IOMC

INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS

A cooperative agreement among FAO, ILO, UNDP, UNEP, UNIDO, UNITAR, WHO, World Bank and OECD

Existing indicators on chemicals and waste management

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Participating organization

- The inventory of the indicators and the analysis report is developed by the IOMC indicators working group: **FAO, ILO, UNEP, UNDP, UNIDO, UNITAR, OECD, WHO, UNECE, UNICEF, SAICM Secretariat, BRS Secretariat, and the Secretariat of the Minamata Convention**.
- The plan of the project was agreed at the 56th Inter-Organization Programme for the Sound Management of Chemicals (IOMC) meeting in October 2021.
- This analysis document is a deliverable of the IOMC coordinated project (including other interested organizations) on supporting an inventory on indicators relevant to chemicals and waste

The screened list of indicators

Step 1

- Their relevance and meaningfulness to the chemicals and waste agenda (**279 indicators**)

Step 2

- Existing indicators, that are already in use / selected to be used in international processes, or widely spread / used at other levels

Step 3

- The existence of a custodian organization, data, and a standard methodology (**64 indicators**)

Analysis of the screened indicators

Measurability

- Many of the screened indicators are specific and are defined in simple yet clear language while being realistic.
- The screened indicators are measurable and for all of them data exist to establish a baseline.

Analysis of the screened indicators

- Impact, process and high-level indicators
- Coverage of environmental media
- Private sector
- Drawing linkages with the Targets IP4.1, EPIs and other issues of concern, UN SDGs, other international processes

Importance of impact indicators

- There are 34 indicators that are impact-focused and 30 process indicators in the screened list of indicators.
- The impact indicators could be helpful in demonstrating the pressure from chemicals on ecosystem as well as the implications for human health, and used in a measurability framework for the beyond 2020.
- There are several impact indicators that measure the level of some groups of chemicals, or substances in various environmental media.

Examples of impact indicators

- Three Stockholm Convention indicators on levels of POPs in humans, air and other environmental media,
- Two Aichi Biodiversity indicators, on trends in nitrogen loss and deposition,
- The climate change indicator on emissions of sulphur oxides (SO2), nitrogen oxides (NOx), nonmethane volatile organic compounds (NM-VOCs) and carbon monoxide (CO),
- FAO indicator on use of nitrogen from chemical fertilizers on agricultural land,
- SDG indicator on plastic debris density,
- UNECE indicator on BOD and concentration of ammonium in rivers.

High-level indicators

- Technical Working Group on Targets, Indicators and Milestones for SAICM and the Sound Management of Chemicals and Waste Beyond 2020 in January 2020 agreed to include in its report, the following two health and environment indicators proposed by IOMC members, indicating it required further discussion:

1. Burden of disease attributable to chemicals.
2. Burden of chemical and waste pollution on the environment.

- It could be helpful to consider a few high-level indicators to address the vision.

Coverage of environmental media

Water — SDG 6.3.1

- The proportion of domestic and industrial wastewater flows safely treated (Total wastewater generated and wastewater treated).

Air — SDG 3.9.1 and Aichi CBD Ind. 7 T8

- Mortality rate attributed to household and ambient air pollution.

Soil — SDG 2.4.1

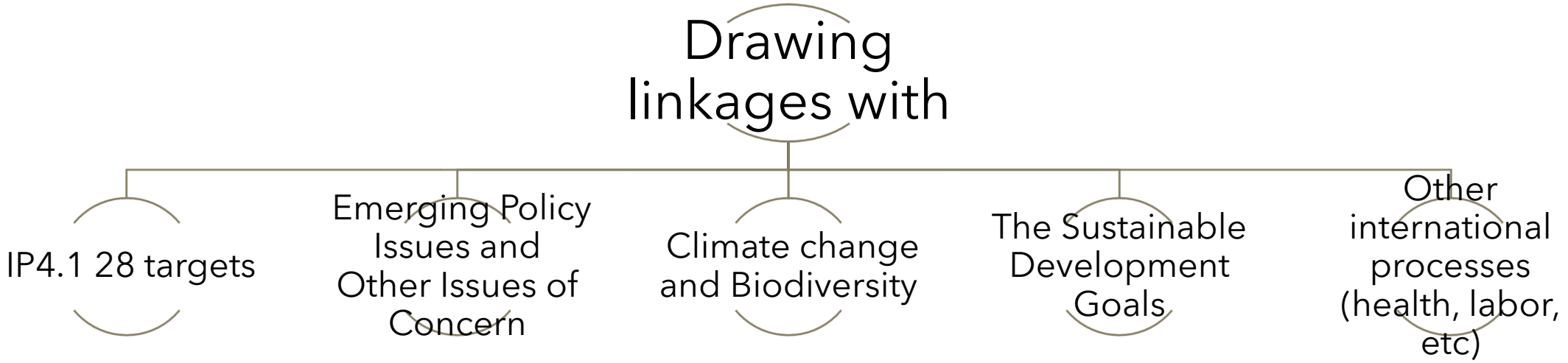
- The proportion of agricultural area under productive and sustainable agriculture.

Private sector

- There exists one screened indicator **SDG indicator 12.6.1** that captures the activities of industry or private sector - Number of companies publishing sustainability reports.
- This indicator does not fully capture all elements in the targets that are relevant to the private sector including Targets A3, D1, D3, and D7.

- In addition, **Basel objective 2.4. Indicator 1**: Number of programmes, projects or activities carried out by parties, jointly with other parties or together with other stakeholders (regional and international organizations, conventions, *industry bodies*, etc.), aimed at the environmentally sound management of priority waste streams that have been monitored and assessed to achieve this goal.

Analysis of the screened indicators



Linkage

IP4.1. 28 targets

- A majority of the screened indicators have clear linkages to some of the 28 proposed targets for chemicals and waste beyond 2020.
- Certain proposed targets for beyond 2020, including **A1, B1, B2 and B3** have good linkages with multiple screened indicators.
- Some of these indicators may represent a starting point for measuring progress. Certain indicators could be justified to have linkages to more than one target.
- Whereas some indicators have been found relevant to some of the targets, in most of the cases, they do not reflect the full picture or intention of the target.
- In addition, several targets (**A5, B5, C1, D4, E4, E5**) were not linked to any of the indicators in the screened list.

Examples of impact indicators that could not be associated to any IP4.1 targets

- Aichi Biodiversity Target 8 - Red List Index (impacts of pollution) (Trends in extinction risk and populations driven by pollution)
- Aichi Biodiversity Target 8 - Water Quality Index for Biodiversity (Trends in ecosystems affected by pollution)
- SDG 3.9.1 - Mortality rate attributed to household and ambient air pollution
- SDG 3.9.2 - Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)
- SDG 12.c.1 - Amount of fossil-fuel subsidies (production and consumption) per unit of GDP
- SDG 2.4.1 - Proportion of agricultural area under productive and sustainable agriculture

Linkage

EPIs

- **Lead in paint** is measured in one of the IOMC indicators on "Countries with controls for lead in decorative paint".

- The indirect linkage to the **hazardous substance within the life cycle of electrical and electronic products** could perhaps be the UNSD indicator on "Total ewaste generated and collected".

Linkage

EPIs

- The EPIs, i.e. **chemicals in products, Nanotechnology, and manufactured nanomaterials** are not explicitly or directly captured by any of the screened indicators

- **The endocrine-disrupting chemicals, environmentally persistent pharmaceutical pollutants, Perfluorinated chemicals, and highly hazardous pesticides** are only partially and indirectly covered by indicators that are on POPs.

Linkages and mainstreaming within other international processes

- Mainstreaming chemicals and waste within other international processes including the sustainable development goals, biodiversity, health and labor through shared indicators or targets is of great value.
- The screened indicators that are in use within other international processes including **climate, food and agriculture, biodiversity, labor, health, water, waste, and electronics**.

Linkages and mainstreaming within other international processes

Climate change

- UNECE Ind. B3 - Greenhouse gas emissions

Biodiversity

- Aichi CBD32 Ind. 10 T8 - Red List Index (impacts of pollution) (Trends in extinction risk and populations driven by pollution)

Health

- IOMC Ind. 6 - Number of countries that have achieved core capacities for chemicals under the International Health Regulations

Food and Agriculture

- SDG 2.4.1 - Proportion of agricultural area under productive and sustainable agriculture

Labor

- IOMC Ind. 10 - Number of member States with national Occupational Safety and Health (OSH) profiles

Waste

- Basel Ind.1 Obj2.5 - Percentage of parties that collect information on the generation, management and disposal of hazardous and other wastes.

Linkage

Biodiversity

- The Kunming-Montreal Global Biodiversity Framework (GBF) agreed at the 15th meeting of the Conference of Parties (COP) to the UN Convention on Biological Diversity (CBD) in December 2022. The GBF includes 4 goals and 23 targets
- Target 7 is of particular relevance to chemicals and waste management:

> *Calling for the reduction of pollution risks and the negative impact of pollution from all sources. The target also calls for reducing excess nutrients lost to the environment by at least half and reducing the overall risk from pesticides and highly hazardous chemicals by at least half and also preventing, reducing, and working towards eliminating plastic pollution.*

The Sustainable Development Goals

SDG 2.4.1

SDG 3.9.1/2/3

SG 6.3.1/2

SDG 7.1.2

SDG 8.8.1

SDG 11.6.1/2

SDG 12.4.1/2

SDG 12.5.1

SDG 12.6.1

SDG 12.c.1

SDG 12.a.1

SDG 14.1.1.

SDG 17.7.1

Suggested Recommendations

Recommendation 1

- Include the screened indicators as an annex to the beyond 2020 framework.
- These indicators are already available and can represent an initial basis for measuring the progress of the framework but are not sufficient.
- Further work is necessary to have a comprehensive measurement of the progress and impact of the beyond 2020 instrument, including the development of high-level indicators as well as indicators for determined targets.

Suggested Recommendations

Recommendation 2

- Criteria for the selection of indicators should be considered by stakeholders for inclusion in the measurability structure.
- Criteria could be considered by stakeholders to be included in the text of the instrument.

Suggested Recommendations

Recommendation 2

List of criteria used by IOMC

+ their relevance /meaningfulness to the chemicals and waste agenda
+ already in use / selected to be used in international processes, or widely spread/used at other levels
+ availability (and location/source) of data
+ comparability of the data
+ type of indicator (i.e., process, impact)
+ use in other sectors (e.g., biodiversity, SDGs)
+ resource/sustainability issues; When was data last updated, if known?
+ transparency - easy access to information and stakeholder participation

Suggested Recommendations

Recommendation 3

- A measurability structure should be developed to support and monitor the new framework.
- The measurability structure should allow for reporting and monitoring progress in the implementation of the new framework, and its impact, in a comprehensive manner.
- Structures under other instruments, **the recently approved Kunming-Montreal global biodiversity framework (GBF),** deserves special attention.
- The monitoring framework for the GBF is composed of 4 types of proposed indicators, **(a) Headline indicators, (b) Global level indicators, (c) Component indicators and (d) Complementary indicators.**

"The IOMC vision is to shape a sustainable future through coordinated global action to achieve the sound lifecycle management of chemicals and waste for healthy lives and the environment."

THANK YOU

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