

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

Online, 14–24 June 2021

Item 7 (b) of the provisional agenda*

**Scoping report for a thematic assessment of the
underlying causes of biodiversity loss and the
determinants of transformative change and options for
achieving the 2050 Vision for Biodiversity****Scoping report on assessing the underlying causes of
biodiversity loss and the determinants of transformative change
(thematic assessment) to achieve the 2050 Vision for
Biodiversity******Note by the secretariat**

1. At its seventh session, in paragraph 2(b) of section II of decision IPBES-7/1, the Plenary approved the scoping process for a thematic assessment of the underlying causes of biodiversity loss and the determinants of transformative change and options for achieving the 2050 Vision for Biodiversity,¹ in accordance with the procedures for the preparation of Platform deliverables set out in annex I to decision IPBES-3/3 and based on the initial scoping report for the assessment, set out in appendix II, section III to document IPBES/7/6.

2. The present note sets out the scoping report presented to the Plenary by the Multidisciplinary Expert Panel. Information on the scoping process is provided in IPBES/8/INF/6.

**I. Scope, timeline and geographic coverage, policy context,
overarching questions and methodological approach****A. Scope**

3. For the purposes of the assessment, and in line with previous IPBES work approved by the IPBES Plenary, transformative change² is defined as a fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values³. The need

* IPBES/8/1.

** The present document is being issued without formal editing.

¹ A world of “Living in harmony with nature” where “By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”, decision X/2 of the Conference of the Parties to the Convention on Biological Diversity, annex.² Throughout the scoping document, transformative change is referred to in the singular but includes many types of changes.³ IPBES (2019): Summary for Policymakers of the Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, S. Diaz, J. Settele, E.S. Brondizio, et al. (eds.). IPBES secretariat, Bonn, Germany. 56 pages.

for and possibility of rapid transformative change have become apparent during the COVID-19 pandemic.

4. The IPBES Global Assessment of Biodiversity and Ecosystem Services concluded that plausible pathways exist for achieving the 2050 Vision for Biodiversity in conjunction with key human development goals. These pathways, however, require fundamental changes in development paradigms and social-ecological dynamics, which in turn entail changes in society, considering inequality and governance, employing much more sustainable use of land, water, energy and materials, and rethinking and appropriately modifying consumption habits, food systems, and global value chains. The assessment will inform decision-makers on options to implement transformative change in order to achieve the 2050 Vision for Biodiversity and the Sustainable Development Goals.

5. The assessment report will assess different visions and scenarios for a sustainable world for nature and people, in line with the 2050 Vision for Biodiversity and in the context of the 2030 Agenda and its Sustainable Development Goals, including visions of indigenous peoples and local communities. Further, the report will assess the determinants of transformative change, how it occurs, which obstacles it may face, and, importantly, which options for action exist to foster and maintain transformative change toward visions, scenarios and pathways of a sustainable world, which steps are required to achieve these visions, and how progress towards transformative change can be identified and tracked.

6. The assessment aims at identifying and providing understanding of factors in human society, at both the individual and collective levels, and at different scales from local to global, that can be leveraged to bring about transformative change to help achieve the 2050 Vision for Biodiversity and the Sustainable Development Goals. These factors span psychological, behavioural, social, cultural, economic, political, governance, institutional, demographic, technical and technological dimensions, corresponding to the indirect drivers of change in biodiversity, which sit at the centre of the IPBES conceptual framework⁴. They include the role of formal and informal institutions, and the impacts of the patterns of production, supply and consumption on nature, nature's contributions to people and good quality of life. A better understanding of how these interacting drivers can be changed or shifted can inform the development of policies and actions to trigger transformative change towards maintaining and promoting biodiversity and nature's contributions to people, and towards sustainability and good quality of life at many levels, from individuals through communities and businesses, to society at large, in line with the 2050 Vision for Biodiversity and in the context of the Sustainable Development Goals.

7. The assessment will consider the importance of the indirect drivers mentioned above in their impact on the most important direct drivers of change⁵ (i.e. land-/sea-use change, direct exploitation of organisms, climate change, pollution, and invasion of alien species) across all biomes.

8. The assessment will take into account the diversity of societal values and behaviours which underpin and co-evolve with indirect drivers of change, that is, the motives behind broad societal changes and transitions, to inform the design of relevant policies, communication and engagement campaigns and other actions. Accordingly, it will take into account, inter alia: (a) values (relational, utilitarian, etc.), how they influence behaviour and how this differs between regions and subregions and between levels of development, building on and complementing the IPBES assessment on values, once finalized; (b) notions of good quality of life, worldviews and cultures, models of interaction between nature and people and social narratives; (c) the role of governance systems, of norms and regulations, of education and communication, of economic incentives, and of financial and other institutions in leveraging behavioural change in individuals, businesses, communities and societies; (d) the role of technologies and of the assessment of technologies; (e) the role of individual and collective action; (f) the role of complex systems and of transformation and transitions theory; (g) obstacles to achieving transformative change; (h) equity and the need for "just transitions", including gender aspects; (i) lessons from previous transitions, crises, and transformations.⁶

9. The assessment process and its outputs will be supported by, and contribute to, the four functions of the Platform.⁷

⁴ Conceptual framework for IPBES, annex to decision IPBES-2/4.

⁵ As identified in the Summary for Policymakers of the Global Assessment Report on Biodiversity and Ecosystem Services.

⁶ As presented in IPBES/7/6, appendix II, section I.

⁷ UNEP/IPBES.MI/2/9, annex I, appendix I, section I.

B. Timeline and geographic coverage

10. This assessment will be global in scope. It will also highlight similarities and differences between regions and subregions and between countries at different stages of development and include local examples, as well as cross-scale issues. It will cover past and future time ranges and time steps of transformative change, as appropriate.

11. The assessment will be conducted over three years, which positions it well to inform and facilitate a review of progress towards the implementation of the post-2020 global biodiversity framework, the 2030 Agenda for Sustainable Development, and the Paris Agreement on Climate Change.

C. Policy context

12. Intended users of the assessment include, but are not limited to: Governments; governing bodies of multilateral environmental agreements; decision-makers in global policy frameworks, subnational governments and local authorities; scientists; education systems and media; the private sector and civil society, including indigenous peoples and local communities, youth, women, and non-governmental organizations.

13. This assessment will strengthen the knowledge base for informed evidence-based decision-making, in the context of the post-2020 global biodiversity framework and the 2050 Vision for Biodiversity, the Agenda 2030 for Sustainable Development and the Paris Agreement. The assessment is also intended to inform other relevant processes under multilateral environmental agreements, other conventions, agreements, and organizations focused on biodiversity and environmental issues, as well as relevant sectoral and regional multilateral environmental agreements and processes.

14. The assessment is further expected to inform subnational, national, regional and global policies relevant for the conservation and sustainable use of biodiversity and ecosystems, of natural resources, and of nature's contributions to people.

D. Overarching questions

15. The assessment will address questions of relevance to decision-makers and other stakeholders dealing with transformative change issues in order to achieve the 2050 Vision for Biodiversity and the Sustainable Development Goals of the Agenda 2030 and to implement the post-2020 global biodiversity framework, and the Paris Agreement" (referred to below, to avoid repetition, as "global objectives"), such as:

(a) What are transformative changes, and how do they relate to current approaches to managing biodiversity and ecosystem services?

(b) How can deliberate and emergent transformative change be used to achieve the global objectives mentioned above?

(c) How do different groups envision a sustainable world where the 2050 Vision for Biodiversity has been achieved in the context of the Sustainable Development Goals? What do these visions and the underlying values imply for transformative changes across sectors and systems?

(d) What future scenarios and pathways could lead to the transformations needed to achieve the global objectives mentioned above? Which levers and policies in these scenarios and pathways are central to enabling the needed transformations?

(e) What enables and accelerates transformative change and what can policymakers, decision-makers, managers, stakeholders, citizens and businesses and organizations do to use and further transformative change to meet relevant local, national and international goals in an equitable, just and participatory manner leaving no one behind?

(f) Which obstacles and challenges impede transformative change toward a sustainable world, how might they change over time, scale and context, and how can they be overcome?

(g) Which options and roles do policymakers, decision-makers, managers, stakeholders, citizens and businesses and organizations have to foster change toward achieving the global objectives mentioned above and how might these options and roles change over time and context?

(h) How can options be combined in pathways to allow achieving the global objectives mentioned above?

(i) What are the most important knowledge gaps to address regarding the underlying causes of biodiversity loss in order to achieve transformative change and the global objectives mentioned above, and how can these knowledge gaps be addressed?

(j) What communication, education and other strategies can be used to educate the intended users of this assessment about transformative change toward a sustainable world?

E. Methodological approach

16. The assessment will be produced by a group of experts in accordance with the procedures for the preparation of Platform deliverables. It will include a summary for policymakers and a set of chapters, submitted to the Plenary for its approval and acceptance, respectively.

17. The assessment will aim to be credible, legitimate, and build from a multiple evidence-base. The summary for policymakers will highlight key policy-relevant findings and non-prescriptive policy options for a wide range of end users, some of which are mentioned above, and reflect the comprehensive analysis of the current state of scientific knowledge and other knowledge systems (including indigenous and local knowledge) performed in the chapters

18. The assessment will be based on existing evidence, i.e. data (including, as appropriate, national data), scientific and grey literature and other forms of knowledge and languages (to the extent possible), in line with relevant procedures of the Platform.

19. The assessment will build on and complement previous and ongoing work by IPBES, including IPBES assessments (methodological, thematic, regional and global). The assessment will also use existing data and information held by global, regional, subregional and national institutions including but not limited to relevant multilateral environmental agreements and intergovernmental organizations. The assessment will use existing scenarios and models as well as new scenarios and models whose production may be catalyzed as part of the follow-up to the IPBES Assessment of Scenarios and Models of Biodiversity and Ecosystem Services⁸.

20. The assessment will identify key information and knowledge gaps and areas where capacity-building and the development of policies and policy tools could facilitate the implementation of the policy options presented in the assessment. The assessment would provide options and solutions for addressing these gaps at the relevant levels.

21. The task force on indigenous and local knowledge will support the implementation of the IPBES approach to recognizing and working with indigenous and local knowledge⁹ for this assessment. The task force on knowledge and data will support work related to data and knowledge, as detailed in section III below. The task force on policy tools and methodologies will perform work to increase the policy relevance of the assessment and its use in decision-making, once approved. The task force on scenarios and models will support work related to scenarios and models, as detailed in section III. Finally, the task force on capacity-building will oversee the implementation of capacity-building activities as outlined in section IV. All IPBES task forces will perform their support to this assessment in line with their respective mandates.

22. Given the potentially strong interlinkages between the planned IPBES transformative change assessment and nexus assessment (the thematic assessment of the interlinkages among biodiversity, water, food and health in the context of climate change; IPBES/8/3), close coordination and facilitation between both assessment processes will be ensured to enable synergies and complementarity and to avoid duplication of scope and work. The two assessments will be complementary, with the transformative change assessment focused on determinants of transformative change, and the nexus assessment focused on options for overcoming trade-offs and for enabling synergies between biodiversity, water, food, climate, energy and health.

II. Chapter outline

23. In its chapters, the assessment will reflect the very nature of transformative change and the multiple values, knowledge systems, institutions and choices involved. As the assessment is intended for a broad and diverse audience and recognizes the need to engage a wide range of actors and communities in transformative change, each chapter will include an assessment of multiple values,

⁸ IPBES (2016): The Methodological Assessment Report on Scenarios and Models of Biodiversity and Ecosystem Services. S. Ferrier, K. N. Ninan, P. Leadley, R. Alkemade, et al. (eds.). IPBES secretariat, Bonn, Germany. 348 pages.

⁹ Set out in annex II to decision IPBES-5/1.

relevant disciplinary perspectives, knowledge systems, development pathways and roles of different actors. Transformative change also entails trade-offs, choices, synergies, equity impacts and tensions, which the assessment will address. It will present actionable knowledge and policy options that open pathways to sustainable and equitable futures.

24. **Chapter 1: Transformative change and a sustainable world.** Chapter 1 will present evidence for the need for transformative change, explain what transformative change is, whether and how it differs from incremental change, and which types of transformative changes could foster the achievement of the Sustainable Development Goals and 2050 Vision for Biodiversity. The chapter will also examine the consequences of the absence of transformative change. It will present a problem statement based on evidence and calls from completed assessments by IPBES and relevant assessments and reports by others, including those under multilateral environmental agreements. The chapter will explore, how to address, in the context of transformative change, the direct and indirect drivers of biodiversity loss and nature deterioration, including climate change and development and environmental inequities, and to reverse biodiversity loss and restore nature and its contributions to people. The chapter will consider the impacts of production systems, resource use and extraction, trade and financial flows, pollution, legacies of colonialism, and of human population dynamics and social practices related to nature and the resultant distribution of material and non-material benefits, degradation and vulnerabilities across global societies and scales. From this problem statement, the chapter will:

(a) **Take-stock** by documenting the various demands for and conceptualizations and understandings of transformative change from international policy fora and groups of countries, policy makers more generally, scientific communities, the private sector, and civil society, including indigenous peoples and local communities, youth, women, and non-governmental organizations;

(b) **Explain the assessment rationale** by presenting its methodological approach and how it addresses challenges such as the complex nature and intrinsic uncertainties of nature-people relations, plurality of values and knowledge systems as well as knowledge gaps;

(c) **Recognize the trade-offs associated with various demands for transformative change** and the ways in which the values of inclusiveness, justice and equity are considered, including aspects of gender, age and socio-economic status. The chapter also explores the importance of indigenous and local knowledge in managing and safeguarding nature from local to global levels, the changes and their implications that indigenous peoples and local communities have experienced, and their contributions to transformative change thinking. The chapter will also explore the importance of access to knowledge and technology that could enable innovative solutions for transformative change;

(d) **Identify the ways in which spatial and temporal scales, historical conditions, and levels of human organization pose challenges and offer opportunities for transformative change** from local to global levels, and the ways in which short-term actions can have cumulative and emergent effects to either facilitate or impede transformative change;

(e) **Reflect on the challenges of transformative change** by assessing trade-offs, intrinsic relation to political representation and legitimacy, socio-economic dimensions of vulnerability and power as well as deeply held values, worldviews, narratives and practices. The chapter will recognize possible implications of transformative change for different groups of countries and sectors of society, highlighting that it could require difficult choices and face resistance and barriers. The chapter will also identify opportunities and incentives that transformative change can open up at different levels;

(f) Finally, the chapter will provide a **framework and roadmap** for the assessment.

25. **Chapter 2: Visions of a sustainable world – for nature and people.** Chapter 2 will assess how transformative change for nature and people presents specific challenges as it involves the consideration of science-based understandings of biodiversity and nature's contributions to people together with normative ethics, different worldviews and collective values about visions of a sustainable future. The chapter will assess mechanisms for inclusion, deliberation and collaboration to consider these aspects simultaneously. It will include examples of good practices, applicable and affordable knowledge and technologies, and invoke narratives, stories, scenarios as well as visualizations at various scales that illustrate visions of a sustainable world, which might provide potential scenarios and pathways for transformative change based on different worldviews.

26. The chapter will assess different tractable values, visions and scenarios for a sustainable world consistent with the 2050 Vision for Biodiversity and the Sustainable Development Goals, including their links to existing scenarios (e.g., scenarios developed for the Intergovernmental Panel on Climate Change). The chapter will then consider the implications of different visions for sectors, subsystems (market/economic, political, legal/judicial, educational, indigenous and local systems and ecosystems)

and interactions between these, at and between a variety of spatial scales. The chapter will also assess pathways to realize those visions, such as recognizing and changing cross-sectoral flows within an economy, taking into account the ways in which diverse actors integrate actions for transformative change in accordance with their perceived priorities, interests, power relations, cultural values, wellbeing and politics, including on a gendered basis. The chapter will assess the state of knowledge on collective visions and scenarios for the future (taking into account relevant work under the nexus assessment), and on the kinds of policy institutions, governance mechanisms, and deliberative processes (including visioning and scenario analyses) which can facilitate transformative change within different settings and in the face of diverse values, building on and complementing the IPBES assessment on values, once finalized. The chapter will draw upon scenario and pathway analyses and literature reviews to assess the feasibility and common constituents of envisioned sustainable pathways. These steps can allow a process of back casting to understand necessary conditions to be in place at stages before 2050, as well as potentially consider the transformative potential of events such as the COVID-19 pandemic or recent civil society movements. The IPBES Global Assessment’s “levers and leverage” model provides a starting point for expanding and connecting to analyses of the ways in which changes occur dynamically, but also for the identification of additional work.

27. **Chapter 3: How transformative change occurs.** Chapter 3 will address how transformative change occurs, focusing on those changes that can be intentionally promoted, accelerated, and scaled to realize a sustainable world where biodiversity can thrive. The chapter will assess theories and frameworks for understanding deliberate, or emergent transformative change and will highlight the conditions and processes for generating and navigating such change. The relationship between paradigms, policies, and practices will be assessed, with an emphasis on how they contribute to strategies that improve, maintain or restore healthy relationships with nature. This may include an assessment of the technical dimensions and the role of research and development in finding innovative solutions for transformative change towards a more sustainable world. The chapter will also consider approaches to enable transformative change at various scales, to inform how transformative change can have a positive impact on global biodiversity, and assess relevant normative, ethical, and political dimensions. Historical cases and examples of transformations that have occurred in various places and times, including those that have influenced biodiversity positively or negatively, will be assessed. The chapter will provide examples drawn from academic, policy and practice literature, including references to indigenous and local knowledge systems and the importance of local action. The chapter will emphasize integrated and holistic perspectives on the topics described above by including:

(a) A comparison, synthesis and assessment of theories and frameworks of transformative change and how they relate to different models, strategies, policies, and practices. This will highlight the multiple theoretical perspectives on how intentional transformative change occurs within complex systems;

(b) An assessment of the ways in which social and cultural norms, values, worldviews, beliefs, and paradigms influence strategies and approaches to transformative change, with an emphasis on how they relate to differing views of human-nature relationships; diverse understandings of the roles and types of power and agency (e.g. individual agency, collective agency, political agency, non-human agency); of different governance arrangements; and of the role of environmental ethics and values, such as equity and justice, in transformative change. The chapter will emphasize how subjectivities influence different approaches to transformative change, as well as resistance to structural change;

(c) An assessment of the possibilities for integrating processes of transformative change within the IPBES conceptual framework. This will include an assessment of how equity-, rights and responsibilities-, gender-, capabilities- and values-based approaches can contribute to sustainable relationships between people and nature;

(d) An assessment of a selection of representative historical examples and case studies of transformative changes that emphasize both the possibilities and challenges for realizing a sustainable world, including the role of and interactions among multiple stressors (e.g., climate change, extreme inequality, economic crises, human population dynamics, pandemics). Key points from the discussion of theories, frameworks, beliefs, norms, values, worldviews, and paradigms in previous sections will be highlighted in the examples. The examples will illustrate actors, conditions, capacities, and policies that contribute to transformative change, including but not limited to learning and education, health, equity and justice, creativity and innovation, agency, empowerment, leadership, and power relations. This will set the stage for chapter 4’s focus on overcoming the challenges and resistances to transformative change.

28. **Chapter 4: Overcoming the challenges of achieving transformative change towards a sustainable world.** Acknowledging that efforts to address the underlying causes of biodiversity loss have mostly been unsuccessful, chapter 4 will assess a wide range of challenges and obstacles that impede transformative change toward a sustainable world for nature and people, with a focus on strategies to overcome them in order to advance global, regional, and local visions for a sustainable world for nature and people.

29. Considering the actions, habits, underlying values and interests of diverse relevant actors and institutions, this chapter will address a range of constraints and challenges that arise within and between political, legal, technological, physical (e.g., infrastructure), economic/financial and other social systems and the functioning of ecosystems, and how these challenges could be overcome. Challenges that the assessment will address include:

- (a) Those associated with policy development, implementation and coherence, including representation and consideration of conflicting worldviews and visions, coupling of policy processes, and unintended policy consequences;
- (b) Opposition arising from vested public and private interests, facilitated by weak institutions lacking in enforcement due to insufficient rule of law, transparency and accountability;
- (c) Human demographic changes;
- (d) Inertia, including personal (habits, mindsets), social/cultural (norms), and systemic (market failures associated with current economic structures; rules and institutions being lacking or outdated, lack of global monitoring and enforcement);
- (e) A lack of policy learning due to insufficient information or insufficient responsiveness to information;
- (f) Trade-offs between short- and long-term costs and benefits; and associated distributional inequalities;
- (g) Capacity and financing, at every scale (including poverty and education failures).

30. The chapter will draw upon a wide range of literature, including, among others, on scenarios and models, and case studies illustrating the degree to which different challenges to transformative change have been overcome. Cases will span a diversity of scales and contexts across social groups, sectors, regions, development status, physical geography, cultural context, and more. Case analysis will also consider how transformative changes – even those that yield outcomes broadly beneficial to many – may generate losses for some groups, including women, youth, elders and the vulnerable. Cases considered will include intentional efforts to address a range of indirect drivers of biodiversity loss and ecosystem services degradation, including designing policies regarding economic development and human population, internalizing environmental externalities, reforming subsidies, modifying indicators or measures of economic progress, producing constitutional amendments for the environment, and changing systems of land and sea tenure, water and resource rights.

31. **Chapter 5: Realizing a sustainable world for nature and people: transformative strategies, actions and roles for all.** In the light of the need for transformative change to enable diverse visions for a sustainable world, this chapter will assess options for institutions, instruments, evaluation and pathways to achieve those visions:

- (a) **Institutions:** An assessment of institutional design, emergence, evolution and operation for attending to the ongoing, dynamic and unpredictable nature of transformative change, including via knowledge generation, experimentation, learning, coordination, and management and governance practices (e.g., co-design, participatory, dialogue approaches). All strategies and actions (including those below) will be assessed in the context of systems, institutions, and the values they articulate, globally, regionally, nationally and/or locally. The roles of all key actors will be identified;
- (b) **Instruments:** A synthesis and assessment of sets of policies, tools, methods, campaigns, frameworks, finance instruments, options and actions enabling and encouraging transformative change at all scales for a sustainable world. They will include a wide range of historically applied and emerging practices for transformation, including policy approaches and mixes, business models, legal and regulatory instruments, standards, governance frameworks, education and knowledge systems, conservation and restoration approaches, coordination, and civic, political and community actions. Analysis will address interactions among instruments needed for transformative outcomes;

(c) **Evaluation:** An assessment of means of adaptively monitoring and evaluating progress towards transformative change and towards a sustainable world, recognizing the unpredictability of rolling targets and that existing evaluation frameworks may omit crucial process-based and inclusive, participatory measures of system-wide changes necessary for coherent achievement of all the relevant goals;

(d) **Scenarios and synthetic pathways** (integrating the elements set out in paragraphs (a) to (c) above): An assessment of possible desirable scenarios and transitional pathways of options and actions over short (up to ten years), medium (10-20 years) and long-time horizons (20-50 years). Pathways will include cascades of actions taken by different actors, as well as various top-down and bottom-up approaches and their scaling. This assessment would include an evaluation of characteristics most key for success, including actions, resources and capabilities, the achievement of particular criteria, means of scaling, and combinations and sequencing of actions.

32. These elements should be situated in reference to the conceptual framework of IPBES as mentioned in chapter 3 and to the challenges identified in chapter 4. Each potential intervention and pathway will also be assessed for effectiveness, legitimacy, co-benefits, gaps, shortcomings and remaining challenges, while attending to justice, equity and power. All the above would include examples spanning variation across time frames, scales, groups, sectors, regions, development status, geographical and cultural contexts, and highlight the roles of such variation within and between cases.

III. Data and information

33. The assessment will draw on data and information from diverse knowledge systems and languages, including scientific literature and indigenous and local knowledge, addressing all the components of the IPBES conceptual framework in order to explore the interrelationships between nature, nature's contributions to people, drivers, institutions, governance and a good quality of life.

34. Attention will be given, in accordance with the Platform's data management policy, to ensuring access to metadata and, whenever possible, the corresponding underlying data, through a findable, accessible, interoperable and reusable (FAIR) process to ensure comparability between assessments. Furthermore, the task force on knowledge and data will work towards ensuring that the outcomes (i.e. knowledge products) of the transformative change assessment are widely available for future Platform assessments and other uses.

35. The assessment will also identify and seek access to globally and regionally relevant data and information sources that may exist or emerge. Potential data sources include global, regional and national institutions and organizations, scientific literature, and indigenous and local knowledge. The needs of the assessment process will be communicated widely in order to identify and encourage the sharing of relevant data and information.

36. The task force on knowledge and data will support work on data and information quality, confidence, essential biodiversity variables and indicators, baselines and representativeness, as necessary. The assessment will, where appropriate, use existing indicators relevant for the implementation of the post-2020 global biodiversity framework and of the Agenda 2030 for Sustainable Development.

37. The task force on scenarios and models will support work related to scenarios and models by providing advice to the assessment and mobilizing input on scenarios and models. The assessment will, where useful and appropriate, be informed by the scenario development framework and methodologies formulated by the task force on scenarios and models, to assess the visions, pathways, and scenarios relevant to its chapters. The products of the task force on scenarios and models are of particular relevance to the assessment as they seek to facilitate the process of creating a shared understanding and commitment to bring about transformative change to achieve the 2050 Vision for Biodiversity. To support the assessment in understanding and identifying the impact of such scenarios on biodiversity and nature's contributions to people, the task force will provide relevant resources and share the latest developments of its work with the assessment.

38. The assessment will recognize and work with indigenous and local knowledge in line with the IPBES approach adopted by the Plenary in decision IPBES-5/1 and relevant guidance regarding its implementation prepared by the task force on indigenous and local knowledge.

IV. Capacity-building and development

39. Capacity-building activities will help support the development and uptake of the assessment. The activities will be designed in accordance with objective 2 on building capacity of the IPBES work programme up to 2030 and the capacity-building rolling plan, under the guidance of the task force on capacity-building. Activities will, subject to the availability of resources, include: the IPBES fellowship programme; the training and familiarization programme; science-policy dialogues; and support to activities organized by other organizations in support of the uptake and use of the assessment findings across sectors and the strengthening of the science-policy interface at (sub)regional and national levels.

V. Communication and outreach

40. The transformative change assessment report and its summary for policymakers will be published in electronic format, made available on the Platform website and promoted through the social media channels of the Platform. The summary for policymakers will be available in all official languages of the United Nations and will be printed on demand, resources permitting. Outreach to a broad set of stakeholders, including the wider audience of decision-makers, will be based on the Platform's communications and outreach strategy and budget.

41. Communication and outreach will be undertaken from the outset of the assessment in order to build engagement with the wider scientific community, other knowledge holders and the end users of the assessment. Two-way engagement with users will help to define the type and range of communication products and policy support tools that will be developed as part of the assessment.

VI. Technical support

42. Technical support for the transformative change assessment will be provided by a technical support unit, composed of several full-time professional and administrative staff members. This unit will work in close collaboration with the groups of experts producing the IPBES assessments and with the IPBES task forces, and their respective technical support units.

VII. Process and timetable

<i>Date</i>	<i>Actions and institutional arrangements</i>
2021	
Second quarter	The Plenary at its eighth session is invited to approve the undertaking of the transformative change assessment, and to request the secretariat to establish the institutional arrangements necessary to operationalize the technical support required for the assessment The Multidisciplinary Expert Panel, through the secretariat, requests nominations of experts from Governments and other stakeholders
Third quarter	The Multidisciplinary Expert Panel selects the assessment co-chairs, coordinating lead authors, lead authors and review editors in line with the procedures for the preparation of IPBES deliverables, including by implementing the procedure for filling gaps in expertise
Fourth quarter	Selection decision communicated to nominees Meeting of the management committee (co-chairs, members of the Bureau and Multidisciplinary Expert Panel assigned by these bodies to the assessment) to plan first author meeting
2022	
First quarter	First author meeting with co-chairs, coordinating lead authors, lead authors, review editors and members of the Bureau and Multidisciplinary Expert Panel that are part of the management committee of the assessment
First to third quarter	Preparation of zero-order drafts and first-order drafts of chapters
Fourth quarter	First external review (6 weeks) – draft chapters made available for review by experts

<i>Date</i>	<i>Actions and institutional arrangements</i>
2023	
Early first quarter	Second author meeting with co-chairs, coordinating lead authors, lead authors, review editors and members of the Bureau and Multidisciplinary Expert Panel that are part of the management committee of the assessment Back-to-back with the second author meeting: Meeting to advance the preparation of the summary for policymakers with co-chairs, coordinating lead authors, lead authors and members of the Bureau and Multidisciplinary Expert Panel that are part of the management committee of the assessment
First to third quarter	Preparation of the second-order drafts of chapters and first-order draft of summary for policymakers
Second quarter	Writing workshop to advance the preparation of the summary for policymakers with co-chairs, coordinating lead authors, lead authors and members of the Bureau and Multidisciplinary Expert Panel that are part of the management committee of the assessment
Late third quarter	Second external review (8 weeks) – draft chapters and draft of the summary for policymakers made available for review by Governments and experts
Fourth quarter	Third author meeting with co-chairs, coordinating lead authors, lead authors, review editors and members of the Bureau and Multidisciplinary Expert Panel that are part of the management committee of the assessment Back-to-back with the third author meeting: Meeting to advance the preparation of the summary for policymakers with co-chairs, coordinating lead authors, lead authors and members of the Bureau and Multidisciplinary Expert Panel that are part of the management committee of the assessment
2024	
First quarter	Online writing workshop to advance the preparation of the summary for policymakers with co-chairs, coordinating lead authors, lead authors and members of the Bureau and Multidisciplinary Expert Panel that are part of the management committee of the assessment
Third quarter	Final review (6 weeks) – final draft chapters and draft of the summary for policymakers made available for review by Governments
Early fourth quarter	Consideration by the Plenary, at its 11th session, of the summary for policymakers of approval and the chapters for acceptance
Fourth quarter	Communication activities in relation to the assessment