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**Plenary of the Intergovernmental Science-Policy
Platform on Biodiversity and Ecosystem Services****Eighth session**

Online, 14–24 June 2021

Item 5 of the provisional agenda*

**Report of the Executive Secretary on progress in the
implementation of the rolling work programme up to
2030****Information on work related to advanced work on scenarios
and models of biodiversity and ecosystem services****Note by the secretariat**

1. In section V of its decision IPBES-4/1, the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) approved the summary for policymakers of the methodological assessment of scenarios and models and accepted the individual chapters of the assessment. In the same decision, the Plenary requested the Multidisciplinary Expert Panel to oversee further work related to scenarios and models, and to appoint an expert group to perform that work.
2. At its seventh session, in its decision IPBES-7/1, the Plenary adopted the rolling work programme of the Platform for the period up to 2030, which includes among its six objectives advanced work on scenarios and models of biodiversity and ecosystem functions and services (objective 4 (b)). The objective consists of providing advice to expert groups assessing the use of existing models and scenarios, and catalysing the development of new scenarios and associated models for the future work of IPBES and the application in policy development, while also promoting coherence with similar work carried out by the Intergovernmental Panel on Climate Change and other bodies, as appropriate.
3. In the same decision, the Plenary established a task force on scenarios and models for the implementation of objective 4 (b) of the rolling work programme of IPBES up to 2030, in accordance with the revised terms of reference set out in sections I and V of annex II to the decision, and building on the work of the former expert group on scenarios and models, whose mandate ended with the seventh session of the Plenary. The Plenary requested the Bureau and the Multidisciplinary Expert Panel, through the IPBES secretariat, to constitute the task force in accordance with the terms of reference.
4. According to its terms of reference, the task force oversees and takes part in the implementation of objective 4 (b) of the rolling work programme up to 2030, “Advanced work on scenarios and models of biodiversity and ecosystem functions and services”, and acts in accordance with relevant decisions by the Plenary and its subsidiary bodies, including by building on lessons learned in the implementation of deliverable 3 (c) of the first work programme. The task force implements the work on scenarios and models based on the terms of reference for the further development of tools and methodologies regarding scenarios and models to facilitate the provision of advice to all the expert teams, in particular those working on assessments on the use of scenarios, and to catalyse the further development of scenarios and models for future IPBES assessments, as well as to guide the secretariat, including the dedicated technical support unit, in the provision of support. The task force exchanges information and collaborates with other bodies developing relevant scenarios and

* IPBES/8/1.

models under the guidance of the Bureau. The Plenary also decided to review the mandate and terms of reference of the task force at its tenth session.

5. Further, the Plenary took note of the next steps for the task force for 2019 and 2020 and requested the task force to develop specific deliverables for each of the priority topics set out in paragraph 8 of the rolling work programme up to 2030¹ for consideration by the Plenary at its eighth session. The general terms of reference of the task forces, set out in annex II to decision IPBES-7/1, stipulate that each task force will, among other activities, provide a regular progress report and, in consultation with the Multidisciplinary Expert Panel and the Bureau, develop and update a workplan that sets out clear milestones and deliverables with regard to the relevant topics and objectives of the rolling work programme up to 2030 for periodic consideration by the Plenary.

6. Information on draft deliverables for objective 4 (b), an interim workplan for the task force for the intersessional period 2021–2022 and a draft workplan for the intersessional period 2022–2023 are set out in document IPBES/8/7. An overview of activities carried out by the task force since the seventh session of the Plenary is set out in the report of the Executive Secretary on progress in the implementation of the rolling work programme up to 2030 (IPBES/8/2).

7. The annex to the present note provides further information on activities carried out by the task force in addressing its mandate, activities planned for the next intersessional period and an overview of possible activities related to the nexus and transformative change assessments. The annex is presented without formal editing.

¹ The three priority topics are: (a) understanding the importance of biodiversity in achieving the 2030 Agenda for Sustainable Development; (b) understanding the underlying causes of biodiversity loss and determinants of transformative change and options for achieving the 2050 Vision for Biodiversity; and (c) measuring business impact and dependence on biodiversity and nature's contributions to people.

Annex

Information on the interim workplan related to scenarios and models of biodiversity and ecosystem services

I. Membership of the task force

1. On 17 May 2019, a notification (EM/2019/09) was issued, in which Governments and relevant stakeholders were invited to nominate candidates for the five IPBES task forces. 59 nominations were received for the task force on scenarios and models. Of the nominations received: 20 candidates were female and 39 were male, 7 were from Africa, 8 from Asia-Pacific, 2 from Eastern Europe, 7 from Latin America and the Caribbean and 35 from Western Europe and other States.

2. The Multidisciplinary Expert Panel and Bureau, at their 13th meetings selected the members of the task force in line with its terms of reference set out in annex II to decision IPBES-7/1. The Multidisciplinary Expert Panel and Bureau identified three gaps in the availability of expertise with regard to 1) indigenous and local knowledge, 2) anthropology and 3) narrative writing, and filled the gaps in line with the procedure set out in the annex to decision IPBES-4/3. The process to replace one member of the task force having resigned is currently ongoing.

3. Following a call for the nomination of fellows for the development of scenarios on nature and its contributions to people by 15 January 2019 (EM/2018/31), 5 fellows were selected by the management committee of the former expert group on scenarios and models in March 2019. This fellowship was extended when the task force on scenarios and models was established at the seventh session of the IPBES Plenary. The final composition of the task force comprises:

Name	Country	Function
Shizuka Hashimoto	Japan	Task force co-chair, member of the Multidisciplinary Expert Panel
Carolyn Lundquist	New Zealand	Task force co-chair, expert
Douglas Beard	United States of America	Bureau member
Rovshan Abbasov	Azerbaijan	Member of the Multidisciplinary Expert Panel
Mariteuw Chimere Diaw	Senegal	Member of the Multidisciplinary Expert Panel
Khaled Allam Harhash	Egypt	Expert
Mekuria Argaw Denboba	Ethiopia	Expert
Laura Pereira	South Africa	Expert
Sathyapalan Jyothis	India	Expert
Dandan Yu	China	Expert
Lilibeth Acosta-Michlik	Philippines	Expert
Ali Kerem Saysel	Turkey	Expert
Ramon Pichs-Madruga	Cuba	Expert
Maria Gasalla	Brazil	Expert
Dolors Armenteras	Colombia	Expert
Garry Peterson	Canada	Expert
Henrique Pereira	Portugal	Expert
William Cheung	Canada	Expert
Paul Leadley	France	Expert
Paula Harrison	United Kingdom of Great Britain and Northern Ireland	Expert
Sylvia Karlsson-Vinkhuyzen	Sweden	Expert
Ana Paula Dutra De Aguiar	Brazil	Expert
Polina Shulbaeva	Russian Federation	Expert
Vacant		Expert

Name	Country	Function
América Paz Durán	Chile	Fellow
Jan Kuijper	The Netherlands	Fellow
HyeJin Kim	Republic of Korea	Fellow
Ghassen Halouani	Tunisia	Fellow
Brian Miller	United States of America	Fellow

4. PBL – the Netherlands Environmental Assessment Agency, which had provided technical support to the Assessment of Scenarios and Models and to the expert group on scenarios and models that had been mandated to work between the fourth and seventh sessions of the Plenary, was selected by the Bureau at its 13th meeting to also provide technical support to the task force under the 2030 rolling work programme until the tenth session of the Plenary.

II. First and second meetings of the task force

5. The first meeting of the task force on scenarios and models under the rolling work programme of IPBES up to 2030 was organized jointly with the four other IPBES task forces in Bonn, Germany from 11 to 14 November 2019.

6. In response to the request by the Plenary in decision IPBES-7/1, the task force, at that meeting, prepared, and further developed in 2020, a set of draft deliverables for objective 4(b) of the IPBES rolling work programme up to 2030, supporting policy through advanced work on scenarios and models of biodiversity and ecosystem functions and services, as well as a suite of specific activities for the period until the eighth session of the Plenary and beyond.

7. A second meeting of the task force on scenarios and models was held from 6 to 8 May 2020 to further develop a detailed work plan for the task force and to organize its work for the remainder of the year and to agree on the methodological steps in creating draft narratives that can be used in the review and dialogue consultations on the Nature Futures Framework.

III. Progress in the implementation of objective 4(b): Advanced work on scenarios and models of biodiversity and ecosystem functions and services

A. Introduction and overview

8. The draft deliverables for objective 4(b) developed by the task force include:

- (a) Provide support to IPBES assessments on scenarios and models (draft deliverable 1);
- (b) Catalyse the further development of scenarios and models for future IPBES assessments (draft deliverable 2);

9. Deliverable 1 consists of the provision of support to IPBES assessments on scenarios and models by mobilizing experts for scoping processes and assessments, by supporting the review of drafts of assessments, providing advice to assessments, and coordinating and mobilizing input on scenarios and models for the assessments.

10. In order to catalyse the further development of scenarios and models for future IPBES assessments (deliverable 2), the task force has first developed the Nature Futures Framework (see appendix II for the most recent draft presentation of this framework), compatible with the IPBES conceptual framework. The task force designed this framework to allow the scientific community to develop new scenarios for future IPBES assessments, and the modelling communities to develop models to quantify the impact of such scenarios on biodiversity and nature's contributions to people, building on the IPBES conceptual framework. The Nature Futures Framework could also be used by stakeholders and research communities in a qualitative manner, or by combining qualitative and quantitative approaches, to imagine examples of new, desirable futures for nature at multiple scales.

11. Progress in the provision of support on scenarios and models to IPBES assessments is set out in section B below; progress in the catalysation of the further development of scenarios and models for future IPBES assessments in section C below.

12. An interim work plan for the intersessional period 2021/22 and a draft work plan for the intersessional period 2022/2023 are set out in document IPBES/8/7, including activities to support the understanding and use of, as well as contributions to the Nature Futures Framework by the wider community. Appendix III of the present note provides further details on the draft deliverables with proposed activities and an indicative timeline.

B. Progress in the provision of support on scenarios and models to IPBES assessments

13. Two task force members participated as coordinating lead author and lead author in the assessment of the sustainable use of wild species and a task force member as review editor in the values assessment.

14. The task force on scenarios and models continued providing support to ongoing assessments, by participating in the review of the second order draft of the chapters and the first order draft of the summary for policymakers of the values assessment (March 2020). One task force member contributed to the internal review of the first order draft of the assessment of invasive alien species.

15. Two task force members were selected as experts to assist with the scoping of the nexus assessment. Several task force members participated in the review of the draft scoping reports for both the nexus and the transformative change assessments (July 2020).

16. The task force also mobilized the scientific community through the networks of task force members to participate in IPBES activities requiring scenarios and models expertise (e.g., review of assessment drafts).

17. The task force has worked with the task force on indigenous and local knowledge on developing guidance on indigenous and local knowledge and scenarios.

18. As part of the work on scenarios and models, four key publications that had been initiated by the former expert group, and a report by the task force were finalized to inform upcoming assessments and engage the broader scientific community.

C. Progress in the catalysation of the further development of scenarios and models for future IPBES assessments

1. Work organised by the technical support unit on scenarios and models following the seventh session of the Plenary and ahead of the establishment of the task force (June 2019 – November 2019)

19. The technical support unit on scenarios and models organized a workshop on ‘Global Modelling of Biodiversity and Ecosystem Services’ in The Hague, Netherlands, on 24-26 June 2019 thanks to in-kind support of PBL to the work on scenarios and models. Participants included 28 modelling and scenario-building experts, who came either from the former expert group on scenarios and models or from this expert group’s network in the modelling communities, four fellows, and three members of the technical support unit. The objective of this workshop was to stimulate the continuation of the work on scenarios and models in IPBES during the transition toward the establishment of the task force. The specific aims of the workshop were to: (i) develop a protocol for modelling trends and near term projections on indicators relevant to the Nature Futures Framework using models that are readily available); (ii) to develop elements of an agenda and possible objectives for a meeting to discuss the long-term strategy towards the development of appropriate indicators and models to produce Nature Futures scenarios; and (iii) compile material as input for a first draft of the fifth Global Biodiversity Outlook based on recent scenario work, and existing models. The outcomes of the workshop were presented as a report².

20. A member of the expert group on scenarios and models that existed between the fourth and seventh sessions of the IPBES Plenary, with the support of the technical support unit, contributed to an IPBES youth workshop in São Pedro, Brazil (27-28 June 2019) using the Nature Futures Framework to explore future scenarios and biodiversity and ecosystem services from the perspective of

² PBL (2019), Report on the workshop ‘Global Modelling of Biodiversity and Ecosystem Services’. PBL Netherlands Environmental Assessment Agency, The Hague. Available from: <https://www.pbl.nl/en/publications/workshop-report-global-modelling-of-biodiversity-and-ecosystem-services>

early-career professionals, and thus contributing to IPBES work on scenarios and models. For more information on the workshop see IPBES/8/INF/9.

21. Four members of the expert group on scenarios contributed to the workshop ‘Improving Brazilian capacities for national assessments, biodiversity information management and mainstreaming of scientific data into policy’ in Sao Paulo, Brazil from 1 to 14 July 2019, using the Nature Futures Framework to build capacities in Brazil to conduct large scale assessments and monitoring of biodiversity and ecosystem services, to manage and explore “big data”, to strengthen the science-policy interface by establishing better ways to communicate scientific findings to policymakers, and to communicate the needs of policymakers for scientific information to funding agencies and the scientific community.

2. Work organised by the task force between the seventh and eighth sessions of the Plenary (2019 – 2021)

22. The task force organized the workshop “New Narratives for Nature: operationalising the IPBES Nature Futures scenarios” from 24 to 28 February 2020 in Hayama, Japan to continue the development of illustrative narratives of Nature Futures. The workshop was attended by members of the task force. The workshop also served to prepare for the production of a guide on the use of the Nature Futures Framework by testing its application with national level scenarios. The outcomes of the workshop have been presented as a report.³

23. The task force also developed a draft description of the Nature Futures Framework (appendix II sets out the most recent draft description of the Nature Futures Framework, as provided to the participants of the modelling workshop in January 2021), draft illustrative narratives of Nature Futures scenarios, as well as draft methodological guidance on the use of the framework.

24. The task force also organized as an online meeting the first part of a workshop on modelling Nature Futures scenarios from 12 to 15 January 2021, which forms part of a series of events on the Nature Futures Framework, targeting the modelling communities. The workshop participants selected by the Multidisciplinary Expert Panel, based on a proposal from the task force reviewed by their management committee, included 30 experts nominated by Governments and organizations following a call for nominations (EM/2020/32) and six experts from the ongoing assessments of the ‘sustainable use of wild species’, the assessment on ‘values’ and the assessment of ‘invasive alien species’, as well as experts from the scoping of the ‘nexus’ assessment and ‘transformative change’ assessments. In addition, 14 resource persons representing modelling groups who contributed to the biodiversity and ecosystem services model intercomparing exercise conducted as input to the Global Assessment, attended the workshop. The objective of this workshop was to catalyse the development of scenarios and models for IPBES by communities that develop and apply models of different types, scales and domains relevant to biodiversity and ecosystem services. The workshop introduced the draft Nature Futures Framework and methodological guidance and addressed how possible work by the modelling communities could support the upcoming nexus and transformative change assessments using the Nature Futures Framework, and what role could indicators play for modelling scenarios using the framework. Participants recommended the use of case studies (either existing or to be developed) to test and demonstrate the use of models to quantify Nature Futures Framework scenarios. Finally, participants discussed a timeline and further engagement in the period towards the second part of the workshop (planned for mid-2022).

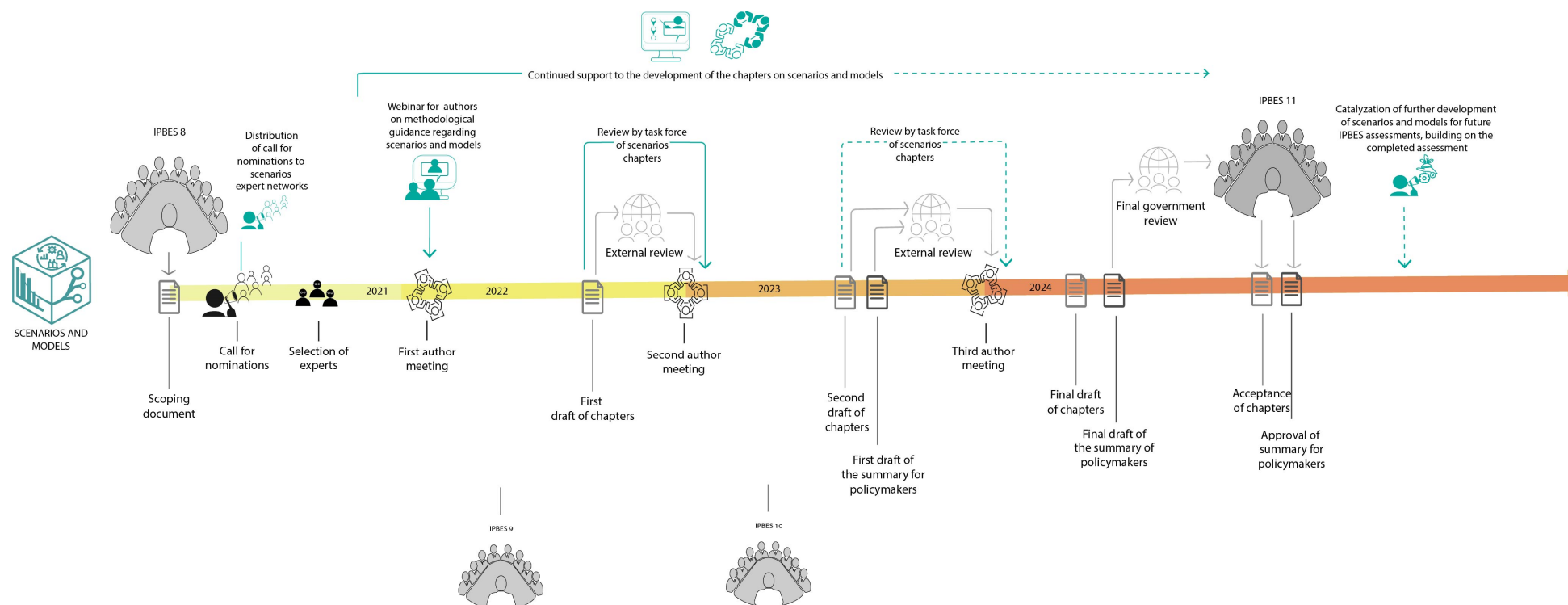
25. The task force also started to develop a method for mapping and categorizing existing indicators for the Nature Futures Framework and to explore synergies with other relevant groups such as Group on Earth Observation - Biodiversity Observation Network (GEO BON), and Ecosystem Services – Integrated Assessment Models Working Group.

³ PBL (2020), Report on the Workshop ‘New Narratives for Nature: operationalizing the IPBES Nature Futures Scenarios’. PBL Netherlands Environmental Assessment Agency, The Hague. Available from: <https://www.pbl.nl/en/publications/report-on-the-workshop-new-narratives-for-nature-operationalizing-the-ipbes-nature-futures-scenarios>

IV. Overview of possible activities under objective 4(b), advanced work on scenarios and models of biodiversity and ecosystem functions and services, related to the nexus and transformative change assessments

26. The work plans set out in document IPBES/8/7 contain various activities to provide support on scenarios and models to the nexus and transformative change assessments and catalyse the further development of scenarios and models for these and future assessments. If the task force was to continue its work following the review of its mandate at the tenth session of the Plenary, activities could include the continuation of these activities, including further facilitating the use of the Nature Futures Framework in catalysing the development of new scenarios and models for future IPBES assessments.

Figure 1
Overview of possible activities under objective 4(b), advanced work on scenarios and models of biodiversity and ecosystem functions and services, related to the nexus and transformative change assessments



Appendix I

Draft description of the Nature Futures Framework

Following from the IPBES Methodological Assessment of Scenarios and Models of Biodiversity and Ecosystem Services (IPBES, 2016), the former IPBES scenarios and models expert group set out a research strategy to address some of the key messages that emerged in the assessment and initiated the development of desirable, multiscale scenarios for nature. These scenarios should be produced through a process that includes a diversity of stakeholders, and explicitly include pathways that enable humanity to meet the desired 2050 Vision for Biodiversity under the Convention on Biological Diversity of ‘Living in harmony with nature’. Central to this process was the research question of how to develop these new scenarios in a way that addresses the gaps identified in other scenarios in order to support the work programme of IPBES. The former expert group and current task force scenarios and models were both mandated (draft deliverable 2) to catalyse such scenario development and ensure that these address the gaps identified in other scenarios by the scenarios and models assessment, and in support of the work programme of IPBES. Pereira et al. (2020)⁴ documents the iterative process that was undertaken by the IPBES scenarios and models expert group from 2016 to 2019 from which the Nature Futures Framework emerged, and is currently being further development by the task force.

The Nature Futures Framework is based on an in-depth analysis of a wide range of visions of positive futures for biodiversity and people (Lundquist et al 2017; Pereira et al. 2020), and embraces the diversity of human-nature relationships that reflect three primary value perspectives of nature (i.e., intrinsic, instrumental, and relational). This framework allows those involved in scenario building to recognize and address plural values ascribed to nature and nature's contributions to people in a more explicit manner, which conventional scenario building methods often fail to capture. The framework places relationships between people and nature at its core. The many ways that humans relate to nature can be used to develop a diversity of possible and desirable future scenarios. In the Nature Futures Framework, human-nature relationships are represented within a triangular framework (figure 2).

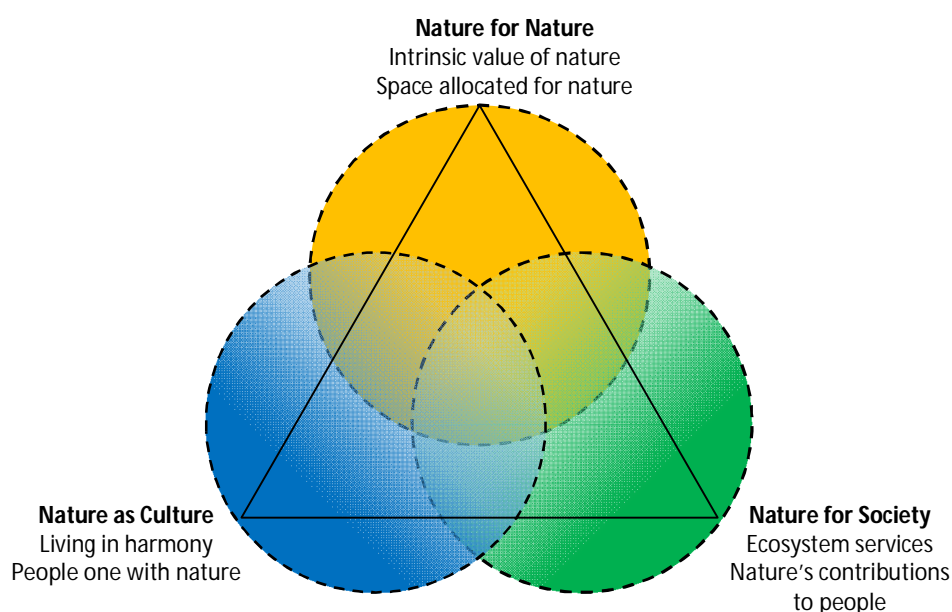


Figure 2

The Nature Futures Framework triangle with a list of some possible synonyms for the value perspectives that are used by various actors

Each corner of this triangle illustrates the orientation towards one of three value perspectives on the relationship between humans and nature (i.e., intrinsic, instrumental, and relational), and the space within the framework represents a continuum or gradient between these three value perspectives, from which multiple relationships between people and nature, and scenarios derived from these relationships, can emerge. It is important to bear in mind that the edges of the triangle offer extreme cases of what could be considered a ‘desirable future for nature’ that are limited to a particular

⁴ Pereira L. et al. 2020. Developing multi-scale and integrative nature-people scenarios using the Nature Futures Framework. *People Nat.* 1–24. doi:10.31235/osf.io/ka69n

perspective. As such, all the potential locations within the triangle are relational to each of the three corners and thus offer some combination of all three value perspectives. The Nature Futures Framework assumes that narratives or scenarios based on any location in the framework triangle are equally plausible. The three values perspectives of the framework are described as follows:

- In the *nature for nature* perspective, people view nature as having intrinsic value, and value is placed on the diversity of species, habitats, and ecosystems that form the natural world, and nature's ability to function autonomously. This perspective has dominated much of the original conservation movement's concern about the extinction crisis and the protection of wilderness, and is well represented in Aichi Biodiversity Targets on protected areas, drafts of the post-2020 global biodiversity framework being developed under the Convention on Biological Diversity, priorities for reducing rates of species extinctions, as well as within concepts such as "Half-Earth" and restorative management initiatives such as rewilding;
- The *nature as culture* perspective highlights primarily relational values of nature, where societies, cultures, traditions and faiths are intertwined with nature in shaping cultural landscapes. This perspective emphasises people living in harmony with nature and is often exemplified in spiritual and other non-material human-nature relationships such as cultural identity and sense of belonging. The *nature as culture* perspective is not limited to indigenous and local knowledge systems, and is increasingly recognized worldwide, for example, by initiatives that promote humans reconnecting with nature within urban and rural landscapes, traditional lifestyles, and nature's contributions to mental health;
- The *nature for society* perspective highlights the utilitarian benefits and instrumental values that nature provides to people and societies. This view is reflected in concepts such as ecosystem services, natural capital, green infrastructure, and nature-based solutions which exemplify nature as a provider of services to society. Ecosystem service science has developed a wide variety of approaches to quantify benefits that people receive from nature, such as food production, water filtration, and recreation, and many of these instrumental values form direct connections between nature and society and are represented within Aichi Biodiversity Targets, the post-2020 global biodiversity framework being developed under the Convention on Biological Diversity as well as the Agenda 2030 for Sustainable Development and its Sustainable Development Goals.

While the Nature Futures Framework builds on the concepts of intrinsic, relational, and instrumental values, the three perspectives do not map unequivocally to these values and allow for their coexistence, addressing some of the criticisms about value dimensions expressed by Piccolo (2017). The *nature for nature* perspective represents both intrinsic values and instrumental values such as existence values and non-material contributions from nature. The *nature for society* perspective is dominated by the use and indirect use of a subset of instrumental values, while the *nature as culture* perspective captures the relational values including the non-material contributions associated with cultural construction and interpretation of nature where the reciprocal relationship of people and nature may have intrinsic value.

Appendix II

Scenarios and models: List of draft deliverables and activities with timeline

Draft deliverables and sub-deliverables	Activities	Outputs	Intersessional IPBES 8 – 9			Post-IPBES 9
			2021 Q3	2021 Q4	2022 Q1	
<u>Sub-deliverable 1.1:</u> Mobilize experts for assessments and for scoping of upcoming assessments	▪ Distribution of calls for nominations of assessment authors and fellows.	<ul style="list-style-type: none"> ▪ Mobilisation of experts for the nexus assessment ▪ Mobilisation of experts for the transformative change assessment ▪ Mobilisation of experts for the business and biodiversity assessment 				
		<ul style="list-style-type: none"> ▪ Linkages between author groups and experts beyond the IPBES circle 				
<u>Sub-deliverable 1.2:</u> Support the review of drafts of assessments	▪ Dissemination of the invitation to review through relevant networks	<ul style="list-style-type: none"> ▪ Inventory of contributions and participation to date 				
	▪ Review of draft assessments by the task force on scenarios and models	<ul style="list-style-type: none"> ▪ Additional review of the second order draft of the summary for policymakers of the assessment on values ▪ Review of the second order draft of the chapters and the first order draft of the summary for policymakers of the assessment of invasive alien species ▪ Review of first order drafts of the nexus and transformative change assessments (post-IPBES 9) 				
<u>Sub-deliverable 1.3:</u> Provide advice to assessments	▪ Review of draft scoping reports by the task force on scenarios and models	<ul style="list-style-type: none"> ▪ Inputs to the external review of the scoping report of the business and biodiversity assessment 				

Draft deliverables and sub-deliverables	Activities	Outputs	Intersessional IPBES 8 – 9			Post-IPBES 9
			2021 Q3	2021 Q4	2022 Q1	
	<ul style="list-style-type: none"> ▪ Provision of assistance to the Multidisciplinary Expert Panel in the implementation of the process for filling gaps in expertise for these assessment expert groups, where required 	<ul style="list-style-type: none"> ▪ Suggestion of names of potential authors upon request 				
	<ul style="list-style-type: none"> ▪ Organization of webinars for assessment authors to support the development of scenarios chapters based on the Methodological Assessment of Scenarios and Models. ▪ Provision of support to all ongoing IPBES assessments on the use of currently available scenarios, including those developed by previous global-scale assessments and the shared socio-economic pathways (SSP) framework assessed by the Intergovernmental Panel on Climate Change 	<ul style="list-style-type: none"> ▪ Communication with coordinating lead authors and lead authors of assessments to advise on producing coherent chapters on scenarios and models <ul style="list-style-type: none"> ○ How to translate the methodological assessment into practical guidelines for assessment authors ○ Feeding back prior experience on assessments into new author groups ○ Recommended resources, databases, existing materials, case studies ○ Cross-chapter box on scenarios and models as needed (led by liaison group) ○ Cross-assessment meeting on scenarios and models with nexus and transformative change authors, as needed 				
		<ul style="list-style-type: none"> ▪ Webinars to guide the preparation of scenario chapters of ongoing and future assessments, in collaboration with the task force on capacity building 				
		<ul style="list-style-type: none"> ▪ Dialogue on indigenous and local knowledge and scenarios in collaboration with the task force on indigenous and local knowledge 				

Draft deliverables and sub-deliverables	Activities	Outputs	Intersessional IPBES 8 – 9			Post-IPBES 9
			2021 Q3	2021 Q4	2022 Q1	
<u>Sub-deliverable 1.4:</u> Coordinate/ stimulate development of scenarios and models, tailored to assessments	▪ Publications of articles in peer-reviewed journals to stimulate development of scenarios and models tailored to IPBES assessments, and to test the application of the draft nature futures framework and narrative scenario development methods where appropriate;	▪ Joint publications to inform assessments and the wider scientific community on, e.g., illustrative narratives for the Nature Futures Framework, quantitative scenarios for the framework, impacts on biodiversity and ecosystem services, assessment specific indicators, linkages to shared socio-economic pathways and model intercomparisons				
		▪ Identification of experts to engage in the nexus and transformative change assessments ▪ Tailoring the nature futures scenarios to inform future assessments				
<u>Sub-deliverable 2.1:</u> Further development of the Nature Futures Framework and scenarios	▪ 2.1.1 Further development of the nature futures framework for catalysing the development of the next generation of scenarios for biodiversity and ecosystem functions and services	▪ A draft description of the Nature Futures Framework for consideration by the Plenary at its ninth session ▪ A draft methodological guidance on the development of Nature Futures scenarios presented to the Plenary for its information at the same session ▪ Consultations on above material (see activities 2.1.3 and 2.1.4)				
	▪ 2.1.2. Further refinement of illustrative examples of nature futures	▪ Refinement of illustrative examples of nature futures (referred to as “narratives”) to provide the wider scientific community with examples of how the Nature Futures Framework could be used to imagine new desirable futures for nature				
	▪ 2.1.3 Consultations on the draft Nature Futures Framework and methodological guidance	▪ Stakeholder consultations and review on the draft framework and methodological guidance ○ Government review of the draft framework prior to submission to the Plenary at IPBES 9 ○ Dialogue with national focal points (with capacity building task force)				

Draft deliverables and sub-deliverables	Activities	Outputs	Intersessional IPBES 8 – 9			Post-IPBES 9
			2021 Q3	2021 Q4	2022 Q1	
		<ul style="list-style-type: none"> ○ Indigenous and local knowledge dialogue (with indigenous and local knowledge task force) ○ Review by Multidisciplinary Expert Panel and Bureau ▪ Informal review with modelling workshop participants <p>Communication and outreach strategy on nature futures (longer term), possibly combined with the promotion of the uptake of other IPBES deliverables</p>				
	▪ 2.1.4 Developing quantitative scenarios with modelling communities	<ul style="list-style-type: none"> ▪ Ongoing support to case study exercises by modelling groups to test the application of the draft Nature Futures Framework in follow-up to the first part of the modelling workshop held in January 2021 and in preparation for its second part scheduled for 2022 ▪ Organization of the second part of the workshop with modelling communities (physical workshop) to collect feedback on the methodological guidance on the use of the Nature Futures Framework and to facilitate the development of case studies which would be available for the nexus and transformative assessment ▪ Drivers of change and response options (link with task force on policy support tools to incorporate policy options) ▪ Socioecological feedbacks 				
Sub-deliverable 2.2: Identify/ develop indicators	▪ Linking the narratives and modelling by identifying key indicators that cover the Nature Futures Framework	▪ Draft set of inclusive indicators that cover the Nature Futures Framework at local to global levels				
	▪ Coordinating within IPBES	▪ Coordination indicators being used in IPBES assessments				

Draft deliverables and sub-deliverables	Activities	Outputs	Intersessional IPBES 8 – 9			Post-IPBES 9
			2021 Q3	2021 Q4	2022 Q1	
	▪ Coordinating with other relevant groups	▪ Synergies with the work of other bodies and processes (e.g., GEOBON, Convention on Biological Diversity, Sustainable Development Goals)				
<u>Sub-deliverable 2.3:</u> Continued interaction with broader modelling community	▪ Situating the Nature Futures Framework work within the prior work of the scientific community	▪ Analysis of the relationship between the Nature Futures scenarios, scenario archetypes, and the shared socio-economic pathways - representative concentration pathways framework, building on prior work of the scientific community (part of workshops and case studies, see 2.1.4)				
	▪ Identification of and outreach to other modelling communities beyond those already engaged (health, etc.)	▪ Complementary inputs to the quantitative scenarios and a broader network of modellers linked to the Nature Futures process (part of workshops and case studies, see 2.1.4)				
<u>Sub-deliverable 2.4:</u> Guide on conducting case studies to support broadening of narratives, indicators, etc.	▪ Extracting methods and lessons from the process of building and applying the Nature Futures Framework	▪ Written guide for conducting sub global participatory scenario-building processes based on the Nature Futures Framework				
	▪ Catalyse the generation of new Nature Futures scenarios that are case study-specific	▪ Refinement of the guide on conducting case studies using the Nature Futures Framework				

Draft deliverables and sub-deliverables	Activities	Outputs	Intersessional IPBES 8 – 9			Post-IPBES 9
			2021 Q3	2021 Q4	2022 Q1	
<u>Sub-deliverable (longer term):</u> Further catalysation of new scenarios on biodiversity and ecosystem services	<ul style="list-style-type: none"> ▪ Further development of the methodological guidance of the Nature Futures Framework ▪ Outreach on the Nature Futures Framework to catalyse the application of the framework and the narrative scenario development methods by various stakeholders 	<ul style="list-style-type: none"> ▪ Further development of the methodological guidance of the Nature Futures Framework; ▪ Outreach on the Nature Futures Framework, e.g., through publications in peer-reviewed journals (on, for instance, modelling the Nature Futures Framework, and illustrative examples of nature futures) which would provide the wider scientific community with examples of how the Nature Futures Framework could be used to imagine new desirable futures for nature. 				