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United Nations Environment Programme

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**Policy Responses and Solutions Pathways Workshop for the Seventh Edition of UNEP's  
Global Environment Outlook (GEO-7)**

**Location:** United Nations Conference Centre (UNCC)  
Meeting Room G  
Rajdamnern Nok Avenue  
Bangkok 10200  
Thailand  
[www.unescap.org/uncc](http://www.unescap.org/uncc)

**8-10 March 2023**

**Final Agenda attached as Annex A.**

**Participants list attached as Annex B.**

The experts of the Policy Responses and Solutions Pathways Workshop for the Seventh Edition of UNEP's Global Environment Outlook (GEO-7) met to define solutions pathways, develop a methodology for the solutions pathways and selecting a pathways framework.

**Agenda items included:**

1. Develop a shared understanding of the objectives of the solutions pathway section.
2. Review and agree on a methodology for the solutions pathways analysis.
3. Discussion of roles and responsibilities in the further development of the methodology.
4. Develop a work plan for methodological development.
5. Establish collaborative approach with the outlooks/modelling/scenarios group.
6. Discuss potential gaps in expertise to be filled and suggest additional experts to be involved.

**On these agenda items the meeting decided:**

- On an initial definition of solutions pathways: *Collection (or set) of actions with a defined sequence and timeline that leads to a self-sustaining momentum and to a transformative goal.*
- On steps for the methodology for solutions pathways (are provided below in the body of the document).
- The Solutions Pathways group would build on the outcomes of the Outlooks chapter, including a solution space and the socioeconomic impacts of the different pathways.
- To share the methodology and typology with the outlooks team.

- To identify a set of actions.
- To define lever, actions and actors and to include them in the glossary.
- To identify the role of actors in the solutions pathways.
- To form subgroups for typologies of actions, literature and data needs which will be crucial for developing the chapters.
- To revisit the framework and methodology discussion on Tuesday, 14<sup>th</sup> March during the First Author's Meeting.
- To present the methodology and workshop progress to IMAG and MESAG.
- To present the methodology and workshop progress to the authors during the first author's meeting.

## ***Meeting Summary***

### **Day 1**

**Develop a shared understanding of the objectives of the solutions pathway section.**

#### ***Summary of the meeting***

The meeting was chaired by the session moderator of the Policy responses and solutions pathways related chapters of GEO-7 with support from the GEO-7 Co-chairs and the Secretariat.

#### **Welcome from the secretariat, adoption of the agendas and introduction of the assessment co-chairs and session moderators.**

The workshop started with a joint session where the Modelling and Scenarios experts joined the Solutions Pathways experts selected for the GEO-7 report. In this joint session, a round table of introductions was carried out with each participant taking the floor to introduce themselves and their affiliation. The four GEO-7 Co-chairs were then introduced together with the Secretariat representatives present in the workshop.

In its welcoming remarks, the Secretariat highlighted the diversity of the groups invited for the workshop reiterating that this edition of GEO aims to be different from previous GEOs by focusing on providing practical options to solve the already known challenges facing both the natural systems and the human system already identified in GEO-6 and other global assessments. This was followed by a brief statement from each of the GEO-7 Co-chairs stating their respective desired objectives for GEO-7 and in turn the three-day workshops.

The GEO-7 Co-chairs shared that they want to produce a solution focused GEO. Although presenting the status and trends of the environment is crucial in GEO-7, Co-chairs would like to produce a GEO that explains how the world can be transformed to be more sustainable. The ambition is to provide guidance to not only the environment policy makers but also to the finance and other sectoral policy makers. Therefore, assessment of the integration and synergies of these sectors will be crucial. The focus on human health and lessons learned from the recent global health pandemic is also needed. Regional perspectives will also be crucial in ensuring impact and utility of the report. Finally, Co-chairs highlighted the importance of assessing how to accelerate transformation as well as linking land degradation to human health and wellbeing. It was also stated that a digital GEO would be crucial aiming to produce a short and direct-to-the-point product that can be understood by policy makers and other targeted stakeholders. Highlighting disasters and conflicts was also emphasised by the Co-chairs as a way of ensuring not only high ambition of the solutions pathways but also a practical means of implementation.

On these issues, the Secretariat congratulated workshop experts on their selection and thanked

them for participating in this first workshop. It was noted that although the formation of the author teams was still ongoing, the diversity of the group in the workshop and the extensive expertise therein was already suitable for a successful workshop and production of the most impactful GEO report yet.

### **Opening sessions, GEO overview by the Secretariat**

The Secretariat presented in detail the history of GEO and main findings of GEO-6. The overview of the solutions-focused approach to GEO-7 was also made, highlighting key intended outcomes. In its presentation, the secretariat highlighted how the human systems interacted with the main planetary crisis. It was emphasized that the GEO-7 assessment seeks to explore how the world can be transformed, how barriers to achieving this transformation can be navigated and how synergies can be leveraged to avoid unintended consequences. It was further stated that to achieve such an outcome associated changes i.e., those in policy, behavior and technology will have to be considered. On the timescale of the assessment, it was emphasized that the focus should be on immediate actions to 2030 and then 2030 to 2040 and then 2050 and beyond. In all these assessments work, it was emphasized to tailor make the writing of the report to different audiences. The Secretariat then presented a detailed timeline of the GEO-7 process highlighting key milestones and dates needed for drafting, peer and intergovernmental reviews and final production processes.

Participants then got an opportunity to discuss and seek clarifications on the presentations made and the plan for GEO-7. The agendas of the two workshops were then presented in detail highlighting similarities and key differences to enable participants understand the synergies and shared objectives for the workshops (See Annex for the full Agenda of the Solutions pathways workshop). A group photo was then taken followed by a break before experts embarking on parallel sessions in their respective breakout rooms.

### **Presentation and discussion of available Solutions Pathways frameworks**

The discussion began with a review of the various frameworks and the key points about those frameworks. It was mentioned that GEO uses the DPSIR framework in the State and trends section of the report but the frameworks in discussion will be used for the policy section. The secretariat also mentioned that a discussion paper that was expected to help with the discussions was not available as expected and that a brainstorming approach would be used for the meeting.

The frameworks reviewed in the discussion included the GSDR 2019 and 2023, World in 2050, Brundtland report, IPBES, IEA, Doughnut economy, planetary boundaries amongst others. The discussion on the strengths and weaknesses of the various frameworks concluded that the GSDR framework was a good candidate as its scope was broad and rich and aligned well with the systems of food, materials/waste, energy, economic/finance and environmental systems presented in the GEO-7 scoping document which could count as the five entry points but levers would need to be discussed and agreed upon. The interdependency of the 5 systems was highlighted and noted that the solution pathways should look into these linkages. It was also highlighted that addressing the roles of various actors in the transformation is important as well as focussing not just on policies but on behaviour change and technologies.

On this issue the solutions pathways group agreed that an in-depth review of the frameworks was still required and that a compare table between the different frameworks, especially GSDR, IPBES and Stockholm Resilience Centre, and the levers and with their definitions would be necessary to come to a better conclusion. The team then discussed what would be possible for the outlooks team to model in order to manage the expectations from both groups. It was highlighted that modelers do not model policies but rather the outcomes of those policies and to provide a methodology to the outlooks team, solutions pathways need to be defined.

The discussion then turned into how to define a solutions pathway. It was shared that the initial thinking was that a solutions pathway is a collection of policies implemented in a particular way, in a particular sequence set to achieve a particular goal. However, after further discussions, it was agreed that policies were not enough, and that the definition should include 'actions' which would also need to be defined. Therefore, a new definition was shared as; *solutions pathway is a collection of actions with the defined sequence and timeline that leads to a self-sustaining momentum to the achievement of a transformational goal.* 'Action' could include policy, technology, behaviour change, changes in governance among others at a business or at societal level and there would be a need to develop criteria to define actions as there are also actions by different actors and therefore decided that creating a specific working group on actions would be useful.

## Day 2

### Exchange of ideas and progress update with participants from both workshops

The second day of the workshop started with a joint session bringing together the Modelling and Scenarios experts with the Solutions Pathways experts selected for the GEO-7 report to exchange ideas and update each other on the progress from both workshops. The session started by an update from the Solutions Pathways group that they had a productive day in defining the term *Solutions pathways*. Different frameworks for conducting the analysis of the solutions pathways had also been discussed in the first day of the Solutions Pathways group workshop. The plan for this second day of the workshop for the Solutions Pathways group was to move to the methodological discussion after an exchange with the Outlooks group in this joint session. It was noted that although there had been productive discussions on the frameworks to be used for the Solutions Pathways analysis, a decision has not been reached and that discussion will advance in this second day session. However, the group had a clear understanding of how it foresees a solution pathway in the definition of the pathway itself. A *Solutions pathways* definition as discussed by the Policy group the previous day was shared in the joint session: *solutions pathway is a collection of actions with the defined sequence and timeline that leads to a self-sustaining momentum to the achievement of a transformational goal.* In its presentation, the policy group highlighted that there is need to have accountability for those who implement policy, and this has to be as reduced in time as possible to ensure that politicians in their term have to be accountable for their policy implementation. Further, it was highlighted that implementation of policy goes in sequence, therefore timelines would be important and also a useful consideration for the modelling group. There was also a recognition in the policy group that actions would be a combination of policies or actions at the business level or society level that either would promote the way to get to that goal or eliminate barriers. It was therefore highlighted that the policy group would develop criteria around how to define actions in its upcoming sessions of the workshop.

A detailed discussion was then undertaken on the definition with the joint group providing inputs on key aspects of the definition. It was noted that the word *transformation* should not be defined to avoid limiting possible solutions in the solutions pathways. The actions would also be a collection of incremental actions and transformation actions.

On this issue the team appreciated the importance of the definition discussion because it leads to shared terminology among the two groups. Clarification was sort on if the GEO has a glossary that would provide such definition. Confirming with other assessments like the IPCC and the IPBES glossaries was seen a potentially useful way to help define or adapt a Solutions pathways definition in GEO-7. The Secretariat highlighted that there is a full glossary in GEO-6 and a clear definition of all terms will be provided in the end. It was agreed that the definition of Solutions pathways will continue to be developed over time, based on the discussion.

The Modelling and Scenarios group then provided an update on the development in their breakout session of the first day of the workshop. A detailed presentation was made by the CLAs. It was

highlighted that the modelling group had spent the first day of the workshop getting to know what different modelling teams do. An early mapping exercise had been carried out to start developing a framework on how different models link to each other and how the dataflows need to be between those models. Work on mapping tasks had also started the previous day to identify overlaps and potential gaps in the models present. It was highlighted that the scope of the available models ranged from global, to regional and national. A question about the modelling approach in case of similar models focusing on the same issue or geographical scale was raised. It was highlighted that it may be expensive to use two or more models for the same output compared to a single model per output. Consequently, it was noted that the modelling group will discuss in depth on whether to use parallel modelling as an indication of uncertainty or rely on particular models. It was further noted that the two groups would meet more in the coming days to discuss how normative and complex scenarios would need to be. Creating storylines jointly with the Policy group would be valuable.

On this issue, the joint group appreciated the update noting that there were clear areas of synergies. It was emphasised that validation should be ensured both in the policy solutions analysis and the models. This will be an ongoing discussion among the respective groups. The groups agreed that the Solutions Pathways group would build on the outcomes of the Outlooks chapter, including a solution space and the socioeconomic impacts of the different pathways. The joint session then adjourned with an agreement to convene again in the third and last day of the workshop.

In its own separate session, the solutions pathways team picked up on the discussion of frameworks to be used for the solutions pathways and leverage points. It was agreed that a theory of change would be necessary to tie in the whole policy together and discussions centered around whether the theory of change should be overarching for the whole report or if it should be established for each of the five systems being covered in the report (food, materials/waste, energy, economic/finance and environmental systems). It was agreed that having a context specific theory of change would be difficult and that a broader establishment of a theoretical background for how transformation happens would be best. The discussion then turned into the steps for developing pathways and eight steps were proposed for discussion. The eighth step was highlighted for discussion in the upcoming First Author's meeting.

The steps are presented below.

1. Define the salient issues of five interdependent systems for transformations and the specific goals.
2. Explore the operation space for transformative action with the modelling group.
3. Identify the specific combination of levers that lead to self-sustaining achievement of system goals,
4. Identify a portfolio of specific short- and medium-term actions related to specific contexts considering the socio-economic impacts of the pathways.
5. Identify and understand the responsible actors and their roles and interactions for realizing those actions.
6. Identify one or more examples/evidence that illustrate prior attempts to transform these systems and analyze them according to pre-defined criteria.
7. Draw out some reflections on how specific actors could identify transformative actions within their specific contexts.
- 8. From transformative action to transformative governance**

The discussion then turned to possible metrics that can be used to group countries. These were identified as fossil fuel dependence, resource dependence, climate vulnerability and GDP. It was suggested that food security could be added to that list as a possible measure of grouping countries as there are data sets that could be utilized for it. The secretariat highlighted that the sub regional groupings from IPBES had been validated and seemed to be reasonably good groupings to use. It was also highlighted that there is no climate vulnerability index but there were suggestions that the World

Adaptation Science Program could hopefully come up with something that can be used for GEO-7 and the multi-dimensional vulnerability index that's being developed for the General Assembly to be made available in July 2023 as also another possibility. It was also noted that GDP doesn't give equity metrics as it doesn't show the distribution of wealth in countries.

A detailed discussion on data ensued and various examples of data sources such as the SCP indicators for hotspot analysis were mentioned. It was however noted that in the methodology, authors will have to justify the indicators chosen for establishing the context specific grouping of countries thus if the indicators are complex then the justification will be complex. Data validation from countries was also shared as a possible challenge. Sources for information and data from the levers, on governance, economics and finance, science and technology, capacity building etc. were shared and included examples such as the OECD policy instruments studies for governance, IMF and World bank for economics and finance, for the governance sector gov employees per capita could be considered, world bank indicators on governance, worldwide governance indicators, ILO data on gender and technology, UNESCO global science index, ICT development index from ITU, Network readiness index, failed state index, global innovation index, democracy index amongst others. It was decided that a sub group on data would be created so as to continue the discussion.

On these issues it was concluded that justification of the methodology with some well-established indicators on governance, civil society participation, finance and economics, on science and technology is crucial to avoid many questions on why suggestions for various groups of countries, the proper lever to use, and the set of actions to use were formulated. It was also agreed that the literature review issue discussion will be discussed the following day.

### **Day 3**

#### **Joint session of the Modelling and Scenarios experts with the Solutions Pathways experts**

The third and final day of the workshop started with a joint session of the Modelling and Scenarios and the Solutions Pathways experts to discuss overall progress and the plan for the day before splitting into individual sessions. In this joint session the team discussed in detail how to address uncertainty in the modelling and scenarios work and how to validate results from the models outputs. It was emphasised that literature would be key in helping situate the results from the models. The two groups then separated to their own rooms.

The solutions workshop participants started their discussion with trying to understand the body of knowledge needed on solutions pathways and collections of actions that lead to transformative goals. The secretariat noted that given GEO-6 was published in 2019, it would be good to look at more recent and updated literature since then and to also consider literature from both global north and global south while also being cautious about the peer review quality for some material. It was pointed out that the resolution on the future of GEO does mention Indigenous local knowledge and national assessments as knowledge that could be utilized in GEO-7. The use of Zotero was also mentioned as a possible tool to centralize all the literature that will be used for the policy chapters. Work by SEI, WESR, IIASA, PBL wedding graphic, data sets behind the SDG reports, national assessments by countries such as Sweden and Switzerland on SDGs, global assessments, economic commissions, review papers were mentioned as possible literature.

The secretariat noted that with the availability of the collaboration platform and the ability to access the power BI software, authors will be able to construct their own graphics rather than cut and paste from PDFs to avoid any possible copyright infringement. The secretariat quickly went through the timeline noting that first order draft is expected in late January or early Feb of 2024 before the peer review and the zero-order draft that will be reviewed internally, would need

to be ready before 15 September 2023. It was emphasized that great chapter summaries will be needed to ensure a great SPM. The possibility of gaps in the author teams was mentioned and the secretariat noted that part of the exercise in the First Author's meeting will be to take stock of the gaps in expertise and have the authors suggest some experts that could be nominated into the GEO-7 process.

Having no other business, the meeting adjourned at 3:40pm (Bangkok time).

**Action items**

- The Secretariat will prepare a written summary of the meeting.
- The Secretariat to create the subgroups for typology of actions, literature review and data needs which will meet virtually to finalize on those aspects.
- The session moderator will brief the GEO-7 advisory bodies and authors in the coming week about the progress of the workshop.

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**United Nations Environment Programme**

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**Policy Responses and Solutions Pathways Workshop for the Seventh Edition of UNEP's  
Global Environment Outlook (GEO-7)**

**Location: United Nations Conference Centre (UNCC)**

**Meeting Room G (In person,hybrid)**

Rajdamnern Nok Avenue

Bangkok 10200

Thailand

[www.unescap.org/uncc](http://www.unescap.org/uncc)

March 8-10, 2023

**Meeting objectives:**

1. Develop a shared understanding of the objectives of the solutions pathway section
2. Review and agree on a methodology for the solutions pathways analysis
3. Discussion of roles and responsibilities in the further development of the methodology
4. Develop a work plan for methodological development
5. Establish collaborative approach with the outlooks/modelling/scenarios group
6. Discuss potential gaps in expertise to be filled and suggest additional experts to be involved

**Provisional Agenda**

**Wednesday March. 8, 2023 – 09h00 to 18h00**

Online participants may join the meeting with this link: [Click here to join the meeting](#)

**09h00 – 10h30**

Location: Room G (MR-G)

**Joint session** (both policy and outlooks teams to participate in the opening session)

**Item 1:** Welcome from the secretariat, adoption of the agendas and introduction of the assessment co-chairs and session moderators

**Item 2:** Opening sessions, GEO overview by the Secretariat

- Short introduction to the history of GEO and main findings of GEO-6 – Secretariat
- Overview of the solutions-focused approach to GEO-7– Secretariat
- Discussion of the vision for GEO-7 from the co-chairs
- Q&A

**Session Objectives:**

- Group introductions, affiliations, backgrounds
- Present the focal points of the two workshops
- Present the GEO-7 co-chairs
- Discuss the objectives of both workshops

**Supporting document:** Presentation on GEO-6 findings and GEO-7 approach, [UNEA Resolution 5/3](#), [GEO-7 Scoping document](#)



**Discussion/decision:** what are the objectives of the two workshops, how are the same or different, how could they be complementary?

### 10h30 – 11h00

#### **Item 3: Group photo and Coffee Break**

*[Location for the group photo tbc]*

*[The participants then move to their allocated rooms – Solutions Pathways group in Room G, Modelling and Scenarios group in Room F]*

### 11h00 – 11h15

Location: Room G (MR-G): [Click here to join the meeting](#)

**Session objectives:** Introduction of any new authors/experts

**Item 4:** Personal introduction from the authors with their backgrounds and possible contributions

**Supporting document:** Confirmed policy and pathways authors list

### 11h00 – 13h00

Location: Room G (MR-G): [Click here to join the meeting](#)

**Item 5:** Presentation and discussion of available Solutions Pathways frameworks –Henri, Parfait

**Session objectives:** Evaluate various methodological frameworks for the development of Solutions Pathways

**Supporting document:** [GEO-7 Scoping document](#), Solutions Pathways discussion paper

### 13h00 – 14h00

**Item 6:** Lunch

### 14h00 – 15h30

Location: Room G (MR-G): [Click here to join the meeting](#)

**Item 7:** Continued discussion on the available analytical frameworks

**Session objectives:**

- Establish an approach for assessing the frameworks
- Agree on how the frameworks will be used
- Agree on how the framework will be translated into a methodology

### 15h30 – 16h00

**Item 8: Coffee Break**

### 16h00 – 17h50

Location: Room G (MR-G): [Click here to join the meeting](#)

**Item 9:** Discussion on possible approaches to the Solutions Pathways methodology

**Session objectives:** List of possible methodologies and narrow down possible methodologies

**Supporting Document:** Solutions Pathways discussion paper

#### 17h50 – 18h00

Location: Room G (MR-G)

**Item 10:** Closing of the meeting and takeaways from day 1.

#### Thursday March. 9, 2023 – 09h00 to 18h00

#### 9h00 – 9h10

Location: Room G (MR-G)

**Item 11:** Recap of day 1 and set the objectives for day 2

#### 9h10 – 10h30

Location: Room G (MR-G): [Click here to join the meeting](#)

#### **Joint session with participants from both workshops**

**Item 12:** Exchange of ideas and progress update with participants from both workshops

#### **Session objectives:**

- Brainstorm with the modelling/scenarios experts to ensure alignment
- Sharing of initial ideas from a solutions pathways perspective and modelling/scenarios perspective
- Discussion on how to link the two parts and respective needs

**Supporting document:** [GEO-7 Scoping document](#), discussion documents

#### **Decision/discussion:**

- How can the two groups best collaborate?
- What's the timeline for the work of the two groups?

#### 10h30 – 11h00

**Item 13: Coffee Break**

#### 11h00 – 13h00

Location: Room G (MR-G): [Click here to join the meeting](#)

**Item 14:** Continued brainstorm

#### **Session objectives:**

- Brainstorm with the modelling/scenarios experts to ensure alignment

- Sharing of initial ideas from a solutions pathways perspective and modelling/scenarios perspective
- Discussion on how to link the two parts and respective needs

**Supporting document:** [GEO-7 Scoping document](#), discussion documents

**Decision/discussion:** Discuss and agree on how the groups will work together, how the methods will dovetail and what key aspects of the work must advance and by when

### 13h00 – 14h00

**Item 15:** Lunch

### 14h00 – 15h30

Location: Room G (MR-G):

*[The participants then move to their allocated rooms – Solutions Pathways group in Room G, Modelling and Scenarios group in Room F]*

**Item 16:** Identification of policies: criteria to be used

**Session objectives:** Agree on methods for developing Solutions Pathways in GEO-7

**Decision/discussion:** Can the methodologies be narrowed down to one primary method?

**Supporting document:** [GEO-7 Scoping document](#), Solutions Pathways discussion paper

### 15h30 – 16h00

**Item 17: Coffee Break**

### 16h10 – 17h50

Location: Room G (MR-G)

**Item 18:** Identifying data and analytical needs to support the proposed methodology

**Session objectives:** Outline what data and analysis are needed to apply the Solutions Pathways methodology and whether these available

**Decision/discussion:** what are the data and analysis needs and how can they be met?

**Supporting document:** Solutions Pathways discussion paper

### 17h50 – 18h00

Location: Room G (MR-G)

**Item 19:** Closing of the meeting and takeaway from day 2

### Friday March. 10, 2023 – 09h00 to 18h00

### 9h00 – 09h10

Location: Room G (MR-G): [Click here to join the meeting](#)

**Item 20:** Recap the previous discussions and set the objectives for day 3

**Session Objectives:** Recap the discussion from day 2 and objectives for day 3

### 9h10 – 10h30

[Location: Room G \(MR-G\): Click here to join the meeting](#)

**Item 21:** Selected literature that must be reviewed to support the selected methodology and analysis

**Session Objectives:** Establish which supporting evidence is needed from the literature to document the methodology.

**Supporting document:** Solutions Pathways discussion paper

### 10h30 – 11h00

**Item 22: Coffee Break**

### 11h00 – 13h00

[Location: Room G \(MR-G\): Click here to join the meeting](#)

**Item 23:** Discussion on the typologies of countries

**Session objectives:** Review and agree on the typologies as inputs for the method (e.g. countries, economic and social indicators) as well as the metrics to be output by the methodology (i.e. the inputs to the modelling and scenarios work)

**Supporting document:** [GEO-7 Scoping document](#), Solutions Pathways discussion paper

### 13h00 – 14h00

**Item 24:** Lunch

### 14h00 – 15h30

[Location: Room G \(MR-G\): Click here to join the meeting](#)

**Item 25:** Group discussion and agreement on:

- roles and responsibilities
- best practices on how to work together, including the use of the GEO collaboration platform and other tools
- workplan for 2023-2024

**Session objectives:** Discuss and agree on:

- workplan for developing the methodology
- divisions of roles and responsibilities
- modus operandi and best practices on how to work together

**Supporting document:** [GEO-7 Scoping document](#), [GEO-7 timeline](#), Solutions Pathways discussion paper

### 15h30 – 16h00

**Item 26: Coffee Break**

### 16h10 – 17h50

[Location: Room G \(MR-G\): Click here to join the meeting](#)

### **Joint session with participants from both workshops**

**Item 27:** Recap of the three days and preparation of the presentation for the Authors meeting

- Discussion and agreement on methodological objectives, roles and responsibilities
- Collective preparation of the presentation for Day 1 of the authors meeting on next Monday
- Collection of takeaways from the three days of workshop

#### **Session objectives:**

- Development of a presentation for Day 1 of the authors meeting
- Summarize the takeaways from the three days of the workshops.

**Decision/discussion:** Agreement on a methodology and ways to collaborate among the two groups

#### 17h50 – 18h00

**Item 28:** Closing of the meeting

## Annex B: Participants list

Title	First Name	Last Name	Occupation	Affiliation
Sir	Robert	Watson	Environmental Scientist	Formerly chaired, co-chaired IPBES, IPCC, MPN, MEA AMONG OTHERS
Prof.	Edgar	Gutierrez-Espeleta	Special Envoy for LAC for the UNCCD	Former Minister of Environment and Energy for Costa Rica
Dr.	Monica	Kerretts- Makau	Academic and Research and Practitioner	Thunderbird School of Global Management - Arizona State University
Dr.	Parfait M	Eloundou-Enyegue	University Professor	Cornell University
Mr.	Christian	Loewe	Senior Researcher, Digitalization and Sustainability	German Environment Agency
Dr.	Bruno	Turnheim	Permanent researcher	Laboratoire Interdisciplinaire Sciences Innovations Sociétales (LISIS), Institut National de la Recherche en Agriculture, Alimentation et Environment (INRAE)
Mrs.	Leila	Devia	Professor and researcher	Instituto Nacional de Tecnología Industrial (INTI)
Dr.	Thang	Nguyen Trung	Researcher	Institute of Strategy and Policy on Natural Resources and Environment
Dr.	Karachepone	Ninan	Honorary Professor	Centre for Economics, Environment and Society (CEES), India
Dr.	Henri	Rueff	Head of Sustainable Land Systems Impact Area	Centre for Development and Environment, University of Bern
Dr.	Patricia	Maccagno	Teacher and researcher in environmental issues	Moreno National University
Dr.	Pierre	Failler	Professor in Economics	University of Portsmouth
Ms.	Deborah	Ley	United Nations Economic Commission for Latin America and the Caribbean, ECLAC	
Dr.	Kevin Nnanye	Nwaigwe	Professor	Clean Energy Research Centre, University of Botswana
Dr.	Alice	Odingo	Professor	University of Nairobi
Dr.	Peter	Alexander	Senior Lecturer in Global Food Security	School of Geosciences, The University of Edinburgh
Dr.	Patrick	Schroeder	Senior Research Fellow	Chatham House

Mrs.	Rossana	Gaudio	Economista, especialista en econom�a y ambiente	Ministerio de Industria y Energ�a
Ms.	Apoorva	Arya	Chief Executive Officer at Circular Innovation Lab	Circular Innovation Lab
Dr.	Olena	Maslyukivska	Researcher	University of Vaasa, Finland
Mr.	Ken	Webster	Author /Consultant	Visiting Fellow Cranfield University
Dr.	Binaya Raj	Shivakoti	Senior Policy Researcher (Adaptation and Water)	Institute for Global Environmental Strategies (IGES)
Dr.	Gail	Taylor	Professor of Environmental Plant Sciences	University of California, Davis/University of Southampton
Dr.	Peter	King	Senior Policy Adviser	IGES, Thailand
<b>UNEP Team</b>				
Mr.	Pierre	Boileau	Head, GEO	UNEP, Nairobi
Mr.	James	Lomax	Food systems and Agriculture adviser	UNEP, Nairobi
Mr.	Jinhua	Zhang	Regional Office	UNEP, Bangkok
Mr.	Jason	Jabbour	Chief Scientist Office	UNEP, Nairobi
Mr.	Llorenç Mila I	Canals	Life Cycle Initiative	UNEP, Paris
Mr.	Ignacio	Sanchez	GEO	UNEP, Nairobi
Ms.	Caroline	Kaimuru	GEO	UNEP, Nairobi
Mr.	Sudhir	Sharma	Energy and Climate	UNEP, Bangkok

### Apologies

Title	First Name	Last Name	Occupation	Affiliation
Dr.	Stefan	Reis	Environmental Scientist	UK Centre for Ecology & Hydrology / DLR-PT, Unit Environment and Sustainability (from 20/03/2023)
Miss.	Svetlana	Radionova	Head of the Federal Service for Supervision of Natural Resources	Rosprirodnadzor
Dr.	Ronaldo	Seroa da Motta	Professor	State University of Rio de Janeiro