WHO input to the SAICM progress report for 2017-2019 period.

The World Health Organization overview
The World Health Organization is an intergovernmental organization with the objective of *the attainment by all peoples of the highest possible level of health*. WHO is the directing and coordinating authority on international health work. This includes *inter alia* delivering programmes, undertaking research, collecting data, building capacity, and developing technical reports, guidelines, methodologies, regulations, policies, and statistics.

Relevance for chemicals management
WHO’s International Programme on Chemical Safety (IPCS) resides within WHO’s Department of Environment, Climate Change and Health which works on a broad range of environmental health issues, including air pollution, climate change, water and sanitation, children’s environmental health, and occupational health, as well as chemical safety.

IPCS focuses on establishing the evidence base for, and reducing the risks and burden of disease from, chemical exposure; this includes work on risk and health impact assessment of priority chemicals; WHO norms, including guidelines and harmonized methodologies; promoting establishment and strengthening of poisons centres; chemical emergency response; convening and contributing to global strategic alliances to address chemical risks; promoting health in development and implementation of international chemical policies, and capacity building.

Progress related to the engagement of health sector in the Strategic Approach to International Chemicals Management and fulfilling its objectives.

WHO has taken the lead role to involve the health sector in SAICM and contributed to strengthening the engagement of the sector in the implementation of the Strategic Approach and its goals and objectives. Over the years WHO undertook numerous of the activities that, among others, raised awareness of the Member States on the role of the health sector in chemicals management, facilitated the sector engagement on global, regional and national levels, supported Member States in capacity building, sharing information, technical cooperation and facilitating multisectoral collaboration.

These efforts of WHO on the global, regional and national level, have delivered many significant achievements that have been reported in detail at meetings of the ICCM and its open-ended working group.
WHO established two important global networks. The WHO Chemical Risk Assessment Network of institutions is a collaborative initiative established to enhance global efforts to assess risks to human health from exposure to chemicals. It was established in 2013 and at the beginning of 2020 comprised 86 risk assessment institutions from 50 countries. The WHO Global Chemicals and Health Network is a global forum for discussion among senior level policy makers and representatives to facilitate implementation of the road map by promoting collaboration on common policy challenges, perspectives and priorities of health ministries in managing chemicals, especially in light of the intersessional process on SAICM and the sound management of chemicals and waste beyond 2020 (the intersessional process. It was established in 2018 and at the beginning of 2020 comprises participants from 75 countries.

Regarding key indicators of progress relevant to the health sector, an upward trend can be seen regarding the total number of countries that have achieved the core capacities on chemicals under the International Health Regulations\(^1\) and the number of countries that have regulated lead in paint\(^2\). Since 2013, WHO has led organization of the international lead poisoning prevention campaign and every year more countries and other stakeholders participate in this one-week event.

In 2017 the WHO Chemicals Roadmap to enhance health sector engagement in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond 2020 was approved. It outlines concrete actions to enhance health sector engagement towards meeting the 2020 goal and contributing to relevant targets of the 2030 Agenda for Sustainable Development. From 2017, the road map has been used by countries as a tool to undertake gap analyses, develop action plans and feed into national chemicals planning processes, to identify on national level areas for health sector leadership and collaboration with other sectors, to communicate the health sector role in chemicals management with other sectors, as well within the health sector. The frequency of use of the road map by countries and other stakeholders is growing.

WHO regularly publishes and updates guidance and other technical documents to support the Member States in the development and implementation of national chemical strategies, including defining the role of the health sector. One example is the series of guidance related to the Minamata Convention on mercury published in the last three years. WHO publications are an important source of information that contribute to risk reduction and capacity building.

In line with raising awareness of the health sector on its role in chemicals management, the frequency of use of WHO databases has increased, for example INCHEM and the Global Health Observatory. WHO regularly updates these databases, which contain information on chemicals and national health statistics, respectively. Furthermore, WHO works to provide information

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1 See page... of the report
2 See page.... of the report
relevant to risk reduction, for example, the International Chemical Safety Cards, prepared in cooperation with ILO and the WHO Recommended Classification of Pesticides. Every year, new cards are added, and existing ones updated and made available in more languages. Moreover, an average of 39 cards per year have been complemented by GHS classification since 2010. The recommended classification of pesticides has been updated severalfold over the last years as well.

Progress in implementing SAICM and its goals and objectives is significant. However, beyond 2020 more work still needs to be done to reach sustainable management of chemicals and waste. This will require the efforts of all stakeholders and can succeed with a multisectoral approach.

Activities of World Health Organization undertaken in the period from 2017 to 2019 supporting implementation of the SAICM and beyond 2020

In the period from 2017 to 2019 the World Health Organization, hereafter the WHO, undertook numerous activities promoting and enhancing health sector engagement in the Strategic Approach to International Chemicals Management towards the 2020 and beyond.

Those activities are continuity of work undertaken in the previous reporting period or are new initiatives and projects. They aim to raise awareness on the importance of health in the sound management of chemicals, to strengthen the presence of health sector in SAICM, highlighting multisectoral and multi-stakeholder nature of that forum, to contribute to the achievement of Sound Development Goals and to support Member States in their national efforts to reach sound management for chemicals. The activities of the WHO help the Member States in raising awareness on the risk posed by chemicals to human health, in risk assessment and management, and in building capacity in the sound management of chemicals to reduce the burden of diseases from chemicals.

This chapter will further present activities of WHO undertaken on the global level in the period from 2017 to 2019, related directly or indirectly to the implementation of Strategic Approach to International Chemicals Management, hereafter SAICM, and developing approach to sound management of chemicals and waste beyond 2020. The work done on the global level does not attempt to cover all many activities undertaken either on a regional or national level.

All the activities described in this chapter contribute to the implementation of SAICM Strategic Objectives: A Risk reduction, B Knowledge and Information, C Governance, Capacity-building and technical cooperation and E Illegal international traffic.
The WHO Chemicals Road Map and its implementation

In May 2017, the Seventieth World Health Assembly with its decision WHA70(23) approved the WHO Chemicals Road Map for the health sector at the national, regional, and international levels towards achieving the 2020 goal and contributing to relevant targets of the 2030 Agenda for Sustainable Development. The road map was requested by the WHA 69.4 resolution in 2016 and was developed by WHO in consultation with Member States and others.

The road map considers the overall orientation and guidance of the Strategic Approach to International Chemicals Management, the intersessional process to prepare recommendations regarding the Strategic Approach and the sound management of chemicals and waste beyond 2020 (intersessional process) as well as WHO's existing relevant work and the strategy for strengthening the engagement of the health sector in the implementation of the Strategic Approach. It also emphasizes certain areas, as defined by the WHA 69.4 resolution. One of those areas is establishment or strengthening of national, regional, or international coordinating mechanisms, proper for multisectoral cooperation, and enhancing engagement of all relevant health stakeholders.

The road map identifies concrete actions where the health sector has a lead or important supporting role to play in the sound management of chemicals, recognizing the need for multi-sectoral cooperation. For each action, the main actor, or lead, is identified.

The actions are organized, without priority order, in four areas closely aligned with the objectives set out in the Strategic Approach’s Overarching Policy Strategy: risk reduction, knowledge and evidence, institutional capacity, leadership and coordination.

Some of the actions are very broad, while others are quite specific to consider different approaches to chemicals management chosen by Member States and other stakeholders as well as different stages of their implementation.

Such a variety of actions, possible to prioritise, makes the road map applicable to all Member States according to their needs, regardless of the development stage, and ensures the involvement of a broad range of stakeholders.

The Road Map Brochure was published in 2017 in 6 UN languages.

With its road map WHO contributes to implementing Objective C, Governance. Moreover, considering the actions in the road map, it contributes to implementation of all five SAICM objectives.

The WHO Global Chemicals and Health Network

3 https://www.who.int/publications-detail/chemicals-road-map-and-workbook
One of the activities in road map mandated the WHO Secretariat to establish a global chemicals and health network. That activity has contributed to Objective C, Governance.

In 2017 and 2018 the Secretariat issued a formal request to countries to nominate a contact point for the network. As of December 2019, over 70 Member States had joined the WHO Global Chemicals and Health Network.

The network serves as a global forum for discussion among senior level policy makers and representatives about issues related to health and chemicals.

The goal of the network is to facilitate implementation of the road map by promoting collaboration on common policy challenges, perspectives and priorities of health ministries in managing chemicals, especially considering the intersessional process on Strategic Approach to International Chemicals Management (SAICM) and the sound management of chemicals and waste beyond 2020 (the intersessional process), and to facilitate continuity of contact among health ministries and with WHO.

The network complements and does not duplicate technical forums (such as the WHO Chemical Risk Assessment Network) and regional networks. It is coordinated by WHO Headquarters and leverages the capacities of the regional offices.

The inaugural meeting of the network took place in November 2018, The meeting led to the identification of common challenges, successes, and opportunities for collaboration in the implementation of the roadmap; greater awareness of health impacts of chemicals and the importance of health ministry participation in chemicals management at the national, regional and global levels; and the role of the health sector in international chemicals discussion and in the beyond 2020 discussions.

In December 2019 an online workspace (sharepoint site) for the Global Chemicals and Health Network was launched. The site was designed considering views, needs and expectations of the Global Chemicals and Health Network members, expressed during the inaugural meeting of the network.

The sharepoint site serves, first, as a platform for the Network members to cooperate, discuss, share information and experience, and to support in the implementation of the WHO Chemicals Road Map. It provides a common space where members can share national implementation plans and case studies on implementing the road map.

The WHO Chemicals Road Map workbook
As a companion to the road map, the WHO chemicals road map workbook was developed and published in 2018 in 6 languages.

The workbook was designed to assist Member States in using the road map to identify priorities and to plan activities around these priorities, offering a structured way to work through the road map. It can also facilitate sharing of information and discussions within and among countries/organizations about health sector priorities and potential activities to address them. It included the input received from Member States.

The workbook aims to increase capacities of Member States, consequently it helps to implement Objective D, Capacity building and Technical Cooperation.

IOMC Toolbox and the road map implementation

In 2019 WHO commenced developing in the IOMC Toolbox an entry point leading its users to the available IOMC Participating Organization guidelines and other tools relevant for the activities of the WHO Chemicals Road Map. The entry point will be launched in early 2020. This activity contributes to the implementation of all five SAICM objectives.

Updating information on the health impacts of chemicals

WHO’s technical work to implement road map activities included publication of updated estimates of the burden of disease attributable to chemicals, presented in the document: The Public Health Impact of Chemicals: Knowns and Unknowns. In 2016, 1.6 million lives were lost due to exposures to selected chemicals. Data are, however, available only for a small number of chemical exposure, while people are exposed to many more chemicals. The updated estimations were published in 2018.

In 2018 WHO provided health information to UNEP for its Global Chemicals Outlook II. It was published in 2019 and submitted to SAICM meetings and the United Nations Environment Assembly.

With the activities on updating information WHO has contributed to Objective B, Knowledge and Information.

Support for Member States’ engagement in SAICM related to the road map.

4 Work done Under the umbrella of the EC-supported project titled “IOMC Toolbox project on decision making in chemicals management: From design to action”

In the reporting period WHO continued to work on aspects of strengthening the engagement of the health sector in implementation of SAICM related to the road map:

- supporting health ministries in their participation in the international process to prepare recommendations for the Strategic Approach and the sound management of chemicals and waste by convening health sector side meetings and panel discussions during meetings three meetings of the Intersessional Process for considering SAICM and sound management of chemicals beyond 2020
- hosting a workshop for ministry of health representatives to discuss road map implementation, provide input on a draft workbook, and to help to prepare for SAICM regional meetings as well as the 2nd meeting of the Intersessional Process;
- hosting the WHO Road Map sessions during the SAICM regional Meetings in 2018;
- supporting participation of ministries of health in the following meetings:
  - 1st, 2nd and 3rd meeting of Intersessional Process, that took place respectively in Brasilia in 2017, in Stockholm in 2018 and in Bangkok in 2019,
  - UNITAR workshop on institutional arrangements, in Genève in 2019
  - 3rd SAICM Open-ended Working Group Meeting in Montevideo in 2019
  - Workshop on indicators for beyond 2020 in Cambridge in 2019,

These activities have contributed to Objective C, Governance and Objective D, capacity Building and Technical Cooperation.

Health sector side meetings and panel discussions during OEWG3 and IP meetings

Throughout the reporting period WHO was supporting health ministries by convening health sector meetings and panel discussions during the IP meetings held, consecutively in Brasilia, Stockholm and Bangkok, and during 3rd meeting of OEWG in Montevideo. Such activities contributed to implementing Objective C, Governing, and also to the Objective D, Capacity Building and Technical Cooperation.

The meetings brought together SAICM health-sector stakeholders, including ministries of health, NGOs, IGOs, industry, academia and representatives of other sectors. They gave a possibility to share experience about the chemical issues faced by the health sector and the role the health sector can play addressing them, both within the health system, as well as by working with others. The importance of the capacity building was highlighted. The WHO Chemicals Road Map, its role and implementation were also discussed. Participants of those meetings agreed on the importance of health sector contribution to the sound management of chemicals and the engagement in SAICM

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6 2nd meeting of the Intersessional Process for considering SAICM and the sound management of chemicals and waste beyond 2020
and beyond 2020. The consecutive versions of the co-chairs' overview paper were also discussed from the health sector perspective.

During the IP3 meeting held in October 2019, the health sector met to discuss on the co-chairs' paper on multi-sectoral engagement and the relevance of proposed indicators and milestones from the health perspective. The meeting resulted in the recognizing importance of the multi-sectoral engagement at all levels was stressed and proposals to strengthen it. In the same time, the lead role of the health sector in various aspects of regulating chemicals, for example, on drinking water, air quality, food safety or industrial chemicals and pesticides, was recognized. The important role also includes health impact assessments, e.g. on contaminated sites. Concerning the targets and indicators, existing WHO data sources on health impact and burden of disease, including several that already contribute to SDG targets and potential SAICM targets, were identified together with several where WHO is a custodial agency under the SDG. A key indicator in this regard is SDG 3.9.3 on mortality from unintentional poisoning. In addition, the International Health Regulations (2005) and strengthening of the core capacities monitored in those regulations for preparedness and response for chemical-related incidents and emergencies was of interest to several discussants in the context of the targets and indicators.

Was highlighted the necessity of having targets and indicators relevant to the health sector to encourage its participation in the work beyond 2020. This might include an indicator for sectoral participation in SAICM bodies and events, and an indicator on sectoral access to support the implementation of SAICM, e.g. through any financial arrangements.

**The WHO Chemical Risk Assessment Network**

The WHO Chemical Risk Assessment Network is a voluntary collaborative initiative whose overall goal is to improve chemical risk assessment globally through facilitating sustainable interaction between institutions on chemical risk assessment issues and activities.

It was established in 2013 to support global efforts to assess and manage the risks associated with exposures to hazardous chemicals, with participation of institutions involved with chemical risk assessment.

The activities of the Network promote the objectives of SAICM, especially objective A, B and D.

In 2019 the network consisted of 86 institutions from 50 countries. In 2017 and 2018 there were 87 institutions from 48 countries and 85 institutions from 49 countries, respectively.

In the reporting period, several activities relating to chemical risk assessment methodology were taken forward covering several topics, including Mode of Action, Combined Exposures, chemical-specific adjustment factors, immunotoxicity of nanomaterials, systematic review in chemical risk assessment.

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assessment and identification of emerging risk from chemicals, in addition to delivery of a Continuing Education Course at a toxicology conference (2019).

In 2019 an online collaborative workspace (SharePoint site) for the Network was launched. The Network met two times in the reporting period, in 2017 and 2019. Between the meetings participants have been regularly kept informed by Network Newsletters.

**Capacity building in Chemical Risk Assessment**

In 2018 the Strategic Plan for enhancing chemical risk assessment capacity\(^8\) in the WHO Chemical Risk Assessment Network, which was developed in 2017, was officially launched.

The Plan aims to increase chemical risk assessment capacity among WHO Network Participants, thereby strengthening environmental health decision-making. It supports the implementation of capacity building related actions of the Chemicals Road Map.

The Plan includes actions to be implemented from 2018 to 2020 to strengthen national institutional capacities to address health threats from chemicals and on filling gaps in knowledge and methodologies for risk assessment.

In 2018 a Steering Group was formed to coordinate and provide advice to WHO on the various capacity building projects taking place under the Strategic Plan 2018-2020. The Group agreed on, among others, building a network of trainers (Community of Trainers) to share experience from providing training in risk assessment, share training material and inspire and support new trainers. In 2019, a Community of Trainers (CoT) was established and two webinars to present different types of available training courses in chemical risk assessment with specific examples were organized. Additionally, the new RiskTrain database of training courses was demonstrated. Webinars of the CoT will continue in 2020, focusing on specific training aspects.

**Trainings supporting risk assessment capacities in countries**

In the period from 2017 to 2019, WHO organized seven workshops supporting activities related to strengthening risk assessment capacities in countries and introducing and promoting the use of the WHO Human Health Risk Assessment Toolkit.

**IOMC Toolbox as support for the capacity building in Chemical Risk Assessment**

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\(^8\) [https://www.who.int/ipcs/network/Network_Capacity_Building_Strategy.pdf?ua=1](https://www.who.int/ipcs/network/Network_Capacity_Building_Strategy.pdf?ua=1)
In 2017, WHO signed an agreement with the European Commission to launch Phase III of the IOMC Toolbox project on decision making in chemicals management titled: From design to action. The project, among others, provides organizing in developing countries several capacity-building workshops from 2018 to 2020.

WHO organized, in the framework of the project, training on Enhancing the Health Sector Role in the Management of Chemicals, one in 2018 in Egypt (national) and two in 2019, in Kazakhstan (sub-regional) and Mali (national).

Tools for assessing chemical risk

All the activities described under this chapter contribute either to Capacity Building and Technical Cooperation, Objective D, or Knowledge and Information, Objective B.

The WHO/IPCS Harmonization Project

The WHO International Programme on Chemical Safety (IPCS) is leading a project to harmonize approaches to the assessment of risk from exposure to chemicals. The goal of this project is to globally harmonize approaches to risk assessment through both increased understanding and agreement on basic principles and to develop international guidance documents on specific issues.

In 2019 WHO initiated work to update the WHO Human Health Risk Assessment Toolkit, which is a publication of the Harmonization Project.

In 2017 in the framework of the Chemicals Risk Assessment Network two collaborative forums were established to work on Mode of Action and Combined Exposures, sharing with the network participants information about activities on the topic, and coordinating work as necessary.

In the same year the network started planning of an activity on identifying emerging risks from chemicals. In 2018 it conducted a mapping and survey of existing systems and prepared a report on present methodologies and systems for identifying emerging risks from chemicals. Subsequently, a task group was convened to publish the mapping report and develop the network’s work plan for 2020 on identifying emerging risks.

In 2018 the project on existing methodologies and tools for the prioritization of chemicals for risk assessment was initiated in framework of the Strategic Plan. Its overall objective is to assist Network institutions based in developing countries in identifying and prioritizing chemicals and settings within their jurisdiction and/or context using existing tools and resources.

A working group was established to identify, review, describe, develop and promote tools to prioritize chemicals and settings involving chemicals for risk assessment. In 2019 survey data and information from literature research were analyzed describing, firstly, the needs of developing
countries concerning the prioritization of chemicals and chemical settings for chemical risk assessment; secondly, existing tools for the prioritization of chemicals and settings. In a next step that will be taken in 2020, existing tools will be presented in a harmonized way including the scope, data needs, and technical skills needed to run the tool.

In the reporting period work to develop a framework on systematic review in chemical risk assessment was conducted. The framework aims to be a concise, high-level document which introduces the topic of a systematic review, provide a practical perspective on when to conduct a systematic review, and give an overview of the tools and resources available. The text of the framework was finalized in 2019 and presented at EUROTOX. It will be published in 2020.

Environmental health criteria and other methodology documents

In the reporting period, WHO under the umbrella of the Chemical Risk Assessment Network, together with the WHO Collaborating Centre at RIVM, continued work on an Environmental Health Criteria Document on Principles and Methods for assessing the risk of immunotoxicity associated with exposure to nanomaterials. The document was finalized in 2019.

Information on chemicals and their impact on health

Activities described in this chapter contribute to implementation of Objective A, Risk reduction, and to Objective B, Knowledge and Information.

International Chemical Safety Cards

WHO work on the International Chemical Safety Cards (ICSCs) continues to be a major point of collaboration with the International Labour Organization (ILO). In the reporting period ICSCs have been available for approximately 1700 chemicals. In the reporting period, an average of 3 new cards per year was added and 52 updated. The cards are available in ten language versions (English, Spanish, French, Finnish, Hungarian, Italian, Japanese, Polish, Russian and Chinese), which can be searched directly using the following link https://www.ilo.org/dyn/icsc/showcard.home. Additional language versions of the ICSCs are under development.

In the reporting period ICSC database was visited 412,309 times in 2017, 386,847 times in 2018 and 1,403,412 in 2019. The difference between the number for 2019 and numbers in previous years is due to a change in website analytics and it is difficult to ascertain growth in the use of the database from 2017 to 2019.
In 2018 the ICSC Compilers Guide was updated, and in 2019 work on a “User Guide” for the ICSCs was commenced. The aim of the User Guide is to provide explanations about the different types of information provided on ICSCs to assist users of the cards.

GHS classifications continue to be made for new and updated ICSCs. The corresponding hazard statements, signal words and symbols are included on the ICSCs. In 2017 GHS classifications were included in 585 ICSCs, in 2018 in 633 and in 2019 in 671. From the previous reporting period number of cards including GHS increased to 126.

IPCS INCHEM website

IPCS INCHEM website, enables WHO/IPCS\(^9\) to disseminate its collections of risk assessment documents and the ICSCs to a wider audience. The INCHEM collection is long established and ranks highly in internet search engine results, as well as allowing powerful search options within the collections.

During 2017 there were 1.41 million page-views on the INCHEM web site from 675 000 users in 913 000 sessions, with 27% of users being repeat visitors. Approximately 38% of sessions (347 000) accessed the INCHEM collection either directly or via links from other web sites, with the remaining 62% reaching the site via a search engine. During 2018 there were 1.19 million page-views on the INCHEM web site from 572 000 users in 782 000 sessions, with 13% of users being repeat visitors. Approximately 36% of sessions (283 000) accessed the INCHEM collection either directly or via links from other web sites, with the remaining 64% reaching the site via a search engine. During 2019 there were 1.46 million page-views on the INCHEM web site from 785,000 users in 1,021,000 sessions, with 12% of users being repeat visitors. Approximately 32% of sessions (326 000) accessed the INCHEM collection either directly or via links from other web sites, with the remaining 68% reaching the site via a search engine. The numbers show an increase of use of the INCHEM in 2019 in comparison to the previous years.

The statistics above demonstrate that the INCHEM collection is a very well-established internet data source, with many direct users or referrals from other web sites.

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

Classification of pesticides by hazard

\(^9\) [http://www.inchem.org](http://www.inchem.org)

\(^{10}\) WHO International Programme on Chemical Safety
In the reporting period, the process to update the WHO Recommended Classification of Pesticides by Hazard was started and continued, with new or amended acute toxicity data from evaluations of 95 new pesticides. The updated document was drafted and prepared for publication in 2020.

WHO was continuing to contribute to the FAO/WHO/UN Environment Strategy on Highly Hazardous Pesticides in the context of SAICM, which was referred to in the ICCM4 resolution on HHPs. Moreover, WHO contributed to the activities relating to HHPs of the FAO/WHO Joint Meeting on Pesticides Management (JMPM) during 2018 and 2019 and to the ongoing development of the FAO Pesticides Registration Toolkit.

**Pesticide poisoning**

In 2019 WHO worked on development of a resource guide for pesticide registrars and regulators\(^{11}\) to provide information on how persons in these positions can play a key role in suicide prevention by reducing access to, and regulating the use of, highly hazardous pesticides. The resource guide was published in 2019 as a joint publication with FAO.

**Chemicals of public concern**

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

In the period from 2017 to 2019, information on the 10 chemicals was regularly updated, including adding newly developed materials and published on WHO website

**Microplastics**

In 2019 WHO commenced development of a report on human health risks resulting from exposure to microplastic in the environment. A state of the evidence report on microplastic in drinking-water\(^{12}\) was published, and a wider assessment of human health risks from exposure to microplastic particles from the environment via food, air and other sources of water was initiated.

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\(^{11}\) https://www.who.int/publications-detail/preventing-suicide-a-resource-for-pesticide-registrars-and-regulator

\(^{12}\) https://apps.who.int/iris/bitstream/handle/10665/326499/9789241516198-eng.pdf?ua=1
Lead - actions taken to prevent poisoning from lead

Activities undertaken by WHO and related to lead in its major part contribute to Objective A, Risk reduction and to objective B, Knowledge and Information. However, legally-binding controls in lead paint contribute to Objective C, Governance.

Guidelines and other supporting documents

In 2017 a publication on the health hazards associated with recycling used lead acid batteries was published in English, French and Spanish. The document provides information about the mechanisms of lead release during recycling, the main routes of exposure, the health impacts, the associated burden of disease, methods for assessing lead exposure, and the types of control measures needed to prevent lead emissions and exposures. A short version of the publication is also available, in the six UN official languages.

In the reporting period WHO worked on the draft of the guidelines for the clinical management of lead exposure.

Work also continued on the guidelines for the prevention of lead poisoning, with the completion of a systematic evidence review on soil remediation. Further work is planned to be carried out in 2020.

Furthermore, WHO revised six modules in the Lead Paint Alliance Advisory Group toolkit to assist countries in establishing and implementing legally binding controls on lead paint. These modules related to the health hazards of lead, analytical methods for measuring lead in blood and paint, conducting investigations into lead exposure and conducting awareness-raising activities on lead.

In 2019 work started on updating two documents: *Brief guide to analytical methods for measuring lead in paint* and the *Brief guide to analytical methods for measuring lead in blood*. The update for lead in paint was completed and prepared for translation and publication. Work on the update for lead in blood was continued and will be completed and translated in 2020.

A technical briefing document explaining the rationale for eliminating the use of lead in paint has been written and will be finalized and translated in 2020.

Global Alliance to Eliminate Lead Paint

In the reporting period WHO continued its work on the implementation of Resolution II/4B of the International Conference on Chemicals Management on eliminating lead from paint through the
Global Alliance to Eliminate Lead Paint\textsuperscript{13} (short name: the Lead Paint Alliance), an initiative established jointly with UNEP.

WHO, jointly with UNEP and the Chair of the Alliance’s Advisory Group (the US EPA), in consultation with the Advisory Group for the Alliance, developed an Action Plan for the work of the Alliance in 2017–2018. It was published on the official website of the Lead Paint Alliance, hosted by UNEP.

**Legally-binding controls in lead paint in countries**

WHO, in partnership with UNEP, monitors progress in eliminating lead paint through periodic surveys of Member States. A database and map have been created in the WHO Global Health Observatory\textsuperscript{14} to show the status of legally-binding controls on lead paint. Whenever new information becomes available the database is updated.

As of October 2017, only 68 countries confirmed that they had legally-binding controls on lead paint. In 2018 71 countries confirmed having legally-binding controls on lead paint and in 2019, the number of countries increased again to 75 countries, indicating a growing tendency in regulating lead paint.

In 2017 WHO worked with UNEP and members of the Lead Paint Alliance Advisory Group in the development of a guidance document on preparing a law to regulate lead paint. The guidance document aims at countries wishing to prepare new laws or to modify existing laws that establish binding limits on the lead content in paints.

**Lead poisoning prevention campaign**

In the reporting period WHO coordinated the fifth, sixth and seventh international lead poisoning prevention weeks, that took place in October 2017, 2018 and 2019. The aim of the campaigns was to raise awareness worldwide about lead poisoning and to encourage action to eliminate the use of lead in paint. WHO, in collaboration with UNEP, US EPA and IPEN, developed campaign resource packs and a range of campaign materials, including posters, infographics, web banners, flyers and FAQs. All materials were published in the six UN languages (Arabic, Chinese, English, French, Russian and Spanish). Social media, particularly Twitter and Facebook, were used to provide key messages about lead hazards. For seventh week, a video animation was developed in English, French, Russian and Spanish.

\textsuperscript{13} https://www.unenvironment.org/explore-topics/chemicals-waste/what-we-do/emerging-issues/global-alliance-eliminate-lead-paint-1

\textsuperscript{14} http://www.who.int/gho/phe/chemical_safety/lead_paint_regulations/en/
During the fifth week there were at least 67 events in 44 countries, based on registrations on the WHO website. Activities included educational sessions in schools, the provision of lead-safe paints to schools, dissemination of information to the public through the mass media and through leaflets, launching reports of national surveys of lead in paint, competitions, and public demonstrations. These events were organized by non-governmental organizations, paint manufacturers, academic institutions and government ministries. Events took place in schools, universities, shopping centres, metro stations, medical centres, community centres and on the street.

During the sixth week there were at least 82 events in 50 countries. Organizers were from academic institutions, governments (local/national), healthcare institutions, Non-Government Organizations and others. Events focused on education about the health effects of lead and on the need for protective national legislation. The events took the form of university lectures, school classes, radio programmes, meetings with different stakeholders, appeals to legislators, and different media events among others. A large array of materials was distributed.

During the seventh week there were at least 89 events in 57 countries. Organizers were from academic institutions, governments (local/national), healthcare institutions, Non-Government Organizations, paint companies and others. A wide range of activities were carried out, including multi-stakeholder meetings to discuss developing laws on lead paint, media statements, public displays and dissemination of leaflets, publication of the results of market surveys of paint, events in schools and poster competitions.

The reports of the lead weeks were published on the WHO website. From 2017 to 2019 there was an increase of interest and participation in the lead weeks, indicating rising awareness on the concerns related to lead and understanding of the need to take further actions to prevent lead poisoning.

**GEF SAICM project**

WHO is an executing partner in a project funded by the Global Environment Facility (GEF) called *Global best practices on emerging chemical policy issues of concern under SAICM*\(^\text{15}\). The project includes two components on lead paint: one supporting small- and medium-sized paint companies to reformulate their products without using added lead and the other to assist countries to put in place legally binding controls on lead paint.

WHO has been working on the second component, which has the target of increasing the number of countries with lead paint laws by at least 40. The project started in January 2019 and ends in 2021.

In 2018 WHO invited Ministers of Health in 77 countries to participate in the project and to nominate a focal point. The positive responses were received from 52 countries. UNEP has similarly written to Ministers of Environment. In total there are focal points for health, environment or both in 63 countries.

In 2019 WHO headquarters, and regional office staff contributed to the organization of, and participated in, four regional workshops to inform countries about the project. WHO also participated in a sub-regional workshop about lead paint organized by the US Government in Georgia.

WHO continued supporting ministries of health in advocating for the development and implementation of legally binding controls on lead in paint, provided technical support to health ministries leading such control measures and commented on drafts of three lead paint laws.

Other lead activities

In November 2018 a side event on lead paint was organized during the Third Inter-Ministerial Conference on Health and Environment in Africa. In the African region only six countries had lead paint laws and the side event was very well attended. Ministers agreed the strategic action plan for Africa for 2019–2029 that includes support for the work of the Lead Paint Alliance, particularly by enacting national legislation to ban lead in paint.

Network of Poison Centers

WHO has continued its work to assist member States to establish poison centers and increase their capacities.

In the reporting period WHO, with its Regional Offices provided technical support to:

- develop poison center network in Africa, South East Asia and Western Pacific regions (2017),
- establish the Africa Network of Poison Control Centers (2018),
- establish a regional network of poison centres in Eastern Mediterranean region (2019),

Moreover, additional trainings and training visits were organized for the staff from the poisons center at the Government Chemical Laboratory Agency (GCLA) in Dar Es Salaam, United Republic of Tanzania in November 2017 and December 2018.
WHO has continued its work related to the network of poisons centers updating regularly the poison center directory on WHO Global Health Observatory (GHO). From 2017 to 2019 five new poison centers were added to GHO, 2 in 2017, 2 in 2019 and 1 in 2019.

In 2018 WHO started its work on updating the publication Guidelines for Poison Control. WHO convened an international working group to provide input and review. The group continued its work on the document through 2019 to finalized it at an editorial meeting hosted by the WHO Collaborating Centre on December 2019 in London UK.

All these activities have contributed to implementing Objective D, Capacity Building and Technical Cooperation.

**Chemical Incidents and emergencies – guidance and manuals**

From 2017 to 2018 WHO reviewed the Guidance for the Assessment and Notification of Chemical Events under IHS. Additionally, in 2018 WHO revised chemical sections of IHR capacity assessment tools, i.e.: The Annual Reporting Tool and the Joint External Evaluation tool.

In 2017 WHO finalized work on a document for the health sector on chemical release triggered by natural hazard events (Natech events). Three companion products, standalone leaflets on chemical release resulting from earthquakes, floods and cyclones, were also prepared. In 2018 the guidance, including leaflets was published on WHO website. In 2019 they were translated into Arabic, Chinese, French, Russian and Spanish and published on the WHO website. An Arabic version is in preparation.

In the reporting period work on revision of the manual for investigating disease outbreaks of possible chemical etiology was conducted. It is planned to finalize the document in 2020.

**WHO Global Health Observatory – valuable source of information**

The Global Health Observatory (GHO) is WHO’s gateway to health-related statistics for its 194 Member States. The aim of the GHO portal is to provide easy access to:

- country data and statistics with a focus on comparable estimates;
- WHO’s analyses to monitor global, regional and country situation and trends.

The GHO contributes to objective A, Risk reduction and objective B, knowledge and Information.

GHO theme pages cover global health priorities such as the health-related Millennium Development Goals, mortality and burden of disease, health systems, environmental health, and more.

17 [https://www.who.int/data/gho](https://www.who.int/data/gho)
noncommunicable diseases, infectious diseases, health equity and violence and injuries. The theme pages present:

- highlights showing the global situation and trends, using regularly updated core indicators;
- data views customized for each theme, including country profiles and a map gallery;
- publications relevant to the theme;
- links to relevant web pages within WHO and elsewhere.

The GHO database provides access to an interactive repository of health statistics, including all country statistics and health profiles are available within WHO. Data can be displayed for selected indicators, health topics, countries and regions. Furthermore, the GHO issues analytical reports on priority health issues, including the World Health Statistics annual publication, which compiles statistics for key health indicators. Analytical reports address cross-cutting topics such as the report on women and health and burden of disease.

The GHO contains information relevant to the sound management of chemicals under SAICM and beyond 2020, including on the establishment of lead paint laws, poisons centers, implementation of the IHR (2005) and unintentional poisoning.

**Supporting of implementation of SAICM and international conventions**

WHO activities undertaken to support implementation of SAICM as well as international conventions contribute to Objective D, Capacity Building and Technical Cooperation.

**Emerging policy issues**

WHO continued to be engaged in SAICM emerging policy issues, including a lead in paint, endocrine-disrupting chemicals, nanotechnology and manufactured nanomaterials, environmentally persistent pharmaceuticals and e-waste, as required. Detailed reports on implementation of SAICM emerging policy issues are provided in other documents.

**Implementation of the health-related articles of the Minamata Convention**

In the reporting period WHO convened a series of events and workshops.

During the 1st Conference of the Parties to the Minamata Convention (COP1), held in September 2017 a series of events on “*For health make mercury history*” were held. During COP3 health side events on *Strategic planning for implementation of the health-related articles of the Minamata Convention* and *Defining the road ahead: Lessons learned from the National Action Plans on ASGM*, were organized.
Furthermore, in 2017 and 2018 WHO organized three regional workshops for ministries of health.

In 2019, multi-stakeholder workshops were organized under the GEF-funded project *Assessment of public health challenges in artisanal small-scale gold mining (ASGM) communities and the local health system’s readiness to respond in Ghana, Nigeria, and Mozambique.*

Between 2017 and 2019 WHO developed or updated the guideline documents and publications related to mercury that are listed in the annex.

In 2018 and 2019 WHO contributed to the Minamata Convention expert group on effectiveness evaluation, by providing information and participating in its meeting in 2019.

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

In 2018 and 2019 WHO both at headquarters and in the regions and countries undertook work on programs on dental amalgam, medical measuring devices, artisanal and small-scale gold mining, the development of training materials, mercury levels in food, and human biomonitoring. Relating to the latter, WHO developed standard operating procedures and a survey protocol for assessment of prenatal exposure to mercury in the framework of the project “Development of a Plan for Global Monitoring of Human Exposure and Environmental Concentrations of Mercury” funded by the Global Environment Facility. The survey protocol is a tool for developing national protocols and can be applied for mercury human monitoring survey globally. Furthermore, WHO commissioned a State-of-the-review of mercury biomarkers in Human Population Worldwide between 2000 and 2018. It was published in the scientific literature and formed the basis for a chapter in UNEP’s Global Mercury Outlook.

**IOMC**

In the framework of activities undertaken by IOMC, WHO in 2017 continued work to finalize the implementation of the EC funded IOMC project entitled IOMC Toolbox for decision making in chemicals management – Phase II: Modification, Expansion and Promotion. The overall objective of the project was to support implementation of SAICM by promoting the identification and

implementation of guidance materials for chemicals management by IOMC Participating Organizations, especially in developing countries and countries with economies in transition.

In 2017, WHO in collaboration with IOMC Participating Organizations finalized the development of the comprehensive proposal for Phase III of the IOMC Toolbox project. The proposal in addition to re-designing, broadening the content and making the Toolbox more user friendly, has a capacity building component including workshops to train policy makers and key professionals of chemicals in developing countries and countries with economies in transition on the public health management of chemicals and related tools developed by IOMC Participating Organizations. Phase III of the project commenced on the 1 January 2018 and in 2019 WHO continued work on the project. The IOMC Toolbox project is managed by WHO.

These activities contribute to Objective D Capacity Building and Technical Cooperation.

**WHO guidelines and technical publications**

**WHO guidelines** are recommendations to Member States and the health sector in general. Guidelines may be adopted under national laws or otherwise adopted by users. The development of guidelines may be triggered by requests from Member States, WHO country offices, external experts or other stakeholders. They can vary greatly in focus and scope.

In the reporting period WHO published or updated, among others:

- WHO Guidelines for Drinking Water Quality,
- WHO Guidelines for Air Quality or
- ASGM and health and Step-by-step guidance on phasing out mercury thermometers and sphygmomanometers.

**WHO technical publications** are developed by WHO technical experts or expert working groups in response to an identified need, such as an emerging issue or information gap. Technical publications vary greatly in focus and scope, however, in general available evidence is reviewed and used to describe the extent of the issue, including sources of exposure and health impacts, identify any data gaps, if applicable, and, based on this, make recommendations for how to mitigate these risks.

Examples of the WHO technical publications published in the reporting period are, among others, following document:

- Recycling used lead-acid batteries: health considerations (2017)
- Don’t pollute my future! The impact of the environment on children’s health (2017)
The development of technical publications on specific issues provides a relatively efficient avenue for WHO to provide information to policymakers to enable informed decision-making.

Annex

List of WHO guidelines and technical publications updated or published between 2017 and 2019.

- Recycling used lead-acid batteries: health considerations
- WHO Fact Sheet on Lead Poisoning and Health (updated)
- Questions and answers about the International Lead Poisoning Prevention Awareness Campaign (updated) – available in 6 languages
  [http://www.who.int/ipcs/lead_campaign/QandA_lead_2017_en.pdf?ua=1](http://www.who.int/ipcs/lead_campaign/QandA_lead_2017_en.pdf?ua=1)
- WHO Chemicals Road Map and Workbook – available in 6 languages
  [https://www.who.int/publications-detail/chemicals-road-map-and-workbook](https://www.who.int/publications-detail/chemicals-road-map-and-workbook)
- A State-of-the-Science Review of Mercury Biomarkers in Human Populations Worldwide between 2000 and 2018
- Data addendum for 2016, Public health impact of chemicals: knowns and unknowns
- Chemical releases caused by natural hazard events and disasters: information for public health authorities
  [https://www.who.int/ipcs/publications/natech/en/](https://www.who.int/ipcs/publications/natech/en/)
  [http://apps.who.int/iris/bitstream/handle/10665/272390/9789241513395-eng.pdf](http://apps.who.int/iris/bitstream/handle/10665/272390/9789241513395-eng.pdf)
- Chemical releases caused by earthquakes
- Chemical releases caused by floods
- Chemical releases caused by cyclones
  [https://www.who.int/ipcs/network/Network_Capacity_Building_Strategy.pdf](https://www.who.int/ipcs/network/Network_Capacity_Building_Strategy.pdf)


- Strategic planning for implementation of the health-related articles of the Minamata Convention on Mercury (available in 6 languages) [https://www.who.int/publications-detail/strategic-planning-for-implementation-of-the-health-related-articles-of-the-minamata-convention-on-mercury](https://www.who.int/publications-detail/strategic-planning-for-implementation-of-the-health-related-articles-of-the-minamata-convention-on-mercury)

- Results from country workshops on the strategic planning for implementation of the health-related articles of the Minamata Convention on Mercury [https://www.who.int/publications-detail/results-workshops-strategic-planning-mercury](https://www.who.int/publications-detail/results-workshops-strategic-planning-mercury)


- Addressing health when developing national action plans on artisanal and small-scale gold mining under the Minamata Convention on Mercury (in 6 languages) [https://www.who.int/publications-detail/addressing-health-when-developing-national-action-plans-under-the-minamata-convention-on-mercury](https://www.who.int/publications-detail/addressing-health-when-developing-national-action-plans-under-the-minamata-convention-on-mercury)


- Microplastics in drinking-water [https://apps.who.int/iris/bitstream/handle/10665/326499/9789241516198-eng.pdf?ua=1](https://apps.who.int/iris/bitstream/handle/10665/326499/9789241516198-eng.pdf?ua=1)