

Homework Consolidation- Technical Working Group on targets indicators and milestones for SAICM and the Sound Management of Chemicals and Waste Beyond 2020

(Including 7-10 February comment round)

## Evaluation of targets and indicators under proposed Strategic Objective A

**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];]

**Considerations<sup>1</sup>:** Intended to address the need for all countries to have basic capacity, legal frameworks and institutional mechanisms to manage chemicals and waste, including illegal trafficking thereof, and for other stakeholders, such as industry, to also assume their responsibilities to prevent harm from chemicals throughout their life cycle.

Proposes targets<sup>2</sup>

**Target A.1:** [By 20XX], [countries] [governments] [adopt] [implement and enforce] [legal frameworks] [to consider to develop policies and programmes] [on sound management of chemicals and waste] that address the [reduction] [prevention [and] [or, where not feasible,] minimization] of [harm] [risk] from chemicals throughout their lifecycle and waste.

**Target A.2:** [Governments][Countries] have **capacity** to address chemicals and waste issues nationally, including appropriate inter-agency coordination and stakeholder participation mechanisms.

**Commented [WS1]:** The issue of enough capacity got lost during the revision.

**Target A.3:** Countries are [fully] implementing the chemicals and waste-related multilateral environmental agreements [to which they are a party], as well as health, labour and other relevant conventions [to which they are a party], [and voluntary mechanisms] [such as the Globally Harmonized System of Classification and Labelling of Chemicals [FAO/WHO International Code of conduct on the Pesticide Management]].

[**Target A.4:** [By 20xx [countries and] companies] [Stakeholders] have incorporated the sound management of chemicals throughout their life cycle and waste [in line with the beyond 2020 strategy or [code of conduct],] into their planning, policies and practices, [and the implementation of safer alternatives] [thereby supporting the development and implementation of chemicals management systems and other sector-appropriate mechanisms].]

**Target A5:** Governments and industry ensure that workers are protected from the risks associated with chemicals and waste and that workers have the means to protect themselves.

<sup>1</sup> Considerations throughout this document as set out in the [SAICM/OEWG.3/4 - Paper by the Co-Chairs of the intersessional process on the Strategic Approach to International Chemicals Management and the sound management of chemicals and waste beyond 2020](#)

<sup>2</sup> Proposes Strategic Objectives and targets throughout this document as set out in the [IP3 report SAICM/IP.3/12 Report of IP3](#)

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## Review- Evaluation of targets by LAC Group

Review- Evaluation of targets

Target ALT. A1 – By [xx], measures needed to be implemented to achieve sound management of chemicals throughout their life cycle [and waste] are identified within SAICM and updated every [xx] years.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
SAICM	Measures are identified and updated	Compliance of measures needed to be implemented	Prevent or minimize harm from....

Identified high-impact/ high level indicators

Indicator	Considerations
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 toolkit, including: <ul style="list-style-type: none"> <li>• Inventory</li> <li>• GHS</li> <li>• Chemicals products register</li> <li>• Risk Assessment for New Chemicals</li> <li>• etc</li> </ul>
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 toolkit, that has guidelines on how to implement measures.

**Commented [WS2]:** SAICM is no specific person, maybe all stakeholders?

**Deleted:** Activities

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**Commented [作成者3]:** If only one roadmap is identified, “are” should be “is”, and “A” should be added in front of “Roadmap”.

**Commented [作成者4]:** If only one roadmap is identified, “are” should be “is”, and “A” should be added in front of “Roadmap”.

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Target ALT. A2- By [xx], actions to prevent or, where not feasible, minimize harm from [xx number] specific chemicals throughout their life cycle [and waste] are identified by governments and non-governmental stakeholders, and “approved” within SAICM.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
SAICM / Science to Policy Interface	Activities are identified and updated	<u>Compilation of actions regarding specific chemicals</u>	Prevent or minimize harm from....

Identified high-impact/ high level indicators

Indicator	Considerations
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	

**Commented [作成者5]:** Target ALT. A2 is very similar to ALT. A1. Please show a clear structure of targets under Objective A.

**Commented [WS6]:** Change wording to differentiate from “measures” in A.1.

**Deleted:** measures

**Commented [WS7]:** I’m not sure I get the intention of this target correctly. To my understanding, this seems to be very closely linked to issues of concern. Delete A.2?

**Deleted:** Measures

**Commented [WS8]:** Those are no specific actors, maybe all stakeholders?

**Commented [作成者9]:** “Grade” cannot be an indicator.

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Target ALT. A3 – By [xx], measures needed to achieve sound management of chemicals throughout their life cycle [and waste] and activities approved, to prevent or, where not feasible, minimize harm from chemicals throughout their life cycle [and waste], are implemented and enforced by [all] governments.

**Commented [WS10]:** As this target seems to relate to the measures and activities identified in A.1 and A.2 I would propose to use the same wording to make this clearer.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
governments	Measures and activities are implemented and enforced		Prevent or minimize harm from....

**Deleted: identified**

**Deleted: identified**

**Deleted: Measures**

Identified high-impact/ high level indicators

Indicator	Considerations
Percentage of countries with measures implemented (related to target Alt.A1 and Alt.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.
Grade of accomplishment of roadmaps for implementation of SMCW for governments (related to target Alt.A1 and Alt.A2)	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 Implementation could be recorded through secondary indicators such as: <ul style="list-style-type: none"> <li>• If PRTR implemented, annual data reported (Y/N)</li> <li>• If Risk Assessment of New Chemicals implemented, the number of risk assessments undertaken per number of new chemicals on the market.</li> <li>• Number of countries that have achieved core capacities for chemicals under the International Health Regulations (IOMC indicator).</li> <li>• Countries which have implemented pesticide legislation based on the FAO/WHO International Code of Conduct (IOMC indicator).</li> <li>• Number of countries that have a legislatively mandated system to manage industrial and consumer chemicals (Proposed OECD indicator)</li> <li>• 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)</li> <li>• implementation of GHS</li> </ul>

**Commented [作成者11]:** "Grade" cannot be an indicator. It could be percentage of countries falling under each grade category (level1, 2, 3, etc.).

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<p>Number of chemicals and waste related inspections undertaken/inspectors per:</p> <ul style="list-style-type: none"> <li>• the number of relevant industries</li> <li>• the volume of chemicals imported and produced</li> <li>• population</li> <li>• expressed as a % of GDP</li> </ul>	<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? 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 &amp; per employees</p>	<p>Suggest agreeing a benchmark for the minimum personnel required. 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:</p> <ul style="list-style-type: none"> <li>• % recovered, % recycled, %landfilled/incinerated.</li> </ul>	
<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>

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Target ALT. A4 – By [xx], measures needed to achieve sound management of chemicals throughout their life cycle [and waste] and activities approved to prevent or, where not feasible, minimize harm from chemicals throughout their life cycle [and waste], are implemented by [all] industry stakeholders.

**Commented [WS12]:** As this target seems to relate to the measures and activities identified in A.1 and A.2 I would propose to use the same wording to make this clearer.

**Deleted:** identified

Target Structure

Responsible agency	Activity	Output	Outcome/impact
industry stakeholders	Measures and activities are implemented		Prevent or minimize harm from....

**Deleted:** A

**Deleted:** Measures

Identified high-impact/ high level indicators

Indicator	Considerations
Percentage/number of industry stakeholders with measures implemented (related to target Alt.A1 and Alt.A2)	
Grade of accomplishment of roadmaps for implementation of SMCW for industry stakeholders (related to target Alt.A1 and Alt.A2)	Eg implementation of GHS
Trends in participation of all relevant stakeholders at national level	

**Commented [作者13]:** "Grade" cannot be an indicator.

**Commented [作者14]:** "Trends" cannot be an indicator.

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Target ALT. A5 – By [xx], all Parties are meeting their commitments and obligations under the provisions of chemicals and waste-related multilateral environmental agreements, as well as health, labour and other relevant conventions.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
Parties	meet their commitments and obligations		Compliance with MEAs

**Deleted:** Activities are implemented  
**Deleted:** Provisions

Identified high-impact/ high level indicators

Indicator	Considerations
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, 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	

**Commented [作成者15]:** "signed" should be replaced with "participated".

**Commented [NS16]:** It may not be possible to identify which countries are complying the obligations and which are not.

**Commented [NS17]:** Countries which signed the MEAs are not always parties. This phrase should be replaced by "Parties of the MEAs/agreements"

Evaluation of targets and indicators under proposed Strategic Objective B

Homework Consolidation- Technical Working Group on targets indicators and milestones for SAICM and the Sound Management of Chemicals and Waste Beyond 2020

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**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.

Proposes targets

**Target B.1:** [All stakeholders, in particular industries and regulators and IGOs, provide] [Comprehensive] data and information for chemicals on the market [and research data] are available and accessible, including information [on emissions, releases and concentrations of chemicals in indoor and outdoor environments as well] 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.

**Target B.2:** [By 20xx] All stakeholders, in particular industries and regulators, [generate,] have and are [using] [sharing][the most] appropriate and [standardized] tools, guidelines and [available] [applicable][best] [good] practices [and technologies] for [risk] assessments [and sound management], as well as for the [prevention of harm] [minimization of adverse impacts], risk reduction, monitoring and enforcement.

**Target B.3:** Information and standardized methods are available and used to understand the impacts of chemicals and waste for improved burden-of-disease and cost-of-inaction estimates, to inform the advancement of chemical safety measures and to measure progress towards reducing those impacts.

**Target B.4:** [Timely information in the local language and in a format they can use] [Formal and informal] Educational, training and public awareness programmes on chemical safety and sustainability have been developed and implemented, including for [women and] vulnerable [low literate] populations, along with worker safety curricula and programmes at all levels [through all available means of communication].

**Target B.5:** Countries and stakeholders [and IGOs to share information and experience to] are implementing training [and sharing of information of policy support] on environmentally sound and safer alternatives, as well as on substitutions and the use of safer alternatives, [such as agroecology] [alternatives such as IPM, agroecology (as a science)].

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## Review- Evaluation of targets by CEE Group

Target ALT B1.<sup>3</sup> By 20xx, industry and regulators generate comprehensive data and information on chemicals on the global market, throughout their lifecycle, and make it available and accessible.

**Commented [WS18]:** This target could include knowledge on the chemical contents of products across the supply chain to incorporate the old C.2, which was moved to SO B by the WEOG-group during revision.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
	Comprehensive data and information are available and accessible	Information and data on properties, health effects, environmental effects, uses, hazard and risk assessments, risk management measures, monitoring results.	

Identified high-impact/ high level indicators

Indicator
Number of countries implementing GHS-it is impact oriented, achievable, and easy 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

Note: On all other proposal for indicators we should consider how and if we could follow progress.

<sup>3</sup> Please refer to the highlighted ALT targets under Strategic Objective B. They are different from the compilation version that was shared during the comments round on 05/02/2020 and should be used for the discussions during the face to face meeting.

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Target ALT.1 B.2<sup>4</sup> By 20xx all stakeholders, in particular industries and regulators, 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 enforcement.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
All stakeholders (industry /regulators)	using the most appropriate and standardized tools, guidelines and best practices  Identification of the available tools, guidelines and best practices .	appropriate tools, assessments and practices for the prevention and minimization of harm, monitoring and enforcement are used.	Outcome could be assessments and sound management and decreasing of risk reduction, prevention of harm.

Deleted: ¶

Deleted: Target ALT.1 B.2 By 20xx, [sound management of chemicals and waste and] [best] [good] practice for [sound management of chemicals and waste and] [risk] assessments, monitoring and enforcement is implemented by allstakeholders, in particular industries and regulators.¶ Target ALT. 2 B.2 By 20xx., have and are using the most appropriate and standardized tools, assessmentsguidelines and best available practices for assessments and sound management, as well as for the prevention and minimization of harm, risk reduction, monitoring and enforcement are used.. ¶

Commented [WS23]: At the moment, this part of the activity is not reflected in B.2.

Commented [WS24]: At the moment, this part of the activity is not reflected in B.2.

Identified high-impact/ high level indicators

Indicator
Number of tools, guidelines and best practices available (international, regional, national)
Number of tools used
Number of trainings organized to promote use of tools

Commented [WS25]: At the moment, this part of the activity is not reflected in B.2.

<sup>4</sup> Please refer to the highlighted ALT targets under Strategic Objective B. They are different from the compilation version that was shared during the comments round on 05/02/2020 and should be used for the discussions during the face to face meeting.

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Target ALT B3.<sup>5</sup> 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.

**Commented [WS26]:** This version is about the access to information and methods while the original B.3 was about availability and use of information and methods.

**Commented [WS27]:** I'm not sure about the status of these targets? Would they be additional to ALT1 B.3?

**Deleted:** Target ALT 1 B.3 Chemical safety measures are advanced by the development of knowledge of the impacts of chemicals and waste on the burden-of-disease and cost-of-inaction estimates. ¶  
Target ALT 2 B.3 The impact of chemicals and waste as regards for burden-of-disease and cost-of-inaction estimates are known for chemicals classified in accordance to GHS. ¶

Target Structure

Responsible agency	Activity	Output	Outcome/impact
	understand the impacts of chemicals and waste for improved burden-of-disease and cost-of-inaction estimates.	Information and standardized methods are available and used to understand the impacts of chemicals and waste for improved burden-of-disease and cost-of-inaction estimates.	Reducing impacts of chemicals and waste.

Identified high-impact/ high level indicators

Indicator	Considerations
<b>Number of globally agreed standards for collecting data on:</b> <ul style="list-style-type: none"> <li>– Mortality</li> <li>– Morbidity</li> <li>– Environmental pollution</li> <li>– Economic costs</li> </ul>	
<b>Indicator 8.8.3:</b> 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

**Commented [NS30]:** Mortality rate attributed to hazardous chemicals are difficult to identify.

**Commented [WS31]:** This doesn't fit to SO B – Knowledge, information... This is an impact oriented indicator for SAICM.

<sup>5</sup> Please refer to the highlighted ALT targets under Strategic Objective B. They are different from the compilation version that was shared during the comments round on 05/02/2020 and should be used for the discussions during the face to face meeting.

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Alternative language to merge B.4, B.5

Target ALT 1 merge B.4, B.5.<sup>6</sup> By 20XX educational, training and public awareness programmes on chemical safety, sustainability and safer alternatives have been developed and implemented at all levels.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
Countries (national governments) /stakeholders (industry) IGOs	Development and implementation of training and public awareness programmes. Also promotion of the use of safer alternatives to harmful chemicals.	Education, training, public awareness programmes on chemical safety and on environmentally sound and safer alternatives.	Not specifically mentioned in targets. But impacts could be following:  Workers that might be negatively affected by harmful chemicals because of their nature of work, are aware of the health risks and know how to minimize, avoid risks. Environmental and health benefits, if safer alternatives are taken into use.

**Deleted:** Target ALT 1 merge B.4, B.5 By 20xx, stakeholders have developed and implemented programmes on the training on chemical safety, sustainability and environmentally sound and safer alternatives, including for workers and vulnerable populations. ¶  
Target ALT 2 merge B.4, B.5 Educational, training and public awareness programmes on chemical safety, sustainability and environmentally sound and safer alternatives have been developed and implemented at all levels.¶  
Target ALT 3 merge B.4, B.5 By 20XX, Governments, industries and regulators develop and disseminate peer-reviewed educational curricula, training and risk communication initiatives relevant for all population, particularly low-literate, including safer and sustainable alternatives.

**Commented [WS36]:** Not included in the proposals ALT 1 and ALT 2.

**Commented [WS37]:** Not included in ALT 1

Identified high-impact/ high level indicators

Indicator
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 that have introduced educational programmes on green chemistry.

<sup>6</sup> Please refer to the highlighted ALT targets under Strategic Objective B. They are different from the compilation version that was shared during the comments round on 05/02/2020 and should be used for the discussions during the face to face meeting. .

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Number of countries that have gone through accredited programmes that promote the concepts of environmentally sound safer alternatives.

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## Evaluation of targets and indicators under proposed Strategic Objective C

**Strategic Objective C.** Issues of concern [that warrant [global] [and] [joint] action] are identified, prioritized and addressed.

**Considerations:** Intended to cover the need to effectively identify, select and address issues of concern that warrant global action. The intention is to cover topics similar in nature to those covered by the Strategic Approach, emerging policy issues and other issues of concern, as well as topics such as managing specific chemicals, the burden of disease and financing. There may be a need to develop and identify the criteria for issues of concern.

Proposes targets

**Target C1:** Programmes of work including timelines are established, adopted and implemented for identified issues of concern.

**Target C2:** Information on the properties and risk management of chemicals across the supply chain and the chemical contents of products is available to all to enable informed decisions.

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## Review- Evaluation of targets by WEOG Group

Target ALT. C1 – As an ongoing process, stakeholders nominate and the international conference adopts issues of concern and supporting workplans with specific responsibilities of relevant stakeholders, specific measurable targets, timelines, and reporting schemes.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
Stakeholders	nominate	Officially identified issues of concern and supporting workplans with specific measurable targets, timelines, and reporting schemes	
International Conference	adopts		

Identified high-impact/ high level indicators

Indicator
Number of adopted issues of concern with specific responsibilities of relevant stakeholders, as proportion of the total number of issues of concern
Number of adopted issues of concern with workplans that include specific measurable targets, timelines, and reporting schemes, as proportion of the total number of issues of concern

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

Target Structure

Responsible agency	Activity	Output	Outcome/impact
stakeholders	Implement workplans Report at ICCM	ICCM-reports	the use of sustainable solutions is maximized and significant negative impacts on human health and the environment are prevented or minimized

Identified high-impact/ high level indicators

Indicator
Number of adopted issues of concern with progress reported to ICCM on specific measurable targets, as proportion of the total number of issues of concern
Number of adopted issues of concern with processes in place to manage issues of concern
Number of issues of concern for which targets in programmes of work were achieved, as proportion of issues of concern

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## Evaluation of targets and indicators under proposed Strategic Objective D

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

**Considerations:** Intended to cover the ongoing need for innovative thinking and solutions to address current and future aspects of managing chemicals and waste, such as life-cycle management, the circular economy, green and sustainable chemistry, safer alternatives, better recycling technologies and resource efficiency.

Proposes targets

**Target D.1:** [% of growth in the amount of]Companies adopt [and implement] corporate policies and practices that promote [innovation,] [resource efficiency][sustainability goals] [and] that incorporate the development, production and use of sustainable and safer alternatives [as well as product transparency mechanisms],[ including new technologies [and non-chemical alternatives]].

**Target D.2:** Governments implement policies that promote innovation to facilitate the recycling and re-use of products, the adoption of sustainable and safe alternatives, including new technologies and non-chemical alternatives (e.g., the prioritized licensing of reduced-risk alternatives, assessment frameworks, labelling schemes and purchasing policies).

**Target D.3:** 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 internationally-recognized reporting standards where relevant.

**Target D.4:** Companies apply sustainable production principles and lifecycle management in the design of chemicals, materials and products, taking reduced-risk, design-for-recycling and non-chemical solutions and processes into account.

**Target D.5:** Industry associations promote change towards sustainability and the safe management of waste and of chemicals and consumer products throughout their life cycles, including in sharing information and building the capacity of small and medium-sized enterprises to reduce risks.

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## Review- Evaluation of targets by AFR Group

**Target ALT D1. Companies (globally, regionally, sub-regionally, nationally) adopt and implement policies and practices to produce and use sustainable and safer alternatives and cleaner production technologies.**

### Target Structure

Responsible agency	Activity	Output
Industry Associations.  Chemical Industries or multinational companies or companies that do not belonging to any association.	Policies and practices are adopted, implemented, and monitored.	1. Highly toxic, unsustainable and non-safe alternatives are neither produced, nor are they used.
	International safety, human and environmental health quality standards adopted, implemented and monitored.	2. Sustainable and natural products or non-chemicals alternatives are produced and used as input in the production processes.
		3. Non-cleaner production technologies are not developed.
		4. Cleaner production technologies are developed and installed.

**Commented [WS38]:** This activity is not reflected in the target.

**Commented [WS39]:** Could the implementation of specific international standards for safety, health or environment serve as a specific indicator?

### Identified high-impact/ high level indicators

Indicator	Considerations
% of companies that have adopted resource efficiency and sustainability in their policies.	
% 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.	% is 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.
% 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.	

**Commented [WS40]:** Non-chemical alternatives should not only be considered as a potential source of production materials but also as an alternative for the use of chemicals (e.g. beneficial insects or traps instead of insecticides). This should be reflected in the target or at least in the indicator. At the moment, it is only explained in under "output".

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Target ALT. D2 – Governments (globally, regionally, sub-regionally, nationally) implement policies that encourage production using natural products or non-chemicals, facilitate the recycling and re-use of products (circular economy), the adoption of sustainable and safe alternatives, including cleaner production technologies.

**Commented [WS41]:** This target now has a very strong focus on renewable resources that was not part of the original D.2. The discussion on the sustainability of renewable resources should be reflected here, e.g. "production using renewable materials from sustainable sources".

From my point of view, the focus of this target shifted too much away from sustainable innovation.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
Governments (globally, regionally, sub-regionally, nationally)	Sustainable chemistry principles encouraged, and promoted as a foundation for ingredient development processes.	1. Active ingredient development processes informed by sustainable chemistry principles.	Prevent or minimize harm from....
	Policies and practices are adopted, implemented, and enforced.	2. Production of toxic, unsustainable and non-safe alternatives are not produced, and used.  3. Sustainable and natural products or non-chemicals alternatives are produced and used as input in the production processes.  4. Non-cleaner production technologies are not developed.  5. Cleaner production technologies are developed and installed.	

**Commented [WS42]:** From my point of view this is not reflected in the target. Innovation according to sustainable chemistry should be directly named in the target.

Identified high-impact/ high level indicators

Indicator
% of countries promoting and adopting circular economy and green procurement.
% of countries using sustainable chemistry principles.
% of countries using natural products or non-chemicals in their production processes.
% of governments direct their companies to use natural products or non-chemicals as input in production processes.
% of governments ended the production, use, import and export of banned, highly toxic, unsustainable, and unsafe chemicals.

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% of governments with integrated pesticide management regulations.
% of governments with the infrastructure for licensing, certification and labelling of pesticides
% of government research funding allocated to safe alternatives
% of governments developed and implement regulations on extended producer responsibility (EPR)
% governments report reduced exposure of human beings to highly toxic, unsustainable, and unsafe chemicals.
% government report reduced related disease burden; improved human health.
% governments report improved environmental health.
% governments report reduced environment and human health management budget, due to improved outcomes.

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Target ALT. D3 – Companies, including from the investment sector, incorporate strategies and policies to implement the sound management of chemicals and waste in their investment approaches and business models and apply internationally-recognized reporting standards.

Target Structure

Responsible agency	Activity	Output
Companies (multinationals; SMMMs)	<p>Strategies and policies to implement the sound management of chemicals and waste incorporated in company's investment approaches and business models.</p> <p>Internationally-recognized reporting standards adopted and implemented by companies.</p> <p>International safety, human and environmental health quality (SHEQ) standards adopted, implemented and monitored.</p>	<p>Company's investment approaches and business models with tangible and specific sound management of chemicals and waste fundamentals. Companies report annually on the implementation of their tangible and specific sound management of chemicals and waste initiatives.</p> <p>2% investment of company annual turnover committed to tangible sound management of chemicals and waste initiatives.</p> <p>Reporting by companies in line with internationally recognized standards.</p> <p>Independently audited international SHEQ reports by companies.</p>

Identified high-impact/ high level indicators

Indicator	Considerations
% of companies/ turnover/ investments that incorporate business models/approaches for the sound management of chemicals and waste throughout the life cycle, and value chain, including% of companies extended producer responsibility (EPR).	Life cycle alone without value chain may miss the role players identified in the value chain such as the small medium and micro-enterprises (SMMEs), informal sector, and the end-users where the main problems or challenges are; resulting in fatal incidences at times.
% of investment in capacity building that address sound management of chemicals and waste throughout the life cycle, and value chain.	
% of patents issued on new sustainable and safe alternatives produced from natural products or non-chemicals.	
% of patents issued on new cleaner production technologies. % of companies certified for EMS/HSE (e.g. ISO).	
% Improved company's environment's footprint.	
% Improved company's social responsibility (human health and communities).	
% Improved company's product stewardship throughout the life cycle, and the value chain.	
% company's Strategy, annual workplan for the implementation of tangible sound management of chemicals and waste capacity building initiatives developed, monitored and evaluated.	

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% company's reports developed in line with internationally recognized standards.	
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Target ALT D4. Companies apply **sustainable chemistry, including** sustainable production principles and lifecycle management in the development of chemicals, materials and products, taking reduced-risk, design-for-recycling, natural products, and non-chemical solutions and processes into account.

**Commented [WS43]:** Those products would have to come from sustainable sources.

Target Structure

Responsible agency	Activity	Output
Industry Associations.  Chemical Industries or multinational companies or companies that do not belonging to any association.	Sustainable chemistry principles inform active ingredient development processes.	Chemicals, and product development informed by sustainable chemistry principles.  Declaration of chemicals in products throughout their lifecycle by companies.
	Companies declare chemicals in their products throughout their lifecycle. Circular economy principles inform chemicals and product development, and design.	Increased chemical, and product recyclables.  Pro-circular economy development and design of products.
	Natural products from sustainable sources, and non-chemical solutions and processes encouraged, and preferred in chemical production and product design	Informed consumers about the chemicals in products throughout their lifecycle  Encouragement and preference of natural products from sustainable sources, and non-chemical solutions and processes in chemical production and product design.

**Commented [WS44]:** This is not reflected in the target. I would propose to add "sustainable chemistry" in the target (see above).

Identified high-impact/ high level indicators

Indicator
% Companies declare the banned hazardous chemicals produced, imported, and exported on a yearly basis.
% Companies report on the percent reduction of PRT in the total components of their chemicals, materials and products.
% Companies report on the % of recyclability of the total components of their chemicals, materials and products.
% Increased job creation, and country GDP contribution from the chemicals and product production sector due to increased recycling rates.
Companies report on the % of non-chemical solutions, emissions from energy consumption and reduction in occupational chemical exposures.
% Safer product choice by consumers.
% decrease in associated hazardous waste produced.
% Improved company's environment's footprint.
% Improved company's social responsibility (human health and communities).

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Target ALT D5. Industry associations encourage change towards sustainability and the safe management of chemicals and waste and consumer products throughout their life cycles, and their value chain, including in sharing information and building the capacity of small, medium, and micro-sized enterprises to reduce risks.

Target Structure

Responsible agency	Activity	Output
Industry Associations.  Chemical Industries or multinational companies or companies that do not belong to any association.	Industry associations, and companies, develop, adapt and adopt, provide international training and development programmes on sustainability and the safe management of chemicals and waste and consumer products throughout their life cycles, and their value chain for sharing of information and building the capacity of workers, SMMEs, and end-users or consumers.  Industry associations, companies provide accessible, visible, understandable, and specific stakeholder group targeted relevant information and capacity-building initiatives and programmes on sustainability and the safe management of chemicals and waste and consumer products throughout their life cycles, and their value chain for workers, and SMMEs, and end-users or consumers.	Industry associations, companies have in place and implement international training and development programmes on sustainability and the safe management of chemicals and waste and consumer products throughout their life cycles, and their value chain for sharing of information and building the capacity of workers, SMMEs, and end-users or consumers.  Relevant information and capacity-building initiatives and programmes on sustainability and the safe management of chemicals and waste and consumer products throughout their life cycles, and their value chain is accessible, visible, understandable, and specific stakeholder group targeted for workers, and SMMEs, and end-users or consumers.

Identified high-impact/ high level indicators

Indicator	Considerations
% of member associations or companies that implement sustainable chemistry.	SMMEs especially in developing countries mostly do not afford the fees charged for belonging to an association
% annual turnover (investment) in capacity building.	Accommodates currency differences; to ensure no company appears to be investing more than the other due to stronger currency. % is the same irrespective of currency differences.
% of member companies providing capacity building workshops	
% of SMEs implementing sound management of chemicals and waste policies, strategies	
% technical publications/ detailed resources issued to members	
Positive change in stochastic risk (disease burden, excess mortality etc.)	

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Ratio between indicator association member: new member (in these statistical measures)	SMMEs especially in developing countries mostly do not afford the fees charged for belonging to an association.
% declaration of hazardous substances in consumer products.	
% Improved company's environment's footprint.	
% Improved company's social responsibility (human health and communities).	
Informed, trained and capacitated workers, SMMEs, and the end-users or consumers on sustainability and the safe management of chemicals and waste and consumer products throughout their life cycles, and their value chain.	
% Informed, and environmentally friendly chemicals and product choices by workers, SMMEs, and end-users or consumers.	
% decrease in incidences related or associated with lack of information and knowledge or complacency on the sustainability and the safe management of chemicals and waste and consumer products throughout their life cycles, and their value chain.	
% decrease disease burden due to un-sustainability and the unsafe management of chemicals and waste and consumer products throughout their life cycles, and their value chain.	

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## Evaluation of targets and indicators under proposed Strategic Objective E

**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].]

**Considerations:** Intended to address the need for high-level commitment across sectoral boundaries, to ensure appropriate attention is given and action taken to accelerate progress, and to contribute to the 2030 Agenda for Sustainable Development.

### Proposes targets

**Target E.1:** 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 action on the sound management of chemicals and waste, and recognize its relevance to sustainable development.

**Target E2:** Policies and processes for the management of chemicals and waste are integrated into national and regional development strategies.

**Target E3:** [xx amount of] 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 and international levels [by year].

**Target E4:** Identify and mobilize the financial and non-financial resources needed to promote the sound management of chemicals and waste in all sectors, by and for all stakeholders.

**Target E5:** Gaps between developed and developing countries are narrowed [by xx %] in terms of the implementation of sound management of chemicals and waste [by year].

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**Review- Evaluation of targets by A-P Group:**

Target ALT. E1 – All highest levels of stakeholder organizations recognize importance of sound management of chemicals and waste, through their actual commitment in the context of sustainable development.

**Commented [WS45]:** Commitment should not only be in the context of the SDG but to sound management of chemicals and waste. In the original target, stakeholders were to commit to SMCW and to recognize the relevance of SMCW to the SDG. This is not anymore reflected in the new version of the target.

Target Structure

Responsible agency	Activity	Output	Outcome/impact
Highest level of stakeholder organization - National government - Industry - Civil society - International organization	Recognize and Commit	Importance of sound management of chemicals and waste are recognized and committed by the organizations	Active recognition and commitment of the stakeholder organizations on the importance of sound management of chemicals and waste

**Commented [WS46]:** This is not reflected in the target (see comment above).

Identified high-impact/ high level indicators

Indicator
<b>Process level indicators</b>
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.
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.
<b>Output/outcome indicators</b>
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
Proportion of the number of organizations that clearly show their active commitment to the sound management chemicals and waste in their written/recorded official statements, documents and/or messages, within the total number of organizations of each stakeholder sector.

**Deleted:** Summary of the proportions throughout all stakeholder sectors in regional or global level.¶

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Target ALT. E2 – Policies of sound management of chemicals and waste are integrated into local, national, regional and global development strategies

Target Structure

Responsible agency	Activity	Output	Outcome/impact
National government and/or nationally-based organizations	Integration of the policy of sound management of chemicals and waste into national development strategies	Well-integrated national development strategies are established	High-level coordination of national, regional (and global) integration of policy of sound management of chemicals and waste into each development strategies.
Regionally-based/regional-international organizations	Integration of the policy of sound management of chemicals and waste into regional development strategies	Well-integrated regional development strategies are established	See above
Global-based/international organizations (if appropriate)	Integration of the policy of sound management of chemicals and waste into regional development strategies	Well-integrated global development strategies are established	See above

Identified high-impact/ high level indicators

Indicator
<b>Process level indicators</b>
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 .
<b>Output indicators</b>
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).
<b>Outcome indicators</b>
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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**Target ALT. E3 –** Increasing collaborative mechanisms among sectors and stakeholders, by inter- and intra-sectoral partnerships and networks, to share information, experiences and lessons learned, at the regional and international levels.

**Commented [WS48]:** Is this target complete?

Target Structure

Responsible agency	Activity	Output	Outcome/impact
Sectors that is responsible for sound management of chemicals and waste at regional level	Inter-sectoral partnerships, ... within the region	Effective partnerships, ... be established at the region	Variety of collaborative networks be established among national and international sectors
Sectors that is responsible for sound management of chemicals and waste at international level -IOMC	Inter-sectoral partnerships, ... at international scales	Effective partnerships, ... be established at international level	As above
All sectors that are responsible for sound management of chemicals and waste and both regional and international levels	Intra-sectoral partnerships, ... within the region, at international scale, and covering both regional and international	Effective partnerships, ... be established among variety of intra-sectoral system	As above

Identified high-impact/ high level indicators

Indicator
Process level indicators
Number of establishment of inter- and intra-sectoral partnerships, networks and collaborative mechanisms within the region.
Number of establishment of inter- and intra-sectoral partnerships, networks and collaborative mechanisms at international level.
Number of shared information/experiences/lessons learned, and coordinated actions at the regional and international levels through partnerships/networks/collaborative mechanisms.
# of companies with XX% of market share and/or \$XX of sales of chemical related product and service that are members of recognized major partnership with ambitious SMCW goals in line with SAICM.
Sales of chemical products and services with disclosed risk information such as hazardous items etc.
% of inter-sectoral donor projects for SMCW combined with other category such as labour, health, agriculture etc. (\$).
# of national/regional governments that impose systematic registration and restriction of chemicals.
# of stakeholders requested tech assistance
# of stakeholders received technical assistance
# of stakeholders cooperated technical assistance
# of stakeholders promoted technical transfer

**Commented [作成者49]:** Should be deleted.

**Deleted:** mobilized resources

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Target ALT. E4 – Promoting identification and mobilization of the financial and non-financial resources effectively to promote the sound management of chemicals and waste in all sectors, by and for all stakeholders.

**Commented [WS50]:** The idea of uniting “mobilization of resources” in one target is good.

Identified high-impact/ high level indicators

Indicator
Process level indicators
Mobilized national resources to international organizations for implementing SMCW
Mobilized national resources to credible research institution for implementing SMCW
Mobilized national resources for operating expense of a credible research institute(s) identified by each government (impact to be determined by human resources expense and numbers of articles published in quality peer-reviewed SMCW related journals)
% of companies handling chemical products and related service that are members of recognized major partnership with ambitious SMCW goals in line with SAICM
# of companies with ambitious SMCW goals in line with SAICM as one of companies core strategy

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Target E5: Gaps between developed and developing countries are narrowed in terms of the implementation of sound management of chemicals and waste.

*No alternative was proposed.*

Target Structure

Identified high-impact/ high level indicators

Indicator
Difference of indicators from E1 to E4, and maybe A to E, between developed and developing countries.
Amount of foreign direct investment by companies that handle chemical product and related service from developed countries to developing countries.