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Integrated National Implementation of SDGs and International Chemicals and Waste Agreements

**International Expert and Stakeholder Workshop
Geneva, Switzerland, 11-13 April 2016**

Compilation of Participants' Observations, Messages and Insights

1. Introduction and Background

The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) were adopted by the General Assembly of the United Nations in September 2015. Sound management of chemicals and waste (SMCW) is a specific target under SDG 12 on Sustainable Consumption and Production. It is also referred to under SDG 3 on Good Health and Well-being and SDG 6 on Clean Water and Sanitation. However, given that chemicals and waste affect almost all aspects of development, SMCW is relevant for, and supports the implementation of many other, if not all, SDGs. SMCW is therefore of significant relevance for implementing the 2030 Agenda.

From 11-13 April 2016, more than 70 international experts gathered in Geneva, Switzerland, in the International Expert and Stakeholder Workshop on the Integrated National Implementation of SDGs and International Chemicals and Waste Agreements. Participants came from all UN regions and a diverse range of sectors, representing 23 countries, 13 civil society organizations (CSOs), eight private sector organizations and 16 inter-governmental organizations (IGOs).

The workshop was organized through collaboration of the Chemicals and Waste Branch, including the Secretariat of the Strategic Approach to International Chemicals Management (SAICM) and the Interim Secretariat of the Minamata Convention on Mercury, Division of Technology Industry and Economics, United Nations Environment Programme (UNEP), the Secretariat of the Basel, Rotterdam and Stockholm Conventions (BRS Secretariat), the United Nations Institute for Training and Research (UNITAR), and the Inter-Organization Programme for the Sound Management of Chemicals (IOMC). Core support was provided by the Swiss Federal Office for the Environment (FOEN) and through contributions provided to UNEP from the Government of Sweden and Norway.

Organised around a number of panels and working groups, the workshop engaged experts and stakeholders in an interactive and collaborative manner in order to advance analysis and action to strengthen national implementation of the SDGs from a chemicals and waste management perspective.

Specific objectives of the workshop include the following:

- Advance analysis of how SMCW is relevant for and affects implementation of the SDGs (and vice versa);
- Capture early action and good practices by governments, industry, academia and civil society to link implementation of SDGs with SMCW in line with international chemicals and waste agreements, including the Basel, Rotterdam and Stockholm Conventions, the Minamata

Convention on Mercury and SAICM, as well as other multilateral environmental agreements (MEAs);

- Identify key determinants for the effective integrated implementation of the SDGs and SMCW in the context of national and sectoral development planning (e.g. governance, economic drivers, integrated approach to financing SMCW);
- Explore practical approaches for effective monitoring of SMCW in the context of SDGs implementation, taking into account existing national and international monitoring systems and indicators; and
- Identify interest in and opportunities for capacity development, partnerships and further action.

This report provides an overview of the observations, key messages and insights shared by workshop participants. These were not negotiated or prioritized, but seek to provide a sense of the array of ideas and perspectives shared. A draft overview of the observations, key messages and insights was tabled at the end of the workshop and in writing for further comments, which have been addressed in this revised version. Additional information is available in summary reports for each of the panels and working groups, which will be made available publicly on the website of UNEP's Chemicals and Waste Branch.

2. SMCW and the 2030 Agenda for Sustainable Development

2.1. Observations, messages and insights

- The integration of SMCW in the 2030 Agenda for Sustainable Development is a major achievement. Ten years ago, in 2006, the first International Conference on Chemicals Management (ICCM) in its Dubai Declaration on International Chemicals Management had specified that sound chemicals management is essential to achieve sustainable development. By reiterating the fundamental link between SMCW and the economic, environmental and social development agenda, the 2030 Agenda and its 17 SDGs create renewed momentum to mainstream and prioritize SMCW at the national level and to implement international chemicals and waste agreements, including relevant MEAs and SAICM.
- During the negotiation of the SDGs, it was a challenge to include chemicals and waste management as a specific Goal in the 2030 Agenda, given that a number of international agreements addressing SMCW are already in place. This highlights the need for a new communication strategy to gain political attention and support. Specifically, a new narrative that speaks to the integrated nature of the SDGs and those who are not engaged in technical chemicals and waste issues should be developed.
- Now that the SDGs have been adopted, it is time to focus on their implementation, including in the area of chemicals and waste. For SMCW this starts with integrating the topic into national planning, priorities and strategies. A number of countries have taken steps in this direction, and lessons are emerging, which should be widely shared (e.g. Thailand is integrating SMCW into its national development plan).
- The SDGs also help to think more broadly and explore innovative and cleaner solutions to achieve wider development objectives and place SMCW within this context. Such solutions may for example include a shift in the chemicals industry (or other industries) to provide innovative services (e.g. chemical leasing, or selling a service, not a product). They may also be driven by transformative changes external to, but with an impact on, the chemicals and waste arena; for instance, new transportation modes may impact the amount and type of chemicals used in this sector.
- In some countries this process is already well advanced, creating opportunities to identify new linkages, mobilize new funding, and implement innovative pilot initiatives (e.g. Germany's platform on sustainable chemistry). In other countries, immediate action has not

yet taken place, but fundamental changes deriving from the 2030 Agenda are likely to occur in the medium and long term.

- Similarly, a number of development partners (e.g. the Global Environment Facility (GEF)) are shifting their resource allocation towards more integrated approaches and solutions which have environmental, economic and social benefits. This requires to design projects in a more holistic manner, taking into account all dimensions of sustainable development.
- IGOs are also responding by mainstreaming the SDGs into their programme of work, thereby including key elements of SMCW (e.g. the World Health Organization (WHO), the United Nations Development Programme (UNDP) and the Food and Agriculture Organization (FAO)).
- A major challenge is to nurture a new way of thinking and attitude change at all levels in order to move away from a silo approach and address chemicals and waste issues in an integrated manner as part of a broader development agenda. Reaching out to key decision makers and change agents, and engaging in innovative partnerships and pilot initiatives is critical in this process to create positive momentum. This includes an improved understanding of the economic and social dimensions of SMCW as well as advancing strategies and solutions that advance all three dimensions of sustainable development.
- New integrated thinking and approaches should complement efforts to develop and strengthen national chemicals and waste management programmes. In fact, such programmes can support and feed into the SDGs and sectoral implementation. National chemicals and waste programmes can become stronger if their value is recognised by new constituencies and change agents.
- Implementation of SMCW in a sustainable development context requires a long-term multi-sectoral and multi-stakeholder approach, drawing on existing institutions (as practiced in Sweden, for example). Strategies by all actors further linking SMCW to implementation of the SDGs need to be developed and successful case examples should be shared.
- The chemicals industry is a key player and aware of the need for a strategic transition. Industry recognizes that it is being held accountable for delivering change in moving towards greater sustainability.
- Downstream industry, which is a major user of chemicals, such as the textile and tyre manufacturers, is equally important. The inclusion of downstream users in international dialogues and initiatives is therefore critical.
- Implementation of international chemicals and waste agreements, including the Basel, Rotterdam and Stockholm Conventions, the Minamata Convention on Mercury and SAICM, will make significant contributions towards achieving the SDGs¹. Further efforts are needed to identify and communicate these linkages. Initial work to place, for example, implementation of the Minamata Convention on Mercury in an SDG context has been initiated and needs to be scaled up.

2.2. Additional areas of action identified for consideration

- Further efforts should be undertaken to advance understanding of the linkages between SMCW and the 2030 Agenda among policy-makers at the national and international levels.
- An important task for the near future is to take a stepwise approach to map linkages between all 17 SDGs and SMCW in terms of goals, targets and indicators, beginning at the national level and including through international chemicals and waste agreements. In analysing the full spectrum of existing mechanisms, gaps may be identified.

¹ For more information about the range and variety of agreements and organizations active in the UN system for SMCW, see UN Environment Management Group (2015), "United Nations and the Sound Management of Chemicals: coordinating delivery for member states and sustainable development" (available at: <http://www.unemg.org/resources/publications>).

- There is a need to explore ways to further promote communication between the High Level Political Forum (HPLF) and the Economic and Social Council (ECOSOC) on the one hand and the governing bodies of international chemicals and waste agreements on the other hand, including on the linkages between SMCW and the SDGs.
- A summary document of the workshop should be disseminated for information and awareness raising to SAICM, the United Nations Environment Assembly (UNEA), the GEF, the Environment Management Group (EMG) and the general public.

3. Linkages between Specific SDGs and SMCW

3.1. Introduction

Throughout the workshop, participants emphasized that all SDGs are linked to SMCW and that full implementation of the SDGs will not be possible without SMCW. The flip side of the SDGs-SMCW interface is equally important: Some SDGs, such as those addressing access to information, inclusive institutions, or justice and partnerships, help create an enabling environment that could support the minimization of the adverse effects of chemicals and waste.

During the workshop, participants examined specific SDGs from a chemicals and waste management perspective. Observations from these discussions are presented below. It is important to note that the SDGs not discussed in more detail at the workshop are equally relevant, providing many further linkages to SMCW. These linkages might be examined in more depth as a follow-up to the workshop.

3.2. SMCW and SDG #1 on No Poverty

- Mismanagement of chemicals and waste primarily and most significantly affects those already in poverty, in particular children, creating a vicious cycle. Those living in poverty tend to work and live in close proximity to hazardous chemicals and waste, for example as artisanal and small-scale gold miners using mercury or informal recyclers in the e-waste sector.
- It follows that, in certain circumstances, poverty alleviation can be an important determinant to reduce exposure and ecological footprints. In addition, those living in poverty have fewer means at their disposal to shield themselves from exposure to hazardous chemicals and waste as well as to address their adverse effects.
- Higher incomes can trigger and be associated with purchase of, and improved access to, healthier and more sustainable products, if incentives are created to purchase them. If not the opposite may be the case.
- Chemicals are integral to manufacturing and primary economic development. Chemicals may help to make essential products cheaper and more readily available, thus contributing to poverty alleviation. SMCW may strengthen this effect by reducing both direct costs and externalities. However, cheap products may also contain more and/or higher levels of hazardous chemicals (e.g. light bulbs).
- SMCW activities and projects should consider all three pillars of sustainable development, i.e. social, economic and environmental factors. They should focus on putting the infrastructures in place that help to lift people out of poverty, instil SMCW in the economy and thereby reduce exposure to hazardous chemicals and waste in a sustainable manner.

3.3. SMCW and SDG #2 on Zero Hunger

- SDG 2 on Zero Hunger covers several dimensions relevant for chemicals and waste, including food production, food safety, food processing, and consumption patterns. The role and

impact of chemicals and waste in each of these differs (e.g. chemicals used as pesticides or as food preservatives) and therefore requires tailor-made management schemes.

- The use of pesticides in food production poses both challenges and opportunities for the achievement of the SDGs. Against the background of a growing global population, further intensification of agriculture is required. However, a more sustainable use of natural resources, minimizing depletion and contamination of land, water and soil fertility, needs to underpin this intensification.
- Appropriate and targeted use of pesticides helps to maintain yields or reduce losses and therefore combat hunger and malnutrition. However, excessive and improper use of pesticides has caused significant adverse health, social, economic and environmental effects that need to be avoided in the future. The majority of farming is undertaken by smallholders, who may have limited knowledge on the correct use of pesticides and limited access to effective risk mitigation measures, such as the use of appropriate personal protective equipment². Farmers need to be informed about the risks associated with the use of pesticides and should be trained in the mitigation of such risks as well as Integrated Pest Management approaches that reduce reliance on pesticides. Existing initiatives, such as those implemented by the private sector, CSOs and IGOs, can be scaled up and replicated.
- SMCW is a key factor to achieve sustainable agricultural development. The Agenda 2030 recognises that we can no longer look at food production and natural resources separately. A major part of the SDG vision has been in moving beyond conservation to sustainable management of natural resources. Sustainable and organic agriculture make important and growing contributions to increase productivity and combat hunger and malnutrition (as shown in various projects implemented by the Pesticide Action Network); while also generating employment and foreign investment (see for example the sustainable production of cacao in Honduras). This implies an integrated approach to agriculture (as promoted by FAO in partnership with WHO, SAICM etc.) that reduces reliance on agro-chemicals, phases out the use of highly hazardous pesticides and enhances the ecosystem services underpinning food production.
- Chemicals and waste issues in animal husbandry, fisheries and food processing also need to be addressed. Further work is necessary to provide safe and nutritious food, produced through environmentally sound processes.
- It is critical to minimize food waste.

3.4. SMCW and SDG #3 on Good Health and Well-being

- The health dimension of SMCW is not limited to target 3.9, but is a cross-cutting issue at the centre of sustainable development. Success in Goal 3 depends on success in the other SDGs and cannot be achieved by the health sector acting alone; in particular target 3.9 is dependent on 12.4 which entails multi-sectoral and multi-stakeholder action.
- Chemicals (in particular pharmaceuticals) save lives and improve well-being. SMCW has enabled industrial manufacturing in developed economies as well as a growing number of developing economies to safely harness the benefits of chemicals. At the same time, evidence suggests a significant burden of disease from exposure to chemicals (as shown in the WHO's global assessment, to be updated in May 2016), particularly associated with some developing countries and certain general uses, suggesting high costs of inaction associated with a large number of deaths and illnesses, for example due to occupational exposure. However, information is still incomplete and it is therefore necessary to gather additional data, including on the costs of inaction and the burden of disease.

² The FAO/WHO International Code of Conduct on Pesticide Management and its supporting technical guidelines, including the recently released guidelines on addressing highly hazardous pesticides, provide technical and policy guidance on mainstreaming SMCW into agriculture to achieve the SDGs.

- A preventive and “health in all policies” approach to SMCW, aiming to avoid and reduce exposures to hazards from chemicals and waste, will deliver more efficient results towards the implementation of the SDGs. Applying SMCW will help to reduce deaths and illnesses attributable to chemicals and waste exposure, increase economic productivity and accelerate implementation of the 2030 Agenda.
- The strategic alliance between the health and environment sectors is of key importance and needs to be further strengthened. While many initiatives are already in place (e.g. regional intergovernmental health and environment processes in Africa, the Americas, Asia-Pacific and Europe; the Global Green and Healthy Hospitals network; or the International Society of Doctors for the Environment), others may need to be established to catalyse action in relevant domestic and international forums, including SAICM, and other sectors.

3.5. SMCW and SDG #5 on Gender Equality

- Gender equality is both a goal in itself and an opportunity that can deliver economic and social outputs necessary for all SDGs to be achieved. In fact, paying priority attention to this SDG and empowering woman may be a key determinant for implementing the entire 2030 Agenda.
- Many chemical and waste-related risks differ depending on gender. Among others, this is due to the special vulnerability of women as well as the different roles and responsibilities women have in our societies (e.g. in deciding on education, health-related issues and family consumption patterns). Risk assessments and regulatory frameworks should take this into account. Understanding gender-dependent risks will improve the way protective and preventive measures are implemented.
- Gender considerations are also important in finding solutions. For example, the role of women as educators, decision-makers and agents of change should be recognized and utilized: it can be a driving force to mainstream SMCW into the SDGs.
- More research on gender and chemicals is needed to understand the linkages and impacts of chemicals and wastes from a gender perspective as well as to identify areas for future work. In particular, there is a need for gender-disaggregated information on the effects of chemicals.

3.6. SMCW and SDG #9 on Industry, Innovation and Infrastructure

- Key concepts to be implemented in order to contribute to the SDGs via SMCW include recycling, a life cycle approach, with information exchange about chemicals in the value-chain, the circular economy, and extended producer responsibility (e.g. the Restriction of Hazardous Substances Directive (RoHS)).
- Within the value chain of chemicals, the chemicals industry is a key player in advancing innovation and providing safer chemicals to downstream users and markets, such as the textile sector. Likewise, downstream companies, given their proximity to the market play an important role to creating demand for cleaner products, suggesting that both push and pull factors are relevant.
- A chemicals industry based on delivering not only functional value, but cleaner production, more sustainable chemistries and substitution (where needed), and more products that are benign by design not only protects human health and the environment but also generates new opportunities for economic growth.
- Industry as well as other actors play an important role in chemical leasing: a model that may hold large potential to stimulate innovation. Non-technical innovation, such as social and process innovation also hold potential in fostering SMCW.

- In order to innovate sustainably, governments are called upon to provide planning certainty for industry. State regulation has a significant influence on pace and quality of innovation. The SDGs create global expectations for the future, particularly among industry.

3.7. SMCW and SDG #12 on Responsible Consumption and Production

- Participants noted the importance of legislative frameworks and domestic regulatory actions coupled with economic incentives to address chemicals and waste related challenges, as well as to level the global playing field.
- Solutions should move away from an approach focused on dealing with chemicals and waste problems once they have reached the market (post-market solutions) and more systematically stimulate pre-market solutions (at the design phase and across the entire production cycle).
- Changes in consumers' behaviour, including through incentive structures, can be an important driver of change towards SMCW, in particular by minimizing waste generation and reducing the demand for products containing toxic chemicals.
- Complementing the consumer side, new production schemes based on a life cycle approach will further contribute towards SMCW. These would enable identification of sustainable solutions, which may include higher efficiency in use, use of alternative chemicals or the elimination of hazardous chemicals.
- Disclosure of the chemicals used by industry, including, but not limited to the chemicals used in articles, is desirable. Lack of information about chemicals in products is an obstacle to consumer choices and the sustainable recycling of product materials. The voluntary programme developed within SAICM (Chemicals in Products) to improve information exchange about chemicals in the value chain as well as voluntary reporting to national Pollutant Release and Transfer Registers (PRTRs) are opportunities for the industry to further contribute to safe recycling and communicate improvements in resource efficiency.

3.8. SMCW and SDG # 13 on Climate Action

- SMCW is an important element of addressing climate change mitigation and adaptation. Initiatives to integrate SMCW into climate action are ongoing.
- In reference to mitigation, the chemicals industry and waste (dumpsites) contribute towards emission of greenhouse gases.
- At the same time, improved life cycle management as well as the chemicals industry's products, processes, information in the value-chain about the characteristics of chemicals and their presence in products, innovation and research capacity is critical to improve energy efficiency, develop renewables, capture greenhouse gases, and increase resource efficiency.
- In terms of adaptation, accelerating climate change through extreme weather events and higher temperatures increases pollution risks. Chemical products may help to adapt to some of the consequences of climate change. SMCW considerations need to be integrated in national and local adaptation planning.
- Procurement policies can be used to provide market incentives, fostering the use of best available techniques (BAT) and best environmental practices (BEP). Efforts should be made to generate co-benefits for SMCW and climate action.
- Relevant national action plans (e.g. the National Implementation Plans (NIPs) developed under the Stockholm Convention) could explore connections between climate change and SMCW. For this purpose, it is useful to develop indicators linking objectives related to SMCW and climate change.
- Further research is necessary to understand the impact of climate change on the fate of toxic chemicals and related exposure (e.g. remobilization of Persistent Organic Pollutants (POPs)).

3.9. Additional areas of action identified for consideration

- Awareness should be raised about the linkages between SMCW and the various SDGs. For this purpose, factsheets exploring the linkages between each SDG and SMCW would be a useful tool, in particular for decision-makers not directly involved in chemicals and waste.
- It will be helpful to generate/gather transparent, georeferenced and publicly available data on pollution, such as available through national PRTRs, and map it against data on poverty in order to understand the impact on communities.
- Available information on the cost of inaction and the global burden of disease should be further used to argue for SMCW and further data should be gathered, including on gender-specific chemicals exposure and the costs resulting from a lack of information on chemicals products.
- The second Global Chemicals Outlook (GCO-II) should include a chapter focusing on the gender dimension of chemicals and waste.
- It is important to promote and follow-up how industries contribute to the voluntary programme to improve information exchange in the value chain about chemicals in products.
- Evidence for the business case to consider the connections between SMCW and climate change should be gathered.
- The links between SMCW and SDGs not discussed in detail at the workshop should be further investigated both through analytical work and by collecting and sharing innovative country examples.

4. Indicators and Measurement of Progress

4.1. Introduction

The workshop featured a dedicated session on indicators of progress and monitoring, with the objective of exploring the interface of SDG indicators, international indicators deriving from international chemicals and waste agreements and other international processes as well as indicators used at the national level to self-assess progress in achieving the 2020 SMCW³ goal in a sustainable development context. More specifically, participants reviewed the indicators under the UN SDGs indicators framework as relevant to chemicals and waste, thereby considering potential gaps, identifying sources of information and collection systems, and exploring possible complementary indicators at the national level. Some of the highlights emerging from the three working groups that were formed by the participants are noted below.

Indicators are used to measure progress in SMCW at the national, regional and global levels. National indicators seek more detail and need to be adapted to the specific domestic circumstances, priorities and capacities and may thus differ across countries. Moving towards the regional and global levels, indicators become more aggregated, composite and holistic, which is necessary to provide a general sense of the progress achieved.

The proposed global indicators framework for the SDGs was agreed by the 47th Session of the UN Statistical Commission in March 2016. It lists two indicators for the achievement of the 2020 goal, namely: (12.4.1) the number of parties to international MEAs on hazardous and other chemicals and waste that meet their commitments and obligations in transmitting information as required by each relevant agreement; and (12.4.2) treatment of waste, generation of hazardous waste, hazardous

³ The Strategic Approach (SAICM) provides a policy framework to guide efforts to achieve the Johannesburg Plan of Implementation goal that, by 2020, chemicals will be produced and used in ways that minimize significant adverse impacts on the environment and human health. It acknowledges the essential contribution made by chemicals to modern societies and economies while at the same time recognizing the potential threat to sustainable development if chemicals are not managed soundly.

waste management, by type of treatment. In addition, there are other SDGs indicators relevant for SMCW, for example under target 3.9 to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination by 2030.

Under SAICM, 11 basic elements have been recognized as critical at the national and regional levels to the attainment of sound chemicals and waste management through the SAICM Overall Orientation and Guidance (OOG) for achieving the 2020 goal. The 11 elements 'unpack' the 2020 goal and provide a structure for breaking down progress towards SMCW. The 2020 goal is explicitly reflected in target 12.4.

4.2. SMCW indicators under the SDGs

- All participants agreed on the importance of global SMCW indicators feeding into the SDGs.
- The current international indicators to measure the 2020 goal address some issues of waste management and sustainable consumption and production, but less so chemicals management, in particular chemicals production. Additional efforts may be needed to explore such gaps and ways of addressing them.
- Challenges were foreseen with reporting under target 12.5. In Basel reporting, waste generation responses will be optional for 2016. Furthermore, there are challenges with measuring waste prevention.
- Indicators under targets other than 12.4 and 12.5 (such as 2.4, 3.9, 6.3 and 11.6) are also highly relevant from a SMCW perspective.

4.3. Measuring progress at the global and regional levels

- The SDGs change how we look at the information reported under international chemicals and waste agreements.
- The indicators developed by the IOMC towards some of the 11 basic elements from the SAICM OOG for achieving the 2020 goal (e.g. number of countries implementing the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), and poison centres) could be used to measure progress at the global level (SAICM) and to what extent we are achieving the 2020 goal in 12.4.
- National reporting under MEAs and other global instruments has been recognized as a challenge in certain instances; however, mechanisms exist to assist in collection and reporting of data. Better baseline reports are needed in order to accurately assess progress towards SMCW and the SDGs.
- Efforts should be made to understand and identify methodologies better for the second and third tier of indicators (i.e. the regional and global levels) and their linkages with national reporting.
- It is necessary to look beyond international chemicals and waste agreements and include, for example, reporting mechanisms under the FAO, WHO, International Labour Organization (ILO) and regional development banks.

4.4. Measuring progress at the national level

- Measuring progress towards achievement of the SDGs and implementation of SMCW is primarily a national endeavour and serves national objectives. A suite of indicators adapted to the different national needs and serving national purposes would help countries choose those that are tailored to each country's needs, priorities and national circumstances in the context of country driven self-assessments. Baselines need further investigation.
- An institutional and regulatory framework is needed at the national level to collect data and measure progress. A number of data collection systems are available and a combination of sources could be used. Beyond national reporting for international chemicals and waste

agreements, these include the Protocol on PRTRs, the FAO's Pesticide Stock Management System (PSMS), and databases maintained by the Organisation for the Prohibition of Chemical Weapons (OPCW). as well as voluntary industry reporting schemes, such as the Global Reporting Initiative or under the International Organization for Standardization (ISO). Some areas, for example the lifecycle perspective, may be difficult to assess from a national level only.

- The 11 basic elements from the SAICM OOG for achieving the 2020 goal could be used as frameworks guiding the development of more specific indicators that would help countries to measure progress at the national level in accordance with their needs. More work is needed to help countries develop more specific benchmarks to help them assess progress on specific instruments considered of universal value, such as implementation of the GHS and poison control centres.
- Some indicators suggested by participants include the following: legislation for SMCW, occupational safety and health, and consumer protection, such as GHS and safety data sheets; presence of safe disposal methods/a functioning infrastructure for SMCW; number of contaminated sites, including their character and relevant risks; existence of a waste management strategy; pollution databases, such as PRTRs; availability of a NIP and hazardous waste inventories; and the number of licensed waste management facilities.

4.5. Additional areas of action identified for consideration

- Given the complexity and interface of the indicators, further work still remains to be done at all levels in order to streamline reporting and indicators and appropriate mechanisms would need to be established for this purpose. Efforts should be enhanced to engage in existing national and international processes on SDGs indicators relevant for SMCW.
- A process may be necessary to contribute to global SDGs indicators. This would involve governments engaging in national level SDGs reporting mechanisms to determine what SMCW indicators are relevant for country reporting on a range of SDGs indicators, including those reported under international chemicals and waste agreements.
- A note should be prepared providing an explanation on the type of information to be collected under indicator 12.4.1.
- In addition to 12.4.1, additional indicators could be considered to measure progress towards target 12.4 on the SMCW by 2020. The basic elements agreed under the SAICM OOG could be considered, as they unpack the 2020 goal. Further possibilities to amend existing indicators should be explored, e.g. adding data on obsolete stockpiles from the Stockholm Convention and the Minamata Convention on Mercury under indicator 12.4.2 or including data on emissions of dioxins and furans under 11.6.1.
- A composite indicator/index which would measure progress in different areas could be compiled from existing indicators from various processes. This could be based on a core capacity framework and be comprised of such elements as the availability of PRTRs and GHS in countries. As SAICM is commissioned to re-evaluate its indicators, this could be the first step for SAICM to consider. Stakeholders are invited to engage in the process to review SAICM indicators in the light of the agreed SDGs.
- Consultations are needed at the domestic level to explore roles and responsibilities in tracking and monitoring implementation of the SDGs. It would also be useful for governments to consider developing national indicators, for example, to measure their institutional capacities.

5. Cross-cutting Themes

5.1. Introduction

In a series of thematic panels, participants examined cross-cutting issues considered critical for the successful integration of SMCW into the SDGs. The panelists shared experiences, insights and lessons learned in order to answer questions such as how institutions can be made fit for purpose to link SMCW and the SDGs, to discuss challenges and opportunities in ensuring inclusion, accountability and access to justice, to explore economic tools that could be used, and to identify strategies to communicate SMCW and SDG linkages, among others.

There was broad agreement on the need to mainstream SMCW into national development plans. Moreover, good governance is essential for the implementation of SMCW in a SDGs context. This includes strong institutions and effective regulatory frameworks, implementation of multi-sectoral and multi-stakeholder approaches, and the reliance on appropriate economic tools and analysis. Ensuring inclusion, accountability and access to justice is sometimes neglected, but critical to protect vulnerable populations from exposure to hazardous chemicals and waste. These issues are not only essential to SMCW, but also cut across the SDGs, meaning that progress in establishing such support structures will deliver multifaceted benefits.

5.2. Strengthening institutions

Legal and institutional frameworks

- Existing national institutional structures in governments do not necessarily match how the SDGs are organized and any work to implement the SDGs needs to take into account existing institutional structure and work with them.
- Countries are therefore encouraged to take further steps in integrating SMCW into national planning, priorities and strategies. A number of countries have already taken initial action (e.g. Colombia, Ghana, Canada and Finland).
- The strengthening of institutional capacity and functioning institutions are fundamental for effective implementation of both SMCW and the SDGs.
- Keeping in mind the universality of the 2030 Agenda and the SDGs, each country needs to prioritize their implementation, identify how they plan to reach specific goals and targets and report on indicators given their national context. Lessons learned from pilot initiatives and initial action should be widely shared.
- A comprehensive regulatory framework is needed to ensure that SMCW contributes towards implementation of the 2030 Agenda. A useful support to national institutions for SMCW would be to promote the development of legislation defining their role as well as the role of other actors, such as industry.

Integrated approach to financing SMCW

- The three interlinked and mutually supporting pillars of an integrated approach to financing SMCW in an SDGs context are: i) mainstreaming into national development plans and budgets, ii) industry involvement, and iii) external financing (e.g., GEF and the Special Programme to support institutional strengthening at the national level). These remain relevant in a SDGs context.
- Mainstreaming SMCW into the work on SDGs might facilitate access to alternative sources of funding; appropriate proposals for SMCW activities can access SDGs funding.

National and international cooperation

- The establishment of multi-sector and multi-stakeholder platforms and the strengthening and utilisation of existing ones, particularly at the domestic, but also at the local, regional

and global level, are critical to catalyse energy and to enhance collaboration among different stakeholder groups for the achievement of SMCW.

- Recognising that SMCW is a global issue (for example due to international supply chains), international cooperation is required to strengthen national implementation of SMCW efforts. Synergies between SAICM, the Minamata Convention on Mercury and the Basel, Rotterdam and Stockholm Conventions as well as other relevant conventions, such as the Barcelona Convention, the Aarhus Convention and its Protocol on PRTRs, the Air Convention and its Protocols, and the Convention on the Transboundary Effects of Industrial Accidents should be strengthened with a view to sharing best practices and facilitating implementation. IGOs can provide support for SMCW at the national level.

Additional areas of action identified for consideration

- Using existing platforms, it is necessary to assess how existing international efforts are contributing to the SDGs and how the chemicals and waste community might engage in existing international frameworks where it has not previously offered input (e.g. a climate change and chemicals and waste side event at the second Meeting of the UNEA).
- It should be considered how approaches under various international venues, such as, but not limited to, the Convention on Biological Diversity (CBD) and the FAO, can contribute to achieving the SDGs consistent with approaches undertaken under chemicals- and waste-related agreements.
- Since the amount of legislation related to chemicals has increased significantly, a comprehensive global overview of legislation related to chemicals would be a useful contribution to help governments, the private sector (e.g. the automotive industry) and civil society in the achievement of the SDGs.
- The clearing-house mechanism of the BRS Secretariat and other relevant mechanisms could be used to disseminate good practices for institutional strengthening. This could be further discussed during the COPs to the Basel, Rotterdam and Stockholm Conventions and other fora. Assistance should be provided to help countries identify mechanisms for mainstreaming SMCW into the SDGs.

5.3. Communication and outreach

Observations, messages and insights

- It is necessary to communicate clearly the linkages between the SDGs and chemical and waste (as for example done by UNDP) and convince sectors and stakeholders not directly/traditionally involved in chemicals and waste issues of the benefits (social, economic and environmental) that SMCW has to offer in achieving the SDGs.
- An effective approach is to focus on tangible, concrete cases that have visible and immediate effect first and then scale up (see for example the initiative by the Center for Environmental Solutions in Belarus, focusing on batteries first and then starting a larger campaign on issues related to e-waste).
- Emotive messages may help to communicate chemicals and waste issues; however, these cannot replace the provision of accurate information. Messages also need to be appropriately adapted to the target audience.
- Success stories from government-driven information initiatives (e.g. anti-smoking) can also serve as references and demonstrate the potential impact of dedicated campaigns.
- Engagement of stakeholders on the ground, for example health workers, to disseminate key messages and awareness is an effective tool. As another example, young professionals can help in such efforts, given their capacity in outreach and communication technologies.

Additional areas of action identified for consideration

- An overarching new communication strategy for chemicals and waste, with a new narrative, reflecting adoption of the SDGs, and clear messages should be developed. Materials promoting SMCW should use the pictograms of the various SDGs. Available information and tools relevant for SMCW should be consolidated and communicated effectively, ensuring that it is readable and usable for the target audience.
- Case studies with concrete examples of the SDGs-chemicals and waste interface should be gathered. Governments, the private sector and civil society are invited to contribute.
- Future conferences, workshops and dialogues should aim to invite non-traditional stakeholders, including those not directly working in the chemicals and waste arena. This means involving, among others, downstream users and other actors along the entire supply chain as well as CSOs. Collaborative efforts across sectors, such as with the health sector, should be shared broadly and enhanced, so that SMCW is widely supported.

5.4. Inclusion, accountability and access to justice

Observations, messages and insights

- Principle 10 of the Rio Declaration emphasized the importance of access to information, access to public participation and access to justice as key pillars of sound environmental governance. Implementation of the Bali Guidelines, including in the area of chemicals and waste, remains relevant in the context of the 2030 Agenda.
- Access to justice, the right to an effective remedy and accountability are firmly rooted in the principles of Human Rights and essential to achievement of the SDGs, in particular the SDG on Peace, Justice and Strong Institutions. These principles are also particularly relevant in the area of chemicals and waste. Credibility is critical.
- No one should be left behind. Inclusion delivers tangible social, health, economic and environmental benefits. For example, workers should have a seat at the table to decide on health and safety standards; an interface is needed to connect the informal and formal sectors across the supply chain. Workers in the informal sector need to receive protection from toxic exposure and be linked to the formal sector.
- Those most affected by a lack of SMCW are rarely those who have caused it, e.g. communities in Small Island Developing States (SIDS).
- Many deaths and illnesses are caused by occupational exposure to toxic chemicals, in particular in developing countries. Large challenges remain regarding the right to an effective remedy. Victims bear the entire burden of proof regarding causation. It is important not to solely rely on voluntary compliance or to outsource it; without a credible and transparent compliance and review mechanism, there is no accountability. The necessary resources need to be mobilized.
- Significant health and environmental gains can be achieved through access to information (e.g. through the Aarhus Convention and its protocol on PRTRs, the GHS etc.) and availability of knowledge on chemicals in products, occupational diseases etc. Nonetheless, information gaps continue to be pervasive in terms of hazards, exposure and knowing which actor to hold accountable. Often such information is not made available, particularly to those that are most affected, such as workers. Transparency and availability of data is critical to identify gaps and priorities for action. National databases providing access to information on pollution as well as on trends in the use and release of pollutants during the production are the basis for informed decision-making.

Additional areas of action identified for consideration

- Further case studies (complementing the information collected under, for example, the Aarhus Convention) could be gathered to compile lessons learned (e.g. from informal e-waste recycling) to be applied in other scenarios.

- The linkages between the concepts of inclusion, accountability and access to justice in the field of chemicals and waste with the various SDGs should be investigated and communicated, including through concrete examples (e.g. from the labour sector).
- The potential to integrate concepts of inclusion, accountability and access to justice in SMCW projects should be further explored.

5.5. Economic analysis and incentives

Observations, messages and insights

- **Benefits of SMCW include establishing a necessary foundation for economic development in the manufacturing arena, and ultimately for participation in the global market place.**
- The costs of inaction are likely much higher than the costs of managing the risks caused by chemicals. While the benefits of regulating chemicals outweigh the costs; it may be challenging to quantify such benefits.
- Economic tools and analysis are critical to convince decision-makers of SMCW benefits. Harmonization of such tools and mutual acceptance of assessments would be beneficial.
- Solutions to share and reduce the cost of risk management are available, e.g. industry's responsible care, defined responsibilities, cost recovery, and mutual acceptance of data. Perverse incentives and subsidies should be avoided. Instead, procurement policies, providing market incentives through requirements and standards development can have beneficial impacts.
- Various instruments are available, including the use of behavioural economics to nudge behavioural change as well as regulatory and policy/market instruments (for example, introducing a chemicals safety tax). The polluter-pays principle can be an effective tool to internalize costs. Voluntary schemes can also be effective, in particular where institutional frameworks are weak.

Additional areas of action identified for consideration

- Harmonisation of existing methodologies to calculate economic costs and benefits related to SMCW would be beneficial (cost of inaction, opportunity cost for productivity etc.).
- Success stories on the use of economic instruments (both voluntary and regulatory schemes) in the field of SMCW could be compiled, thereby exploring the potential for replication.

5.6. Sustainable chemistry

Observations, messages and insights

- Sustainable chemistry can make an important contribution towards SMCW as well as the achievement of all SDGs, going beyond the benefits for health and the environment.
- The International Sustainability Chemistry Collaborative Centre (ISC3) promotes sustainable chemistry as a holistic approach going beyond the production of benign chemicals and addressing overarching questions of sustainability in chemicals management, with the aim of creating social, economic and environmental benefits in line with the SDGs.
- In order to be successful, sustainable chemistry needs to be implemented in an inclusive manner and have broad ownership across stakeholders

Additional areas of action identified for consideration

- Further efforts should be undertaken to explore and understand the potential of sustainable chemistry towards SMCW and the SDGs, including via initiatives such as the International Sustainability Chemistry Collaborative Centre (ISC3).

6. Evolving Modes of Development Cooperation and Partnerships

6.1. Introduction

On the final day of the workshop, two panels were held to explore whether and how modalities and priorities for development cooperation and partnerships in the area of SMCW are changing in light of the SDGs. The diverse panels, composed of participants from governments, the private sector, civil society and IGOs, also discussed potential implications for mobilizing financial support in the area of SMCW.

During the discussions, it became clear that projects need to adopt multi-focal approaches, thereby addressing all three pillars of sustainable development. A key to this will be to cultivate broader understanding of the social, economic and environmental aspects. This will help in attracting funding. In order to be successful, such projects need to engage relevant actors from all sectors in open and inclusive partnerships.

6.2. Evolving modes of development cooperation

- With the traditional way of managing the development agenda challenged, the SDGs provide an opportunity to (re-)focus and guide development work in the area of SMCW.
- The broader scope of the SDGs as compared to the MDGs offers an opportunity to address the root causes beyond chemicals and waste issues, considering social, economic and financial aspects of development, and to set a higher level of ambition necessary to successfully implement sustainable development strategies.
- In some circumstances, it is necessary to address the entire supply/value chain and involve all relevant actors, including non-traditional ones. Industry needs to be seen as a central part of the solution.
- Activities and projects should take a multi-focal approach. This may imply some trade-offs. The bundling of projects and activities may provide additional opportunities to attract and leverage funding.
- Project concepts for development cooperation should be framed in a way that they speak to the SDGs and result in concrete outcomes.

6.3. Evolving modes of partnerships

- Partnerships are essential to achieve SMCW and the SDGs. They should complement and reinforce a robust regulatory framework, rather than serving as an alternative. Partnerships can help to implement relevant obligations but cannot shift relevant responsibilities.
- Partnerships are most effective if they have clearly defined goals and transparent operations. Each partner needs to see a clear benefit in participating and add value. In securing a critical mass, open and broad multi-sectoral and multi-stakeholder approaches are essential and will stimulate participation (as practised for example in the United States' partnerships to enhance voluntary and regulatory regimes in advancing SMCW). Partnerships among governments, the private sector or civil society organizations can also make important contributions.
- Civil society organizations and the private sector are important partners for governments. Actors across the value chain should be included and potential upstream contributions should be explored.

6.4. Additional areas of action identified for consideration

- Options for multifocal projects and the bundling of development projects into packages which may be attractive to investors should be considered. Projects should be designed in such a way as to move away from targeting individual conventions.
- In developing SMCW projects, the supply/value chain approach should be incorporated, with involvement of all actors (producers, consumers, those managing end-of-life products etc.)
- New partnerships (e.g. with small and medium-sized enterprises) and methods of cooperation should be explored. It is necessary to intensify efforts to build partnerships in developing countries.
- A knowledge-sharing process should collect good practice and identify characteristics of partnerships that were successful in reducing chemicals- and waste-related risks.
- The importance of SMCW and the opportunities it has to offer for development should be proactively highlighted at the Financing for Development process.

7. Concluding Remarks

The workshop generated many insights on the linkages between chemicals and waste and the 2030 Agenda. Throughout, participants provided ideas and suggested areas of action identified for further consideration. These are noted at the end of each section. An evaluation undertaken at the end of the workshop has shown that the workshop stimulated the participants to initiate concrete action on the SDGs-SMCW interface in their specific context⁴.

The partners will use the momentum generated by the workshop to explore possible follow-up activities. Specifically, opportunities for knowledge creation, exchange and management will be explored, such as collecting innovative approaches undertaken by countries and stakeholders that demonstrate integrated approaches of SMCW in a sustainable development context. In addition, opportunities may exist for specific workshops (e.g. focusing on specific goals) and/or pilot projects with interested regions and countries to capture, catalyse and share innovative action. Concerning communication, development of factsheets on linkages between each SDG and chemicals and waste will be initiated.

⁴ 29 participants completed an evaluation form. Of these, ca. 97 % agreed or strongly agreed that the workshop stimulated them to contribute to/initiate action in their organizations/institutions on the SDGs/chemicals and waste interface.