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Synthesis report of the activities of the Science-Policy Interface

# Synthesis report of the activities of the Science-Policy Interface

## Report by the Executive Secretary*

*Summary*

By its decisions 20/COP.16 and 21/COP.16, the Conference of the Parties (COP) mandated the Science-Policy Interface (SPI) to operate through a 2025–2026 transition biennium, during which it would both implement a substantive work programme and support preparations for future quadrennial SPI work programmes from 2027–2030 onwards.

In response to these decisions, the primary substantive activities of the SPI included taking the scientific lead in the development of the third edition of the Global Land Outlook (GLO3) and the analysis of key messages from two recently published assessment reports by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

The present document provides a synthesis report on GLO3, centred on a proposed land stewardship framework – a practical expression of an ethic of care for land and a guiding principle for transformative change in the valuation, governance and management of land and water resources for people and the rest of nature, across present and future generations. This document also synthesizes the SPI's analysis of key IPBES messages relevant to land degradation, desertification and drought on: (i) interlinkages among five nexus elements: biodiversity, water, food, health and climate change, as well as cross-cutting systems, including land, soil, air and energy; and (ii) transformative change, defined as fundamental, system-wide shifts in views, structures and practices.

Based on a summary of the key findings emerging from these workstreams, the Committee on Science and Technology may wish to consider these findings for the development, as appropriate, of recommendations to the COP.

* This document was scheduled for publication after the standard publication date owing to circumstances beyond the submitter's control.

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# I. Background and approach

1. At its sixteenth session, the Conference of the Parties (COP) decided to establish a standing Science-Policy Interface (SPI) and, through decisions 20/COP.16 and 21/COP.16, set in motion a transition from biennial to quadrennial work programmes, with the 2025–2026 biennium serving as a transition period. During this biennium, the SPI was requested both to deliver a substantive work programme and to contribute to preparations for its future functioning from the 2027–2030 quadrennium onwards.

2. The institutional, procedural and operational preparations for the future functioning of the SPI, undertaken by the Bureau of the Committee on Science and Technology (CST) with the support of the secretariat and input from the SPI, are set out in document ICCD/COP(17)/CST/5. The present document focuses on the substantive activities and findings of the SPI during the 2025–2026 transition biennium, and on the conclusions and recommendations arising from that work for consideration by the CST and the COP.

## A. The 2025–2026 transition biennium

3. By its decision 20/COP.16, the COP decided that, starting at its seventeenth session (COP 17) in 2026, the future work programmes of the SPI would be fixed for a duration of two intersessional periods (usually four years), and that the 2025–2026 work programme would serve as a transition programme, as set out in decision 21/COP.16.

4. In response, the Bureau of the CST, with the support of the secretariat and input from the SPI, used the 2025–2026 transition biennium both to implement the SPI work programme requested in decision 21/COP.16, and to prepare the institutional, procedural and operational foundations for the future functioning of the SPI, beginning with the 2027–2030 quadrennium. The outcomes of this preparatory work, including updated modalities on membership and governance, procedures for requests and outputs, options for technical support and related financial implications, are presented in documents ICCD/COP(17)/CST/5, ICCD/COP(17)/CST/INF.2 and ICCD/COP(17)/7, respectively.

5. As a result of this “learn-by-doing” approach, the experience of delivering the 2025–2026 SPI work programme directly informed the development and trialling of new procedures and modalities. In particular, the SPI applied draft procedures for receiving and prioritizing requests, for the preparation of flagship reports and for fast-track assessments and information products, while advancing its substantive work, allowing practical challenges to be identified and addressed in real time, resulting in more robust and implementable arrangements for future work programmes.

## B. Focus of the 2025–2026 substantive work programme

6. The compressed timeframe available during the transition biennium had significant implications for the SPI’s substantive work under its 2025–2026 work programme. For Objective 1, which tasked the SPI with taking the scientific lead in the production of the third edition of the Global Land Outlook (GLO3), fewer than 12 months were effectively available for scoping, conducting the scientific assessment and preparing the draft report, compared with the approximately 36 months foreseen for the preparation of GLO4 under future quadrennial work programmes, excluding the initial period for renewing SPI membership and the final period for publication production.

7. This shortened period required the SPI to sequence and prioritize its activities for the GLO3 more tightly, including the allocation of tasks among SPI members, reliance on streamlined review and coordination processes, and close collaboration with the secretariat on scoping and communications. The substantive work undertaken for the GLO3 is elaborated upon in section II.A of this document.

8. The lessons learned from working under these constraints informed refinements to the agreed procedures for flagship reports and confirmed the importance of providing the SPI with a full quadrennium for future GLO editions. These lessons were formatively

incorporated into the development of the procedures for future flagship reports of the United Nations Convention to Combat Desertification, as set out in document ICCD/COP(17)/CST/5.

9. The reduced timeframe also influenced work under Objective 2 on fast-track assessments, information products and advice. During the 2025–2026 biennium, the SPI focused on piloting and providing feedback on the development of fast-track procedures rather than on the production of substantive fast-track outputs, with the resulting experience feeding into the procedural framework set out in document ICCD/COP(17)/CST/5 and enabling the SPI to respond more flexibly in subsequent work programmes.

10. By contrast, the SPI's coordination activities with other intergovernmental science-policy bodies and relevant initiatives were largely completed as planned over the 2025–2026 biennium, as set out in document ICCD/COP(17)/CST/5, providing an important evidence base and reinforcing the SPI's role in connecting the UNCCD with these parallel processes. Among the six cooperating scientific partners in the 2025–2026 SPI work programme, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) published two assessment reports in time for the SPI to conduct an analysis of the key messages relevant to the UNCCD. This substantive work is elaborated upon in sections II.B and II.C of this document.

# II. Evidence base and rationale

11. In accordance with decision 21/COP.16, the SPI, with the support of the secretariat, undertook substantive work during the 2025–2026 transition biennium on those elements of its work programme capable of generating timely scientific inputs for consideration by the CST and the COP. This work included the preparation of GLO3,[1] for which the SPI was requested to take the scientific lead.

12. This work also included the analysis and synthesis of key messages of two scientific assessment reports listed among the coordination activities identified in the SPI work programme (decision 21/COP.16) which became available in time for the SPI to conduct the review:

(a) The IPBES *Thematic Assessment Report on the Interlinkages Among Biodiversity, Water, Food and Health* (hereafter the Nexus Assessment);[2]

(b) The IPBES *Thematic Assessment Report on the Underlying Causes of Biodiversity Loss and the Determinants of Transformative Change and Options for Achieving the 2050 Vision for Biodiversity* (hereafter the Transformative Change Assessment).[3]

13. The Summary for Policymakers (SPM) text for both IPBES reports was negotiated by Member States, line by line, and subsequently approved in respective IPBES sessions. The background on the IPBES report preparation and approval with respect to both reports is provided in annex II to this document.

14. Recognizing that the language of the SPMs of IPBES reports has already been inter-governmentally agreed, the SPI drew directly from key IPBES messages for this document, referencing the key messages from each respective SPM to provide a clear line of sight. The full methodology employed by the SPI to analyse these reports is provided in annex II to this document.

[1] See https://www.unccd.int/resources/global-land-outlook/global-land-outlook-3rd-edition.

[2] The Nexus Assessment provides a critical evaluation of evidence on interlinkages among five nexus elements: biodiversity, water, food, health and climate change, as well as cross-cutting systems, including land, soil, air and energy (see Nexus Assessment Preamble, first paragraph, at https://zenodo.org/records/13850055).

[3] The Transformative Change Assessment defines transformative change as fundamental, system-wide shifts in views, structures and practices. Deliberate transformative change for a just and sustainable world shifts views, structures and practices. (see Transformative Change Assessment key message KM1 at https://zenodo.org/records/17099472).

15. Together, these SPI workstreams provide an important evidence base for considering how the Convention may strengthen its scientific foundations and implementation approaches in the context of increasing interaction among desertification, land degradation and drought (DLDD), biodiversity loss, climate change, water stress, food insecurity and broader human insecurity. While GLO3 remains under preparation at the time of writing, the work carried out thus far has already generated key conceptual and analytical elements of direct relevance to Parties. The two IPBES assessments, whose SPMs were approved and whose chapters were accepted by the IPBES Plenary at its eleventh session, provide an additional body of intergovernmentally endorsed scientific findings that the SPI reviewed for their implications for the implementation of the Convention.

## A. Third Edition of the Global Land Outlook

16. In accordance with decision 20/COP.16, the SPI was requested to take the scientific lead in the preparation of GLO3, which constitutes the flagship strategic communications product of the Convention during the 2025–2026 transition biennium. Within the limited timeframe available during this biennium, the SPI has undertaken substantial work on the core conceptual, analytical and structural elements to draft the report, while also generating lessons that informed the development of the procedures and modalities for future SPI flagship reports set out in document ICCD/COP(17)/CST/5.

17. The work undertaken on GLO3 was framed by the recognition that land DLDD is increasingly interacting with wider pressures linked to climate change, biodiversity loss, food insecurity, water stress, economic volatility and human insecurity. Against this backdrop, GLO3 was conceived not only as an update on the status and trends of land degradation, but also as an opportunity to articulate a stronger and more operational framing for how Parties and other stakeholders could respond to these interconnected challenges in a manner that is consistent with the mission and strategic objectives of the Convention.

18. At the time of writing, GLO3 remains under development. To date, the work carried out by the SPI has generated a substantial evidence base and a novel conceptual framework that the SPI considers of particular relevance for the CST and the COP, namely the proposed land stewardship framework (See annex I).

19. The introductory chapter of GLO3 situates the report in the current context of an increasingly transactional relationship between people and land. It emphasizes that land is the foundation of food, water, livelihoods and other dimensions of human security, yet being degraded faster than it is being restored. GLO3 provides both a scientific assessment and a forward-looking effort to reconnect people to land and transform how land is valued, governed and managed. It concludes that the technical knowledge needed to address the land degradation crisis already exists, but that a more coherent organizing principle is needed to align values, institutions and practice. In this framing, GLO3 positions land stewardship as a practical expression of an ethic of care for land and as a guiding principle for transformative change on how land and water resources are valued, governed and managed for people and the rest of nature, across present and future generations.

20. Chapter 2 of GLO3 offers the diagnosis that underpins the report's argument for transformative change. It synthesizes recent evidence on how human activity has reshaped land systems worldwide and how the combination of unsustainable land (and water) use and management, biodiversity loss, climate change and other pressures are exacerbating deterioration in land condition, with serious consequences for ecosystems, economies, human security and human well-being. Chapter 2 emphasizes that land degradation is no longer an isolated environmental concern, but part of a broader pattern of systemic pressures affecting food and water systems, biodiversity, climate regulation and the resilience of social-ecological systems.

21. Among the headline messages emerging from Chapter 2 is the finding that government reports in the last reporting cycle of Sustainable Development Goal (SDG) indicator 15.3.1, as well as a range of different studies, indicate that around a quarter of global land has already been degraded mainly through unsustainable use and management, with

more than 60 per cent of this degradation occurring on agricultural lands.[4] Chapter 2 also highlights the SDG Report 2023 finding that each year, between 2015 and 2019, the world lost at least 100 million hectares of healthy and productive land, affecting food and water security globally.[5,6] Human activities, intensified by climate change, are the main drivers of land degradation, directly affecting 1.3 billion people. Occurring across all regions, with differing intensities and drivers, these trends are especially consequential where degraded land coincides with poverty, rural instability, human insecurity and limited adaptive capacity. If land degradation continues at a similar rate to that reported by governments to date, it would result in an additional 1.1 billion hectares of degraded land by 2030.

22. A second set of messages concerns the growing interlinkages between land degradation, aridity, drought and water stress. Chapter 2 notes that more than three-quarters of all land on Earth was drier during the three decades leading up to 2020 than during the preceding 30-year period, and that drylands expanded by around 4.3 million square kilometres. In addition, 40 per cent of global land experienced an increase in drought frequency and severity in recent decades. This trend is more pronounced than previously expected based on projections from Earth system models. Moreover, these trends are projected to worsen under continued climate change, increasing the risks of desertification, declining productivity, ecosystem stress and heightened competition for scarce water resources.

23. A third set of messages concerns the implications of these trends for people, livelihoods and economic systems. Chapter 2 points to major effects on food and water security, including crop yield losses affecting large populations, mounting pressures on groundwater, and the erosion of ecosystem services on which a significant share of global economic activity depends. It also underlines that land degradation and drought are associated with very substantial economic losses and that the resulting burdens fall disproportionately on vulnerable populations and regions already exposed to multiple forms of stress and insecurity.

24. Taken together, the evidence synthesized in Chapter 2 reinforces the conclusion that incremental improvements in land and water management, while necessary, are unlikely to be sufficient in themselves if the underlying drivers of degradation remain unchanged. It is against this evidentiary background that Chapter 3 advances the novel conceptual framing of GLO3: a land stewardship framework intended to operationalize an ethic of care that guides how individuals and societies relate to, care for, sustain, restore and regenerate the capacity of land to support life and livelihoods, across present and future generations.

25. Chapter 3 begins with the premise that ongoing land degradation in the current context of scarcity and insecurity requires not only better techniques and policies but a deeper transformation in the way individuals and societies understand and relate to land and its resources. It proposes land stewardship as a framework through which worldviews, socio-economic structures and practical action can catalyse long-term care for land and water resources. The chapter defines stewardship as a way to operationalize an ethic of land care in

[4] Estimates of the extent of global land degradation compiled and assessed in the third edition of the Global Land Outlook vary widely due to different definitions, methods, datasets and time periods of assessment, with recent literature indicating a range of 10 to 40 per cent, and a majority of studies estimating that around 25 per cent of land is degraded globally.

[5] The Sustainable Development Goals Report 2023: Special Edition, p. 43 (https://unstats.un.org/sdgs/report/2023/). For the underlying data, see the United Nations Convention to Combat Desertification 2023 document ICCD/CRIC(21)/2 (https://www.unccd.int/convention/official-documents/cric-21-samarkand-uzbekistan-2023/documents/iccdcric212) and the 2023 special report of the Secretary-General, titled "Progress towards the Sustainable Development Goals: towards a rescue plan for people and planet" (document A/78/80-E/2023/64 at https://docs.un.org/en/e/2023/64) and p. 187 of its annex (document E/2023/64 at https://unstats.un.org/sdgs/ files/report/2023/E_2023_64_Statistical_Annex_I_and_II.pdf).

[6] It is important to clarify that the information presented in under Sustainable Development Goal 15.3.1 in these interlinked reports should not be interpreted as a comprehensive global or regional assessment of status and trends in the indicators. Rather, it presents a partial estimate of progress made as not all Parties have submitted a report and not all Parties have reported all indicators.

a manner that can guide more responsible governance, planning, investment and on-the-ground action.

26. In developing this approach, Chapter 3 draws on both Western and Indigenous scientific perspectives, and recognizes that stewardship can be understood in multiple ways across the science, policy and practice interface. The chapter emphasizes their common and complementary elements and advances a synthesis in which land stewardship is understood as the practice of caring for land through an understanding of interdependencies, the need for reciprocity and a sense of responsibility and long-term commitment. In doing so, it seeks to provide a formulation that is conceptually robust, respectful of plural knowledge systems and relevant to the practical challenges of implementing the Convention.

27. The core contribution of Chapter 3 is the presentation of the land stewardship framework itself. The framework is intended to move from vision to action by organizing land stewardship around a central ethic of land care and by identifying the main dimensions through which that ethic must be recognized and expressed if societies are to avoid, reduce and reverse land degradation. In this sense, the framework is neither a single management technique nor a replacement for existing sustainable land management (SLM) approaches. Rather, it provides a transformative conceptual and operational framework that reorients how societies understand, value, govern and care for land by aligning worldviews, institutions and practices around a shared ethic of stewardship.

28. The framework is organized around three interconnected and mutually reinforcing dimensions of land stewardship: care in views, care in structures and care in practices, leading to the recognition of responsibility and long-term commitments, while acknowledging that land is a socio-ecological system in which ecological and human processes are inseparably linked. The framework also extends to water resources above and below ground, recognizing the functional interdependence of land and water in the achievement of landscape resilience and land degradation neutrality (LDN).

29. The first dimension, care in views, concerns how societies perceive, understand, value and express their relationships with land and water resources. Chapter 3 argues that transformative change requires attention to these views because they influence how individuals and societies understand their relationships with each other and with nature, and shape responses to environmental phenomena, including land degradation, biodiversity loss and climate change. From this perspective, land stewardship begins with shifts in knowing, valuing and narrating, including greater recognition of Indigenous, local, experiential and scientific knowledge systems, broader, more accurate valuation of nature and stronger narratives of reciprocity, regeneration, responsibility and shared futures.

30. The second dimension, care in structures, concerns the social, institutional, legal and economic conditions that enable or constrain land stewardship. Chapter 3 identifies rights and justice, economy and finance, governance and power, and knowledge and institutions as key areas through which a land stewardship ethic must be reflected if it is to improve real-world outcomes. This dimension is of particular relevance to the Parties as it points directly to the importance of inclusive governance, tenure security, policy coherence, targeted investment strategies, accountability mechanisms and the institutional recognition of multiple knowledge systems in supporting long-term sustainable land and water management.

31. The third dimension, care in practices, refers to land stewardship in action on the ground. It encompasses the application of integrated and place-based land and water management approaches, while emphasizing that there is no one-size-fits-all solution and that stewardship must be adapted to the ecological, social and cultural conditions of particular landscapes. The framework links practice not only to technical measures but also to continuous learning, adaptation and locally grounded decision-making led by those who live and depend most directly on the land and its resources.

32. Another important feature of the framework is the central role it assigns to values of nature, especially relational values. Chapter 3 distinguishes between intrinsic values, instrumental values and relational values, arguing that relational values can serve as a bridge linking how individuals and societies think, govern and act in relation to land. In this formulation, care in views without care in structures remains aspirational; care in structures without care in practices remains procedural; and care in practices without care in views risks

reproducing short-term and exploitive patterns of land use. The framework seeks to bring together ethical orientation, institutional change and practical implementation within a single, mutually reinforcing logic.

33. Chapter 3 also connects the land stewardship framework explicitly to the outcomes most relevant to the Convention. It presents land stewardship as a pathway to resilient and regenerative landscapes and to improved human security in its broadest sense, including secure access to food, water and livelihoods, as well as dignity, rights and social well-being. In addition, the framework directly aligns with LDN efforts by arguing that stewardship provides an integrated basis for avoiding, reducing and reversing degradation while maintaining or improving the land resources needed to support ecosystem functions and services, and food security.

34. In this regard, the proposed land stewardship framework provides a practical, conceptual and operational framework for guiding implementation under the Convention by aligning values, institutions and practices toward resilient landscapes, human security and sustainable futures. By encouraging greater attention to shifts in values and narratives, to the enabling structures, such as land rights, finance and governance, and to context-appropriate practices, it offers a way of understanding how action under the Convention may be strengthened across scales and sectors. It also positions SLM within broader concerns of socio-ecological resilience, justice, participation and human security, which are increasingly relevant to Parties.

35. The remaining chapters of GLO3 elaborate upon and support this central framing. Chapter 4 examines finance and data as enabling elements within care in structures, arguing that moving towards more resilient land systems requires not only more investments but also a more flexible and integrated financial architecture that is capable of directing the right finance to the right intervention, in the right place at the right time. It highlights the continuing mismatch between relatively limited finance for nature-based solutions and much larger flows of nature-negative finance, and emphasizes the need to align public, blended, private and community finance with landscape resilience and ecosystem restoration initiatives.

36. Chapter 4 also considers data and knowledge systems as part of the implementation infrastructure rather than secondary technical issues. It argues that credible, participatory and applied information systems are essential if land degradation is to be made visible, outcomes are to be verified and stakeholders are to remain engaged. In this respect, chapter 4 complements the broader land stewardship framework by clarifying that finance, incentives, monitoring and access to trusted data are among the most practical enabling conditions required for land stewardship to move beyond pilot projects and be implemented at meaningful scales.

37. Chapter 5 focuses on implementation and explores how the dimensions of the land stewardship framework are already reflected, to varying degrees, in documented sustainable land and water management efforts around the world. It combines a synthesis of project evaluations with illustrative case studies in order to identify where elements aligned with care in views, care in structures and care in practices are incorporated into existing land management efforts, and how they relate to development outcomes, such as landscape resilience, human security and LDN. Chapter 5 is therefore intended to demonstrate emerging stewardship practices across a range of contexts.

38. Chapter 5 also places particular emphasis on land-user-driven approaches, joint spatial planning, coordination across scales, land rights and responsibilities, knowledge integration and access to markets and finance, which it identifies as observable features associated with enhanced land stewardship outcomes. It also highlights gaps, including the still-limited recognition of Indigenous and local knowledge systems in many documented projects, and of rights-based approaches, thereby underscoring areas where further attention is needed if land stewardship is to be implemented in a more inclusive and durable manner.

39. Chapter 6 explores the relevance of the land stewardship framework for synergies across the Rio conventions. It presents land stewardship, especially the care in structures dimension, as a potentially useful shared foundation or “boundary object” through which the climate, biodiversity and land agendas may engage more coherently while retaining their

respective mandates and priorities. Chapter 6 emphasizes that land is central to the interconnections among these agendas and that more integrated approaches can improve efficiency, reduce duplication and generate co-benefits across climate action, biodiversity conservation and efforts to combat DLDD.

40. Chapter 6 further suggests that the land stewardship framing may support stronger alignment among national planning and reporting instruments under the Rio conventions, including those related to climate, biodiversity and DLDD. In this way, the chapter extends the logic of GLO3 beyond the internal architecture of the report itself and toward broader intergovernmental relevance, highlighting the possibility that land stewardship may help Parties integrate action across multiple multilateral commitments in ways that are more efficient and effective at landscape scales.

41. Chapter 7 is designed to synthesize the report's findings and translate them into a more explicit call to action. It reiterates that land stewardship is intended as a framework for responsibly managing land and water in ways that balance present and future needs, prioritize human security and recognize diverse stakeholders as rights-holders, knowledge holders and agents of change. It also identifies the enabling conditions for land stewardship, including inclusive participation, coherent policies, secure land rights, knowledge integration, data systems and financial and economic incentives that support SLM practices.

42. Progress so far on GLO3 points towards a report that is broader than a diagnosis of land degradation alone. It can be seen as an effort by the SPI to provide a scientifically grounded, policy-relevant and action-oriented framework for strengthening implementation under the Convention, helping Parties and other stakeholders respond to increasing environmental, social and economic pressures. Work to date under GLO3 provides a substantial basis for an important strategic communications product.

43. In view of the compressed timeframe of the transition biennium, the SPI gave priority to those elements of GLO3 that could provide a scientifically grounded, policy-relevant and action-oriented framework with the potential to catalyse transformative action on current global land challenges by providing Parties and other stakeholders with practical guidance for strengthening implementation under the Convention. The SPI considers that this framework, together with the extensive work undertaken across the report, offers a potentially valuable basis for future discussion on how the Convention may continue to advance integrated, inclusive and action-oriented responses to DLDD.

## B. Nexus Assessment report

44. The IPBES Nexus Assessment report provides an assessment of the interlinkages and interdependencies among biodiversity, water, food and health, while also addressing climate change as a fifth interacting element because of its growing influence on all nexus elements. The assessment emphasizes that the crises of biodiversity loss, water availability and quality, food insecurity, health risks and climate change are complex and interconnected, and that decisions taken in isolation can result in misalignment, unplanned trade-offs and unintended consequences. (See Nexus Assessment Preamble)

45. The assessment indicates that societal, economic and policy decisions prioritizing short-term benefits and financial returns, while ignoring negative impacts across biodiversity, water, food, health and climate change, lead to unsustainable and unequal outcomes for human well-being. It further indicates that siloed policy approaches and actions prioritizing a single nexus element limit the achievement of benefits across policy goals, with particularly adverse effects for developing countries, including small island developing States, Indigenous peoples and local communities. (See Nexus Assessment SPM key messages A3 and B3)

46. These findings are of direct relevance to the UNCCD because they reinforce the importance of approaching land and water management in an integrated manner rather than through isolated sectoral interventions. Although land and LDN are not treated in the Nexus Assessment as a separate nexus element, the assessment nevertheless provides important scientific support for more coherent approaches to sustainable land and water management

and for pursuing LDN in synergy with biodiversity, climate, food, water and health objectives. (See Nexus Assessment SPM key messages A3 and B3)

47. The assessment further identifies numerous highly synergistic response options already available to actors in multiple sectors for the sustainable management of the nexus elements. It indicates that, when implemented at appropriate scales and in appropriate contexts, these response options can generate multiple benefits across the nexus, and that some options, including integrated landscape management, efficient water use in agriculture, ecosystem restoration and sustainable healthy diets, provide particularly broad nexus-wide benefits. (Key message C1)

48. The assessment also emphasizes that response options may facilitate or impede one another, giving rise to synergies or trade-offs. Their effectiveness in generating benefits across the nexus can therefore be strengthened by implementing them in combination or in sequence, especially where some response options enable others or amplify their impacts. This is particularly relevant to the UNCCD, as it suggests that the effectiveness of efforts to combat desertification, land degradation and drought can be increased when SLM, ecosystem restoration, water management and related measures are designed and implemented as mutually reinforcing packages rather than as stand-alone interventions. (See Nexus Assessment SPM key message C2)

49. The assessment also indicates that response options designed to benefit multiple nexus elements can strongly advance global policy efforts, including the SDGs, the Kunming-Montreal Global Biodiversity Framework and the Paris Agreement, by supporting just and sustainable futures and by strengthening alignment across policy frameworks. This is of particular interest to the UNCCD because it points to the value of identifying response options capable of promoting sustainable land and water management and LDN while also contributing to biodiversity, climate, food, water and health objectives.

50. Finally, the assessment finds that existing governance arrangements are often too siloed to respond effectively to the interconnected and interdependent challenges associated with environmental change and rising inequities. It highlights that fragmented governance across biodiversity, water, food, health and climate change has contributed to negative outcomes across the nexus and that more integrative, inclusive, equitable, accountable, coordinated and adaptive governance approaches are needed. The assessment also indicates that a road map for nexus action can help a wide range of actors to identify common problems and shared values, and work collaboratively towards solutions aligned with global policy frameworks. Taken together, these findings support the relevance to the Convention of integrated planning, whole-of-government and whole-of-society approaches, and stronger coordination across sectors and scales in order to improve the effectiveness of action on DLDD.

## C. Transformative Change Assessment report

51. The IPBES Transformative Change Assessment report is especially relevant to the UNCCD because it links current environmental decline to deep-rooted structural and behavioural drivers and sets out strategies and enabling conditions for deliberate transformative change that are also highly pertinent to efforts to combat DLDD. (See Transformative Change Assessment SPM key message KM1)

52. The assessment indicates that transformative change for a just and sustainable world is urgent and necessary to address interconnected global crises related to biodiversity loss, nature's decline and the projected collapse of key ecosystem functions. It stresses that delaying action is costly compared with the benefits of acting now, and that biodiversity loss, ecosystem degradation and related forms of land degradation are interconnected and accelerating, with cascading implications for food systems, livelihoods, conflict, migration and climate resilience. (See Transformative Change Assessment SPM key message KM1)

53. The assessment further shows that transformative change requires coordinated, system-wide action and that fragmented governance is a major barrier to progress. It identifies integrated strategies with complementary and synergistic effects, including

strategies that shift entrenched views, structures and practices, and transform the sectors most responsible for biodiversity loss, including agriculture, livestock, fisheries, forestry, infrastructure, mining and fossil fuels. These findings are highly relevant to the UNCCD because they underline the importance of integrated landscape approaches capable of aligning production systems, ecosystems and livelihoods, rather than addressing land degradation through isolated measures alone. (See Transformative Change Assessment SPM key messages KM7, KM9 and KM11)

54. The assessment also emphasizes that transformative change is more likely where governance is inclusive, integrative, accountable and coordinated across sectors and scales. It highlights that whole-of-society and whole-of-government approaches are needed to engage all actors in envisioning and contributing to transformative change, and that governments are powerful enablers when they foster policy coherence, strengthen regulatory frameworks, deploy economic and fiscal tools, reform harmful incentives and promote international cooperation. For the purposes of the Convention, these findings reinforce the importance of coordinated governance frameworks and broad-based stakeholder engagement in advancing SLM, restoration and LDN. (See Transformative Change Assessment SPM key messages KM11, KM14 and KM15)

55. Another important message emerging from the assessment is that current economic systems and incentive structures continue to drive biodiversity loss and ecosystem degradation, including through activities in land-use sectors. The assessment indicates that private sector initiatives and tools can support transformative change, but that they remain insufficient without stronger public governance, greater accountability and better alignment of financial flows and incentives with sustainability objectives. This is directly relevant to the UNCCD because it points to the need to strengthen the integrity, coherence and accountability of land-based investment and to more effectively align public and private finance with sustainable land and water management objectives. (See Transformative Change Assessment SPM key messages KM9, KM11, KM15 and KM17)

56. The assessment also underscores the role of coalitions, partnerships and inclusive processes in enabling transformation. It indicates that fragmented efforts and power imbalances limit effectiveness, whereas collaboration across governments, civil society, Indigenous peoples and local communities, the private sector and other stakeholders can improve legitimacy, equity, learning and implementation outcomes. In that regard, the assessment provides strong support for approaches under the Convention that seek to build coordinated, participatory and knowledge-inclusive responses to DLDD. (See Transformative Change Assessment SPM key messages KM14 and KM15)

57. Taken together, the findings of the Transformative Change Assessment suggest that more effective responses to DLDD will require not only better technical measures, but also broader shifts in governance, economic incentives, institutional coordination and the values and practices that shape how land is used and managed. In this sense, the assessment provides an important complementary perspective to the Nexus Assessment. While the latter highlights the need to manage interlinkages, synergies and trade-offs across sectors and objectives, the Transformative Change Assessment helps clarify the deeper structural and systemic changes needed if those more integrated approaches are to be implemented effectively and sustained over time. (See Transformative Change Assessment SPM key messages KM1, KM7, KM11, KM12, KM14 and KM15)

# III. Conclusions

**58. The work undertaken by the SPI during the 2025–2026 transition biennium, including the ongoing preparation of GLO3 and the SPI analysis of the IPBES Nexus and Transformative Change Assessments, provides an important and mutually reinforcing body of evidence for the implementation of the Convention. Taken together, these workstreams indicate that more effective responses to DLDD will require not only sound technical measures, but also more integrated, inclusive and forward-looking approaches to how land is valued, governed, financed and managed.**

***State of the land crisis and urgency of action***

**59. What is clear from all three assessments is that, given the severity of DLDD, and the foundational role land can play in supporting the efforts of Parties to deliver on their environmental, economic and social objectives, there is an urgent need for transformative change, rather than incremental, short-term and narrow improvements.**

**60. A central conclusion emerging from this body of work is that DLDD is strongly intertwined with biodiversity loss, climate change, water stress, food insecurity and broader forms of human insecurity. The evidence reviewed by the SPI indicates that these pressures are intensifying in mutually reinforcing ways and that their combined effects are undermining the resilience of social-ecological systems, with particularly severe consequences for populations already facing poverty, marginalization or limited adaptive capacity.**

**61. The findings further suggest that incremental improvements in both land use planning and land management, while necessary, are unlikely to be sufficient alone where the underlying drivers of degradation remain unchanged. The evidence points instead to the need for more deliberate and coordinated systemic action that addresses the structural, institutional, economic and behavioural conditions shaping how land and water are used. This is particularly important given the increasing costs and risks associated with delayed action.**

***Framing integrated responses***

**62. In that regard, the emerging land stewardship framework in GLO3 offers a potentially useful lens for the Convention by linking values, institutions and practices within a single, action-oriented framing. The framework suggests that durable progress in preventing, reducing and reversing land degradation depends on how societies see and value land, on whether rights, governance arrangements, finance and knowledge systems enable stewardship, and on whether practices on the ground are adapted to local ecological and social realities.**

**63. The work reviewed by the SPI also underlines the importance of integrated approaches that recognize the interdependencies among land, water, biodiversity, food, health and climate. Although land is not treated as a separate nexus element in the IPBES Nexus Assessment, the assessment nevertheless provides important scientific support for approaching sustainable land and water management and LDN in synergy with other environmental and development objectives, rather than through isolated sectoral interventions.**

**64. Taken together, these findings suggest that action under the Convention can be strengthened when SLM is framed not as a stand-alone technical agenda, but as part of a broader effort to build resilient landscapes, reduce trade-offs across sectors and align environmental, social and economic objectives over time.**

***Governance, integrated response options and enabling conditions***

**65. An important conclusion drawn from all three assessments highlights that existing land governance arrangements are often not sufficiently integrated or adaptive to address the interconnected, cross-sectoral, and multi-scale challenges facing Parties. Addressing this can significantly enhance the impact of the range of pre-existing response options, which can generate multiple benefits across interconnected land, water, biodiversity, food, health and climate systems when implemented at appropriate scales and in appropriate contexts. The evidence highlights, in particular, the potential of integrated landscape management, ecosystem restoration, efficient water use in agriculture, sustainable healthy diets and other mutually reinforcing measures to contribute simultaneously to sustainable land and water management, drought resilience, biodiversity conservation and food security.**

**66. At the same time, the findings indicate that the effectiveness of such measures depends not only on which options are chosen, but also on how they are combined, sequenced and governed. Bundling or sequencing complementary measures can amplify synergies and reduce trade-offs, whereas fragmented or poorly coordinated interventions may fail to realize broader benefits and may in some cases intensify existing pressures on land, water and ecosystems.**

**67. Across the evidence reviewed, fragmented institutions, siloed policymaking and weak coordination emerge as recurring barriers, while more integrative, inclusive, equitable, accountable and adaptive governance approaches are essential to support coherent action on DLDD.**

**68. The SPI's work also highlights that inclusive participation, secure land and resource rights, policy coherence and recognition of diverse knowledge systems are not peripheral concerns, but core enabling conditions for effective implementation. Greater attention to the roles of Indigenous peoples and local communities, women, youth, land users and other stakeholders, together with stronger integration of scientific, Indigenous, local and experiential knowledge, can improve the legitimacy, relevance and durability of action under the Convention.**

***Finance, incentives, knowledge and data***

**69. A related conclusion is that finance, incentives, data and knowledge infrastructure play a decisive role in determining whether more integrated and sustainable land-use pathways can be implemented at scale. The evidence reviewed points to the importance of aligning public and private finance with sustainable land and water management objectives, reforming environmentally damaging incentives, improving accountability for land-related investment and strengthening participatory and usable data systems that can guide decision-making, monitoring and learning.**

**70. In this respect, the findings suggest that SLM and restoration are more likely to be durable where they are supported by institutions and information systems that make degradation visible and indicate tipping points, recognize the role of land stewards, and connect finance and investment with measurable social, economic and ecological outcomes.**

***Coherence, transformation and partnerships***

**71. The findings further indicate that action under the Convention can benefit from stronger cross-sector and cross-convention coherence. Both the land stewardship framing developed in GLO3 and the insights drawn from the Nexus and Transformative Change Assessments suggest that more coherent alignment among land, climate, biodiversity, water, food and development policies can improve efficiency, reduce duplication and generate co-benefits across multiple international agreements, including those related to LDN.**

**72. Another important conclusion coming from all three assessments is that more effective responses to DLDD will depend not only on improved techniques or better project design, but also on broader shifts in values, incentives, and patterns of decision-making that currently drive unsustainable land use. The evidence suggests that more durable progress under the Convention will depend on the ability to connect SLM, restoration and efforts to build the resilience of communities and ecosystems with wider changes in governance, economic systems, social inclusion and long-term planning. Governments are powerful enablers of transformative change when they foster policy coherence, and enact and enforce stronger regulations to benefit nature and its contributions to people in policies and plans (e.g., regulations, taxes, fees and tradable permits) across various sectors, deploy innovative economic (including financial) and fiscal tools, eliminate, phase out or reform environmentally harmful subsidies, and promote international cooperation**

**73. The SPI's work also suggests that coalitions, partnerships and whole-of-government and whole-of-society approaches can play an important role in enabling such change. Collaboration across ministries, levels of government, civil society, Indigenous peoples and local communities, the private sector, scientific institutions and development partners can help to build shared understanding, mobilize capacities and resources, reduce fragmentation and strengthen implementation outcomes in relation to DLDD.**

**74. Taken together, these conclusions point in a common direction: implementation under the Convention is likely to be strengthened where Parties pursue more integrated, inclusive, synergistic and coherent approaches that connect SLM with resilience, rights,**

**participation, finance, knowledge, policy coherence and cross-sector coordination. The overall implication of the evidence reviewed is that addressing DLDD effectively will require action not only on land itself, but also on the wider systems, incentives and institutions that shape how land is valued and used. Finally, cost-effective synergies must be deployed across the Rio conventions.**

**75. Parties may wish to consider these conclusions when engaging in consultations on a draft decision to be considered by the COP, based on the draft text for negotiations found in document ICCD/COP(17)/CST/8, which, following decisions 22/COP.16 and 36/COP.16, contains all draft decisions prepared for Parties for consideration at CST 17.**

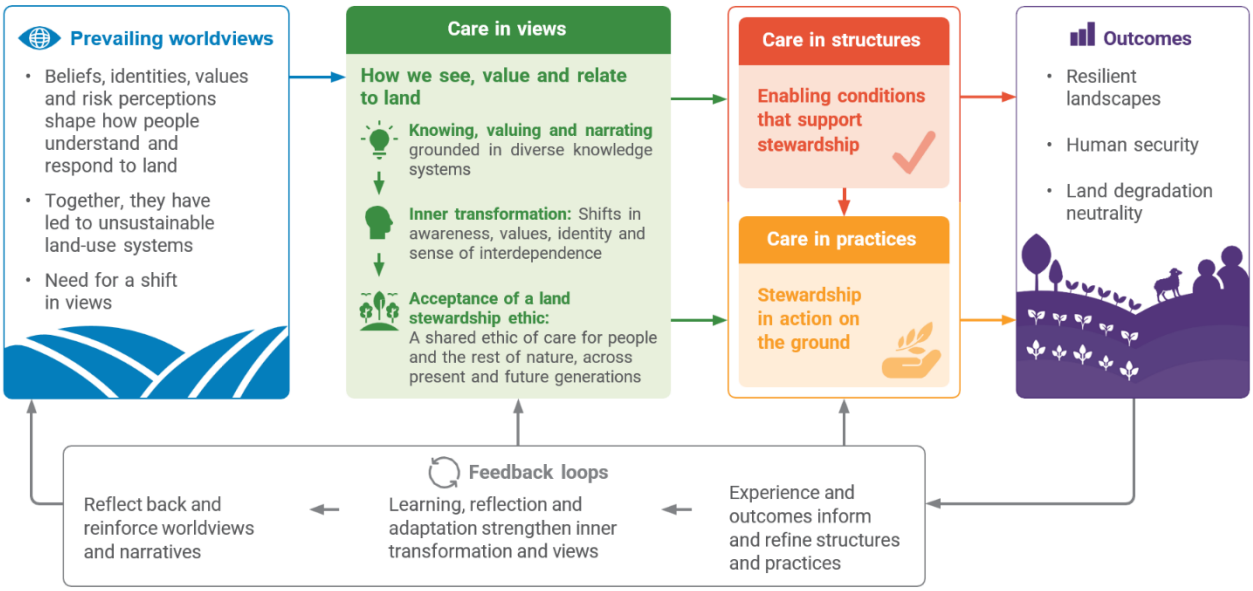
# Annex I

## Overview diagram of the land stewardship framework

[English Only]

Figure

**The land stewardship framework, shown in the context of prevailing worldviews which shape how people know, value and narrate their relationships with the land. The land stewardship framework emphasizes "care" across three interdependent dimensions: care in views, care in structures and care in practices. At its core, care in views integrates diverse worldviews, identities, narratives and knowledge systems through three mutually reinforcing elements: knowing, valuing and narrating in relationship, linked by relational values. These processes foster inner transformation and the acceptance of a land stewardship ethic, which is expressed through care in structures (the institutions that create enabling conditions) and care in practices (implementation through on-ground action). Continuous feedback loops of reflection, learning and adaptation strengthen these domains over time. Together, these domains support resilient landscapes, human security and land degradation neutrality, while sustaining thriving agricultural and rangeland systems across generations.**



# Annex II

## Background on report preparation and approval by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

[English only]

1. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) prepares policy-relevant but not policy-prescriptive assessments of biodiversity and ecosystem services, including thematic reports, regional assessments and methodological studies, in accordance with its functions and procedures adopted by the Plenary. These assessments aim to synthesize the best available scientific, technical and Indigenous and local knowledge to inform decision-makers on the status, trends and drivers of biodiversity and ecosystem change and on options for policy and practice.

2. At its seventh session (IPBES-7, 29 April to 4 May 2019, Paris, France), the IPBES Plenary adopted a new work programme for the period 2019–2030, following up on the first IPBES work programme for 2014–2018. The 2019–2030 work programme included, inter alia, a thematic assessment of the underlying causes of biodiversity loss, determinants of transformative change and options for achieving the 2050 vision for biodiversity (Transformative Change Assessment), and a thematic assessment of the interlinkages among biodiversity, water, food and health (Nexus Assessment).

3. The Transformative Change Assessment was initiated pursuant to this work programme. At IPBES-8 (14 to 24 June 2021, held online), the Plenary approved the undertaking of the Assessment, as outlined in the scoping report contained in annex II to decision IPBES-8/1. The scoping report defined the objectives, scope, structure and key questions for the assessment and provided the basis for subsequent author selection and chapter development under IPBES procedures.

4. The Nexus Assessment was similarly initiated under the 2019–2030 work programme. The Plenary at IPBES-8 decided to undertake a thematic assessment of the interlinkages among biodiversity, water, food and health, drawing on a dedicated scoping process conducted in accordance with the IPBES procedures for the preparation of deliverables and approved by the Plenary. The approved scoping report set out the Assessment's focus on interlinkages and synergies across key environmental and societal dimensions, including relevance to food security, water security and human health, and guided the subsequent preparation of the report.

5. The preparation of both Assessments followed the IPBES procedures for the preparation of assessment reports and other deliverables, as set out in the "Procedures for the preparation of IPBES deliverables" and related decisions of the Plenary. In accordance with those procedures, governments and organizations nominated experts to serve as authors and review editors; the Multidisciplinary Expert Panel and Bureau selected authors, co-chairs and review editors; and technical support units assisted in coordinating drafting and review, ensuring consistency with the approved scoping report documents.

6. Draft chapters and the draft Summary for Policymakers (SPM) for each assessment were subjected to multiple review rounds in line with IPBES procedures. An initial external expert review was followed by a combined expert and government review, with comments collated and addressed by authors and review editors. This iterative process ensured that the assessments reflected a broad range of scientific, technical and Indigenous and local knowledge and that the SPMs accurately captured key findings grounded in the underlying chapters.

7. The Nexus Assessment SPM and chapters were considered by the IPBES Plenary at its eleventh session (IPBES-11, Windhoek, Namibia, 10 to 16 December 2024). At that session, the Plenary approved the SPM and accepted the chapters of the Thematic Assessment

Report on the Interlinkages among Biodiversity, Water, Food and Health, in line with standard IPBES practice, under which SPMs are approved line by line, and underlying reports are accepted as scientific-technical assessments.

8. The Transformative Change Assessment was considered by the Plenary on the same basis. At IPBES-11, the Plenary examined the draft SPM and underlying chapters of the Thematic Assessment Report on the Underlying Causes of Biodiversity Loss and the Determinants of Transformative Change and Options for Achieving the 2050 Vision for Biodiversity. In accordance with IPBES procedures, the SPM was approved and the chapters were accepted, thereby completing the formal assessment process under the 2019–2030 work programme.

9. Confidence in key findings of IPBES assessments is expressed using calibrated language adapted from the Intergovernmental Panel on Climate Change, combining qualitative evaluations of evidence and agreement. The SPM of the Nexus and Transformative Change Assessments indicates confidence levels in italics (e.g., “high confidence”), with each key finding traceable to specific sections of the underlying chapters and their synthesis of multiple lines of evidence. This calibration ensures that the findings drawn upon by the Science-Policy Interface for the purposes of the present document are grounded in rigorously evaluated scientific and technical evidence, and in the procedures established by the IPBES Plenary.

# Annex III

## Science-Policy Interface methodology for the analysis of key messages

[English only]

1. As per decision 21/COP.16, the Science-Policy Interface (SPI) conducted a review and analysis of two assessment reports of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), namely the Thematic Assessment Report on the Interlinkages among Biodiversity, Water, Food and Health (Nexus Assessment) and the Thematic Assessment Report on the Underlying Causes of Biodiversity Loss and the Determinants of Transformative Change and Options for Achieving the 2050 Vision for Biodiversity (Transformative Change Assessment), in order to identify key messages and policy-relevant implications for the implementation of the United Nations Convention to Combat Desertification (UNCCD).

2. The SPI had already contributed to the scientific review of both assessments in the preparation stage, through processes organized by IPBES. The analysis summarized in the present document therefore builds on both that earlier engagement and on the finalized assessment outputs approved and accepted by the IPBES Plenary.

3. The SPI analysis was based on inputs by individual SPI members, supported by the secretariat, and developed through document review, working-level exchanges and iterative drafting. In line with the approach used by the SPI in analysing relevant reports produced by other intergovernmental scientific bodies, the purpose of the analysis was to identify the messages from the two IPBES Assessments most relevant to the mandate, objectives and implementation needs of the UNCCD.

4. The SPI analysis focused primarily on the key messages contained in the approved Summaries for Policymakers of the two assessments. The SPI also consulted the underlying chapters and associated explanatory text in order to ensure that the synthesis undertaken would remain scientifically grounded and provide the necessary detail for the formulation of conclusions and policy-oriented recommendations relevant to the Convention.

5. In reviewing the Nexus Assessment, the SPI focused on findings related to interlinkages among biodiversity, water, food, health and climate change, including the implications of siloed governance, fragmented decision-making and the need for response options that generate synergies across multiple policy goals. In reviewing the Transformative Change Assessment, the SPI focused on findings related to the urgency of systemic change, the need to address underlying drivers of biodiversity loss and ecosystem degradation, and the importance of integrated strategies, governance, policy coherence, enabling institutions and economic incentives.

6. The SPI worked to ensure that the conclusions and any associated recommendations presented in this document are clearly anchored in the key messages of the two IPBES Assessments. To maintain a clear line of sight, the elements of the key messages drawn upon to formulate the synthesis are referenced in the text of the document, and, where necessary, the underlying chapters were used to clarify concepts, contextualize findings and identify their relevance to the UNCCD.

7. Draft conclusions and recommendations derived from the two Assessments were refined with support from the secretariat in order to express them in a form suitable for consideration by policymakers during the Committee on Science and Technology and the Conference of the Parties. A final review of the synthesis, conclusions and recommendations was undertaken within the SPI to ensure consistency with the approved language of the IPBES Summaries for Policymakers, coherence across the document and relevance to the needs of Parties.