/cetc-course-5.html

[26] http://www.who.int/ipcs/networks/ranetwork/en/

[27] http://www.who.int/whopes/en/

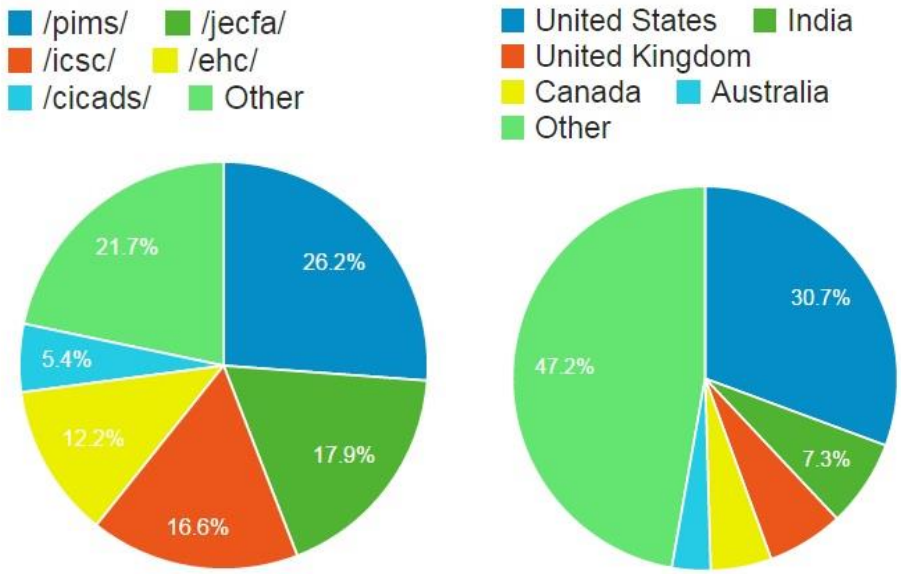
[28] http://monographs.iarc.fr/

pollution, PFOA, some nanomaterials and organophosphate pesticides and organochlorine insecticides. An upcoming meeting, scheduled for February 2016, is on some industrial chemicals.

36. The INCHEM web site provides a consolidated access to publications and information products on international chemical safety of a number of intergovernmental organizations whose goal it is to assist in the sound management of chemicals (i.e. 13 collections of publications, including CICAD, EHC etc.). The web site has been established for many years and is therefore well known and easily accessible for search engines. WHO has analysed INCHEM statistics for the years 2012-2014 and found, amongst others, that i) the site has approximately 1.5 million visitors per year; ii) top countries visiting the site include: the United States of America, India, United Kingdom, Canada, Australia and France and ii) the five most frequently visited collections are: the Poison Information Monographs (PIMs), JECFA Monographs, International Chemical Safety Cards, EHCs and CICADs (Figure 1).

Figure 1

**Left figure: Most frequently visited collections. (PIMS: Poisons Information Monographs, ICSC: International Chemical Safety Cards, CICADS: Concise International Chemical Assessment Documents, JECFA: Joint FAO/WHO Expert Committee on Food Additives, EHC: Environmental Health Criteria) Right figure: Countries visiting the site.**




**(b) Occupational health**

37. The Global plan of action on workers' health 2008–2017 adopted by the World Health Assembly addresses all hazards in the workplace including chemicals.[29] WHO, its Member States and a network of approximately 60 WHO Collaborating Centres work to implement the plan of action worldwide.

38. During 2014, WHO and ILO jointly developed the HealthWISE – Work improvement in health services programme that combines action and learning. HealthWISE is a participatory methodology for the health sector based on the ILO Work Improvement in Small Enterprises (WISE) tool to assist health care organizations in improving working conditions and workplace safety. Included in the tool is a module "Towards a green and healthy workplace" that includes a review of chemicals used in health facilities and alternatives to mercury-containing products.[30] The guidelines are foreseen to be finalized around mid-2016.

[29] http://www.who.int/occupational_health/publications/global_plan/en/

[30] http://www.ilo.org/global/about-the-ilo/media-centre/press-releases/WCMS_250150/lang--en/index.htm

**(c) Implementation of IHR (2005), including incidents, emergencies, and poisons centres**

39. The International Health Regulations (IHR) are an international legal instrument that is binding on 196 countries across the globe, including all the Member States of WHO. Their aim is to help the international community prevent and respond to acute public health risks that have the potential to cross borders and threaten people worldwide. The IHR entered into force on 15 June 2007 and require countries to report certain disease outbreaks and public health events – including chemical events - to WHO. In order to put core capacities in place for countries to detect, assess, notify and respond to chemical events, many sectors of society need to be engaged; as of July 2014, 35 counties have reported they have not yet put in place capacities to detect and respond to chemical events and requested an extension in order to put these in to place.

40. Training is being undertaken, for example, a course on "International Health Regulations (IHR) in Practice" took place for Russian-speaking countries from 22–26 September 2014 in Vihula, Estonia. An additional objective of the training was to facilitate bilateral dialogue between countries to improve the capacity-building process in the WHO European Region. The training involved three participants per country, including two experts from the health sector and one expert from a relevant non-health sector (Ministry of Defence, Interior, Emergency Situations, Environment, Agriculture, etc.). Similarly, for the English speaking countries in the Caribbean and South America, a training workshop on "Preparedness and response to chemical emergencies" was held in Miami during May 2013 and attended by 28 participants from 15 countries with the purpose of identifying resources and needs, mostly in the context of small island countries.

41. Addressing chemical and radionuclear incidents of public health concern remain an important challenge in South-East Asia and an initiative undertaken by WHO has been to develop the *South-East Asia Regional Strategy to Strengthen Public Health Response to Chemical and Radiation Events* in the context of the International Health Regulations. The strategy aims to help Member States develop core IHR capacities as part of an all-hazards preparedness approach to emergency management, and has been developed following a number of expert consultations and regional meetings on chemical and radionuclear events. The strategy underscores the importance of multi-sectoral collaboration and the need to take account of the various national, regional and global obligations that lay outside of the health sector in tackling these issues, thus promoting synergies wherever possible including with efforts to strengthen capacities on chemicals and waste management. Strengthening and establishing poisons centres and poisons centre networks is also recognised as important as these centres are already fulfilling many of the core-capacities needed for implementation of the IHR.

42. Preparedness and response for chemical incidents and emergencies requires the involvement and coordination of multiple sectors, including environment, health, civil protection and industry. This is recognised in the IHR, with its emphasis on good intersectoral collaboration as a core capacity need.

43. Poisons centres can contribute to sound chemicals management in a number of ways, for example by collecting information on the health effects of exposures to chemicals, on the circumstances of exposure and providing early warning of emerging hazards with chemical products. Poisons centres can also contribute to a number of the core capacities needed by countries for implementation of the IHR, in particular capacities for surveillance, preparedness and response for public health events involving chemical agents.

44. WHO has a programme to assist countries with the establishment and strengthening of poisons centres[31] and maintains a global directory of poisons centres.[32] In 2012-13 WHO HQ and the Regional Office for Africa (AFRO), in collaboration with the Zambia Environmental Management Agency, implemented a SAICM Quick Start Programme Trust Fund supported project, which was a feasibility study of a subregional poisons centre in East Africa.[33] An important component of the feasibility study was multisectoral consultation within the sub-region, conducted through meetings and a survey. There were 6 multi-stakeholder meetings to discuss the problem of poisoning in the sub-region, the role of poisons centres, and the feasibility and pre-requisites for a sub-regional poisons centre. These meetings brought together representatives from ministries of health and environment, other IGOS and a number of NGOs. Two meetings were international (in June 2012 and May 2013) and four meetings were national multi-stakeholder workshops, in Kenya, Zambia, Tanzania and Zimbabwe (Sept-Oct

[31] http://www.who.int/ipcs/poisons/en/

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

[33] For more information on this project, see http://www.who.int/ipcs/about_ipcs/activity_report_2013.pdf?ua=1

2012). The survey was sent to all 16 countries in the East Africa subregion, directed at SAICM Focal Points, representatives from ministries of health and professional associations. As part of this project a meeting was also organised in Zambia in May 2013 with representatives from Ethiopia, Uganda, United Republic of Tanzania and Zambia together with the project Steering Group to discuss national plans for establishing poisons centres. The Steering Group included directors of poisons centres in other African countries, who gave practical feedback on the plans and offered to provide training placements. Also in 2013 there was a meeting of the Network of African Poisons Centres and Applied Toxicologists (NAPCAT).[34] This association came into being at an earlier WHO workshop on poisons centres. It aims to promote the establishment of poison centres in the region and to foster knowledge of clinical and applied toxicology, and is currently trying to build up its membership. The establishment of a poisons centre in the United Republic of Tanzania is now well advanced and it is expected to start operations later in 2015.

**Text box 2: The case of mass lead poisoning in Nigeria**

The response to the mass lead poisoning event in Zamfara, Nigeria required the engagement of a number of different sectors. WHO, through its country office, coordinated discussions on response needs and activities between the environment, mining and health sectors, as well as with local leaders, NGOs and IGOs. WHO also engaged in advocacy to urge further action to stop the continuing environmental contamination, drawing attention to the long term health impacts of lead exposure. In addition, WHO raised funds to pay for environmental remediation and the medical treatment of victims.

45. The WHO South-East Asia Regional Office (SEARO) is also working to strengthen poisons centres in the region. Following a workshop in June 2013, the six poisons centres in SE Asia (India, Indonesia, Nepal, Myanmar, Sri Lanka and Thailand) agreed to form a network for mutual support and to strengthen the development of their services and facilities. In addition to the network of poison centres, SEARO has supported the establishment of a Regional Chemical Helpdesk comprising a community of experts for answering questions from users and information clearinghouse on meetings and chemical safety initiatives in the region. The helpdesk is hosted on behalf of the region by the Chulabhorn Research Institute in Thailand. The operations of the clearinghouse are currently being evaluated to make stronger ties with national helpdesks and the information services that are offered by a number of poisons centres in the region.[35]

46. In Latin American and the Caribbean, poisons centres have been engaged in a number of initiatives, including assisting the 2014 and 2015 courses of the PAHO Virtual Campus in Public Health on "Diagnosis, treatment and prevention of acute intoxication by pesticides" targeted at health personnel at the front line of pesticides uses and exposures[36], an April 2014 meeting of six poisons centres from the region in Brazil during the 1st Latin American Congress of Clinical and Laboratorial Toxicology, and the continued dissemination by the regional Toxicology Network of Latin America and the Caribbean (RETOXLAC) of information on clinical toxicology, access to poisoning antidotes and medicaments and toxicology related events and opportunities.

**Text box 3: Greening the health sector**

[34] http://napcat.net/

[35] http://www.chemhelpdesk.com/

[36] http://cursos.campusvirtualsp.org/course/index.php?categoryid=77

As part of broader outreach to the health sector on environmental aspects, a number of actions have taken place in the framework of "greening the health sector", that are of relevance to wider SAICM objectives including:

- The WHO biennial meeting of the Chief Nursing and Midwifery Officers (CNMOs) 2012 included a session specifically on the SAICM health sector strategy and discussed the chemical hazards in health facilities with participation from 90 country CNMOs;
- Development of a toolkit on assessing and addressing chemical hazards in the health care workplace (undertaken by the WHO Collaborating Centre in Occupational Health in PAHO and the University of Maryland Occupational Medicine Clinic);
- Provision of technical advice and leadership in a joint UN interagency initiative on green procurement in the health sector which will also systematically review all chemical substitution lists in use in health care settings for replacing with less toxic alternatives. Included within is a focus on promoting use of safe and environmentally sound chemicals in health care (e.g. disinfectants, sterilants, laboratory reagents, etc.);
- WHO publication from 2015 on Developing national strategies for phasing out mercury-containing thermometers and sphygmomanometers in health care, including in the context of the Minamata Convention on Mercury – Key considerations and step-by-step guidance[37]; and
- The 2nd edition of the handbook on "Safe management of wastes from healthcare activities" - published in 2014 – provides comprehensive guidance on safe, efficient, and environmentally sound methods for the handling and disposal of health-care wastes in normal situations and emergencies[38]

***Air, water, and food safety***

47. WHO establishes a range of guidelines on chemicals in various media, for adoption by national governments, usually the health sector and related regulatory agencies.

48. WHO establishes guidelines for indoor and outdoor air pollution, for adoption by countries. WHO is planning the next update of outdoor air pollution guidelines which will address numerous chemicals and participates in networks led by others, to provide health evidence.[39] WHO guidelines on indoor air pollution will be published in late 2014. At the international level, WHO and the Executive Body for the Convention on Long-range Transboundary Air Pollution (UNECE) lead the "Joint Task Force on the Health Aspects of Air Pollution" to assess the health effects of long-range transboundary air pollution.[40]

49. Regarding water safety, WHO establishes Guidelines for Drinking Water Quality for adoption by countries, including chemical guidelines using an expert process, and collaborates with drinking water regulators around the globe.[41] WHO is working at regional and country levels in the implementation of the Guidelines and Water Safety Plans which aim to identify and control water quality risks to drinking water supplies. Work is underway to support water quality surveillance programmes at the regional level to enhance capacity for surveillance of priority parameters. The technical report "Pharmaceuticals in drinking-water" aims to provide practical guidance and

[37] http://www.who.int/entity/ipcs/assessment/public_health/WHOGuidanceReportonMercury2015.pdf?ua=1

[38] http://www.who.int/water_sanitation_health/medicalwaste/wastemanag/en/

[39] http://www.who.int/mediacentre/factsheets/fs313/en/; http://www.who.int/ipcs/assessment/public_health/air_pollution/en/

[40] http://www.unece.org/env/lrtap/workinggroups/wge/who.html

[41] http://www.who.int/water_sanitation_health/dwq/guidelines/en/

recommendations in managing concerns over pharmaceuticals in drinking-water, taking into consideration available scientific knowledge and evidence.[42]

50. Through the International Food Safety Authorities Network (INFOSAN), WHO along with FAO assists Member States in managing food safety risks, including those arising from chemicals, ensuring rapid sharing of information during food safety emergencies to stop the spread of contaminated food from one country to another. INFOSAN also facilitates the sharing experiences and tested solutions in and between countries in order to optimize future interventions to protect the health of consumers.[43]

# VI. International Conventions and initiatives

51. In addition to SAICM, WHO engages the health sector – and collaborates with a range of other sectors – in a number of international conventions and initiatives.

**Mercury and the Minamata Convention**

52. The May 2014 World Health Assembly adopted a resolution on "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", which supported strong engagement of the health sector in Convention implementation and coordination with other involved sectors.[44] WHO is providing technical support to ministries of health on a range of health aspects of the Convention, including provisions relating to mercury thermometers and sphygmomanometers, dental amalgam, and ASGM. In October 2014, WHO hosted a meeting on "Health in Artisanal Small Scale Gold Mining (ASGM)" in Geneva to discuss development of the public health strategy for national action plans to reduce or eliminate mercury emissions from ASGM.

53. A WHO Europe *Regional Workshop on Health sector involvement in the implementation of the Minamata Convention:* was held from 24-25 June 2015 in Bonn, with the objectives of updating information on mercury health effects and share knowledge and information relevant to the implementation of the Minamata Convention and prevention of exposure to mercury. Needs for capacity building and technical support to facilitate the implementation of the Convention in WHO European Member States were identified. Synergies with other WHO strategies and policies as well as relevant activities in other sectors that could render the implementation of the Convention more efficient, were mapped and investigated.

54. The WHO Regional Office for Europe and Regional Office for Western Pacific organized a session on "protecting human health from adverse impacts of mercury and its compounds: from science to policy and actions" at the 12th International Conference on Mercury as a Global Pollutant held on 14-19 June 2015 in Jeju, Republic of Korea. Scientific support for implementing the Minamata Convention in the health sector was discussed and different topics were raised during the session including occupational exposure, communication of risks and development of harmonized methodologies.

55. In early 2015, the UNEP/WHO project "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury" funded by the Global Environment Facility (GEF) commenced. In the frame of the project WHO has coordinated development of a harmonized scheme for assessing human exposure to mercury on the global scale. Standard operating procedures for three matrices (scalp hair, cord blood, urine) to assess the mercury body burden will be developed and pilot surveys will be conducted in at least 5 countries.

56. PAHO/WHO conducted a satellite national meeting on health in the Minamata convention held at PAHO office in Lima with health sector in preparation for the participation at the South American Forum on Regional Cooperation to Support National Action Plans for Artisanal and Small Scale Gold

[42] http://www.who.int/water_sanitation_health/publications/2012/pharmaceuticals/en/

[43] http://www.who.int/foodsafety/areas_work/infosan/en/

[44] http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_R11-en.pdf?ua=1

Mining (March, 2015) held in Lima, Peru, organized by the Natural Resources Defense Council, US Department of State and UNEP.

**Basel, Rotterdam, and Stockholm Conventions**

57. In the context of the Stockholm Convention, WHO provides technical information as a basis for decisions on DDT and lindane. For the Basel Convention, WHO undertakes activities on medical waste, in collaboration with UNDP.[45] In the context of work related to the Rotterdam Convention, WHO has identified asbestos (see text box 4) as one of 10 chemicals of major public health concern and publishes information for decision-makers, tools for action, norms, guidance, and reviews of the scientific evidence.[46] In 2014 WHO issued a publication on chrysotile asbestos with information for decision-makers on the elimination of asbestos-related diseases, questions commonly raised in policy discussions and a technical summary of the health effects of chrysotile.

58. WHO contributes to capacity building activities and workshops to strengthen competencies of Basel and Rotterdam Convention designated national authorities (DNAs), especially for human health risk assessment and the public health management of chemical incidents. Additionally, WHO is raising awareness about similar and complementary capacity needs required under the IHR for coordination, collaboration and joint implementation.

**Text box 4: Regional Initiatives on Asbestos**

The Asian Initiative for the Elimination of Asbestos-Related Diseases (otherwise known as the Asian Asbestos Initiative or AAI) aims to develop a platform on which public health specialists, researchers, administrators, academia and civil society groups from different countries can share relevant knowledge, core technologies and strategic approaches to eliminate asbestos-related disease. The sixth and seventh meetings of the AAI were held in 2013 in Manila, Philippines and in 2014 in Jakarta. WHO is an active partner in the AAI and has made a short video film about victims of chrysotile asbestos exposure in South-East Asia highlighting the different types of settings in which exposure is possible. [47]

WHO Regional Office for Europe has organized a series of meetings to promote elimination of asbestos and the development national profiles and programs for elimination of asbestos related diseases, including:

- A 2011 meeting on "National programmes for elimination of asbestos-related diseases: review and assessment" [48];

- A 2012 meeting on the "The Human and Financial Burden of Asbestos in the WHO European Region"[49] ;

- A 2014 meeting "Towards the elimination of asbestos-related diseases in the WHO European Region. Assessment of current policies in Member States" [50]; and

[45] http://www.who.int/mediacentre/factsheets/fs281/en/; http://www.who.int/mediacentre/factsheets/fs253/en/

[46] http://www.who.int/ipcs/assessment/public_health/asbestos/en/; http://www.who.int/mediacentre/factsheets/fs343/en/

[47] http://envepi.med.uoeh-u.ac.jp/aai/index.html https://www.youtube.com/watch?v=OTiF3xGXFTI

[48] http://www.euro.who.int/en/health-topics/environment-and-health/occupational-health/publications/2012/national-programmes-for-elimination-of-asbestos-related-diseases-review-and-assessment

[49] http://www.euro.who.int/en/health-topics/environment-and-health/occupational-health/publications/2013/the-human-and-financial-burden-of-asbestos-in-the-who-european-region

- The report "Towards the elimination of asbestos-related diseases in the WHO European Region" was published in English and Russian in 2014. It updates on the implementation of the commitment made at the 5th Ministerial Conference on Environment and Health (Parma, Italy, 2010) and includes assessment of current policies in the countries that made based on a survey conducted in 2014[51]

# VII. Conclusions

59. WHO has played an important role in the establishment of SAICM, coordinating the inputs of health ministries, and identifying the health sector priorities that were subsequently adopted in the Global Plan of Action of SAICM and contributing to the development of the Strategy for strengthening the engagement of the health sector in the implementation of the Strategic Approach, adopted at ICCM-3 in 2012.

60. The findings of this paper indicate the significant work being undertaken by the health sector on SAICM and the work of WHO to support engagement of the health sector on chemicals issues. Regional activities have proven particularly useful, to reach more decision-makers in different sectors (expanding of networks and improve communication) and provide more detailed technical information and support for action at the country level.

61. Other sectors are encouraged to collaborate with the health sector in this regard to further multi-sectoral approaches at the national level.

62. WHO will continue to work to further strengthen the engagement of the health sector in implementation of SAICM in accordance with health-sector priorities and through its 194 Member States, 6 Regional Offices, and 150 Country Offices. [52]

[50] http://www.euro.who.int/en/health-topics/environment-and-health/occupational-health/publications/2015/towards-the-elimination-of-asbestos-related-diseases-in-the-who-european-region.-assessment-of-current-policies-in-member-states,-2014

[51] http://www.euro.who.int/en/health-topics/environment-and-health/occupational-health/publications/2015/towards-the-elimination-of-asbestos-related-diseases-in-the-who-european-region.-assessment-of-current-policies-in-member-states,-2014

[52] http://www.who.int/ipcs/saicm/saicm/en/