

Toxic chemicals and the Sustainable Development Goals (SDGs): proposed Targets for 2030

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The UNEP 2012 global chemicals report estimates close to 1 million deaths from harmful chemicals and pesticides each year! The above experts of major group and civil society organisations are concerned about the lack of focus on a goal and targets to address the immense economic and health damage from hazardous chemicals in particular in developing countries, which is not sufficiently addressed by the current co-chairs 16 focus area document.

The SDGs should include an overall focus or target area which aims at achieving:

“Zero harmful chemicals contamination of people and planet by 2030”

Furthermore the SDG preamble should strongly emphasize the need for commitments to the basic 6 principles that underpin a global toxics-free future:

1. Precaution;
2. Right to know;
3. Substitution and elimination of hazardous substances;
4. Internalization of environmental and human health costs;
5. Full application of the polluter pays principle and extended producers' responsibility, and
6. Adequate long-term funding.

Focus Area 2: Sustainable Agriculture, food security and nutrition

Target c: by 2030 ensure sustainable food production systems with high yields, and reduce intensity of use of water by at least x%, highly hazardous chemicals by at least y% and move towards non-hazardous chemical alternatives, and energy by at least z%¹

Related Focus Areas: (11) Sustainable consumption and production; or (3) Health and population dynamics.

Rationale

The sound management of chemicals plays a critical role in sustainable food production, particularly agricultural chemicals. Its inclusion as an element in the SDG target is essential.

In its 2013 report “Costs of Inaction on the Sound Management of Chemicals”, UNEP reiterated that there is strong economic evidence showing that agriculture yields, household incomes, and gross domestic product can increase with sound management of agricultural chemicals.¹ The report also states that “[i]f business continues as usual, with projections of increased pesticide use, the unsound use of agricultural chemicals could result in even more harmful effects.”²

UNEP’s conclusion is supported by the Food and Agricultural Organization (FAO) when it recommended that developing countries should speed up the withdrawal of highly hazardous pesticides from their markets, recognizing the potential serious risk to human health and the environment from the use of highly hazardous pesticides through their life cycle. In 2012, 2013 and 2014 the Latin America and Caribbean (GRULAC), African and Asia Pacific regions called for increased efforts on the urgent need to reduce the use of highly hazardous pesticides.³

One of eight key components of the new chemicals and waste framework of the sixth replenishment of the Global Environment Facility (GEF-6) is to “facilitate the deployment of environmentally safe technologies, techniques, practices and approaches for the elimination and reduction of harmful chemicals and waste.” The reduction and eventual phase-out of all Highly Hazardous Pesticides with safer alternatives would be in line with recommendations by the FAO, GEF and the regional priorities of GRULAC, Africa and the Asia-Pacific regions.

It is also important to establish reduction targets for priority chemicals of concern under the SDG because existing multilateral environmental agreements on chemicals and wastes, i.e. Basel, Stockholm, Rotterdam and Minamata Conventions do not fully address the need for sound management of chemicals in the agricultural sector.

Focus Area 3: Health and population dynamics

Target 2: Reduce by x% the risk of premature mortality from non-communicable diseases (NCDs) and develop action plans to reduce by 2020 and eliminate by 2030 chemical-linked and other environmental determinants of NCDs and other health disorders, in particular for vulnerable groups children, women and specific occupational groups.

Related Focus Areas: (9) Industrialization or (11) Sustainable consumption and production;

¹ UNEP, “Costs of Inaction on the Sound Management of Chemicals”, p. 13 (2013). Available at: http://www.unep.org/chemicalsandwaste/Portals/9/Mainstreaming/CostOfInaction/Report_Cost_of_Inaction_Feb2013.pdf (last visited May 15, 2014)

² *Id.*

³ SAICM, report of the third meeting of the International Conference on Chemicals Management (ICCM3); SAICM regional meeting for Group of Latin America and the Caribbean (2013); SAICM Regional Meeting for African Region (2013).

Prevention of NCDs by taking proactive steps needs to be operationalized under the proposed target. Salient tools for operationalizing this important element are the development of plans and to identify contributing factors to NCDs, particularly chemicals and other environmental determinants.

The World Health Organization in its Global Action Plan for the Prevention and Control of Non-communicable Diseases 2013-2020 identifies chemicals as risk factors to NCDs.⁴

*Similarly, indiscriminate use of agrochemicals in agriculture and discharge of toxic products from unregulated chemical industries may cause cancer and other noncommunicable diseases such as kidney disease. These exposures have their greatest potential to influence noncommunicable diseases early in life, and thus special attention must be paid to preventing exposure during pregnancy and childhood. Simple, affordable interventions to reduce environmental and occupational health risks are available, and prioritization and implementation of these interventions can contribute to reducing the burden due to noncommunicable diseases.*⁵

Moreover, the UNEP 2012 Global Chemicals Report estimates that close to 1 million people die from exposure to harmful chemicals and pesticides each year! Not to speak of the many diseases and disabled. Almost all environmentally related health indicators show a worrying upward trend, except for a few where specific harmful chemicals have been banned through a global effort, however, body-burden studies show strong increases for other harmful chemicals including so-called “endocrine disrupting chemicals”.⁶

Modifying the target to reflect prevention through development of national plans, establishing clear targets and identifying contributing risk factors to NCDs can greatly assist countries in taking action to address NCDs.

Focus Area 9: Industrialization

Target 3: Expand the scope of legally-binding obligations under national and international law in the field of chemicals management by 2030 to include all chemicals of concern.

Related Focus Areas: (11) Sustainable consumption and production; (3) Health and population dynamics; or.

Rationale

At the 26th Session of the UNEP Governing Council in 2011, members noted “that further action may be needed to strengthen the sound management of chemicals and wastes globally up to 2020 and beyond.”⁷ Recent analyses show that the unmet need for sound management of chemicals is growing most rapidly in developing countries, and the costs of inaction continue to mount for people, governments and

⁴ WHO, Global Action Plan for the Prevention and Control of Non-communicable Diseases 2013-2020, available at: http://www.who.int/nmh/events/ncd_action_plan/en/

⁵ *Id.* Appendix 1.

⁶ See overview of recent science and research in the WECF/IPEN publication, non-communicable diseases and environmental determinants“ <http://www.wecf.eu/english/publications/2013/NCD-publication.php>

⁷ UNEP GC-26/12.

businesses.⁸ In some instances, the costs associated with toxic chemicals exceed official development assistance received by developing regions.⁹

The present scope of two international treaties with a lifecycle approach only applies to one narrow class of chemical (POPs), and one element (mercury)—and only for certain sources of exposure. Eighty percent of the World Health Organization's (WHO's) "Ten chemicals of major public health concern" do not fall within the scope of legally-binding treaties with a life-cycle approach, which is necessary to protect people and the environment.¹⁰ These chemicals include "low-hanging fruit," such as lead and cadmium. It is estimated that, in low- and middle-income countries, the burden associated with childhood lead exposure amounts to 1.20% of world GDP in 2011, with the largest burden of lead exposure is now borne by low- and middle-income countries.¹¹

The European Union estimated in 2001 that as many as 1400 industrial chemicals may be of concern, most of which would not fall within the scope of the above two treaties.¹² To achieve and maintain sustainable development, chemicals linked to lower productivity, increased healthcare costs, and deteriorating ecosystem services, must be subject to legally-binding obligations at the global level.

Focus Area (11) Sustainable consumption and production

At the eleventh session of the Open Working Group, numerous countries expressed their concern regarding the removal of targets on the sound management of chemicals under the sustainable consumption and production focus area.¹³ Twenty-seven countries voiced their support for the restoration

⁸ UNEP, *Global Chemicals Outlook* (2012); UNEP, *Cost of Inaction* (2012).

⁹ UNEP, *Global Chemicals Outlook* (2012).

¹⁰ This agreement is the Stockholm Convention on Persistent Organic Pollutants (POPs), which applies to a very narrow class of chemicals, and not the broad suite of chemicals of concern recognized under international chemicals frameworks. Chemicals of concern include, for example, persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune, or nervous systems; mercury and other chemicals of global concern; chemicals produced or used in high volumes; those subject to wide dispersive uses; and other chemicals of concern at the national level. In addition, a recently concluded treaty for mercury pollution applies legally-binding obligations to certain sources of mercury exposure.

¹¹ Attina TM, Trasande L. 2013. Economic costs of childhood lead exposure in low- and middle-income countries. *Environ Health Perspect* 121:1097–1102; <http://dx.doi.org/10.1289/ehp.1206424>

¹² EU REACH white paper (2001).

¹³ See Poland and Romania's Statement, Eleventh session of the Open Working Group on Sustainable Development Goals, ("The link with chemicals has disappeared and needs to be restored. This should be included, possibly under an additional point i) achieve the sound management of chemicals throughout their lifecycle and of wastes in ways that lead to the prevention and minimization of significant adverse effects on human health and the environment..."); France, Germany and Switzerland's Statement, Eleventh session of the Open Working Group on Sustainable Development Goals, ("We regret the deletion of the target related to the sound management of chemicals and waste and would like to stress the importance of the sustainable management of chemicals and development on non-chemical alternatives throughout their life cycle and of waste and its interlinkages with human health and the environment, the reduction of poverty and sustainable economic growth."); Sweden's Statement, Eleventh session of the Open Working Group on Sustainable Development Goals ("Like others, such as G77 and Mexico we are, however, missing the previous reference to sound management of chemicals and hazardous materials. Chemicals are used or produced in almost every sector, including health, energy, transport, agriculture, construction, textile and mining. Achieving the sound management of chemicals and waste is an essential element of sustainable consumption and production. We would like to see this issue reintroduced through a target reading:

of this link through the inclusion of a target promoting the sound management of chemicals and hazardous materials under the sustainable production and consumption focus area.¹⁴

We propose the following two targets under “Sustainable Consumption and Production”

Target 4: Generate and provide global access to a standard data set for information on cancer, hormone (endocrine) disruption, reproductive toxicity, and other health risks of all substances used in industrial processes and agriculture by 2020.

Related Focus Areas: (3) Health and population dynamics; or (9) Industrialization.

Rationale:

In 2006, stakeholders around the world agreed by consensus that “there is often limited or no information on many chemicals currently in use and often limited or no access to information that already exists,” and there was need to remedy this situation.¹⁵ Among hazardous properties with inadequate information were cancer, mutation, and adverse effect to, inter alia, the reproductive, endocrine, immune, or nervous systems.¹⁶

The amount of information missing is staggering. The World Health Organization (WHO) and UN Environment Programme (UNEP) note that for chemicals that interfere with the normal function of hormone systems, linked to cancer and other adverse health effects, many information gaps currently exist.¹⁷ For example,

- 85 % of new chemicals entering the market in the United States do not have basic information regarding their potential to cause cancer, interfere with the normal function of hormone systems, or result in other adverse health effects.¹⁸
- Removing just one chemical that interferes with the normal function of hormone systems (bisphenol A or BPA) from food uses might prevent 6,236 cases of childhood obesity and

“Achieve the sound management of chemicals throughout their lifecycle in ways that lead to prevention or minimization of significant adverse effects on human health and the environment.”).

¹⁴ The following countries all supported the inclusion of a target area dedicated to the sound management of chemicals and hazardous materials under the sustainable production and consumption focus area: Brazil, Nicaragua, Bulgaria, Croatia, Canada, Israel, USA, China, Indonesia, Kazakhstan, Denmark, Norway, Ireland, France, Germany, Switzerland, India, Iran, Italy, Spain, Turkey, Peru, Mexico, Poland, Romania, Sweden. Country Statements, Eleventh session of the Open Working Group on Sustainable Development Goals (May 2014).

¹⁵ SAICM, Overarching Policy Strategy, para 6(d) (2006).

¹⁶ SAICM, Overarching Policy Strategy, para 14(d) (2006). The full list of groups of chemicals that might be prioritized for assessment and related studies are: persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances; chemicals that are carcinogens or mutagens or that adversely affect, inter alia, the reproductive, endocrine, immune, or nervous systems; persistent organic pollutants (POPs), mercury and other chemicals of global concern; chemicals produced or used in high volumes; those subject to wide dispersive uses; and other chemicals of concern at the national level.

¹⁷ UNEP & WHO, *State of the Science on Endocrine Disrupting Chemicals*, xvi (2012)

¹⁸ U.S. EPA Office of Inspector Gen., *EPA Needs a Coordinated Plan to Oversee Its Toxic Substances Control Act Responsibilities*, 4 (2010), <http://www.epa.gov/oig/reports/2010/20100217-10-P-0066.pdf>.

22,350 cases of newly incident coronary heart disease per year, with potential annual economic benefits of \$1.74 billion.¹⁹

- More robust information on intrinsic hazards of chemicals could enable a transition to safer chemicals, with tremendous savings to individuals and governments, especially in developing countries and countries with economies in transition.

It is essential that people and governments have access to this information to enable the sound management of chemicals. Although the European Union is implementing policies requiring chemical manufactures generate this type of information for tens of thousands of widely used industrial chemicals, governments around the world—including those with highly-robust systems in place for protecting confidential business information—cannot access complete information generated by the chemical industry to reduce the risk of hazardous chemicals.²⁰

Target 5: Achievement of sound chemicals management so that, by 2030, chemicals are produced and used in ways that eliminate significant adverse impacts on human health and the environment.

Rationale:

At the 2002 World Summit on Sustainable Development (WSSD), nations adopted the “2020 Goal,” i.e. chemicals are used in ways that lead to the minimization of significant adverse effects on human health and the environment. In 2006, a non-binding policy framework was created (SAICM) to help governments and other stakeholders cooperate toward achieving the sound management of chemicals. Countries have agreed that the need for sound chemicals management will continue beyond 2020.²¹

Thus, the 2020 Goal is an important milestone toward the ultimate goal of *eliminating* adverse effects of chemicals on human health and the environment. Since 2002, significant progress has been made towards achieving the 2020 Goal in the form of enhanced cooperation, capacity building, and information sharing. Without the objective of eliminating adverse effects, chemicals and waste will continue to extract a substantial toll on human health and the environment. Moving forward, a target aimed at eliminating adverse impacts will enable nations to harness the momentum of the 2020 Goal and accelerate towards achieving the ultimate goal: eliminating adverse effects on human health and the environment.

Chemicals mismanagement, including chemicals that cannot be soundly managed, imposes tremendous economic costs on governments and individuals. For example, cost of illness to pesticide users in sub-Saharan Africa from 2015 to 2020 is projected to be US \$ 90 billion.²² Additionally, costs to clean up 50,000 tonnes of obsolete pesticides in Africa are estimated to be

¹⁹ Leonardo Trasande, Further Limiting Bisphenol A In Food Uses Could Provide Health And Economic Benefits, *Health Affairs*, 33, no.2 (2014):316-323 (published online January 22, 2014; 10.1377/hlthaff.2013.0686)

²⁰ Dinesh Kumar, US EPA weighing legal action to get REACH data (ChemicalWatch, 5 March 2014), available at: <http://chemicalwatch.com/18593/us-epa-weighing-legal-action-to-get-reach-data?q=TSCA%20access%20to%20information>

²¹ SAICM, 5th Regional Meeting EU-JUSCANNZ

²² *Id.* at 29.

between US \$150-170 million, as calculated by the Africa Stockpiles Programme.²³ Elimination rather than the minimization of adverse impacts could result in avoidance of these costs altogether and may also result in additional benefits such as poverty reduction, resource efficiency, and increased trade and investment.²⁴ For example, as highlighted by participants during the Geneva Environmental Network (GEN) event on integrating the sound management of chemicals and wastes in the Sustainable Development Goals, the decision to phase out lead in gasoline in the United States due to the health consequences of lead exposure is now recognized as an extremely cost-effective measure, as evidence has shown that the benefits outweigh the costs tenfold.²⁵ Such measures could provide the opportunity to take a proactive, rather than reactive approach to chemical management, enabling nations to effectuate systemic change.²⁶

The global chemical industry is expanding rapidly, with a staggering 71% of this growth expected in emerging economies.²⁷ Concern for the potential adverse effects on human health and the environment, especially in the face of substantial knowledge gaps, has led to increased interest in safer chemicals.²⁸ According to a 2011 assessment, the market potential for “green chemistry” could rise exponentially from an estimated US \$ 2.8 billion in 2011 to US \$ 98 billion by 2020.²⁹ Extending the target to eliminating adverse environmental and health impacts by 2030 may be the catalyst for breeding further innovation for risk reduction in chemical technologies on a global level.

²³ *Id.*

²⁴ *See Id.*

²⁵ Summary of the Geneva Environmental Network (GEN) event on integrating the sound management of chemicals and wastes in the SDGs, 6 May 2014 (Geneva), available at: <http://www.genevaenvironmentnetwork.org/?q=en%2Fevents%2Fintegrating-sound-management-chemicals-and-waste-sustainable-development-goals>

²⁶ *See Id.*

²⁷ *Id.*

²⁸ CIEL, Paths to Global Chemical Safety at 11.

²⁹ Pike Research, Green Chemistry (July 2011) available at: <http://www.pikeresearch.com/newsroom/green-chemical-industry-to-soar-to-98-5-billion-by-2020>.