Beyond 2020: Financing chemical safety

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Introduction

The Strategic Approach to International Chemicals Management (SAICM) addresses significant health and environmental harms caused by chemical exposure and makes a global political commitment to reform how chemicals are produced and used in order to minimize those harms. Heads of State at the 2002 World Summit on Sustainable Development in Johannesburg called for the development of SAICM. While the agreement is not legally binding, its basic texts represent a consensus of Environment Ministers, Health Ministers and other delegates from more than one hundred governments who attended the first International Conference on Chemicals Management (ICCM1), held in Dubai, February 2006.

The SAICM Overarching Policy Strategy that was adopted in 2006 acknowledged that access to considerable financial and other resources will be needed to achieve the sound management of chemicals.[1] However, these funds never materialized on a scale commensurate with the need.

Substantial new and additional funds for the implementation of SAICM will be needed for a sincere global effort to achieve SAICM's goals and relevant SDGs, in particular in the world's developing and transition countries. The ultimate objective is to ensure that the costs of sound chemicals management are internalized by producing industries but this will require substantial efforts to reform legal and governance mechanisms and the measures to be implemented must be sustained on a continuing basis. Revenue flows to support national chemicals management programs and infrastructures must also be long-term and sustainable. A realistic approach to mobilizing sustainable and predictable resources on the scale needed for robust SAICM implementation must be developed.

Funding for SAICM implementation is lacking

Overall, SAICM funding has not been adequate or predictable:

- Donor government delegates at SAICM preparatory meetings raised expectations that international development assistance agencies would provide substantial funding for SAICM implementation. This has not yet occurred on a significant scale and needs to be further pursued.
- Though a modest and limited SAICM Quick-Start funding program was established and successful, the program was time-limited and focused on enabling activities. No substantial and sustainable program for mobilizing the necessary implementation resources followed.
- Some funds for SAICM implementation were included in the portfolio of the Global Environment Facility during its fifth and sixth replenishments.[2] This is welcome. However, the amount allocated was very small compared to the need.[3]

[1] UNEP (2006) Strategic Approach to International Chemicals Management: SAICM texts and resolutions of the International Conference on Chemicals Management, p21: http://www.saicm.org/images/saicm_documents/saicm%20texts/SAICM_publication_ENG.pdf

[2] $4.43 billion USD for the GEF-6 period, of which $554 million USD is programmed under the chemicals and waste focal area (12.5%); $1.35 billion USD for climate (28%); and $1.2 billion for biodiversity (29%).

- UNEP developed an integrated approach to financing sound management of chemicals and wastes that includes some elements that could be developed further. However, this has not yet provided a large influx of financial support for SAICM implementation.
- A Special Programme to support institutional strengthening at the national level has been established. This too is welcome, but it is limited in scope and time and specifically diverges from SAICM's multi-stakeholder approach by being open solely to government stakeholders.

The integrated approach

In 2013, the UNEP Governing Council approved an integrated approach to address the financing of chemicals management.[4] The integrated approach includes three components: mainstreaming chemical safety into development planning, industry involvement, and dedicated external financing.

Mainstreaming

The mainstreaming component is designed to integrate sound chemicals management into national budgets, sector and development plans for agriculture, health, environment, water, transport, industry, trade, energy, mining, and other sectors. Ultimately, the goal is to articulate chemicals and waste management priorities in country assistance plans and strategies. Ideally, this would allow national and international financing to be directed into sound chemicals management.

Industry involvement

This is vaguely defined in the integrated approach but several aspects are noted, including fines, cost recovery measures, and tax rebates as incentives. One objective is to shift government costs of chemicals management to producers and importers that benefit from these services provided by the government. Three key aspects noted in the integrated approach are command and control, economic instruments (such as cost recovery), and voluntary agreements.

Dedicated external financing

The integrated approach lists three components of dedicated external financing: institutional strengthening, Global Environment Facility (GEF) funding under the integrated chemicals and wastes focal area, and the Special Program Fund for Chemicals and Wastes. An additional source of funding should be international development assistance agencies.

Institutional strengthening means strengthening or establishing institutional structures to address chemical safety implementation. The Integrated Approach notes that this could include funding of chemical units.

The GEF funding refers to the widened scope of the integrated chemicals and wastes focal area. However, external financing of the chemicals agenda through GEF financing is underfunded. In GEF6, chemicals and wastes only represent 12.5% of the portfolio.[5] A total of $554 million USD is programmed under the chemicals and waste focal area, with allocations as follows: POPs $375 million USD; Mercury $141 million USD; SAICM $13 million USD; and Ozone Depleting Susbstances $25 million USD.[6] The increase in funding over GEF5 is primarily earmarked for mercury. SAICM, which has the broadest mandate, has the smallest allocation.

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[3] Breakdown is as follows: POPs $375 million USD; Mercury $141 million USD; SAICM $13 million USD; and ODS $25 million USD; GEF6 Programming Directions; https://www.thegef.org/gef/replenishment_docs/1043/40

[4] UNEP (2013) VIII. Consultative process on financing options for chemicals and wastes, Proceedings of the governing council/global ministerial environment forum at its first universal session, UNEP/GC.27/17

[5] $4.43 billion USD for the GEF-6 period, of which $554 million USD is programmed under the chemicals and waste focal area (12.5%); $1.35 billion USD for climate (28%); and $1.2 billion for biodiversity (29%).

[6] GEF6 Programming Directions; https://www.thegef.org/gef/replenishment_docs/1043/40

The Special Programme Fund was not clearly outlined in the Integrated Approach, but has since evolved.[7] The Programme is time-limited and only applicable to activities that fall outside the GEF's mandate. Unlike the GEF, the Special Programme only funds government initiatives.

Donor government development assistance agencies should be funding sound chemicals management and SAICM in particular, due to inherent links between sound chemicals management and sustainable development. As noted by UNEP, *"the economic development assistance agenda has not necessarily kept pace with these changes in the global distribution of chemical-intensive activities. Chemicals management is usually not included either in development assistance packages, or in recipient countries' aid requests. Consultations by UNEP with donor countries reveal a pattern of treating chemical management problems on a case-by-case basis, rather than integrating them into broader environment and development agenda. Factors contributing to this pattern include a lack of awareness of the risks posed by poorly-managed chemicals and waste, and lack of coordination among national institutions regulating chemical use and disposal."*[8]

Examples of the chemical industry's externalized costs

The harms associated with hazardous chemicals represent costs that are externalized by the industry onto the public and the environment. As noted by UNEP, *"The vast majority of human health costs linked to chemicals production, consumption and disposal are not borne by chemicals producers, or shared down the value-chain. Uncompensated harms to human health and the environment are market failures that need correction."*[9] The magnitude of the costs externalized by the chemical industry is enormous. Conservative estimates of some of these externalized costs include:

- USD$90 billion for health-related pesticide costs in Sub-Saharan Africa from 2005 – 2020. As a means of comparison, the entire 2009 Overseas Development Assistance to the health sector in Africa was US$4.8 billion – a fraction of the health-related costs due to pesticides alone.[10]

- €157 billion as a median annual health cost for diseases associated with endocrine disrupting chemicals in the European Union. The diseases include IQ loss and associated intellectual disability, autism, attention-deficit hyperactivity disorder, childhood obesity, adult obesity, adult diabetes, cryptorchidism, male infertility, and mortality associated with reduced testosterone. The authors noted that this estimate was conservative as it represented only those EDCs with the highest probability of causation and a broader analysis would have produced greater estimates of burden of disease and accompanying costs.[11]

[7] http://www.unep.org/chemicalsandwaste/SpecialProgramme
[8] UNEP (2013) Global Chemicals Outlook – Towards sound management of chemicals, ISBN: 978-92-807-3320-4, Job Number DTI/1639/GE
[9] UNEP (20122013) Global Chemicals Outlook*:* – Towards the sound management of chemicals, p 118, ISBN: 978-92-807-3320-4, Job Number DTI/1639/GE
[10]UNEP (20122013) Global Chemicals Outlook*:* – Towards the sound management of chemicals, p 99, ISBN: 978-92-807-3320-4, Job Number DTI/1639/GE
[11]Trasande L, Zoeller RT, Hass U, Kortenkamp A, Grandjean P, Myers JP, DiGangi J, Bellanger M, Hauser R, Legler J, Skakkebaek NE, Heindel JJ (2015) *Estimating Burden and Disease Costs of Exposure to Endocrine-Disrupting Chemicals in the European Union*, J ClinEndocrinolMetab 100: 1245 – 1255 doi: 10.1210/jc.2014-4324

- USD$236 billion annual costs for pollution associated with the production and use of volatile organic compounds. This is an underestimate as it excludes damage to most natural resources as well as water pollution and land use change and waste in non-OECD countries.[12]

- USD$977 billion annual costs related to childhood lead exposure in low- and middle-income countries. This figure represents 1.20% of global GDP in 2011. The authors note that the largest burden of lead exposure is now borne by low- and middle-income countries.[13]

None of these figures reflect the full magnitude of human suffering or damage to ecosystems.

Internalization of costs

The amount of new and additional funds that developing and transition country governments will need if they are to successfully establish and operate effective chemical safety policies, consistent with achieving the SAICM goal, is on a scale substantially beyond what donor governments have so far been willing and able to provide. New sources of funding are therefore needed to enable governments of developing and transition countries to protect their public's health and environment from injuries associated with exposures to toxic chemicals and wastes.

The key to securing sustainable funding for chemical safety is the internalization of costs within relevant producer industries. The starting point for the SAICM is the recognition that adverse effects ("damage") associated with the production and use of chemicals presently exists and need to be addressed. Chemicals-producing industries—merely by producing chemicals—create the fundamental conditions that lead to such damage. Therefore, a practical approach would be to designate chemicals-producing industries as the "polluter," based on the argument that this is the most economically and administratively efficient choice, as outlined by the EU in a 2002 OECD report.[14]

The costs of government management of chemicals and wastes are externalities

When chemicals are produced, or used in a country, it is an obligation of the government to ensure that the public's health and the environment are not harmed as a result of chemical exposure or chemical accidents. The costs governments incur in fulfilling this obligation are economic externalities that arise as a result of economic decisions by industry to manufacture and to use chemicals. According to the Polluter Pays Principle,[15] and according to sound economic policy, such external costs should not be borne by the general taxpayer, by the general national treasury, or by any other third party. Rather, appropriate economic instruments should be developed that effectively internalize such costs within the relevant industries in ways that do not distort international trade and investment. As noted above, *"The vast majority of human health costs linked to chemicals production, consumption and disposal are not borne*

[12] UNEP (2013) Costs of inaction on the sound management of chemicals; p 11, Job numbe DTI/1551/G

[13] Attina TM, Trasande L (2013) *Economic costs of childhood lead exposure in low- and middle-income countries*, Environ Health Perspect 121: 1097-1102 doi: 10.1289/ehp.1206424

[14] OECD (2002) The polluter-pays principle as it relates to international trade, Joint Working Party on Trade and Environment, JT00137174 http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=com/env/td(2001)44/final

[15] See Rio Declaration on Environment and Development, Principle 16, adopted by the 1992 United Nations Conference on Environment and Development, http://www.unep.org/Documents/Default.asp?DocumentID=78&ArticleID=1163

by chemicals producers, or shared down the value-chain. Uncompensated harms to human health and the environment are market failures that need correction."[16]

Many countries start out with significant legacy issues. They are burdened with obsolete stocks of chemicals and pesticides; contaminated soils, sediments and sites; and other costly legacies for which no responsible party with sufficient remedial capabilities or attachable assets has or can be identified. The protection of public health and the environment must encompass a plan under which these legacy issues are satisfactorily addressed.

Governments require substantial chemicals management capabilities and infrastructure in order to effectively implement, promote, and enforce sound chemicals management laws, policies and regulations. Additionally, governments need enhanced capability so that they can effectively promote clean technology transfer, cleaner production, safe and sustainable agricultural practices, safer substitutes (including non-chemical ones) to replace production and use of hazardous chemicals and materials, and other similar reforms. With these government capabilities appropriately in place, harm can be prevented and future toxic legacies can be avoided. In their absence, especially in many developing and transition countries, there is a high likelihood of continuing practices that poison children, workers and farmers, pollute communities, and disrupt ecosystems through chemical exposures and chemical accidents, further hindering development processes of those countries who need it the most.

A small levy on the chemical industry would produce appropriate levels of funding

Chemicals-producing industries acknowledge that they bear responsibility for costs associated with their normal operations: procedures for operational safety, product stewardship, development of safer alternatives and so on. Downstream-user industries assume (or should assume) similar costs. However, purely voluntary measures have not been and will not be sufficient to achieve SAICM's goals.

The global chemical industry has an annual turn-over of approximately USD $4.1 trillion per year (trillion = thousand billion).[17] If, for example, a global cost recovery scheme recovers USD $4.1 billion annually,[18] the total burden on the chemical producing industry would come to 0.1% of the industry's annual turnover – one cent (USD $.01) for each ten dollars (USD $10.00) in sales.

This cost is so small relative to the total turnover of the chemical industry that it should not be reflected in the price of products to the end-user. The aggregate costs of daily fluxes in the price of petroleum and other raw materials are huge compared to the amount a producer might need to pay annually in this kind of a cost-recovery scheme.

On the other hand, USD $4.1 billion per year is considerably more than what donor governments would likely make available in grant aid for chemicals management efforts. It is also considerably more than governments of developing and transition countries can mobilize under present conditions.

Global approach to cost internalization

A global approach to cost internalization has several advantages. Given the transnational nature of the chemicals industry and its markets, purely national approaches to cost-recovery could be difficult, even for large, highly industrialized countries. Most developing and transition countries would find the burden

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[16] UNEP (2012) *Global Chemicals Outlook: Towards the sound management of chemicals*, p 118, ISBN 978-92-807-3320-4

[17] United Nations Environment Programme (2012) Global Chemicals Outlook

[18] See http://www.oecdwash.org/DATA/DOCS/env_outlook_chem_industry.pdf

of establishing a unique national approach overwhelming. A purely national approach could also lead to economic retaliation and/or distortions in international trade and investment.

Besides contributing to efficiency and consistency, a global approach may provide other benefits. Some substantial costs to governments for sound chemicals management are associated with chemicals that are not produced in the country and not directly imported. Instead, the chemical may be present in imported products and released to the environment when the product is used and/or after it has become a waste. Such chemicals may be of substantial volume, and measures to assure they do not harm health and the environment may be costly. However, a purely national cost recovery system would likely be unable to recover these costs.

Finally, some Least Developed Countries (LDCs) may have great needs, but national cost-recovery could not be reasonably expected to generate sufficient revenues. For these and other reasons, a global approach would be preferred.

Overall, the key to securing sustainable funding for chemical safety is the internalization of costs within relevant producer industries. This is because the money needed to assure that chemicals are safely managed is, ultimately, the responsibility of chemical producing industries, in line with Rio Principle 16.

> Outcomes for financing chemical safety

1. ICCM designs and implements a specific SAICM implementation financial mechanism with sufficient, predictable funds that can be accessed by all relevant SAICM stakeholders.
2. ICCM supplements the Special Programme to enable access by all relevant SAICM stakeholders.
3. Donor government development assistance agencies substantially increase visibility and financial support for chemical safety by 2022, particularly because SAICM links sound chemicals management to sustainable development and will develop measurable objectives in support of Agenda 2030.
4. A SAICM clearing house mechanism publicly tracks development aid for sound chemicals management by 2022.
5. UN Environment executes a study by 2023 on how to implement market-based instruments to internalize within relevant industries the cost to governments of implementing robust programs for sound chemicals management, with an appropriate share of the funds generated directed to assist chemical safety activities in developing countries and countries with economies in transition. The study should include input and review by governmental and stakeholder experts and give serious consideration to common global or regional approaches or instruments that avoid distortions in international trade and investment, consistent with Rio Principle 16.
6. The SAICM Secretariat uses the UN Environment cost internalization report and other relevant materials to provide legal and policy training on global and regional cost internalization approaches back to back with SAICM regional meetings, which include the participation of appropriate government staff from countries responsible for developing and executing these types of laws.
7. UN Environment uses the cost internalization report and other relevant materials to initiate a multi-stakeholder process to develop a global cost internalization program within the SAICM process, finalized by 2028.