

**Dialogue on the relationship between
land and climate change adaptation related matters**
**Information note by the Chair of the
Subsidiary Body for Scientific and Technological Advice**
(11 November 2020)

Summary

This note provides background information on the organization of the dialogue on the relationship between land and climate change adaptation related matters. It includes highlights of action by Parties and non-Party stakeholders related to land and adaptation being conducted under the Convention and the Paris Agreement and within the wider international system responding to land and climate change adaptation related matters. It provides a summary of the inputs from Parties regarding the organization of the dialogue and the resulting approach proposed by the Chair of the Subsidiary Body for Scientific and Technological Advice.

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Abbreviations and acronyms

CAN International	Climate Action Network International
CBD	Convention on Biological Diversity
CIFOR	Center for International Forestry Research
COP	Conference of the Parties
FAO	Food and Agriculture Organization of the United Nations
GFC	Global Forest Coalition
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
KJWA	Koronivia joint work on agriculture
NAP	national adaptation plan
NDC	nationally determined contribution
NWP	Nairobi work programme on impacts, vulnerability and adaptation to climate change
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para. 70)
SBSTA	Subsidiary Body for Scientific and Technological Advice
SDG	Sustainable Development Goal
UNCCD	United Nations Convention to Combat Desertification
UNEP	United Nations Environment Programme
Warsaw International Mechanism	Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts

I. Introduction

A. Mandate

1. COP 25 requested the Chair of the SBSTA to convene at SBSTA 52 a dialogue on the relationship between land and climate change adaptation related matters, not intervening in other processes under the Convention, the Kyoto Protocol and the Paris Agreement, including those carried out under the SBSTA. The COP invited Parties and non-Party stakeholders to submit inputs via the submission portal by 31 March 2020 to inform the dialogue and requested the SBSTA Chair to prepare an informal summary report on the dialogue.¹

2. As at 30 October 2020, 17 submissions on the dialogue had been received: 9 from Parties, of which 2 were from groups of Parties; 3 from United Nations organizations; 2 from intergovernmental organizations; and 3 from non-governmental organizations.² A list of the Parties and organizations is contained in annex I.

B. Intergovernmental Panel on Climate Change Special Report on Climate Change and Land

3. In 2019 the IPCC released its Special Report on Climate Change and Land.³

4. The report assesses recent progress towards understanding the impacts of climate change on land and provides evidence of how climate change creates additional stresses on land, exacerbating existing risks to livelihoods, biodiversity, and human and ecosystem health, infrastructure and food systems, particularly those that are uniquely vulnerable to land degradation, desertification and climate change. The report also describes the urgency of tackling land degradation across all land ecosystems. It examines a range of actions that can be taken to reduce land degradation, maintain land productivity and food security, and reverse the adverse impacts of climate change on land degradation, including related policy choices and trade-offs.

5. At COP 25, the SBSTA and IPCC Chairs held a joint special event entitled “Unpacking the new scientific knowledge and key findings in the IPCC Special Report on Climate Change and Land”⁴ to present the main findings from the report.

C. Land and climate change adaptation under the UNFCCC

6. The ultimate objective of the Convention is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The climate system is defined in Article 1, paragraph 3, of the Convention as the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions.

7. Adaptation of land systems to climate risks is one of the foundational objectives of countries’ national adaptation policies, strategies and plans. Over half of the urgent and immediate adaptation priorities identified by the least developed countries in their national adaptation programmes of action focus on adaptation measures in land systems and related areas of agriculture and water resources.

8. All NAPs submitted by developing countries as at 30 September 2020 contain measures related to addressing desertification and/or land degradation (see annex II).

¹ Decision 1/CP.25, paras. 32–34.

² Available at <https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx>.

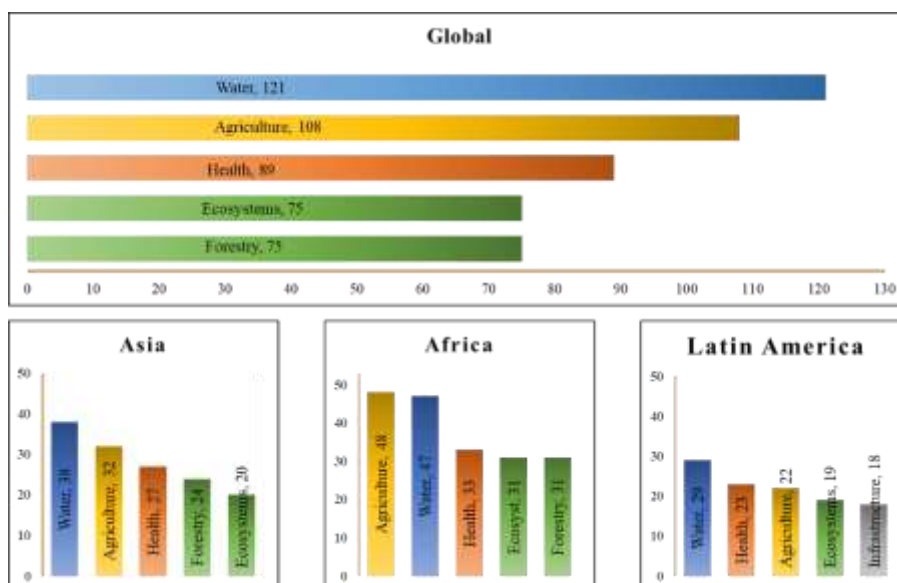
³ IPCC. 2019. *IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems*. PR Shukla, J Skea, E Calvo Buendia, et al. (eds). Available at <https://www.ipcc.ch/srccl/>.

⁴ See <https://unfccc.int/event/srccl-special-event>.

9. Ecosystems and forests, which are the key sectors associated with land, are among the top five sectors addressed in the adaptation component of the intended nationally determined contributions submitted by Parties between 2015 and 2017 (see figure below).

Figure

Adaptation sectors most commonly addressed in the adaptation component of intended nationally determined contributions



Note: Breakdown of 137 intended nationally determined contributions received from Parties between 2015 and 2017.

10. As noted in the submissions referred to in paragraph 20 below, land and climate change are also being addressed under matters relating to land use, land-use change and forestry;⁵ REDD+;⁶ the KJWA;⁷ the process to formulate and implement NAPs; the NWP;⁸ the Warsaw International Mechanism;⁹ and the Marrakech Partnership for Global Climate Action.¹⁰ Land use, land-use change and forestry and REDD+ relate to mitigation; NAPs, the Warsaw International Mechanism and the NWP focus on adaptation related matters; while the KJWA and the Marrakech Partnership for Global Climate Action address both adaptation and mitigation. Boxes 1–5 provide brief descriptions of NAPs, the NWP, the Warsaw International Mechanism, the KJWA and the Marrakech Partnership for Global Climate Action, respectively.

Box 1

National adaptation plans

NAPs are the main instrument for addressing climate change adaptation under the UNFCCC. Through the process to formulate and implement NAPs, countries identify their medium- and long-term adaptation needs and develop and implement strategies and programmes to address those needs. The process has two objectives: to reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience; and to facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular

⁵ See <https://unfccc.int/topics/land-use/workstreams/land-use--land-use-change-and-forestry-lulucf>.
⁶ See <https://unfccc.int/topics/land-use/workstreams/reddplus>.
⁷ See <https://unfccc.int/topics/land-use/workstreams/agriculture>.
⁸ See documents FCCC/SBSTA/2018/4, para. 21, and FCCC/SBSTA/2019/28, para. 18. Information on the NWP is available at <https://unfccc.int/nwp>.
⁹ See <https://unfccc.int/topics/adaptation-and-resilience/workstreams/approaches-to-address-loss-and-damage-associated-with-climate-change-impacts-in-developing-countries>.
¹⁰ See <https://unfccc.int/climate-action/marrakech-partnership-for-global-climate-action>.

development planning processes and strategies, within all relevant sectors and at different levels, as appropriate.

Land is central to the key systems targeted in countries' NAPs; such systems include agriculture, food security, water, health, energy, terrestrial and marine ecosystems, coastal zones, infrastructure, governance, and social and cultural systems.

As at 30 September 2020, 20 developing countries had prepared and submitted NAPs to the secretariat via NAP Central. Annex II provides examples of specific climate risks and adaptation priorities identified in the NAPs.

More information about the process to formulate and implement NAPs is available at <https://unfccc.int/node/698> and <https://unfccc.int/nap>.

Box 2

Nairobi work programme

The NWP serves as a UNFCCC knowledge-to-action hub on adaptation and resilience. It connects constituted bodies, institutional arrangements and non-Party stakeholders under the Convention through the co-curation, production and communication of knowledge and the establishment of partnerships for closing knowledge gaps on all aspects of climate change impacts, vulnerability and adaptation.

The NWP operates under the overall guidance of the SBSTA Chair, with the assistance of the secretariat, with contributions from Parties and non-Party stakeholders.

The current priority thematic work areas of the NWP, as mandated at SBSTA 48 and 50, are:

- (a) Extreme weather events such as heatwaves, flash floods, sand and dust storms, cyclones and heavy precipitation;
- (b) Drought, water scarcity and land degradation neutrality;
- (c) Forests and grassland;
- (d) Oceans, coastal areas and ecosystems, including mega deltas, coral reefs and mangroves;
- (e) Agriculture and food security.

More information on the NWP is available at <https://unfccc.int/nwp>.

Box 3

Koronivia joint work on agriculture

By decision 4/CP.23 the COP requested the SBSTA and the Subsidiary Body for Implementation to jointly address issues related to agriculture, including through workshops and expert meetings, working with constituted bodies under the Convention and taking into consideration the vulnerabilities of agriculture to climate change and approaches to addressing food security.

The following elements of the work were identified as a starting point:

- (a) Modalities for implementation of the outcomes of five in-session workshops on issues related to agriculture and other future topics that may arise from this work;
- (b) Methods and approaches for assessing adaptation, adaptation co-benefits and resilience;
- (c) Improved soil carbon, soil health and soil fertility under grassland and cropland as well as integrated systems, including water management;
- (d) Improved nutrient use and manure management towards sustainable and resilient agricultural systems;

- (e) Improved livestock management systems;
- (f) Socioeconomic and food security dimensions of climate change in the agriculture sector.

More information on the KJWA is available at <https://unfccc.int/topics/land-use/workstreams/agriculture>.

Box 4

Warsaw International Mechanism

The Warsaw International Mechanism is the vehicle under the UNFCCC for averting, minimizing and addressing loss and damage associated with impacts of climate change, including extreme events and slow onset events, in developing countries that are particularly vulnerable to the adverse effects of climate change.

The Warsaw International Mechanism has three functions:

- (a) Enhancing knowledge and understanding of comprehensive risk management approaches;
- (b) Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders;
- (c) Enhancing action and support, including finance, technology and capacity-building to address loss and damage associated with the adverse effects of climate change.

The Executive Committee of the Warsaw International Mechanism guides the implementation of these functions through its rolling workplan that has five strategic workstreams, two of which feature land-related topics in a cross-cutting manner: strategic workstream (a) slow onset events (e.g. increasing temperature, desertification, loss of biodiversity, land and forest degradation, glacial retreat, sea level rise, ocean acidification, and salinization) and strategic workstream (b) non-economic losses (e.g. loss of life, degraded health, losses induced by human mobility, loss or degradation of territory, cultural heritage, indigenous knowledge, societal/cultural identity biodiversity and ecosystem services).

More information on the Warsaw International Mechanism is available at <https://unfccc.int/topics/adaptation-and-resilience/workstreams/approaches-to-address-loss-and-damage-associated-with-climate-change-impacts-in-developing-countries>.

Box 5

Marrakech Partnership for Global Climate Action

The Marrakech Partnership for Global Climate Action, under the leadership of the high-level champions, supports the implementation of the Paris Agreement by enabling collaboration between governments and cities, regions, businesses, investors and civil society acting on climate change. The work programme for 2020–2021 sets out the following objectives:

- (d) Strengthening collaboration among national governments and non-Party stakeholders;
- (e) Broadening participation in the Marrakech Partnership for Global Climate Action of non-Party stakeholders from all regions and sectors, in particular from developing countries, to bring about more balanced representation and to realize the potential for action;
- (f) Creating enabling conditions for breakthroughs in 10 tipping points for systems transformation;
- (g) Following up on and ensuring continuity and coherence of action between major milestones;

(h) Tracking progress impacts and results and identifying best practices and lessons learned.

A set of climate action pathways has been developed by stakeholders of the Marrakech Partnership for Global Climate Action, outlining the longer-term vision and related actions to strive for a 1.5 °C climate-resilient world. The pathways cover seven thematic areas of energy, human settlements, industry, land use, oceans and coastal zones, transport, and water; and cross-cutting issues of resilience, finance, gender, health and just transition.

More information on the Marrakech Partnership for Global Climate Action is available at <https://unfccc.int/climate-action/marrakech-partnership-for-global-climate-action>.

D. Land and climate change adaptation within the wider international system

11. There is a wide range of programmes and activities within the wider international system that address issues related to land and climate change adaptation.

12. SDG 15 aims to sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.¹¹ The United Nations has also launched the Decade on Ecosystem Restoration (2021–2030)¹² as a globally coordinated response to prevent, halt and reverse the degradation of ecosystems worldwide.

13. As referenced in several submissions, IPBES issued an assessment report on land degradation and restoration in 2018, which describes the global status of and trends in land degradation; the effect of land degradation on biodiversity values, ecosystem services and human well-being; and the state of knowledge of ecosystem restoration extent and options.¹³ The report provides evidence that land degradation is a pervasive, systematic phenomenon that will worsen in the face of climate change, among other factors.

14. In addition to the UNFCCC, the other two Rio Conventions, CBD and UNCCD, address issues closely linked to land and climate change adaptation. CBD promotes the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. It recently launched the fifth Global Biodiversity Outlook,¹⁴ providing a global summary of progress towards the Aichi Biodiversity Targets, lessons learned and achievable actions towards protecting biodiversity, ecosystems and nature's contributions to people. UNCCD addresses desertification and the effects of drought in countries experiencing serious drought and/or desertification. In November 2019, UNCCD, through its Science–Policy Interface, organized a Science Day to focus on the evidence from several global scientific reports that urgent action is required to sustain the health of the land.¹⁵ UNCCD, in collaboration with the Commonwealth Secretariat, also held a high-level side event on accelerating action around land for enhanced climate action¹⁶ at the 75th meeting of the United Nations General Assembly in 2020.

15. A wide range of organizations have programmes and activities related to addressing land and climate change adaptation related matters. Examples from those that had made submissions as at 30 October 2020 are provided in annex III.

¹¹ See <https://www.un.org/sustainabledevelopment/biodiversity>.

¹² See <https://www.decadeonrestoration.org>.

¹³ IPBES (2018): *The IPBES assessment report on land degradation and restoration*. Montanarella, L., Scholes, R., and Brainich, A. (eds.). Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany. 744 pages. Available at <https://doi.org/10.5281/zenodo.3237392>.

¹⁴ Available at <https://www.cbd.int/gbo5>.

¹⁵ See <https://knowledge.unccd.int/science-policy-interface/science-day-cop14>.

¹⁶ See <https://www.unccd.int/news-events/accelerating-action-around-land-enhanced-climate-action>.

II. Land and climate change adaptation related matters at the national level

A. Climate change impacts on and risks to land systems

16. The submissions highlight a range of climate hazards to land systems, including increasing temperatures, droughts, floods and changing precipitation patterns. These hazards result in significant impacts and risks, including sea level rise, permafrost degradation, coastal degradation, increased frequency of wildfire, decreased crop yields, decreased food stability, decreased water availability, vegetation loss, decreased access to food, increased soil erosion, increased prevalence of pests and diseases, new pests and diseases, and the spread of invasive exotic species.

17. The submissions also highlight other stressors arising from human activities, such as deforestation, urbanization and industrialization, which compound the pressure on land systems.

18. The submissions further highlight the critical importance of the continuous monitoring, analysis and communication of climate risks to land.

B. Practices related to climate change adaptation and land

1. Policies and legal and regulatory frameworks

19. The submissions provide examples of regulatory frameworks and policies implemented by countries to enable or incentivize measures to address climate change impacts and risks. These included national legislation, such as Japan's Climate Change Adaptation Act¹⁷ and New Zealand's Climate Change Response (Zero Carbon) Amendment Act 2019,¹⁸ which provide a framework for developing and implementing climate change policies; overarching climate change policies that provide the basis for implementing adaptation actions, such as Brazil's National Climate Change Plan;¹⁹ and specific regulations and policies on land management or closely related systems, such as Brazil's Forest Code.²⁰

2. Strategies and plans for promoting land management and climate change adaptation

20. The submissions indicate that climate change adaptation strategies and plans provide a solid basis for delivering significant results in addressing impacts and risks, and helping to align key policy instruments for implementing coordinated measures. Examples cited in the submissions include Argentina's adaptation plan for agriculture,²¹ Brazil's Adaptation and Low-Carbon Emission Agricultural Plan and NAP,²² the European Union's strategy on adaptation to climate change,²³ Japan's National Plan for Adaptation to the Impacts of Climate Change,²⁴ and New Zealand's first National Climate Change Risk Assessment²⁵ and the provision for developing a NAP.

21. The submissions also refer to planning tools used by countries to enable effective practices. One such example was the Brazil Agriculture Climate Risk Zoning, which indicates climatic risks to crops considering the production calendar, as well as specific crop genetics and the productive characteristics of each territorial unit.

¹⁷ See <https://www.env.go.jp/en/earth/cc/adaptation.html>.

¹⁸ See <https://www.mfe.govt.nz/climate-change/zero-carbon-amendment-act>.

¹⁹ See <https://www.mma.gov.br/clima/politica-nacional-sobre-mudanca-do-clima/plano-nacional-sobre-mudanca-do-clima> (in Portuguese).

²⁰ See <https://www.embrapa.br/codigo-florestal> (in Portuguese).

²¹ See https://www.magyp.gob.ar/sitio/pdf/plan_sectorial_cc.pdf (in Spanish).

²² Available at <https://www4.unfccc.int/sites/NAPC/Pages/national-adaptation-plans.aspx>.

²³ See https://ec.europa.eu/clima/policies/adaptation/what_en#tab-0-1.

²⁴ See <http://www.env.go.jp/en/focus/docs/files/20151127-101.pdf>.

²⁵ See <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/national-climate-change-risk-assessment-main-report.pdf>.

22. The submissions note that incorporating nature-based solutions into climate change adaptation related strategies and plans can guide mitigation and adaptation interventions in the land sector in a synergistic manner that prioritizes ecosystem integrity and enhances overall human welfare.

3. Implementation of actions related to land and climate change adaptation

23. The submissions provide various examples of climate change activities targeted at building the resilience of land systems, as well as land management actions that also contribute towards climate change adaptation. These include:

(a) Reducing vulnerability to and risk of soil erosion and nutrient loss through cover crops, crop residue retention, reduced or zero tillage, improved grazing management, such as land-sharing systems and cattle ranching, and integrated animal and crop production systems to promote soil organic matter accumulation and nutrient cycling;

(b) Reducing deforestation and forest degradation through conservation and restoration of high-carbon natural ecosystems;

(c) Re-establishing or strengthening the ecological connections in degraded lands and improving their ecological condition in order to maintain and enhance the adaptive capacity and ability of plants and animals to migrate and adapt to climate change;

(d) Conserving and restoring secondary natural areas or habitats to reduce ecosystem degradation, preserve natural heritage, strengthen local economies and improve human well-being;

(e) Improving payments for ecosystem services, such as through wildlife and ecosystem management programmes, to promote the participation of smallholder farmers, local communities, civil society and private actors in sustainable land management;

(f) Promoting community and social agroforestry initiatives and programmes;

(g) Promoting sustainable agricultural and agroforestry practices;

(h) Promoting nature-based solutions to create integrated, effective, adaptive and sustainable solutions towards reducing land degradation and restoring degraded lands;

(i) Leveraging social protection to promote climate-resilient land practices.

24. The submissions emphasize the critical importance of policies, legal and regulatory frameworks, and strategies and plans that provide the basis for and facilitate the above-mentioned actions. In addition, some of these actions can be applied without competing for land, and some can provide multiple adaptation and mitigation co-benefits.

4. Monitoring and evaluation

25. The submissions note that monitoring and planning are essential elements of sustainable land management. An example cited in the submissions is the Brazil Agriculture Climate Risk Zoning tool referred to in paragraph 21 above. Under its Climate Change Response (Zero Carbon) Amendment Act 2019, referred to in para. 19 above, New Zealand is to carry out national climate change risk assessments every six years and, in response to the risk assessment, prepare a NAP that sets out, inter alia, the measures and indicators that will enable regular monitoring of and reporting on the implementation of the country's climate change adaptation strategies, policies and proposals.

5. Delivering support for land and climate change adaptation related actions

26. The submissions indicate that the dialogue could focus on how policies, institutions, financial mechanisms and governance arrangements can be designed to best deliver integrated responses across the land sector to support climate-adaptive development pathways that are consistent with the goals of the Paris Agreement.

27. The submissions highlight financing models and programmes for activities related to land management. In Mexico, two independent regional funds were created to coordinate initiatives and manage funds to strengthen local organizations. Through these funds, finance

was provided to 32 sub-projects, managed by civil society organizations, on promoting the integrated environmental management of selected coastal basins with the aim of conserving biodiversity, contributing to the mitigation of climate change and improving the sustainable use of natural resources. Japan continued its international support for ecosystems through the Japan Biodiversity Fund under CBD, as well as through its leadership role in the Global Coral Reef Monitoring Network in East Asia. The European Union actively supports other regions and countries in the implementation of policies, measures and projects that contribute to adaptation and to reducing the impacts of and vulnerability to the adverse effects of climate change.

28. The submissions also highlight that countries' priority financing needs generally relate to land, agriculture, water, health, physical infrastructure and reducing risk from extreme weather events.

6. Co-benefits of land and climate change adaptation actions

29. The submissions indicated that various co-benefits are feasible and should be sought when investing in land and climate change adaptation actions. Measures highlighted in the submissions include the conservation and restoration of high-carbon ecosystems; the reduction of deforestation and forest degradation; the promotion of agroforestry; the introduction of integrated animal and crop production systems that promote soil organic matter accumulation and nutrient cycling; the enhancement of soil carbon storage in managed landscapes; and, more globally, sustainable and systemic land management, including agroecology.

30. Specific examples of co-benefits cited include the following:

(a) Reducing soil erosion, restoring degraded lands and sustainable land management can contribute significantly to achieving the goals of the Paris Agreement and the SDGs;

(b) Sustainable management of land and its freshwater systems can contribute towards enhancing food security;

(c) Sustainable forest management, forest restoration, reforestation, afforestation can function as buffers against e.g. extreme weather and landslides, and at the same time significantly contribute to enhancing the sequestration of carbon dioxide;

(d) Improved cropland management, agricultural diversification, grazing land management and integrated production systems such as agroforestry can also contribute to food security and food productivity;

(e) Sustainable use of land helps to safeguard indigenous peoples' lands, secure livelihoods for local communities and enhance other ecosystem services;

(f) The interaction of soils and hydrology plays a vital role in food production, water, energy and greenhouse gas fluxes in the context of climate change. Reducing soil erosion also contributes to these co-benefits;

(g) Nature-based solutions can provide multiple social, economic and cultural co-benefits for local communities.

C. Cross-cutting considerations

31. The submissions highlight the following cross-cutting considerations for ensuring effective and sustainable outcomes in land management and climate change adaptation:

(a) Ensuring policy coherence of climate change adaptation action across the land-use sector and enhancing enforcement of existing environmental laws to ensure synergistic delivery at scale;

(b) Ensuring linkages between land and climate change adaptation actions across systems, including agriculture, water, biodiversity, energy and health;

- (c) Exploring the co-benefits of social protection and land-use policies, including co-benefits in the areas of nutrition and food security, poverty reduction, employment and climate change mitigation, as well as downstream environmental benefits;
- (d) Carefully considering and balancing trade-offs between sustainable land management goals and other competing demands for limited land resources;
- (e) Engaging with and empowering the poorest and most vulnerable groups, smallholder farmers, women, local communities and indigenous peoples through policies and strategies;
- (f) Protecting the rights of indigenous peoples to the lands, territories and resources that they have traditionally owned or otherwise occupied or used;
- (g) Promoting synergies at all levels across the UNFCCC, CBD and UNCCD;
- (h) Ensuring alignment with the SDGs and other relevant frameworks such as the United Nations Strategic Plan for Forests 2017–2030 and its Global Forest Goals, and the United Nations Decade on Ecosystem Restoration;
- (i) Ensuring linkages with the Gender Action Plan and the Local Communities and Indigenous Peoples Platform;
- (j) Exploring linkages with the fifth session of the United Nations Environment Assembly, to be held in 2021, especially given its theme of strengthening action for nature to achieve the SDGs; the 2021 Food Systems Summit; and the upcoming fifteenth meeting of the Conference of the Parties to the CBD.

D. Implications of the coronavirus disease 2019 pandemic

32. The submissions note that the coronavirus disease 2019 pandemic is adversely impacting supply chains and sustainable development and is likely to impose additional pressure on natural and human systems in the long term. Poor and marginalized communities, which lack any support or safety net, are particularly vulnerable. Strengthening land-based solutions has the potential to reduce the impact of the pandemic on the most vulnerable.

III. Organization and outcomes of the dialogue

A. Organization

33. In terms of its organization, the submissions identified that the dialogue should:

- (a) Avoid duplication of work with existing processes under the Convention as referred to in paragraph I.C.10 above;
- (b) Be a useful opportunity for Parties and non-Party stakeholders to exchange views;
- (c) Focus on how the land sector contributes to the achievement of the goals and objectives of the Convention and the Paris Agreement, and how to integrate the land sector into NDCs and NAPs, as well as other strategies and plans, such as the national biodiversity strategies and action plans under CBD and land degradation neutrality targets under UNCCD;
- (d) Include inputs from a wide range of actors and stakeholders, including members of the scientific community, such as the IPCC and IPBES; constituted bodies under the Convention and the Paris Agreement, such as the Adaptation Committee and the Facilitative Working Group of the Local Communities and Indigenous Peoples Platform; Parties, including national governments and subnational authorities; and non-Party stakeholders, such as non-governmental organizations, intergovernmental organizations, civil society, researchers, farmers and NWP partner organizations;
- (e) Provide an opportunity to explore potential synergies between land-based climate change adaptation actions and actions under related conventions and frameworks,

including CBD, UNCCD, the Convention on Wetlands of International Importance Especially as Waterfowl Habitat and the Sendai Framework for Disaster Risk Reduction 2015–2030;

(f) Not duplicate existing processes under the Convention, but rather focus on addressing significant gaps that cannot be addressed by those processes, and/or provide inputs to support them;

(g) Deliver outcomes that will help Parties to enhance their land adaptation action towards achieving the long-term goals of the Paris Agreement, with exchanges at the dialogue being based on scientific findings, as well as social and economic research;

(h) Be a one-off event, with any further work continued under existing processes under the subsidiary bodies or the COP;

(i) In terms of any subsequent work, devote particular attention to countries facing higher risks of land degradation and desertification, and those whose national development depends significantly on agriculture;

(j) Include adequate technological provisions to enable and maximize participation if the dialogue is to be conducted virtually; and make presentations made at the dialogue available to the public.

B. Topics

34. The submissions suggested topics to be considered at the dialogue, including:

(a) Scientific knowledge and findings from the IPCC Special Report on Climate Change and Land with regard to climate change adaptation matters related to land;

(b) Assessment of climate risks in land systems, and of the contribution of land systems in building resilience to climate change;

(c) Experience, good practices and lessons learned in addressing climate change risks using land systems, including through the conservation, restoration and sustainable management of land;

(d) Experience, good practices and lessons learned in land management related practices in other systems such as agriculture, soils, forests, biodiversity, other ecosystems, water and infrastructure, and how these contribute to adaptation;

(e) Demand-side approaches such as the adoption of healthy and sustainable diets, and reduction in food loss and waste, and how these contribute to adaptation;

(f) Policy approaches for enabling and promoting land management and climate change adaptation actions, including with respect to considerations regarding different groups and communities, land rights and tenure, gender, women and smallholder farmers, civil society, local communities and indigenous peoples;

(g) Co-benefits and trade-offs between land management and climate change adaptation, including with respect to mitigation, halting biodiversity loss, preventing and combating desertification and land degradation, enhancing food security, controlling and managing pests and diseases, and supporting the SDGs;

(h) Synergies and trade-offs between land and climate change adaptation actions and actions related to the SDGs, disaster risk reduction and other processes;

(i) Monitoring and evaluation of land management and climate change adaptation strategies;

(j) Inclusion of the land sector in NDCs, NAPs and long-term strategies to enhance adaptation ambition;

(k) Consideration of the scale, types and sources of support needed and provided for the land sector to build resilience to climate change, as well as related challenges and opportunities;

(l) Cooperation at all levels to enhance the response to land and climate change adaptation related matters.

35. The submissions also suggested the following questions for the discussions:

(a) How can the existing work between various forums under the Convention on land and climate change adaptation related matters be consolidated to provide Parties with coherent information and options for implementation?

(b) What technical support can the UNFCCC constituted and subsidiary bodies contribute to Parties' efforts to plan and increase their resilience to the current and projected impacts of climate change on land?

(c) How can the UNFCCC process facilitate and support the inclusion of land and adaptation measures in Parties' NDCs?

C. Expected outcomes

36. Suggestions for outcomes of the dialogue include:

(a) A synthesis report summarizing the outcomes of the dialogue;

(b) Ways of ensuring that the land-based sector contribution to adaptation is better articulated and adaptation benefits are further strengthened within the climate regime;

(c) Strong encouragement of all Parties to enhance their land-based mitigation and adaptation action for achieving the long-term goals of the Paris Agreement;

(d) Encouragement of other international organizations and international conferences to take more actions aimed at raising ambition in relation to land and climate change adaptation;

(e) Specific recommendations on how adaptation of land systems can contribute to raising ambition on adaptation and mitigation under the Convention;

(f) Identification of linkages with the 2030 Agenda for Sustainable Development, CBD and UNCCD, the United Nations Strategic Plan for Forests and its Global Forest Goals, and the United Nations Decade on Ecosystem Restoration;

(g) Organization of UNFCCC-led thematic workshops that address, inter alia:

(i) Unpacking the new scientific knowledge and key findings from the IPCC Special Report on Climate Change and Land;

(ii) The importance of land to humanity, including for food, shelter and recreation;

(iii) Interlinkages, synergies and trade-offs between desertification, land degradation, food security and greenhouse gas fluxes;

(iv) Integrating land-related matters into the NDCs;

(v) Sustainable land management at all levels and related policies and programmes to support response options;

(vi) Cooperation at all levels to enhance the response to land-related climate change adaptation issues;

(vii) Climate change adaptation to land degradation and reduction of soil fertility as well as the importance of land to humanity, including as a home and a source of nutrition, protection and recreation;

(viii) The special circumstances of African countries;

(ix) The transformational changes needed to address unsustainable land use, injustice and inequality in the land-use sector; adaptation and relations with local communities, indigenous peoples and ecosystems; and integrating adaptation and biodiversity.

37. The submissions indicate that the outcomes of the dialogue could feed into existing processes, including those under the Convention and the Paris Agreement.

IV. Proposed approach to the dialogue

38. The dialogue will take place virtually as part of the UNFCCC Climate Change Dialogues, which will be held from 30 November to 4 December 2020.

39. The dialogue will consist of two 2.5-hour sessions, held on two consecutive days. The sessions will be informed by the submissions and additional contributions from Parties and non-Party stakeholders and will consist of the following:

- (a) A high-level panel to set the stage for the dialogue;
- (b) Plenary keynote presentations to offer deeper insights into climate change adaptation and land;
- (c) Thematic breakout group discussions, offering an opportunity for in-depth exchanges on experience, good practices and lessons learned regarding climate change adaptation and land.

40. The sessions will be designed in an inclusive manner, considering the proposals included in the submissions, as summarized in chapter III.A above.

41. Annex IV provides an indicative programme for the dialogue.

V. Next steps

42. Additional information on the dialogue, including a detailed programme, will be made available at <https://unfccc.int/node/210375>.

43. Information on the UNFCCC Climate Change Dialogues will be made available at <https://unfccc.int/process-and-meetings/conferences/un-climate-change-dialogues-2020-climate-dialogues>.

Annex I

Submissions from Parties and non-Party stakeholders to inform the dialogue on the relationship between land and climate change adaptation related matters

Submissions from the following Parties and non-Party stakeholders to inform the dialogue on the relationship between land and climate change adaptation related matters had been received as at 21 October 2020:²⁶

1. Parties:
 - (a) Gabon on behalf of the African Group of Negotiators;
 - (b) Argentina;
 - (c) Brazil;
 - (d) Croatia and the European Commission on behalf of the European Union and its member States;
 - (e) Indonesia;
 - (f) Japan;
 - (g) Mexico;
 - (h) New Zealand;
 - (i) Norway.
2. United Nations organizations:
 - (a) FAO;
 - (b) UNCCD.
3. Intergovernmental organizations:
 - (a) CIFOR;
 - (b) IUCN;
4. Non-governmental organizations:
 - (a) CAN International;
 - (b) WWF;
 - (c) GFC in collaboration with Climate Land Ambition Rights Alliance and Corporate Accountability International.

²⁶ The submissions are available at <https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx>.

Annex II

Measures identified in the national adaptation plans for addressing climate change while combating land degradation or restoring degraded lands^a

<i>Party</i>	<i>Climate risks to land</i>	<i>Proposed steps in combating land degradation and restoring degraded lands with contribution to adaptation</i>
Brazil	<p>Soil erosion and landslides due to flooding</p> <p>Forest fires due to drought</p> <p>Higher frequency of extreme weather events</p> <p>Loss of land in low-lying areas due to sea level rise</p> <p>Fragmentation of biomes and loss of fauna populations</p>	<p>Address ongoing desertification through sensitivity mapping and stocktaking of technologies for addressing desertification</p> <p>Create and deploy information management systems on deforestation, land use, and recovery of native vegetation and biodiversity</p> <p>Extend the implementation of land-use monitoring programmes, such as TERRACLASS, to all Brazilian biomes</p> <p>Set up a system for prioritizing vulnerable regions and land-use planning</p> <p>Undertake a spatial analysis of the climate risk of target populations under the National Territorial and Environmental Management Policy for Indigenous Lands</p>
Burkina Faso	<p>Reduction in infiltration replenishing the water table</p> <p>Rapid rate of desertification due to increased temperatures</p> <p>Increased frequency of bush fires due to drought</p>	<p>Recuperate and restore the fertility of degraded land</p> <p>Restore soil fertility in order to limit its continued degradation</p> <p>Recover degraded land by means of sub-soiling and reforestation</p> <p>Implement water and soil conservation and soil defence and restoration techniques</p> <p>Rehabilitate and preserve wetlands</p> <p>Improve land tenure security as a basis for land conservation and management</p> <p>Ensure strict compliance with legislative measures</p>
Cameroon	<p>Loss of arable land to dust storms</p> <p>High risk of land erosion due to frequent extreme wind and rainfall</p>	<p>Develop a land-use plan and identify pastoralists as users of the land</p> <p>Ensure access to land and secure land tenure for the populations and implement significant land zoning</p> <p>Promote community participation in land-use planning</p> <p>Improve local land governance for sustainable management, participatory and equitable land use in the context of climate change</p> <p>Integrate climate risks when updating the land allocation plan</p> <p>Assess current and future land needs according to main uses</p>
Chile	<p>Adverse impacts on cloud forests, tropical (deciduous) forests and dry scrub areas</p>	<p>Conserve and restore forests to stabilize the slopes of land and regulate water flow</p> <p>Promote the sustainable management of upland wetlands and floodplains in order to ensure continued water flow and quality</p>

<i>Party</i>	<i>Climate risks to land</i>	<i>Proposed steps in combating land degradation and restoring degraded lands with contribution to adaptation</i>
Colombia	Decrease in agricultural activity and the range of land productivity due to droughts and floods Soil quality degradation due to climate variability	Strengthen institutional capacity for adaptation to climate change Prevent and/or reverse the degradation of fragile ecosystems and agroecosystems
Ethiopia	Increased soil erosion and landslides High rate of land degradation	Strengthen sustainable natural resources management through safeguarding landscapes and watersheds Focus on agriculture and the rehabilitation of degraded lands
Fiji	Forest fires due to drought Loss of mangrove forests due to sea level rise, warming and acidification Loss of topsoil due to erosion Shoreline retreating due to the loss of mangroves	Increase adoption of sustainable soil and land management techniques to address soil erosion and desertification Enhance meteorological prediction systems for flooding and droughts and develop forest fire watch system Implement ecosystem-based approaches to adaptation to protect, maintain and restore degraded habitats with active community involvement Promote the endorsement of a mangrove management plan and expand the tree planting campaign to encourage voluntary tree and/or mangrove planting activities Assess and monitor the state of coastal ecosystems and protect and enhance the natural coastal defences
Grenada	Loss of agricultural land due to salt water intrusion Increased risk of forest fires and soil erosion Forest degradation	Identify land and infrastructure at risk of being damaged or lost due to the impacts of climate change Improve the availability of ecosystem data and strengthen monitoring of critical ecosystems, with a particular focus on protected areas Strengthen ecosystem resilience while providing livelihood options
Guatemala	Risk of increased soil degradation Increased frequency of landslides Forest fires	Conserve, protect, restore and make sustainable use of Guatemalan forest resources and biodiversity Protect agriculture production from the effects of bush fires and soil degradation Improve knowledge of soil conservation Develop conservation policy Undertake studies of soil taxonomy and land-use capacity
Kenya	Deforestation due to drought and high temperatures Soil erosion in coastal areas due to sea level rise	Restore degraded grazing lands Build the capacity of land planners in climate change land-use planning Integrate climate change scenarios into spatial planning (climate-resilient spatial planning) Build the capacity of land managers in terms of climate change adaptation Update land-use plans with climate scenarios
Kiribati	Forest degradation	Promote sound and reliable infrastructure development and land management

<i>Party</i>	<i>Climate risks to land</i>	<i>Proposed steps in combating land degradation and restoring degraded lands with contribution to adaptation</i>
	Loss of soil moisture due to drought	Develop drought management plans for all islands of Kiribati
	Loss of land to coastal inundation and erosion due to sea level rise	Develop a management plan for landfills and disposal of stored chemicals
	Loss of unique biodiversity	Develop land and marine planning and management for all islands that provides clear regulations on land development
Paraguay	Increased risk of ecosystem loss due to drought, floods and forest fires	Implement integrated management of the landscape and diversify land-use practice
	Degradation and desertification as a result of high temperatures affecting the flora and fauna	
Saint Lucia	Increased risk of loss of agricultural land in low-lying areas due to floods	Strengthen resilience and ecosystem services through integrated sustainable land and watershed management
	High rate of loss of soil nitrogen due to high ambient temperatures	Scale up demand-side management of water by implementing water and soil conservation best practices
	Loss of land productivity, nutrient cycling and agricultural yields	Reduce the impact of ecosystem degradation factors
	Risk of elevation of soil salinity due to sea level rise	
	Likelihood of landslides on poorly drained soils	
Saint Vincent and the Grenadines	Increased risk of land degradation and desertification due to drought	Protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss
	Loss of land utility and quality due to excessive flooding	Measure changes in the levels of vulnerability to climate change (e.g. hectares of arable land lost due to drought)
Sri Lanka	Increased incidence of landslides	Protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
	Increased incidence of saltwater intrusion affecting land productivity	
	Loss of agricultural lands due to inundation of low-lying areas	Strengthen the seawater defence structures to control seawater intrusions into coastal paddy lands
	Increased incidence of storm surges, tidal waves and turbulent conditions due to degraded coastal ecosystem	Convert severely affected paddy lands for other uses (e.g. brackish water aquaculture)
	Drying out of wetlands due to increased evaporation	Design and construct salinity barriers to protect freshwater resources and agricultural lands
State of Palestine	Loss of vegetation cover due to low rainfall levels and drought	Enhance land-use planning and management of greening, afforestation and rangeland
	Loss of soil quality due to erosion	Carry out beach nourishment, reclamation and beach drift rehabilitation
		Enhance city and regional plans and related by-laws, including conservation guidelines

<i>Party</i>	<i>Climate risks to land</i>	<i>Proposed steps in combating land degradation and restoring degraded lands with contribution to adaptation</i>
Sudan	Frequent rangeland fires due to extreme drought	Increase awareness of the importance of conserving and restoring cultural heritage sites
	Loss of biodiversity due to drought-induced land degradation Increased risk of deforestation, overgrazing, soil erosion and desertification due to drought, flood and extreme temperatures	Enforce existing legislation; introduce legislative reforms to better ensure protection of the natural resource base; implement special programmes for rangeland management and pastoral systems Increase the use of remote-sensing technology to collect information about the negative effects of climate change on rangelands Improve vegetation cover of key range plants, research the rehabilitation of degraded rangelands using indigenous plant species Prepare both land-use and investment plans Expand existing biodiversity protection interventions to cover climate change impacts (restrict land conversion of wetlands)
Suriname	Land degradation due to increased frequency of flooding and drought	Implement land-use planning through the creation of a single land-use authority Regulate activities such as sand and shell mining and the issuance of land rights in the estuarine zone Conduct mapping of land titles across the total surface area of the country Establish and implement institutional arrangements, policies and capacities to lead and coordinate national and subnational climate change adaptation Develop robust land management and waste management policies; Reduce gaps in land-use data, increase tree forest cover Implement sound, consistent and transparent land-use administration Create an awareness-raising campaign on land title holders' rights and responsibilities as they relate to climate change impacts and adaptation
Togo	High risk of land erosion resulting from extreme floods	Develop transhumance corridors through the installation of 10,000 boundary markers Combat land degradation by strengthening integrated management of soil fertility
Uruguay	Land degradation resulting from general climate impacts	Enhance the sustainable use and conservation of natural grasslands

^a Based on national adaptation plans submitted as at 30 September 2020.

Annex III

Examples of programmes and activities related to land and climate change related matters

<i>Organization^a</i>	<i>Related programmes and activities</i>
FAO	FAO works to promote coherent approaches to sustainable soil, land and water management. FAO has developed a wide range of guidelines, methodologies and practices for sustainable land management and sustainable soil management. ^b It also works to increase cross-sectoral coherence between SDGs 6 and 15 and other SDGs. FAO promotes improved resource governance, such as by providing support for smallholder farmers, rural women and rural investment, and improved technical information for policymaking. It is one of the lead partner agencies for the United Nations Decade on Ecosystem Restoration.
UNCCD	UNCCD was established in 1992 to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification. Many countries have developed action plans to address land degradation and climate change by setting both carbon and land degradation neutrality targets. ^c One of the expected impacts of the UNCCD 2018–2030 Strategic Framework is for sustainable land management and the combating of desertification/land degradation to contribute to addressing climate change. See also para 14 of this document.
UNEP	UNEP has led the implementation of over 160 initiatives on land degradation across the globe and has supported the development and implementation of over 40 ecosystem-based adaptation projects spanning 31 countries. ^f The projects have been primarily focused on adaptation of agricultural land, forests and coastal ecosystems, as well as on mountain systems, grasslands, wetlands and urban landscapes, rangelands, savannahs and drylands. UNEP has also launched a four-year land-use finance programme that runs from 2018 to 2021 to unlock public and private capital for deforestation-free commodity production, restoration of degraded land and improvement of smallholder farmer livelihoods. ^g It is currently working with organizations on developing technical materials for integrating ecosystem-based adaptation into NAPs.
CIFOR	CIFOR conducts innovative research, develops partners' capacity and actively engages in dialogue with all stakeholders to inform policies and practices that affect forests and people. It issues many publications every year on forests and climate change, landscape restoration, rights, forest policy, and agroforestry. ^h
IUCN	IUCN is an intergovernmental organization working on nature conservation and the sustainable use of natural resources. It has produced several publications and various methodologies, frameworks and tools in relation to nature conservation. ⁱ
CAN International	CAN International is a worldwide network of over 1,300 non-governmental organizations in more than 130 countries, working to promote government and individual action to limit human-induced climate change to ecologically sustainable levels. It provided reflections at the launch of the IPCC Special Report on Climate Change and Land and inputs for the land dialogue, on the basis of its members' knowledge and expertise on technical issues related to land and climate change adaptation.
GFC	Both the GCF and the Climate Land Ambition and Rights Alliance advocate for the conservation and restoration of forest ecosystems, focusing on the rights, territories, traditional knowledge and sustainable livelihoods of the indigenous peoples and local communities that coexist with them.
WWF	WWF is an international organization working on conservation, with a focus on climate, food, forests, freshwater, oceans and wildlife. It published a report, <i>Climate, Nature and our 1.5°C Future: A Synthesis of IPCC and IPBES Reports</i> , ^j

<i>Organization^a</i>	<i>Related programmes and activities</i>
	which illustrates the impacts and risks to people and nature, as well as the solutions that nature can provide to human development, the climate crisis and the decline in biodiversity.

^a Consisting of only the organizations that made submissions as at 31 October 2020.

^b See <http://www.fao.org/land-water/home/en>.

^c See <https://www.unccd.int/actions/ldn-target-setting-programme>.

^d See <https://knowledge.unccd.int/science-policy-interface/science-day-cop14>.

^e See <https://www.unccd.int/news-events/accelerating-action-around-land-enhanced-climate-action>.

^f UNEP. 2019. *UNEP and EbA. Briefing Note 7*. Nairobi. Available at <https://www.unenvironment.org/gan/news/press-release/unep-wcmc-release-briefing-note-series-ecosystem-based-adaptation>.

^g UNEP. 2020. *Financing Sustainable Land Use for People and Planet*. Nairobi. Available at <https://www.unenvironment.org/resources/publication/financing-sustainable-land-use-people-and-planet>.

^h See <https://www.cifor.org/knowledge/publications>.

ⁱ For example, see IUCN (2020). *Global Standard for Nature-based Solutions*. A user-friendly framework for the verification, design and scaling up of NbS. First edition. Gland, Switzerland: IUCN. Available at <https://portals.iucn.org/library/node/49070>.

^j See <https://wwf.panda.org/our-work/our-focus/climate-and-energy-practice/climate-nature-future-report>.

Annex IV

Indicative programme for the dialogue on the relationship between land and climate change adaptation related matters

Day 1 (2.5 hours)

<i>Duration (minutes)</i>	<i>Items</i>	<i>Contributors</i>
10	Introduction to the event	Moderator
20	High-level opening	Speakers to be identified
40	Keynote presentations	Speakers to be identified
50	Thematic breakout discussions	All participants
30	General discussion and wrap up pf day 1	All participants

Day 2 (2.5 hours)

<i>Duration (minutes)</i>	<i>Items</i>	<i>Contributors</i>
10	Introduction to day 2	Moderator
40	Keynote presentations	Speakers to be identified
60	Thematic breakout discussions	All participants
30	General discussion	All participants
10	Closing	SBSTA Chair

Note: A detailed programme will be made available on the event page at <https://unfccc.int/topics/adaptation-and-resilience/events-meetings/national-adaptation-plans/dialogue-on-the-relationship-between-land-and-climate-change-adaptation-related-matters>.