United Nations ICCD/COP(16)/CST/5

Convention to Combat Desertification

Distr.: General
10 September 2024

Original: English

Conference of the Parties
Committee on Science and Technology
Sixteenth session
Riyadh, Saudi Arabia, 3–12 December 2024
Item 4 (a) of the provisional agenda
Interfacing science and policy, and sharing knowledge
Interfacing science and policy, knowledge sharing and technology transfer

Interfacing science and policy, knowledge sharing and technology transfer

Note by the secretariat

Summary

By its decision 19/COP.15 regarding the Science-Policy Interface, the United Nations Convention to Combat Desertification Knowledge Hub, and the analysis, dissemination and accessibility of best practices, the Conference of the Parties (COP) requested the secretariat to report at the sixteenth session of the COP on the implementation, of the decision, as well as on measures taken to facilitate the sharing of knowledge and the interfacing of science and policy.

Contents

I. Background

1. By its decision 23/COP.11, the Conference of the Parties (COP) established a Science-Policy Interface (SPI) to facilitate a two-way science-policy dialogue and ensure the delivery of policy-relevant information, knowledge and advice on desertification/land degradation and drought (DLDD) to all interested Parties. Following decisions 19/COP.13 and 21/COP.15, a review of the SPI was undertaken. The outcomes of this review are presented in ICCD/COP(16)/CST/6, and corresponding draft text recommendations for the future functioning of the SPI are contained in ICCD/COP(16)/CST/10.

2. Further, the Intergovernmental Working Group on the Midterm Evaluation (IWG-MTE) of the 2018–2020 Strategic Framework of the United Nations Convention to Combat Desertification (UNCCD), inter alia, provided several recommendations regarding the SPI, and the tools offered to promote science-policy messages through advocacy and communications. The outcomes of the IWG-MTE are contained in ICCD/COP(16)/2.

3. By its decision 19/COP.15, the COP requested the Bureau of the Committee on Science and Technology (CST) to develop a gender policy and implementation plan for the SPI, requested the secretariat to promote published and new SPI reports on social media, and to create, in collaboration with the SPI, a three-to-five minute video summary of each report to amplify the key messages contained in recently published SPI reports.

4. The UNCCD Convention text recognizes the importance of access by affected country Parties, particularly affected developing country Parties, to appropriate technology, knowledge and know-how.

5. Decision 19/COP.15 also requested the secretariat to continue the development of knowledge tools, and decision 20/COP.15 requested the secretariat, the Global Mechanism (GM) and the SPI, and invited the World Overview of Conservation Approaches and Technologies (WOCAT) and other stakeholders, to, inter alia, explore options for knowledge and technology transfer to support approaches to the implementation of the Convention that can simultaneously address DLDD, and sand and dust storms (SDS), support climate change mitigation and adaptation, and contribute to conservation, the sustainable use of biodiversity and the sustaining of livelihoods.

6. Decision 19/COP.15 further requested the secretariat to conduct a coherence and alignment assessment of the expanding number of approaches that may contribute to the sustainable management of land and water resources which, while not being formally recognized under the UNCCD or other intergovernmental processes, may contribute to addressing DLDD and the achievement of land degradation neutrality (LDN).

7. Decision 20/COP.15 on policy-oriented recommendations resulting from the SPI's cooperation with other intergovernmental scientific panels and bodies included a request to the secretariat to collaborate with relevant constituted bodies under the United Nations Framework Convention on Climate Change (UNFCCC) as well as relevant scientific and technical partners to produce a supplement to the national adaptation plan (NAP) technical guidelines on promoting synergy between efforts addressing DLDD, the achievement of LDN and the process to formulate and implement NAPs under the UNFCCC and the Paris Agreement.

8. By the same decision, the COP requested the secretariat and the GM to collaborate with relevant intergovernmental, scientific and technical partners to develop guidelines for Parties on the design of policy options that make ecological restoration attractive in terms of financial inclusion and social protection, to collaborate with appropriate secretariats and other initiatives, as well as relevant scientific and technical partners, to produce the methodology for an interactive report on the total global ambition for land restoration, and to explore options for the development of a technical guide series on integrated land management response options for ecosystems in drylands.

9. Decisions 9/COP.15 and 11/COP.15 recommend the Global Environment Facility promote the use of and encourage Parties to use the WOCAT database for knowledge sharing and the dissemination of best practices on sustainable land management (SLM). Decision 24/COP.15 encourages the secretariat to continue the collaboration with WOCAT to enhance

the implementation of the Gender Action Plan and its road map, including to generate gender-disaggregated data, and inform gender-responsive policy design for achieving LDN.

10. Chapter II of this document provides a report on the practices and working modalities for the SPI over the triennium 2022–2024. A synthesis of the outcomes of the current work of the SPI is contained in documents ICCD/COP(16)/CST/2, ICCD/COP(16)/CST/3 and ICCD/COP(16)/CST/4.

11. Chapter III of this document provides information on the available tools for sharing data, knowledge and technologies, as well as background on the model for technology transfer and innovation.

12. Chapter IV summarizes the outcomes of several scientific processes which have resulted in scientific guidance for improving SLM and restoration practices.

13. Chapter V of this document provides an overview of the cooperation between the UNCCD and WOCAT, and the availability of best practices on SLM.

14. Chapter VI of this document provides conclusions and recommendations.

II. Working modalities of the Science-Policy Interface during the triennium 2022–2024

15. In accordance with decisions 19/COP.13 and 19/COP.14, membership is renewed in stages through a rotating system, with some new and other remaining members. To renew the SPI for the triennium 2022–2024, an open call for independent scientists was opened on 21 July 2022 and closed on 25 August 2022. The open call was advertised on the UNCCD website and within relevant scientific networks, taking into consideration the need for regional, gender and disciplinary balance, for scientific expertise and demonstrated scientific impact relevant to the SPI work programme, and for experience in interfacing science and policy. A total of 216 applications were received from 80 different countries, representing all regional groups and regional implementation annexes, with a gender balance of 32 per cent women and 68 per cent men.

16. At its September 2022 meeting, the Bureau of the CST reviewed, evaluated and ranked the applications received through the aforementioned call, as per the selection modalities agreed by the Bureau of the CST, leading to the selection of 13 new independent scientists, five of whom were nominated to represent each of the five regional groups, and two of whom were early career scientists. All four serving observer organizations from United Nations organizations already serving on the SPI were renewed by the Bureau at the same meeting.

17. The completed SPI renewal process achieved the regional and disciplinary balance in SPI membership called for in decision 23/COP.11, as well as gender parity across the membership as requested by Parties in decision 19/COP.15, contributing positively to the monitored status of overall gender parity across the UNCCD requested of the secretariat in decision 24/COP.15 and reported in ICCD/COP(16)/17.

18. The full SPI met physically four times, and the various working groups of the SPI engaged virtually numerous times during the triennium 2022–2024, leading to the completion of two scientific assessments reported in documents ICCD/COP(16)/CST/2 and ICCD/COP(16)/CST/3 and the outcomes of seven coordination activities reported in document ICCD/COP(16)/CST/4.

19. The working modalities of the SPI were refined during the triennium 2022–2024. Following decision 19/COP.15, the Bureau of the CST and the SPI, with support from the secretariat, developed, reviewed and adopted a Gender Policy and Implementation Plan[1] that

[1] See: https://www.unccd.int/sites/default/files/2024-08/SPI%20Gender%20Policy%20and%20Implementation%20Plan_120824_0.pdf.

is aligned with the UNCCD Gender Equality Policy and Plan 2024 to 2030[2] and that builds on the experiences of other intergovernmental bodies having developed similar policies.

20. The SPI continued to foster partnerships with other scientific bodies during the triennium 2022–2024. In September 2023, the French Scientific Committee on Desertification (CSFD)[3] graciously hosted the eighteenth meeting of the SPI in September 2023 back-to-back with a co-organized joint workshop entitled "The role of land in the sustainable development agenda". The joint workshop brought together representatives of scientific institutions and civil society organizations from France and Africa to exchange with SPI members and explore collaboration opportunities. The nineteenth meeting of the SPI in March 2024 coincided with World Water Day, which the SPI celebrated through a joint session with the Bonn Water Network[4] at the United Nations Campus in Bonn, Germany.

21. The SPI and the secretariat collaborated to improve the communication of SPI products during the triennium 2022–2024. In accordance with 19/COP.15, the secretariat developed a new approach to the design and promotion of SPI technical reports and science-policy briefs which was tested during the launch of the SPI report on integrated land use planning[5] and the SPI report on drought resilience assessment and monitoring.[6] The approach included a social media campaign amplified by current and former members of the SPI as well as scientific partners. Short video summaries of each report were also produced with the aim of amplifying the key messages contained within, targeting a wider audience.[7]

22. The secretariat also organized a media training session during the nineteenth meeting of the SPI in March 2024. An internationally recognized journalist spoke to the group about his experience speaking with scientists and gave his advice on best practices for scientists when speaking to the media. The session included recorded sessions of the scientists participating in a mock media event. After the practice session, scientists were given feedback on their interviews.

23. During the biennium 2025–2026, the secretariat continued to mobilize resources for the effective functioning of the SPI, which made it possible for the SPI to complete all tasks in its work programme according to the means defined in its mandate.

III. Tools for sharing data, knowledge and technologies, technology transfer and innovation

A. Knowledge sharing

24. The UNCCD Knowledge Hub, launched in 2016, was fully integrated into the UNCCD website during the rebranding and redesign in 2022. The three main elements of the Knowledge Hub were: (i) providing easy access to relevant best practices, primarily on SLM, in collaboration with WOCAT; (ii) a Drought Toolbox (based on the three pillars of Monitoring and Early Warning, Vulnerability and Risk Assessment, and Risk Mitigation Measures); and (iii) an SDS Toolbox (which was developed and structured based on the SDS

[2] See: https://www.unccd.int/sites/default/files/2024-07/Gender%20equality%20policy%20and%20plan%20May%202024%20UNCCD.pdf.

[3] The French Scientific Committee on Desertification is an advisory body composed of experts from scientific institutions from across France which provides scientific knowledge and advice on issues related to desertification/land degradation and drought, particularly in the context of sustainable development. See: https://www.csf-desertification.org/.

[4] The Bonn Water Network is a community of practice which pools the capacities of 11 institutions with offices in Germany to strengthen the expertise needed in research, training and practice to implement water-related sustainable development goals around the world. See: https://www.geographie.uni-bonn.de/bonn-water-network/de.

[5] See: https://www.unccd.int/resources/reports/contribution-integrated-land-use-planning-and-integrated-landscape-management.

[6] See: https://www.unccd.int/resources/reports/multiscale-approaches-assessment-and-monitoring-social-and-ecological-resilience.

[7] See: https://www.unccd.int/science/resources.

compendium). In 2022, these three elements were fully integrated into the UNCCD website and continue to be maintained and updated.

25. In 2023, the UNCCD launched the Data Dashboard, which provides easy access and analysis of the data reported by Parties during the 2022 Reporting process.[8]

26. In 2024, the UNCCD GM, in collaboration with the Great Green Wall (GGW) Accelerator, the Pan African Agency of the Great Green Wall (PAGGW) and the 11 GGW countries, also launched the GGW Observatory. The GGW Observatory is a multi-stakeholder, multipurpose digital platform to monitor the progress of the GGW Initiative, providing access to finance and project management data and giving stakeholders insight into the GGW Initiative projects being implemented locally.[9]

27. Subsequently, the Group of Twenty (G20) Global Land Initiative (GLI) launched the Global Land Restoration Information Hub (GRIH) in 2024. The GRIH is a platform to facilitate connections between experts, activists and advocates of land restoration and newcomers via forums and webinars. It also showcases key legislation, players and their commitments as well as best practice, learnings and training to support collaboration and the implementation of restoration projects. It also provides access to data, facts and knowledge.[10]

28. To facilitate the process for UNCCD stakeholders, all platforms and tools are accessible through the "knowledge and data" section of the UNCCD website.[11] For the coming biennium, the secretariat and the GM aim to continue developing knowledge tools in collaboration with the SPI, scientific partners and other partners.

B. Technology transfer

29. In the UNCCD context, technology transfer is defined in Article 18 of the Convention text, which lists, inter alia, the promotion and facilitation of access to appropriate technology, knowledge and know-how. The UNCCD 2018–2030 Strategic Framework further defines the strategy and expected outcomes and accomplishments with regards to access to knowledge and technology, under Strategic Objective 5. It indicates "Extensive efforts are implemented to promote technology transfer, especially on favourable terms and including on concessional and preferential terms, as mutually agreed, and to mobilize other non-financial resources". The UNCCD 2018–2030 Strategic Framework also reiterates that the GM has a central responsibility to support technology transfer.

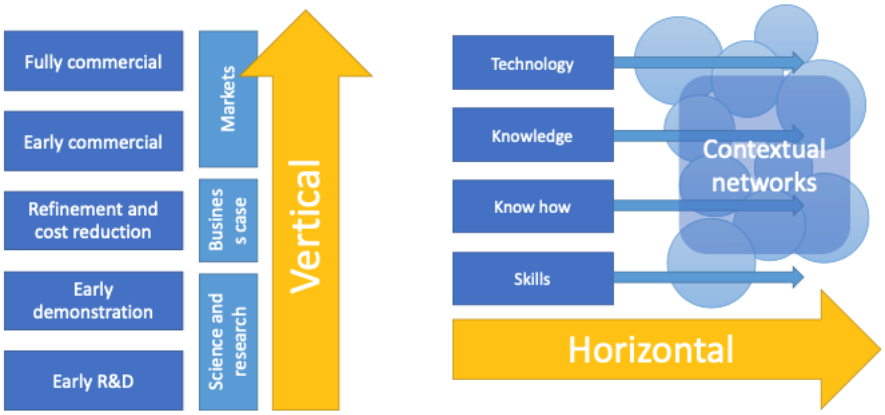
30. In 2022, the GM published the model framework for technology transfer in the UNCCD context, which was presented to Parties at the fifteenth session of the COP (COP 15). The model framework provides a proposed approach to technology transfer in the UNCCD context, and contains elements for implementation by Parties and other stakeholders.

31. In the model framework, technology transfer is described as including technology development, diffusion, transfer, and application of new and innovative technologies, as well as the transfer of related knowledge, know-how and good practices to affected country Parties.[12]

32. The model framework includes mechanisms for vertical transfer which encourages new and innovative technologies to move up the innovation chain and helps promising new technologies out of the R&D and scientific context into a viable business context for implementation on the ground. The model framework also includes mechanisms for horizontal transfer, which entails the diffusion of more mature technologies between countries to ensure technologies are available and affordable where they are most needed (see figure below).

[8] See: https://data.unccd.int and document ICCD/CRIC(22)/7–ICCD/COP(16)/CST/8.
[9] See: https://www.ggwobservatory.org and document ICCD/CRIC(22)/5.
[10] See: https://grih.info/.
[11] See: https://www.unccd.int/data-knowledge.
[12] See: https://www.unccd.int/resources/other/model-framework-technology-transfer.

Figure
Horizontal and vertical Technology Transfer



33. In 2023, the GM collaborated with the GGW Accelerator and DeserTech, the innovation centre in Israel's Negev desert, on a pilot comprising many elements of the model framework.

34. DeserTech deploys an innovation ecosystem model which, in line with the UNCCD model framework, and emphasizes the collaboration between the many stakeholders involved. The method acknowledges that innovation is not only technological but can also include new and innovative business models and behavioural patterns. Within the innovation ecosystem, the concept of co-creation is emphasized.[13]

35. In the pilot project,[14] DeserTech, the GGW accelerator and the GM brought together entrepreneurs and innovators from 11 GGW countries to engage in a needs assessment, which included capacity-building on evaluating innovations and technologies in line with expressed needs.

36. During in-person workshops, the innovators from the GGW countries connected with those from the Negev region, and in joint writing workshops, developed project proposals that were published on the DeserTech Marketplace. Participating entrepreneurs presented these proposals to potential private sector investors with interest in the GGW and several projects have received full or partial funding.[15]

37. To ensure the solutions were rooted in local knowledge and implemented with clear local ownership and leadership, this collaboration started with capacity-building for 30 young entrepreneurs from the GGW countries. This comprised seven online training sessions between December 2022 and February 2023, culminating in an immersive learning experience in the Negev desert. The entrepreneurs then developed 16 project proposals and business plans in collaboration with entrepreneurs and innovators from the Negev region.

38. The DeserTech collaboration with the GM and GGW Accelerator demonstrated the effectiveness of this collaborative approach, which included elements of knowledge sharing and co-creation. A lessons learned report has been published on the UNCCD website.[16]

39. In the coming biennium, the secretariat aims to follow up on this model of innovation with new partners from both the academic and private sector. The GM is also exploring follow-up projects, using a similar collaborative model for different regions based on the lessons learned, including bringing financing institutions into the innovation ecosystem at an early stage.

[13] See: https://publications.iadb.org/en/publications/english/viewer/Innovation-Ecosystem-Management-Methodology.pdf.
[14] See: https://en.desertech.org.il/great-green-wall.
[15] See: https://en.desertech.org.il/_files/ugd/9347c4_009e2e7004f24ea894c5f3ead750bafb.pdf.
[16] See: https://www.unccd.int/resources/brief/great-green-wall-desertech-collaboration.

IV. Scientific guidance for improving sustainable land management and restoration practices

A. Coherence and alignment assessment of the expanding number of approaches that may contribute to the sustainable management of land and water resources

40. In response to decision 19/COP.15, the secretariat collaborated with the United Nations University Institute for Environment and Human Security (UNU-EHS) to produce an independent assessment and research report on the expanding number of approaches that may address DLDD and contribute to the sustainable management of land and water resources and the achievement of LDN.

41. Published by UNU-EHS in March 2024, the resulting report, entitled, "The contribution of land and water management approaches to Sustainable Land Management and achieving Land Degradation Neutrality", responds to this need by examining the alignment of the following land and water management approaches with SLM and LDN: agroecology, climate-smart agriculture, conservation agriculture, forest landscape restoration, integrated agriculture, regenerative agriculture, and rewilding.[17] The alignment assessment used a formative methodological approach, combining literature review and extensive expert consultations, and is structured according to the SLM and LDN pillars of ecosystem health, food security and human well-being, each comprised of several criteria which were used for the analysis. In addition, several criteria that cross-cut all pillars were identified and used.

42. The results indicate that each of the approaches contributes to SLM and the achievement of LDN in different ways and to varying degrees, with none of the approaches embracing principles or practices that directly conflict with the criteria of SLM and LDN. A higher degree of alignment was identified for the ecosystem health and food security pillars, such as maintaining land-based natural capital. Most gaps in alignment concern criteria relating to the human well-being pillar along with certain cross-cutting criteria, e.g. the protection of land tenure rights or the integration of biophysical, socio-cultural and economic needs. Importantly, conclusions about an approach's degree of alignment with or gaps in alignment relevant to SLM and LDN criteria are conceptually indicative but may change in actual practice depending on where and how projects are implemented. Figures 1a to 1f in the Annex to this document illustrate the alignment of all seven approaches with the SLM and LDN criteria described in detail in the underlying report.[18]

43. Notwithstanding, the results of the assessment led to the identification of common entry points for addressing gaps in alignment:

(a) Including supplementary, relevant remedial activities in the project design and implementation;

(b) Incorporating site-specific but complementary approaches at landscape scale to synthesize individual strategies;

(c) Ensuring more rigorous adherence to the principles of each approach through monitoring and evaluation; and

(d) Consulting and applying established guidelines.

44. Clarifying the approaches' contribution to SLM and the achievement of LDN can help overcome the lack of formal intergovernmental recognition of the approaches, prevent

[17] See: https://collections.unu.edu/view/UNU:9640.

[18] In the report, the term alignment refers to the process of identifying synergies among strategies with common objectives to increase efficiency and effectiveness for improved outcomes. These synergies reflect the degree to which the selected approaches align with SLM and LDN and contribute to their conceptual aims, based on the core criteria underlying SLM and LDN, which are detailed in the report.

misinterpretation, and ensure their strategic inclusion in broader efforts to remedy land degradation.

B. Promoting synergies between land degradation neutrality and climate change adaptation through a supplement to the national adaptation plan technical guidelines

45. The NAP process of the UNFCCC enables Parties to formulate and implement UNFCCC NAPs as a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs. At the seventeenth session of the UNFCCC COP, Parties adopted initial guidelines and principles for the NAP process.[19] The UNFCCC established the NAP process as a way of facilitating adaptation planning in least developed countries and other developing countries. The agreed objectives of the NAP process are:

(a) To reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience;

(b) To facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate.

46. As a way of providing technical support, the NAP technical guidelines have been supplemented with materials developed by a number of organizations working on various areas related to the process of formulating and implementing NAPs; a number of these have now been published.[20] The supplementary materials are intended to offer in-depth coverage of selected steps in the process to formulate and implement NAPs.

47. Following decision 20/COP.15, the secretariat collaborated with UNU-EHS and relevant constituted bodies under the UNFCCC to produce a supplement to the NAP technical guidelines on promoting synergy between efforts addressing DLDD, the achievement of LDN, and the process to formulate and implement NAPs under the UNFCCC and the Paris Agreement. The new supplement to the NAP technical guidelines is entitled "Promoting synergies between land degradation neutrality and climate change adaptation".[21]

48. While drought and desertification are frequently mentioned as challenges in NAPs, only a few of them refer to LDN or other initiatives under the UNCCD. The new supplement provides guidance intended to bridge this gap by identifying shared objectives and activities, to support efforts to achieve both LDN and climate change adaptation, and to highlight benefits to be gained from integrating LDN initiatives into NAPs. Figure 2 in the annex to this document highlights the similarities and differences between LDN and climate change adaptation.

49. The supplement to the UNFCCC's NAP technical guidelines describes synergies between climate change adaptation and LDN initiatives and elaborates on integrating efforts to address DLDD and achieve LDN into the formulation and implementation of NAPs. The supplement was developed based on a review of literature, exchanges with national focal points of the UNFCCC and UNCCD, and the engagement of the Least Developed Countries Expert Group of the UNFCCC for the validation and review of findings.

50. The key findings on opportunities and synergies between land degradation and climate change adaptation are as follows:

(a) Similarities between climate change adaptation and LDN can benefit both processes by addressing shared objectives;

[19] See decision 5/CP.17 of the United Nations Framework Convention on Climate Change.

[20] See: https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans-naps/guidelines-for-national-adaptation-plans-naps.

[21] See: https://www.unccd.int/resources/publications/promoting-synergies-between-land-degradation-neutrality-and-climate-change.

(b) The integration of established national initiatives under the UNCCD into NAP processes can make them more efficient and impactful;

(c) The expertise and experiences of the UNCCD on land can positively influence land-based adaptation outcomes;

(d) The NAP process can help "climate-proof" LDN initiatives and avoid maladaptation; and

(e) Addressing shared climate change adaptation and LDN objectives together can pave the way for new funding and support opportunities.

51. The supplement provides nine key recommendations related to coordination, capacities, types of assessments, monitoring, evaluation and learning, and communication. These recommendations are intended to guide countries in building synergies between activities to achieve LDN and climate change adaptation within the NAP process. Some may be more relevant than others for particular countries, depending on a nation's progress in their NAP process, on its different initiatives under the UNCCD, and on the current degree of collaboration between its authorities working on climate change adaptation and LDN.

C. Harmony in action for land restoration: linking social protection, financial inclusion and disaster risk finance

52. Following decision 20/COP.15, the secretariat collaborated with UNU-EHS to develop guidelines for Parties on the design of policy options that make ecological restoration more attractive in terms of financial inclusion, social protection, adaptive safety nets, and contingent finance and reserve funds to support land users, especially women, youth, Indigenous peoples, and other vulnerable groups, in order to reduce the additional burden caused by the added cost of land degradation driven by climate change and human-induced activities and processes. The report is entitled "Harmony in action for land restoration: linking social protection, financial inclusion and disaster risk finance – A guide for UNCCD Parties".[22]

53. Land restoration pursued without careful adherence to environmental and social safeguards can pose risks for ecosystems and communities. However, land restoration pursued in the context of LDN not only aims to avoid, reduce and reverse land degradation, but also supports more productive landscapes, addresses climate change and reduces biodiversity loss. Furthermore, it opens up the opportunity to foster sustainable livelihoods, decent work and human well-being. Currently, there are limited incentives to facilitate local acceptance and participation in land restoration and make the activities more effective. However, it is essential to ensure that land restoration activities are conducted in a manner that considers the well-being of those affected. These guidelines address this need by first describing the policy objectives of land restoration, social protection and financial inclusion, as well as the instruments of disaster risk finance, and then identifying the opportunities for building synergies between them.

54. The guidelines were developed based on a literature review, interviews with experts, an expert stakeholder workshop, and an independent review. This process enabled the understanding of the relationships between ecological restoration, social protection, financial inclusion, and disaster risk finance and allowed for the identification of leverageable synergies by building on the diversity of their policy instruments and their shared aim to improve and protect human well-being.

55. The report is organized around three iterative steps to guide the design of coherent policies which facilitate land restoration outcomes that are equitable and suited to particular contexts. Step I is to explore pathways to designing coherent policies, i.e: (i) adapting stand-alone policy instruments with co-benefits; (ii) combining multiple policy instruments into programmes; or (iii) coordinating and aligning multiple policy instruments and programmes. The selection of one or more pathways depends on the enabling environment for policy development (Step II) and on the context in which the policies will be implemented (Step III).

[22] See: https://www.unccd.int/resources/publications/harmony-action-land-restoration.

Examples from case studies have been used to illustrate the suggested steps and potential pathways. These steps are illustrated in figure 3 of the annex to this report.

D. Report on the total global ambition for land restoration

56. Following decision 20/COP.15, the secretariat, through the office supporting the G20 GLI, has commissioned the International Union for Conservation of Nature (IUCN) to produce an interactive report on the total global ambition for land restoration, including all measures to avoid, reduce and/or reverse land degradation.

57. After completing a literature review and a technical methodological note for the database and interactive report, the IUCN engaged the appropriate secretariats and other initiatives that receive commitments for land restoration. The final report is expected to be published before the end of 2024 on the Global Restoration Information Hub.[23]

E. Options for the development of a technical guide series on integrated land management response options for ecosystems in drylands

58. Decision 20/COP.15 requests the secretariat and the GM to collaborate with relevant intergovernmental, scientific and technical partners to explore options for the development of a technical guide series on integrated land management response options for ecosystems in drylands, taking into account national contexts and the interaction among land degradation, biodiversity loss and climate change.

59. The discussion with partners led to relevant work being conducted in the context of the United Nations Decade on Ecosystem Restoration 2021–2030, led by the FAO and the United Nations Environment Programme. This work culminated in the publication of "Standards of practice to guide ecosystem restoration"[24] in 2024, based on a shared vision of ecosystem restoration underpinned by ten principles[25] for achieving the highest level of recovery possible through restoration projects. The first principle, which orients restoration in the context of the Decade on Ecosystem Restoration is followed by nine best-practice principles. These best-practice principles detail the essential tenets of ecosystem restoration that should be followed to maximize net gain for native biodiversity, ecosystem health and integrity, and human health and well-being, across all biomes, sectors and regions.

60. To facilitate application of these principles and thereby maximize restoration outcomes for nature and people, the standards of practice to guide ecosystem restoration provide key recommendations for all phases of restoration projects. These recommendations are applicable to the broad array of restorative activities included as ecosystem restoration under the Decade on Ecosystem Restoration, across all types of ecosystems, including in drylands (urban, production, cultural, semi-natural and natural) and restoration projects, from voluntary community member-led efforts to highly resourced, nationally funded projects.

V. Accessibility of best practices on sustainable land management and collaboration with the World Overview of Conservation Approaches and Technologies

61. The sustainable management of land and water resources is central to the objective of the UNCCD (Article 2 of the Convention) and knowledge of appropriate practices is essential for its effective implementation. The provision of evidence-based practical guidance for on-the-ground solutions has been emphasized in numerous COP decisions related to interfacing science and policy and sharing knowledge. For knowledge on SLM practices and LDN implementation, the secretariat collaborates with, inter alia, WOCAT, which features a rich

[23] See: https://grih.info/reports/.
[24] See: https://openknowledge.fao.org/handle/20.500.14283/cc9106en.
[25] See: https://openknowledge.fao.org/handle/20.500.14283/cb6591en.

database of SLM practices (technologies and approaches), as well as spatially explicit LDN Decision Support Systems for the convergence of evidence.

62. Established in 1992, WOCAT is a global network of SLM specialists, uniting more than 2000 members registered on the WOCAT platform, as well as collaborating with institutions and actors in more than 60 countries. It connects all stakeholders involved in land management, from land users to decision-makers, and specifically works with SLM specialists and experts who share tools and methods for identifying fields of action. Furthermore, WOCAT is a platform for knowledge sharing and exchange in land management, with a particular focus on South-South cooperation and capacity development.

63. WOCAT Consortium Partners include the University of Bern/Centre for Development and Environment (CDE), the FAO, the International Soil Reference and Information Centre (ISRIC), the Alliance of Biodiversity International and the International Centre for Tropical Agriculture (CIAT), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the International Center for Agricultural Research in the Dry Areas (ICARDA) and the International Centre for Integrated Mountain Development (ICIMOD).

64. In 2014, following decision 17/COP.11, WOCAT was recognized as the primary recommended database for UNCCD stakeholders to exchange knowledge and best practices on SLM. As part of the UNCCD national reporting process, Parties are encouraged to share relevant best practices on SLM through the WOCAT database.

65. The WOCAT 2020+ Initiative, which was developed by the WOCAT Consortium Partners in close collaboration with the secretariat to the UNCCD[26] aims to boost the uptake of SLM practices around the world through a strengthened global partnership. WOCAT 2020+ strives to establish a leading platform of expertise and create transformative momentum to enable countries and institutions to scale up SLM, achieve LDN and reach the related Sustainable Development Goals addressed by the three Rio conventions on land, climate and biodiversity. Building on the vast knowledge presented in the global SLM database and new partnership actions, WOCAT 2020+ synthesizes local, national and regional experiences, provides tools for evidence-based decision-making, facilitates targeted research and disseminates lessons learned. This gives a wide range of stakeholders, from agricultural extensionists to UNCCD national focal points, access to new SLM insights and guidance.

66. Further to decision 24/COP.15, a project was initiated to develop a gender module in the WOCAT database, now expected for mid-2025. The new module, based on a tool which is currently being tested and refined in more than 50 countries, aims to provide better insight into the potential gender-responsiveness of SLM technologies, while also increasing awareness of gender issues amongst WOCAT users, the SLM community and UNCCD stakeholders. For more information this project, see ICCD/COP(16)/17.

67. During the triennium 2022–2024, the UNCCD secretariat and WOCAT and other partners collaborated with the International Institute for Applied Systems Analysis on the development of a report entitled "Carbon Farming in Kazakhstan: Unlocking the Opportunity."[27] This report discusses how carbon farming and trading can provide a marked contribution to socio-economic development while addressing environmental degradation and building resilience to climate change. It explores viable options for leveraging the potential of SLM to support meeting land restoration targets and the net-zero transition while helping accelerate economic development.

68. Best practices from the WOCAT SLM database are disseminated through the UNCCD Toolboxes, contributing to the drought risk mitigation tools offered in the UNCCD Drought Toolbox, as well as the source control and management tools offered in the SDS Toolbox. For more information on these toolboxes, see ICCD/COP(16)/15 and ICCD/COP(16)/16.

69. To ensure wide dissemination of and access to SLM knowledge, WOCAT's global SLM database is increasingly used in related platforms, applications, and toolboxes via a

[26] See: https://www.wocat.net/documents/1082/WOCAT2020_Concept_Note.pdf.
[27] See: https://wocat.net/en/wocat-media-library/carbon-farming-in-kazakhstan-unlocking-the-opportunity/.

well-documented Application Programming Interface (API). This includes the United Nations Decade on Ecosystem Restoration's Framework for Ecosystem Restoration Monitoring (FERM), the GGW Observatory and the G20 GLI Global Land Restoration Information Hub (GRIH).

70. For the upcoming biennium, the secretariat aims to further pursue the collaboration with WOCAT, developing further knowledge tools and products on SLM, and addressing needs identified by UNCCD stakeholders to scale up SLM and achieve LDN.

71. For the implementation of the WOCAT 2020+ strategy, the WOCAT Consortium initiated the development of a Multi-Donor Trust Fund for SLM. This Fund, to be hosted by the UNCCD secretariat, will ensure the continuation of WOCAT services to UNCCD stakeholders from 2025 onward.[28] A number of donors have already committed to contributing to this Fund. The Fund is intended to support the operations of the WOCAT Secretariat, and the maintenance and development of the WOCAT SLM database, as well as strengthening WOCAT's representation at regional level by setting up WOCAT Regional Clusters. It also focuses on capacity-building, South-South collaboration and exchange.

VI. Conclusions and recommendations

72. Having considered the reports in this document, the enhancements in the working modalities of the SPI, the communication of its outputs, the progress made in knowledge sharing and technology transfer, the report on a coherence and alignment assessment of the expanding number of approaches that may contribute to the sustainable management of land and water resources, the supplement to UNFCCC NAP technical guidelines, the guidelines for making land restoration attractive in terms of financial inclusion, social protection and disaster risk reduction, and the impact of UNCCD's collaboration with WOCAT on the dissemination of best practices on SLM, the CST may wish to consider the following conclusions, with the aim of making recommendations to the COP.

73. Gender parity across SPI membership was achieved during the triennium 2022–2024, and the Bureau of the CST and SPI drafted and implemented a gender policy and implementation plan.

74. Through the generous support of Parties, the secretariat has been successful over the triennium 2022–2024 in mobilizing resources for the effective functioning of the SPI, and for other science and technology tasks requested under COP 15 decisions. These contributions facilitated the completion of all tasks assigned to SPI and the CST in their respective work programmes.

75. The model framework for technology transfer has the relevant elements to further knowledge and technology sharing and transfer in collaboration with partners. A collaborative approach where all stakeholders are involved in an innovation ecosystem can ensure that the technology addresses the needs and is available in the places where its most needed.

76. Approaches to managing land and water play increasingly important roles in addressing environmental and social challenges, such as land degradation, food insecurity, water scarcity, health, climate change and biodiversity decline. These approaches vary in terms of name, objectives, principles, methods and technologies, however all aim to address DLDD along with other environmental, economic and social co-benefits. While some approaches are explicitly recognized for these benefits by intergovernmental conventions, many others are not and thus risk being overlooked for their potential to contribute to global goals, and excluded from consideration in the design and funding of efforts to achieve these goals.

77. Seven such approaches have been demonstrated to align with many (but not all) of the SLM and LDN criteria known to address global environmental, economic and social challenges: agroecology, climate-smart agriculture, conservation agriculture,

[28] See: https://wocat.net/en/about-wocat/multi-donor-trust-fund-for-slm/.

forest landscape restoration, integrated agriculture, regenerative agriculture and rewilding. Understanding the degree of alignment of these approaches with LDN and SLM, including gaps that may need to be addressed during application, can help ensure their application will contribute positively to local and national efforts to address desertification and land degradation and help build the resilience of ecosystems and communities to drought.

78. There are multiple entry points at national level where the planning and implementation of land-based climate change adaptation measures and the pursuit of LDN can be effectively coordinated and integrated for greater impact. The supplement to the NAP technical guidance focused on this challenge provides Parties with instructions on how this can be accomplished in practice.

79. Land restoration is widely recognized for its capacity to deliver multiple environmental, economic and social benefits. However, land restoration does not always benefit all people equally, particularly the most vulnerable. This can be remedied through coherent and context-appropriate policy instruments aimed at simultaneously enhancing ecosystem services and human well-being to ensure that co-benefits are available to everyone, including the most vulnerable.

80. Globally relevant standardized guidance for land restoration in all ecosystems, including dryland ecosystems, was published in 2024 under the United Nations Decade on Ecosystem Restoration by the FAO, IUCN and the Society for Ecological Restoration, and is now available for use by Parties and UNCCD stakeholders.

81. The collaboration with WOCAT has proven very effective in supporting the knowledge needs of UNCCD stakeholders. WOCAT products feature in many knowledge products by the UNCCD and others.

82. 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 that can be found in document ICCD/COP(16)/CST/10, which, following decision 33/COP.15, contains all draft decisions prepared for Parties for consideration at the sixteenth session of the CST.

Annex

[English only]

Figures

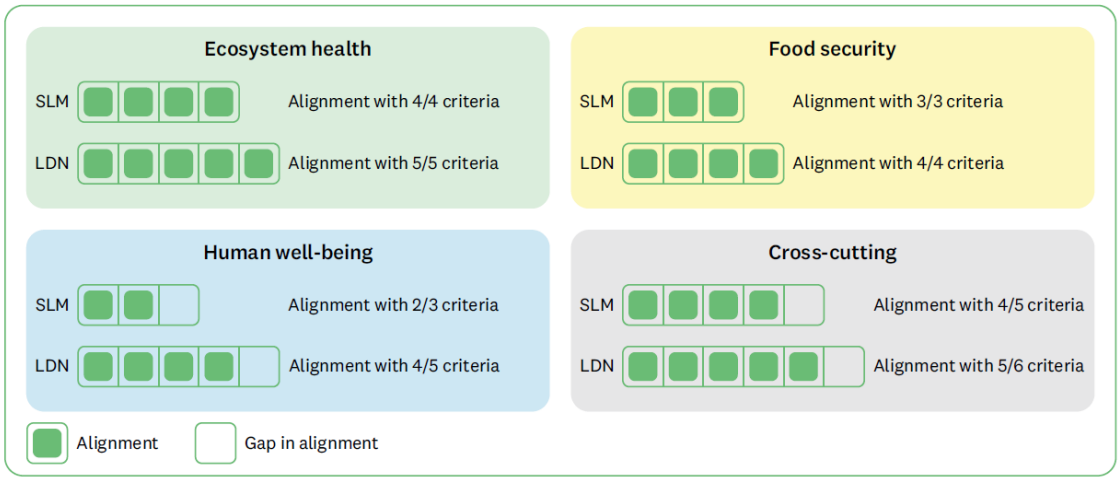
I. Introduction

1. This annex contains figures referenced in this document. These figures have been drawn from several assessments and reports discussed in the main text of this document.

2. The figures herein are presented under headings which correspond to the title of their report of origin.

II. The contribution of land and water management approaches to sustainable land management and achieving land degradation neutrality

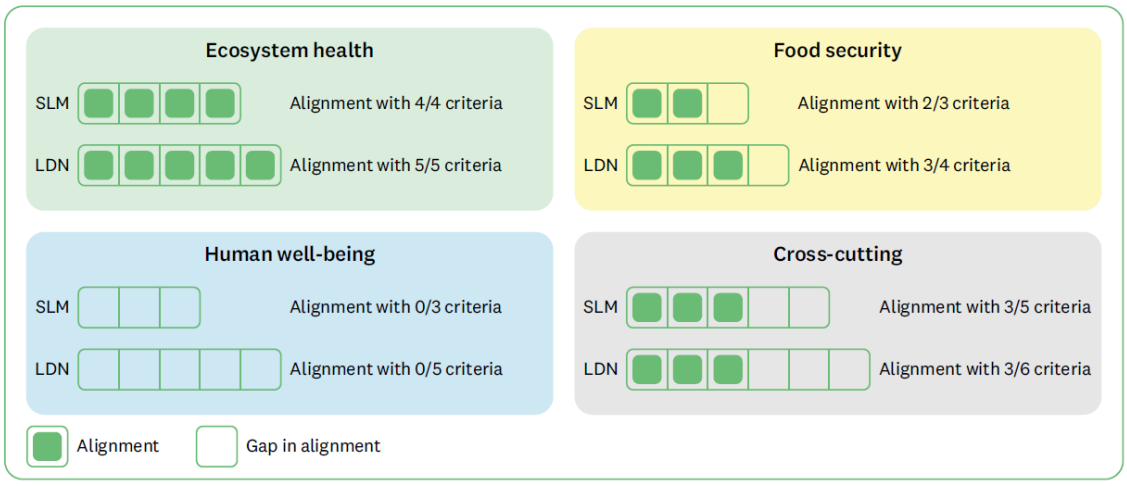
Figure 1a
Summary of the alignment of agroecology with sustainable land management (SLM) and land degradation neutrality (LDN) criteria.



Notes: Agroecology is a holistic approach that considers ecological, economic, social and political aspects beyond agricultural production. It aligns with all or most criteria of the four sustainable land management (SLM) and land degradation neutrality (LDN) pillars: ecosystem health, food security, human well-being and cross-cutting criteria. Gaps in alignment relate to some cross-cutting criteria and criteria of the human well-being pillar as it tends to challenge established structures to the detriment of broad social acceptance.

Figure 1b

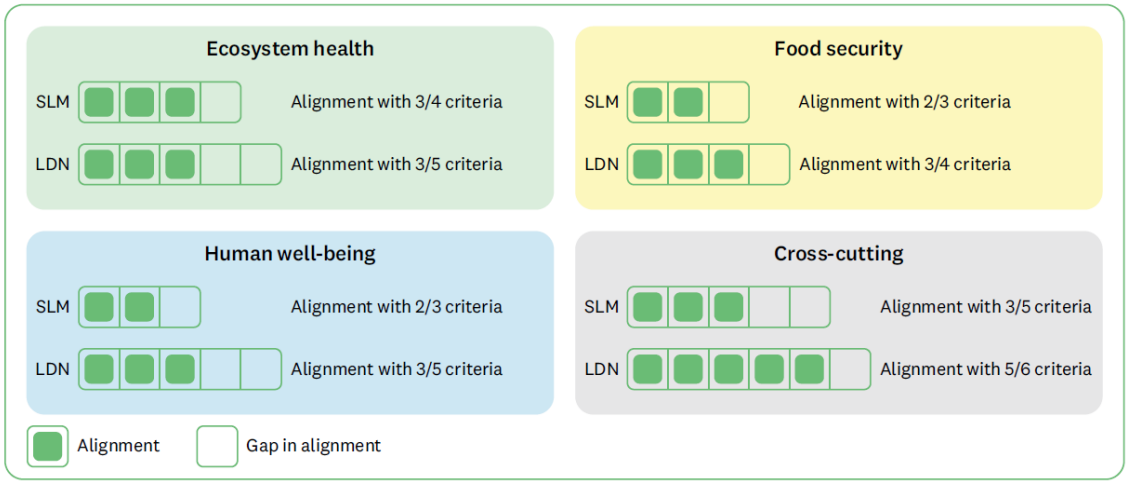
Summary of the alignment of climate-smart agriculture with sustainable land management (SLM) and land degradation neutrality (LDN) criteria.



Notes: Climate-smart agriculture emphasizes greater productivity, emissions mitigation and climate adaptation in agricultural systems. These objectives ensure its alignment with many criteria belonging to the ecosystem health and the food security pillars. Gaps in alignment concern criteria relating to the human well-being pillar as the approach may overlook social needs and considerations.

Figure 1c

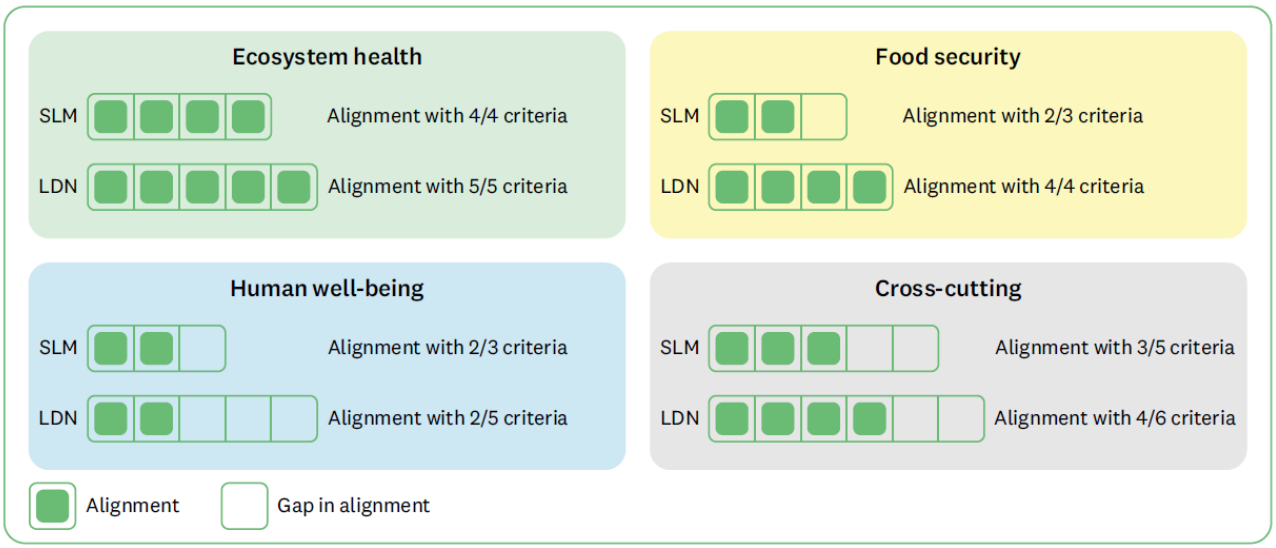
Summary of the alignment of conservation agriculture with sustainable land management (SLM) and land degradation neutrality (LDN) criteria.



Notes: Conservation agriculture addresses the biophysical conditions of agroecosystems and soil conservation and aligns with many criteria of the ecosystem health and food security pillars. The approach's frequent use of environmentally detrimental glyphosate and a lack of attention to local knowledge and communities result in gaps in alignment.

Figure 1d

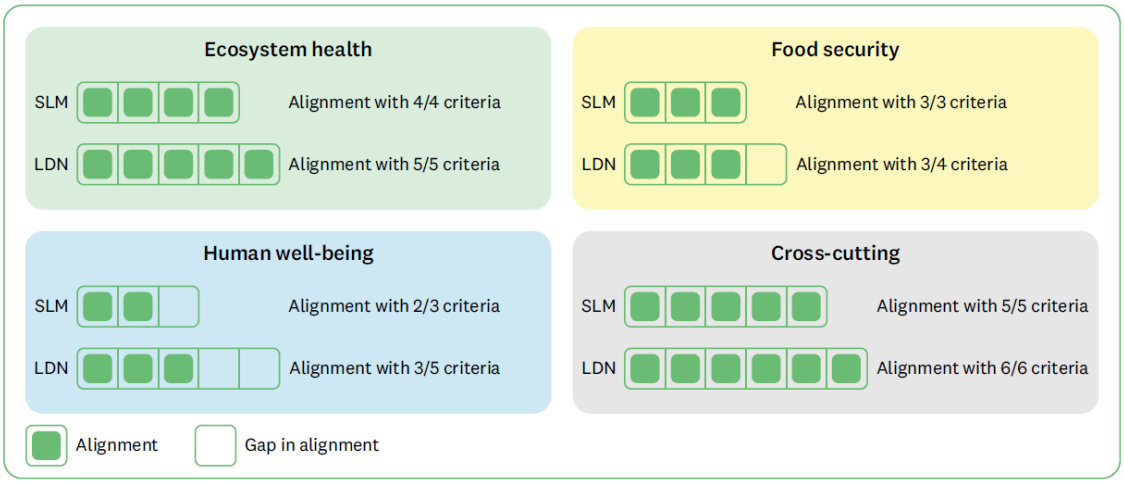
Summary of the alignment of forest landscape restoration with sustainable land management (SLM) and land degradation neutrality (LDN) criteria.



Notes: Forest landscape restoration's aim to restore forest ecosystems and enhance human well-being aligns this approach with many sustainable land management (SLM) and land degradation neutrality (LDN) criteria, especially relating to the ecosystem health pillar. Gaps in alignment result from failures to actively include local stakeholders or address other human well-being criteria.

Figure 1e

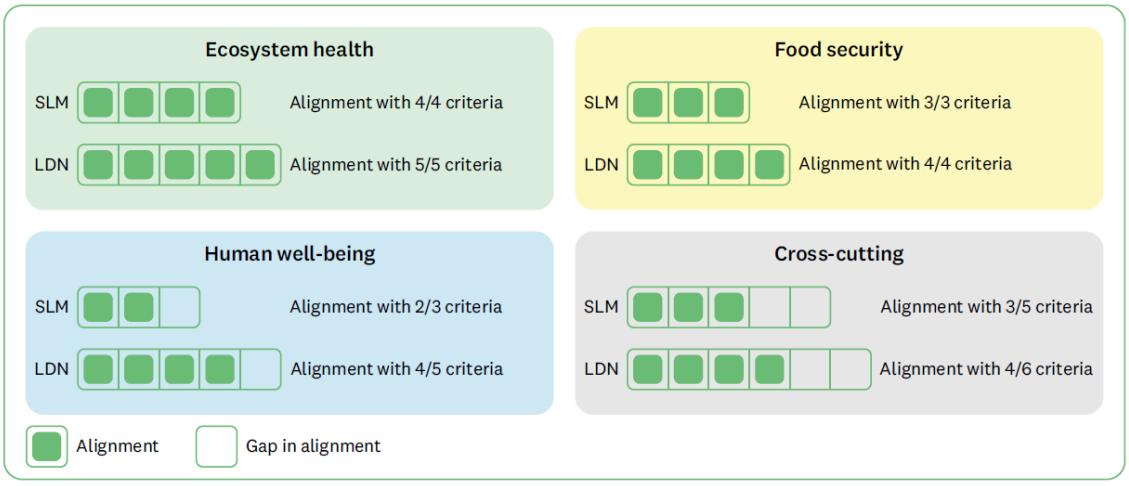
Summary of the alignment of integrated agriculture with sustainable land management (SLM) and land degradation neutrality (LDN) criteria.



Notes: Integrated agriculture promotes the integration of different systems, such as crops and livestock. It aligns with the sustainable land management (SLM) and land degradation neutrality (LDN) criteria of all pillars, especially those related to improving the biophysical conditions of agroecosystems and the sustainable use of resources. Gaps in alignment related to the human well-being pillar reflect the approach's general failure to include gender or land tenure considerations.

Figure 1f

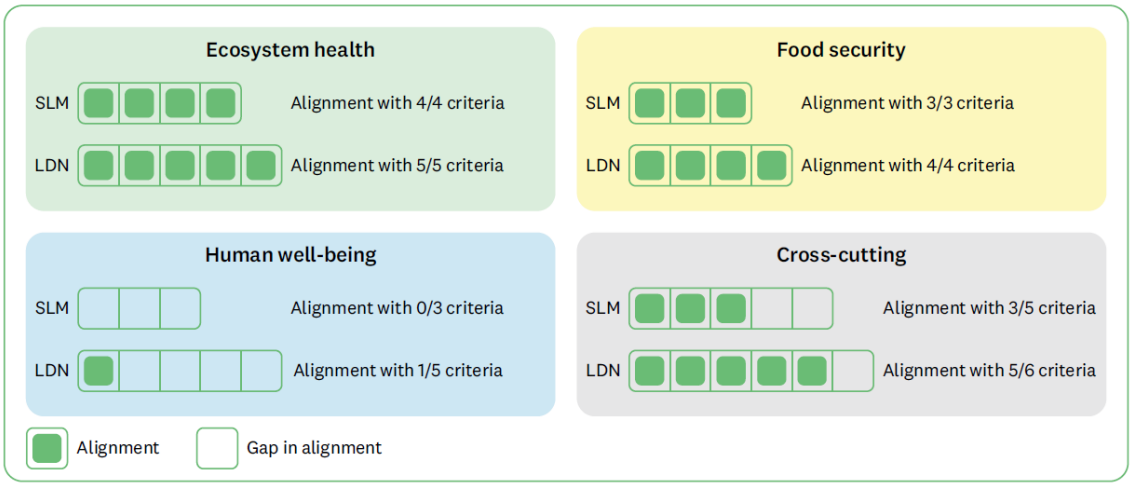
Summary of the alignment of regenerative agriculture with sustainable land management (SLM) and land degradation neutrality (LDN) criteria.



Notes: Regenerative agriculture focuses on soil conservation to regenerate agroecosystems and aligns with many sustainable land management (SLM) and land degradation neutrality (LDN) criteria, especially relating to the ecosystem health and food security pillars. Gaps in alignment mainly concern cross-cutting criteria and the approach's tendency to favour biophysical over social and economic needs in practice.

Figure 1g

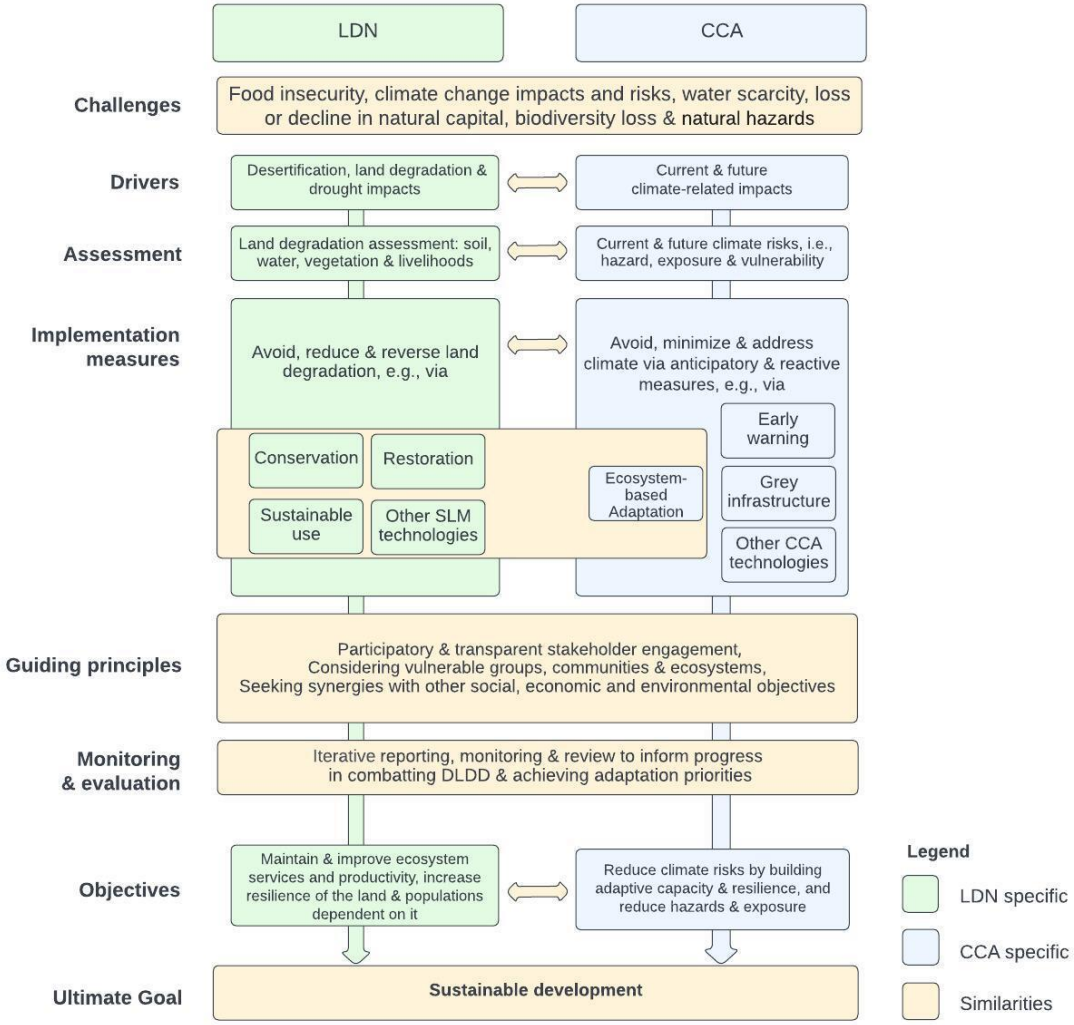
Summary of the alignment of rewilding with sustainable land management (SLM) and land degradation neutrality (LDN) criteria.



Notes: Rewilding emphasizes the restoration of natural processes. It aligns with all criteria of the ecosystem health and food security pillar as it offers opportunities for sustainable food production. Gaps in alignment concern human well-being and cross-cutting criteria, reflecting criticism of the approach for neglecting social needs in some contexts.

III. Promoting synergies between land degradation neutrality and climate change adaptation: a supplement to the national adaptation plan technical guidelines

Figure 2
Similarities and differences between land degradation neutrality and climate change adaptation



Abbreviations: LDN = land degradation neutrality; CCA = climate change adaptation; SLM = sustainable land management; DLDD = desertification/land degradation and drought

IV. Harmony in action for land restoration: linking social protection, financial inclusion and disaster risk finance

Figure 3

Three iterative steps for designing coherent policies to make land restoration outcomes more equitable by integrating social protection, financial inclusion and disaster risk finance