Thought Starter on Beyond 2020 Indicators and Milestones: Chemical Safety Contributions to the SDGs

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Additional policy papers relevant to the Beyond 2020 process can be found here: https://ipen.org/conferences/oewg3 and https://ipen.org/documents/ipen-beyond-2020-perspectives

Introduction

A new global agreement on chemical safety should include both a substantial advancement of SAICM (SAICM2.0) that includes the elements described below and an enabling framework that acts as an umbrella for all chemicals-related agreements. This document will provide some initial thoughts on indicators for SAICM2.0, but efforts should also be directed at further defining the enabling framework.

Indicators for SAICM.20

Indicators for SAICM2.0 should include both global-level indicators connected to objectives and targets as well as meaningful national indicators that are connected to global objectives and are part of a national action plan. Regional indicators could also be considered. Since national indicators need to be developed by each country, this thought starter will focus on global-level indicators. The indicators also include measurable milestones and connections to relevant Sustainable Development Goals (SDGs) because the most fundamental task of the Beyond 2020 process is to, *"…develop recommendations regarding measurable objectives in support of the 2030 Agenda for Sustainable Development."*

Annex 1 shows proposed targets, milestones and relevant SDGs for each of the SAICM2.0 objectives. Some text edits of the objectives are shown along with some additional proposals for objectives. The indicators include key measures from SAICM emerging policy issues and issues of concern. Some of these connect to other multi-lateral environmental agreements, as does the original SAICM agreement. The indicators and their milestones are clearly defined, measurable and quantifiable.

Some participants in the Beyond 2020 process have noted the desirability of developing objectives, targets and indicators that are "achievable and realistic." However, objectives, targets and indicators should track closely with the framework's goals and its timeless vision and not lack ambition due to arbitrary determinations of what is achievable or realistic.

SAICM's broad scope covers many chemical exposures that lie outside the framework of current chemicals conventions. In many cases, the harms to human health and/or the environment caused by these other sources can be just as serious as harms caused by persistent organic pollutants, ozone depleting substances or mercury. These sources of toxic chemical exposure frequently disproportionately affect Indigenous Peoples and people and environments in low- and middle-income countries. In the absence of SAICM, no international framework would exist for addressing the majority of the world's most pressing, chemical safety concerns.

Measuring the impact of SAICM on health and the environment

Key aspects of measuring SAICM's impact on health and the environment include:

- Periodic review of national implementation (see below)
- Consideration of a variety of data sources (see below)
- Multi-sectoral and multi-stakeholder input
- Allowance for ad hoc review of the agreement or parts of it as agreed by the International Conference

Data sources

Depending on the target, a variety of data sources could be utilized as indicators. These could include:

- National laws and reviews of their implementation and enforcement
- Monitoring and hazard/health impact data on wastes and chemicals in the environment, food, products, and people

- Data on trade of chemicals, chemical-containing products, and wastes
- Data and information obtained through complementary processes, for example reporting undertaken for Basel, Stockholm and Rotterdam Conventions, by other MEAs and/or IOMC organizations.
- Use of peer reviewed scientific literature; citizen science; and traditional knowledge

Periodic review of national actions

Progress against key targets and the national implementation plan should be measured every 3 years and presented in a report to the International Conference along with any suggested recommendations to address identified gaps. All strategic objectives and national implementation plans should be reviewed on a rotational basis so that the entirety of the Approach is reviewed within a 9-year period. Where possible and helpful, the periodic review could be conducted together with evaluations of the relevant Conventions' NIPs/NAPs.

A periodic review system for reporting should be implemented that reports on actions in the National Action Plan and others including comments from stakeholders. An expert panel would review the reports and propose recommendations and countries could come up for review every three years. These reports could form the basis of SAICM2.0 effectiveness evaluation along with assessment of financing, capacity building and other important elements of the agreement.

Text proposal:

i. Taking stock of progress
   Institutional arrangements to take stock of progress will include a periodic review system facilitated by a secretariat and a regionally balanced working group as decided by the governing body. The operation of the periodic review system will include:
   a. Coverage of all countries equally including the full involvement of each country with consideration given to its capacity building needs.
   b. Preparation of a national implementation report by each country under review.
   c. Discussion of the national report on country implementation of the agreement, information from UN agencies, and information from stakeholders.
   d. An outcome report prepared by the periodic review working group in cooperation with the secretariat which summarizes the discussion including responses from the country under review along with recommendations for implementation.
   e. Review of each country once every three or four years.

Annex 1. Targets, indicators, milestones and related SDGs

Strategic objective A: Measures are identified, implemented and enforced in order to prevent and minimize harm from chemicals throughout their life cycle and waste.

Targets	Indicators	Milestones	SDG(s)
A1: All c~~C~~ountries adopt, implement and enforce comprehensive legal frameworks that address risk prevention and the reduction of adverse impacts from chemicals throughout their life cycle and waste.	1. Number of countries that submitted web links and/or text of legal framework	M1: By 2025, all countries have submitted texts of legal frameworks	S1: 12
	2. Number of reviews of the framework including input from stakeholders on successes and gaps	M2: By 2025, three reviews have been conducted	S2: 12, 16
	3. Number of legally-binding regulatory controls on lead decorative paints and lead paints for other applications most likely to contribute to children's lead exposure	M3: By 2022, all countries have adopted controls	S3: 3, 12
	4. Number of legally-binding regulatory controls prohibiting the use of lead in paint, varnishes, stains, enamels, glazes, primers or other coatings	M4: By 2027, all countries have adopted controls	S4: 3, 12
	5. Number of countries that phased out the manufacture, import, sale and use of highly hazardous pesticides	M5: By 2025, 20 HHPs have been eliminated in 50 countries; 150 countries by 2030	S5: 2, 3, 8
	6. Number of policies and instruments that implement agroecological strategies and practices adopted as alternatives to conventional agriculture and forming the basis of agriculture	M6: By 2025, agroecological strategies and practices as the basis of agriculture adopted in 75 countries; 150 countries by 203	S6: 2
	7. Number of meaningful right to know regulations adopted for workers and sub-contractors in	M7: By 2025, 50 countries adopt meaningful right to known regulations	S7: 8, 16

	manufacturing and recycling industries, including those producing and recycling electrical and electronic equipment		
	8. Monitoring and research results are translated into EDC control actions	M8: By 2025, EDC control actions in 5 developed countries and 3 developing and transition countries in 4 UN regions for a total of 17 countries	S8: 12
	9. Number of adequate regulatory frameworks for nanomaterials	M9: By 2025, rigorous regulatory frameworks for nanomaterials adopted in 5 countries in 5 UN regions for a total of 25 countries	S9: 12
	10. Number of occupational health and safety regulations that provide meaningful right to know to workers, prioritize prevention and hazard-based assessment, establish exposure limits protective of the most vulnerable populations, and provide equal protection in the workplace and the community	M10: Regulations established and enforced in 150 countries by 2025	S10: 8, 9, 12
	11. Enforcement actions; assessed penalties legal judgements; and return to sender actions implemented	M11: Enforcement actions; assessed penalties legal judgements; and return to sender action documented in 150 countries by 2030	S11: 12
	12. Number of regulations that protect freshwater sources, including drinking water, from pesticide contamination	M12: Regulations established in 75 countries by 2025; 150 countries by 2030	S12: 6
	13. Number of national bans on all forms of asbestos	M13: All forms of asbestos prohibited in all countries by 2025	S13: 3, 12

	14. Number of bans on multi-layered, single use plastic packaging and products, particularly sachets	M14: Multi-layered, single use plastic packaging and products, particularly sachets banned in 150 countries by 2025	S14: 11, 12, 14
	15. Number of national bans on plastic food wrappers, containers, straws, stirrers, shopping bags, utensils, cups, personal care products containing or packaged in plastic, take-out containers, and cigarette lighters	M15: Plastic food wrappers, containers, straws, stirrers, shopping bags, utensils, cups, personal care products containing or packaged in plastic, take-out containers, and cigarette lighters banned in 150 countries by 2025	S15: 11, 12, 14
	16. Number of governments classifying illegal trade of obsolete pesticides as organized crime	M16: 150 countries classify illegal trade of obsolete pesticides as organized crime by 2025	S16: 2, 12
	17. Number of governments that end illegal traffic of pesticides including obsolete pesticides and other toxic substances	M17: All governments end illegal traffic of pesticides including obsolete pesticides and other toxic substances by 2030	S17: 15
	18. Number of countries banning per- and polyfluorinated chemicals (PFAS) as a class	M18: PFAS banned as a class in all countries by 2024	S18: 3, 12
A2: Countries have sufficient capacity to address chemicals and waste issues nationally, including inspection, monitoring, investigation, enforcement, and appropriate inter-agency coordination and stakeholder participation mechanisms, such as national action plans.	1. Number of developing and transition countries with publicly available analytical data on lead in paint	M1: By 2022, analytical data on lead in paint from 80 developing and transition countries is publicly available	S1: 16
	2. Number of countries with publicly available monitoring of lead content of paint on the market that shows no new decorative paint or paints for other applications most likely to contribute to	M2: No sale of decorative paint containing lead by 2025 in all countries	S2: 3, 12

	childhood lead exposure are being sold		
	3. Number of countries with publicly available monitoring that shows that no varnishes, lacquers, stains, enamels, glazes, primers or coatings that are being produced, sold, exported, imported or used for any purpose contain lead	M3: Elimination of production, sale, export and import of lead in varnishes, lacquers, stains, enamels, glazes, primers or coatings in all countries by 2030	S3: 3, 12
	4. Number of countries in which Ministries of Health conduct biomonitoring and health surveillance of workers handling nanomaterials	M4: Biomonitoring complete in 15 countries by 2025; 50 countries by 2030	S4: 8, 16
	5. Number of countries which have adopted and enforced legally binding regulations aimed at disclosing chemicals of concern[1] in consumer products	M5: Monitor and publicly disclose information on 50 chemicals of concern in consumer products in 75 countries by 2025	S5: 12, 16
	6. Number of developing and transition countries conducting monitoring studies of EDCs and potential EDCs	M6: Monitor EDCs and potential EDCs in 4 – 6 developing and transition countries in four UN regions for a total of 16 – 24 countries by 2025	S6: 12, 16
	7. Number of countries with regular monitoring and public reporting of water sources including potable water, surface and ground water sources, sewage treatment effluents and sewage sludge for the presence of EPPPs and their bioactive transformation products	M7: Regulator monitoring in 50 countries by 2025	S7: 6, 12, 16

[1] Groups of chemicals that might be prioritized include persistent, bioaccumulative and toxic substances (PTS); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune or nervous systems; persistent organic pollutants (POPs), mercury and other chemicals of global concern; chemicals produced or used in high volumes; chemicals subject to wide dispersive uses; and other chemicals of concern at the national level. SAICM Overarching Policy Strategy para 9.

	8. Number of countries monitoring all major rivers and waterways for existing and emerging substances of concern and making the data publicly available	M8: Monitoring and publicly available data in 75 countries by 2025; 150 countries by 2030	S8: 6, 12, 16
	9. Number of major cities conducting real-time monitoring of PM2.5 and making the data publicly available	M9: All cities with greater 100,000 inhabitants conduct real-time PM2.5 monitoring with publicly available results by 2025	S9: 11, 16
	10. Number of countries identifying and conducting inventories of sites contaminated by toxic chemicals including obsolete pesticides, mercury, and others	M10: Contaminated sites identified in 75 countries by 2025; 150 countries by 2030	S10: 12, 15
	11. Number of countries characterizing and prioritizing mercury-contaminated sites followed by development of the site management plan and remediation	M11: Mercury-contaminated sites identified and remediated in 75 countries by 2030	S11: 12, 15
A3: Countries are implementing the chemicals and waste-related multilateral environmental agreements, as well as health and safety labour and other relevant conventions, and voluntary mechanisms such as the Globally Harmonized System of Classification and Labelling of Chemicals and the FAO Code of Conduct.	1. Number of publicly available national implementation / action plans developed	M1: Updated National Implementation / action plans of 150 countries on websites of relevant agreements by 2025	S1: 12
	2. Number of reports on implementation to Convention secretariats	M2: Updated reports on implementation of agreements by 150 countries on websites of relevant agreements by 2025	S2: 12
	3. Number of assessments of implementation by relevant stakeholders	M3: Three assessments of implementation of each chemical MEA by relevant stakeholders publicly available by 2030	S3: 12, 16

	4. Number of countries ratifying ILO conventions 29, 87, 98, 100, 105, 111, 138, 139, 155, 161, 162, 167, 170, 174, 176, 182, 184, 187	M4: These ILO Conventions ratified in all countries by 2030	S4: 8, 12
	5. Number of countries ratifying the Basel Ban Amendment	M5: All Parties ratify the Basel Ban Amendment by 2027	S5: 11, 12
A4: Stakeholders have incorporated the sound management of chemicals throughout their life cycle and waste into their planning, policies and practices including internalization of costs, thereby supporting the development and implementation of chemicals management systems and other sector-appropriate mechanisms.	1. Number of companies publicly reporting their chemical footprint annually	M1: 100 companies publicly reporting chemical footprint annually by 2022; 200 companies by 2027	S1: 9, 12
	2. Number of hazardous substances eliminated from production and use	M2: Public reporting shows stopping production of 100 hazardous substances by 2023	S2: 3, 9, 12
	3. Number of policies and actions for safer substitutes implemented by the private sector	M3: Private sector develops safer substitution policies for 100 hazardous chemicals by 2023	S3: 9, 12
	4. Number of periodic stakeholder assessments of framework implementation	M4: Periodic assessments reported by trade unions, health sector, public interest NGOs, and industry at each ICCM meeting	S4: 12, 16
	5. Number of countries assessing implementation of the 2011 Vienna recommendations on hazardous substances within the lifecycle of electrical and electronic products	M5: Assessment completed by 2025 in 20 countries designing and/or producing electrical and electronic equipment	S5: 3, 8, 12
	6. Number of countries with economic instruments that internalize the costs of chemicals producers and support at 10% of the budget needed for sound chemicals management	M6: 50 countries with economic instruments that internalize costs by 2030	S6: 9, 12, 17

A5: Governments and industry implement right to know, right to participate, protection from victimization, compensation for injury and illness, freedom of association, and the hierarchy of hazard controls to ensure that workers are protected from the risks associated with chemicals and waste and that workers have the means to protect themselves.	1. Number of pollutant release and transfer registers (PRTR) with publicly accessible data established	M1: PRTR with publicly available data operating in 150 countries by 2030	S1: 9, 12, 16
	2. Number of countries ratifying ILO conventions 29, 87, 98, 100, 105, 111, 138, 139, 155, 161, 162, 167, 170, 174, 176, 182, 184, 187	M2: ILO Conventions ratified in all countries by 2030	S2: 8, 12
	3. Number of countries enacting meaningful right to know regulations for workers producing electrical and electronic equipment, including sub-contractors	M4: Right to know regulations established in 50 countries by 2030	S3: 8, 9, 16
	4. Number of countries establishing and implementing mechanisms to ensure meaningful participation of civil society in decisions on sound chemicals management at the national level, particularly for women, workers, and Indigenous Peoples	M5: Mechanisms established in 150 countries by 2030	S4: 12, 16
	5. Number of countries with public interest civil society representatives meaningfully participating in national implementation committees of SAICM and of the Basel, Minamata, Rotterdam, and Stockholm Conventions	M6: Public interest civil society representatives meaningfully participate in national implementation committees of all chemicals agreements in all countries by 2030	S5: 12, 16
	6. Establish a global mechanism within SAICM to protect environmental and human rights defenders and include a procedure for reporting reprisals	M7: Mechanism established by 2023	S7: Agenda 2030 Preamble, Declaration, Vision, Our Shared Principles and Commitments,

			The New Agenda, 12
A6: Countries develop and implement national action plans on the sound management of chemicals and wastes.	1. Number of countries with a publicly available national action plan	M1: National action plans publicly available in 150 countries by 2022	S1: 12
A7: Morbidity, mortality, and environmental contamination from or by chemicals and wastes is substantially reduced.	1. Significant reduction in pesticide poisonings globally	M1: 80% reduction in pesticide poisonings compared to 2020 by 2030	S1: 2, 3, 12
	2. Significant reduction in the number of pesticide-related suicides	M2: Pesticide-related suicides reduced 50% compared to 2020 by 2025; 100% by 2030	S2: 2, 3, 12
	3. Sharp decline in percentage of global burden of disease attributable to lead exposure	M3: By 2025, lead exposure accounts for less than 25% of global burden of idiopathic developmental intellectual disability; 1% of the global burden of ischaemic heart disease and 1% of the global burden of stroke	S3: 3, 12
	4. Sharp decline in number of disability-adjusted life-years (DALYs) caused by occupational exposure to chemicals	M4: By 2025, a reduction in DALYSs caused by occupational exposure to chemicals of 25% has been verified	S4: 3, 9, 12
	5. Significant reduction in morbidity and mortality caused by asbestos exposure	M5: By 2025, a 50% reduction in morbidity and a 75% reduction of mortality caused by asbestos	S5: 3, 9, 12
	6. Significant reduction in morbidity and mortality caused by mercury exposure	M6: M5: By 2025, a 50% reduction in morbidity and a 75% reduction of mortality caused by mercury	S6: 3, 12
	7. Significant drop in number of poisonings in relation to contaminated sites	M7: By 2025, 150 sites contaminated with mercury, industrial wastes, pesticides and other hazardous	S7: 3, 12, 15

		chemicals are identified, contained and remediated	
A8: Private sector fully implements extended producer responsibility throughout the production and supply chain including take back of obsolete chemicals, wastes, and pesticides containers.	1. Number of countries in which all pesticide containers are safely removed and stored	M1: Pesticide containers removed and stored in 75 countries by 2025; 150 countries by 2030	S1: 2, 3, 12
	2. Number of countries with extended producer responsibility policies implemented so that the pharmaceutical industry is accountable for all pharmaceutical waste throughout the life cycle of their products	M2: All countries have extended producer responsibility policies implemented an in place by 2030	S2: 3, 9, 12
	3. Number of countries with free electronics take-back programs implemented as part of extended producer responsibility measures	M3: Free electronics take-back programs established in 150 countries by 2030	S3: 9, 12
A9: Countries prohibit manufacture and export of substances, intermediates, formulations or products that are banned nationally for environmental or health reasons.	1. Number of countries prohibiting manufacture of substances for export that are banned nationally	M1: Law prohibiting export of banned substances publicly available on-line in 75 countries by 2025; 150 countries by 2030	S1: 12
A10: IOMC organizations and MEA Secretariats make meaningful contributions to sound chemicals management	1. WHO and UN Environment take the lead roles in the Secretariat in their respective areas of expertise	M1: WHO and UN Environment written into new framework of joint secretariat by 2020	S1: 12
	2. WHO initiates a hazard surveillance program in collaboration with governments and stakeholders to identify agricultural settings where there are particular pesticide exposures and health hazards to workers	M2: Surveillance program established in 75 countries by 2025; 150 countries by 2030	S2: 2, 3
	3. UN Environment in collaboration with governments and stakeholders initiates a	M3: Program initiated by 2022	S3: 12, 14, 16

	monitoring program for chemicals in microplastics in the world's oceans as an effectiveness evaluation measure for SAICM and the chemical conventions		
	4. WHO and FAO update pesticide poisoning data for the African, Asia-Pacific, Central and Eastern Europe, and Latin America and the Caribbean regions and make it publicly available	M4: Pesticide poisoning data updated and publicly available by 2023	S4: 2, 3, 12, 16
	5. WHO in collaboration with governments establishes effective poison control centers in the 55% of the WHO Member States that do not have them and ensure adequate coverage in existing centers	M5: Poison control centers established by 2030	S5: 2, 3, 12, 16
	6. SAICM Secretariat establishes a multi-stakeholder women and chemicals working group to develop recommendations for actions on women and chemical safety that are included in workplans guiding SAICM implementation including issues of concern	M6: Working group established by 2021	S6: 5, 12
	7. IOMC organizations and MEA secretariats develop gender guidelines for all projects on sound chemicals management including gender-disaggregated data	M7: Gender guidelines finalized by 2022	S7: 5, 12
	8. UN Environment produces a report focused on practical steps for hazard reduction in chemical	M8: Report publicly released by 2022	S8: 12

	design and use with a special emphasis on developing and transition countries		
	9. ILO conducts capacity building workshops at SAICM regional meetings on how hazard reduction with inherently safer chemistry can reduce chemical accidents and insure worker health and safety	M9: Workshops begin in UN regions in 2023	S9: 8, 12
	10. UN Environment conducts training for government regulators in all UN regions on economic instruments useful for achieving sustainable zero waste practices including revenue generating instruments (e.g. pay as you throw, green taxes), revenue providing instruments (e.g. tax credits, funds), and non-revenue instruments (e.g. liability, public procurement, extended producer responsibility).	M10: Trainings conducted beginning in 2023	S10: 11, 12
	11. A SAICM clearing house mechanism publicly tracks development aid for sound chemicals management	M11: Clearing house established by 2022	S11: 12, 17
	12. UN Environment executes a study on how to implement market-based instruments to internalize, within relevant industries, the cost to governments of implementing robust programs for sound chemicals management, with an appropriate share of the funds generated directed to assist chemical safety activities in developing countries	M12: Study publicly released in 2023	S12: 12, 17

	and countries with economies in transition		
	13. The SAICM Secretariat uses the UN Environment cost internalization report and other relevant materials to provide legal and policy training on global and regional cost internalization approaches back to back with SAICM regional meetings, which include the participation of appropriate government staff from countries responsible for developing and executing these types of law	M13: Trainings in UN regions begin in 2023	S13: 12, 17
	14. UN Environment uses the cost internalization report and other relevant materials to initiate a multi-stakeholder process to develop a global cost internalization program within the SAICM process	M14: Process initiated in 2025; finalized by 2028	S14: 12, 17
	15. UN Environment establishes a living, publicly available global inventory of nanomaterials on the market	M15: Inventory publicly available by 2025	S15: 12, 16
	16. UN Environment in collaboration with stakeholders develops and publicly disseminates a list of chemicals of concern to human health and the environment used in electronics production and products	M16: Process initiated by 2005	S16: Agenda 2030 Preamble, Declaration, Vision, Our Shared Principles and Commitments, The New Agenda, 12
	17. UN Environment and the World Health Organization facilitate the exchange of expertise	M17: Exchange of expertise and best practices initiated in 2022 and continues	S17: Agenda 2030 Preamble, Declaration,

	and best practices between human rights and chemical experts with the SAICM process to build collective capacity to prevent adverse impacts of hazardous substances and wastes and report regularly on progress to meetings of the International Conference on Chemicals Management	with periodic reporting at ICCM meetings	Vision, Our Shared Principles and Commitments, The New Agenda, 12
	18. UN Environment operationalizes a national periodic monitoring, reporting and evaluation mechanism within SAICM that provides synergistic information exchange about progress toward chemical safety with UN human rights treaty bodies, Special Procedures, and other human rights mechanisms	M18: Mechanism established by 2030	S18: Agenda 2030 Preamble, Declaration, Vision, Our Shared Principles and Commitments, The New Agenda, 12
	19. IOMC organizations and MEA secretariats strengthen collaboration with the Office of the High Commissioner on Human Rights to strengthen national, regional and international human rights mechanisms and environmental, health, labor and other related authorities on the implications of hazardous substances for human rights and reports regularly on progress to the chemicals conventions COPs and meetings of the International Conference on Chemicals Management	M19: Collaboration established by 2025	S19: Agenda 2030 Preamble, Declaration, Vision, Our Shared Principles and Commitments, The New Agenda, 12
	20. IOMC and GEF activities and projects	M20: Requirement established by 2030	S20: 12, 16

	include a requirement for disaggregated information on risks to vulnerable groups from hazardous substances and wastes to help realize the rights to information and meaningful participation		
	21. SAICM Secretariat establishes links and reports on activities of the international working group to elaborate an international legally binding instrument on Transnational Corporations and Other Business Enterprises with respect to human rights	M21: Links established by 2021 with reporting at subsequent ICCM meetings	S21: 9, 12
	22. UN Environment assembles a list(s) of endocrine disrupting chemicals (EDCs) and potential EDCs and sources of exposure from the UNEP/WHO State of the Science report and other sources and makes it publicly available on its website	M22: List assembled and publicly posted on UN Environment website by 2022	S22: 12, 16
	23. OECD establishes a living, publicly available global inventory of nanomaterials on the market	M23: Publicly available inventory posted on OECD website by 2025	S23: 12, 16
	24. UN Environment and WHO collaborate with stakeholders to develop guidance on safe management of legacy lead paint	M24: Guidance developed by 2021	S24: 3, 12

Strategic objective B: Comprehensive and sufficient knowledge, data, information and awareness is generated, available and accessible to all to enable informed decisions and actions.

Targets	Indicators	Milestones	SDG(s)
B1: Comprehensive data and information for all chemicals on the market are	1. Number of pollutant release and transfer registers (PRTR) with	M1: PRTR with publicly available data operating in 150 countries by 2030	S1: 12, 16

available and accessible, including information and data on properties, health and environmental effects, uses, hazard- and risk-assessment results and risk-management measures, monitoring results and regulatory status throughout their life cycle nationally, in other countries, and globally.	publicly accessible data established		
	2. Number of countries that have identified and made publicly available, environmental and health information on 50 pesticides that should be classified as highly hazardous under the conditions of their ordinary use	M2: Information available in 75 developing and transition countries by 2025; 150 countries by 2030	S2: 2, 12, 16
	3. UN Environment assembles a list(s) of endocrine disrupting chemicals (EDCs) and potential EDCs and sources of exposure from the UNEP/WHO State of the Science report and other sources and makes it publicly available on its website	M3: List assembled and publicly posted on UN Environment website by 2022	S3: 12, 16
	4. OECD establishes a living, publicly available global inventory of nanomaterials on the market	M4: Publicly available inventory posted on OECD website by 2025	S4: 12, 16
	5. Number of countries identifying gaps in existing legislation and developing regulations to address information disclosure on chemicals in products	M5: Gaps identified and regulations established in 80 countries by 2030	S5: 12, 16
	6. Number of countries implementing GHS	M6: All countries implementing GHS by 2030	S6: 12, 16
B2: All stakeholders, in particular industries and regulators, have and are using the most appropriate and standardized tools, guidelines and best practices for assessments and sound management, as well as for the prevention of harm, risk reduction, most protective occupational and	1. IOMC organizations in collaboration with governments and stakeholders develop a global roadmap on how pharmaceuticals can be produced, used and disposed of in a sustainable way, with an emphasis on the quality/rational use of	M1: By 2022, global road map developed	S1: 9, 12

environmental exposure standards, monitoring and enforcement.	medicines (human and veterinary), preventing microbial resistance and reducing and eliminating pharmaceutical pollution downstream of production facilities		
	2. UN Environment and WHO collaborate with stakeholders to develop guidance on safe management of legacy lead paint	M2: Guidance developed by 2021	S2: 3, 12
	3. IOMC organizations in collaboration with stakeholders establish an inventory of available techniques in waste water treatment/water treatment plants for destroying pharmaceutical pollutants, applicable in all countries	M3: Inventory established by 2025	S3: 6, 12
B3: Information and standardized methods such as of comprehensive morbidity and mortality data, and statutory reporting requirements on employers' occupational injuries and diseases related to workplace exposure to chemicals are available to all and used to understand the impacts of chemicals and waste for improved poisoning, burden-of-disease and cost-of-inaction estimates, to inform the advancement of chemical safety measures and to measure progress towards reducing those impacts.	1. WHO works with Ministries of Health to develop standardized methods and conduct biomonitoring and health surveillance of workers including those handling nanomaterials	M1: Biomonitoring complete in 15 countries by 2025; 50 countries by 2030	S1: 8, 12, 16
	2. Number of countries with concrete actions to raise awareness of the public, communities and workers about existing legal frameworks that address risk prevention and the reduction of adverse impacts from chemicals throughout their life cycle and waste.	M2: Long term actions to raise awareness of public, communities and workers on legal frameworks addressing the negative impacts of toxic chemicals throughout their life cycle are in place in all developing and transition countries by 2025	S2: 12
	3. Number of developing and transition countries with national monitoring and education program on lead poisoning prevention	M3: Vulnerable population groups to lead poisoning are regularly tested for their blood lead levels and receive appropriate risk	S3: 3, 12

		reduction education in 75 countries by 2030	
B4: Educational, training and public awareness programmes on chemical safety and sustainability have been developed and implemented, including for vulnerable populations, along with worker safety curricula and programmes at all levels.	1. FAO works with stakeholders to provide assistance to farmers in to enable them to discontinue the use of highly hazardous pesticides while maintaining their agricultural livelihood	M1: Documentation from governments and stakeholders that 1 million farmers in 100 countries have been assisted by 2030	S1: 2, 3, 12
B5: Countries and stakeholders are implementing training on environmentally sound and safer alternatives, as well as on toxics use reduction policies, substitutions and the use of safer alternatives, such as agroecology.	1. Governments with FAO assistance provide guidance on safer alternatives to HHPs with priority to non-chemical alternatives and ecosystem approaches to sustainable food and fiber production	M1: Guidance provided to 50 countries by 2025; 150 countries by 2030	S1: 2, 3, 12
	2. Number of countries that adopt policies and instruments that implement agroecological strategies and practices that reduce synthetic inputs, such as pesticides and fertilizers, and are based on biodiversity and integrated soil nutrition and thus increase agricultural productivity in a sustainable way, strengthen adaption to climate change and mitigate greenhouse gases	M2: 75 countries adopt agroecological policies and instruments by 2025; 150 countries by 2030	S2: 2, 3, 12
	3. Number of countries that adopt policy instruments to reduce, substitute, and eliminate hazardous substances in electrical and electronic products	M3: Policy instruments adopted in 25 countries by 2025; 50 countries by 2030	S3: 3, 9, 12
B6: Workers are informed by industry about actual and potential exposures to	1. Number of meaningful right to know regulations adopted for workers and	M1: By 2030, 50 countries adopt	S1: 8, 9, 12, 16

hazardous substances in a form that serves their needs.	sub-contractors, including those producing electrical and electronic equipment	meaningful right to known regulations	
	1. WHO works with Ministries of Health to conduct biomonitoring and health surveillance of workers including those handling nanomaterials	M2: Biomonitoring complete in 15 countries by 2025; 50 countries by 2030	S2: 8, 12, 16
	2. Number of countries establishing a hazard surveillance program to identify agricultural settings where there are particular pesticide exposures and health hazards to workers	M3: Programs established in 75 countries by 2025; 150 countries by 2030	S3: 2, 3, 12
	3. Numbers of countries that identify and make publicly available, environmental and health information on 50 pesticides that should be classified as highly hazardous under the conditions of their ordinary use	M4: Information available in 75 developing and transition countries by 2025; 150 countries by 2030	S4: 2, 3, 12, 16

Strategic objective C: Issues of concern ~~that warrant global action~~ are identified, prioritized and addressed.

Targets	Indicators	Milestones	SDG(s)
C1: Processes and p~~P~~rograms of work including timelines are established, adopted and implemented for identified issues of concern to reduce and eliminate harm.	1. Existing SAICM emerging policy issues and issues of concern are carried forward for further work under the new framework	M1: All SAICM emerging policy issues and issues of concern carried forward by decision at ICCM5	S1: 12
	2. Number of issues of concern processes and programs of work with timelines adopted	M2: 12 issues of concern adopted and implemented by 2025	S2: 12
	3. Number of stakeholder assessments of implementation of issues of concern performed	M3: Stakeholder assessments of issues of concern performed at each ICCM	S3: 12, 16

C2: Information on the properties ~~and risk management~~ of chemicals across the supply chain and their sound management including alternatives, and the chemical contents of products is available to all to enable informed decisions and actions.	1. Private sector publicly provides comprehensive information on adverse effects for all chemicals in commerce, including mutagenicity, carcinogenicity and adverse effects on the reproductive, developmental, endocrine, immune and nervous systems	M1: Information publicly provided by 2030	S1: 9, 12, 16
C3: Recommendations are made on how stakeholders should address the issues.	1. Stakeholder recommendations and commitments issued	M1: Recommendations and commitments issued at each ICCM	S1: 12, 16

Strategic objective D: ~~Benefits are maximized and risks~~ Prevention of harm to human health and the environment is prioritized ~~are prevented~~ through safer alternatives and innovative and sustainable solutions and forward thinking

Targets	Indicators	Milestones	SDG(s)
D1: Companies adopt and implement corporate policies and practices, including those from C3, that promote resource efficiency and that incorporate the development, production and use of sustainable and safer alternatives, including new technologies and non-chemical alternatives.	1. Number of companies that phase out the manufacture, import, sale and use of lead pigments and paint	M1: By 2027, no lead pigments or use in paint, varnishes, stains, enamels, glazes, primers or other coatings in all countries	S1: 3, 9, 12
	2. Number of countries that phase out the manufacture, import, sale and use of highly hazardous pesticides (HHPs)	M2: Phase out of 20 HHPs in 50 countries by 2025;150 countries by 2030	S2: 3, 9, 12
	3. Private sector publicly provides comprehensive information on adverse effects for all chemicals in commerce, including mutagenicity, carcinogenicity and adverse effects on the reproductive, developmental, endocrine, immune and nervous systems	M3: Information publicly provided by 2030	S3: 3, 9, 12, 16
	4. The private sector publicly provides comprehensive and verifiable information	M4: Information publicly available by 2030	S4: 9, 12, 16

	on adverse effects for all nanomaterials in commerce, including mutagenicity, carcinogenicity and adverse effects on the reproductive, developmental, endocrine, immune and nervous systems		
	5. IOMC organizations in collaboration with governments and stakeholders develop a global roadmap on how pharmaceuticals can be produced, used and disposed of in a sustainable way, with an emphasis on the quality/rational use of medicines (human and veterinary), preventing microbial resistance and reducing and eliminating pharmaceutical pollution downstream of production facilities	M5: By 2022, global road map developed	S5: 9, 12
	6. Number of companies implementing the SAICM chemicals in products programme	M6: CiP Programme implemented by 75 companies in 2025; 150 companies by 2030 with implementation in in 75 countries	S6: 9, 12, 16
	7. Number of companies that achieve clean production and zero discharge of pharmaceuticals into the environment	M7: Zero discharge achieved by 75 companies in 2025; 150 companies by 2030 with implementation in in 75 countries	S7: 9, 12
	8. Number of companies that complete an inventory of hazardous chemicals used in manufacturing processes as a baseline for subsequent reduction and publicly reports their chemical footprint periodically	M8: Inventory completed by 75 companies in 2025; 150 companies by 2030 with implementation in in 75 countries	S8: 9, 12, 16

	9. Number of countries where private sector funds recycling infrastructure	M9: Private sector funds recycling infrastructure in 75 countries by 2025, 150 countries by 2030	S9: 9, 11, 12
	10. All companies reduce sulfur in fuel to less than 10 ppm	M10: Achieved in all countries by 2025	S10: 9, 11, 12
	11. All companies reduce manganese in fuel to less than 2 ppm	M11: Achieved in all countries by 2025	S11: 9, 11, 12
	12. All companies eliminate metals and benzene in fuel	M12: Achieved in all countries by 2025	S12: 9, 11, 12
D2: Governments implement policies that promote innovation to facilitate the reuse and recycling ~~and re-use~~ of products without carryover of toxic substances, the adoption of sustainable and safer alternatives, including new technologies and non-chemical alternatives (e.g., ~~the tax~~ tax instruments that promote safer alternatives, prioritized licensing of ~~reduced risk~~ less hazardous alternatives, process or production methods, assessment frameworks, labelling schemes and purchasing policies, and agroecology).	1. Number of countries with extended producer responsibility policies implemented so that the pharmaceutical industry is accountable for all pharmaceutical waste throughout the life cycle of their products	M1: All countries have extended producer responsibility policies implemented an in place by 2030	S1: 6, 9, 12
	2. All major cities containing more than 1 million inhabitants conduct a waste audit to find out the amount and type of waste being produced, imported, and exported	M2: Audits completed by 2025	S2: 11, 12
	3. All major cities containing more than 1 million inhabitants implement segregation of waste at source for reuse, recycling and composting in all major cities	M3: Completed by 2030	S3: 11, 12
	4. Number of countries that implement circular economy/cradle to cradle systems without toxic chemical recycling	M4: Practice implemented in 100 countries in 5 UN regions by 2030	S4: 12
	5. Number of countries that increase local markets by 50% so that the increase in	M5: Implemented in75 countries by 2025; 150 countries by 2030	S5: 2

	agricultural production and productivity will translate into higher incomes		
	6. Number of countries that implement policies and their instruments to achieve access to education, land, agricultural extension, and credit equitably between women and men, respecting community cultures and practices	M6: Implemented in 75 countries by 2025; 150 by 2030	S6: 2
	7. Number of countries that conduct plastics audits in municipal and industrial wastes	M7: Audit results publicly released in 50 countries in 2023	S7: 6, 11, 14
	8. Number of countries that establish and implement cost recovery instruments to recover cleanup costs from polluting industries	M8: Instruments implemented in 150 countries by 2030	S8: 12, 17
	9. Number of countries that eliminate government subsidies for waste to energy incinerators and cement kilns	M9: Subsidies elimination by 2022 in 75 countries, 150 countries by 2025	S9: 9, 12
	10. Number of countries that implement sustainable zero waste city strategies to address the adverse air quality impacts of open burning of waste	M10: Strategies implemented in 75 countries by 2025; 150 countries by 2030	S10: 11, 12
	11. Number of major cities that implement segregation of waste at source for reuse, recycling and composting	M11: Implemented in all major cities containing more than 1 million inhabitants by 2030	S11: 11, 12
	12. Number of countries and manufacturers that implement zero waste procurement practices including non-toxic zero	M12: Practices adopted in 150 countries and all major manufacturers by 2030	S12: 11, 12

	waste products; reusable shipping containers; reduced packaging; recycled and compostable products; remanufactured equipment; and leased, rented, or shared equipment		
	13. Number of countries that shift to non-combustion methods for residual waste treatment	M13: Implemented in 75 countries by 2030	S13: 11, 12
	14. Number of countries that facilitate circular economy/cradle to cradle systems without toxic chemical recycling	M14: Systems implemented in 100 countries in 5 UN regions by 2030	S14: 11, 12
	15. Number of countries implementing green electrical and electronic product procurement initiatives favor products without harmful materials or chemicals	M15: Implemented in 150 countries by 2030	S15: 9, 12
	16. Number of countries that safely remove and store obsolete pesticides	M16: Implemented in 75 countries by 2025; 150 countries by 2030	S16: 2, 12
	17. Number of countries that implement policies for the sustainable use of forests and soils through the establishment of agroecological practices that promote biodiversity, soil nutrition and the transfer of agricultural machinery appropriate to natural, economic, cultural conditions	M17: Policies implemented in 75 countries by 2025; 150 countries by 2030	S17: 2, 15
	18. Number of countries with laws mandating take back of used lead acid batteries for monetary compensation at point of sale	M18: Laws established in 100 countries by 2025	S18: 9, 12

D3: Companies, including from the investment sector, incorporate strategies and policies to support the sound management of chemicals and waste in their investment approaches and business models and apply comprehensive public reporting of sustainability criteria, chemical use, management, and toxics-use reduction plans in annual reports along with internationally-recognized reporting standards where relevant.	1. Number of companies that complete an inventory of hazardous chemicals used in manufacturing processes as a baseline for subsequent reduction and publicly reports their chemical footprint periodically	M1: Inventory completed by 75 companies in 2025; 150 companies by 2030 with implementation in in 75 countries	S1: 9, 12, 16
D4: Companies apply sustainable production principles and life cycle management in the design of chemicals, non-toxic, durable, and reusable materials and products, taking reduced ~~risk~~ hazard, design-for reuse or recycling and non-chemical solutions and processes into account.	1. Number of companies that make products that are non-toxic; durable; reusable; easy to dismantle, repair and rebuild; minimally and appropriately packaged; recyclable and/or compostable at the end of life and publicly reports progress periodically	M1: 75 companies make these types of products by 2025; 150 companies by 2030 with implementation in in 75 countries	S1: 9, 12
D5: Companies and i~~I~~ndustry associations promote change towards sustainability and the safe management of waste and of chemicals and consumer products throughout their life cycles, including in pollution prevention, developing and implementing safer chemical and non-chemical alternatives, zero discharge of toxic chemicals and wastes in production, sharing comprehensive hazard	1. Number of companies that implement benchmarking tools to assure hazard reduction and avoidance in the design of new chemicals and assessment of current products and reports on progress at each ICCM. 2. Number of companies that eliminate or reduce the use of hazardous chemicals in design and manufacturing by 70% and publicly reports progress periodically	M1: Tools implemented completed by 75 companies in 2025; 150 companies by 2030 with implementation in in 75 countries M2: Hazardous chemical use reduced by 75 companies in 2025; 150 companies by 2030 with implementation in in 75 countries	S1: 9, 12 S2: 9, 12

information, promoting and monitoring best practices throughout their supply chains, and building the capacity of small and medium-sized enterprises to reduce risks.	7. Number of companies publicly reporting their chemical footprint annually	M3: 50 companies publicly reporting chemical footprint annually by 2022; 150 companies by 2027	S3: 9, 12, 16
D6: Companies comply with the UN Guiding Principles on Business and Human Rights	1. UN Working Group on Business and Human Rights includes chemicals and wastes in reports to the Human Rights Council	M1: Public reports of the UN Working Group on Business and Human Rights include chemicals and wastes beginning in 2021	S1: Agenda 2030 Preamble, Declaration, Vision, Our Shared Principles and Commitments, The New Agenda, 12
	2. The number and percentage of companies with human rights due diligence procedures for toxic substances used, produced and released in their activities	M2: By 2023, 250 companies have human rights due diligence procedures in place for toxic substances used, produced and released in their activities	S2: Agenda 2030 Preamble, Declaration, Vision, Our Shared Principles and Commitments, The New Agenda, 12
	3. The number and percentage of companies with human rights due diligence procedures in place for the toxic footprint of their supply and value chain of their products	M3: By 2023, 250 companies have human rights due diligence procedures in place for the toxic footprint of their supply and value chain of their products	S3: Agenda 2030 Preamble, Declaration, Vision, Our Shared Principles and Commitments, The New Agenda, 12
D7: Governments develop and implement policies to assist farmers to transition from Highly Hazardous Pesticides and other pesticides to agroecology.	1. Number of countries that develop and implement policies to assist farmers to transition from Highly Hazardous Pesticides and other pesticides to agroecology	M1: Web link and/or text of policy by 2025 in 50 countries	S1: 2, 12
	2. Number of countries with stakeholder review of implementation of	M2: Stakeholder review of implementation 50 countries by 2027	S2: 2, 12, 16

	policies to transition to agroecology		
D8: Governments develop and implement policies to end inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions and phasing out those harmful subsidies to reflect their environmental impacts.	1. Number of countries ending fossil-fuel subsidies	M1: Government statements and press accounts show fossil-fuel subsidies ended in 50 countries by 2025	S1: 11, 12

Strategic objective E: The ~~importance of~~ sound management of chemicals and waste makes concrete contributions to achieve sustainable development through measurable actions~~. is recognized by all, actions are accelerated and necessary partnerships established~~

Targets	Indicators	Milestones	SDG(s)
E1: The highest levels of stakeholder organizations, including government, industry, civil society and international organizations in all relevant sectors formally recognize the importance of and ~~commit to~~ implement actions on the sound management of chemicals and waste ~~and recognize its relevance~~ that contribute to sustainable development.	1. UN agency governing bodies and MEA secretariats approve the new chemicals agreement and commit to its implementation	M1: All IOMC agencies and MEA secretariats agree and commit to support it by 2022	S1: 12
	2. Private sector CEOs and trade associations relevant to chemicals and wastes approve the new chemicals agreement and commit to its implementation	M2: Private sector CEOs and trade associations agree and commit to support it by 2020	S2: 9, 12
	3. Civil society organizations approve the new chemicals agreement and commit to its implementation	M3: Civil society organizations agree and commit to support it by 2020	S3: 12
	4. Trade unions approve the new chemicals agreement and commit to its implementation	M4: Trade unions organizations agree and commit to support it by 2020	S4: 12
	5. Health sector representatives approve the new chemicals agreement and commit to its implementation	M5: Health sector representatives agree and commit to support it by 2020	S5: 12
E2: Policies and processes for the sound management of chemicals and waste are	1. Number of countries with national development strategies	M1: Sound management of chemicals and waste	S1: 12

integrated into national, sub-regional and regional development strategies.	containing sound management of chemicals and waste.	integrated into the development strategies of 75 countries by 2025; 150 countries by 2030	
	2. Number of developing and transition countries with a regulated system of funds allocation from the national budget to implement sound management of chemicals and wastes in the country.	M2: All countries allocate 2% of their national budgets for the sound management of chemicals and wastes by 2025	S2: 12
	3. Sub-regional development strategies contain sound management of chemicals and waste	M3: If sub-regional development strategies exist, then sound management of chemicals and waste is integrated into them	S3: 12
	4. Regional development strategies contain sound management of chemicals and waste	M4: If regional development strategies exist, then sound management of chemicals and waste is integrated into them	S4: 12
E3: Inter- and intra-sectoral partnerships, networks and collaborative mechanisms are established to mobilize resources, to share information, experiences and lessons learned, and to promote coordinated action at the regional, sub-regional, and international levels.	1. Number of inter- and intra-sectoral partnerships established on the sound management of chemicals and wastes	M1: 10 partnerships established by 2025 with public annual reporting thereafter	S1: 12, 17
E4: Partnerships with the private sector are transparent and consistent with UN Guidelines including UN Global Compact and the UN Guiding Principles on Business and Human Rights.	1. Partnership agreements are publicly available	M1: Agreements are posted on agreement website	S1: 12, 17
	2. Partnership agreements meet UN Guidelines	M2: Partnership agreements include clauses explaining consistency with UN Guidelines including UN Global Compact and the UN Guiding Principles on Business and Human Rights	S2: 12, 17