



► ILO Working Paper

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ILO Framework for Action on Chemicals and Waste

Introduction

The ILO aims to promote activities to better engage ministries of labour, employers' and workers' organizations, as well as other world of work stakeholders, in the sound management of chemicals at all levels of governance. The development of an ILO Framework for Action on Chemicals and Waste (Framework) is envisaged to define action areas and priorities for the engagement of world of work actors on chemicals management at the international level. The Framework aims to identify concrete actions where the labour sector has either a lead or important supporting role to play in the sound management of chemicals, recognizing the need for multi-sectoral cooperation.

Background on international processes

Several initiatives create clear opportunities for the enhanced engagement of the labour sector on chemicals management at the global level, including the Strategic Approach to International Chemicals Management (SAICM), the UN Sustainable Development Goals (SDGs), among others. This section briefly describes the key processes as they relate to chemicals in the world of work.

By way of background, in 2003, the ILC adopted a Global strategy on occupational safety and health, noting that "in addition to established measures to prevent and control hazards and risks, new strategies and solutions need to be

developed and applied both for well-known hazards and risks such as those arising from dangerous substances."¹

The six-part strategy (see Annex) consisted of:

1. Promotion, awareness raising and advocacy;
2. ILO instruments;
3. Technical assistance and cooperation;
4. Knowledge development, management and dissemination;
5. International collaboration; and
6. Special consideration and efforts in relation to countries with particular needs (see Annex for greater detail).

The underlying needs identified in the six-parts of the 2003 Global Strategy continue to be identified as needs by more recent international initiatives on chemicals and wastes.

SAICM is a global policy framework that was envisaged to implement a global objective "*to achieve the sound management of chemicals throughout their life cycle so that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment*" (WSSD 2002). It was established in 2006 to ensure that all relevant sectors are actively engaged in discussions on chemicals at the global level. The participatory structure of SAICM, bringing together governments, non-governmental organizations/civil society/workers' organizations, and industry, reflects the tripartite governance structure of the ILO.

¹ https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/policy/wcms_107535.pdf at para 2

The SAICM process has since developed highlighted priority areas, which clearly implicate the world of work. The Overarching Policy Strategy sets forth five objectives of SAICM: risk reduction, knowledge and information, governance, capacity building and technical cooperation, and illegal international traffic. These objectives were to be advanced through numerous activities catalogued in the Global Plan of Action (GPA). The GPA has approximately 170 references to possible “actions” that could be taken by the ILO, trade unions, industry and/or the labour sector (see Annex). Concerns over the lack of action on the GPA prompted the Overall Orientation and Guidance, which further refined and filtered actions that relate to various sectors, including workers and the labour sector (see Annex).

Starting in 2009, emerging policy issues and other issues of concern were identified by the participants in the SAICM process. These issues are closely tied to working conditions and world of work concerns for a broad range of stakeholders. They include electronics manufacturing, lead in paint, nanomaterials, perfluorinated compounds (PFCs, aka PFAS), highly hazardous pesticides, endocrine disrupting chemicals, pharmaceutical pollutants, and chemicals in products.

Today, the post-2020 process of SAICM is envisaged to contain five objectives with targets and indicators (See Annex). Many of these actions speak to the implementation of key OSH instruments, such as Convention No. 187, Convention No. 155, Convention No. 161, as well as those regarding certain sectors and issues (e.g. Convention No. 170 on Chemicals, Convention No. 184 on Agriculture, Convention No. 176 on Construction, etc.).

In the context of the post-2020 SAICM process, the IOMC proposed a concise set of quantitative indicators from verifiable sources and for which global data are available, to track the future progress of SAICM Beyond 2020. The ILO indicators of progress include:

1. The number of member States with national Occupational Safety and Health (OSH) profiles;
2. The number of member States with national recording and notification systems that allow regular reporting

against SDG indicator 8.8.1 (frequency rates of fatal and non-fatal occupational injuries); and

3. The number of ratifications of up-to-date ILO Conventions related to chemical risks.²

Implicit from these three indicators are several actions, such as:

1. To develop and analyse national OSH profiles, with a view taking advantage of opportunities to strengthen legislation, infrastructure, resources and the current national situation with regard to occupational accidents and diseases, including those related to chemical hazards, where needed.
2. To formulate policies and programmes to record occupational injuries, diseases and deaths related to chemical exposures for prevention purposes, and to use this information in the prioritization of risk-reduction measures and development policies.
3. To ratify various ILO Conventions, such as the core OSH Conventions (C155, C161 and C187) as well as the Chemicals Convention, 1990 (No. 170); Prevention of Major Industrial Accidents Convention, 1993 (No. 174); Occupational Cancer Convention, 1974 (No. 139); Working Environment Convention, 1977 (No. 148); Asbestos Convention, 1986 (No. 162); Safety and Health in Construction Convention, 1988 (No. 167); Safety and Health in Mines Convention, 1995 (No. 176); and Safety and Health in Agriculture Convention, 2001 (No. 184).

Chemicals management is central to the achievement of Goal 8 of the SDGs: to promote full and productive employment and decent work for all. As defined by the ILO and other UN bodies, decent work is safe work, which requires effective mechanisms to ensure safety and health when working with various chemicals. Moreover, the exposure of children to hazardous substances at work is one of the worst forms of child labour. Thus, the sound management of chemicals is integral to SDG targets such as:

- **8.5.** By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

² https://www.ilo.org/global/topics/safety-and-health-at-work/areasofwork/occupational-health/WCMS_789655/lang-en/index.htm

- **8.7.** Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms
- **8.8.** Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment, with indicators
 - **8.8.1:** Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status
 - **8.8.2:** Level of national compliance of labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status

Progress toward these targets and indicators are in turn mutually supportive of other goals of the SDGs, such as those promoting health and sustainable production.

- **3.9.** by 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination
- **12.4.** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

In addition, several other regional and global agendas are notable with respect to chemicals at work. Under the rubric of business and human rights, efforts are being made to ensure companies increase their efforts to act responsibly and respect worker rights, among other human rights. The due diligence that is increasingly required by companies should include efforts to minimize chemical hazards and risks in the working environment. At the regional and global levels, efforts are underway to ensure mandatory due diligence for human rights, including worker rights and the environment. For example, several EU Member States have passed legislation requiring mandatory human rights due diligence for certain companies and issues, with the EU debating the adoption of an EU-wide directive. At the global level, negotiations continue on the development of a treaty on business and human rights that may contain mandatory due diligence elements.

The concept of a circular economy has attracted attention and has advanced discussions on the removal of toxic chemicals from materials to better enable recycling and recovery. The removal of these chemicals would have some benefits for workers throughout the product's lifecycle. However, chemicals that are not part of the product (e.g. solvents) are a major source of chemical exposure by the workforce and are not addressed. Therefore, multi-stakeholder efforts such as the Zero-Exposure Initiative by the Clean Electronics Production Network (including participants such as Apple, Dell, HP, US EPA, civil society and others) are prioritizing "process chemicals" that are not part of the finished product but pose concerns for the health of workers.

In the context of these international initiatives, efforts within the ILO should bear in mind work that is already being done by and/or expected from ILO member states. The policy discussion on the inclusion of occupational safety and health as a fundamental right and principle at work (FPRW) is highly relevant to the proposed Framework. If included as expected, all States (including non-parties) would periodically report OSH efforts, likely based on C187 (and possibly C155). In addition, the ILO's Green Jobs programme continues to connect the decent work and sustainable development agendas. Efforts have focused on climate change and the just transition but there are opportunities to better integrate OSH into the overall initiative. ILO's Fundamentals branch developed hazardous work lists to identify the worst forms of child labour, based on hazardous exposures (including chemicals) and created considerable momentum towards eliminating hazardous child labour. ILO's SECTOR department actively promotes decent work by addressing social and labour issues in specific economic sectors, including in the chemical industries, as well as in those sectors where chemicals are widely used (agriculture, construction, mining, etc.).

Possible Framework themes

In developing actions under the Framework, several options are available. Actions could be stand alone or grouped under themes. If the latter is preferred, then from an examination of previously catalogued examples of activities (see Annex), certain cross-cutting "themes" emerge, which can be further elaborated as "actions" to be undertaken by world of work stakeholders. These themes include:

- Development of a national profile on chemicals management as it relates to occupational safety and health
- A prioritized “roadmap” of measures to be taken to address challenges and needs identified in the profile
- Mechanisms for implementation and enforcement of relevant legislation
- Implementation of the Globally Harmonized System for Classification and Labelling of Chemicals (GHS)
- Ratification and implementation of key ILO Conventions on OSH, chemical hazards and relevant sectors
- Data on occupational deaths, injuries, diseases and/or exposures
- Sustainable development strategies, including policies, practices and incentives to accelerate the use of safer chemicals

How these themes are framed will help or hinder the ability of the Framework to connect to SAICM and other international processes. Several options for themes exist, such as:

- a. Framing in the context of the systems approach promoted by the ILO instruments on OSH;
- b. Framing under the post-2020 objectives of SAICM, namely risk reduction, information, issues of concern, safer alternatives and sustainable development;
- c. Framing under the seven themes of the SAICM Global Plan of Action; or
- d. Framing in the context of the UN business and human rights framework, i.e. the duty of States to

prevent, the responsibility of businesses to respect, and the need to ensure access to effective remedies.

Recommendation

Finding the proper balance between linkages to multiple global processes and targeted themes and activities is important to ensure that States and other stakeholders find the framework useful to meeting several different international obligations and expectations. Given the hope that the SAICM process will be elevated nationally and internationally as the primary vehicle for holistically advancing chemical safety, ensuring the themes are closely linked to SAICM objectives appears pragmatic. Bearing in mind the progress made to protect workers from chemical risks by framing OSH as an integral part of human rights duties and responsibilities, forward looking themes should capitalize on the further potential that exists to use a rights-based approach. Thus, the reporting efforts expected on OSH in the ILO and attention being drawn to value chains in business and human rights discourse appear useful to reflect in any proposed Framework.

Taking the above into consideration, the following framework is recommended as one that would enable world of work stakeholders to engage at the global level through national efforts that are framed in alignment with the objectives of SAICM and terminology of other international fora. Table 1 summarizes the recommended framework, which is further explained below.

► **Table 1: Recommended Framework for Action on Chemical Safety at Work**

Theme	Possible actions on chemicals
Advancing risk reduction	A national profile on chemicals at work to identify opportunities to strengthen the protection of workers from hazardous chemicals.
	A national strategy on chemicals at work to secure safe and healthy working environments based on International Labour Standards, including filling gaps in OSH systems and identifying priority sectors, targets, indicators of progress, and responsibilities.
Providing information to support prevention	Implementation of the GHS
	National recording and notification system of fatal and non-fatal occupational diseases and injuries for prevention purposes
	Supporting the adoption of safer and more sustainable alternatives
Implementing key International Labour Standards	Chemicals (C170)

	Major Industrial Accidents (C174)
	Sectoral Standards (incl. Agriculture, Construction, Mining)
	OSH Systems (C187, C155 and C161)
Securing decent work vulnerable groups in the value chain to secure decent work	Children, given their heightened sensitivity to chemical exposures, generally lower awareness of risks and the heightened risk for exploitation
	Women, given the unique tasks performed in value chains that often involve hazardous substances and wastes, gender-based sensitivities to chemical exposure, and heightened risk of exploitation
	Migrants and Minorities, given the prevalence of economic and social insecurity, language barriers and propensity to be exploited
	Persons with disabilities, given the difficulties they may face in understanding and comprehending hazard information, applying necessary precautions, and securing safe and healthy work

Theme 1: Risk reduction

Given the staggering number of workers who develop diseases and disabilities from chemical exposures, risk reduction has appropriately been a priority objective for the global community under SAICM. For decades, ILO has promoted chemical risk reduction in the world of work through a multipronged strategy of interrelated efforts by governments, employers, workers and workers’ representatives. For example, the ILO has promoted good practices such as the implementation of the hierarchy of hazard controls, training of workers, implementation of classification and labelling, awareness raising, among other actions.

International Labour Standards reflect the prioritization of risk reduction by the international community for the protection of workers. Some examples include hazard identification as emphasized in the Chemicals Convention, (No. 170) (e.g. article 6). Furthermore, various International Labour Standards, both overarching and sectoral in nature, enshrine a policy objective to prevent accidents and injury to health by minimising, so far as is reasonably practicable, the causes of hazards inherent in the working environment (see e.g. article 4 of Occupational Safety and Health Convention, 1981 (No. 155); and article 4 of the Safety and Health in Agriculture Convention, 2001 (No. 184)).

Through the progress toward adoption of OSH as one of ILO’s Fundamental Principles and Rights at work, risk reduction through chemical safety is likely to be an elevated priority for world of work stakeholders. It is highly compatible with the UN Business and Human

Rights framework, which emphasizes the duty of States to protect human rights and the responsibility of businesses to undertake steps to prevent and minimize abuses, enabling efforts that are aligned with UN human rights mechanisms.

The proposed activities would fit with the proposed post-2020 framework for SAICM and its indicators of progress. The following activities could follow under the theme of risk reduction:

1. A **national profile** on OSH that integrates considerations on chemicals at work to identify opportunities to strengthen the protection of workers from hazardous chemicals and wastes.

Based on Section IV of R197, a national profile would serve as a baseline of chemical safety at work. This activity should be conducted in a collaborative spirit among world of work stakeholders under the initiative and guidance of the government. The national profile on OSH that integrates chemicals and waste considerations would enable opportunities to be identified to strengthen chemical safety and is linked to the national strategy activity and information theme, discussed below.

2. A **national strategy** on chemicals at work to secure safe and healthy working environments

The national strategy would serve as a plan of action on the opportunities identified in the national profile that include chemicals and waste considerations. This national strategy would draw from the National

Program of Convention No. 187, Recommendation No. 197 and other relevant International Labour Standards. The activity would include actions to fill gaps in OSH systems for chemical safety (again drawing from C187 and R197) and to identify priority sectors, targets, indicators of progress, and responsible stakeholders for the actions. The activity should be conducted in a collaborative spirit among world of work stakeholders under the initiative and guidance of the government.

Theme 2: Information to support prevention

Following the Bhopal disaster, the instrumental role of the ILO in initiating the development of the GHS – a crucial global information sharing system – illustrates the significant role of information to the protection of workers. Information is the foundation of efforts for prevention and risk reduction. The SAICM process has emphasized the importance of information. ILO instruments on OSH, including the Chemicals Convention No. 170 and Occupational Health Services Convention No. 161, contain numerous provisions on the availability and accessibility of information to support prevention efforts by all stakeholders. For example, under Convention No. 187, States are required where appropriate to ensure the national system has information

States should ensure that they have the proper legislation to require information generation and disclosure. This includes mechanisms to evaluate which sectors, tasks and groups of workers are the most impacted and to make this information available to guide risk reduction activities, as described above in Theme 2. The UN Business and Human Rights framework details the responsibility of businesses to “identify and assess” possible impacts on workers, such as those arising from chemical exposures. International Labour Standards (e.g. C155) further detail the responsibilities of employers to make information available and accessible, whether on labelling of chemicals or incidence of injuries and diseases. Framing certain activities under the theme of information would enable the proposed ILO Framework to enable world of work stakeholder to engage in SAICM and other international arenas.

1. The **UN Globally Harmonized System (GHS)** for classification and labelling of chemicals

The GHS is the global standard for ensuring that employers, workers and other stakeholders have access to basic information on chemicals hazards and measures of protection. Many provisions of the ILO Chemicals Convention (C170) reflect the basic building blocks and elements of the GHS. Progress has been uneven, including in countries that have begun implementation.

2. National recording and notification system of fatal and non-fatal occupational diseases and injuries for prevention purposes

A clearer understanding of the health and economic impacts of chemicals on workers at the national level would help prioritize prevention measures for greater benefit. Collectively, such efforts would paint a global picture of exposures and health outcomes of chemicals at work and where efforts should be concentrated, in regards to groups of chemicals, sectors of concern, and regional and national trends.

The activity is closely tied to C161 on Occupational Health Services and would advance implementation of this convention. In addition, it would also advance the implementation of the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187), which aims to advance a systems approach to OSH through the development of national policy, national system and national programme. Under the National System of C187, States are required to develop a mechanism for the collection and analysis of data on occupational injuries and diseases, where appropriate. This activity would also be in line with SDG target 8.8 and indicator 8.8.1. In addition to occupational injuries, the inclusion of occupational diseases would better enable the economic impacts of adverse health outcomes to be identified from the unsafe use of chemicals at work and link to ILO and WHO's joint and individual efforts in this regard. This is especially important as it is estimated that of all global work-related mortality, approximately 80 per cent is due to diseases. It would also strengthen the linkages with SDGs related to non-communicable diseases and other international initiatives, such as the implementation of the International Health Regulations.

The activity should include actions such as:

- Conducting a national survey of occupational accidents and diseases related to chemical hazards;
- Identifying the occupations and economic activities with the highest risk of occupational disease and injury, including specific sectors and tasks therein;
- Increasing related data flows on highly vulnerable categories of workers (e.g. children, migrants, women), and hard to reach sectors, such as the informal economy;
- Detecting changes in the occurrence of occupational diseases and injuries, so as to monitor improvements in safety and reveal any new areas of risk (including chemical);
- Informing employers, employers’ organizations, workers and workers’ organizations of the risks associated with their work and workplaces;
- Estimating the consequences of occupational diseases and injuries, particularly in terms of days lost or costs to the enterprise and productivity; and
- Providing a basis for policymaking aimed at encouraging employers, employers’ organizations, workers and workers’ organizations to introduce prevention measures.

their implementation. **As no one Convention covers the full range of expectations by world of work stakeholders on chemical safety, implementation of several instruments is needed.** For example, the Chemicals Convention covers many important elements, but does not detail the national OSH systems that are needed, as well as accompanying needs such as medical surveillance, and the recording and notification of occupational accidents and diseases.

If OSH is included as a FPRW, ILO member states would likely report directly on the implementation of one of the key OSH Conventions (likely C187) and indirectly on several others. Thus, the Actions listed would not necessarily be new responsibilities for States and businesses; but rather enable these efforts to be highlighted in SAICM and other international processes. In addition, efforts to implement the International Labour Standards would complement actions under themes such as risk reduction and vulnerable groups in value chains. Under the ILS, the duties and responsibilities of governments, employers, workers and representatives of workers and employers, are well specified. Thus, they are not reproduced here but are useful to identify the actors responsible for various actions identified in the national strategy for risk reduction (see Theme 1).

Theme 3: Implementation of key International Labour Standards

ILO Conventions and other instruments could dramatically improve chemical safety at work with further efforts for

► **Table 2: Selected International Labour Standards related to chemicals and waste in the world of work.**

Category	ILO instrument
Chemical specific	C170 Protocol of 2002 to the Occupational Safety and Health Convention, 1981 Chemicals Recommendation, 1990 (No. 177) Prevention of Major Industrial Accidents Convention, 1993 (No. 174) Prevention of Major Industrial Accidents Recommendation, 1993 (No. 181)
OSH Systems	Occupational Safety and Health Convention, 1981 (No. 155) Protocol of 2002 to the Occupational Safety and Health Convention, 1981 Occupational Health Services Convention, 1985 (No. 161) Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) Promotional Framework for Occupational Safety and Health Recommendation, 2006 (No. 197)

Risk-specific	Benzene Convention, 1971 (No. 136) Occupational Cancer Convention, 1974 (No. 139) Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (No. 148) Asbestos Convention, 1986 (No. 162) ILO List of Occupational Diseases, Recommendation (No. 194)
Sectoral	Safety and Health in Construction Convention, 1988 (No. 167) Safety and Health in Mines Convention, 1995 (No. 176) Safety and Health in Agriculture Convention, 2001 (No. 184)

Theme 4: Securing decent work for vulnerable groups in global value chains

Ensuring decent work in today's economy requires concerted efforts to promote chemical safety and waste management in international value chains.

A focus on global value chains draws appropriate attention to sectors and groups of workers where the impacts of chemicals are greatest and the need for stronger measures of protection and international cooperation to this end. Through this lens, the workers most vulnerable to the adverse impacts of toxic chemicals and wastes often include child labourers, women workers, persons with disabilities and migrant workers.

A set of actions influenced by the UN human rights due diligence framework – identifying, assessing, preventing and remediating impacts -- would help to prioritize preventative actions on chemicals safety and waste management to better protect those most in need of protection, whether at home or abroad. Focusing on these four groups would provide a valuable perspective on protection gaps and opportunities to ensure decent work for all. These groups were among those identified in 2003 under the Global Strategy's "general considerations" (see Annex).

This theme would help foster synergies between the labour sector's efforts and environmental protection-driven international chemical agreements, namely multi-lateral environmental treaties, such as the Basel and Minamata Conventions, and SAICM. For example, the attention paid by these Conventions to electronics waste, ship recycling and artisanal gold mining are strongly linked to the heightened sensitivity and vulnerability of child labourers. The deliberations of these Conventions should be guided by the situation of workers in the

relevant sector on the ground, including the evidence of impacts and challenges presented. Furthermore, an increased focus on groups of highly vulnerable workers and the impact they endure from chemicals would also enable SAICM to have more input on policy issues that are not holistically addressed by the above Conventions, including global supply chains, certain sectors (e.g. agriculture) and various substances of concern to workers.

Activities to protect workers in global value chains such as electronics, plastics and waste picking, artisanal and small-scale mining, agriculture, textiles and tanneries, among others would fit within this theme but could be based on vulnerable groups found in these production and disposal chains. For example, the development of ILO's hazardous work lists and national registries on child labour can help provide opportunities to better protect children from hazardous work by placing greater emphasis on chemical risks. This in turn strengthens the link between OSH and other FPRWs and allows for integrated and coordinated action for these mutually reinforcing rights.

Consistent with the International Labour Standards and the UN Guiding Principles, States would bear responsibility for the governance structures, to be developed in co-operation with employer and worker representatives. This could be done in concert with the above Themes, for example bringing focus to vulnerable groups in their National Strategy (Theme 1) and development of disaggregated or specialized information systems (Theme 2). Businesses would be responsible for human rights due diligence for chemical impacts on these vulnerable groups in line with their aforementioned responsibilities under the UN Guiding Principles on Business and Human Rights. Workers and their representatives would bear responsibilities as described under the International Labour Standards and as otherwise established under the National Strategy.

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► Annex

An ILO Global Strategy on Occupational Safety and Health (2003)

Promotion, awareness raising and advocacy

- The strategy states that ILO should, inter alia,
 - seek ways to raise visibility of the ILO and its OSH instruments;
 - launch a global knowledge and awareness campaign focused on promoting the concept of “sound management of safety and health at work” as the most effective means for achieving strong and sustained preventative safety and health culture at both the national and enterprise levels;
 - strategically use international meetings to promote a preventative safety and health culture;
 - internally implement its own guidelines on OSH management systems;
 - encourage the launching of national OSH programmes by the highest government authorities.

ILO instruments

The strategy recommends the development of new OSH instruments, including on OSH systems; revisions of certain instruments; and a principle-based approach for Conventions and leaving technical specifications for codes of conduct and guidelines.

Technical assistance and cooperation

Emphasizes the development of national OSH programmes as a means of improving OSH systems. Key aspects are identified, such as a national OSH profile, targets, indicators, responsibilities, resources, and government leadership.

Knowledge development, management and dissemination

ILO should, inter alia, develop or strengthen national and collaborating centres of the ILO’s International Occupational Safety and Health Information Centre (CIS); foster research on particular priority subjects in the area of OSH; enable free access to ILO OSH information; contribute to international and national efforts aimed at developing harmonized methods for the collection and analysis of data on occupational accidents and diseases; and provide education and training material.

International collaboration

Emphasizes the importance of ILO’s collaboration with international organizations and fora, such as WHO, ICOH, UNEP, IFCS (superseded by SAICM) and IOMC.

General consideration

Notes means that could be considered at a national level as part of strategies to improve working conditions at the enterprise level, including SMEs and informal economy undertakings, and for vulnerable workers, including young, disabled and migrant workers, and the self-employed. Further notes the importance of considering gender specific factors and mainstreaming OSH in other ILO activities.

SAICM Global Plan of Action (2006)

The following are excerpts from the GPA that clearly and specifically involve the labour community. While many references to ILO, unions and/or labour are made in the GPA, some have been omitted due to repetition and relevance. Activities 11–21, 138–149, and 255 of the GPA are categorized as the OSH “work area” in the GPA. Many of these activities are considered core business of the ILO/IOMC and may be ongoing activity areas (see 2015 progress report on IOMC activities under the GPA).

Risk reduction - Children’s health

10. Eliminate as a priority any child labour that involves hazardous substances (Activity 10)*

Risk reduction - Occupational Safety and Health

11. Develop harmonized data elements on occupational health and safety for recording relevant workplace data in company-specific databases.

12. Consider legislation to protect the health of workers and the public, covering the entire spectrum of work situations in which chemicals are handled, including such sectors as agriculture and health.

13. Develop a system of health and environmental impact assessment in chemicals handling and incorporate it in occupational safety and health programmes.

14. Develop, enhance, update and implement ILO safe work standards, ILO guidelines on occupational safety and health management system (ILO-OSH 2001) and other non-binding guidelines and codes of practice, including those particular to indigenous and tribal populations

15. Develop national occupational safety and health policies containing specific text on chemicals management, with a clear emphasis on preventive measures, requiring that workplace risk assessments and hazard prevention measures be carried out based on the recognized hierarchy of prevention and control measures.

16. Establish integrated programmes for all public health and safety practitioners and professionals, with an emphasis on identification, assessment and control of occupational chemical risk factors in all workplaces (such as industrial, rural, business and services).

17. Promote exchange of information on successful experiences and projects related to chemical occupational safety and health.

18. Develop and disseminate chemical safety data sheets to assist enterprises in protecting their workers.

19. Avoid worker exposure through technical measures where possible; provide appropriate protective equipment; improve the acceptance of wearing protective equipment and stimulate further research on protective equipment to be used under hot and humid conditions.

20. Protect workers from chemicals causing asbestosis, other asbestos-related diseases and occupational cancers, those chemicals included in the Rotterdam Convention because of their occupational risks and other hazardous chemicals based on their occupational health risks.

21. Develop guidance on a harmonized approach to the setting of occupational exposure limits.

22. Establish roles and responsibilities of employers, employees, chemical suppliers and Governments in the implementation of GHS.

23. Encourage full implementation of the FAO International Code of Conduct on the Distribution and Use of Pesticides.

Risk reduction - Pesticides, esp. HHPs

23-31. Transition to safer alternatives, through effective sustainable development Strategies, more precise risk assessments, procurement policies, substitution, hierarchy of hazard concern

34. Health surveillance (Activity 34)

41-42. Proper access to training and appropriate PPE (Activities 41-42)

Risk reduction - Cleaner Production, remediation of contaminated sites, lead in gasoline, sound agricultural practices, chemicals of concern (e.g. POPs, PBTs, vPvBs, EDCs, heavy metals, etc.), waste minimization,

Eliminate hazards, apply pollution prevention, circular economy and waste minimization in policies, and clean up (Activities 43-60, 68-71)

Risk reduction - Waste management

72. Carry out measures that will inform, educate and protect waste handlers and small-scale recyclers from the hazards of handling and recycling chemical waste.

Risk reduction - Risk assessment, management, and communication

Assess risks to certain segments of the population and intersectionality, e.g. women workers (Activity 61)

Simplified tools to integrate guidance on risk assessment and management into policy and decision making (Activity 64)

Risk reduction – impacts of industrial accidents and emergencies

74. Develop integrated national and international systems to prevent major industrial accidents and for emergency preparedness and response to all accidents and natural disasters involving chemicals

76. Minimize the occurrence of poisonings and diseases caused by chemicals.

77. Provide for national collection of harmonized data, including categorization by, for example, type of poison, chemical identity, structure, use or function.

78. Address gaps in the application of safety procedures relevant to the operation of chemical-intensive facilities, including the environmentally sound management of hazardous substances and products.

Knowledge and Information – Research

80. Develop and establish targeted risk assessment approaches to evaluating exposure and impacts, including socio-economic impacts and chronic and synergistic effects of chemicals on human health and the environment.

81. Evaluate whether different segments of the population (e.g., children, women) have different susceptibility and/or exposure on a chemical-by-chemical basis in order of priority.

83. Develop scientific knowledge to strengthen and accelerate innovation, research, development, training and education that promote sustainability

84. Promote research into technologies and alternatives that are less resource intensive and less polluting.

Knowledge and Information – Hazard data

89. Generate and share information detailing the inherent hazards of all chemicals in commerce, giving priority to hazard information for those chemicals that have the greatest potential for substantial or significant exposures.

91. Encourage the use of IPCS health and safety cards (international chemical safety cards, or ICSCs)

96. Identify possible approaches for prioritization for such chemicals that are not necessarily based on production volume but, e.g., build on significant exposures

Knowledge and information – GHS

101. Complete GHS Industry awareness-raising and capacity-building guidance and training materials

Knowledge and Information - OSH

138. Establish a means of developing and updating internationally evaluated sources of information on chemicals in the workplace by intergovernmental organizations, in forms and languages suitable for use by workplace participants.

141. Strengthen global information networks in the sharing, exchange and delivery of chemical safety information (e.g. ILO, WHO, INFOCAP).

142. Promote the establishment of ILO SafeWork programmes at the national level and the ratification and implementation of ILO conventions 170, 174 and 184.

143. Implement an integrated approach to the safe use of chemicals in the workplace by establishing new mechanisms for expanding and updating ILO conventions related to hazardous substances and linking them to various other actions such as those associated with codes, information dissemination, enforcement, technical cooperation, etc.

144. Establish approaches and methods for communicating the results of international risk assessments to appropriate workplace participants and stipulate related roles and responsibilities of employers, employees and Governments.

145. Promote the establishment of national inspection systems for the protection of employees from the adverse effects of chemicals and encourage dialogue between employers and employees to maximize chemical safety and minimize workplace hazards.

146. Strengthen chemical-safety-related information dissemination among social partners and through public media at the national and international levels.

147. Stress the importance of workers' right to know in all sectors (formal and informal), i.e., that the information provided to workers should be sufficient for them to protect their safety and health as well as the environment.

148. Eliminate workplace hazards posed by chemicals through simple, practical methods, in particular chemical control banding

149. Establish the right of employees to refuse to work in hazardous environments if they are not provided with adequate and correct information about hazardous chemicals to which they are exposed in their work environment and about appropriate ways in which to protect themselves.

Knowledge and Information – Children and chemical safety

Several references to ILO but no clear action points

Knowledge and Information – Waste management and minimization

161. Implement information, education and communication packages on the sound management of chemicals, targeting key stakeholders including waste handlers and recyclers.

Governance – integrated national programs

166. With regard to the implementation of national programmes: Develop comprehensive national profiles; Formalize inter-ministerial and multi-stakeholder coordinating mechanisms on chemicals management issues, including

coordination of national Government and multi-stakeholder positions in international meetings; Develop policies of systematic stakeholder involvement, bringing synergies from related initiatives on chemicals management.

167. Support efforts to implement an integrated approach to the safe use of chemicals at the workplace by establishing effective mechanisms for following up and updating information on international instruments related to hazardous substances.

Governance – GHS

168. Review national legislation and align it with GHS requirements.

Governance – International agreements

169. Promote ratification and implementation of all relevant international instruments on chemicals and hazardous waste, encouraging and improving partnerships and coordination (e.g., Stockholm Convention, Rotterdam Convention, Basel Convention, ILO conventions and IMO conventions related to chemicals such as the TBT Convention) and ensuring that necessary procedures are put into place.

Governance – legal, policy and institutional aspects

193. Promote a culture of compliance and accountability and effective enforcement and monitoring programmes, including through the development and application of economic instruments.

Governance – socio economic considerations

181. Establish the capacity to collect and analyse social and economic data.

Technical cooperation

Numerous references to “training” and “capacity” building (activities 221-235)

232. Provide training in the application of relevant liability and compensation mechanisms

Technical cooperation – children and chemical safety

245. Develop mechanisms to facilitate collaborative national and international research and shared technology

246. Establish needed infrastructure for research into the impact of exposure to chemicals on children and women.

Technical cooperation – OSH

255. Promote the necessary training and capacity-building for all people involved directly and indirectly with chemical use and disposal.

Technical cooperation – info management and dissemination

256. Develop and enhance the capacity to acquire, generate, store, disseminate and access information, including INFOCAP.

Technical cooperation – Waste management

260. Undertake training programmes for preventing the exposure of waste handlers and recyclers, particularly waste scavengers, to hazardous chemicals and waste.

SAICM Overall Orientation and Guidance (2015)

Basic elements of SAICM include:

(c) Implementation of chemicals and waste-related multilateral environmental agreements, as well as health, labour and other relevant conventions and voluntary mechanisms;

(g) Inclusion of the sound management of chemicals and waste in national health, labour, social, environment and economic budgeting processes and development plans;

Six core areas of activity include

(c) Mainstream the sound management of chemicals and waste in the sustainable development agenda: advancing risk reduction and enhancing the link between the sound management of chemicals and waste and health, labour, and social and economic development planning, processes and budgets;

1. Enhance the responsibility of stakeholders: promoting and reinforcing commitment and multisectoral engagement

► Overall guidance

25. Greater awareness and the involvement of various sectors – in particular health, agriculture, labour and industry – as well as public interest groups, in policy deliberation, development and implementation are critical in providing an informed basis for the sound management of chemicals at the national level, and also at the regional and global levels.

► Action points

27. Stakeholders, and in particular national focal points, should take action to ensure that the sound management of chemicals involves a balance of sectors and stakeholders and that all sectors increase their active participation in a coordinated manner. Such actions include developing and strengthening linkages with health, agriculture, labour, industry and public interest groups, and with other international agreements and relevant initiatives supporting the mainstreaming of chemicals in the broader development agenda.

2. Establish and strengthen national legislative and regulatory frameworks for chemicals and waste: improving capacity to address the basic elements of the sound management of chemicals and waste and encouraging regional cooperation

► Action points

38. Through the multisectoral and multi-stakeholder approach, Strategic Approach national focal points should identify the key actors at the national, regional and global levels towards strengthening the capacity of health, environment, industry, labour, planning and agriculture agencies, among others, to establish and address priorities. Capacity for dialogue between relevant agencies, enterprises or industry associations and trade unions is also important.

39. The Strategic Approach national focal points should strive to cooperate closely with the entities responsible for the implementation of multilateral environmental agreements, related health and labour conventions as well as relevant voluntary mechanisms at the national level, including the Basel Convention, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, the Stockholm Convention on Persistent Organic Pollutants, the Minamata Convention on Mercury, the International Health Regulations (2005), the International Labour Organization's Convention concerning Safety in the use of Chemicals at Work and the International Code of Conduct for Pesticide Management.

3. Mainstream the sound management of chemicals and waste in the sustainable development agenda: advancing risk reduction and enhancing the link between the sound management of

chemicals and waste and health, labour, and social and economic development planning, processes and budgets

► Action points

49. Recognizing the different roles of stakeholders, all those involved in national planning processes, strategies and budgets need to understand the relevance of sound chemicals and waste management to poverty eradication and other sustainable development goals, such as those relating to health, water quality and food security and safety. National focal points should engage relevant ministries in mainstreaming efforts, including ministries of finance, health and labour.

4. Increase risk reduction and information sharing efforts on emerging policy issues: continuing to promote actions on issues not currently addressed in existing agreements, complementing initiatives taken by other bodies

► Action points

56. Risk reduction and information sharing efforts on emerging policy issues should continue to be promoted by Strategic Approach stakeholders, by drawing heightened political attention to those issues, sharing best practices information and fostering enhanced coordination, collaboration and cooperation among relevant stakeholders.

57. The emerging policy issue leads have developed workplans on the current emerging policy issues to promote enhanced cooperative actions in these areas and to achieve specific risk reduction measures by 2020, including targets and indicators in order to assess progress. Other issues of concern, such as perfluorinated chemicals and highly hazardous pesticides, can be addressed by building on existing work supported by stakeholders and identifying gaps that require additional risk reduction action. Strategic Approach stakeholders should take steps to enhance their involvement in these efforts wherever possible.

58. Strategic Approach stakeholders in countries where lead paint remains in use should continue their efforts to regulate lead in paints and reinforce those efforts as a key risk reduction achievement in line with the targets set out in the business plan.

5. Promote information access: increasing the accessibility of relevant information and making it understandable for all levels of society

► Action points

63. Businesses, Governments and civil society organizations, including academia, non- governmental organizations and trade unions, should work together to identify effective ways of communicating relevant best practices, hazard and risk information on chemicals used in products and processes, to enable informed decision-making by employers, workers, users and consumers, and to promote environmentally sound and safer alternatives. A chemicals in products programme under the Strategic Approach needs to address challenges related to the diverse and large number of product sectors involved.

66. While recognizing the importance of protection of confidential business information to stimulating innovation towards more sustainable products, industries should review their approach to classifying business information as confidential to ensure that, while protecting their legitimate interests, they do not prevent the dissemination of relevant health, safety and environmental information to workers as well as suppliers, distributors, users and consumers.

68. Chemical producers and suppliers should make information on chemical exposure, hazards and safer alternatives available to distributors, workers, consumers and users at all levels in the supply chain so that chemicals may be produced, used and discarded safely in an environmentally sound manner. Chemical producers should work with users and civil society organizations to identify chemical risks that can be managed by using safer alternatives and processes while still providing needed capabilities in a cost effective way.

6. Assess progress towards the 2020 goal of minimizing the adverse effects of chemicals on human health and the environment: identifying achievements, understanding the gaps in implementation and prioritizing actions for achievement by 2020.

► Action points

74. While current Strategic Approach reporting mechanisms are useful in assessing progress towards the 2020 goal, Strategic Approach stakeholders should devise and communicate further means of demonstrating progress in support of decision-making at the national, regional and global levels. Since the means of demonstrating progress can vary from country to country, national focal points should take the immediate lead in identifying, describing and – as far as possible – quantifying specific indicators of progress in their country. In doing so, they should take account of the Global Plan of Action, in particular its indicators of progress, as well as the 11 basic elements.

75. Stakeholders should use the current above-mentioned 20 indicators to monitor overall progress towards the 2020 goal, evaluate their usefulness and consider their links to the sustainable development goals, in particular with regard to assessing non-quantitative aspects of progress. Stakeholders should put in place mechanisms to increase timely reporting in their respective areas of responsibility, with the intention of increasing overall reporting in the future. Implementing partners, in particular from among the IOMC participating organizations and relevant conventions, can play an enhanced role in mapping out global progress in areas relevant to the basic elements for the attainment of sound chemicals and waste management.

76. Stakeholders should review the report and existing strategy on health sector engagement and apply any lessons learned in developing a strategy to achieve the fuller engagement of representatives of other economic sectors in Strategic Approach meetings, projects and initiatives. This should promote the development of a broader ownership base, which is essential to achieving successful and durable outcomes in pursuit of the 2020 goal.

77. The national focal point in each country should be encouraged to engage with stakeholders to provide other instances or indicators of progress, which should be quantified wherever possible. As far as possible, they should use the indicators of progress in the Global Plan of Action but may also devise other indicators related to the 11 basic elements which can readily be measured and incorporated into reports on progress in the implementation of the Strategic Approach.

78. With limited information available on progress related to the illegal international traffic objective in the Overarching Policy Strategy, stakeholders should review information made available to the conferences of the parties to the Basel, Rotterdam and Stockholm conventions, together with other relevant regional information in order to gain a better picture of the global situation related to illegal international traffic and develop a core set of priorities for 2015–2020 based on the lessons learned.

Proposed targets formulated by the Technical Working Group for Proposed Strategic Objectives A-E of SAICM post-2020 framework as of IP3 (2019)

Proposed Strategic Objective A , : [Measures are identified, implemented and enforced in order to prevent or, where not feasible, minimize harm from chemicals throughout their life cycle [and waste];]

Target A1 – [Countries][governments] develop and periodically review plans to achieve sound management of chemicals [and waste] throughout their life cycle.

Target ALT A1. – Measures needed to be implemented to achieve sound management of chemicals throughout their life cycle are identified within the beyond 2020 instrument and updated every xx years.

	High Impact/ High level Indicators	Considerations
High Impact/ High level Indicators	Roadmap of measures to be implemented at the national level to achieve SMCW are identified.	Suggest minimum number of legal frameworks that should be adopted, or a baseline to show progress e.g. from the IOMC toolbox including: Inventory GHS Chemicals products register Risk Assessment for New Chemicals Etc
	Roadmap of measures to be implemented by non-governmental stakeholders to achieve SMCW are identified.	Suggest minimum number of measures that should be implemented, or a baseline to show progress.
	[xx] "facilitation toolkits" for implementing measures identified are elaborated.	e.g. the IOMC toolbox, that has guidelines on how to implement measures.
	Number of countries with national profiles.	Data source UNITAR

Target A2³ – By [xx], Measures to prevent⁴ harm from [xx number] specific chemicals throughout their life cycle [and waste] are identified by [countries] [governments] and non-governmental stakeholders

	High Impact/ High level Indicators	Considerations
High Impact/ High level Indicators	Chemicals to be assessed are "identified" and "prioritized", a work plan is agreed upon and updated every [xx] years.	Baseline to this indicator: #chemicals from MEAs and others with global action (eg: lead)
	Percentage of chemicals "prioritized" that have been assessed to identify measures to prevent or minimize harm throughout their life cycle and measures for its prevention / minimization have been identified	
	Grade of accomplishment of the work plan	
	Countries with controls for lead in decorative paint.	Data source WHO and UNEP

Target A3 – By [xx], measures identified to prevent or, minimize harm from chemicals throughout their life cycle [and waste], are implemented and enforced by [countries] [governments].⁵

	High-level/ high- impact indicator	Considerations
High Impact/ High level Indicators	Percentage of countries with measures implemented (related to target Alt.A1 and A2)	Baseline: national legislations, local action plans, inventories of CAS/EPA/ECHA...? The IOMC Toolbox has levels corresponding to the number of elements incorporated into legal framework(s). These could be displayed as a map showing countries that had reached level 1, level 2 etc. Data would be self-reported by countries.

³ Further discussion is needed on this target. It might be better placed under Objective C or may already be covered by the existing targets for Objective C.

⁴ Further discussion is needed on the addition of "minimization of negative impacts" in targets (under this and other objectives) where prevention is mentioned.

⁵ Further discussion is needed regarding the inclusion of worker protection measures under Targets A3 and A4.

	<p>Grade of accomplishment of roadmaps for implementation of SMCW for governments (related to target Alt.A1 and A2)</p>	<p>The IOMC Toolbox has levels corresponding to the number of elements incorporated into legal framework(s). These could be displayed as a map showing countries that had reached level 1, level 2 etc.</p> <p>Data would be self-reported by countries</p> <p>Implementation could be recorded through secondary indicators such as:</p> <p>If PRTR implemented, annual data reported (Y/N)</p> <p>If Risk Assessment of New Chemicals implemented, the number of risk assessments undertaken per number of new chemicals on the market.</p> <p>Number of countries that have achieved core capacities for chemicals under the International Health Regulations (IOMC indicator).</p> <p>Countries which have implemented pesticide legislation based on the FAO/WHO International Code of Conduct (IOMC indicator).</p> <p>Number of countries that have a legislatively mandated system to manage industrial and consumer chemicals (Proposed OECD indicator)</p> <p>Number of member States who have adopted national profiles, policies or programmes on occupational safety and health and the working environment including the prevention of chemical risks, accompanied by institutional frameworks and strengthened national OSH systems. (proposed ILO)</p> <p>implementation of GHS</p>
	<p>Number of chemicals and waste related inspections undertaken/inspectors per: the number of relevant industries the volume of chemicals imported and produced population expressed as a % of GDP</p>	<p>It is recognised that 'relevant industries' is poorly defined, however it is questioned whether the ILO has data on the number of companies within any one country within its remit?</p> <p>It is noted that this does not specify what kind of inspections are included, which would need to be defined in order to ensure quality reporting</p>
	<p>Number of personnel in relevant roles related to chemicals and waste within Government per population & per employees</p>	<p>Suggest agreeing a benchmark for the minimum personnel required.</p> <p>There may be data already collected through the IHR on personnel working in occupational health, nationally.</p>
	<p>Amount of hazardous and non-hazardous waste generated nationally</p>	
	<p>Percentage of hazardous and non-hazardous waste treated as a proportion of total non-hazardous waste generated nationally: % recovered, % recycled, %landfilled/incinerated.</p>	
	<p>Number of countries with a formal inter-ministerial co-ordinating body</p>	<p>Already collected by an existing SAICM indicator</p>
	<p>Number of countries with a formal multi-stakeholder co-ordinating body</p>	<p>The ILO already collects data on tri-partite coordination bodies</p>

Target A4 - By [xx], measures identified to prevent or, minimize harm from chemicals throughout their life cycle [and waste], are implemented by companies.

High Impact/ High level Indicators	High Impact/ High level Indicators	Considerations
	<p>Percentage/number of industry stakeholders with measures implemented (related to target Alt.A1 and Alt.A2)</p>	
	<p>Grade of accomplishment of roadmaps for implementation of SMCW for industry stakeholders (related to target Alt.A1 and Alt.A2)</p>	<p>Eg implementation of GHS</p>
	<p>Trends in participation of all relevant stakeholders at national level</p>	
	<p>Number of chemical associations participating in Responsible Care</p>	<p>Industry indicators.</p>
	<p>% of Chemical Production by companies signing the Responsible Care Global Charter</p>	<p>Industry indicators</p>

	Number of chemical associations reporting RC KPIs	Industry indicators
	Number of employee fatalities Lost time injury rates for employees Process Safety Event Rate Rate of Transport Incidents Number of workplaces that have been audited on health and safety	These are Responsible Care Indicators as reported by ICCA Member Associations.

Target A5 – By [xx], Countries make and meet their commitments and obligations under the provisions of chemicals and waste-related multilateral environmental agreements to which they are a Party, as well as health, labour and other relevant instruments in which they participate⁶.

	High Impact/ High level Indicators	Considerations
High Impact/ High level Indicators	Number or % of countries signed key MEAs / agreements	Key MEAs would need to be identified as a proxy for participating in and implementing MEAs / agreements Much of this data already exists in the reporting for the GHS, PRTR, BRS Conventions, Minamata Convention, ILO Conventions related to chemical risks, National Improvement Plans, IHR, National Profiles under UNITAR, WHO
	% of Parties complying with their obligations under the MEAs / agreements	Each IOMC / MEA has its own definition of ‘compliance’ with Parties’ obligations, and reporting of implementation
	% countries reporting as a proportion of total country signatories	
	Number or % of countries signed key MEAs / agreements	

Proposed Strategic Objective B: Comprehensive and sufficient knowledge, data and information are generated, available and accessible to all to enable informed decisions and actions.

Considerations: Intended to address the need for new information and data to be generated to address gaps and for greater transparency and accessibility, as well as to address the need for training and education to protect all levels of society.

Target B1. By 20xx, comprehensive data and information on chemicals on the global market, throughout their lifecycle, are generated [are shared], made available and accessible.

	High impact/ high level indicators	Considerations
High level/ high impact Indicators	Number of countries implementing GHS-it is impact oriented, achievable, and easily measurable (existing GHS indicator UNECE, UNITAR, ILO- / TWG document /4	
	Number of countries with chemicals registers/inventories (existing IOMC indicator –PRTR) TWG document /4	
	Number of countries ratified Aarhus Convention on Access to Information	

⁶ “The group suggested further discussion is needed about whether the target should refer to those who are a party to the Convention/Instrument etc. or whether this should be included in a specific indicator to measure countries meeting their obligations to instruments to which they are a party. “

Target B.2 By 20xx all stakeholders have and are using the most appropriate and standardized tools, guidelines and best available practices for assessments and sound management, as well as for the prevention of harm, risk reduction, monitoring and enforcement⁷.

	High Impact/ High level Indicators	Considerations
High level/ high impact Indicators	Number of tools, guidelines and best practices available (international, regional, national)	
	Number of tools used	
	Number of trainings organized to promote use of tools	
	Number of countries with poisons centres	Existing data source WHO

Target B.3 - By 20xx, stakeholders have put in place mechanisms to access information and standardized methods to assess, reduce and prevent health impacts at all stages of the chemical life cycle.

	Indicator	Considerations
High level/ high impact Indicators	Number of globally agreed standards for collecting data on: Mortality Morbidity Environmental pollution Economic costs	
	Indicator 8.8.3: Mortality rate from diseases attributed to occupational risk factors, by disease, risk factor, sex, and age group.	ILO, WHO Secretariats proposal. Indicator makes use of existing official data produced almost exclusively by NSOs and already compiled by WHO and ILO.
	Number of governments implementing standardized data collection methods.	Poison centres (example); ChemObs decision making tools.

Target B.4 - By 20XX educational, training and public awareness programmes on chemical safety, sustainability and safer alternatives have been developed and implemented.

	High Impact/ High level Indicators	Considerations
High level/ high impact Indicators	No. of governments with strategy for chemical safety programmes.	
	Number of countries who provide occupational safety and health training on chemical safety.	
	Number of educational, training and public awareness programmes addressing chemical safety and chemical sustainability	
	SDG indicator 3.9.3 Mortality rate attributed to unintentional poisoning (as an indicator of outcome from awareness programmes).	
	SAICM indicator B.7 Number of countries and organisations that have specific strategies in place for communicating information on the risks associated with chemicals to vulnerable groups.	
	Number of countries, universities, etc [other organizations] that have introduced educational programmes on green chemistry.	
	Number of countries that have gone through [accredited] programmes that promote the concepts of environmentally sound safer alternatives.	

⁷ Further discussion is needed regarding the addition of “risk” before “assessments” and listing “standardized tools” last so that “standardized” is not seen as describing “guidelines” and “best available practices”.

	Number of Member States with national recording and notification systems that allow the regular reporting against SDG indicator 8.8.1 (occupational injuries).	Existing data source ILO.
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Proposed Strategic Objective C: Issues of concern [that warrant [global][and][joint] action] are identified, prioritized and addressed

Target ALT. C1 – As an ongoing process, stakeholders nominate, and the international conference adopts issues of concern with specific goals.

	High Impact/ High level Indicators	Considerations
High Impact/ High level Indicators	Number of issues of concern nominated.	
	Number of adopted issues of concern with specific goals, as proportion of the total number of issues of concern	

Target ALT. C2 – As an ongoing process, stakeholders implement workplans for adopted issues of concern and report on progress achieving their goals, such that the use of sustainable solutions is maximized and significant negative impacts on human health and the environment are prevented or minimized.

	High Impact/ High level Indicators	Considerations
High Impact/ High level Indicators	Number and percentage of adopted issues of concern with progress reported to ICCM.	
	Number of adopted issues of concern with processes in place to manage issues of concern	
	Number of issues of concern for which goals in programmes of work were achieved, as proportion of issues of concern	

Proposed Strategic Objective D: Benefits to human health and the environment are maximized and risks are prevented or, where not feasible, minimized through safer⁸ alternatives, innovative and sustainable solutions and forward thinking.

Target D1 - Companies adopt and implement policies and practices consistently, regardless of where they operate, to produce and use sustainable and safer alternatives and deploy life cycle management and cleaner production technologies.

	Indicators ⁹	Considerations
Indicators	% of companies that have adopted resource efficiency and sustainability in their policies	For all indicators: % inclusive of the number and it is indicative of the overall situation whereas a number alone tells nothing as the broader or overall number is not known.

⁸ Further discussion is needed in regards in the use of the term “safe[r]”.

⁹ The indicators under this objective were not classified as high-level/high-impact indicators and were not discussed in the group in any detail.

	% Reduced production and use of toxic, unsustainable, and unsafe chemicals, and installation of non-cleaner technologies.	
	% of companies implement sustainable chemistry principles, use natural products or non-chemicals as a source for their products.	Non-chemical alternatives should also be considered as alternative for the use of chemicals (e.g. beneficial insects or traps instead of insecticides)
	% of companies implement sustainable chemistry principles, use natural products or non-chemicals as a source for their products.	
	% of companies implement sustainable chemistry principles, use natural products or non-chemicals as a source for their products.	
	% of companies that have developed and implemented an overall environmental or sustainability plan.	
	% of start-up companies investing on innovative and sustainable chemical solutions, and cleaner production technology.	
	% company turnover investment on research and development on safe alternatives, innovative and sustainable chemical solutions, and cleaner production technology.	
	% associations, companies acknowledge; encourage; and reward through economic incentives the production and use of natural products or non-chemicals as input in production processes.	
	% companies report reduced exposure of workers and nearby communities to highly toxic, unsustainable, and unsafe chemicals.	
	% companies report reduced associated disease burden, improved human health of workers, nearby communities and associated work environment.	
	...	

Proposed Strategic Objective E. [The importance of the sound management of chemicals and waste as an essential element to achieving sustainable development is recognized by all[; adequate financial and non-financial resources are [identified and] mobilized; actions are accelerated; and necessary [transparent and accountable] partnerships are established to foster cooperation among stakeholders].]

Target E1 - All countries and stakeholder organizations at the high[est] level recognize the importance of and demonstrate their commitment to the sound management of chemicals [and waste] as a contribution to sustainable development [and the 2030 Agenda¹⁰].¹¹

	High Impact/ High level Indicators	Considerations
High Impact/ High level Indicators	Process level indicators	
	The number of high levels of stakeholder organizations who delivered speeches and messages that refer to the importance of and commit to action on the sound management of chemicals and waste and its relevance to sustainable development.	

¹⁰ Or « 2030 Agenda for Sustainable Development »

¹¹ Further discussion is needed on the level of recognition (high vs. highest) and the specific linkage to the 2030 Agenda.

	The number of newspaper advertisement, TV commercial, posters, government’s social media (website, facebook, twitter, etc.) that giving reference to the importance of and commitment to actions on the sound management of chemicals and waste and its relevance to sustainable development.	
	Output/outcome indicators	
	Proportion of the number of organizations that clearly state their recognition of the importance of sound management of chemicals and waste in their written/recorded official statements, documents and/or messages, within the total number of organizations in each stakeholder sector	
	Summary of the proportions throughout all stakeholder sectors in regional or global level.	

Target E2 - Policies for sound management of chemicals [and waste] are integrated into local, national, sub regional, regional [global]¹² development strategies.

	High Impact/ High level Indicators	Considerations
High Impact/ High level Indicators	Process level indicators	
	The number of countries that have developed a national development strategy having a section of management of chemicals and waste with responsible agencies identified.	
	The number of regional development strategy having a section of management of chemicals and waste with responsible agencies identified.	
	# of regional actions, regulations, policies that are reflected in national policies.	
	Output indicators	
	The proportion of the number of national development strategies having a section of management of chemicals and waste with responsible agencies identified.	
	The proportion of the number of regional development strategies having a section of management of chemicals and waste with responsible agencies identified.	
	(if global level added, similar examples can be added).	
	Outcome indicators	
	The extent of coordination among national, regional, (and global) levels. It will be measured by the proportion of organization/agencies inter-coordinated against all possible combination among relating national-regional combination.	

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¹² Further discussion is needed on the inclusion of “global” development strategies.