

# Investigation of elements in support of the global post 2020 framework for chemicals and waste

## *Final Report*

Commissioned by the Swedish Society for Nature Conservation (SSNC), Finnish Society for Nature Conservation (FANC), Norske Naturvernforbundet (Friends of the Earth Norway), and Det Økologiske Råd (Denmark), with co-funding from the Nordic Council of Ministers and the Swedish International Development Cooperation Agency (SIDA)



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## EXECUTIVE SUMMARY

This analysis considers options for the global post-2020 chemicals and waste regime. It has been prepared with a view to the intersessional process underway concerning the future of the Strategic Approach to International Chemicals Management (SAICM) after 2020, as well as the recently launched Alliance for High Ambition on Chemicals and Waste and the parallel explorations concerning global arrangements to address plastic pollution and highly hazardous pesticides (HHPs). These issues overlap and will need to be considered for the post-2020 chemicals and waste management regime.

SAICM was intended to complement the existing conventions on chemicals and waste by helping States to reduce the risks of toxic chemicals left unaddressed by the patchwork of global treaties. It has pioneered a positive model of voluntary multi-stakeholder engagement where governments, international organisations, industry, and civil society organisations come together to identify challenges and possible actions. However, it lacks a mechanism for moving concerns beyond identification as emerging issues or for taking actions on substances of global concern; it has no provisions for monitoring, reporting, and evaluating what States are doing concerning chemicals management; and it is severely constrained by a lack of financial resources stemming in large part from the lack of clear obligations on States.

The SAICM goal remains as important for protection of human health and the environment as in 2006. However, a policy framework alone is not sufficient to meet the progress required for achieving sound management of chemicals and waste by 2020. A binding framework on chemicals and waste is needed if the international community is to achieve the 17 Sustainable Development Goals (SDGs) by 2030, because several of the SDGs and their accompanying targets are largely dependent on the SAICM goal.

The study concludes that certain elements of international chemicals and waste management need to be binding. In line with the Paris Agreement, the analysis also recognises the importance of a flexible approach -- one that sets global objectives and standards but, in addition, builds on governments' own efforts to identify and implement the chemicals management measures best for their situation. This mix – internationally agreed objectives and binding obligations, together with national flexibility in determining country-level measures for meeting those objectives and obligations – may be viewed as a hybrid approach.

The proposed binding elements draw on the set of eleven “basic elements” for achieving the sound management of chemicals and waste at national and regional levels agreed at the 2015 ICCM4. These agreed elements include binding frameworks addressing the life cycle of chemicals and waste, and relevant enforcement and compliance mechanisms. Importantly, they also recognise the critical importance of financing the necessary national governance structures by defining industry responsibility, by setting up comprehensive cost recovery policies and systems, and by including the sound management of chemicals and waste in national development plans and budgeting processes. Setting in place coherent national governance structures for chemicals and waste will at the same time open up new, sustainable sources of revenue – a win/win situation for governments as well as citizens.

### *The binding elements:*

- State Parties should have national systems for ensuring sound management of chemicals and waste and develop national action plans (NAP) for risk reduction
- State Parties should participate in global periodic reviews of national efforts for ensuring chemical safety.
- A mechanism should be developed within a determined number of years for reaching legally binding decisions on which chemicals outside the scope of the current chemicals treaties are of global concern and what risk reduction measures State Parties should take to reduce risk of exposure to those chemicals. This mechanism is particularly needed with respect to (1) highly

hazardous chemicals in use for pest control and (2) hazardous chemicals used in production in ways that result in exposure of workers and the environment and that may end up in products and end-of-life material waste streams, leading to further exposure.

- Transparency obligations to ensure a safe circular economy - State Parties should ensure that producers and manufacturers disclose information on chemicals hazardous to health and the environment used in products and material waste streams as well as during manufacturing, at a minimum chemicals of global concern.

***Elements that can remain flexible (examples):***

- National goals and targets beyond the international obligations –in developing their national action plan (NAP), the States themselves could identify other steps needed to improve national systems for ensuring chemical safety, based on the eleven basic elements of the OOG.
- Framework for emerging issues and policy approaches – a global structure, like SAICM, for discussions on emerging policy issues and approaches that would benefit from a broader discussion on the science, relevance to the international community and various approaches being employed.
- Encouragement for sustainable alternatives and support for stakeholders to use non-toxic alternatives wherever possible, e.g., agro-ecology as the alternative to highly hazardous pesticides, and avoidance or minimisation of use of hazardous chemicals in consumer products.

***Other elements to consider:***

- Independent scientific body to review evidence and science, especially health impacts.
- Regional bodies for chemicals management/enforcement, e.g., regional information sharing networks on chemical hazards and risks and systems for cooperating on trans-boundary movements (including illegal trade).

***Costs and options for financing:***

A critical element for a new binding initiative on chemicals will be an understanding of how to finance the governance measures needed on national and international level for the safe management of chemicals and waste. The study reviews each of the proposed binding and flexible elements and provides an overview of financing options. It highlights how medium and low-income countries can gain resources for financing measures on safe management of chemicals and waste throughout their life cycles, through mainstreaming chemicals management into other governance areas and through cost recovery from industry.

***The path forward:***

There is some momentum in other international processes for binding approaches to the related problems of plastic pollution and highly hazardous pesticides (HHPs). These issues overlap with, and are partly subsets of, the chemicals and waste management issues considered under SAICM. Rather than having these processes run in parallel and compete for political buy-in, it could be considered to link or even merge them. The circular economy could provide a useful and suitable framing, under which toxic substances of global concern in production, including their use in products, materials, agriculture and other facets of the economic value chain, could be discussed and negotiated.

The binding elements proposed could also underpin a global framework that would address the related problems of toxic substances in plastics and other materials, as well as highly hazardous pesticides, providing the holistic and comprehensive control mechanisms needed to underpin a safe circular economy throughout the world. And finally, the proposed approach would maintain the unique ability of SAICM to raise global awareness on emerging issues and on policy approaches to reduce potential risks to human health and the environment.

# 1 INTRODUCTION

This report is a contribution to the international discussions on what the global post-2020 chemicals and waste regime should look like. It has been prepared with a view to the intersessional process underway concerning the future of the Strategic Approach to International Chemicals Management (SAICM) after 2020, as well as the recently launched Alliance for High Ambition on Chemicals and Waste and the parallel explorations concerning global arrangements to address plastic pollution and highly hazardous pesticides (HHPs). These issues overlap with, and are partly subsets of, the chemicals issues considered under SAICM and will need to be taken into account for the post-2020 chemicals and waste management regime.

SAICM grew out of global discussions on how to support implementation of the Stockholm, Rotterdam and Basel Conventions and to address the management of the many chemicals not covered by the chemicals conventions. It was launched in 2006 as a multi-stakeholder effort focused on an ambitious goal: “to achieve sound management of chemicals throughout their life-cycle so that, by 2020, chemicals are used and produced in ways that lead to the minimisation of significant adverse effects on human health and the environment”.

A dozen plus years later, it is clear that SAICM’s voluntary approach, while useful on several fronts, has not been able to achieve its overall objective. As various studies recount<sup>1</sup>, the production, marketing and use of hazardous chemicals continue to increase, and harmful impacts on human health and the environment continue to mount<sup>2</sup>.

At the fourth International Conference on Chemicals Management (ICCM4) in 2015, with the SAICM structure scheduled to come to an end in five years, it was decided to initiate an intersessional process (IP) to discuss options for the next stage in global chemicals and waste management after 2020. This does not limit the discussion to the successor to SAICM. The multi-stakeholder process was launched in February 2017 with a kick-off meeting in Brazil and continued with a second IP meeting in Sweden in March 2018. The IP is expected to culminate in a fifth International Conference on Chemicals Management (ICCM5) scheduled for autumn 2020.

In July 2018, at the UN High-Level Political Forum (HLPF) on Sustainable Development, the Swedish Minister for Environment Karolina Skog accelerated the ambition of these discussions by announcing an international high-level initiative aimed at forging a global agreement on chemicals and waste comparable to the Paris Agreement on climate. Countries participating in the launch event included Argentina, Brazil, Canada, Finland, Germany, Jordan, the Netherlands, Norway, Switzerland, Uruguay, and USA. The High Ambition Initiative on Chemicals and Waste provides a new platform for governments and other stakeholders to consider what is needed to form a more effective architecture for international chemicals management.

In parallel, calls for global action with respect to plastics pollution have also gained momentum. In September 2018, UN Environment launched the Global Plastics Platform aimed at reducing plastics pollution and supporting the transition to a more circular economy<sup>3</sup>, and proposals for an international convention are circulating<sup>4</sup>. At the time of writing, the political will for this Convention to restrict certain chemicals of concern from plastics (and potentially other materials) under this initiative is uncertain.

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<sup>1</sup> CEFIC (2017), *Facts and Figures 2017 of the European chemical industry*. (<http://www.feica.eu/cust/documentrequest.aspx?DocID=3340>)

<sup>2</sup> WHO (2016). *Public health impact of chemicals: knowns and unknowns* (with 2018 data addendum). (<https://www.who.int/ipcs/publications/chemicals-public-health-impact/en/>)

<sup>3</sup> <https://www.unenvironment.org/news-and-stories/press-release/nations-commit-fight-plastic-pollution-together-during-un-general>.

<sup>4</sup> Simon, N. and Schulte, M.L. (2017). *Stopping Global Plastic Pollution: The Case for an International Convention*. Heinrich Böll Foundation. (<https://www.boell.de/sites/default/files/stopping-global-plastic-pollution.pdf>)

This report draws on the findings of several excellent studies that have already analysed the international chemicals management landscape. These include the 2013 SSNC/CIEL report *Pathways to Global Chemical Safety*<sup>5</sup>, the 2017 Nordic Council report *Chemicals and Waste Governance Beyond 2020*<sup>6</sup> and the 2018 report on ‘*Options for effective governance of the Beyond-2020 Framework for sound management of chemicals and waste*’<sup>7</sup>. The analyses in these reports have highlighted the gaps that need to be considered in deciding the direction of global chemicals management.

This report is therefore able to start with a conclusion -- that the voluntary approach of SAICM has not been sufficient for protecting human health and the environment from chemicals-related harm. In our opinion, for the international community to move forward on controlling hazardous chemicals and waste, certain elements of international chemicals and waste management do need to be binding. In line with the Paris Agreement, the report also recognises the importance of a flexible approach -- one that sets global objectives and standards but, in addition, builds on governments’ own efforts to identify and implement the chemicals and waste management measures best for their particular situation.

In the report, we set out a number of elements that should be in a post-2020 framework on chemicals and waste management throughout their life cycle. While it makes sense to continue the useful multi-stakeholder dialogues that have characterised SAICM, at the same time a more sophisticated and effective control structure needs to be in place to counter the harmful impacts on health and the environment from the production and use of chemicals around the globe. This will require a treaty or convention, as envisioned by the High Ambition Initiative on Chemicals and Waste.

The legally binding elements we propose draw on the set of eleven “basic elements” for achieving the sound management of chemicals at national and regional levels agreed at the 2015 ICCM4<sup>8</sup>. These agreed elements include legal frameworks addressing the life cycle of chemicals and waste and relevant enforcement and compliance mechanisms. Importantly, they also recognise the critical importance of financing the necessary national governance structures by defining industry responsibility, by setting up comprehensive cost recovery policies and systems, and by including the sound management of chemicals and waste in national development plans and budgeting processes.

Thus the report also highlights how the proposed legally binding elements will leverage more funds for governments to apply to the sound management of chemicals and waste. It draws on the LIRA Guidance prepared by UNEP<sup>9</sup> to explain how setting in place coherent national governance structures for chemicals and waste will at the same time open up new, sustainable sources of revenue – a win/win situation for governments as well as citizens.

In addition, the legally binding elements proposed could underpin a global framework that would address the related problems of toxic substances in plastics and other materials, as well as highly hazardous pesticides, providing the holistic and comprehensive control mechanisms needed to underpin a safe circular economy throughout the world. And finally, they would maintain the unique ability of SAICM to raise global awareness on emerging issues and discuss policy approaches to reduce potential risks to human health and the environment.

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<sup>5</sup> Tuncak, B. and Ditz, D. (2013). *Pathways to Global Chemical Safety: The 2020 Goal and Beyond*, (<https://www.ciel.org/reports/paths-to-global-chemical-safety-the-2020-goal-and-beyond-tuncak-ditz-march-2013-2/>).

<sup>6</sup> Honkonen, T. and Khan, S. (2017). *Chemicals and Waste Governance Beyond 2020: Exploring Pathways for a Coherent Global Regime*. Nordic Council. (<http://norden.diva-portal.org/smash/get/diva2:1061911/FULLTEXT01.pdf>).

<sup>7</sup> Urho, N. (2018). *Options for effective governance of the Beyond-2020 Framework for sound management of chemicals and waste: Lessons learned from other regimes*. Center for Governance and Sustainability, ([http://www.saicm.org/Portals/12/documents/meetings/IP2/IP\\_2\\_INF\\_14\\_Governance\\_CGS\\_f.pdf](http://www.saicm.org/Portals/12/documents/meetings/IP2/IP_2_INF_14_Governance_CGS_f.pdf)).

<sup>8</sup> SAICM (2015). *Overall orientation and guidance for achieving the 2020 goal of sound management of chemicals*, (<http://www.saicm.org/Portals/12/documents/meetings/ICCM4/doc/K1501995%20SAICM-ICCM4-6-e.pdf>).

<sup>9</sup> UNEP (2015). *Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for Sound Management of Chemicals*, (<http://wedocs.unep.org/handle/20.500.11822/12224>).



## 2 THE CURRENT CHEMICALS AND WASTE REGIME, INCLUDING SAICM, AND THE SUSTAINABLE DEVELOPMENT GOALS

Over the past two decades, the global chemical industry has undergone significant changes. When the 1998 Rotterdam and 2001 Stockholm Conventions were negotiated, the majority of chemicals were produced in Western Europe, the USA, and Japan. Today, China, India, South Africa, and Brazil are major chemical producing, consuming and exporting countries, and low and middle-income countries are all increasingly using toxic chemicals in supply and value chains as part of an increasingly globalised economy. The post 2020 global regime on chemicals and waste needs to reflect this new reality.

### Legally binding instruments for management of chemicals and waste

- The *1987 Montreal Protocol on Substances that Deplete the Ozone Layer* is aimed at phasing out emissions of ozone-depleting substances (ODS). The phase-outs are step-wise, with different dates for developing and developed countries. **Covers 24 substances and groups of substances** (5 CFCs, 3 halons; 10 other CFCs, carbon tetrachloride, methyl chloroform; HCFCs, HBFCs, bromochloromethane; and methyl bromide). The 2016 Kigali Amendment adds hydrofluorocarbons (HFCs) to the Protocol's control regime due to their high global warming potential (GWP).
- The *1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal* provides for the environmentally sound management and disposal of the several hundred million tonnes of hazardous waste materials produced annually, including through controls over transboundary movements of waste. It **does not restrict specific chemicals**. A 1995 amendment that would prohibit all transboundary movements of hazardous wastes destined for final disposal from OECD (i.e., developed) to non-OECD countries has not received enough ratifications to come into force.
- The *1998 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade* does not ban chemicals. Rather, it gives importing countries information for taking informed decisions about whether to import certain hazardous chemicals. Countries exporting chemicals that are restricted or banned at home must inform the country of intended import that a shipment of the chemical is pending, why the chemical is restricted or banned, and wait for the importing country's consent before the shipment may take place. It **covers 50 chemicals**: 34 pesticides, 15 industrial chemicals, and one chemical in both categories.
- The *2001 Stockholm Convention on Persistent Organic Pollutants (POPs)* targets chemicals that share four properties: high toxicity, persistence in the environment, bioaccumulability in the food chain, and capacity to travel long distances through the air and water. Parties are required to eliminate or restrict the production and use of POPs listed under the Convention, develop national plans for implementing the Convention, and for environmentally sound management and destruction of POPs stockpiles. It **covers 31 chemicals**: Annex A lists 24 chemicals (13 pesticides, 9 industrial chemicals, and 2 in both categories) for elimination; Annex B lists 2 chemicals (1 pesticide and 1 in both categories) for restriction, and Annex C on unintended production lists 7 chemicals.
- The *2013 Minamata Convention on Mercury* aims to protect human health and the environment from exposure to **mercury**, which is ubiquitous throughout the globe today, due to its release to the atmosphere, soil and water from anthropogenic activities. The Convention's provisions include a ban on new mercury mines, the phase-out of existing ones, the phase out and phase down of mercury use in specified products and processes, measures to control emissions to air and releases to land and water, and controls over artisanal and small-scale gold mining. The Convention also covers disposal of mercury once it becomes waste and sites contaminated by mercury.

The number of chemicals listed in identified inventories varies widely, from between 22,000 and 140,000, depending on the nature of the economy of the respective countries; however, a relatively

small number of chemicals account for the largest share of production volume<sup>10</sup>. For example, a total of 21,403 unique substances have been registered with the European Chemicals Agency (ECHA) as placed on the EU market in volumes above one tonne per year<sup>11</sup>. According to Eurostat, 322.5 million tonnes of chemicals were produced by the EU Member States in 2015, of which 63.5% (205 million tonnes) were considered hazardous to human health while 37.6% (121 million tonnes) were considered hazardous to the aquatic environment<sup>12</sup>. These percentages overlap.

Many of the chemicals known to have qualities hazardous to human health and the environment are widespread today via the globalised economy in ways not reflected in the existing treaties. However, as the box on the previous page shows, the conventions that comprise the current global regime for managing chemicals and waste cover only a very small fraction of currently marketed hazardous chemicals and toxic byproducts (Montreal Protocol – 24+ chemicals; Rotterdam Convention – 50 chemicals; Stockholm Convention – 31 chemicals; Minamata Convention - mercury and mercury compounds).

SAICM was intended to complement the existing conventions on chemicals and waste by helping States to reduce the risks of toxic chemicals left unaddressed by the patchwork of global treaties, while also promoting their implementation. It grew out of a resolution adopted by governments participating in the 2002 World Conference on Sustainable Development in Johannesburg that called for a strategic approach to international chemicals management. A decision was taken to structure SAICM as a voluntary, multi-stakeholder forum where governments, international organisations, industry, and civil society organisations could come together to identify challenges and possible actions.

SAICM is essentially a policy framework. It is based on three documents agreed at the first International Conference on Chemicals Management (ICCM1) in 2006. The first, the Dubai Declaration on International Chemicals Management, documents the high-level political commitment made by participating governments, while the second, the Overarching Policy Strategy (OPS), sets out SAICM's scope, objectives, underlying principles, and implementation and review arrangements. The 46 objectives are grouped into five thematic focus areas: risk reduction, knowledge and information, governance, capacity-building and technical cooperation, and illegal international trade. A third, complementary document is the Global Plan of Action (GPA). It lists 273 activities, accompanied by indicators, to be implemented by stakeholders, as appropriate, without indicating which activities should be given priority.

In 2015, with the aim of providing some type of strategic focus, the fourth International Conference on Chemicals Management adopted the Overall Orientation and Guidance (OOG) document. This sets forth 11 basic elements agreed as necessary for sound chemicals and waste management at national level, as per the box below.

### 11 basic elements considered critical for sound chemicals / waste management

- (a) Legal frameworks that address the life cycle of chemicals and waste;
- (b) Relevant enforcement and compliance mechanisms;
- (c) Implementation of chemicals and waste-related multilateral environmental agreements, as well as health, labour and other relevant conventions and voluntary mechanisms;

<sup>10</sup> Geiser, K. (2015). *Chemicals without Harm: Policies for a Sustainable World*. (<https://mitpress.mit.edu/books/chemicals-without-harm>).

<sup>11</sup> Registered substances, ECHA, (<https://echa.europa.eu/information-on-chemicals/registered-substances>).

<sup>12</sup> Hazardous to health covers the following 5 classes: (1) Harmful to health hazard, (2) Toxic health hazard, (3) Very toxic to health hazard, (4) Chronic toxic health hazard, (5) Carcinogenic, mutagenic and reprotoxic (CMR) health hazard. Hazardous to the environment chemicals covers the following 5 classes: (1) Significant acute environmental hazard, (2) Chronic environmental hazard, (3) Moderate chronic environmental hazard, (4) Significant chronic environmental hazard, (5) Severe chronic environmental hazard. This division is based on their hazard on the aquatic environment and does not include PBT or vPvB. ([https://ec.europa.eu/eurostat/statistics-explained/index.php/Chemicals\\_production\\_and\\_consumption\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php/Chemicals_production_and_consumption_statistics)).

## 11 basic elements considered critical for sound chemicals / waste management

- (d) Strong institutional frameworks and coordination mechanisms among relevant stakeholders;
- (e) Collection and systems for the transparent sharing of relevant data and information among all relevant stakeholders using a life cycle approach, such as the implementation of the Globally Harmonized System of Classification and Labelling of Chemicals;
- (f) Industry participation and defined responsibility across the life cycle, including cost recovery policies and systems as well as the incorporation of sound chemicals management into corporate policies and practices;
- (g) Inclusion of the sound management of chemicals and waste in national health, labour, social, environment and economic budgeting processes and development plans;
- (h) Chemicals risk assessment and risk reduction through the use of best practices;
- (i) Strengthened capacity to deal with chemicals accidents, including institutional-strengthening for poison centres;
- (j) Monitoring and assessing the impacts of chemicals on health and the environment;
- (k) Development and promotion of environmentally sound and safer alternatives.

SAICM has pioneered a positive model of multi-stakeholder engagement. It has brought together representatives of government, industry and civil society organisations (CSOs) to share perspectives and develop agreements on ways forward. It has helped to identify a number of emerging policy issues and in the area of lead in paint it has pushed forward initiatives aimed at a global phase-out.

In addition, its work on the LIRA guidance<sup>13</sup> has highlighted a viable way for medium and low-income countries to gain new resources for financing measures on safe management of chemicals and waste, through **mainstreaming** chemicals management into other governance areas and through cost recovery from industry.

However, while SAICM's structure has some of the trappings of a binding international agreement, it does not impose obligations on participating governments, which has limited transparency, accountability and the mobilisation of financial resources regarding sound chemicals management. Moreover, its governing body lacks an effective mechanism for taking binding decisions on issues of global concern. In addition, it lacks a number of elements that we consider necessary for effective international chemicals management:

- there is no mechanism for moving policy concerns beyond identification as emerging issues or for taking actions on substances of global concern;
- it has no provisions for monitoring, reporting, and evaluating what States are actually doing concerning chemicals management, e.g. with respect to the 11 basic elements they have already signed up to, though evidence is growing that they are not doing enough; and
- it is severely constrained by a lack of financial resources stemming in large part from the lack of clear obligations on States, including the obligation to set in place the regulatory frameworks for protection of health and the environment.

Moreover, several of the terms in the SAICM goal are ambiguous. Instead of “sound chemicals management”, it may be more ambitious and precise to use the term “safe chemicals and waste management throughout their life cycle”. In addition, it would be useful to give guidance concerning what might be a “significant” adverse effect, and to use the term “prevention” rather than “minimisation” of adverse effects.

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<sup>13</sup> UNEP, 2015. UNEP Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for Sound Management of Chemicals (LIRA) (<http://wedocs.unep.org/handle/20.500.11822/12224>).

The SAICM goal remains as important for protection of human health and the environment as in 2006, but should be broadened to include waste. However, without binding obligations, the policy framework of SAICM is not sufficient to meet the progress required for achieving sound management of chemicals by 2020, and beyond.

If the international community is to achieve the 17 Sustainable Development Goals (SDGs) by 2030<sup>14</sup>, a binding framework on chemicals and waste is also needed. This is because several of the SDGs and their accompanying targets are largely dependent on the SAICM goal. The SDGs and targets most closely linked to the SAICM goal of sound management of chemicals and waste are provided in the table below:

<b>2030 Sustainable Development Goals linked to safe chemicals management</b>	
<b>SDG 2:</b>	<b>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</b> Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality
<b>SDG 3:</b>	<b>Ensure healthy lives and promote well-being for all at all ages</b> Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
<b>SDG 6</b>	<b>Ensure availability and sustainable management of water and sanitation for all</b> Target 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
<b>SDG 7</b>	<b>Ensure access to affordable, reliable, sustainable and modern energy for all</b> Target 7.A By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology
<b>SDG 8</b>	<b>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b> Target 8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead Target 8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment
<b>SDG 11</b>	<b>Make cities and human settlements inclusive, safe, resilient and sustainable</b> Target 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
<b>SDG 12</b>	<b>Ensure sustainable consumption and production patterns</b> Target 12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment Target 12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
<b>SDG 14</b>	<b>Conserve and sustainably use the oceans, seas and marine resources for sustainable development</b> 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

<sup>14</sup> The SDGs were adopted in 2015 by the UN. See UN General Assembly Resolution 70/1 (2015): *Transforming our world: the 2030 Agenda for Sustainable Development*: ([http://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/70/1&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E)).

At the first intersessional meeting to consider SAICM and the sound management of chemicals and waste beyond 2020, stakeholders highlighted the need for the post 2020 framework to:

*'take into account the 2030 Agenda for Sustainable Development in its entirety and in particular goals 3, 6 and 12, recognising that the sound management of chemicals and waste is an essential prerequisite for sustainable development while respecting the integrated nature of the Sustainable Development Goals'*<sup>15</sup>.

They also noted the need to link with other agendas such as biodiversity, oceans and climate change, food and agriculture, health, gender and labour.

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<sup>15</sup> Co-chairs' summary

(<http://www.saicm.org/Portals/12/documents/meetings/IP1/co-chair-summary/Co-chairs'%20summary%20english.pdf>)

### 3 SOFT AND HARD LAW OPTIONS INVESTIGATED

The commission for this report asked for consideration of possible approaches for developing legally binding mechanisms to foster the implementation of the future SAICM framework beyond 2020: a “soft” approach of developing voluntary standards that would become legally binding once adopted into national law, and a “hard” approach of going directly to elements legally binding at the international level, either within the SAICM post 2020 framework or as a new external convention.

#### *The “soft” approach*

Under the “soft” approach, countries would join in a process of developing common standards with a view towards their subsequent adoption into national legal frameworks and implementation within their national territories. This “soft” approach was used to develop the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)<sup>16</sup> and it partly describes the status quo with SAICM today.

In the case of GHS, countries (and the chemical industry) had a strong incentive to cooperate on harmonisation of classification systems since the effort was needed to remove technical barriers to trade created by differing national systems. But GHS took a long time to develop and agree. The decision to develop GHS was taken at the 1992 Rio conference. The first version was published in 2003, and a third revision published in 2009. However, the GHS system has been implemented in only 67 countries to date (2018), and mostly in industrialised countries, including China, that are involved in the export of chemicals. Low income countries in Africa and Asia, which are mostly importers of chemicals, have lagged in implementing GHS.<sup>17</sup>

A “soft” system of voluntary standards would be less challenging politically. More stakeholders might support giving the successor to SAICM, or the post 2020 framework of chemicals and waste management, a function involving development of global standards that parties could choose to make legally binding on national level, with the long-term vision being that all parties would eventually adopt them.

However, as already seen with GHS, once certain standards were agreed, there would be no guarantee or even incentive for countries – especially low-income countries -- to implement the standards within a reasonable time frame. This would weaken the overall global objective of achieving sound management of chemicals and waste. If evidence emerged that global bans or restrictions were in order, it is difficult to see how this approach could lead to an effective response. Moreover, this “soft” approach would be unlikely to generate any new sources of funding for the process of reaching agreement and subsequent implementation.

In summary, a purely voluntary “soft” law approach would perpetuate many of the frustrations with the current voluntary approach of SAICM, including the lack of clear obligations on stakeholders, the only limited adoption of risk reduction measures, the lack of effective means for addressing “emerging policy issues” and “issues of concern”, and the limited financial contributions of States and businesses.

#### *The “hard” approach*

A “hard”, i.e. directly legally binding, approach would be more effective and efficient in achieving certain chemicals management objectives, such as implementation of the 11 “basic elements” of the OOG, restrictions or phase-outs of chemicals of global concern, or mandatory labelling of products

<sup>16</sup> Globally Harmonized System for the Classification and Labelling of Chemicals ([https://www.google.com/url?q=https://www.unece.org/fileadmin/DAM/trans/danger/publi/ghs/ghs\\_rev04/English/ST-SG-AC10-30-Rev4e.pdf&sa=U&ved=0ahUKEwip6K3TxIThAhXS8qYKHbVIARsQFggGMAE&client=internal-uds-cse&cx=015747183538840128847:7r0qtadycj4&usq=AOvVaw29Nxjoa6rmFBLxbelkoy3J](https://www.google.com/url?q=https://www.unece.org/fileadmin/DAM/trans/danger/publi/ghs/ghs_rev04/English/ST-SG-AC10-30-Rev4e.pdf&sa=U&ved=0ahUKEwip6K3TxIThAhXS8qYKHbVIARsQFggGMAE&client=internal-uds-cse&cx=015747183538840128847:7r0qtadycj4&usq=AOvVaw29Nxjoa6rmFBLxbelkoy3J))

<sup>17</sup> GHS implementation map, (<http://ghs.dhigroup.com/GHSImplementationMap.aspx>).

with hazardous chemicals on the global market. At the same time, it could co-exist with the types of “soft” measures that have been useful under SAICM, such as knowledge sharing on emerging policy issues, capacity building, and information exchange.

The “hard” elements of a post 2020 global chemicals and waste management framework could take different forms. It could be part of a mixed post 2020 regime – a voluntary multi-stakeholder process similar to SAICM in combination with existing and new legally binding elements, or perhaps a process for agreeing when certain new elements should become legally binding on all participating countries.

These legally binding elements for a post 2020 global chemicals regime could include requirements for all parties to have minimum systems for the sound management of chemicals and waste (e.g. basic elements of the OOG) while allowing national governments some flexibility in setting objectives and approaches. This would be similar to the approach taken by the Paris Agreement on climate change.

With clearer obligations and more pressure for implementation on participating States, a framework containing legally binding elements could be far more conducive to mobilising financial resources from donor countries. In the authors’ opinion, such a framework would have the greatest chance of levelling standards of protection across all jurisdictions and catalysing a global shift toward safer chemicals that do not have certain intrinsic hazards or properties.

## 4 PROPOSED: A HYBRID APPROACH

Several stakeholders, including the governments participating in the international high-ambition initiative to develop a global agreement on chemicals and waste, have mentioned the 2015 Paris Agreement on climate as a possible model.<sup>18</sup>

The Paris Agreement is interesting in that it sets a common objective for all nations: to keep the increase in global temperature to well below 2° Celsius. It then relies on governments to set their own national objectives and to identify the measures they will take to achieve this global goal, as well as to address the climate change-related challenges within their territories. The main tool for doing this is through the development of national climate plans, the so-called “nationally determined contributions” (NDCs). Each party is under an obligation to prepare and submit an NDC and regularly report on its implementation. The reports undergo expert review and multilateral consultation. Every five years parties carry out a “global stocktake” which assesses collective progress. Parties are obliged to update their NDCs every five years, with rising ambition in light of the stocktake.

Implementation of the NDCs will be encouraged via the periodic reporting, individual review and the global stocktake. The Paris Agreement also sets differentiated financial obligations aimed at supporting the actions to be taken by developing countries, along with the most vulnerable countries.

This mix – internationally agreed objectives and legally binding obligations, together with national flexibility in determining the country-level measures for meeting those objectives and obligations – may be viewed as a hybrid approach. We explain further below.

### 4.1 WHAT ELEMENTS NEED TO BE LEGALLY BINDING

Rules can be legally binding at different regulatory levels, mainly international law, EU law and the respective national laws. Actors such as states can be subject to binding rules as well as obliged to set binding rules. For instance, a state can be obliged by a treaty to ban a certain chemical. This obligation would be binding upon the state in international law. That state would normally fulfil its obligation under international law by enacting and implementing corresponding laws in its national legal system and therefore also act as rule-maker. These national laws would then be binding upon the addressees in the national jurisdiction, e.g. chemical companies. Traditionally, companies are not subjects of international law and have no obligations from this legal order.<sup>19</sup> Binding elements at the international level would therefore address states.<sup>20</sup>

Making elements of a post 2020 chemicals and waste management framework binding for states requires a treaty.<sup>21</sup> The elements could be laid down in a new stand-alone treaty, amendments to existing treaties, or combined. It is important to distinguish between the legal form and structure of a treaty as a whole and the specific content of its individual provisions and elements. While formally speaking the whole of a treaty is binding upon its parties, the wording of each provision can be more or less precise and prescriptive, and still leave ample flexibility for states.<sup>22</sup>

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<sup>18</sup> Alliance for High Ambition on chemicals and waste launched in New York (<https://www.government.se/press-releases/2018/07/alliance-for-high-ambition-on-chemicals-and-waste-launched-in-new-york/>).

<sup>19</sup> However, this view has been under debate for a long time in particular because of the special nature of investment treaties, in which states and companies enter into agreements at the international level.

<sup>20</sup> In this paper, unless stated otherwise we use the term „state“ so as to include the EU and other relevant subjects of international law.

<sup>21</sup> The other two sources of international law, i.e. customary law and general principles of law, are irrelevant for this paper.

<sup>22</sup> See Bodle, Ralph and Oberthür, Sebastian (2017), “Legal form of the Paris Agreement and nature of obligations”, in: Klein, Daniel, Maria Pia Carazo, Meinhard Doelle, Jane Bulmer and Andrew Higham (eds.), *The Paris Climate Agreement. Legal Analysis and Commentary*, Oxford: Oxford University Press.



In addition, a treaty could typically include an institutional structure through which parties regularly meet and agree on guidance and details on its implementation.

#### **4.1.1 National and regional systems for ensuring chemical safety**

The post-2020 framework for chemicals and waste management should contain an obligation for State Parties to have national and regional systems for ensuring chemical safety.

##### ***Explanation***

A system at the national level consisting of: (1) legislation to protect human health and the environment from toxic chemicals; (2) enforcement and compliance mechanisms; (3) strong institutional frameworks for coordination among relevant actors<sup>23</sup>; (4) information collection and distribution systems; (5) risk assessment and risk reduction policies; (6) capacity to handle chemical accidents and disasters; and (7) cost-recovery systems. The actual treaty provision would not need to be more precise or detailed than this. A life-cycle approach is essential for these elements, particularly with respect to legislation and information.

Such national systems would, if properly designed, include features that enable progress toward implementation of international agreements; ensure industry participation; mainstream chemicals and waste management in development plans and budgets; include monitoring and assessment of health impacts; and promote the development and adoption of safer alternatives. As discussed below, these features are recognised at the global level as “basic elements” of chemicals and waste management.<sup>24</sup>

As part of implementing these basic elements, States could be required to develop and communicate a National Action Plan (NAP) for chemicals and waste management that would assess their existing systems and identify priority gaps, inventory their chemicals risks, and create a concrete list of actions to be taken during a period of time to strengthen legislation and reduce priority risks. The below mentioned periodic review is an essential component of the NAP as it would both help to strengthen the quality of NAP and incentivise its development and implementation.

##### ***Justification of why this is needed***

SAICM participants negotiated and recognised in 2015 eleven “basic elements” necessary to achieve and maintain the sound management of chemicals and waste as part of the Overall Orientation and Guidance (OOG).<sup>25</sup> While the ICCM has not adopted a definition of “sound chemicals management,” these elements are the foundation for States to protect human health and the environment from toxic chemicals and waste and could be argued to be the de-facto definition at the global level.

The above-enumerated seven aspects (legislation, enforcement, coordination, information, risk assessments and risk reductions, accident/disaster management capacity, and cost recovery systems) are explicitly included in the eleven basic elements recognised by SAICM participants. The other features mentioned above are the remaining elements recognised by SAICM to achieve the sound management of chemicals and waste, which are enabled by, if not dependent on, States having these seven aspects in place.

The ICCM’s endorsement of the OOG and the eleven basic elements reflects international consensus on the need for all States and regions to have such risk reduction systems in place.

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<sup>23</sup> Including government ministries and agencies, business enterprises that produce and use chemicals, civil society, trade unions and other actors as relevant.

<sup>24</sup> SAICM OOG paragraph 19, (<http://www.saicm.org/Portals/12/documents/meetings/ICCM4/doc/K1501995%20SAICM-ICCM4-6-e.pdf>).

<sup>25</sup> See section 2 for a list of the eleven “basic elements”.

While States do not question the importance of having national chemicals and waste management systems, most do not prioritise this, particularly in the context of economic development. In low and middle-income countries, prioritising chemicals and waste management is extremely challenging and perceived as a luxury. Having the clear obligation under international law to develop national systems can help both ensure the systems are put in place and raise the profile in developing countries. In creating these systems, a virtuous cycle can be created as national authorities gain a clearer understanding of the risks and impacts nationally (and needs), which can then translate to higher priority for resources and stronger risk reduction systems.

### ***Benefits and challenges***

Following decades of voluntary initiatives to promote the sound management of chemicals, including the 2020 Goal, a large number of States continue to lack necessary systems for ensuring chemical safety. Meanwhile, risks to health and the environment continue to increase with accelerating manufacture and use of toxic chemicals and subsequent generation of waste in their jurisdiction. There is no evidence in the independent evaluation of the Strategic Approach from 2006-2015 why a continuation of existing soft law provisions for States to establish systems for chemical safety would lead to the development of necessary systems to achieve a framework for the sound management of chemicals and waste in the coming years. Stronger requirements are necessary to compel countries to ensure that such systems are put in place, particularly in low-income countries that continue to prioritise other development concerns over chemicals management.

A clear obligation to have national systems for risk reduction would help States to implement all eleven basic elements of sound chemicals and waste management. The obligation to prepare and communicate NAPs, together with transparency of action through regular reporting to the treaty, would enable monitoring, reporting and evaluation of each States' progress, which is currently lacking under the voluntary SAICM. Furthermore, the requirement under international law would help increase the priority of the issue at the national and regional levels, enabling mainstreaming in development budgets, among other benefits.

The various sources of financial resources required to help States develop and implement their NAP, which would be a challenge for several States, are discussed in Section 5. A UN Institute for Training and Research (UNITAR) led initiative to assess national chemical profiles could be updated and enhanced to expedite and reduce the costs of the development of NAPs.

Indeed, State participants to ICCM have already agreed on the eleven basic elements as part of the SAICM process, and thus it would not be a huge leap for them to accept this as an obligation as part of the future post 2020 framework for chemicals and waste management. However, the obligations regarding many of these aspects could not be expected to be very prescriptive because States have varying chemical risk profiles, levels of sophistication in chemicals management at present, and differing approaches to risk reduction.

Thus, a legally binding obligation on States to establish the basic elements of chemicals and waste management with the flexibility for each country to determine nationally the details of the elements (as well as measures to ban or restrict chemicals of national or global concern) appears most promising as an approach.

This so-called "hybrid" option of legally binding obligations combined with flexibility for certain options would obligate States to have national systems for risk reduction in place and to develop a NAP, identifying themselves what steps will be taken during a fixed time period to improve national systems for ensuring chemical safety. The experience of the Paris Agreement indicates a greater political appetite for this type of approach.

This hybrid approach would give States the flexibility to improve their systems to address the chemicals and waste-related risks more pressing in their jurisdiction, whether industrial or agricultural or both. It would also encourage all States to reduce risks, irrespective of their level of chemicals and waste control at present. Nationally developed plans would reduce concerns over national sovereignty.

Attempts to reach consensus on the listing of chemicals under global treaties can hinder States from taking national measures on chemicals of national and global concern—even when safer and viable alternatives exist and there is an overwhelming majority in favour of global action. Asbestos and paraquat are notable examples under the Rotterdam Convention. States may be empowered to take action nationally on chemicals of concern through the development of and updates to their NAPs, building toward global consensus on bans or restrictions from the bottom up, without the annual or biannual negotiations on global decisions to be taken. However, this would not foreclose the possibility of global phase-outs through a mechanism on chemicals of global concern that are not covered by the Stockholm and Minamata Conventions (see below 3.1.3).

Although States would retain flexibility in developing their NAPs, they would however still have requirements regarding the NAPs structure and content (i.e. the seven elements above, or all eleven of the Overall Orientation and Guidance Document) as well as requirements regarding a review of each State's or collective progress (see discussion on periodic review below). Consistent with the participatory approach of SAICM, the role of civil society should be preserved in the development, implementation (to some degree) and monitoring of the NAP. This participatory approach, together with the periodic review discussed below, could help with ensure that the flexibility given to States in the development of the NAP does not hinder progress.

#### **4.1.2 Periodic review system of State efforts**

The post-2020 chemicals and waste management framework should contain an obligation for State Parties to participate in a global periodic review of national efforts for ensuring chemical safety, with respect to the seven elements above.

##### ***Explanation***

A system whereby national efforts to ensure chemical safety is assessed, utilising a periodic review model.

Under a periodic review process for chemicals and wastes, each State would declare actions taken to develop effective systems for the sound management of toxic chemicals and wastes. States could report on actions taken for sound management of chemicals and waste, and other States and stakeholders may evaluate these steps and offer recommendations for improvement and follow-up. While primarily a State-driven peer-review process, participation of various stakeholders including NGOs and other non-State actors should be a critical component of the mechanism.

This could be linked to National Action Plans (NAPs) for the sound management of chemicals and wastes, where States would communicate such plans and progress reports for periodic review at the global level. A panel of government representatives or experts (five for example) would be entrusted to review the submitted national assessments, NAPs and progress reports, and to propose recommendations to the State under review. The composition of the panel could either take the multi-stakeholder approach of SAICM composed of experts from government, business, civil society, trade unions, and academia, or a State-to-State but participatory approach where any State may provide input for the consideration of reviewing States in finalising the review. Each State could have the responsibility to review a certain number of countries per year, depending on the size of the panel and its composition. States would be grouped in review cycles, such that a fraction of States would be reviewed every year (for example approximately 60 States reviewed each year with a 3-year review cycle).

Similar systems of periodic review are used at the international level to assess progress of States. The Universal Periodic Review (UPR) model used by the UN Human Rights Council<sup>26</sup> is particularly relevant model for consideration under the post-2020 framework. The UPR is a unique, comprehensive, and universal reporting and review process that involves an objective and non-confrontational review of all UN Member States' performance under several individual treaties, with an inclusive multi-stakeholder participatory approach.<sup>27</sup> It assesses State performance in light of a number of individual international agreements (up to nine), each established with a view toward the achievement of a common overall objective, similar to the 'cluster' of multilateral environmental agreements, labour conventions and other international instruments relevant to the sound management of chemicals and wastes. The participatory approach of the UPR is highly compatible with the participatory nature of SAICM.

Other environmental and labour topics are utilising various other forms of periodic review. Under article 13 of the UNFCCC Paris Agreement, a "transparency framework" was established "to track progress made in implementing and achieving its nationally determined contribution" to reducing greenhouse gas emissions, among other information. Also, the Convention on Biological Diversity adopted in 2016 a pilot project to utilise a voluntary peer review process for national biodiversity planning to improve the individual and collective capacities of States to halt biodiversity loss.<sup>28</sup> The ILO is also discussing a voluntary peer review process for national employment policies.<sup>29</sup>

### ***Justification of why this is needed***

Reporting and monitoring will be essential to ensure transparency and progress under various elements of the post-2020 chemicals and waste management framework. Whether States are to have national action plans, information sharing provisions and/or a mechanism for phase outs of chemicals of global concern, reporting and evaluation is a critical component.

The present chemicals and waste management cluster suffers from unsatisfactory reporting and review mechanism. In particular, there is no meaningful assessment of national efforts on sound chemicals management under SAICM or otherwise,<sup>30</sup> as "no institution is responsible for exercising strategic oversight and monitoring with respect to chemicals and waste management."<sup>31</sup> Statistics on reporting reveal limited reporting rates of States under SAICM.<sup>32</sup> These weak reporting and review mechanisms prevent supervisory or oversight roles within the existing structure of SAICM in achieving the sound management of chemicals.<sup>33</sup> While reporting under Conventions is better than SAICM, the reporting rates under Basel and Stockholm Conventions have also not been as good as needed. Under Stockholm, 22 % of Parties gave complete reports and 33 % did not report.<sup>34</sup> In the case of Basel, only 10 % of Parties gave complete reports, with 11 % not reporting.<sup>35</sup>

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<sup>26</sup> Universal Periodic review, Human Rights Council. (<https://www.ohchr.org/en/hrbodies/upr/pages/uprmain.aspx>). A similar idea was suggested by the Center for Governance and Sustainability in a March 2018 meeting of SAICM.

<sup>27</sup> Ibid.

<sup>28</sup> Convention on Biological Diversity, (<https://www.cbd.int/nbsap/vpr/default.shtml>).

<sup>29</sup> Follow up discussion on the voluntary peer-review mechanisms of national employment policies,

([https://www.ilo.org/wcmsp5/groups/public/---ed\\_norm/---relconf/documents/meetingdocument/wcms\\_618110.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_618110.pdf)).

<sup>30</sup> Honkonen and Khan, Chemicals and Waste Governance Beyond 2020: Exploring Pathways for a Coherent Global Regime (Nordic Council of Ministers, 2017), pages 6, 56, 58 (<http://norden.diva-portal.org/smash/get/diva2:1061911/FULLTEXT01.pdf>).

<sup>31</sup> Ibid.

<sup>32</sup> Terekhova, Vickers, & Koekkoek, 2016. Indicators of progress and monitoring. Integrated. National Implementation of SDGs and International Chemicals and Waste Agreements. International Expert and Stakeholder Workshop.

<sup>33</sup> SAICM, SAICM/IP.2/INF.14, page 6 ([http://www.saicm.org/Portals/12/documents/meetings/IP2/IP\\_2\\_INF\\_14\\_Governance\\_CGS\\_f.pdf](http://www.saicm.org/Portals/12/documents/meetings/IP2/IP_2_INF_14_Governance_CGS_f.pdf)); Geneva Academy, Economic, Social and Cultural Rights and Sustainable Development Goals (Research Brief May 2018) (<https://www.geneva-academy.ch/joomlatools-files/docman-files/Research%20Brief%20Economic,%20Social%20and%20Cultural%20Rights%20and%20SDGs.pdf>) (hereafter Geneva Academy).

<sup>34</sup> 2018 Environmental Performance Index Report (<https://epi.envirocenter.yale.edu/2018-epi-report/introduction>).

<sup>35</sup> Ibid.

Although sound chemicals and waste management is a target of the Sustainable Development Goals (SDGs), the SDG review process does not address the problem of insufficient oversight and monitoring for chemicals and wastes. There are concerns that the SDG Follow-up and Review (FUR) architecture is based on voluntary national reviews and peer-reviewed soft guidance.<sup>36</sup> The process also has inadequate representation and participation of civil society, as government-appointed representatives primarily undertake reviews.<sup>37</sup> Furthermore, States do not benefit from country-specific recommendations, which could provide tailor-made suggestions on SDG implementation and measures to improve chemicals management in light of national circumstances.<sup>38</sup>

### ***Benefits and challenges***

Mandatory reporting requirements, coupled with participatory but State-led peer-review and recommendation process, have proven successful in the case of the Universal Periodic Review. Since its beginning in 2008, the UPR has received 100 % participation, twice, by UN Member States. It is the first human rights mechanism to do so. In addition, due to its very nature, the UPR permits civil society to advocate and to take part in implementation of human rights obligations.

The UPR has strengthened national level coordination, through the involvement of various State entities in national coordination mechanisms for reporting and follow-up.<sup>39</sup> Concrete results are shown at national levels, where UPR recommendations feed into national development initiatives,<sup>40</sup> for example through legal reforms and national action or implementation plans.<sup>41</sup> Such coordination between governmental and non-governmental entities in various sectors including health, trade, agriculture, and environment, is crucial for protection of health and the environment from toxic substances and waste.

The participation of civil society and other stakeholders in the process would preserve one of the most positive features of SAICM. While the UPR is a State-driven peer-review process, participation of various stakeholders including NGOs and NHRIs is considered a critical component of the mechanism.

One of the unavoidable challenges of such a periodic review process is to ensure States are able and willing to implement resultant recommendations domestically. However, the results from the UPR system are encouraging, particularly in comparison with the progress under SAICM to date. An analysis showed “48 percent of UPR recommendations triggered action by mid-term, meaning that the recommendations were either fully or partially implemented only 2.5 years after the initial review.”<sup>42</sup> It remains to be seen how effective the voluntary peer review processes, such as that of the CBD, will prove in the long term. In addition, there is the obvious challenge of financial resources for the process, apart from the development of assessments, NAPs and progress reports, options for which are discussed below in section 5.

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<sup>36</sup> Ibid.

<sup>37</sup> Center for Governance and Sustainability, SAICM, SAICM/IP.2/INF.14, ([http://www.saicm.org/Portals/12/documents/meetings/IP2/IP\\_2\\_INF\\_14\\_Governance\\_CGS\\_f.pdf](http://www.saicm.org/Portals/12/documents/meetings/IP2/IP_2_INF_14_Governance_CGS_f.pdf)).

<sup>38</sup> Geneva Academy, Economic, Social and Cultural Rights and Sustainable Development Goals, page 3 (Research Brief May 2018), (<https://www.geneva-academy.ch/joomla-tools-files/docman-files/Research%20Brief%20Economic,%20Social%20and%20Cultural%20Rights%20and%20SDGs.pdf>).

<sup>39</sup> HRC 37, Annual high-level panel discussion on human rights mainstreaming, ([https://sustainabledevelopment.un.org/content/documents/1822IHRC\\_and\\_the\\_2030\\_Agenda\\_HLPF\\_2018.pdf](https://sustainabledevelopment.un.org/content/documents/1822IHRC_and_the_2030_Agenda_HLPF_2018.pdf)).

<sup>40</sup> The Danish Institute for Human Rights, Rights in Follow-Up and Review of the 2030 Agenda For Sustainable Development, page 34.

([https://www.humanrights.dk/sites/humanrights.dk/files/media/dokumenter/udgivelse/sdg/may\\_17\\_follow-up\\_and\\_review\\_sdg\\_docx.pdf](https://www.humanrights.dk/sites/humanrights.dk/files/media/dokumenter/udgivelse/sdg/may_17_follow-up_and_review_sdg_docx.pdf)).

<sup>41</sup> HRC 37, Annual high-level panel discussion on human rights mainstreaming.

<sup>42</sup> UPR-info, *Beyond Promises* (2014) ([https://www.upr-info.org/sites/default/files/general-document/pdf/2014\\_beyond\\_promises.pdf](https://www.upr-info.org/sites/default/files/general-document/pdf/2014_beyond_promises.pdf)).

### 4.1.3 Mechanism to phase out chemicals of global concern

The post-2020 chemicals and waste management framework should include a provision to develop within a determined number of years a legally binding mechanism for reaching decisions on chemicals that are currently not covered by existing conventions but are of global concern and what risk reduction measures State Parties are obliged to take to reduce risk of exposure to those chemicals.

#### *Explanation*

The post-2020 chemicals and waste framework should include a commitment to develop a legally binding mechanism or process for reaching international decisions concerning whether a chemical (or group of chemicals) not covered by existing conventions should be considered of “global concern” such that its production and use is subject to international restriction and eventual phase-out within a certain number of years. The mechanism should also include a process for identifying the risk reduction measures to be taken by State Parties for reducing risk of exposure to those chemicals. The mechanism would ideally prioritise elimination of uses of a chemical considered of global concern and not essential from a societal point of view as well as identify those uses important to society where alternatives would need to be developed.

As described below, the mechanism would address chemicals of global concern that are not included in the scope of existing treaties, including for example per-fluoroalkyl substances (PFASs), various toxic substances in plastics, and highly hazardous pesticides. Such a mechanism would help to ensure a more holistic and meaningful global reduction in toxic exposures. It would avoid the problem of narrowly defined issues or substances or materials of global concern, which runs the grave risk of regrettable substitution and challenge the limited resources of States for participating in an increasing multitude of international processes.

The assessment of essentiality would draw on the Montreal Protocol’s criteria for determining whether a use of a controlled substance was essential, i.e., necessary for health, safety or critical for the functioning of society, and no technically and economically feasible alternatives or substitutes acceptable for environment or health were available.<sup>43</sup> This differs from the socio-economic analyses (SEA) used under some existing chemicals management regimes.<sup>44</sup>

In practice this would require some type of subsidiary body to discuss which substances are of global concern and whether certain uses of the substance are essential or not. The subsidiary body would then forward its recommendations for particular actions to the treaty’s conference of the parties (CoP), for final decision. The subsidiary body would thus have a function similar to the Rotterdam Convention’s Chemicals Review Committee or the Stockholm Convention’s POPRC. The independent scientific body discussed in section 4.3.1 could play a role in identifying chemicals of global concern for consideration by the subsidiary body and eventual decision-making by State Parties.

The SAICM Chemicals in Products Programme defines ‘chemical of concern’ as a chemical which, due to its inherent hazardous properties, presents a known or reasonably suspected risk to human health and/or the environment.

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<sup>43</sup> Montreal Protocol, Decision IV/25 of the 4<sup>th</sup> Meeting of the Parties (MOP4), ([https://ozone.unep.org/meetings?range\\_start=1986&range\\_end=1992&meeting\\_types%5Bcop%5D=cop&meeting\\_types%5Boewg%5D=oe wg&meeting\\_types%5Bimpcom%5D=impcom&meeting\\_types%5Bbureaux%5D=bureaux&meeting\\_types%5Bmop%5D=mop&meeting\\_types%5Borm%5D=orm&meeting\\_types%5Bworkshops%5D=workshops&meeting\\_types%5Bmisc%5D=misc&form\\_build\\_id=form-lCpT-uDGrkNmI-348qdncasifGYUCchEScKQVXeYuVw&form\\_id=ozone\\_meeting\\_document\\_search\\_form#](https://ozone.unep.org/meetings?range_start=1986&range_end=1992&meeting_types%5Bcop%5D=cop&meeting_types%5Boewg%5D=oe wg&meeting_types%5Bimpcom%5D=impcom&meeting_types%5Bbureaux%5D=bureaux&meeting_types%5Bmop%5D=mop&meeting_types%5Borm%5D=orm&meeting_types%5Bworkshops%5D=workshops&meeting_types%5Bmisc%5D=misc&form_build_id=form-lCpT-uDGrkNmI-348qdncasifGYUCchEScKQVXeYuVw&form_id=ozone_meeting_document_search_form#)).

<sup>44</sup> The EU REACH Regulation includes SEA as a tool in taking decisions on chemical risk management, i.e., to evaluate the costs and benefits of a particular action for society compared to a situation where the action is not implemented. For example, in cases where authorisations or restrictions are considered for SVHCs without safe thresholds such as PBT or certain CMRs, the SEA may assess whether any remaining risks are counterbalanced by socioeconomic benefits.

The question of what might constitute a ‘chemical of global concern’ requires more reflection. The Stockholm Convention requires evidence that the chemical is likely “as a result of its long-range environmental transport to lead to significant adverse human health and/or environmental effects such that global action is warranted”.<sup>45</sup> It only refers to long-range environmental transport through air, water or migratory species.<sup>46</sup>

But this concept is no longer sufficient. It needs to be updated to reflect the different ways a chemical may have a global impact today. Today’s global marketplace and the reach of its supply chains and material waste streams bring new potential for widespread human and environmental exposure to various hazardous chemicals. A chemical may be transported to other parts of the globe far from the site of the chemical’s production, if it is used in a product shipped to customers in other countries and eventually disposed of in yet another locality.

A mechanism to address chemicals or groups of chemicals of global concern will need flexibility in order to take account of changes in global production and patterns of use and end-of-life disposal. It will be important to be able to link to new scientific knowledge concerning negative impacts from chemical exposures, including impacts on vulnerable populations and from chronic exposures to multiple chemicals (“cocktail effects”).

The mechanism may also need to be shielded from powerful stakeholders with an interest in preserving the market for certain high-risk chemicals, as has been the experience with efforts to bring additional chemicals under the framework of the Rotterdam Convention. Here the international community may be able to draw on the example of the UN Framework Convention on Tobacco Control which has taken steps to prevent corporate capture by the tobacco industry.

The Montreal Protocol is an example of an international agreement with a provision that allows the Parties to adjust its control measures in the light of new scientific knowledge. Once agreed by the Conference of the Parties, these adjustments then apply to all countries that are party to the Protocol without the need for a formal treaty amendment that would have to undergo the respective domestic ratification processes by states.

### ***Justification of why this is needed***

The main justification for an international mechanism to phase out chemicals of global concern is the reality of a globalised economy in which hazardous chemicals can be transported in materials all over the world and quickly become widespread, increasing the risk of long-term harm to the health of vulnerable communities as well as to the environment. It is worth noting once again how few hazardous chemicals are in fact regulated globally, due to the very particular criteria in place for bringing chemicals within the scope of the current chemicals conventions.

The phase-out or effective restriction of substances of global concern was highlighted as one of four strategic objectives for the sound management of chemicals and waste beyond 2020, in a Draft Thought-Starter on Objectives and Milestones submitted to the second Intersessional Process meeting as a work-in-progress document under internal discussion among the EU and its Member States.<sup>47</sup> The Draft Thought-Starter proposed several milestones under this strategic objective, including:

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<sup>45</sup> Stockholm Convention, Art. 8.7 (a).

<sup>46</sup> Annex D of the Stockholm Convention sets forth four criteria for determining whether a chemical is ‘of global concern’: (1) persistence; (2) bioaccumulation; (3) potential for long-range environmental transport; and (4) adverse effects.

<sup>47</sup> EU thought-starter document from the second Intersessional Meeting in the SAICM post 2020 process, (<http://www.saicm.org/Portals/12/documents/meetings/IP2/Draft%20thoughtstarter%20on%20Objectives%20and%20Milestones%20-%20IP2.docx>).

- C1. By 20XX, hazardous substances, or groups of substances, of global concern have been identified and phased out or effectively restricted, at the national level, throughout the entire life cycle, including the waste stages, in ways that exposure of humans and the environment is prevented or minimised.
- C2. By 20XX, highly hazardous pesticides are no longer in use, or are used in ways that prevent or minimise exposure of humans and the environment throughout their life cycle.

Two areas of chemical usage particularly call out for a mechanism for deciding on global action with respect to certain high-risk chemicals and groups of chemicals:

- Highly hazardous chemicals in use for pest control
- Hazardous chemicals used in production in ways that result in exposure of workers and the environment and that may end up in products and end-of-life material waste streams, leading to further exposure.

**a. Highly hazardous chemicals in use for pest control**

According to the FAO, pesticides may be considered highly hazardous if they have high acute toxicity or known chronic toxic effects even at low levels of exposure, or if they are very persistent in the environment<sup>48</sup>. The voluntary FAO/WHO International Code of Conduct on Pesticide Management acknowledges in its Article 7.5 that bans on the import, distribution, sale and purchase of HHPs are appropriate under certain circumstances.<sup>49</sup>

The problems associated with highly hazardous pesticides (HHPs) have been debated within the SAICM process since the original 2006 SAICM texts. In 2012 at ICCM3, a resolution calling for the progressive ban of HHPs and their substitution with safer alternatives was supported by 65 countries and organisations. At the 2015 ICCM4, HHPs were formally acknowledged as an ‘issue of concern’.

The main document to emerge from SAICM on HHPs as an issue of concern is the Strategy to address highly hazardous pesticides.<sup>50</sup> Its suggestions for concerted action focus on awareness-raising, identification of HHPs, capacity-building to support Governments to strengthen regulatory controls and mainstreaming of alternatives. Nowhere does it acknowledge (as FAO does) that bans of certain HHPs may be appropriate.

As input into the Intersessional Process, the Pesticide Action Network has called for a global binding treaty on the life-cycle management of pesticides.<sup>51</sup> Among its recommendations are that a framework should be developed for the banning and phasing-out of HHPs.

In 2017, the UN Special Rapporteur on the right to food, Hilal Elver, concluded that a binding treaty was needed to regulate hazardous pesticides throughout their life cycle, taking account of human

<sup>48</sup> “Highly hazardous pesticides means pesticides that are acknowledged to present particularly high levels of acute or chronic hazards to health or environment according to internationally accepted classification systems such as WHO or GHS or their listing in relevant binding international agreements or conventions. In addition, pesticides that appear to cause severe or irreversible harm to health or the environment under conditions of use in a country may be considered to be and treated as highly hazardous.” FAO, Article 2, International Code of Conduct on Pesticide Management.

<sup>49</sup> “Prohibition of the importation, distribution, sale and purchase of highly hazardous pesticides may be considered if based on risk assessment, risk mitigation measures or good marketing practices are insufficient to ensure that the product can be handled without unacceptable risk to humans and the environment”, Article 7.5, FAO Code of Conduct.

<sup>50</sup> Strategy to address highly hazardous chemicals in the context of the Strategic Approach to International Chemicals Management, (<http://www.saicm.org/Portals/12/Documents/EPI/HHP%20strategy%20English.pdf>).

<sup>51</sup> Global Governance of Highly Hazardous Pesticides, Pesticide Action Network. ([http://www.saicm.org/Portals/12/documents/meetings/IP2/IP\\_2\\_INF\\_8\\_PAN\\_Global\\_Governance\\_HHPs\\_f.pdf](http://www.saicm.org/Portals/12/documents/meetings/IP2/IP_2_INF_8_PAN_Global_Governance_HHPs_f.pdf)).



rights principles<sup>52</sup>. She recommended that “*such an instrument should:*

- a) *Aim to remove existing double standards among countries that are particularly detrimental to countries with weaker regulatory systems;*
- b) *Generate policies to reduce pesticide use worldwide and develop a framework for the banning and phasing-out of hazardous pesticides;*
- c) *Promote agroecology;*
- d) *Place strict liability on pesticide producers.”*

In 2015 an NGO report on the marketing and risk mitigation practices of two globally prominent pesticide manufacturers in the Punjab region of India documented numerous instances of lack of understanding of the toxicity of the pesticides being used as well as lack of protective equipment. The report concluded that highly hazardous substances could not be handled without unacceptable risks to human health and the environment. Their request that the FAO Panel of Experts recommend that HH pesticides be prohibited was disregarded.<sup>53</sup>

According to the WHO, pesticides are considered responsible for some 200,000 acute poisoning deaths each year, almost all of which occur in developing countries with weaker health, safety and environment regulatory systems. In light of these figures, the need for a legally binding mechanism for phasing out highly hazardous pesticides is clear.

#### ***b. Hazardous chemicals used in manufacturing and in products***

Here we refer to the many thousands of hazardous chemicals that are not within the scope of the Stockholm, Minamata or other current chemicals conventions that employ a lifecycle approach. These include, for example, the extremely persistent per- and polyfluoroalkyl substances (PFASs), toxic metals, and a multitude of industrial substances known or suspected of causing cancer, birth defects, impaired brain function, and other adverse health consequences.

In today’s global marketplace, a hazardous chemical introduced into a product will be transferred via the product to a customer in another part of the world. Solvents and other chemicals used in production may contaminate local communities where production takes place. At the product’s end-of life, the hazardous chemical may end up as part of a contaminated waste stream recycled into other materials and products or disposed of in yet another part of the world. The result: a contaminated waste stream, and exposures at each stage of the chemical’s life cycle, such that the exposure to the hazardous chemical becomes a global concern.

The use of hazardous chemicals in global supply chains is linked today to another trend: the transfer of hazardous chemical production from OECD countries to countries with less developed systems of regulatory controls. Their use in industrial applications and consumer products is generating a host of problems, including the exploitation of low-paid workers for profit, and heedless exposure of vulnerable communities living near industrial sites.

These trends create significant difficulties in international efforts to ensure consumer products are safe and produced ethically. They also undercut the global goal of a circular economy, as per SDG targets 12.4 (“By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle...”) and 12.5 (“By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse”).

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<sup>52</sup> *Pesticides: Report of the Special Rapporteur on the justiciability of the right to food and barriers to accessing justice* (A/HRC/34/48), ([http://ap.ohchr.org/documents/dpage\\_e.aspx?si=A/HRC/34/48](http://ap.ohchr.org/documents/dpage_e.aspx?si=A/HRC/34/48)).

<sup>53</sup> European Center for Constitutional & Human Rights et al. (2015). *Ad Hoc Monitoring Report: Claims of (non-) adherence by Bayer CropScience and Syngenta to the Code of Conduct Provisions on Labeling, Personal Protective Equipment, Training, and Monitoring*, ([https://www.ecchr.eu/fileadmin/Juristische\\_Dokumente/Ad\\_Hoc\\_Monitoring\\_Report\\_Final.pdf](https://www.ecchr.eu/fileadmin/Juristische_Dokumente/Ad_Hoc_Monitoring_Report_Final.pdf)).

Chemicals in products (CiP) has been an emerging policy issue under the SAICM agenda since 2009. The CiP Programme has played an important role in drawing global attention to the need to share information on the presence of hazardous chemicals in products. However, hazardous chemicals continue to be found in consumer products around the world.

A circular economy is premised on using resources in a more sustainable fashion, by partly decoupling manufacturing from extraction and production of primary resources/raw materials, using the least hazardous auxiliary and finishing chemicals, or non-chemical alternatives. It calls for greater recycling and reuse of material flows, with the aim of helping society to save energy, reduce greenhouse gas emissions, and get maximum gain from the materials in existing products as well as additional raw materials. In order to avoid a hazardous circular economy, it will be vital to keep chemicals of concern out of material flows.

A critical step towards achieving a safe, i.e., non-hazardous, circular economy globally is therefore to put in place a global mechanism for setting in place bans or restrictions on substances of global concern.

The Globally Harmonized System of Classification (GHS) discussed earlier forms a starting point for identifying chemicals that might be of global concern. However, the GHS system has focused mostly on physical hazards and health toxicity and remains incomplete. International agreement is still difficult to reach concerning environmental toxicity, with only two categories agreed in this area so far: Hazardous to Aquatic Environment (Acute/Chronic) and Hazardous to the Ozone Layer. Other characteristics of chemicals that are considered to pose dangers to health and the environment -- such as endocrine disruption, persistence, bioaccumulability and mobility – are not part of GHS (though persistence and bioaccumulability criteria are part of the Stockholm Convention).

The SAICM programme on Chemicals in Products (CiP) has a broader scope in that it prioritises chemicals which are persistent, bioaccumulative and toxic, very persistent and very bioaccumulative, carcinogens or mutagens or which adversely affect the reproductive, endocrine, immune or nervous systems.<sup>54</sup> The Guidance Document<sup>55</sup> for the CiP Programme provides a number of chemical hazard lists in its Table 2, including *inter alia* the EU candidate list.

The European Union's candidate list now includes 191 substances. It is drawn up on the basis of the REACH criteria for substances of very high concern (SVHC). These criteria, found in Article 57 of the REACH Regulation<sup>56</sup>, include most of the CiP list of characteristics to given priority, as noted above.

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<sup>54</sup> Section II.B - Chemical scope, ([http://www.saicm.org/Portals/12/Documents/EPI/CiP%20programme%20October2015\\_Final.pdf](http://www.saicm.org/Portals/12/Documents/EPI/CiP%20programme%20October2015_Final.pdf)).

<sup>55</sup> Chemicals in Products Guidance Document, ([http://www.saicm.org/Portals/12/Documents/EPI/Guidance%20for%20Stakeholder%20in%20Exchanging%20CiP%20Information\\_October2015.pdf](http://www.saicm.org/Portals/12/Documents/EPI/Guidance%20for%20Stakeholder%20in%20Exchanging%20CiP%20Information_October2015.pdf)).

<sup>56</sup> Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC. ('REACH Regulation'), O.J. 396, 30.12.2006, p. 1.

### REACH, Article 57 criteria for identifying SVHCs

- a. carcinogenicity category 1A or 1B under GHS
- b. germ cell mutagenicity category 1A or 1B under GHS
- c. reproductive toxicity category 1A or 1B, adverse effects on sexual function and fertility or on development under GHS
- d. persistent, bioaccumulative and toxic
- e. very persistent and very bioaccumulative
- f. substances with endocrine disrupting properties
- g. PBT or vPvB substances which do not fulfill the criteria for (d) or (e) but give rise to an equivalent level of concern

The EU SVHC criteria for carcinogenicity, mutagenicity and reproductive toxicity are based on the GHS system. Together with the remaining criteria for PBT, vPvB, EDCs and other substances of equivalent concern, the EU SVHC criteria would form a more complete foundation for identifying chemicals of global concern than the GHS criteria by themselves. Other important inputs into a post 2020 mechanism for identifying chemicals of global concern could include the SIN (Substitute It Now!) list<sup>57</sup> from the International Chemical Secretariat, which covers 31 groupings of substances considered likely to become restricted under EU legislation in the future.

In line with recommendations in the CiP Programme Guidance Document, the Swedish Society for Nature Conservation and European Environment Bureau (EEB) have suggested a legally binding component for the post 2020 chemicals and waste management framework that would require full transparency on the contents of any product containing chemicals of very high concern and restrict the most hazardous chemicals, based on existing chemical hazard lists, such as the SIN list.<sup>58</sup> The SIN list is based on SVHC criteria.

However, even the expanded criteria for SVHCs may not be enough for addressing all substances of potential concern. Some scientists argue that extreme persistence, such as with respect to the per- and polyfluoroalkyl substances (PFASs), should be a sufficient basis for regulating a chemical in order to prevent poorly reversible future impacts.<sup>59</sup>

#### ***Benefits and challenges***

The effectiveness of a phase-out for reducing risk of harm from chemicals (in this case, a group of chemicals) has been amply demonstrated by the success of the Montreal Protocol. The Stockholm Convention is another example of an international instrument able to implement phase-outs of chemicals considered to present a global risk. However, as mentioned earlier, these two instruments cover only a fraction of the chemical substances currently in use.

The Rotterdam Convention was intended to fill gaps in information on chemical hazards. By establishing a system for sharing information on pesticides and industrial chemicals severely restricted or banned by more than one government, it aimed to enable other Governments to set in place national controls for protection of health and environment. However, it only requires information sharing on a chemical's intrinsic hazards and related risks. The convention does not require any risk reduction measures or assist States with limited capacity to adopt and implement controls. For these reasons, as well as the consistent opposition against listing of restricted substances by stakeholders with strong

<sup>57</sup>Substitute it Now List (<http://sinlist.chemsec.org/>).

<sup>58</sup> Input by the Swedish Society for Nature Conservation and the European Environmental Bureau to the SAICM post 2020 process, (<http://www.saicm.org/Portals/12/Documents/IP-consultation/Jul-Sep-2017/EEB-SSNC.pdf>).

<sup>59</sup> Cousins, I., Ng, C.A., Wang, Z., and Scheringer, M. (2018). Why is High Persistence Alone a Major Cause of Concern?. ([https://chemrxiv.org/articles/Why\\_is\\_High\\_Persistence\\_Alone\\_a\\_Major\\_Cause\\_of\\_Concern\\_/7299992](https://chemrxiv.org/articles/Why_is_High_Persistence_Alone_a_Major_Cause_of_Concern_/7299992)).

interests in maintaining the status quo, it has failed to live up to its promise. Moreover, its information sharing regime is only for chemical substances and mixtures; it does not cover a severely restricted or banned substance that may already be present in an article.

An international mechanism addressing chemicals of global concern would lead to efficiencies of scale because it would avoid the necessity of each country/region having to carry out its own risk assessment per chemical or group of chemicals of global concern. This would save money for countries with limited financial means. Moreover, it would also overcome other problems faced by many countries seeking to drive national changes, such as a lack of independent regulatory and judicial authorities and limited civil society. It would also lead to harmonised outcomes across regions, which would be beneficial for cross-border trade.

A legally binding mechanism for restricting chemicals of global concern would not limit more ambitious countries wishing a higher level of protection. Countries would be obliged to set in place measures to implement the restrictions on chemicals listed as of global concern in the treaty, but they would also have flexibility to determine if additional chemicals were considered of national concern and to set in place additional national risk reduction measures such as restrictions or bans in their national action plans. This could be a bottom-up mechanism for building support for listing additional chemicals of global concern within the treaty.

One argument against the proposed legally binding mechanism would be the cost of operating such a structure and the difficulties that might arise in identifying and restricting chemicals of global concern for global action. For example, efforts to add additional chemicals to the information sharing mechanism of the Rotterdam Convention have met opposition from governments seeking to protect chemical producers within their borders. On the other hand, it would help create a level playing field for all companies operating in the global marketplace, and therefore might have the support of some industry members.

An alliance with the WHO and health advocates similar to the collaboration that resulted in the Framework Convention on Tobacco Control might be helpful. It is important to note that the FCTC excludes the participation of the tobacco industry for engaging in some of the behavior that certain toxic chemical manufacturers have engaged in, particularly involving the manufacture of doubt to obfuscate risks.

#### **4.1.4 Transparency obligations to ensure a safe circular economy**

The post-2020 framework for the sound management of chemicals and waste should include obligations on state parties to ensure that producers and manufacturers disclose information on chemicals hazardous to human health and the environment, which are used during manufacturing, are present in products, as well as in material waste streams - at a minimum on chemicals of global concern and chemicals regulated by existing conventions.

##### ***Explanation***

Chemical producers and companies using chemicals in the manufacture of products should be legally obliged to provide information to all stakeholders on the intrinsic hazards to human health and the environment posed by the chemicals they are producing and using for each constituent component of a product. This information should be made available in formats appropriate to the stakeholders concerned, including downstream users, workers, affected communities, government regulators, consumers and other stakeholders.

At a minimum, this transparency obligation should cover all chemicals considered of global concern, including chemicals already regulated under the Stockholm, Rotterdam and Minamata Conventions as

well as additional chemicals designated through the mechanism discussed in the previous section. But the countries negotiating the post 2020 chemicals and waste management framework might consider extending the scope to also consider additional chemicals, such as all chemicals classified as hazardous using GHS criteria.

In discussions concerning how to achieve a global circular economy, suggestions have included a system that would document ALL chemicals used in the manufacturing of products -- intermediate chemicals as well as those present in the finished product or article or article component – and for this information to accompany the product or article from the time of manufacture through to end-of-product life and its subsequent recycling into a material waste stream.<sup>60</sup> This would enable tracking of all chemicals, including any that were not regulated at the time of manufacture, but which may subsequently become regulated during the product's life span or at end of product life, to avoid the regulated chemical from reentering a recycled material flow.

Under the Globally Harmonized System of Classification and Labelling, information about a hazardous substance is to be transmitted from the chemical's producer to downstream users via a Safety Data Sheet (SDS). The SDS is aimed primarily at informing the downstream user of the hazards of a chemical substance or mixture and to provide advice on safety precautions to ensure safe use of the chemical. It is an important tool for management of chemicals in the workplace.

Once the hazardous substance is used in products, with a few exemptions, there is no transmission of information on the substance to downstream users. In the EU, Article 33(1) of the REACH Regulation requires suppliers of products containing any substances of very high concern (SVHCs) in concentrations equal to or exceeding 0.1% (weight/weight in each component) to provide the recipient of the article with enough information to enable safe use, including the name of the substance.

#### ***Justification of why this obligation is needed***

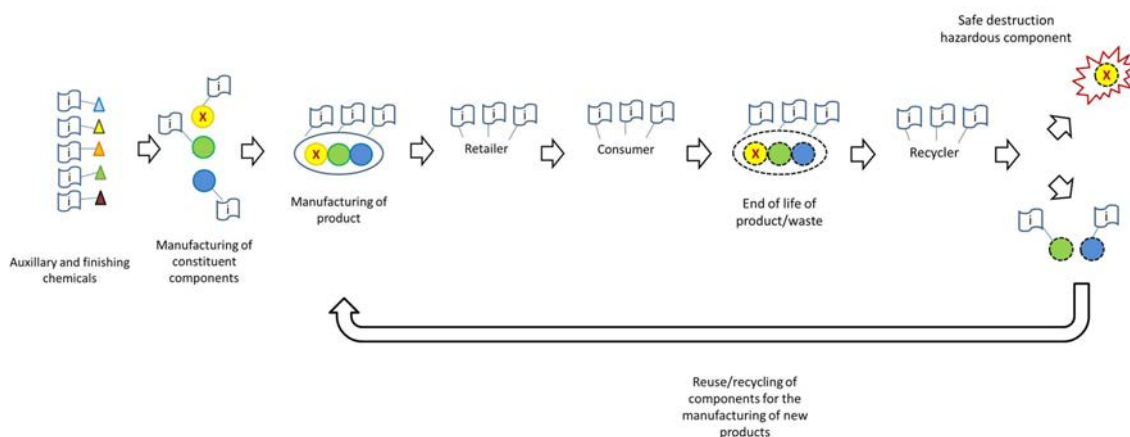
Paragraph 15(b) of the Overarching Policy Strategy underpinning SAICM sets forth the objective of ensuring, for all stakeholders, “*that information on chemicals throughout their life cycle, including, where appropriate, chemicals in products, is available, accessible, user friendly, adequate and appropriate to the needs of all stakeholders. Appropriate types of information include their effects on human health and the environment, their intrinsic properties, their potential uses, their protective measures and regulation*”. The CiP Programme underlines this objective and specifically declares: “Information on chemicals relating to the health and safety of humans and the environment should not be regarded as confidential”.

Even the chemicals legislation of the European Union – arguably the most advanced system in the world today for regulating chemicals and waste – has significant gaps in its regime concerning chemicals in consumer products, particularly imported products. Contamination of waste and of products made from waste products is not due only to "legacy substances" now subject to restrictions and remaining in waste streams. As already explained, there may be substances used in products and ending up in material waste streams today that will be identified as substances of concern in the future. A first and necessary step is to as a minimum require transparency for chemicals of global concern and those regulated by existing conventions that cannot be immediately phased out but are restricted according to the proposed treaty.

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<sup>60</sup> European Environment Bureau (February 2018). Letter to the Ministers of the Environment Council. ([http://files.chemicalwatch.com/EEB\\_letter\\_ENVI\\_Council\\_5March2018\\_interface.pdf](http://files.chemicalwatch.com/EEB_letter_ENVI_Council_5March2018_interface.pdf)).

### Example of a chemicals labelling system



**Explanation:** Chemicals (“triangles”) are tagged\* with information (“i”) on their identity. Chemicals of global concern (“X”) are highlighted in the tags. This information is passed to the manufacturer of the component via the tag, and then to the manufacturer of the complete product, so that it can make informed choices about which components to use. If additional chemicals are used in the manufacturing processes, it should be the responsibility of the manufacturers to tag this new information to the components/products. The information is passed in turn to the retailer, to ensure safe handling of the product, and then to the consumer. This helps the consumer to make informed choices on whether to buy the product, as well as how to handle the product if it is broken or when it reaches its end of life and may have to be discarded in a specific way, to ensure that the chemicals of global concern in it are not spread in an uncontrolled way.

The information is also crucial to the recycler, so that it can handle and dismantle the discarded product in a safe way and make an informed decision on how to separate and safely destruct the component with chemicals of global concern. The remaining components, still with the information tagged, can safely be reused/recycled. If additional chemicals are used in the recycling process, it should be the responsibility of the recycler to tag this new information to the material stream sent back to the manufacturer of new products.

\*A tag in this case could, for example, be a SDS, bar code, Quick Response (QR) code, or a chip.

It is particularly important to make sure that information about chemicals of global concern and those regulated in conventions is available to stakeholders in developing countries and countries with economies in transition, where regulatory requirements may be in place, but enforcement is sporadic, and where there are also large informal recycling economies with inadequate occupational safety. Because stakeholders in these countries may have lower levels of knowledge concerning chemicals in products throughout the product life cycle, producers and manufacturers should be specifically obliged to provide user-friendly information appropriate to the various stakeholders concerned.

#### **Benefits and challenges**

A safe circular economy will eventually require full transparency on hazardous chemicals in products and material waste streams, in order to avoid use of contaminated materials in products that would lead to consumer exposure and the possibility of adverse impacts on humans and the environment. At this point such a vision might be considered unrealistic, but it is a goal worth keeping in mind. In particular, a number of technical challenges would need to be solved in order to move forward on a globally reliable system. Enforcement at local, national and global levels would be critical, in order to control opportunities for gaming the system.

For certain industries, the legally binding obligation to transmit information on hazardous chemicals in

products including article components may not be sufficient for safe use or for building product brand value. So flexibility could remain for stakeholders to shape their own systems for labelling and tracking chemicals in and outside of the supply chain, in addition to legally binding obligations. The SAICM CiP programme recognises that specification of details concerning chemicals used and exchange of best practice may be sector-specific. The CiP *Guidance for stakeholders on exchanging chemicals in products information* provides numerous examples of systems already in place to share information within supply chains<sup>61</sup>.

This could satisfy the need for some industries, particularly brand names, to have more certainty that the materials in their products are free of contamination. Conversely, such systems might also provide a means to ensure downstream users and consumers that only materials free from hazardous chemicals were used during the manufacture of the product. The ability to attest to contaminant-free recycled materials could be a market advantage for certain manufacturers.

## **4.2 ELEMENTS THAT CAN REMAIN FLEXIBLE (EXAMPLES)**

### **4.2.1 National goals and targets beyond the international obligations**

As described above, the so-called “hybrid” option would obligate States to have national systems for risk reduction in place and to develop a national action plan (NAP) in which States themselves identify what steps will be taken during a fixed time period to improve national systems for ensuring chemical safety, based on the eleven basic elements of the OOG.

This hybrid approach would give States the flexibility to improve their systems to address the risks more pressing in their jurisdiction, whether industrial or agricultural or both. They would set their own timelines for establishing and improving systems and for transitioning away from chemicals of concern, but bearing in mind and perhaps modifying those systems based on the recommendations provided through the above-mentioned periodic review.

This flexibility would ensure and encourage the participation of all States, irrespective of their level of chemicals control at present. Nationally developed plans would reduce concerns over national sovereignty. Consistent with the participatory approach of SAICM, the role of civil society should be preserved in the development, implementation (to some degree) and monitoring of the NAP.

### **4.2.2 Framework for emerging issues and policy approaches**

#### ***Explanation***

The post-2020 framework for chemicals and waste management should include a structure for discussions on emerging policy issues and approaches. While a number of substances are unquestionably hazardous and warrant risk reduction measures, other issues are more complex and may benefit from a broader discussion on the science, relevance to the international community and various approaches being employed.

#### ***Justification of why this is needed***

One of the positive aspects of the Intergovernmental Forum on Chemical Safety (IFCS) and SAICM has been to enhance global knowledge on issues of concern, such as nanomaterials, EDCs and per/poly-fluorinated substances. To a degree, these forums have served as incubator on these and other

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<sup>61</sup> Chemicals in Products Programme guidance document ([http://www.saicm.org/Portals/12/Documents/EPI/Guidance%20for%20Stakeholder%20in%20Exchanging%20CiP%20Information\\_October2015.pdf](http://www.saicm.org/Portals/12/Documents/EPI/Guidance%20for%20Stakeholder%20in%20Exchanging%20CiP%20Information_October2015.pdf)).

issues of emerging concern, helping to accelerate global knowledge sharing in hopes of risk mitigation measures and the implementation of a precautionary approach globally.

This policy space can serve to prepare all countries to take action either nationally or internationally on such substances (or classes of substances) of concern. It can also serve to share experiences of novel approaches to chemical safety, including the availability and adoption of safer alternatives.

Furthermore, the knowledge and approaches for mitigation of risks come from industrialised countries. Ensuring a global policy space for discussions of such issues can help to address the long-standing problem of unscrupulous actors accelerate the international transfer issues of emerging concern, to exploit knowledge gaps and regulatory systems that lag behind industrialised countries.

### ***Benefits and challenges***

While global obligations are appropriate for the multitude of substances with clear hazard profiles and evidence of harm, evidence continues to grow of individual substances and classes of substances that require precaution and increasing attention at the global level. In some States, novel approaches are being developed to deal with the complexity of these risks.

At some stage, strong national and international risk reduction measures are likely to be required for emerging issues. However, it is unlikely that for certain substances and issues that States would be prepared to move toward bans or restrictions in an expeditious manner.

Thus a voluntary approach, similar to SAICM, to address emerging policy issues and approaches would be most prudent. In between the emergence of evidence until the science appears reasonably established of risks, a non-binding policy space could help to ensure all stakeholders participate in discussions and help to build consensus toward international measures, if and when they may be required.

### **4.2.3 Encouragement for sustainable alternatives**

The post-2020 framework for chemicals and waste management should provide encouragement and support for all stakeholders to change practices so as to use non-toxic alternatives wherever possible. This could be part of the flexible international multi-stakeholder framework for emerging issues and policy approaches already discussed above.

#### ***Explanation***

One of the core elements in the OOGD is “Development and promotion of environmentally sound and safer alternatives”. In this vein, the post-2020 framework for chemicals and waste management should include measures for encouraging users of hazardous chemicals and especially users of chemicals of global concern to phase out those uses in favour of non-chemical alternatives.

The measures could range from support for education, training and research on non-toxic alternatives, to national measures intended to discourage chemicals use or to internalise costs of adverse effects, such as Denmark’s tax on pesticides and Sweden’s tax on flame retardants in products. A new focus on sustainable alternatives is particularly needed in two areas of chemical use:

#### *a. Agro-ecology as the alternative to highly hazardous pesticides*

When the ICCM4 formally recognised highly hazardous pesticides as an issue of concern, it



recommended that emphasis be given to promoting agro-ecologically-based alternatives<sup>62</sup>. This recommendation is in line with the findings of the UN-led International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) in 2008, which concluded that agro-ecology was one of the most robust approaches available for reducing harm from hazardous pesticides and for bringing about more equitable and sustainable development.

The Strategy to address HHPs<sup>63</sup> adopted at the ICCM4 noted that farmers' organisations and networks had deep knowledge of integrated pest management based on agro-ecological approaches, and that sharing this knowledge could help to ensure that non-chemical alternatives are given priority in efforts to phase out HHPs. Accordingly, the post 2020 framework for chemicals and waste management could explore ways to enhance support for stakeholders to make optimal use of agro-ecological approaches and to reduce reliance on chemicals for pest control.

#### *b. Avoidance or minimisation of use of hazardous chemicals in consumer products*

The Overarching Policy Strategy for the launch of SAICM in 2006 (paragraph 14) calls for support for “the development and implementation of, and further innovation in, environmentally sound and safer alternatives, including cleaner production, informed substitution of chemicals of particular concern, and non-chemical alternatives.” This call is repeated in the documents introducing the Chemicals in Products (CiP) Programme under SAICM..<sup>64</sup>

To make these goals more concrete, the post-2020 framework for chemicals and waste management should encourage countries to take nationally appropriate measures to restrict consumer products containing hazardous substances and reward environmentally-sound products. Encouraging countries to take a two-pronged approach – targeting both the supply of products and consumer demand for products – can help build the effectiveness of measures.

On the supply side, measures restricting the substances used in products should be pursued. These measures can include product standards and ecodesign requirements that require producers to consider the avoidance, minimisation and substitution of hazardous substances in the production of products during the design phase. On the demand side, improved product information for consumers through, for example, product labels can also reward safer products by building consumer demand. Product information measures can also support the improved traceability of hazardous substances throughout a product's lifecycle. Other measures, such as criteria for green public procurement based on the chemical safety of products, can also help build markets for safer products.

The EU approach to improving the energy performance of consumer products may be a model to be explored regarding quantifying the toxic substances in products and their lifecycle. Under this approach, the Ecodesign Directive removes worst-performing products from the market through design requirements set out in product standards (implementing measures), while the Energy Labelling Directive helps build consumer demand for the best-performing products through a label signalling the energy efficiency of products.

#### ***Justification of why this is needed***

The preferred option in the area of pest control or in product manufacturing should be on avoidance or minimisation of hazardous chemical use, use of non-chemical alternatives, or substitution by the least hazardous chemical alternatives when no non-chemical alternatives are available or unsuitable for a

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<sup>62</sup> UNEP, 2015. Report of the International Conference on Chemicals Management on the work of its fourth session, Annex I, p. 47, ([http://www.saicm.org/Portals/12/documents/meetings/ICCM4/doc/K1606013\\_e.pdf](http://www.saicm.org/Portals/12/documents/meetings/ICCM4/doc/K1606013_e.pdf)).

<sup>63</sup> UNEP, 2015. Strategy to address highly hazardous pesticides in the context of the Strategic Approach to International Chemicals Management, (<http://www.saicm.org/Portals/12/documents/meetings/ICCM4/doc/K1502177%20SAICM-ICCM4-8-e.pdf>).

<sup>64</sup> Chemicals in Products Programme, (<http://www.saicm.org/Portals/12/documents/meetings/ICCM4/doc/K1502319%20SAICM-ICCM4-10-e.pdf>).

specific application.

### ***Benefits/challenges***

Discouraging the inclusion of hazardous substances in consumer products is a critical step to prevent these substances from entering the economy. This helps to protect the health of consumers and the environment and progressively removes hazardous substances from waste streams, thereby building the market for secondary materials.

Designing measures to restrict market access for harmful products can be challenging. Developing products standards and ensuring conformity assessment infrastructure can be resource-intensive and time-consuming, and requires a high-degree of technical capacity within authorities. Nonetheless, most countries have product safety regimes in place that could be built upon to include restrictions on hazardous substances.

## **4.3 OTHER ELEMENTS**

### **4.3.1 Independent scientific body to review evidence and science, especially health impacts**

#### ***Explanation***

Independent scientific bodies are often established under international agreements to review evidence and provide technical advice or recommendations. The role, composition, and function of scientific bodies can vary widely. Scientific bodies may be *ad hoc* or permanent, and may operate under the direction of the governing body as a subsidiary body, or independently.

The post-2020 framework for chemicals and waste management could benefit from an independent scientific body to serve as a barometer of impacts from toxic exposures and the level of progress made, providing a credible assessment of the global state of affairs and trends regarding the impacts of toxic chemicals on human health and the environment. A Global Panel on Chemicals and Waste (GPCH) would be external to the treaty. Its reports could inform the various aspects of the post-2020 framework for chemicals and waste management.

The role of the GPCH would be to provide authoritative information on the impacts of toxic exposures on health to help elevate the priority of the issues and drive progress at national, regional and global levels. Such a scientific body may also encourage scientific advancements in evaluating chemical hazards, exposures, uses, and alternatives. Available information generated through the EU's REACH and other national or regional measures (such as PRTRs), as well as peer-reviewed, independent, and science-based research could form the basis of the GPCH's assessments on health and environment. The GPCH's function as an advisory body would also enable better use of epidemiological data to drive prevention and precaution, including adverse health trends that point to environmental factors but lack clear evidence of which substances are to blame.

The GPCH could issue recommendations that may have bearing on either or both the policy framework and the mechanism for restrictions/bans, without directly influencing the activities of either, which would be determined by States. This body could provide scientific guidance and recommendations for the suite of issues, emerging or otherwise, to be considered by the voluntary structure for policy discussion suggested above. It may also facilitate the categorisation, coordination, and synergy between issues that are urgent, mature, and well-characterised (and thus ready for bans/restrictions), versus those that are truly more emerging in nature. This could create the much needed "off-ramp" for existing emerging policy issues, such as lead-in-paint, per-fluorinated substances and highly hazardous pesticides that are sufficiently well characterised to warrant global restrictions and bans.

Maintaining SAICM's participatory nature, government participants, NGOs, and civil society could propose particular issues or trends for detailed assessments. The GPCH would not assess whether chemicals meet relevant criteria for listing under Stockholm or Rotterdam conventions or the envisioned mechanism for global bans or restrictions in the post-2020 framework for chemicals and waste management.

The GPCH should be comprised of independent scientists with appropriate safeguards to ensure the credibility of its findings, divorced from political interference. It would be necessary to look at the experience of other scientific bodies in international environmental law, public health and other relevant international institutions, to see what lessons could be learned to avoid extending the delay between the emergence of new scientific knowledge and its integration at the policy level.

### ***Justification of why this is needed***

Scientific bodies are useful in both raising public awareness of a particular environmental challenge, and also for helping to create political will to address the challenge.

The current ICCM does not have a review process in place to report on the efficacy of SAICM as a whole in achieving its stated objective, the sound management of chemicals throughout their lifecycle by 2020. In contrast, the Scientific Assessment Panel under the Montreal Protocol produces a report every four years documenting the state of the ozone layer, based on contributions from an ad hoc steering group of international researchers.<sup>65</sup> Similarly, the Intergovernmental Panel on Climate Change (IPCC) provides scientific assessment of the dangers presented the continued emission of unsafe levels of greenhouse gases.<sup>66</sup> As repeatedly demonstrated, the IPCC has proven invaluable in assessing the adequacy of measures to combat climate change, thereby helping to raise national and global ambition.

If an international body was charged with providing credible scientific information on progress toward sound management of chemicals globally, with timely updates and without using the lack of full scientific certainty for delay, it could serve as a powerful barometer of effectiveness of overall activities towards chemical safety at the global level.

### ***Benefits and challenges***

The proposed scientific body would help to provide States and the international community a comprehensive overview of the health impacts of toxic exposures, as well as key information gaps to close, which is sorely lacking. This information could help to improve the limited public awareness of toxic exposures, and to thus drive political will to increase action towards a healthy environment.

While this initiative would require financial resources, it could build off various existing bodies and processes or create a coordinating network to minimise the additional resources that would be required.

There is a challenge in all scientific bodies of ensuring that the composition is sufficiently independent, and the resulting recommendations are clear and useful for policy and decision-makers at national and international levels. The experiences of other scientific bodies, in particular the IPCC, may help to mitigate the risk of a body that is not sufficiently independent. There is also a risk that disagreements between the scientists participating may hinder the effectiveness of the body. However, in the case of various toxic exposures the evidence of impacts is well established and thus the potential for delay on these substances of concern would be less likely.

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<sup>65</sup> Ozone Secretariat, Scientific Assessment Panel ([http://ozone.unep.org/Assessment\\_Panels/SAP/](http://ozone.unep.org/Assessment_Panels/SAP/)).

<sup>66</sup> IPCC (<http://www.ipcc.ch/>).

### **4.3.2 Regional bodies for chemicals management/enforcement**

#### ***Explanation***

States may find it useful or perhaps even necessary to have in parallel many of the basic elements of an effective national system at the regional level. For example, States can and arguably should have regional information sharing networks on chemical hazards and risks and systems for cooperating on trans-boundary movements (including illegal trade). States may also wish to have regional cooperation on risk assessments and technical capacities for monitoring water, soil and air for contamination

#### ***Justification***

Given the limited resources for developing countries, even with the cost-recovery systems discussed below, regional cooperation is important. With respect to information sharing, risk assessments and management, regional mechanisms may be more effective and/or efficient than national measures. For example, the regional systems of the European Union under REACH helped reduce the burden of chemicals management on individual Member States.

#### ***Benefits and challenges***

As mentioned above, there are potential efficiencies to be gained from regional cooperation bodies. In the case of low- and middle-income countries this is would be of considerable value in creating economies of scale and reducing inefficiencies. However, there is the challenge of the ensuring that resources are available for creating effective regional coordinating bodies and institutions in developing countries. Financial resources from the international community could help to enable the initiation of regional bodies, while national cost-recovery systems are being developed, which would then enable national contributions from regional members. Furthermore, existing regional centres for the chemicals and waste Conventions might be a foundation for expansion to more comprehensive regional coordination bodies.

## 5 COSTS AND OPTIONS FOR FINANCING

One of the obstacles to moving forward with a new legally binding initiative in the area of chemicals and wastes is the challenge of how to finance the governance measures needed on national and international level for the safe management of chemicals and waste.

It should be noted that there are existing financing channels at the international level. Besides ad-hoc contributions from donor countries, there are bilateral development assistance as well as funding from multilateral institutions. The Global Environment Fund (GEF) services much of the financing needs of the chemicals and wastes cluster. Under the recently concluded 7<sup>th</sup> replenishment for 2018-2022, approximately 500 million USD (15% of the total replenishment budget) was allocated to the GEF's Chemicals and Waste Focal Area.

Regarding SAICM, GEF-7 supports specific SAICM priorities. The Chemicals and Waste Focal Area will support the objectives of the Strategic Approach to International Chemicals Management, specifically in supporting the global phase out of the manufacture of lead based paint, building capacity for management and disposal of e-waste, elimination of chemicals of global concern from the supply chain of commercial and domestic products and support to countries to control and prevent the unsafe use and disposal of highly hazardous pesticides. Funding for these activities would extend through 2022.

However, more financial resources would be required to help negotiate and implement the elements proposed in this report nationally and internationally. There are various options for how these resources could be mobilised.

One potential starting point is the proposal by UNEP's Executive Director of 2012 ("UNEP Proposal").<sup>67</sup> This more conceptual proposal is supplemented by the LIRA guidance of 2015 which sets out more concrete options in particular for cost recovery systems at the domestic level. It describes measures that governments can take at domestic level to recover their implementation costs, in particular from industry. Implementation of such measures offers the governments of even low-income countries the opportunity to mobilise new sources of income through effective cost recovery systems.

However, there is a difference between guidance setting out the various options for e.g. costs-recovery systems and imposing international *legal obligations* on states to establish or implement specific cost-recovery measures. From the experience of existing treaties, it seems unrealistic to agree on and impose detailed legal obligations. It has to be taken into account that states have different national circumstances and a one-size-fits-all approach might be as unsuitable as an unclear general obligation to have "a cost recovery system". However, in addition to international financing channels, the post-2020 chemicals and waste management framework should highlight the potential of costs-recovery systems generally and encourage all parties to establish them for financing safe chemicals management. This can be achieved at the level of concrete drafting.

The following section follows the structure above and addresses financing issues and options for each of the elements proposed. The Annex provides further background on financing issues under international law and existing international financing channels and funds.

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<sup>67</sup> UNEP doc. UNEP/GC.27/7 of 11 December 2012. See Annex.

## 5.1 THE LEGALLY BINDING ELEMENTS

### 5.1.1 Negotiation of a treaty

The costs of negotiating the treaty part of the new framework include mainly the logistics, i.e. the costs for the negotiating venue and supporting secretariat, and the costs for each country of participating in the negotiations. With regard to who bears the costs of the conference centre, logistics etc, this would depend on who mandates the negotiations. The costs are often at least partly borne by the UN, sometimes with contributions from the country hosting the conference. The costs for participating are normally borne by each country. However, there is usually funding available for developing countries for a certain number of delegates. Since treaty negotiations can take several rounds over several years, the costs could add up over time.

### 5.1.1 Having the treaty structure in place

Since binding elements require a treaty in some form, it would make sense for the treaty to establish a structure with permanent treaty bodies such as, at a minimum, a COP that meets regularly, and a Secretariat. This is standard in modern treaties. This involves operational costs in the same way that existing environmental treaties have such costs, mainly for the staff and offices of the Secretariat and for organising the COPs and other meetings. Normally the treaty would include provisions about parties periodically agreeing on and setting its budget. The budget is usually paid for by assessed contributions from parties. Often the country hosting the Secretariat commits to substantial contributions over and above what its assessed contributions would be.

The three existing chemicals conventions have in recent years established procedures and structures that create synergies, e.g. by holding simultaneous or joint COPs, and by a matrix-based organisation of the secretariats with a single Executive Secretary. A new post-2020 framework for chemicals and waste management that includes binding elements, or in entirety is treaty-based, might be able to link to and join the existing structure for the chemical conventions and thereby keep down these costs. The current budget for the three chemicals conventions together for the biennium 2018-2019 is approximately USD 45 million, which however also includes providing support to parties for implementation.<sup>68</sup>

### 5.1.2 National systems for ensuring chemical safety

National systems for ensuring chemical safety would be important opportunities for mainstreaming chemicals management, as mentioned above. Having a system in place would also be an important step for lower income countries seeking to unlock (additional) official development assistance.

However, in order to have that effect, parties would have to finance *establishing* these systems in the first place. This requires capacity at the national level, particularly administrative capacity, to *devise* the national system, i.e. to conceive, develop and adopt it. The same goes for a National Action Plan as part of that system. The next step is *implementing* that system and the NAP, which will require financing as well.

With regard to the first step, establishing a national system and NAP would be a state's obligation under a post 2020 framework for chemicals and waste management with binding elements. Funding capacity building and technical assistance for developing countries to fulfil this obligation would be a typical function for existing international financing channels, e.g. through a financial mechanism such as GEF, as well as through bilateral development assistance. The GEF's mandate already includes

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<sup>68</sup> See Stockholm Convention decision SC-8/27.

financing chemicals and waste and now has one, fully integrated Chemicals and Waste Focal Area, including POPs, Mercury, Ozone Depleting Substances, and SAICM.<sup>69</sup> This includes supporting the global phase out of the manufacture of lead based paint, building capacity for management and disposal of e-waste, elimination of chemicals of global concern from the supply chain of commercial and domestic products and support to countries to control and prevent the unsafe use and disposal of highly hazardous pesticides.<sup>70</sup>

This means that there already is a specific and well-established “external” international financing channel in place to assist developing countries. One obvious option would therefore be to designate GEF as a financial mechanism under the post 2020 chemicals and waste management framework. This does not necessarily mean that the amount of finance that is available would be sufficient. The current GEF-7 programming for 2019-2022 did not envisage specific obligations to have overarching national systems in place and to prepare NAPs.

These traditional international financing channels are not available for developed countries. They would be expected to find or create their own financing for devising national systems and preparing NAPs.

It is therefore essential both for developed and developing countries to find ways to recover at least some of the costs of establishing their national systems and NAPs. For developing countries, this would be in addition to seeking and obtaining potential international assistance.

The LIRA Guidance<sup>71</sup> describes a variety of options for developing cost recovery mechanisms to build national and regional capacity, such as registration, manufacture, import and use fees to cover overall national governance of chemicals expenditures, as discussed further below. International support could also assist developing countries in devising their respective country-specific ways for cost recovery.

Mainstreaming is one track of financing options suggested by UNEP,<sup>72</sup> but it is not a finance option as such. It describes actions that integrate chemicals management into other areas, which can help to use existing resources also for a new post-SAICM legally binding regime, and to unlock further resources, in particular at the national level.

### **5.1.3 Periodic review system: NAPs and reporting**

The binding elements would not only include the obligation for parties to the treaty to prepare and periodically submit their (updated) NAPs and implementation reports. They would also include a mechanism by which the NAPs and the reports are reviewed and in some form discussed at the *international* level.

The financing required would depend on the details and modalities of how this process is carried out.

Financing would be required, e.g., to convene meetings of the periodic review, but options such as video conferencing may defray costs associated with in-person meetings of review teams. Costs for the review process under the treaty, such as the review teams and logistics, would normally be borne by the treaty budget.

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<sup>69</sup> GEF doc GEF/A.6/05/Rev.01 of 27 June 2018, para 211.

<sup>70</sup> GEF doc GEF/A.6/05/Rev.01 of 27 June 2018, para 219.

<sup>71</sup> UNEP (2015). *Guidance on the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for Sound Management of Chemicals*.

<sup>72</sup> #On mainstreaming policies and actions see UNEP paper on financing options.

Resources would also be required nationally to prepare the reports and to participate in the review, but could be included in financing for lower income countries through any international financial mechanism (e.g. GEF or otherwise). To further encourage reporting financial resources could be tied to submission of adequate periodic reports to the review process.

#### **5.1.4 Mechanism to phase out chemicals of global concern**

A legally binding mechanism (process) for reaching international decisions concerning whether to ban or restrict a chemical of global concern could entail significant costs. Both the Montreal Protocol and the Stockholm Convention rely on scientific review committees balanced across the UN geographic regions to evaluate the strength of the evidence concerning the need for a restriction or phase-out.

We assume that the final decision would be taken by the COP of the treaty for the mechanism, and that therefore the mechanism up to the decision on phasing out would at least partly be a mandate and process under the treaty. To that extent, the costs would be part of the regular business under the treaty and typically be part of the treaty budget. However, depending on the actual design of the process, the scientific groundwork for making the proposals and recommendations regarding the chemicals might create significant costs. For instance, scientific groundwork could be done by the independent scientific body proposed above, which then recommends the phase-out to the process under the treaty (see section 4.1.3). In that case the costs for this groundwork would normally have to be borne by that independent body's budget (see below).

Apart from the costs of arriving at the decision to phase out chemicals, costs will arise for parties for *implementing* the decision to phase out. These are implementation costs that the parties to the treaty will incur. They would typically include the administrative structures and capacity to enact and enforce the phase-out at the national level. This is the main area where implementing a costs recovery system would significantly contribute to financing the state's administrative and governance costs, so that the state does not have to bear these costs. As mentioned above, the post 2020 chemicals and waste management framework, should encourage parties to make use of options in this regard, as set out e.g. in the LIRA guidance. A significant part of the costs will be incurred by the chemical industry which would have to phase out the chemicals.

At the international level, developing countries could ask for financial and other support to meet these costs, similar to the costs for preparing devising NAPs (see above).

#### **5.1.5 Transparency obligations to ensure a safe circular economy**

An obligation on states to ensure that producers and manufacturers disclose information on hazardous chemicals (see section 4.1.4) entails administrative and governance costs for setting up, implementing and enforcing these rules. Depending on the supply chain, transparency systems could be based on industry-led systems. To that extent, the costs would basically accrue to the producers and manufacturers of materials and projects.

But even in that case a state would still have to administer and enforce the rules within its jurisdiction in order to fulfil their international obligation. As with a mechanism for phasing out chemicals, such costs could be covered to a significant extent by national cost recovery systems. External funding through international finance could help states in particular in designing and setting up the transparency systems, in light of national circumstances.



## **5.2 THE FLEXIBLE ELEMENTS**

### **5.2.1 National goals and targets**

These will be part of the basic obligation on Parties to set in place national systems for safe chemicals management. Each country would have the opportunity to gather information on the situation within its borders and to set its own national goals and targets, as a component of the national implementation plan. This cost would therefore be part of the cost of its overall chemicals management system, and presumably financed via its choice of cost recovery systems (see above on financing the national systems).

### **5.2.2 Framework for emerging issues and policy approaches**

This policy space could be very similar to the existing SAICM, requiring similar levels of financing. However, the meetings would either be part of the regular business under any new post-2020 chemicals and waste management treaty, or they should be in conjunction with the other aspects of the post-2020 framework discussed herein, so the total costs of meetings would be less than the ICCM and intersessional efforts.

### **5.2.3 Encouragement for sustainable alternatives**

As discussed above, it will be important for the post-2020 chemicals and waste management framework to provide support for stakeholders currently using hazardous chemicals to switch to sustainable, preferably non-chemical alternatives. This is conceptually similar to financing energy efficiency and renewable energy under climate change financing efforts.

For developing countries, the main source of financing would probably be bilateral funding in the form of development assistance (differentiated financing responsibilities). It would be important not to leave initiatives in this area solely to the chemical industry, in order to guard against the risk of industry capture.

## **5.3 INDEPENDENT SCIENTIFIC BODY**

The establishment and ongoing operations of an independent scientific body would require some funding. This could range from being part of the post-2020 chemicals and waste management framework itself, or completely independent financing. Costs could be deferred through voluntary participation of experts in the process, supported by UN staff.

For instance, the International Panel on Climate Change (IPCC) has comparatively low running costs, mainly for its Secretariat and for logistics, while hundreds of scientists contribute to its scientific work on a voluntary basis. The budget has been roughly between CHF 8-10 million and is expected to be around CHF 8 million over the next few years. The activities of the IPCC have been funded mainly through voluntary contributions to a special IPCC Trust Fund from about 25 Member countries. However, donations have been declining and the IPCC projects a deficit over the next few years.<sup>73</sup>

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<sup>73</sup> IPCC (2017), IPCC Resource mobilisation brochure, (<http://www.ipcc.ch/>).

## 6 PATHS FOR GETTING THERE

On the basis that certain elements of a new post-2020 framework on chemicals and waste management should be binding under international law, this would require a treaty of some form. This treaty would have to be negotiated. There is no single standard way of starting negotiations on a new treaty. Usually states agree in a suitable forum on a mandate to start negotiations, possibly together with an initial timeline and process.

A new treaty could be a protocol to an existing treaty where that treaty provides for this option. In that case there is already a forum and the parties would decide under the treaty procedures to initiate negotiations for a protocol. The treaty might already determine certain elements of the process to be followed and the scope of the protocol.

A post-2020 framework treaty for chemicals and waste management could also be a standalone instrument. An obvious forum for agreeing to start negotiations on a new treaty would be the ICCM5. Other fora could be e.g. the UN General Assembly, UNEA or another international organisation with a strong interest in preventing harm from hazardous chemicals, such as the WHO. Each of these fora has its own procedures that would have to be followed, as well as its mandate which might direct or limit the scope of the new treaty from the start.

As mentioned at the beginning of this study, there is some momentum in other international processes for legally binding approaches to the related problems of plastic pollution and highly hazardous pesticides (HHPs). These issues overlap with, and are partly subsets of, the chemicals and waste management issues considered under SAICM. Rather than having these processes run in parallel and compete for political buy-in, it could be considered to link or even merge them.

However, the negotiating mandates differ, and it is likely to be politically difficult to simply add one issue to the other process, e.g. adding chemicals management to the negotiations on plastic pollution, or vice versa. It could therefore be worth considering bringing the various efforts to remove toxic chemicals in production and use under one overarching umbrella, such as the post-2020 framework for chemicals and waste management. The circular economy could provide a useful and suitable framing, under which toxic substances of global concern in production, including their use in products, materials, agriculture and other facets of the economic value chain, could be discussed and negotiated without the complications and substantive gaps emerging from narrowly defined treaties of chemicals and other issues of global concern.

## ANNEX: BACKGROUND TO FINANCING OPTIONS

For financing options, one potential starting point is the proposal by UNEP's Executive Director ("UNEP Proposal").<sup>74</sup> The UNEP Proposal contains "three complementary and mutually reinforcing tracks":

- mainstreaming of the sound management of chemicals and wastes into development planning;
- industry involvement; and
- dedicated external financing.

This Annex explains how the three "tracks" in the UNEP Proposal would relate to a binding international framework. It should be noted that any provision in a new chemicals and waste management framework instrument can be formulated in a more or less prescriptive and precise manner, giving states more or less leeway and discretion in how to implement it.

The more conceptual UNEP Proposal is supplemented by the LIRA Guidance, which sets out and explains more concrete options available to states in particular with regard to cost recovery systems at the domestic level.

### 1. OPTIONS FOR MAINSTREAMING

Mainstreaming, the first track in the UNEP Proposal, is not as such a financing mechanism. The idea behind this option is that mainstreaming actions, such as alignment of regulation and other policy instruments, will contribute to the reshaping of national budgets and facilitate national and international financing.<sup>75</sup>

From this perspective, the mainstreaming track is actually a policy issue: A post 2020 framework for chemicals and waste should require or provide incentives for states to implement policies on mainstreaming chemicals management, in order to facilitate and increase finance in this area. The UNEP Proposal lists a number of such actions.<sup>76</sup> Then next question is whether states need finance to do the mainstreaming.

### 2. OPTIONS FOR INDUSTRY INVOLVEMENT

The UNEP Proposal on financing options states that engagement of industry at *both the national and international levels* was required.<sup>77</sup>

At the international level, obligations and are usually directed at states<sup>78</sup> or other subjects of international law such as International Organisations. Apart from a few exceptions, international law does not impose obligations directly on private actors. The UNEP Proposal acknowledges this and accordingly states that industry can be "influenced" by international standards.<sup>79</sup>

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<sup>74</sup> UNEP doc. UNEP/GC.27/7 of 11 December 2012.

<sup>75</sup> UNEP doc. UNEP/GC.27/7 of 11 December 2012 para 22.

<sup>76</sup> UNEP doc. UNEP/GC.27/7 of 11 December 2012 para 20.

<sup>77</sup> UNEP doc. UNEP/GC.27/7 of 11 December 2012 para 25.

<sup>78</sup> References to „states“ should be read as including the EU unless otherwise stated.

<sup>79</sup> UNEP doc. UNEP/GC.27/7 of 11 December 2012 para 25.

If international law wanted to *require* private actors pay e.g. for pollution, this would normally involve two steps: First, international law would impose an obligation on *states* to require industry under their jurisdiction to pay. States would then fulfil this international obligation by e.g. imposing domestic laws that require those private actors to pay. For instance, international law might require states to make polluters liable for the remediation costs of pollution. Each state party would then have to fulfil this obligation in its respective jurisdiction, usually by adopting corresponding laws and ensuring implementation and compliance.

Similar to mainstreaming, involving industry is therefore more a policy issue than a finance issue. It is about states implementing policies that “engage” industry, for instance by providing economic incentives. As with mainstreaming, the question is to what extent international law requires or encourages states to adopt and implement certain policies that address industry in particular with regard to costs.

In theory, an international agreement on a new chemicals and waste management framework could provide a whole range of obligations on states to make industry under their jurisdiction pay costs associated with chemical management. At one end of the spectrum, a new global framework could be general and abstract and e.g. encourage states to “implement the polluter pays principle”. This would leave states considerable discretion and freedom with regard to how to do it and which concrete measures to take. At the other end, a global framework could require states to adopt and implement specific and clearly defined measures such as civil liability, taxes, economic incentives etc.

There have been suggestions that industry should pay a percentage of their turnover towards safe chemicals management. Addressing this at the international level would require a two-step process: First, the binding elements of new post-2020 global framework for chemicals and waste management, or if the framework itself is a treaty, would require or encourage *parties* to require industry to pay, e.g. via a tax or levy. Second, states would act upon this obligation or encouragement and implement rules to that effect in their national jurisdictions.

In addition, measures such as due diligence, corporate reporting obligations and reputational measures can influence industry conduct.<sup>80</sup>

Since most states are members of the WTO, any state action would have to be in conformity with WTO rules, notably on non-discrimination.

### 3. OPTIONS FOR EXTERNAL FINANCING

Most existing mechanisms at the international level would fall under the UNEP’s third track, i.e. external financing. Exceptions include for instance the special funding model for the Adaptation Fund under the Kyoto Protocol, the oil pollution compensation fund and mandatory insurance for nuclear accidents.

The main options suggested by the UNEP Proposal for external financing include:

- Institutional strengthening;
- An integrated chemicals and wastes focal area under the Global Environment Facility (GEF); and
- A special programme fund for chemicals and wastes.<sup>81</sup>

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<sup>80</sup> For other potential policies and measures see e.g. SAICM, Financing the sound management of chemicals and waste beyond 2020. Note by the secretariat“, SAICM/IP.2/9 of 12 January 2018, 20.

In addition, this paper looks at a fund modelled on the Multilateral Fund for the Implementation of the Montreal Protocol.

The SAICM Secretariat has provided an overview of more options for institutional setup and financing models such as blended finance that can be relevant to new chemicals and waste management framework.<sup>82</sup>

#### **a. GEF**

Established in 1992, GEF is funded by donor states every four years through formalised and periodic “replenishments”. These are basically negotiations between donor countries, developing countries, and the GEF secretariat, at which currently 39 donor countries pledge to pay a certain amount into the GEF for the next replenishment period. The sum of these contributions is the total budget that GEF has available for this period. GEF funds are available to developing countries and countries with economies in transition.<sup>83</sup>

The GEF serves as the Financial Mechanism for the Stockholm Convention on Persistent Organic Pollutants and for the Minamata Convention on Mercury. Since GEF4, GEF has also financed SAICM. GEF-7 in 2018 resulted in a joint pledge of about USD 4.1 billion. The replenishment determines how much money is available for each of GEF’s focal area. GEF provides funding in its five focal areas. “Chemicals and waste” is one of them. Today the focal area combines persistent organic pollutants, ozone-depleting substances, mercury and SAICM in an integrated manner.<sup>84</sup> Therefore the option of a revised focal area, as envisaged in the 2012 UNEP Proposal, has already been implemented.

The GEF has six complementary programs:

- Develop and demonstrate new tools and economic approaches for managing harmful chemicals and waste in a sound manner.
- Support enabling activities and promote their integration into national budgets and planning processes, national and sector policies and actions and global monitoring.
- Reduce and eliminate POPs.
- Reduce or eliminate anthropogenic emissions and releases of mercury to the environment.
- Complete the phase out of ozone-depleting substances in countries with economies in transition and assist Article 5 countries under the Montreal Protocol to achieve climate mitigation benefits.
- Support regional approaches to eliminate and reduce harmful chemicals and waste in least developed countries and Small Island Developing States.

Advantages of using GEF for a new post 2020 global framework on chemicals and waste management include inter alia:

- It is an already established institution with 25 years of experience.
- It has specific experience in financing chemicals and waste, including SAICM
- It has specific experience in serving as a financial mechanism to a treaty.

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<sup>81</sup> UNEP doc. UNEP/GC.27/7 of 11 December 2012 para 31.

<sup>82</sup> SAICM, Financing the sound management of chemicals and waste beyond 2020. Note by the secretariat“, SAICM/IP.2/9 of 12 January 2018, 26.

<sup>83</sup> See generally <https://www.thegef.org/about/funding>.

<sup>84</sup> GEF, Chemicals and Waste, (<https://www.thegef.org/topics/chemicals-and-waste>).

- Is is trusted by donor countries.

Disadvantages include inter alia:

- Complaints about small amount available specifically for SAICM (currently about USD 12 mill, that is 0,3% of the total replenishment amount).

### b. Bilateral development assistance

It should be noted that a significant part of existing international environmental finance flows as bilateral development assistance.

### c. External fund of some kind, e.g. like Montreal Protocol or Oil Liability Fund

Some Conventions and Processes have other funds instead of, or in addition to, GEF. For instance:

- Multilateral Fund under the Montreal Protocol
- Green Climate Fund under the climate regime
- LDN Fund for the CCD.
- Oil Liability Fund

Each of these funds has its own special setup and role, due to historical developments, the particular subject matter, and the political circumstances that led to its creation.

The MP has its own fund, the **Multilateral Fund**, which works solely under, and for, the MP. It was established by a COP decision. It is funded mainly by contributions from developed countries as defined under the MP. The contributions are mandatory<sup>85</sup> as “assessed contributions”: How much each country has to pay is determined by reference to the scale of assessments that determines membership contributions to the UN. For each country, the scale lists a certain percentage of the total budget that that country has to pay. The MF has also received additional voluntary contributions from donor countries.

In the climate regime, the **Paris Agreement** uses the financial mechanism of the UNFCCC. This comprises two “operating entities”, the GEF and the **Green Climate Fund (GCF)**. Both are under the “guidance” of the COP, i.e. at arm’s length, with regard to policies, programme priorities and eligibility criteria. The GEF also serves other Environmental Agreements and climate is just one of several focal areas. The Green Climate Fund was established in following the Copenhagen and Cancun COPs in 2009 and 2010 solely for financing climate. It is also a separate legal entity. It will be funded by replenishments from donor countries, but there has been no formal replenishment process as yet. Its current funding budget of around 10 bn was raised in 2014 by an ad-hoc process called “initial resource mobilisation”. The GCF is supposed to finance projects at scale and its projects are implemented by accredited partner organisations. According to its “country driven approach”, developing countries appoint a National Designated Authority that acts as the interface between their government and GCF, and must approve all GCF project activities within the country. The GCF’s key features also include a Private Sector Facility which can engage directly with the private sector in transformational climate-sensitive investments.

**Land Degradation Neutrality Fund under the CCD:** This is a new Fund established in cooperation with a private asset management firm.<sup>86</sup> It is a private impact investment fund, launched in 2017 with

<sup>85</sup> This view could be challenged on the basis that the contributions were set by a COP decision and that COP decisions are in principle not binding as such. However, we do not discuss the legal details here.

<sup>86</sup> #LDN Fund brochure 2017, on file.

an initial target size of US\$ 300 Mio and current capital commitments of around USD 100 mill.<sup>87</sup> It is intended to mobilise public and private capital and to focus on direct investment into large-scale land restoration and land degradation avoidance projects.<sup>88</sup> However the LDN Fund is not operational as yet and has not started funding projects.

Making industry pay into such a fund would require a two-step process, as set out above: The new post-2020 framework for chemicals and waste management would require or encourage state parties to require industry to pay, e.g. via a tax or levy. States could make industry pay directly into the fund, or the payments could go to the governments first who then pay into the fund. The latter would probably be more complicated because it would require that states agree at the international level to earmark the payments from industry.

Finally, there are **International Oil Pollution Compensation Funds** for oil pollution clean-up from oil tankers. The legal structure is based on several treaties and two international organisations. However, the funding comes from contributions from industry: It is financed by levies on certain types of oil carried by sea. The levies are paid by entities which receive oil after sea transport, and normally not by States.<sup>89</sup> The treaties require their parties to make these actors pay these levies.

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<sup>87</sup> (last accessed on 24 November 2017).

<sup>88</sup> #LDN Fund brochure 2017, on file.

<sup>89</sup> [www.iopcfunds.org](http://www.iopcfunds.org).