Needs and Questions the Panel May Handle

Request for Written Submissions from Member States and Relevant Stakeholders

Member states, during the resumed first session of the Open-ended Working Group (OEWG1.2), requested the Secretariat of the OEWG to solicit input from Member States and relevant stakeholders regarding the **needs** and **questions** the panel may handle in order to inform negotiations through the OEWG process (OEWG2 and OEWG3).

In support of this request, member States are invited to provide submissions through their respective national focal points (list of focal points available at this link). Non-government stakeholders are invited to submit their submissions on behalf of their organization or group. Once complete, please submit this filled document to SPP-CWP@un.org. All submissions will be uploaded online and will be summarized in an INF document in order to inform the work undertaken at OEWG2 and OEWG3.

Please complete and submit this form by 5 September 2023.

Several documents prepared by the secretariat for OEWG1.2 are of relevance to this submission, including:

- The Mapping and Gap analysis that was presented at UNEA 4 (UNEP/EA.4/INF.9)
- The UNEP report "Assessment of options for strengthening the science-policy interface at the international level for the sound management of chemicals and waste" https://wedocs.unep.org/bitstream/handle/20.500.11822/33808/OSSP.pdf
- UNEP/SPP-CWP/OEWG.1/INF/1 - UNEA Resolution 5/8 entitled "Science-policy panel to contribute further to the sound management of chemicals and waste and to prevent pollution"
- The stakeholder survey conducted between OEWG 1.1 and OEWG 1.2, which was summarized in Information document "Stakeholder Engagement Feedback" (UNEP/SPP-CWP/OEWG.1/INF/6)
- Reports of OEWG1.1 and OEWG1.2, available with all other meeting documents on the OEWG website

Contact information

What is your name/surname?

Dr Michelle Bloor

Who are you submitting on behalf of?

Society of Environmental Toxicology and Chemistry (SETAC)

Are you a national focal point?

No, I'm Chair of SETAC's Advisory Panel on Chemicals Management (CheM) and SETAC's Representative for UNEP Chemicals Management Stakeholder Engagement. SETAC is accredited to UNEP's Scientific and Technical Major Group

What is your country?

SETAC is a global society, but I'm personally based in the UK

What is your title?

Associate Professor in Environmental Science and Risk, University of Glasgow, UK

What is your gender?

Female

What is your email address?

michelle.bloor@glasgow.ac.uk

1. **Please list and if appropriate briefly describe, your preference for which <u>needs</u> the panel may handle. *(If possible, please rank your responses, where 1 indicates your top preference)*:**

   The major points below reflect high-level strategic needs that should be core principles for the panel's scope and functions. These serve as foundational needs to ensure that the Science-Policy Panel is effective and meets its objective to contribute to the sound management of chemicals, waste, and pollution prevention.

   1. Holistic approach: Integrated, multi-disciplinary approaches that incorporate socioeconomic and geopolitical factors influencing the impact of chemicals throughout their life cycle, as well as different environmental compartments and exposure pathways.

   2. Global but local: Specific issues related to chemical management, waste and pollution can have highly significant local impacts and the global work of the panel must consider this within their work. For example, many value chains are global and the use of chemicals in one part of the world can have major environmental impacts in other geographical regions. In contrast, impacts at the local/ regional level also need to be considered, especially in less developed/ resourced regions.

   3. Risk-based: Approaches based on an exposure and effects assessment with the goals of protecting human health and the environment.

   4. Chemical-based focus: Inclusion of all forms of chemical pollution within the scope of the panel. Although important environmental stressors, non-chemical pollution should be excluded to facilitate appropriate focus on the core mission of the panel.

   5. Sound science: Evaluation and assessment based on high quality science. Data quality, scientific rigor, and sound evidence should be at the core of all panel work.

   6.Transparent: Clearly communicated, science-based approaches that are applied consistently.

   7.Multi-stakeholder: Diverse engagement with multiple stakeholders. This is critical to ensure that the activities of the panel are provided with the best available science.

   8. Flexible: Flexibility and agility to respond to emerging issues without compromising scientific quality and rigor.

2. **Please provide any relevant comments on the needs you have listed above:**

   Holistic approach to assessments: This includes a focus on holistic consideration of health and environmental aspects of chemical management, waste, and pollution prevention, including direct and indirect impacts to human (health, societies, food and water securities, economies) and environmental (biota, ecosystems, climate, biodiversity, services) systems and their geopolitical and socioeconomic interdependencies.

Multi-stakeholder: Inclusive engagement is key to the success of the panel and the implementation of its principal functions. The value-chain is vast and experiences and knowledge of stakeholders across the chemicals and waste value-chain is required to undertake assessments that are holistic. Additionally, different stakeholder groups will have different base knowledge that could only be shared by inclusive engagement. This does not diminish the need for assessments and any horizon scanning to be risk focused, based on sound science, and conducted transparently.

3. Please list, and if appropriate briefly describe, your preference for which <u>questions</u> the panel may handle. *(If possible, please rank your responses, where 1 indicates your top preference)*:

Focused and clear development of a prioritization process will provide the justification for the specific topics the panel will address. It is critical that this prioritization work is completed in a transparent, scientifically robust manner with multi-sector input, and therefore we have identified it as the single, highest priority question for the panel at this stage.

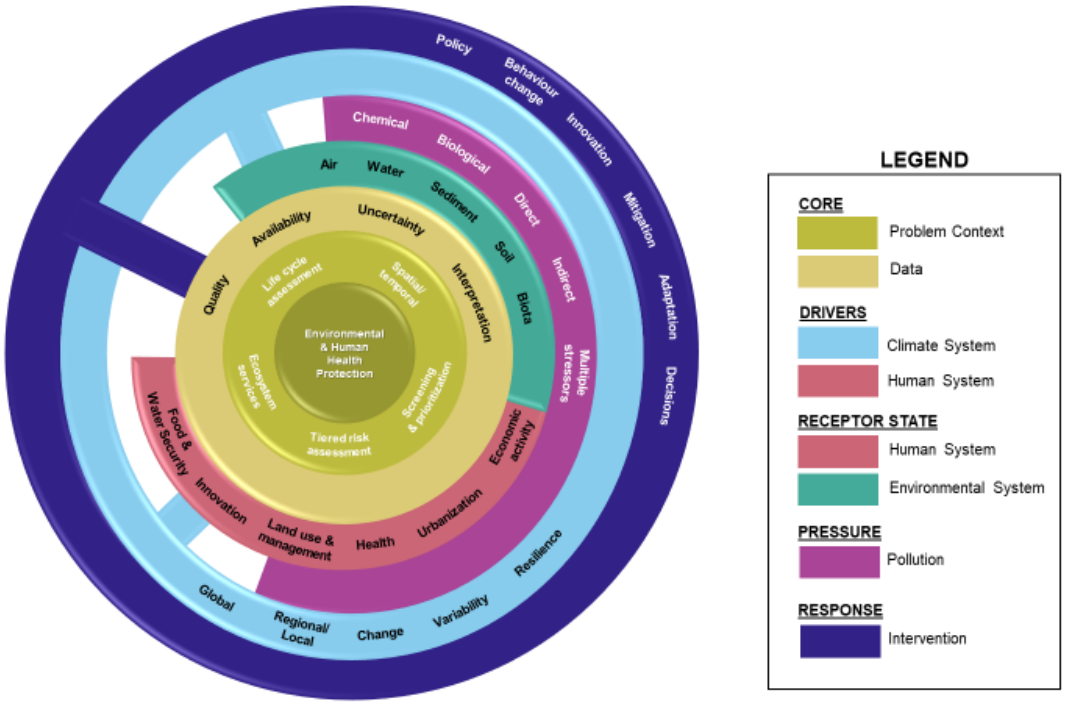
We have developed a proposed conceptual model that can be used to help guide the prioritization process that is described in (4) below.

4. Please provide any relevant comments on the questions you have listed above:

Key factors in a priority setting framework should be guided by the objectives of the chemicals, waste, and prevention of pollution science-and policy interface. Given the range of potential issues that may be considered, a multi-criteria analysis approach is appropriate to provide the holistic considerations and the flexibility required for prioritization of the work scope. However, the criteria must be transparent and based on scientific evidence.

The implications for human health and the environment are outcomes of an assessment of impact and risk. This must be guided by a risk assessment process that is inclusive of the consideration of persistence, toxicity, exposure, spatial scales, implications for economic and social values, and others. We consider the DPSIR framework (drivers, pressures, state, impact, and response model of intervention) useful to help inform the science policy process. This type of framework identifies critical elements used to describe the interactions between society and the environment. The indicators are categorized into ‘drivers’ that put ‘pressures’ in the ‘state’ of the system, which in turn results in certain ‘impacts’ that will lead to various ‘responses’ to maintain or recover the system under consideration. It is followed by the organization of available data, and the suggestion of procedures to collect missing data for future analysis.

The figure below presents a proposed conceptual model for the science-policy process that can serve as a guide for the prioritization process.



The rings of the figure above illustrate the connectivity between each of the elements. At the centre of a multi-criteria analysis approach is the core goal of Environmental and Human Health Protection within a One Health approach (WHO, 2022). Elements that touch each other demonstrate direct connectivity via the rings as well as the spokes.

- Core – this represents the overall protection goal.
  - A problem context would be established based on a set of supporting tools: a tiered risk assessment, screening and prioritization, spatial/temporal assessments, lifecycle assessments and ecosystem services.
  - The data to address the problem context will need to be assessed for their availability, reliability, quality and interpretation.
  - The impact is represented within the core, such that the data can be used to frame the problem and characterize and quantify impacts.
- Drivers
  - The climate system driven by global change, regional/local change, variability and resilience.
  - The human system driven by economic and social values related to innovations for human betterment/improvement.
- Receptor States
  - State of the Environmental system (soil, water, sediment, air and biota)
  - State of the Human system, including sustainable development goals
- Pressure – whether chemical, physical, biological, indirect or a combination of multiple concurrent stressors and whether these remain persistent.
- A response would require intervention in the form of policy development, aligned decision makers, behavioral change, innovation, adaptation and mitigation.

Based on the conceptual model and DSPIR framework, and SETAC CheM's experience, we consider the following factors critical for a successful prioritization framework:

- **Risk**, based on an exposure and effects assessment, should be the centerpiece of any prioritization framework and should be assessed against the goal of protecting human health and the environment.

- Holistic consideration of health and environmental aspects should be given including direct and indirect impacts to human (health, societies, food and water securities, economies) and environmental (biota, ecosystems, climate, biodiversity, services) systems and their geopolitical and socioeconomic interdependencies.
  - The exposure assessment should include source apportionment covering point, diffuse, and natural sources of chemicals, and their resulting concentrations, behaviors, and sinks.
  - The effects assessment should be holistic in its scope by incorporating the assessment of direct and indirect impacts to the environment, human health, and cultural and socioeconomic aspects.

- **Spatial and temporal trends** in sources, pathways, bioavailability modifiers, receptors and effects (including mixture/multiple stressor interactions) affect current and projected risk.

- **Progress enablers**, including policies, multilateral agreements, chemical inventories, data tracking and reporting, data repositories and accessibility, and state of knowledge reviews, may accelerate outcomes for the science-policy process and ensure the process value-adds rather than duplicates.
  - **Implications for economic and social values**, including the economic and societal costs of action and inaction, could be addressed within an assessment of risk or may be assessed in comparative assessment of potential responses from the science-policy process.
  - **Data, uncertainty and their interpretation** are critical to a multicriteria assessment. A balance between data and uncertainty is needed to quantify both the sources of uncertainty and variability that might influence risk. Additionally, consideration for how to manage the absence of information will be important to ensuring the science-policy process does not miss emerging threats.

The following tools may support the science-policy panel to prioritize elements of the work program:

Tiered-risk assessments guided by simplified and conservative assumptions at low tiers and supported by sensitivity and uncertainty analysis to screen and prioritize next steps towards guiding the decision-making process.

Screening tools will be critical for prioritization particularly of new chemicals and chemicals of emerging concern. Screening tools may fit within a tiered-risk assessment framework and can include New Assessment Methodologies such as *in silico* structure-activity relationships or existing frameworks such as outlined in Annex D of the Stockholm Convention whereby a candidate chemical is assessed against persistence, long-range transport and bioaccumulation criteria as a preliminary evaluation.

Life Cycle Analyses (LCA) provides an existing framework that may be used to screen by looking at the full lifecycle of chemical production through the persistence in the environment.