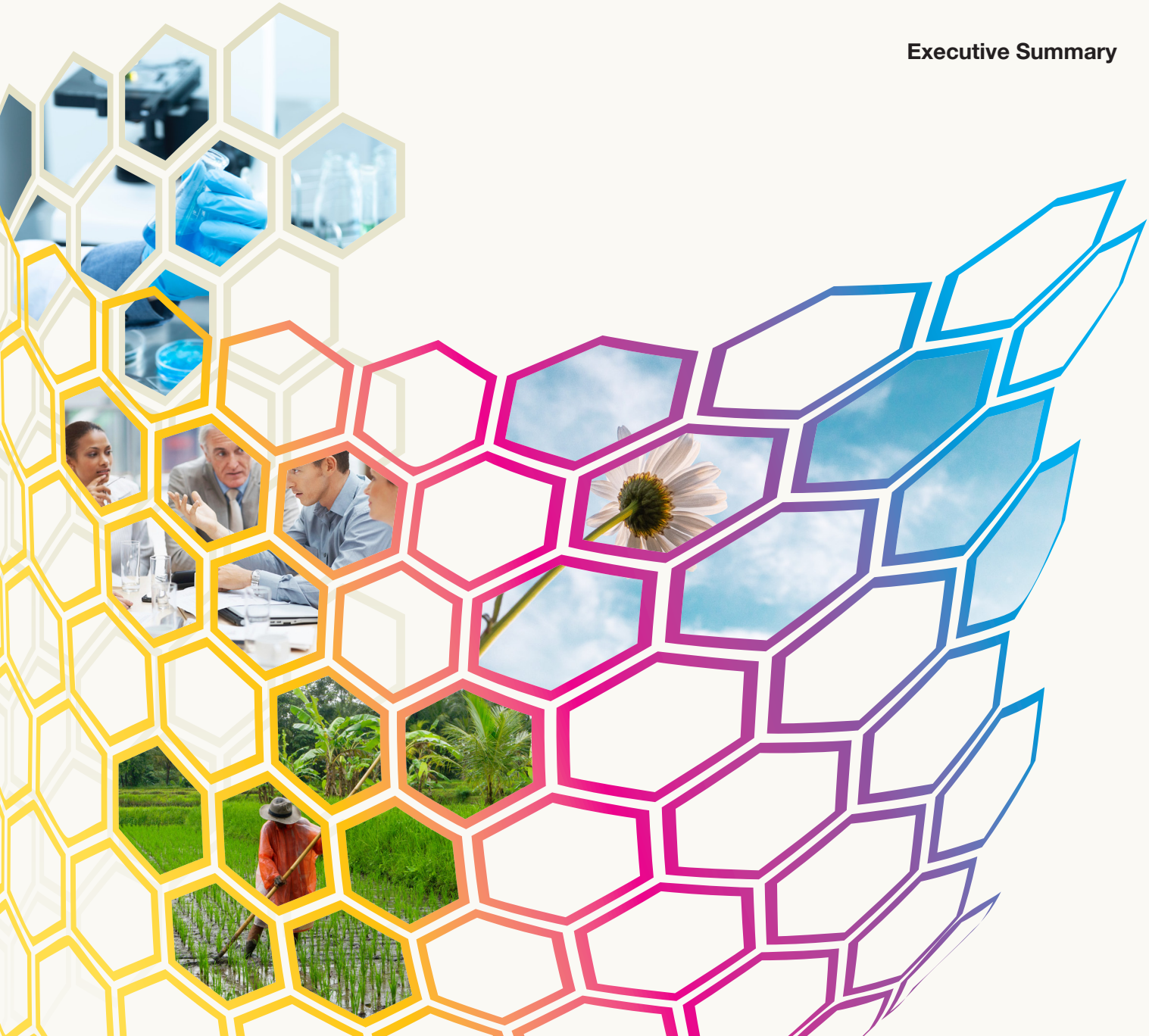
UN environment programme

Assessment of options for strengthening the science-policy interface

at the international level for the sound management of chemicals and waste

Executive Summary



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Feedback and contact: The United Nations Environment Programme encourages interested readers of this report to engage and share their views about the report.

Email: science.chemicals@un.org
Website: https://www.unenvironment.org/explore-topics/chemicals-waste

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Executive Summary

UNEA Resolution 4/8[1] on the sound management of chemicals and waste stresses, in the preamble, "the urgent need to strengthen the science-policy interface at all levels to support and promote science-based local, national, regional and global action on sound management of chemicals and waste beyond 2020; use of science in monitoring progress; priority setting and policy making throughout the life cycle of chemicals and waste, taking into account the gaps and scientific information in developing countries."

The urgent need to strengthen the science-policy interface at all levels to support and promote science-based local, national, regional and global action on sound management of chemicals and waste beyond 2020; use of science in monitoring progress; priority setting and policy making throughout the life cycle of chemicals and waste, taking into account the gaps and scientific information in developing countries

The resolution, adopted at the fourth meeting of the United Nations Environment Assembly (UNEA4) (Nairobi, Kenya, 11-15 March 2019), also requests the UNEP Executive Director, "subject to the availability of resources and, where appropriate, in cooperation with the member organizations of the Inter-Organisation Programme for the Sound Management of Chemicals (IOMC)" to "prepare an assessment of options for strengthening the science-policy interface at the international level for the sound management of chemicals and waste, taking into account existing mechanisms, including under UNEP, and relevant examples in other areas, in order to maximise cost-effectiveness, make best use of new technologies, track progress and improve implementation of relevant multilateral environmental agreements at the national level, and to make it available for consideration by all stakeholders prior to International Conference on Chemicals Management (ICCM-5)."[2]

The resolution further "encourages the involvement of all relevant stakeholders, including industry, in strengthening the science-policy evidence in this area, including consideration of relevant socioeconomic aspects"[3] and

1 UNEP/EA.4/RES.8 p.1
2 UNEP/EA.4/RES.8 Paragraph 14 and 14 (g)
3 UNEP/EA.4/RES.8 Paragraph 9

calls on governments and all other relevant stakeholders including United Nations agencies as appropriate, industry and the private sector, civil society and the scientific and academic communities to "support relevant science-policy interface platforms, including input from academia, and to enhance cooperation in the environment and health areas; and consider at the Strategic Approach to International Chemicals Management (SAICM) Open-ended Working Group (OEWG3) and at the intersessional process on the sound management of chemicals and waste beyond 2020 ways of strengthening science-policy interface, including its relevance for implementation of multilateral environmental agreements at the national level."[4]

Impact of a Strengthened Science-Policy Interface platform

The success of a Science-Policy Interface (SPI) platform can be measured by its impact in a given issue area. Whether through convening expert groups, conducting assessments, preparing guidelines, or assessing particular actions, SPI platforms can facilitate policy design and decision-making by bodies such as the Conferences of Parties to Multilateral Environment Agreements (MEAs), the UN governing bodies and/or the (ICCM)[5] as such or after decision at ICCM5 in its new form. SPI platforms can also influence a broad range of stakeholders and institutions as they contribute to the design and implementation of policies relevant to their organizations' mandates. SPI platforms can also support national agencies and other groups with awareness-raising activities, capacity-building, access and development of policy tools, and implementation of actions related to sound management of chemicals and waste. Outputs from SPI platforms, such as the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services (IPBES), have been used by stakeholders including:

- national governments,
- multilateral environmental agreements (for example, IPCC assessment provided the evidence base for the Kyoto Protocol and the Paris climate agreement, and the recent IPBES assessments are providing the evidence base for the post 2020 biodiversity framework and targets),
- global financial institutions and development agencies,
- UNEA and other UN governing bodies,
- the private sector, and
- civil society.

4 UNEP/EA.4/RES.8 Paragraph 12 (g)

5 ICCM is the multi-sectoral and multi-stakeholder governing body of the Strategic Approach to International Chemicals Management (SAICM). Adopted in 2006, SAICM's overall objective is "to achieve the sound management of chemicals throughout their life-cycle so that, by 2020, chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment." At its fourth meeting in 2015, ICCM initiated an intersessional process for considering SAICM and the sound management of chemicals and waste beyond 2020. To date, three meetings of the intersessional process have taken place. IP4 was planned to be held from 23-27 March 2020 in Bucharest, Romania, new dates to be defined. ICCM5 will take place from 5-9 October 2020.

The global mercury assessment informed the development of the Minamata Convention on Mercury, and the assessments mandated by the Montreal Protocol have significantly influenced adjustments and amendments to the Montreal Protocol.

Such outputs have also been widely communicated to the public via both social media and mass media coverage and have been used in community organizing, awareness-raising, policymaking, mobilization of financial resources and judicial decision-making at a variety of scales in many countries.

Outputs from a Strengthened Science-Policy Interface

SPI platforms can inform different stages of the policy-making process, depending on needs. It is worth emphasizing that policy processes are rarely linear, and are more accurately represented as several iterative phases that feed into and shape one another; this is a key and valuable characteristic of science-policy interfaces, which allows science to provide the evidence needed for policy formulation and implementation, and policy needs to spur gathering of relevant scientific data and new research endeavours. However, it is useful to specify the key stages of the policymaking process and the ways in which SPI platforms can link scientific knowledge/evidence with policymakers at each stage of the policy process.

Agenda setting: SPI platforms can be used for horizon scanning. They can also identify and define problems that require action on a national, regional or global scale by undertaking scientific assessments, conducting literature reviews, producing reports on the nature and scale of a problem, and how an issue may evolve in the future. They can also play a significant role in raising public awareness.

Policy formulation: SPI platforms can generate inputs that inform all actors, both in the negotiation of instruments designed to respond to a problem, and in developing specific policies designed for implementation at the global, regional or national scale.

Policy implementation: SPI platforms can provide critical information about the potential impacts of regulatory action, e.g., data or evidence related to benefits, costs, feasibility, and likely efficacy of proposed actions.

Policy evaluation: SPI platforms can provide critical input on the impacts of policies and strategies on a given problem, drawing out lessons to support increased effectiveness in future actions.

At the time of defining characteristics of a SPI platform, several elements need to be considered. Table 1 summarizes some key questions that need to be addressed for a science-policy interface platform. The rest of the paper addresses each of these issues.

Table 1 Guiding questions for a science-policy interface platform

I. SCIENCE POLICY INTERFACE PLATFORM

1. Can existing interfaces be expanded to address the needs?
2. How should the institutional arrangements be structured?
   - Should the SPI be intergovernmental or non-governmental?
   - Should the SPI be a standalone independent body or be subsidiary to an existing body?
3. How should decisions be made?
   - Should there be a plenary?
     - If there is a plenary and it is an intergovernmental process, would only governments be members and allowed to make decisions, and would stakeholders be observers?
     - Should the plenary be the decision-making body?
     - Should the plenary set the agenda and select assessment topics, approve the overall budget and approve assessment reports?
       - What process should be used to set the agenda, e.g., who can suggest assessment topics?
   - Should the platform have advisory body(s), such as a Bureau and/or a scientific advisory body?
     - If there is a bureau should it be composed of government representatives only? or should it be comprised of government representatives and other stakeholders? And what should the status of the stakeholders be? - the same as the government representatives or only observer status?
4. Should the platform receive funds from governments, UN bodies, GEF, intergovernmental organizations, private sector and foundations, and should a UN organization manage the funds?
5. Should the secretariat be hosted in a UN organization, or as a joint secretariat between 2 organizations, or be independent?

II. OUTPUTS

1. General questions related to output

- Should the platform reports be of a global nature, or also regional/ national?
- What kind of information should the platform produce (e.g., assessed knowledge, policy options, guidelines)
- Should the platform measure its impact on how it has influenced the S-P interface?

2. Process for drafting reviewing assessment reports

- Should the assessments review existing journal and grey literature only, or also request data generation?
- Should assessments be prepared by experts from within permanent working groups, through using the existing networks of experts, or nominated/selected depending on the issue(s) being assessed?
- Should the external reviewers be open to anybody with relevant academic expertise, i.e., selected on a report by report basis, or be nominated by the SPI?

3. Functions

- Should the platform communicate its outputs, or should another body do so?
- Should the platform go beyond assessment reports? for example could the platform:
  - Provide capacity building, how?
  - Develop or assist in accessing policy tools

Institutional design

To deliver authoritative outputs that are policy relevant but not policy prescriptive the procedures through which an SPI platform works, whether formal or informal, must contribute to the credibility, legitimacy, relevance, and transparency of the platform. SPI platforms needs to be iterative, which is crucial to an institution's flexibility, and inclusive, ensuring appropriate contributions from a broad range of experts with different disciplinary expertise, geographic/regional balance and ways of knowing (i.e., different world views), and from experts from different stakeholder groups, while avoiding conflicts of interest[6]. SPI platforms may be intergovernmental (e.g., IPCC or IPBES) or non-governmental (e.g., the International Panel on Chemical Pollution); this and other design choices could affect the perceived legitimacy of an SPI platform, as would the composition, representativeness, and participation of stakeholders in its work.

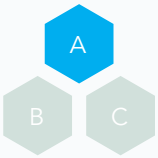
The existing landscape of SPI platforms working on aspects of sound management of chemicals and waste includes several subsidiary advisory bodies that are tasked with recommending actions to support implementation of an MEA (e.g., the Stockholm Convention's Persistent Organic Pollutant's Review Committee (POPRC) and the Rotterdam Convention's Chemical Review Committee). Examples from outside the field of environment include the joint Food and Agriculture Organization (FAO)/World Health Organization (WHO) panels subsidiary to the Codex Alimentarius Commission, as well as other expert bodies that established by UN Specialized Organizations. IPCC and IPBES, which are tangentially involved in this issue area, have no analogue in the chemicals and waste arena, but provide potential models in that they are independent but highly responsive to the needs of the conventions on climate and biodiversity, respectively.

Several challenges will need to be addressed in order to effectively strengthen an international-level science interface for sound management of chemicals and waste. As desired qualities, a SPI should be able to: engage in horizon scanning; identify emerging issues of concern; monitor trends; identify, assess and communicate the environmental and human health issues associated with chemicals and waste; evaluate and refine response options (e.g., practices, policies and technologies); and potentially stimulate the negotiation and enactment of new policy approaches. Furthermore, it will be critical to consider issues including, but not limited to, the extent to which chemical identities remain publicly unknown; the financial implications for the private sector of sharing proprietary information; technical challenges of identifying and tracking chemicals in products, humans and the environment; different approaches to precaution, and risk-based versus hazard-based chemicals management (Geiser 2015).

6 This does not mean that stakeholders need to be represented on the expert body, but different stakeholders do have useful knowledge. Stakeholder input to expert bodies can also be achieved by hearings, submissions, public review of drafts. This is a means to manage potential conflicts of interest.

Options for strengthening the SPI at the international level for sound management of chemicals and waste

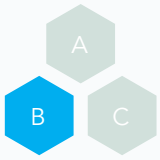
This report outlines options for strengthening the science-policy interface, including the anticipated strengths and weaknesses of each option. It is also possible to develop an option by combining different characteristics from the following options, taking account of the questions in Table 1 to guide the decision making. Any new science-policy interface would need to be designed to strengthen and complement existing science-policy interfaces. Appendix I to this report includes a list of the SPI platforms reviewed in preparing this report.



Option A
An independent platform

Under this option, which is most analogous to the IPCC and IPBES models, a new platform would produce authoritative assessments, engage in horizon scanning, and identify emerging issues. As with IPBES, it could also build capacity in particular to address special needs of developing countries, catalyse knowledge generation, and develop policy tools. This body would not be subsidiary to an existing institution and would thus not be overseen by an existing political process. But it would need to have close ties to relevant decision-making bodies. There are several options for structure and membership, each of which carries specific advantages and limitations.

This independent platform could become the overarching, authoritative science-policy interface, in part because it would be positioned to tackle cross-cutting issues that none of the current SPI platforms are able to address due to their more focused mandates. A potential weakness is that it may not be best suited to rapid response scientific advice, as the infrastructure and systematic production, review and adoption processes for IPCC and IPBES assessments have typically taken several years from framing to completion (although IPBES has developed a fast-track process). Additional strengths and weaknesses are set out in the full report.



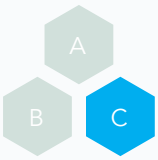
Option B
Institutionalizing the Global Chemicals Outlook (GCO) and Global Waste Management Outlook (GWMO) processes

This option[7] would institutionalize the production of the GCO and of the GWMO so that they are not contingent on a UNEA resolution or prioritization in the context of a crowded, UNEP-wide work programme. A key strength of this option is that it could be implemented relatively rapidly; it could also bring heightened visibility to outputs of existing SPI platforms. This option would be less costly than an independent

7 Another science-policy interface that has some features of the Global Chemical Outlook is the International Resource Panel

intergovernmental platform, *à la* IPCC and IPBES, if the indicative budget of GCOII is taken as the baseline; however, this depends on how critical issues such as membership and geographic representation are built into the institutional design.

A potential weakness of this option, like many of the options, is that the GCO and GWMO may not be best suited to horizon scanning or rapid production of science advice, as the schedule might lock in several years from initiation to output. Furthermore, although conclusions would be agreed by a broadly representative steering committee, they would not be formally adopted inter-governmentally and therefore may not carry as much weight.



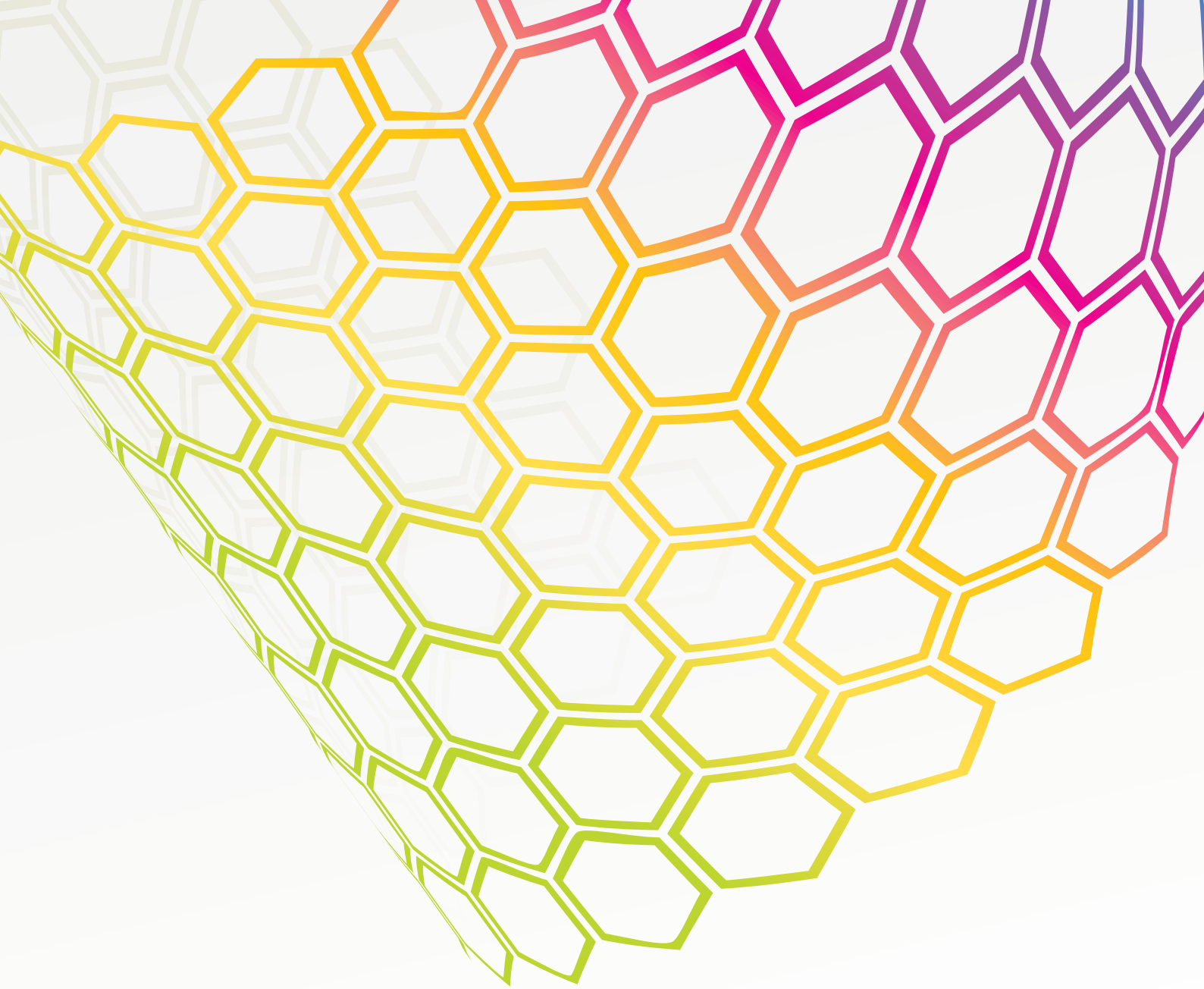
Option C
Thematic subsidiary panels with specialized task forces

This option would be analogous to the SPI arrangements under the Vienna Convention and Montreal Protocol on the ozone layer, in which parties are advised by three panels comprised of independent experts. This option would entail establishment of thematic panels subsidiary to a decision-making body such as UNEA, or by the WHO, which comprises the inter-governmental World Health Assembly (WHA) and a technical secretariat headed by a Director General responsible for convening expert bodies) or the relevant governing body of the Beyond 2020 framework. Panels could be established as needed, time-limited, and supplemented by task forces responsible for cross-cutting work. Joint panels could also be established in accordance with the rules of the relevant UN bodies.

Such an SPI could: be highly responsive to the body or bodies to which it reports; facilitate exchanges among experts who would be unlikely to interact in the current arrangement of SPIs; and create a space for scientific and technical discussions that do not have a forum in the current structure, or have not been established to date in the current structure. This option would be less costly than an independent intergovernmental platform, à la IPCC and IPBES.

If subsidiary to UNEA and/or the WHO, a potential weakness could be that such an SPI platform risks overloading an already crowded agenda (under which the sound management of chemicals and waste is just one of several areas of concern). Some government representatives who normally deal with environmental issues in international settings, rather than health issues, might be concerned that the reports are not approved through an intergovernmental process, ala IPCC and IPBES[8], even though it is acknowledged that UNEA and WHO are the authoritative international sources of environment and health information. A science policy interface jointly administered by UNEA and WHO would avoid duplication of effort and potential inconsistencies.

8 An intergovernmental process approving a technical assessment would not be appropriate for the WHO. Technical products such as norms, standards and guidelines are approved by the Director General, not the WHA. This separation of technical work from the supreme decision-making body was a desired feature of the States that developed the treaty that established WHO. The view in the paper that acceptance of expert advice is strengthened by governmental participation in the expert process does not reflect the experience of the WHO, which is in contrast to experiences of science-policy interfaces for environmental issues, ala IPCCand IPBES.



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