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REPORT OF THE WORKSHOP ON BIODIVERSITY AND CLIMATE CHANGE: INTEGRATED SCIENCE FOR COHERENT POLICY

Paris, 18 October 2018

INTRODUCTION

1. In decision XIII/29, the Conference of the Parties to the Convention on Biological Diversity requested the Executive Secretary and invited the secretariats of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC) to foster further enhanced collaboration between the scientific communities related to the these bodies working on scenarios and models, as well as collaboration with communities working on biodiversity monitoring and data, and the policy community.

2. Further, the Subsidiary Body on Scientific, Technical and Technological Advice, at its twentieth meeting, in paragraph 5 of recommendation XX/10, invited IPCC, when elaborating its special report on the impacts of global warming of 1.5 degrees Celsius above pre-industrial levels, to include consideration of the impacts on biodiversity and ecosystem functions and services, and of the contribution of the conservation and sustainable use of biodiversity, and of ecosystem restoration, to efforts to keep global warming within a limit of 1.5 degrees Celsius.

3. In recommendation SBSTTA-XXI/1, the Subsidiary Body on Scientific, Technical and Technological Advice welcomed the ongoing work by the scientific and other relevant communities working on scenarios and related assessments, including the increased collaboration between the communities working on biodiversity and on climate change, and, recalling the invitation to the Intergovernmental Panel on Climate Change in paragraph 5 of recommendation SBSTTA-XX/10, invited these communities to continue these efforts to promote coherence in scenarios and related assessments.

4. Accordingly, the Secretariat of the Convention on Biological Diversity organized the workshop "Biodiversity and climate change: integrated science for coherent policy", in cooperation with IPBES and IPCC, as well as the United Nations Framework Convention on Climate Change (UNFCCC). The workshop, made possible by a generous support from the Government of France, was held at the headquarters of the United Nations Educational, Scientific and Cultural Organization (UNESCO), in Paris, on 18 October 2018.

5. The workshop objectives were to discuss recent assessments and policy-relevant science through a dialogue between the climate and biodiversity communities, including the two major assessment processes, IPCC and IPBES, as well as UNFCCC and CBD.

6. The workshop built on previous work and ongoing work, including work under the CBD, to identify key issues related to the interface between biodiversity and climate change mitigation and adaptation.

7. By encouraging the continued communication and mutual understanding between the scientific communities involved in the work of IPCC and IPBES, the workshop aimed to ensure that key issues will be addressed in future work, including, as appropriate, assessments under both processes.

8. The workshop also aimed to ensure that more coherent implementation is strengthened under the two conventions, as well as in the processes related to the goals of the two conventions, the Sustainable Development Goals, and the New York summits on climate change in 2019 and biodiversity in 2020.

9. The main outputs from the workshop were the identification of key messages to inform the CBD and UNFCCC, as well as the strengthened collaboration between the climate and biodiversity communities, specifically those of the IPCC and IPBES, in order to produce more integrated assessments. The key messages developed by the experts present at the workshop and compiled by the co-chairs are available in document CBD/COP/14/INF/22.

10. The workshop was attended by 47 participants. The list of participants is presented in annex I.

11. The workshop was included presentations and discussions in plenary, as well as break-out groups. The workshop was conducted in English, with partial French interpretation. The organization of work is contained in annex II.

ITEM 1. OPENING OF THE MEETING

12. Registration for the meeting began at 9:00 a.m. and the meeting opened at 9:30 a.m.

13. Mr. Xing Qu, Deputy Director General of UNESCO, opened the meeting. In his opening remarks, he recognized that as climate change impacts such as floods, droughts and hurricanes have been increasingly apparent around the world, the role of ecosystems can help us mitigate and adapt to climate change while contributing to the achieving the Sustainable Development Goals.

14. Dr. Cristiana Paşca Palmer, Executive Secretary of the CBD, in her address, called for more coherent and engaging political leadership under the CBD and the UNFCCC. She emphasized that, just as biodiversity loss and climate change are twin challenges and inseparable in their impacts, their solutions too should be jointly addressed. Addressing these issues in silos will lead to failure in both areas.

15. Mr. Florin Vladu, Manager of Adaptation Programme of the UNFCCC, spoke on behalf of Ms. Patricia Espinosa, Executive Secretary of the UNFCCC. Mr. Vladu stated that failing to limit temperature increase to well below 2°C above preindustrial levels is a moral concern and that this limit would require transformational change. He recognized the importance of ecosystem-based approaches and ecosystem restoration in our efforts to mitigate and adapt to climate change.

16. Ms. Virginie Dumoulin, Director in the French Ministry for Ecological and Inclusive Transition, provided opening remarks and welcomed participants to the workshop while highlighting the importance and significance of the meeting to follow in the spirit of the historic Paris Agreement.

17. The co-chairs of the workshop, Sir Robert Watson, Chair of the IPBES and Dr. Youba Sokona, Vice Chair of the IPCC, also gave opening remarks to welcome the participants. Sir Watson stressed the importance of the market and non-market economic value of biodiversity and ecosystem services. Dr. Sokona highlighted the barriers, both politically and socially, that have prevented progress in addressing the issues of climate change and biodiversity loss. Both co-chairs agreed that climate change and the loss of biodiversity are truly intertwined issues and need to be addressed in a holistic and all-inclusive way in order to achieve a more sustainable future.

18. Later during the day, a heartfelt address was made by the newly appointed Secretary of State of the French Ministry for Ecological and Inclusive Transition, Ms. Emmanuelle Wargon, in which she encouraged the experts to work together on the increasingly urgent issues of climate change and biodiversity loss.

ITEM 2. FINDINGS FROM RECENT REPORTS OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE AND THE INTERGOVERNMENTAL SCIENCE-POLICY PLATFORM ON BIODIVERSITY AND ECOSYSTEM

SERVICES ON THE INTERFACE BETWEEN BIODIVERSITY AND CLIMATE

19. Under this item, experts from the IPCC and IPBES made presentations on the content of the most recent reports of the two processes. The presentations were followed by a group discussion to identify key issues on the interface between biodiversity and climate.

20. Dr. Markus Fischer, IPBES assessment co-chair and member of the IPBES multidisciplinary expert panel, presented on the causes and consequences of biodiversity loss and its link with climate change and sustainable development and options for decision-making.

21. Prof. Paul Leadley, former member of the IPBES multidisciplinary expert panel, current member of the expert group on scenarios and models and expert on the global assessment of biodiversity and ecosystem services, presented on the major challenges for science, assessment and policy in addressing the interactions between climate change and biodiversity.

22. Some of the key messages from the presentations on the IPBES assessments include:

(a) The loss of biodiversity is already impacting climate and affecting people and livelihoods all around the world.

(b) Limiting the loss of biodiversity and the degradation of ecosystems can be facilitated through transformative changes including the use of participatory governance systems and multi-sectoral planning.

(c) There are clear benefits to limiting the loss of biodiversity and degradation of ecosystems.

(d) Limiting the loss of biodiversity and degradation of ecosystems can contribute to mitigating and adapting to climate change and is essential to the achievement of many of the United Nations Sustainable Development Goals.

23. The co-chairs of the IPCC Working Groups I, II and III, Valérie Masson-Delmotte, Hans-Otto Pörtner and Jim Skea, respectively, jointly presented a summary of the findings of the IPCC Special Report on Global Warming of 1.5°C. They provided an overview of the projections of potential climate change impacts and associated risks, emission pathways and system transitions consistent with global warming of 1.5°C above pre-industrial levels. They also highlighted the need for a strengthening of the global response in the context of sustainable development and efforts to eradicate poverty. They also presented a timeline of deliverables for the IPCC sixth assessment report.

24. Some of the key messages from the presentations on the IPCC Special Report on Global Warming of 1.5°C include:

(a) Climate change is already affecting people, ecosystems and livelihoods all around the world.

(b) Limiting warming to 1.5°C is not impossible but would require unprecedented transitions in all aspects of society.

(c) There are clear benefits to keeping warming to 1.5°C compared to 2°C, or higher. Every bit of warming matters.

(d) Limiting warming to 1.5°C can go hand in hand with achieving other global policy goals.

25. The group discussion that followed the presentations identified existing gaps in knowledge and reflected on the inequalities and inequities that form out of the issues of climate change and biodiversity loss. Some of the key messages from the discussions on the major challenges for science, assessment and policy in addressing the interactions between climate change and biodiversity include:

(a) There is a need for concerted efforts to evaluate: (i) feedback between biodiversity and climate; (ii) uncertainty related to climate change and its impacts on biodiversity and ecosystem services;

(iii) interactions between climate change and other drivers of biodiversity loss; and (iv) links between biodiversity, ecosystem functions, ecosystem services and human well-being.

(b) There is a need for much more comprehensive understanding and assessment of the impacts of climate change mitigation and adaptation actions on biodiversity, including: (i) evaluating a broad panel of mitigation and adaptation actions; (ii) comparing benefits of reducing climate change impacts versus potential negative effects of mitigation actions (e.g., large-scale bioenergy with carbon capture and storage) on biodiversity; (iii) identifying win-win actions and means of implementing them; and (iv) identifying trade-offs and means of avoiding or minimizing trade-offs in implementation of climate mitigation and adaptation plans.

(c) Knowledge of nature-based solutions to climate change adaptation and mitigation needs to be much better communicated to decision makers and the general public, including priorities to: (i) clearly present the suite of potential nature-based solutions; (ii) agree on and disseminate best practices; (iii) identify key social, technical and political barriers to implementation; (iv) identify the potential speed and costs of implementation; (v) focus on the sustainability of ecosystem carbon sequestration; and (vi) compare relative contributions of nature-based solutions to portfolios of mitigation measures.

26. The full report on the key messages of the presentations on the recent IPCC and IPBES reports and the group discussion that took place at the workshop on "Biodiversity and Climate Change: Integrated Science for Coherent Policy" can be found in Annexes II, III and IV of the document CBD/COP/14/INF/22.

ITEM 3. IDENTIFICATION OF CHALLENGES, OPPORTUNITIES AND UNRESOLVED ISSUES

27. Under this item, two working groups worked in parallel to further examine and identify challenges, opportunities and unresolved issues, and developed ideas for ongoing communication and collaboration between the two scientific communities on: (a) the impacts of climate change mitigation and adaptation measures on biodiversity and impacts of biodiversity conservation or restoration measures on climate change mitigation and adaptation: how to avoid or minimize negative and maximize positive impacts; and (b) nature-based solutions and "win-win" measures for achieving the co-benefits between climate change and biodiversity, and the Sustainable Development Goals.

28. Below are some of the key messages that emerged from the two break-out group discussions. The full list of key messages are available in Annex V of document CBD/COP/14/INF/22.

3.1. Impacts of climate change mitigation and adaptation measures on biodiversity and impacts of biodiversity conservation or restoration measures on climate change mitigation and adaptation: how to avoid or minimize negative and maximize positive impacts

29. Some key messages from the break-out group discussions on this topic include:

(a) Land use must be a part of the mitigation and adaptation solution. Land-based mitigation actions require specialized and integrated approaches and must address all forcing factors, not only CO_2 sequestration (e.g. albedo change, unintended consequences for biodiversity and ecosystem services). Land-based mitigation and adaptation actions often have multiple objectives and there is a need to take an integrated view of adaptation-mitigation linkages.

(b) Multiple opportunities for food production and consumption efficiencies exist and need to be assessed in appropriately nuanced ways, relevant for local and regional contexts.

(c) Overall, these options and trade-offs need to be better communicated for both managers and policymakers, preferably in the form of "policy packages", i.e., combinations of policies that maximize synergies and minimize adverse trade-offs.

(d) Downscaling of responses in terms of potential unintended and adverse consequences will be important – including large-scale renewable energy roll-outs and upgrades as envisaged by the IPCC 1.5°C report.

(e) Synergies between nature-based solutions and adaptation to extreme events are powerful entry points for initial implementation.

(f) There is a need to entrain market forces to scale up societal transformation and behavioural change.

(g) There is a significant knowledge gap regarding biodiversity multi-functionality, and about the relationship with sustainable land use.

(h) A significant gap in our understanding of the linkage between conservation and mitigation – in particular, the role of conservation in preserving the sink function of low management systems such as in tropical forests and high-latitude peat systems.

(i) Better support is needed for government stocktaking to support action on biodiversity. There exists an organizational issue – that IPCC, UNFCCC, CBD and IPBES do not have a full mandate to synergize on issues where this is vital and of mutual benefit to each.

3.2. Nature-based solutions and "win-win" measures for achieving the co-benefits between climate change and biodiversity, and the Sustainable Development Goals

30. Some key messages from the break-out group discussions on this topic include:

(a) Achieving the Sustainable Development Goals depends on ensuring a healthy climate as well as conserving and sustainably using biodiversity.

(b) There are many synergies, and some trade-offs, between climate policy consistent with the Paris Agreement and protecting biodiversity as outlined in the recent IPCC Special Report on 1.5°C. Coherent policies across different policy areas at the national scale can benefit from the options that provide synergy. However, such coherent policies are still often lacking. Some examples of policy options that lead to synergies are (i) the conservation of natural areas and avoiding deforestation and (ii) nature-based adaptation (e.g. mangroves instead of sea walls).

(c) Feasibility considerations of nature-based solutions should take account of technical, economic and socio-political concerns.

(d) Sustainable Development Goal 12 (Achieving sustainable production and consumption patterns) is of key importance for both climate and biodiversity policy. It also recognizes that solutions are often outside the realm of narrow climate/biodiversity policies (e.g. urban planning, mobility, etc.).

(e) Climate change and biodiversity policies should be harmonized to realize synergies and avoid unintended adverse consequences.

(f) Two of the most vital strategies for achieving the co-benefits between climate change, biodiversity and the Sustainable Development Goals are through ecosystem restoration and avoiding deforestation.

(g) It is important to explore how IPCC and IPBES could find new ways to work together and improve the synergy between their assessments in order to increase the relevance and quality of the assessments and reduce the workload on the communities. This could for instance include joint expert meetings, cross-sectoral papers, technical papers, and in the longer future maybe joint special reports.

ITEM 4. CONCLUSIONS AND KEY MESSAGES

31. Under this item, participants discussed the key conclusions and observations that emerged during the workshop.

32. Some of the key messages taken from the discussions throughout the day include:

(a) Climate change and biodiversity loss are inseparable threats to humankind and must be addressed together;

(b) There are significantly greater risks to natural and human systems in a world warming to 2°C above pre-industrial temperatures compared to 1.5°C above pre-industrial temperatures;

(c) In order to limit global warming to well below 2°C, and closer to 1.5°C above pre-industrial levels, strong actions are needed to reduce greenhouse gas emissions from fossil fuel use and cement production, as well as to protect and enhance carbon sinks on land and in the oceans through ecosystem-based approaches;

(d) Protecting and conserving biodiversity and ecosystems is critical in order to maintain and increase the resilience and reduce the vulnerability of ecosystems and people in the face of the adverse effects of climate change, as well as to maintain their capacity to store carbon;

(e) Ecosystem-based approaches to climate change mitigation and adaptation, including biodiversity conservation, the reduction of ecosystem degradation, and restoration of ecosystems, provide significant contributions to stabilizing warming to below 2°C, and closer to 1.5°C above pre-industrial levels, while delivering multiple co-benefits for biodiversity and sustainable development;

(f) Investing simultaneously in ecosystem restoration, the rehabilitation of degraded agricultural and pasture lands, and ways to sustainably enhance agricultural productivity can contribute to combating climate change and biodiversity loss and enhance food security at the same time;

(g) When considering bioenergy and biomass-based measures, attention should be given to the direct and indirect effects of related land-use changes, including net greenhouse gas emissions, water and nutrient constraints and changes in albedo;

(h) Many of the direct and most of the indirect drivers of biodiversity loss and climate change are common to both these challenges;

(i) The integration between climate and biodiversity requires an integrated approach at the local/national level in order to be able to address the systemic interactions and identify the synergies that could be strengthened by adequate policy packages;

(j) There are opportunities for further work to integrate science on the links between climate change and biodiversity in policy.

ITEM 5. CLOSURE OF THE MEETING

33. The workshop closed on 18 October 2018 at 6:00 p.m. with closing remarks from Dr. David Cooper, Deputy Executive Secretary of the CBD, followed by a cocktail reception from 6:30 to 7:00 p.m.

34. Participants agreed on next steps including sharing the results of this workshop in a summary report. Accordingly, the CBD Secretariat prepared document CBD/COP/14/INF/22, highlighting the key messages from the experts present at the workshop and compiled by the co-chairs, with a view of bringing them to the attention of policy-makers under both the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC) at the fourteenth meeting of the Conference of the Parties to the CBD and the twenty-fourth session of the Conference of the Parties to the UNFCCC.

Annex I

LIST OF PARTICIPANTS

	Name	Position/Role	Organization
1	Emmanuelle Wargon	Secretary of State	French Ministry for an Ecological and Inclusive Transition
2	Cristiana Paşca Palmer	Executive Secretary	Convention on Biological Diversity
3	Florin Vladu	Programme Officer, Adaptation Technology and Science Programme	United Nations Framework Convention on Climate Change
4	Paul Watkinson	SBSTA Chair	United Nations Framework Convention on Climate Change
5	Xing Qu	Deputy Director General	United Nations Educational, Scientific and Cultural Organization
6	Flavia Schlegel	Assistant Director-General for Natural Sciences	United Nations Educational, Scientific and Cultural Organization
7	Miguel Clüsener–Godt	Director, Division of Ecological and Earth Sciences	United Nations Educational, Scientific and Cultural Organization
8	Peter Dogse	Programme Specialist, MAB Research and Policy: Ecology and Biodiversity (ESP)	United Nations Educational, Scientific and Cultural Organization
9	Noeline Raondry Rakotoarisoa	Chief of Section, MAB Networking: Biosphere Reserves and Capacity Building (NBC)	United Nations Educational, Scientific and Cultural Organization
10	Laure Ledoux	Deputy Head of Unit, DG-Environment	European Commission
11	Karin Zaunberger	Policy Officer, DG-Environment	European Commission
12	Abdalah Mokssit	Secretary	Intergovernmental Panel on Climate Change
13	Kerstin Stendahl	Deputy-Secretary	Intergovernmental Panel on Climate Change

14	Anne Larigauderie	Executive Secretary	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
15	Robert Watson	Chair	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
16	Hien Ngo	Head of the Technical Support Unit, Global Assessment	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
17	Youba Sokona	Vice-Chair	Intergovernmental Panel on Climate Change
18	Valérie Masson-Delmotte	Co-Chair of Working Group 1	Intergovernmental Panel on Climate Change
19	Hans-Otto Pörtner	Co-Chair of Working Group 2	Intergovernmental Panel on Climate Change
20	Jim Skea	Co-Chair of Working Group 3	Intergovernmental Panel on Climate Change
21	Johnson Ndi Nkem	Coordinating Lead Author, SRCCL, Ch 6	Intergovernmental Panel on Climate Change
22	Josef Settele	Co-Chair, Global Assessment	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
23	Paul Leadley	Multidisciplinary Expert Panel (MEP)	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
24	Guy Midgley	Coordinating Lead Author, Global Assessment	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
25	Carlo Rondinini	Coordinating Lead Author, Global Assessment	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
26	Bernardo Strassburg	Lead Author, Ch 5 (scenarios), Global Assessment	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
27	Yunne Jai Shin	Coordinating Lead Author, Global Assessment, Ch 4	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
28	Markus Fischer	Chair, Europe Central Asia Assessment	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

29	Detlef Van Vuuren	Prof. Integrated Assessment of Global Environmental Change	Copernicus Institute of Sustainable Development, Utrecht University
30	Pam Berry	Adaptation Expert	Oxford University
31	Philippe Ciais	Associate Director	Institut Pierre-Simon Laplace
32	Franck Lecocq	Lead Author, 4th and 5th Assessment Reports (Working Group III)	Intergovernmental Panel on Climate Change
33	Wolfgang Cramer	Author, SR15, Ch 1	Intergovernmental Panel on Climate Change
34	Almut Arneth	SRCCL, CLA, Ch 1	Intergovernmental Panel on Climate Change
35	Joeri Rogelj	Coordinating Lead Author, SR15, Ch 2	Intergovernmental Panel on Climate Change
36	Henri Waisman	Coordinating Lead Author, SR15, Ch 5	Intergovernmental Panel on Climate Change
37	Meriem Bouamrane	Biodiversity and IPBES Focal Point, Programme Specialist	United Nations Educational, Scientific and Cultural Organization
38	Virginie Dumoulin	Director for European and International Affairs	French Ministry for an Ecological and Inclusive Transition
39	Stéphanie Croguennec	Deputy Director, Climate Change and Sustainable Development	French Ministry for an Ecological and Inclusive Transition
40	Laurence Perianin	Biodiversity Project Manager, Biodiversity and Environment Unit	French Ministry for an Ecological and Inclusive Transition
41	François Lengrand	Deputy Head of the Biodiversity and Environment Unit, Directorate for European and International Affairs	French Ministry for an Ecological and Inclusive Transition
42	Antonin Vergez	Head of Global Public Goods Unit	French Ministry for an Ecological and Inclusive Transition
43	Catherine Julliot	Research Service, Office of the Commissioner General for Sustainable Development	French Ministry for an Ecological and Inclusive Transition

44	Marc Strauss	Project Director for Major International Events	French Ministry for an Ecological and Inclusive Transition
45	David Cooper	Deputy Executive Secretary	Convention on Biological Diversity
46	Jyoti Mathur-Filipp	Head of Implementation Support Division	Convention on Biological Diversity
47	Christopher Pereira	Individual Contractor, Climate Change and Nature-based Solutions	Convention on Biological Diversity

Annex II

ORGANIZATION OF WORK

18 October 2018

Time	Workshop activity
9 to 9.30 a.m.	*Registration and coffee*
9.30 to 10.05 a.m.	Opening remarks by the hosts and organizers
10.05 to 10.35 a.m.	Welcoming address by the co-chairs
10.35 a.m. to 12.30 p.m.	Presentation by experts from the IPCC and IPBES on the content of the most recent reports of the two processes Presentation of experts involved in the work of the IPCC and IPBES on key issues on the interface between biodiversity and climate change Group discussion
12.30 to 1.30 p.m.	*Lunch*
1.30 – 1.45 p.m.	Address by representative of French Ministry for an Ecological and Inclusive Transition
1.45 to 3.15 p.m.	Break-out group discussions. Two working groups will work in parallel to further examine and identify challenges, opportunities and unresolved issues, and develop ideas for ongoing communication and collaboration between the two scientific communities on: (a) Impacts of climate change mitigation and adaptation measures on biodiversity and impacts of biodiversity conservation or restoration measures on climate change mitigation and adaptation: how to avoid or minimize negative and maximize positive impacts (b) Nature-based solutions and "win-win" measures for achieving the co-benefits between climate change and biodiversity, and the Sustainable Development Goals
3.15 to 3.45 p.m.	*Coffee Break*
3.45 to 4.15 p.m.	Report of break-out groups and summary of key messages
4.15 to 5 p.m.	Roundtable discussion
5 to 5.45 p.m.	Conclusions and key messages
5.45 to 6 p.m.	Closure of the meeting
6.30 to 7 p.m.	*Reception*

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