

Second meeting of the open-ended ad hoc group on measurability and indicators

14 August 2024, Online

2:00 p.m. to 4:00 p.m. (CEST)



1. Opening and welcome

2. Organizational matters - Provisional Agenda

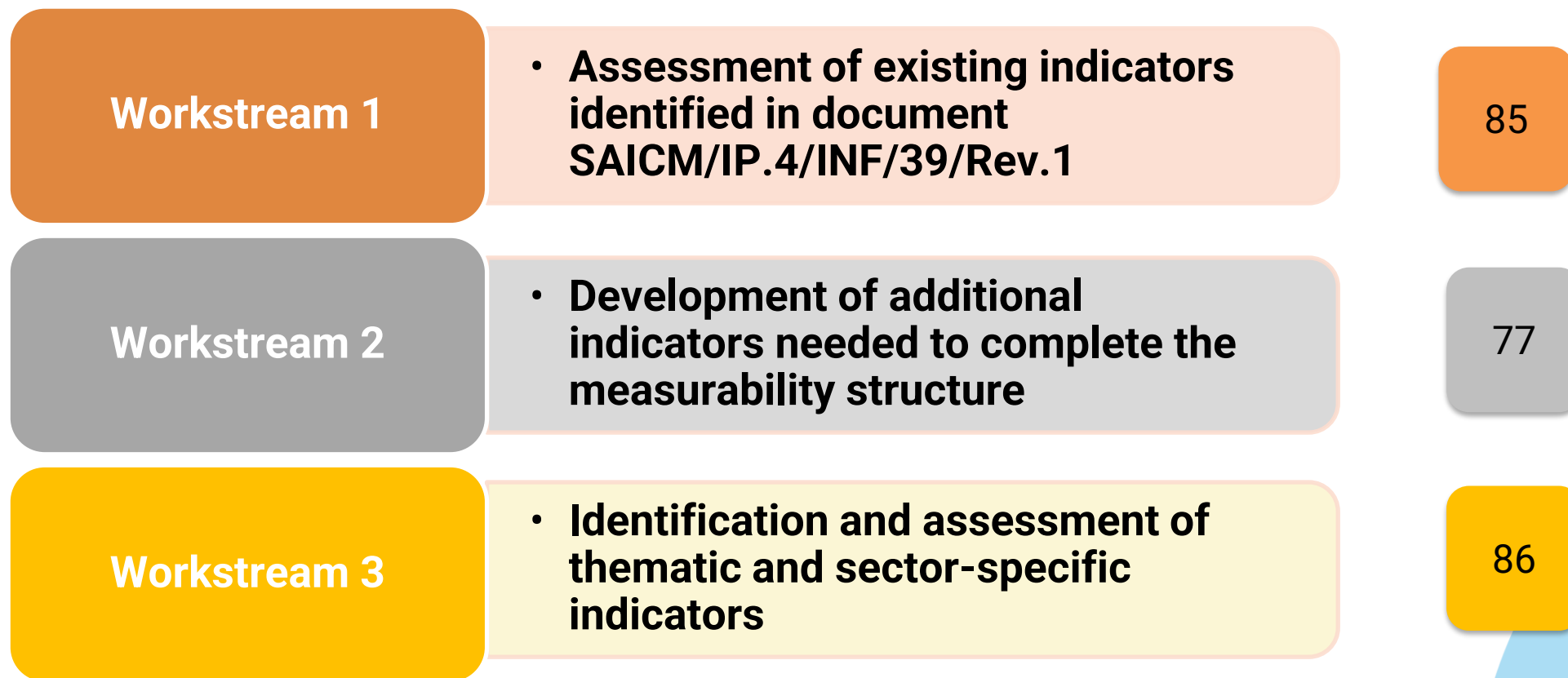
1. Opening and welcome
2. Organizational matters
 - a) Adoption of the agenda
 - b) Organization of work.
3. Updates on the workstreams
 - a) Thought starter on criteria
 - b) Thought starter on Factsheet for indicators
4. Update on progress of work under workstream 1
 - Concept note workstream 1
5. Update on progress of work under workstream 2
 - a) Concept note on global environmental burden attributable to chemicals and waste indicator
 - b) Concept note on the global burden of disease attributable to chemicals and waste indicator
6. Update on progress of work under workstream 3
7. Next steps
8. Any other business
9. Closure of the meeting

2. Organizational matters – Organization of work

- It is anticipated that this group will convene every quarter for 2-3 hours to advance its objectives.
- The meeting will be conducted in English only.
- Working documents are available on the meeting webpage at:
<https://www.chemicalsframework.org/page/open-ended-ad-hoc-group-measurability-and-indicators>

3. Updates on the workstreams

Number of participants registered to three workstreams via the task team registration link



3. Updates on the workstreams

Number of participants registered to three workstreams per stakeholder group

	NGO / civil society	Government/ Public sector	Private sector/ Industry	Academia/ research institute	IGO
Workstream 1	35	31	6	6	7
Workstream 2	33	23	7	7	7
Workstream 3	40	24	9	7	6

Task Team registration via [link](#)

3. Updates on the workstreams

a) Thought starter on criteria

Document GFC/OEAHGMI.2/2 “Thought starter – On the criteria to select indicators of the Global Framework on Chemicals”

3. Updates on the workstreams

List of Criteria

- a) Relevance and/or meaningfulness to the Framework
- b) Availability of data to create a baseline and to assess progress
- c) Have a designated custodian
- d) Allow for regular updating to help ensure sustainability of the measurement
- e) Allow for easy access to data and enable stakeholder participation in data collection
- f) Data comparability through standardized methodologies

3. Updates on the workstreams

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- f) Data comparability through standardized methodologies

- g) **Must show progress – the indicator must have the capacity for evolution and show change in time.**

Reference: [Document GFC/OEAHGMI.2/2 “Thought starter – On the criteria to select indicators of the Global Framework on Chemicals”](#)

3. Updates on the workstreams

b) Thought starter on Factsheet for indicators

Document GFC/OEAHGMI.2/3 “Thought starter – Proposed Factsheet template for indicators of the Global Framework on Chemicals”

3. Updates on the workstreams

Factsheet divided in five sections:

- **SPECIFICATIONS:** technical description of the indicator
- **ASSESSMENT:** evaluation of the indicator
- **DATA SPECIFICATIONS:** data sources, data availability, data disaggregation/aggregation, reporting mechanism
- **METHODOLOGY** used for calculating the indicator
- **REFERENCES**

Reference: [Document GFC/OEAHGMI.2/3 “Thought starter – Proposed Factsheet template for indicators of the Global Framework on Chemicals”](#)

4. Update on progress of work under workstream 1

Concept note workstream 1

[Document GFC/OEAHGMI.2/4 “Concept note – workstream 1”](#)



Inter-Organization Programme for the
Sound Management of Chemicals

**WORKING TOGETHER TO
END CHEMICAL POLLUTION**

**Open-ended ad hoc group on
measurability and indicators**

Concept note - Workstream 1

14 August 2024



Concept note

- **Progress made by the IOMC** since the submission of the “Inventory and Analysis Report: Existing Indicators on Chemicals and Waste Management” (SAICM/IP.4/INF/39/Rev.1) at IP4s across 2022 and 2023
- **Planned next steps**

INF39 reminder

- INF39 document identified an **initial list of 279** existing indicators relevant to the chemicals and waste agenda.
- These indicators span various frameworks
- A **refined list of 63 indicators** was developed through a three-step screening process, meeting criteria such as their relevance, data availability, and the presence of a custodian agency.
- All subsequent work has been based on INF39 BUT takes into account ICCM5-agreed targets



Objective of Workstream 1:



Workstream 1 is tasked with streamlining and strengthening the indicators, recalling that the aim is to reduce the number of indicators and enhance their robustness.



Work already undertaken

- Review the “long list” of 279 existing indicators; none brought into proposed list of indicators
- Revisit the screened list of 63 indicators; through this process, 29 indicators, including 3 new ones, were retained for their relevance and meaningfulness to the targets



Work already undertaken

- Propose a priority list; based on the revisited list, and in consultation with the co-chairs, the IOMC has conducted a further review of the 29 indicators.
 - This review focused on data availability and the potential for progress for each indicator. The goal was to distribute the indicators into two groups; “1” and “2”
 - To be shared with workstream 1 stakeholders for review and input
- Perform a gap analysis:
 - In order to fill some gaps, 3 new indicators have been proposed
 - Final gap analysis can be performed after the final list of indicators is agreed to identify targets not or only partially covered by existing indicators, informing the work of WS2 or WS3



Proposed approach to conduct upcoming work under workstream 1

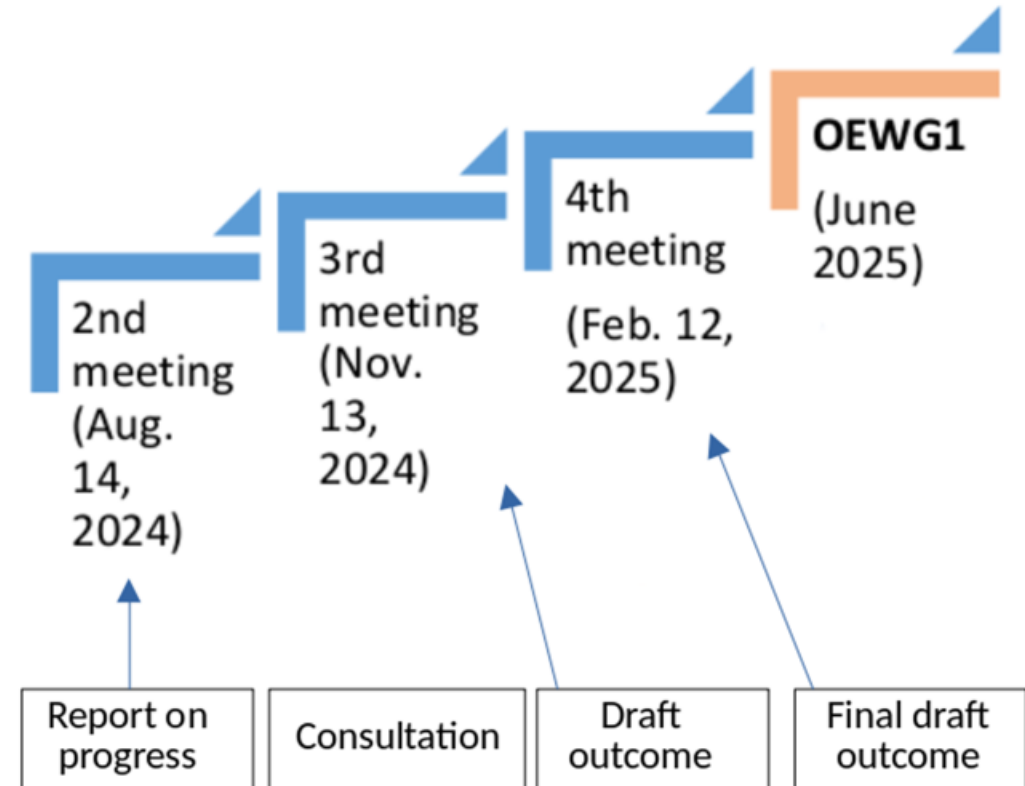
- Suggest mechanisms for collaboration with stakeholders
 - The IOMC suggests collaborating with stakeholders registered for Workstream 1 and conducting an online consultation in September 2024
 - Stakeholders in workstream 1 are invited to suggest further indicators that align with the Framework, where they satisfy the screening criteria and fit within the objective (*reduce the number of indicators and enhance their robustness*).
 - The inclusion of diverse perspectives will ensure that the indicators are comprehensive and reflective of the global context of chemicals and waste management.

Proposed approach to conduct upcoming work under workstream 1

- Set out a workplan for intersessional work
- 1 (or 2) consultations

Workplan of the Open-ended ad hoc group

Workplan of Workstream 1



5. Update on progress of work under workstream 2

- a) **Concept note workstream 2 - on global environmental burden attributable to chemicals and waste indicator**

[Document GFC/OEAHGMI.2/5 “Draft concept note - Proposed approach in developing a high-level indicator on global environmental burden attributable to chemicals and waste”](#)

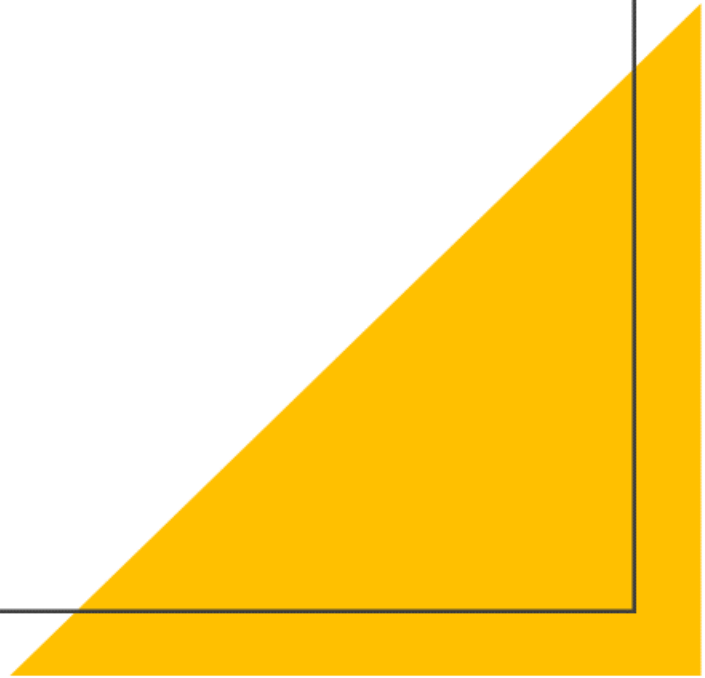
5. Update on progress of work under workstream 2

b) Concept note workstream 2 - on global burden of disease attributable to chemicals and waste indicator

Document GFC/OEAHGMI.2/5 “Concept note on global burden of disease attributable to chemicals and waste indicator”

Global Burden of Disease attributable to chemicals and waste

Thought starter



Background

- The Global Framework on Chemicals (GFC) includes the Global Burden of Disease attributable to chemicals and waste as a possible high-level indicator in its measurability framework.
- Target B7 of the GFC states that – *By 2030, stakeholders generate, to the extent possible, and make available **comprehensive and accessible monitoring and surveillance data** and information on concentrations and potential exposure sources of chemicals in humans (disaggregated by sex, age, region, other demographic factors, and other relevant health determinants as feasible), other biota and environmental media.*
- Resolution V/10 of the ICCM5 **Recognizing the role of surveillance systems** for human health as part of integrated national chemicals and waste management systems,
 - *Encourages* the strengthening of institutional linkages between poison centres and health ministries/authorities and other government agencies, as appropriate, to ensure the sound management of chemicals;
 - *Encourages* stakeholders to establish and strengthen surveillance systems as part of integrated national chemicals and waste management systems to assist in implementation of the Global Framework on Chemicals – For a Planet Free of Harm from Chemicals and Waste
 - *Encourages* the development of a proposal for the creation of a global network for the collection of health surveillance data and for the analysis of trends regarding selected chemicals of concern

Global Burden of Disease

- The concept of the Global Burden of Disease (GBD) is well established.
- The GBD quantifies the burden of premature mortality and disability for major diseases or disease groups worldwide allowing the magnitude of disease, risk factors and injuries to be compared across regions, countries, age groups and gender.
- The GBD concept back to the early 1990s. It was institutionalized in the WHO. Since 2013 the Institute of Health Metrics and Evaluation IHME (– an independent organization based at the University of Washington) has expanded and extended the GBD – in terms of experts collaborating and the number of causes of disease and risk factors.
- WHO provides global health statistics through the World Health Observatory and these are critical in establishing national demographical data.

IHME GBD report 2021

- The IHME 2021 GBD report provides the latest GBD data. It was published in May 2024.
- Chemicals and waste do not produce a single disease but contribute to disease burdens. In GBD terminology chemicals and waste would be “risk factors”
- In the context of IHME’s GBD analysis, the risk factors relating to chemicals and waste are limited to:
 - **Unsafe water, sanitation and handwashing**
 - **Air pollution** Particulate matter, household air pollution from solid fuels, ambient ozone and nitrogen pollution
 - **Other environmental risks:** namely Radon, **Lead exposure**
 - **Occupational risks:** asbestos, arsenic, benzyene, beryllium, cadmium, chromium, diesel engine exhaust, formaldehyde, nickel, polycyclic aromatic hydrocarbons, silica, sulfuric acid and trichloroethylene, occupational asthmagens and occupational particulate matters, gases and fumes.
- In addition the GBD includes the burden of disease from unintentional poisonings by carbon monoxide and other means and self harm, not specified.


WHO estimates of environmental BOD

- WHO established the methodology for assessing the environmental burden of disease in the early 2000's. Essentially all assessments require
 - a) estimating **the exposure distribution in a population**;
 - (b) selecting one or more appropriate relative risk estimates from the **epidemiological literature**, generally from a recent meta-analysis; and
 - (c) estimating the population attributable fraction.
- The population-attributable risk factor is then multiplied by the total number of deaths and disability-adjusted life-years(DALY) for the diseases in each population group.
- WHO has long-established methods for estimating the burden of disease due to environmental factors and has published reports on preventing disease through healthy environments providing estimates of the global burden of disease from the environment. The first report in 2006 concluded that almost a quarter of disease burdens and more than one-third of the burden in children was due to modifiable environmental factors

WHO burden of disease estimates from chemicals

first published in 2011 using systematic review of studies estimating the disease burden due to chemicals – at global level.

- Relevant estimates available for 14 chemicals, their groups and mixtures
- Methodology includes a basic framework of the main disease groups with suspected or confirmed linkage to chemicals and a mixture of comparative risk analysis
 - For 2012 - 1.3 million deaths (2.3% of the global total) and 1,6% of the total DALYS
 - For 2016 – 1.5 Million deaths (2.7 % of the global total) and 1.7% of the total DALYS
 - For 2019 –2 Million deaths (3.6 % of the global total) and 2.1% of the total DALYS

 World Health Organization

THE PUBLIC HEALTH IMPACT OF CHEMICALS: KNOWN AND UNKNOWN

Data addendum for 2016

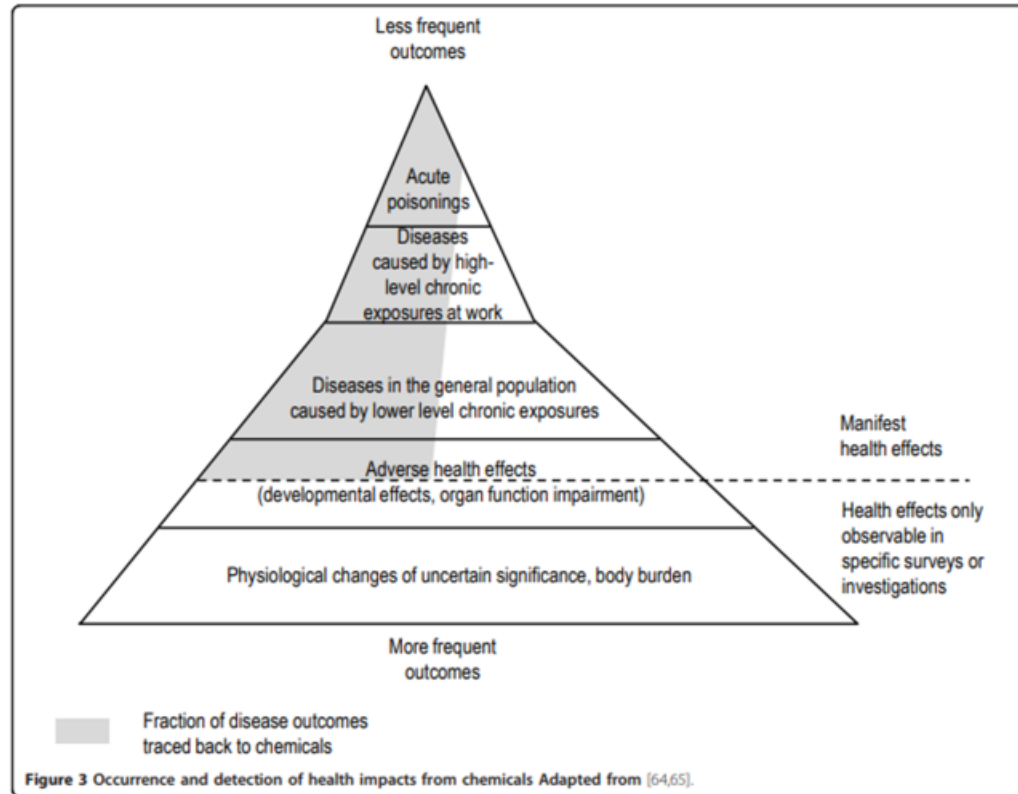
This is an addendum to the WHO publication "The Public Health Impact of Chemicals: Known and Unknown" (WHO, 2014) and presents an update of the main data tables and figures for the year 2016.

Disclaimer: All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Table 1: Overview of the disease burden preventable through sound management and reduction of chemicals in the environment (2016)

Chemicals/ Group of chemicals	Disease outcomes considered (association attributable fraction of DALYs)	Deaths (% total deaths)	DALYs (% total DALYs)	Method
Chemicals in acute poisonings				
Chemicals involved in unintentional acute poisonings (methanol, diethylene glycol, kerosene, pesticides etc.)	Unintentional poisonings (73%)	77,879	4,576,044	Expert survey
Chemicals involved in unintentional occupational poisonings (already included in the above poisonings)	Unintentional poisonings (occupational) (9.8%)	5,766	308,336	CRA
Pesticides involved in self-inflicted injuries	Self-inflicted injuries (20%)	155,488	7,362,493	Limited epidemiological data
Chemicals involved in congenital anomalies	Congenital anomalies (5.0%)	29,544	3,149,020	Expert survey
Single chemicals with mostly <u>long-term</u> effects				
Lead	Cardiovascular diseases (2.5%); chronic kidney diseases (1.7%); idiopathic intellectual disability (30%)	540,043	13,873,563	CRA
Chemicals in occupational exposures (longer term effects)				
Occupational carcinogens (arsenic, asbestos, Cancers (2.5%); pneumoconiosis; benzene, beryllium, cadmium, chromium, (81%); diesel engine exhaust, formaldehyde, nickel, silica, sulfuric acid, <u>trichloroethylene</u>)		323,114	6,438,790	CRA
Occupational <u>asthma</u> : (arsenic, fumes, gas)	COPD (13%); pneumoconiosis (39%)	424,266	9,377,104	CRA

The tip of the iceberg



- Quantified exposure-response relationships supported by strong evidence – lacking
- Large scale exposure data insufficient. Even chemicals with health consequences supported by strong evidence of causality
- Acute poisonings are more easily linked. Chemicals with delayed or sub clinical impacts such as cancers and neurological disease more difficult to allocate to specific exposures
- Insufficient surveillance even for chemicals with well-known effects

Other relevant burden of disease estimates (not exhaustive)

- **The Lancet Commission on Pollution and Health** (most recent report published in 2022) which reported pollution was responsible for 9 Million deaths in 2015 and again in 2019 (p This assessment essentially used the IHME GBD 2019 and risk factors – the substantial burden from air pollution was included in the estimates.
- **The WHO/ILO Joint Estimates of Work-related burden of Disease and injury 2000-2026** published in 2021 includes estimates of 14 work-related chemical risk factors eg occupation exposure to nickel, asbestos, etc as per the GBD classifications
- **The World Bank** has recently published (2023) an updated assessment of the global health burden and cost of lead exposure in children and adults which includes an updated methodology for cardiovascular disease and IQ loss in children – resulting in a significantly increased burden estimate from 1.54 Million deaths (IHME) to 5.5 M (World Bank)
- A recent publication in 2021 included a **structured expert judgment approach** of the health impacts of various chemicals and pollutants. Although limited in scope this approach provided estimates of 16 chemicals and pollutants.

Some take –away messages – 1

- **Existing GBD systems are limited** in terms of BOD for chemicals and waste. The GBD Study (routinely updated by IHME) is limited in its scope in estimating the global burden of disease from chemicals. It is the most up-to-date methodology
- **WHO study of the knowns and unknowns** is the widest approach to estimating burden but does not provide national estimates. Three periodic assessments have been made for 2012, 2016 and 2019. These assessments could be extended in future, subject to resources.
- **BOD from wastes needs to be separately assessed and defined.** A search of the literature is needed to find approaches applicable to estimating the burden of disease from wastes. Some health impacts from some wastes may be captured in existing work but more analysis is needed.

Some take-away messages – 2

- 1. Strengthening Surveillance Systems:** Resolution V/10 emphasizes the importance of enhancing surveillance systems to assess the impact of chemicals on human health. This contributes to long-term improvements in understanding and assessing disease burden over time
- 2. Growing Evidence and Exposure Reduction:** As more robust data and scientific evidence emerge, global burden of disease estimates are likely to increase. Considering efforts to reduce exposure, an alternative indicator focusing on exposure reduction could be explored in addition to a GBD estimate – this may more easily equate with achievements
- 3. Composite Indicators:** A number of existing indicators are proposed for Target B7 and some of these may be combined into a composite indicator for the overall progress. Alternatively the whole set of indicators adopted by the GFC may be combined).
- 4. Proxy indicator.** Alternatively or in addition using available data that can be directly related to an achievement under the GFC such as reducing Lead-Blood levels could be considered as a simplified proxy indicator. .

Proposed way forward

- WHO to circulate a written concept note based on the present PPT for comment by OEWG members (Early September)
- WHO to organize a webinar on the Global Burden of Disease and approaches to the development of new indicators for the purposes of the GFC (November 2024)
- Conduct further rapid assessment particularly on approaches to assess the burden of disease from wastes in order to consider the feasibility of this aspect of the indicator
- Establish a task group to investigate options for combination of existing indicators

6. Update on progress of work under workstream 3

- Workstream 3 to identify and assess indicators (either existing or under development) covering different sectors and themes of relevance to the Global Framework on Chemicals and its implementation programmes

6. Update on progress of work under workstream 3

Questionnaire for workstream 3: Identification and Assessment of Thematic and Sector-Specific Indicators

- **A first group of indicators:** Indicators measuring the integration of safe and sustainable management of chemicals and waste into sustainable development decision making processes related to Sustainable Development Goals, climate change, biodiversity loss, labour, health, waste management, finance, trade, gender
- **A second group of indicators:** Indicators measuring the implementation of the Global Framework on Chemicals in economic and industrial sectors along value chains
- **Development of new indicators**

6. Update on progress of work under workstream 3

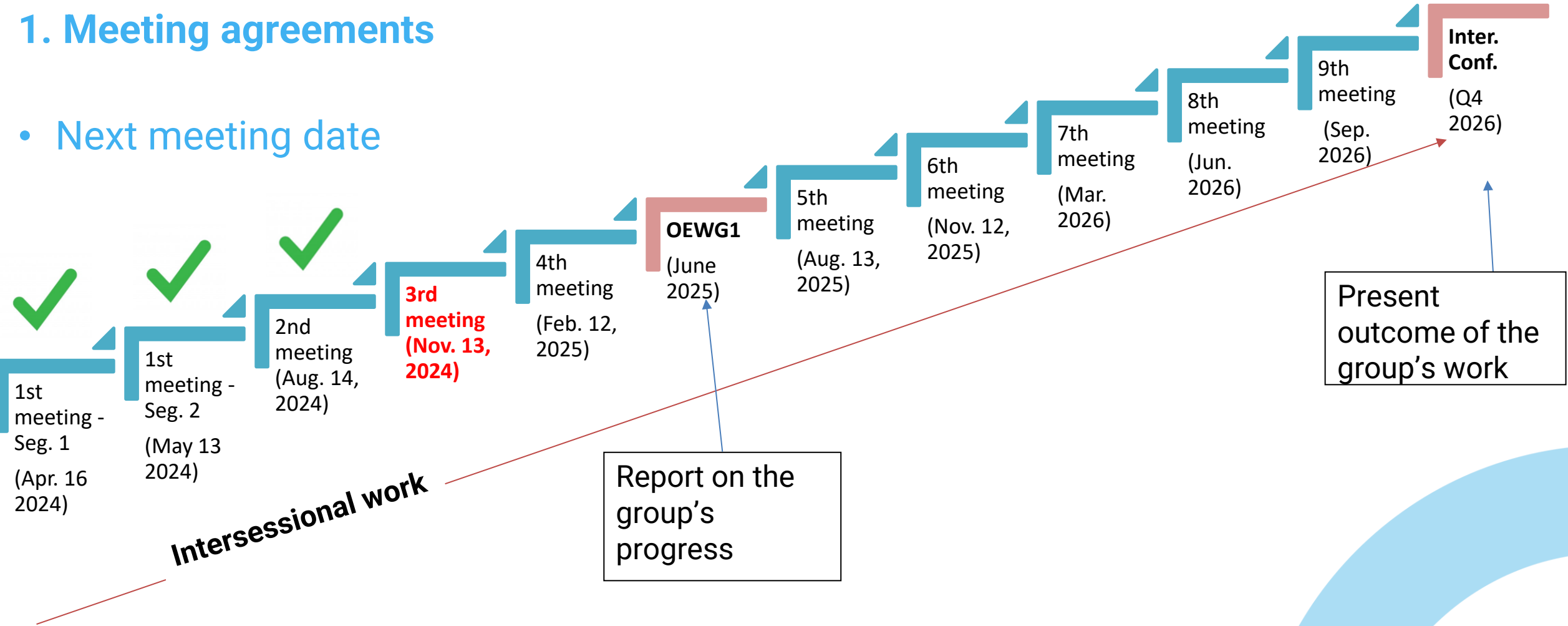
Questionnaire for workstream 3: Identification and Assessment of Thematic and Sector-Specific Indicators

- Link to questionnaire: <https://forms.office.com/e/9ZHrAbQ97K>
- **Deadline** to answer the questionnaire is **31 August**

7. Next steps

1. Meeting agreements

- Next meeting date



Schedule of the work of the group

Note-The exact dates indicated are tentative and will be confirmed prior the sessions

7. Next steps

2. Main deliverables and areas of work

Next Deliverables by the 3rd meeting of the OEAHGMI

- **Workstream 1 – List of priority indicators**
 - **IOMC** Conclude the work by the 3rd meeting

- **Workstream 2 – High-Level indicators**
 - **UNEP** Report on progress at 3rd meeting
 - **WHO** Report on progress at 3rd meeting
 - Outcomes to be presented at OEWG June 2025

- **Workstream 3**
 - **Secretariat** Conclude the work by the 3rd meeting

7. Next steps

3. Working modalities

- Meetings will be conducted in English.
- Request written submissions from leads two weeks in advance- will be uploaded to the website.
- Send any other submissions from relevant stakeholders to the Secretariat (unep-gfc.secretariat@un.org) Deadlines will be notified to participants.
- All Meeting Reports and relevant documentation will be uploaded to the website.
- Works of the teams done intersessionally will be conducted separately with Secretariat support as requested.
- Secretariat will compile information of participants in each workstream and liaise accordingly with team leads.

8. Any other business

9. Closure of the meeting

GLOBAL FRAMEWORK ON CHEMICALS - FOR A PLANET FREE OF HARM FROM CHEMICALS AND WASTE

Texts and resolutions of the Fifth International
Conference on Chemicals Management

UN
environment



