Ad hoc open-ended working group on a science-policy panel
to contribute further to the sound management of
chemicals and waste and to prevent pollution
First session
Nairobi, 6 October 2022 and Bangkok, 30 January–3 February 2023*

Comparative analysis of existing assessment structures

Note by the secretariat

The annex to the present note contains a comparative analysis of existing assessment structures, which the ad hoc open-ended working group for the science-policy panel to contribute further to the sound management of chemicals and waste and to prevent pollution may wish to consider. The annex has not been formally edited.

* The first session of the ad hoc open-ended working group on a science-policy panel to contribute further to the sound management of chemicals and waste and to prevent pollution is being held in two parts. The first part of the session was held in Nairobi on 6 October 2022, while the second part, namely the resumed first session, will be held in person in Bangkok from 30 January to 3 February 2023.
Annex*

Comparative analysis of existing assessment structures

1. At its resumed fifth session, held in Nairobi and online from 28 February to 2 March 2022, the United Nations Environment Assembly (UNEA) of the United Nations Environment Programme (UNEP), by its resolution 5/8, decided that a science-policy panel should be established to contribute further to the sound management of chemicals and waste and to prevent pollution (hereinafter referred to as the “science-policy panel”), with details to be further specified according to the provisions of paragraphs 4 and 5 of the resolution.

2. In addition, the Environment Assembly decided to convene, subject to the availability of resources, an ad hoc open-ended working group that would commence its work in 2022, with the ambition of completing it by the end of 2024. The Environment Assembly further requested the Executive Director of UNEP to provide a secretariat for the ad hoc open-ended working group and to prepare the analytical and summary reports necessary for its work.

3. The present document has been prepared by the secretariat and presents a comparison of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), Intergovernmental Panel on Climate Change (IPCC), UNEP Global Environmental Outlook (GEO), Montreal Protocol Assessment Panels (ozone layer), and UNEP International Resource Panel (IRP) processes.

I. Comparison of the institutional design, functions of the plenary and subsidiary bodies, selection of subsidiary body members (e.g., bureaus and multi-disciplinary expert panels), scoping processes, nomination and selection of assessment chairs and experts, peer-review processes and acceptance and approval processes

4. The goal of each of these processes is to provide credible and relevant information through legitimate processes.

A. Institutional design

5. **IPBES** – Plenary, Bureau, Multi-disciplinary Expert Panel (MEP), Expert Groups (assessments and activities), secretariat and TSUs

6. **IPCC** – Plenary, Bureau, Executive committee, three Working Groups (science, impacts/adaptation, and mitigation) and one task force on GHG inventories, secretariat and TSUs

7. **GEO** – Ad-hoc Open-Ended Working Group (OEWG), Intergovernmental and Multi-stakeholder Advisory Group (IMAG), Multi-disciplinary Expert Scientific Advisory Group (MESAG), and an Assessment Panel

8. **Ozone** – Meeting of the Parties (MOP) and OEWG of the Montreal Protocol, three Assessment Panels (science, impacts, and technology and economic), secretariat

9. **IRP** – Steering Committee (government representatives), Scientific Panel, secretariat

B. Functions of the plenary and subsidiary bodies

10. **Plenary** is the decision-making body comprised of Member States with voting rights and attended by observers with voice but no voting rights.

11. **IPBES Bureau** has 10 members (2 per UN region) – the purpose of the Bureau is to fulfill a set of administrative functions (e.g., overseeing implementation of Plenary decisions). Bureau members represent their regions.

12. **IPBES MEP** has 25 members (5 per UN region) - the purpose of the MEP is to fulfill a set of scientific and technical functions. MEP members are independent, and do not represent their region.

* The annex has not been formally edited.
13. **Secretariat** is located in Bonn, hosted by Germany, supported by contributions from members and others to a trust fund, and provided by UNEP. A number of technical support units (TSU) support assessments’ experts’ groups and task forces.

14. **Expert groups**, each supported by a dedicated TSU, for specific activities, e.g., assessments, capacity building, knowledge and data, indigenous and local knowledge (ILK), supporting policy, models and scenario development, and multiple values.

2. **IPCC**

15. **Plenary** is the decision-making body comprised of Member States with voting rights and attended by observers with voice but no voting rights.

16. **IPCC Bureau** has 34 members – chair, 3 vice chairs, 8 WG and task Force co-chairs (2 per WG and task force), 7 WG I vice-chairs, 8 WG II vice-chairs, and 7 WG III vice-chairs. The purpose of the Bureau is to provide guidance on the scientific and technical aspects of the work of IPCC, and to advise on related and management and strategic issues, and to take decisions on specific issues within its mandate.

17. **IPCC Executive committee** has 12 members - chair, 3 vice chairs, 8 WG and task Force co-chairs. The purpose of the executive committee is to strengthen and facilitate the timely and effective implementation of the IPCC work programme.

18. **Working groups** conduct assessments, and the task force on GHG inventories overseas inventory processes.

19. **Secretariat** is located within WMO headquarters in Geneva, supported by three WG TSUs and the GHG task force TSU located with the developed country co-chair of the assessments and developed country task force co-chair.

3. **GEO**

20. **Ad-hoc Open-Ended Working Group** is a decision-making body comprised of Member States mandated to adopt procedures, scoping paper, advise on author selection, and approval of the assessment SPMs.

21. The **UNEP ED** has authority, in selecting the chairs and authors of the assessments, members of IMAG and MESAG, and overseeing many aspects of the assessment cycle, e.g., scoping.

22. **IMAG** has over 30 members, including 2 co-chairs, 2 vice chairs, and 1 rapporteur. The purpose of the IMAG is to provide policy guidance.

23. **MESAG** has 30 members, including 2 co-chairs, 2 vice chairs, and 1 rapporteur. The purpose of the MESAG is to provide scientific and technical advice, including overseeing the scientific integrity of GEO.

24. **Assessment panel**.

25. **Secretariat** is provided by UNEP and located Nairobi.

4. **Ozone**

26. **Meeting of the Parties (MOP) to the Montreal Protocol** decides on the assessment process, scope, procedures, and selection of co-chairs; Open-Ended Working Group provides recommendations and guidance to the assessment processes for MOP decisions.

27. **Secretariat** is provided by UNEP and located in Nairobi, Kenya.

28. **Three panels** conduct the assessments.

5. **IRP**

29. **Steering Committee** (28 members, 7 observers) – members are from Members States, regional economic integration organizations, or UNEP.

30. **Scientific Panel** (35 members).

31. **Secretariat** is hosted by UNEP, and based in Paris.
C. Selection of the plenary chair and subsidiary body members (e.g., bureaus and multi-disciplinary expert panels)

32. IPBES – Each region selects two Bureau members, from which one is selected as chair for a single three-year term, with the chair rotating from one region to another. Each region selects five MEP members. Bureau and MEP members are selected by the Plenary for three years, renewable for a second term.

33. IPCC – The chair is elected from government nominations, each region selects their Bureau members, including who will chair, co-chair and vice-chair the 3 WGs and task force on GHG inventories.

34. GEO – the OEWG selects two co-chairs, two vice-chairs and a rapporteur (one from each region), the UNEP Executive Director selects a geographically, disciplinary and gender balanced IMAG based on Member States, specialized agencies and major group nominations, and the UNEP Executive Director selects a geographically, disciplinary and gender balanced MESAG based on Member State, specialized agencies and major group nominations. IMAG and MESAG will self-select two chairs, two vice-chairs and a rapporteur.

35. Ozone – the three assessment panels are subsidiary bodies of the Montreal Protocol.

36. IRP – there are no subsidiary bodies.

D. Scoping processes

37. IPBES – initiated by plenary, scoped by nominated experts, reviewed and approved by plenary.

38. IPCC - initiated by plenary, scoped by nominated experts, reviewed and approved by plenary.

39. GEO - initiated by UNEA, scoping overseen by UNEP Executive Director, with advice from the assessment panel co-chairs and vice-chairs and IMAG, reviewed and endorsed by an ad-hoc OEWG.

40. Ozone – decided by the MOP after consideration by OEWG.

41. IRP – prepared by the panel with the support of the secretariat, and the panel and steering group review and approve.

E. Nomination and selection of assessment chairs

42. IPBES – governments and relevant institutions nominate and the MEP, with advice from the Bureau, select the co-chairs.

43. IPCC – chaired by the appropriate WG co-chairs.

44. GEO – the UNEP Executive Director selects the chairs and vice chairs.

45. Ozone – each assessment panel has 2-4 co-chairs nominated by governments and appointed by the MOP.

46. IRP – co-chairs are nominated by panel members, steering committee and secretariat, and appointed by the steering committee.

F. Nomination and selection of assessments CLAs, LAs, REs, contributing authors

47. IPBES – governments and relevant institutions nominate, and the MEP selects with advice from the Bureau and assessment co-chairs, taking into account regional, gender and disciplinary balance.

48. IPCC – governments nominate and the Bureau selects taking into account regional, gender and intellectual balance.

49. GEO – governments nominate, and the UNEP Executive Director selects, taking into account advice from the assessment co-chairs, IMAG and MESAG taking into account regional, gender and intellectual balance.

50. Ozone – governments nominate, and the assessment co-chairs select experts for their panel, taking into account regional, gender and intellectual balance.
IRP – new panel members are selected by the steering group, based on recommendations by the panel, steering committee, secretariat and co-chairs. Co-Chairs and 3 panel members review recommendations and put forward potential new members to the secretariat. The secretariat consults the steering committee and appoint new members. A sub-set of the panel members are the authors of a particular study.

G. Peer-review processes

52. IPBES – the main report undergoes two rounds of review, expert and expert/government, and the SPM undergoes an expert/government review, and a second government review prior to the plenary.

53. IPCC – the main report undergoes two rounds of review, expert and expert/government, and the SPM undergoes an expert/government review, and a second government review prior to the plenary.

54. GEO - the main report undergoes two rounds of review, expert and expert/government, and the SPM undergoes an expert/government review.

55. Ozone – the science and impacts reports undergo an expert review, and on rare occasion a TEAP report undergoes an expert review.

56. IRP - reports undergo an expert review.

H. Acceptance and approval processes

57. IPBES – the plenary accepts the chapters, and approves the Summary for Policy Makers line by line.

58. IPCC - the plenary accepts the main report and approves the Summary for Policy Makers line by line.

59. GEO – the OEWG accepts the main report, based on the advice of IMAG and MESAG that all procedures were followed, and the OEWG approves the Summary for Policy Makers line by line.

60. Ozone – the panels approve their own reports.

61. IRP – the steering committee provides advice on the preparation of the final draft - approval of requires agreement of two-thirds of the panel, with advice from the steering committee.

II. Strengths and weaknesses of these processes

62. All models produce assessments that are credible and relevant, but their processes differ, and the involvement of Member States and other stakeholders varies, especially with respect to scoping, review, and acceptance/approval of reports.

63. IPBES and IPCC are independent intergovernmental science-policy processes, with their own rules of procedure, providing policy-relevant, but not policy prescriptive evidence. Their reports are used extensively in national decisions, and international processes such as the CBD and UNFCCC. In contrast, GEO is an intergovernmental process, under the auspices of UNEA, with considerable decision-making authority given to the UNEP Executive Director. The stratospheric ozone assessments are expert led with the scope of the assessments determined by the MOP. However, their reports are highly influential at both the national level, and in the MOP for decision-making. The IRP is a UNEP managed assessment process with a steering committee comprised of Member States.

64. Plenary and OEWGs: The functions of the IPBES and IPCC plenaries are quite similar. In each case they are the decision-making bodies, open to all Member States and qualified observers, but only Member States having voting rights. The ad-hoc OEWG of GEO has a more limited set of functions defined by a UNEA resolution. The Montreal Protocol assessment panels have significant independence from the MOP and OEWG, and the IRP panel also has significant independence from the steering committee.

65. Subsidiary bodies: The single biggest difference between the IPCC and IPBES models is that IPCC has a Bureau that addresses scientific, technical, policy and administrative issues, where-as IPBES has a Bureau that fulfills administrative functions, and a multidisciplinary expert panel that fulfills scientific and technical functions. GEO has a structure more akin to IPBES than IPCC, with the IMAG being equivalent to the IPBES Bureau and MESAG being equivalent to the MEP, with the functions being similar, but not quite the same. One of the Montreal Protocol assessment panels
(TEAP) has subsidiary bodies (technical options committees, task forces and working groups) and IRP has no subsidiary bodies.

66. Recognizing that there is no perfectly clean separation between scientific and technical issues, and management and policy issues, hence one advantage of the IPCC model is that a single subsidiary body, the Bureau, addresses all issues simultaneously. However, one advantage of the IPBES and GEO models is that the members of the Bureau/IMAG are selected for their management and policy expertise, and members of MEP/MESAG for their scientific and technical expertise, and where appropriate scientific and technical issues are separated from policy and administrative issues. IPBES and GEO address overlapping issues in joint meetings of the Bureau and MEP, and IMAG and MESAG, respectively.

67. Given the size of the IPCC Bureau, an executive committee has been established to assist the secretariat in implementing the work program. IPBES does not require an executive committee as the Bureau is much smaller, and the co-chairs of the Bureau and MEP interact when the Bureau and MEP meet simultaneously. GEO has a coordinating committee comprising of the chairs and vice-chairs of IMAG, MESAG and the assessments.

III. Implications for assessments

68. **IPCC Assessments:** IPCC has three working groups: (i) science of climate change, (ii) impacts of, and adaptation to, climate change; and (iii) mitigation of climate change. Comprehensive assessments are comprised of three WG reports, plus a synthesis report that integrates the key findings of the three WG reports. Special reports, i.e., narrower thematic assessments, are prepared by one or more WGs. With the exception of the chair and 3 vice-chairs, Bureau members chair and manage the IPCC assessments and task force on greenhouse gas inventories. The authors (CLAs, LAs) and REs are nominated by member states and relevant stakeholders and selected by the Bureau.

69. **IPBES Assessments:** IPBES assessments are not subdivided into the science, the impacts, and response options of biodiversity – all assessments – comprehensive, thematic, or regional – address all three aspects of biodiversity in line with the IPBES conceptual framework. IPBES assessments are chaired by experts nominated by member states and chosen by MEP, with advice from the Bureau. Bureau and MEP members are not eligible to chair or be authors of IPBES assessments. The authors (CLAs, LAs) and REs are nominated by Member States and relevant stakeholders, and selected by the MEP, with advice from the Bureau, and assessment co-chairs.

70. **GEO assessments:** GEO assessments, like IPBES, are not subdivided into the science, impacts, and response options – they address all three aspects of the environment. GEO assessments are chaired by experts selected by the UNEP Executive Director. The authors (CLAs, LAs) and REs are nominated by Member States and relevant stakeholders, and selected by the UNEP Executive Director, with advice from the IMAG, MESAG and assessment co-chairs and vice-chairs.

71. **Montreal Protocol assessments:** Like IPCC, there are three assessment panels, science, impacts, and technology and economic. The co-chairs are nominated by parties to the Montreal Protocol (i.e., governments) and appointed by the MOP. The authors are selected by the assessment co-chairs upon nomination by Parties.

72. **IRP:** IRP assessments, like IPBES and GEO, address all relevant aspects of an issue in one report. The co-chairs and members of the panel are selected by the steering committee.

73. Therefore, in contrast to IPCC, IPBES assessments are independent of IPBES subsidiary bodies, thus a clear separation of functions. In this respect GEO is similar to IPBES. The Montreal Protocol and IRP processes are quite independent of Member States.

74. One advantage of the IPBES and GEO assessment model, over the IPCC and Montreal Protocol assessment model, is that the inter-connections between the scientific, impacts and response options are more easily addressed in one process rather than three processes, where coordination is more difficult.

IV. Scoping, peer-review, and acceptance and approval processes

75. **Scoping:** The IPBES, IPCC and GEO scoping processes are comparable and involve Member States, experts, and relevant stakeholders. The reports are detailed and thoroughly reviewed and adopted by the IPBES and IPCC plenaries, and the ad-hoc OEWG of GEO. The Montreal Protocol assessments are largely scoped by the Parties. Likewise, the IRP reports are largely designed by the panel members and endorsed by the steering committee.
76. **Peer-review:** The peer-review processes of IPBES, IPCC and GEO typically involve two rounds of review involving Member States and experts. Where-as the stratospheric ozone assessments (science and impacts) only undergo one round of expert review, and the TEAP reports are rarely peer-reviewed. The IRP reports are expert reviewed.

77. **Acceptance and approval:** The IPBES and IPCC reports are accepted by the IPBES and IPCC plenaries, and the GEO reports by UNEA (tbc). The IPBES and IPCC Summary for Policy Makers are approved, line by line, by their respective plenaries, and the GEO Summary for Policy Makers are approved, line by line, by the ad-hoc OEWG. The Montreal Protocol assessment and IRP reports are approved by their own panels, without member state review.

V. **Conclusion**

78. All processes have produced credible and relevant information for evidence-based decision-making by governments and other stakeholders, nationally and internationally.

79. The IPBES, IPCC and GEO processes are the most rigorous, open and transparent, with respect to scoping, selection of chairs and authors, peer-review, and acceptance and approval processes. Member States are involved in all aspects of the work and own the processes and final reports. IPBES and IPCC are independent of UN agencies and MEAs, whereas GEO is a UNEA process. The stratospheric ozone panels have more independence in producing and approving the assessments and selecting experts. The IRP processes are much more independent of member states in all aspects of their work.

80. The IPBES model provides a greater level of separation between scientific and technical issues, and policy and administrative issues, with its separate Bureau and MEP, and selection of assessment co-chairs, than IPCC.

81. Given this comparative analysis, the meeting may wish to consider which scientific assessment process is most appropriate for an independent intergovernmental science-policy process that is relevant, credible and legitimate for chemicals, waste and prevention of pollution as recommended by UNEA.