



Convention on Biological Diversity

Distr.
GENERAL

CBD/SBSTTA/REC/23/1
29 November 2019

ORIGINAL: ENGLISH

SUBSIDIARY BODY ON SCIENTIFIC,
TECHNICAL AND TECHNOLOGICAL ADVICE

Twenty-third meeting

Montreal, Canada, 25-29 November 2019

Agenda item 3

RECOMMENDATION ADOPTED BY THE SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL AND TECHNOLOGICAL ADVICE

23/1. Informing the scientific and technical evidence base for the post-2020 global biodiversity framework

The Subsidiary Body on Scientific, Technical and Technological Advice,

Recalling recommendation [XXI/1](#) and decisions [14/1](#) and [14/34](#),

1. *Welcomes* the *Global Assessment Report on Biodiversity and Ecosystem Services* issued by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services¹ and its regional and thematic assessments;²

2. *Also welcomes* the special reports of the Intergovernmental Panel on Climate Change on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, and on the ocean and cryosphere in a changing climate and on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems;

3. *Takes note* of the information presented in the note by the Executive Secretary,³ in particular:

(a) The overview of the findings of the global and other assessments of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and other relevant assessments, and implications for the work of the Convention and the post-2020 global biodiversity framework;

(b) Other information on the evidence base for the post-2020 global biodiversity framework;

4. *Stresses* the need for urgent action to address the drivers of biodiversity loss, as well as those of climate change and land degradation, in an integrated manner, in line with the findings of the *Global Assessment Report on Biodiversity and Ecosystem Services* of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services to achieve the 2050 Vision;

5. *Calls on* Governments to make the development of the post-2020 global biodiversity framework a matter of high priority for all their ministries, agencies and offices with clear assignment of necessary actions;

6. *Recognizes* that a key element in the development of pathways for living in harmony with nature, includes making changes in global financial and economic systems towards a globally sustainable economy and ensuring the full implementation of the three objectives of the Convention;

¹ <https://www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services>

² <https://ipbes.net/assessment-reports>

³ CBD/SBSTTA/23/2 and addenda.

7. *Requests* the Co-Chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework and the Executive Secretary to consider the information referred to in paragraphs 1 to 3 above when preparing documentation for the second meeting of the Working Group, taking into account the comments made by Parties at the twenty-third meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, and *invites* the Working Group to consider this information in its deliberations;

8. *Recalls* the request from the Open-ended Working Group on the Post-2020 Global Biodiversity Framework at its first meeting to provide elements concerning guidance on specific goals, SMART targets, indicators, baselines, and monitoring frameworks, relating to the drivers of biodiversity loss, for achieving transformational change, within the scope of the three objectives of the Convention, and *requests* the Co-Chairs of the Open-ended Working Group and the Executive Secretary to take into account the information contained in the annex to the present recommendation when preparing documentation for the Working Group;

9. *Requests* the Co-Chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework to consult biodiversity-related conventions and other relevant international agreements and processes in order to take into account their scientific and technical information for the development of the post-2020 global biodiversity framework;

10. *Takes note* of the information documents⁴ provided on indicators, and *invites* the Biodiversity Indicators Partnership, the Organisation for Economic Co-operation and Development and other relevant bodies to continue to provide information in support of the process to develop the post-2020 biodiversity framework;

11. *Requests* the Executive Secretary to invite written submissions from Parties and others seeking views, particularly on the possible targets, indicators and baselines related to the drivers of biodiversity loss as well as on species conservation and the mainstreaming of biodiversity across sectors, compile the views and make them available for the consideration of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework at its upcoming meetings and the Subsidiary Body on Scientific, Technical and Technological Advice at its twenty-fourth meeting;

12. *Requests* the Co-Chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework and the Executive Secretary, when preparing documentation for the second meeting of the Working Group, to include information on the availability of indicators for targets included in the zero draft of the global biodiversity framework;

13. *Requests* the Executive Secretary to submit for peer review by Parties and stakeholders the document on “Indicators for global and national biodiversity targets: experience and indicator resources for development of the post-2020 global biodiversity framework”,⁵ and, in collaboration with other members of the Biodiversity Indicators Partnership, to prepare an analysis of the use of indicators in the sixth national reports, and, drawing upon this information as well as the inputs to the peer review and other relevant information,⁶ including CBD/SBSTTA/23/INF/3, to prepare a document that identifies the range of relevant existing indicators, baselines, baseline dates, or other appropriate methods for monitoring changes in biodiversity, indicator gaps, and, where relevant, options for filling such gaps and for a monitoring framework for the post-2020 global biodiversity framework, taking into account the outcomes of the second meeting of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework, and to issue

⁴ CBD/SBSTTA/23/INF/3 and INF/4.

⁵ CBD/SBSTTA/23/INF/4.

⁶ Including but not limited to documentation related to or developed in connection with the Sustainable Development Goals, the Organisation for Economic Co-operation and Development, Biodiversity Indicators Partnership, the United Nations Environment Programme – World Conservation Monitoring Centre, and those contained in the relevant sections of the documents prepared for the twenty-third meeting of the Subsidiary Body on Scientific, Technical and Technological Advice.

the document no later than six weeks in advance of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice for its consideration;

14. *Takes note* of the progress made in preparing the fifth edition of the *Global Biodiversity Outlook*, including the first draft and its summary for policymakers;

15. *Urges* Parties, and *invites* other Governments and relevant organizations and experts to participate in the peer review process for the fifth edition of the *Global Biodiversity Outlook*;

16. *Requests* the Executive Secretary to complete the *Global Biodiversity Outlook* and to revise the draft summary for policymakers, in accordance with decisions [XIII/29](#) and [14/35](#), in the light of comments made at the twenty-third meeting of the Subsidiary Body on Scientific, Technical and Technological Advice as well as the input provided by Parties, other Governments, relevant organizations and experts through the peer review process;

17. *Urges* Parties that have not yet done so to submit their sixth national reports to the Executive Secretary;

18. *Requests* the Executive Secretary to carry out a comprehensive analysis of information in the sixth national reports and to use this information when completing the *Global Biodiversity Outlook*;

19. *Welcomes* the financial support provided by Canada, the European Union, Japan and the United Kingdom of Great Britain and Northern Ireland for the preparation of the fifth edition of the *Global Biodiversity Outlook* and, recalling decision 14/35 of the Conference of the Parties, *invites* Parties, other Governments and relevant organizations in a position to do so to provide timely financial contributions for the preparation and production of the fifth edition of the *Global Biodiversity Outlook* and its related products, in line with the work plan and budget estimates for its preparation;

20. *Recommends* that the Conference of the Parties at its fifteenth meeting adopt a decision along the following lines:

The Conference of the Parties

1. *Welcomes* the *Global Assessment Report on Biodiversity and Ecosystem Services* issued by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services⁷ and the related regional and thematic assessments;

2. *Welcomes* the special reports of the Intergovernmental Panel on Climate Change on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, and on the ocean and cryosphere in a changing climate and on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems;

[3. *Urges* Parties to take urgent action to address the drivers of biodiversity loss as identified in the *Global Assessment* of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, as well as those of climate change and land degradation, in an integrated manner through both the implementation and scaling up of existing proven measures and the initiation of transformative changes, [calling for the provision of resources to developing countries in order to address such changes, consistent with Article 20 of the Convention, and consistent with international obligations], to achieve the 2050 vision.]

⁷ <https://www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services>

Annex

**ELEMENTS OF SCIENTIFIC AND TECHNICAL GUIDANCE FOR THE POST-2020
GLOBAL BIODIVERSITY FRAMEWORK⁸**

I. 2030 MISSION

1. The contact group on agenda item 3 raised general issues on the formulation of a mission statement for the post-2020 global biodiversity framework. It was noted that a mission could:

(a) Contain measurable elements, serve as a milestone to 2050, be outcome-oriented in relation to the state of biodiversity, imply a sense of urgency and be concise and easy to communicate;

(b) Focus on what the post-2020 global biodiversity framework is attempting to achieve, for example by including language related to “bending the curve of biodiversity loss”, “putting biodiversity on a path to recovery”, and/or “no net loss”;

(c) Focus on implementing solutions and taking urgent action for addressing biodiversity loss, sustainable use;

(d) Reflect the benefits, not only for people, but also for the planet and for sustainable development.

2. The contact group also considered six formulations of possible mission statements, one from document CBD/SBSTTA/23/2/Add.4 and the others from the interventions on item 3 in plenary, and provided observations on them:

(a) “Implement solutions across society by all stakeholders to halt and reverse biodiversity loss and enhance benefits-sharing/benefits of ecosystem services, contributing to the global development agenda and, by 2030, putting the world on a path to achieve the 2050 vision”:

(i) Some suggested that halting and reversing biodiversity loss is not scientifically possible by 2030 and, therefore, the focus should be on changing trends in loss;

(ii) Some noted that this formulation is too long, not easy to communicate, not measurable or action-oriented, and not a milestone towards the 2050 Vision and that it does not address the elements in CBD/SBSTTA/23/2/Add.4, paragraph 12;

(iii) Some noted that the element on benefits of ecosystems is not clear and may be conflated with benefits in relation to access and benefit-sharing;

(iv) Some felt that the reference to the global development agenda was unclear and suggested instead referring to sustainable development;

(v) Some noted that some issues may need to be reflected in the mission statement implicitly and that a mission statement could be accompanied by a supporting or explanatory text for specific elements or terms;

(b) “By 2030, put nature on path to recovery for the benefit of all people by protecting wildlife, restoring ecosystems, tackling the drivers of biodiversity loss and avoiding a climate crisis”:

⁸ The present note, which was not negotiated, reflects the efforts by the Co-Chairs of the contact group on agenda item 3 to provide the Co-Chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework with scientific and technical guidance on specific goals, SMART targets, indicators, baselines, and monitoring frameworks, relating to the drivers of biodiversity loss, for achieving transformational change, within the scope of the three objectives of the Convention. The issues raised in this annex should not be taken to mean that an agreement was reached on any particular issue and should be read in the light of the views expressed by Parties and observers at the twenty-third meeting of the Subsidiary Body on Scientific, Technical and Technological Advice.

- (i) Some noted that this formulation, while short and direct, is too restrictive in scope, is not measurable, uses many terms and has a narrow focus on wildlife. It was also noted that the proposed actions are conventional and do not take into consideration transformative change;
- (ii) Some felt that a reference to the “climate crisis” is not necessary in the mission statement, and that “environmental crisis” could be an alternative;
- (iii) Some noted that this formulation focuses on how the post-2020 global biodiversity framework should be implemented instead of what is trying to be accomplished;
- (iv) Some suggested adding a reference to sustainable use and transformational change to this formulation;
- (v) Some noted the use of technical language in this formulation and suggested it was not fit for a non-technical audience;
- (vi) Some suggested replacing “benefit” with “nature’s contribution to people”, to avoid conflation with benefits of genetic resources, “protecting” with “conserving”, “wildlife” with “biodiversity”, “nature” or “species”, and “ecosystems” with “habitats” for ease of communication;
- (vii) Some suggested alternative formulations, including:
 - a. “By 2030, put nature on path to recovery, tackling the drivers of biodiversity loss for the benefit of all people”;
 - b. “Protect – Restore – Act now for the benefit of all people and the planet”;
 - c. “By 2030, sustainably utilize nature and put it on a path to recovery for the benefit of all people”;
 - d. “To incorporate solutions on the drivers, contributing to bending the curve of biodiversity loss”;
 - e. “By 2030, take action to change the course of loss of species, ecosystems and genetic diversity: restore, recover and use nature for the benefit of people and the planet by 2050”;
 - f. “By 2030, trends of biodiversity loss have been reversed”;
 - g. “Implement solutions to halt and reverse biodiversity loss by 2030”;
- (c) “By 2030, halt and reverse the unprecedented loss of biodiversity and put nature on a path to recovery for the benefit of all people and the planet”:
 - (i) Some noted that this formulation is short and easy to communicate. It was noted that “put nature on a path to recovery” can be used as a call to action, as it is understandable outside the Convention on Biological Diversity;
 - (ii) Some noted that it is not realistic to halt biodiversity loss and that the focus should be on halting the net loss of biodiversity and suggested using “change the course of loss” (bending the curve). However, some appreciated the urgency that such terms as “halt” and “reverse” carry in order to inspire action and felt that it was realistic;
 - (iii) Some suggested that “by 2030, put nature on a path to recovery for the benefit of all people and the planet” could be an alternative formulation. However, some had concerns regarding how “put nature on a path to recovery” translates into different languages and suggested that the term “benefit” is not clear, and instead suggested using “sustainable development”;

(d) “Take effective and urgent measures to halt the loss of biological diversity in order to ensure, by 2030, that ecosystems are resilient and continue to provide essential services, ensuring in this way the variety of life of the planet and contributing to human well-being and the eradication of poverty”:

- (i) Some noted that this formulation covers several elements, is too long, complex, and difficult to communicate;
- (ii) Some suggested removing such adjectives as “effective” and “urgent”. However, others appreciated having these because they link to key actions and indicators to measure the effectiveness;
- (iii) Some appreciated the outcome-oriented nature of the formulation and the references to the eradication of poverty and the introduction of sustainable development;
- (iv) Some suggested adding elements, such as guaranteeing resilience of ecosystems;
- (v) A suggested alternative formulation was “take measures to halt the loss of biodiversity to ensure by 2030 ecosystem resilience and continue to provide services to ensure the majority of life for sustainable development”;

(e) “By 2030, effectively integrate biodiversity into productive sectors and generate transformational changes in production and consumption patterns that allow the re-valuation of biodiversity and ecosystem services”:

- (i) Some noted that this formulation is too complicated, difficult to communicate;
- (ii) Some noted that, although mainstreaming is important, it is not necessary to refer to it in the mission;
- (iii) Some noted that this formulation does not reflect the three objectives of the Convention and covers issues that are not within the scope of the Convention;
- (iv) Some noted that it was not clear what “re-valuation of biodiversity” means;
- (v) Some noted that this formulation focuses on how the post-2020 global biodiversity framework should be implemented and not on what is trying to be accomplished;
- (vi) Some suggested alternative language for this formulation, including:
 - a. “By 2030, implement solutions to integrate biodiversity”;
 - b. “Building a shared future for nature and people” instead of “re-evaluation of biodiversity and ecosystem services”;
 - c. “Putting nature on a path to recovery”;

(f) “Implement solutions to address loss of biodiversity in order to increase the benefits that it provides to sustainable development”:

- (i) Some appreciated that this formulation is short, direct and process- and results-oriented;
- (ii) Some noted that the formulation may not be measurable and that it is not time-bound;
- (iii) Some noted that this formulation does not convey a sense of urgency and suggested adding such terms as “unprecedented loss” and “drastic loss”;
- (iv) Some suggested adding outcome elements, such as the eradication of poverty;
- (v) Some noted that this formulation is anthropocentric and suggested referring to benefits to the planet;
- (vi) Some suggested alternative language for this formulation, including replacing “implement solutions” with “take urgent action”, adding “put biodiversity on the path to recovery” “and

secure all life on Earth”, replacing “in order to” with “and” and replacing “provides” with “enhance”, “contribute” or “strengthen”.

II. TARGETS

3. The contact group on agenda item 3 considered the information on targets in document CBD/SBSTTA/23/2/Add.4. There was broad support for many elements in the annex to this document, and many were found to be relevant to the development of future targets. The contact group also made a number of observations and suggestions.

A. General issues on the formulation of targets

4. Some emphasized the need for a separate target on genetic diversity and that such a target could address the genetic diversity of wild and cultivated species, ex situ conservation and gene banks.

5. Some suggested using the direct drivers presented in the *Global Assessment* of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) as a framework on which to base the new targets.

6. Some cautioned against repetition by listing the components (for example habitat loss) in both the “biodiversity and conservation outcomes” topics and in the “drivers of loss” topics.

7. Some noted that biodiversity and conservation outcomes targets should relate to the long-term biodiversity outcome goals, making it clearer that the 2030 mission is a milestone to the 2050 vision.

8. Some emphasized the importance of constructing the global biodiversity framework from a bottom-up, rather than a top-down approach, taking into account the context and realities of each country and region.

9. Some highlighted the need for a glossary of terms.

10. Some noted the importance of including marine and other aquatic ecosystem issues throughout the targets, wherever relevant.

11. Some expressed concern over the logical flow of the target topics, and some suggested using a pressure-state-response model, extended to benefits.

12. Some noted the value of considering indicators when formulating targets.

13. Some noted that the global biodiversity framework is intended to extend beyond the Convention, and, therefore, it requires the engagement and participation of actors beyond the Convention focal ministries and partners as entry points for its effective implementation.

14. Some noted that the concept of a circular economy could be relevant to the whole framework. However, it was also noted that the capacity of countries to implement such approaches was variable and dependent on their national circumstances.

15. Some noted that the number of targets in the framework should be limited and that these should be clearly phrased and easy to monitor. It was also suggested that sub-targets could be used.

16. Some asked if indirect drivers of biodiversity loss would be reflected in the zero draft of the framework and, if so, how.

17. Questions were raised regarding whether targets should be included on curbing population growth, preventing conflict or addressing indirect drivers in other ways.

18. Some noted the need for health to be reflected as a cross-cutting issue.

19. Some noted the importance of gender; however, there was uncertainty regarding the best place to note this element.

20. It was noted that “youth” was not listed in document CBD/SBSTTA/23/2/Add.4 and needed to be addressed somewhere.
21. Some noted that it was important to consider whole government approach when addressing biodiversity issues.
22. Some participants emphasized the importance of scientific and technical monitoring for biodiversity and ecosystem services, and the need to work on monitoring systems. They suggested that there should be a specific target on development and enhancement of observation systems for biodiversity and ecosystem services.
23. Some stated that indigenous peoples and local communities were important partners in implementing the Convention and that they should be reflected more broadly in the global biodiversity framework in addition to any target on traditional knowledge.
24. It was suggested that the global biodiversity framework should include principles of equity and human rights.
25. Some noted the need for further discussion on the flow in framework, to determine how to avoid overlaps and identify those targets that should be outcome oriented or action oriented.

B. Habitats

26. Some noted that the term “ecosystem” should be used instead of “habitats”. However, others felt that “habitats” was appropriate, and others suggested using both terms. Some suggested that the definitions of “habitats” and “ecosystems” in Article 2 of the Convention could be used.
27. Some noted that target(s) should address issues related to ecosystem integrity, ecological connectivity (both functional and structural), and ecosystem health as well as addressing issues related to the status and trends of habitats.
28. Some noted that targets should cover natural habitats, habitat mosaics, production landscapes, agricultural areas, cultural landscapes, and urban areas. Others suggested that the focus should be simply on natural habitats and habitats within national jurisdictions.
29. Some noted that targets could address specific habitats or biomes, including soil biodiversity, vulnerable ecosystems, coral reefs and mountains ecosystems, wetlands, wilderness, private land and key biodiversity areas.
30. Some noted the need for approaches that combine conservation, sustainable use and connectivity and linked to sustainable development.
31. A specific suggestion for a target was “no habitat loss by X date”.

C. Species

32. Some suggested that species abundance should not be included in a target as it is difficult to measure. However, others noted that it is an important element for a target, and others suggested using relative abundance.
33. Some suggested that a target could focus on the sustainable use of species, species sensitive to climate change, soil biodiversity, pollinators, endangered species, threatened species, risk status, common species, key stone species, and wild species for food and agriculture.
34. A specific suggestion for a target was “no more extinction by a certain date.” However, it was also noted that such a target would need to take into account exploitation at different levels.

D. Land use change

35. Some suggested that the focus should be on habitat loss and not on land use or land use change as these are not commonly used terms under the Convention. However, others felt that they should be referred to and suggested that issues related to sea use change and water use could be reflected.

1. Habitat loss

36. Some suggested that targets on these issues should be action-oriented and that land use and marine spatial planning could be tools to reach them, as well as a landscape approach.

37. Some noted that targets on this issue could be reached by increasing protection of ecosystem types, ensuring representativity, and investing in ecological infrastructure.

38. Some suggested the relevance of mainstreaming to this issue, including in the productive and extractive sectors that drive land-use and sea-use change. However, some also suggested that sectors could be mentioned under targets related to overexploitation.

39. Some suggested that this target topic should be renamed “planning” rather than “habitat loss to be action/solution-oriented”. Others suggested that it could be renamed “habitat modification” or “ecosystem modification”. Another suggestion was “land use and land use change”. However, others suggested continuing to use “habitat loss”.

40. Some suggested that the focus could be on sustainable use and that the role of indigenous peoples and local communities should be acknowledged in this respect.

41. Some suggested reflecting “water use” to address issues related to the marine environment and inland water ecosystems.

42. Some suggested specific issues that could be reflected in target(s) on this issue, including land degradation, net land-use change, the loss of natural habitats, forests, soil, habitats important for carbon storage, such as wetlands, peatlands, and seagrass beds, and high seas ecosystems.

43. Some noted that target(s) on this issue are linked to the issues of protected areas, other effective conservation measures and restoration.

44. Some noted that land-use change can be a direct driver of change, for example through conversion of forests to agriculture, but also an indirect driver, for example through the reconversion of converted land. Some noted that this indirect driver aspect should not be addressed in the framework as it would be beyond the mandate of the Convention on Biological Diversity.

45. Some noted the importance of including references to agricultural and issues related to subsidies or incentives, such as the incentivization of sustainable food production practices, in a target. However, others suggested that this issue was outside the scope of the Convention and that land use change is broader than just agriculture.

46. Some suggested that the reconversion of converted land, for example the conversion of deforested land to sustainable agricultural landscapes, could be a possible indicator of land-use change.

47. Some noted that this issue overlaps with possible targets related to biodiversity outcomes as well as tools for implementation.

48. Some noted the relevance of the land degradation neutrality under the United Nations Convention to Combat Desertification.

49. Some noted that a target could be developed in relation to recovery potential.

50. Some emphasized the importance of framing the targets in a positive and action-oriented way, looking at tools for action rather than focusing on loss.

51. A specific suggestion for a target on this issue was “Parties should commit to a land use target in line with Aichi Biodiversity Target 11 aimed at conserving X percentage of native vegetation, considering different ecosystems or biomes and marine areas under different categories of conservation and protected areas according to national legislation and priorities”.

2. Protected areas

52. Some noted that the issues addressed by Aichi Target 11 remain relevant but that greater emphasis on the qualitative aspects, including management effectiveness, financial sustainability, connectivity and representativity, is needed. Further, some noted that management effectiveness is linked to the available means of implementation.

53. Some noted a need for a reference to effective functional connectivity linked to broader landscape, including in forestry and agriculture.

54. Some suggested that a target on protected areas should reference key biodiversity areas (KBAs) as well as joint management, co-management, and the full and effective participation and respect of indigenous peoples and local communities.

55. Some suggested that a separate target on other effective conservation measures could be developed, and others noted the need for guidance on these.

3. Restoration

56. Some noted the relevance of the thematic workshop on ecosystem restoration for the post-2020 global biodiversity framework in providing guidance on this target.

57. Some noted the need to ensure that no ecosystems are left unrestored and to acknowledge that different ecosystems have different restoration needs and that the costs and benefits of restoration should be shared. This topic target should not be focused only on forests and should reflect marine and water ecosystems.

58. Some noted that the focus should be on ecological restoration and that restoration should (a) use native species, (b) avoid using invasive alien species, (c) not replace natural habitat types with other types of habitats, (d) avoid using monoculture, and (e) focus on all habitat types and biomes, including landscapes and seascapes.

59. Some noted that restoration should be linked to sustainable development, sustainable use and the creation of “virtuous circles” whereby jobs are created and nature is restored.

60. Some noted that restoration is costly, and that appropriate means of implementation are needed. However, others noted that restoration can also generate benefits which could offset these costs. It was also noted that restoration can help to reach other objectives, such as climate change adaptation and mitigation.

61. Some noted that a target should also cover issues related to ecosystem recuperation and rehabilitation.

62. Some noted enabling conditions for restoration, including: involvement of indigenous peoples and local communities, effective monitoring, baseline data, ensuring economic sustainability, including through subsidy reform, green financing and natural capital accounting, policy alignment, and the need to incentivize private land owners to restore.

63. Suggested target formulations were “during the decade 2021-2030, all types of degraded ecosystems will be under restoration and will show measurable improvement, prioritizing the areas and restorative activities consistent with achieving the objectives of the Convention on Biological Diversity” and “Parties should commit to determining the percentage of their territories to be restored, taking into account their ecosystems and priorities.”

E. Overexploitation

64. Some felt that this topic should also include the exploitation of organisms to be in line with IPBES direct drivers.
65. Some noted that issues related to trade, incentives and consumer choices should not be addressed as they are not within the mandate of the Convention. However, others noted that it was important to address indirect drivers, such as trade. In that regard, some suggested including or addressing concepts related to telecoupling, supply chains, rules for access, enforcement, international coordination, the ecological footprint, patterns of consumption and production, demand management, and the circular economy.
66. Some suggested including the levers for transformational change from the IPBES *Global Assessment Report*, and guidance on how to address them.
67. Some suggested that wildlife trade should be referenced and noted that this topic could present an opportunity for collaboration with the Convention on International Trade in Endangered Species of Wild Fauna and Flora.
68. Some suggested that sectors should be included here as they are the entry points for addressing overexploitation – forestry, fisheries (legal and illegal overexploitation), and that they should be considered possible avenues for sustainable management/production.
69. Some noted the relevance of the work of the Informal Advisory Group process on the long-term strategic approach to mainstreaming, the thematic consultation on sustainable use and the decision of the Conference of the Parties on mainstreaming to this topic.
70. Some suggested adding a reference to customary sustainable use.
71. Some cautioned against mixing sustainable use (exploitation) and unsustainable use (overexploitation). Some favoured the use of the words “unsustainable use” in this topic.
72. Some warned against creating perverse incentives in the formulation on this target. Some warned about avoiding “criminalizing” the exploitation of natural resources. Some emphasized that the problem of overexploitation was related to illegal practices and rules of access to natural resources, while others emphasized that the driver relates to both legal and illegal practices.

F. Invasive alien species

73. Some noted that more technical and scientific information was needed on this issue and suggested that processes should be established to obtain such information. In that regard, some noted the relevance of the upcoming meeting of the Ad Hoc Technical Expert Group on Invasive Alien Species.
74. Some suggested that Aichi Target 9 contained the major elements that should be reflected in a target on this issue. However, some noted that a sub-target related to invasive alien species on islands should be developed.
75. Some suggested that issues related to invasive alien species in the marine and freshwater environments should be reflected.
76. Some noted a connection between climate change, plastic pollution and invasive alien species.
77. Some noted that issues related to the intentional and unintentional introduction of invasive alien species should be reflected in the target and noted the importance of risk assessment models with regard to the latter.
78. Some noted that the target should prioritize the prevention of invasive alien species, the control of introduction pathways, and early identification given the costs associated with eradication. In that regard, the relevance of considering trade, including wildlife trade, and sectors was noted by some.

79. The importance of regional and international cooperation, mitigation, considering health impacts, involving partners, capacity-building, undertaking studies and awareness-raising on invasive alien species was noted.

80. Some noted that efforts to control or eradicate invasive alien species should take into account the impact that those activities may have on indigenous peoples and local communities. Similarly, the importance of working with indigenous peoples and local communities on identification and control measures was also noted by some.

81. Some noted that countries should commit to developing national science-based regulations and allocate adequate resources to prevent and control invasive alien species, including through capacity-building.

G. Climate change

82. Some noted that climate change is a driver of biodiversity loss, but that biodiversity also offers means of adapting to and mitigating climate change. In that respect, some noted the need for holistic approaches on this issue.

83. Some noted the relevance of reflecting nature-based solutions in a target on this issue. In that respect, some noted that nature-based solutions are relevant to other targets and offer possible co-benefits, including for disaster risk reduction and adaptation and that nature-based solutions can also be used in urban environments. The importance of ecosystem-based approaches was also noted. However, it was also noted that nature-based solutions should not deviate efforts towards the mitigation of anthropogenic emissions and should not become a perverse incentive towards practices that do not really contribute to mitigation. It should also allow countries to identify and evaluate the potential of renewable energy sources based on ecosystem approaches.

84. Some noted the need to broaden the focus from what is included in Aichi Targets 10 and 15. However, it was also noted that the text of these Aichi Targets is complicated and difficult to implement.

85. Some noted potential synergies with discussions and processes under the United Nations Framework Convention on Climate Change and under the United Nations Convention to Combat Desertification.

86. Some noted the need for adaptive management in the light of future climate change impacts and the need to consider restoration, connectivity, protected areas and resilience.

87. Some suggested that disaster risk reduction should be reflected in a target on this issue.

88. Some noted the need to account for synergies and possible trade-offs between biodiversity and the actions taken to address climate change and the need to integrate biodiversity considerations into climate change policies.

89. Some noted the need to focus on vulnerable ecosystems, including coral reefs, mangroves and seagrass habitats, mountains, polar ecosystems and lands and waters used by indigenous peoples and local communities. Similarly, some noted the need to also address the impacts on vulnerable species in terrestrial, marine and aquatic environments.

90. Some noted the need to focus on the protection and restoration of carbon-rich ecosystems, such as forests, peatlands, seagrasses and mangroves. The importance of blue carbon was also noted.

91. Some noted that this target links to and overlaps with several other possible targets in the post-2020 global biodiversity framework.

92. Some noted that ocean acidification could be reflected in a target on this issue.

93. Some noted the interconnections between climate change and human health.

94. Some noted the importance of considering this issue from a regulatory perspective.

95. Some noted the relevance of coastal zone planning, urban planning and landscape planning for this issue and the development of sustainable infrastructure, particularly in developing countries, in relation to strategies for resilience.
96. The importance of sustainable agriculture from both a mitigation and an adaptation perspective was noted.
97. It was suggested that climate change impacts on islands could be used as an indicator for this target.
98. Some noted the need for alignment between national biodiversity strategies and action plans and nationally determined contributions and the ecosystem based-approach as a complementary solution to address the drivers of biodiversity loss.

H. Pollution

99. Some noted that pollution is a cross-cutting issues and noted the need to seek an expert opinion and possible further submissions on this issue to help inform discussions.
100. Some noted the relevance of applying a driver-pressure-state-impact-response model to this target.
101. Some suggested focusing on specific types of pollutants and pollution, including soil pollution, water pollution, air pollution, plastics, nutrients, pesticides, pharmaceuticals, light pollution, noise pollution, including underwater noise pollution, genetic pollution, nano-particle waste, mercury, nitrous oxide and ozone.
102. Some noted links to other conventions and processes, including the Minamata Convention on Mercury and the Strategic Approach to International Chemicals Management (SAICM) and the potential for synergies with these processes.
103. Some noted the importance of mainstreaming and the need to focus on sectors.
104. Some noted the links to human health and possible synergies in this respect.
105. Some noted that targets on this issue should focus on how to respond to the problem of pollution.
106. Some noted the need to look at the connectives between terrestrial and marine pollution.
107. Some noted the relevance of the circular economy concept, the need to consider sustainable consumption and production as well as waste management, addressing pollution at its source and emphasizing prevention.
108. Some suggested focusing on the impacts of pollution on species, for example on marine mammals.
109. Some suggested that a target on pollution should consider the impacts of industrialization and urbanization on biodiversity as well as science-based risk assessment frameworks. It was noted that such frameworks could be adopted by all countries to evaluate the positive and negative impacts of pesticides and other chemicals.
110. Some suggested that a target should consider a substantial increase in cooperation and technology transfer activities, particularly for the benefit of developing countries, to develop alternatives towards a more sustainable agricultural production system, including new emerging technologies.

I. Use and value of nature

111. Some noted links to the issue of sustainable use generally and suggested that “sustainable use” may be a better descriptor for these issues. However, some also suggested using sustainable use and benefits and that a better or common understanding of what “sustainable use” means should be developed. In that connection, some suggested that the concept of planetary boundaries and ecosystems services could be useful.
112. It was also noted that more understanding about how to address this issue in the global biodiversity framework was required, since many topics seem to overlap, the number of targets starts to increase, and the

relationship between the sections becomes complex. The relevance of the topic on targets in this section was also reiterated.

113. Some noted the relevance of the concept of “nature’s contributions to people” as used by IPBES and noted that their work on this issue could be used as a basis for targets and indicators.

114. Some noted the importance of mainstreaming biodiversity in the productive sectors in relation to this issue.

115. Some noted the importance of the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity as well as the ecosystem approach.

116. Some noted that several of the issues under this topic could be challenging to measure and noted the need to set targets which could be monitored.

117. Some noted that this target topic illustrates why biodiversity is important to society, for example in relation to human health, the economy, sustainable development, and the Sustainable Development Goals, and that thought needed to be given on how best to communicate this. One suggestion was that it could be done through the concept of ecosystem services, but another suggestion was to do it through such issues as jobs, economic development, poverty alleviation and equity.

118. Some noted that this target topic has links to sustainable consumption and production, which are addressed in other elements of the framework.

119. Some noted the need to be clear on the difference between action and outcome targets and to have clarity on what types of targets are needed in this section.

120. Some noted the need to link the issues under this topic to the mission statement and the long-term goals.

121. Some noted that the topics addressed under this section present opportunities reflect the contribution of the post-2020 global biodiversity framework to the 2030 Agenda for the Sustainable Development.

122. Some noted the need to address potential trade-offs between the different types of services.

123. Some noted that there could be targets on each type of ecosystem services but that there could also be a more integrated target which addresses the different types of services together.

124. Some noted that this target topic presents an opportunity to integrate issues related to indigenous peoples and local communities.

125. Some noted the importance of reflecting ecosystem services generally and of integrating such concepts as natural capital accounting and reflecting biodiversity in national planning and budgetary processes.

126. Some noted that some ecosystem services are co-created between people and biodiversity and that this aspect should be considered in this section.

127. Some noted the importance of valuation for the different types of ecosystems services and ensuring that these values are integrated or reflected in decision-making at all levels. In that respect, some referred to national accounting, national budgets and national planning.

1. Material goods from nature

128. Some noted the need to capture monetary values not just but also the range of benefits that biodiversity provides, and some observed that there is a range of services which fall outside commodity chains and for which financial information is not available. In this respect, some noted the importance of valuation approaches which take into account different types of values, and some noted the relevance of the work of IPBES on the diverse conceptualization of biodiversity and nature’s benefits to people. In that connection, some suggested looking at broader issues, such as food security.

129. Some noted the need for targets related to sustainable industries and livelihoods.
130. Some noted the need to focus on issues related to meeting the needs of people in an equitable and accessible way.
131. Some noted the need to focus on the integration of biodiversity values into economic frameworks and some noted the relevance of environmental accounting, ecosystem accounting, environmental impact assessment, and strategic environmental impact assessment.
132. Some noted the need to focus on specific material benefits, including energy, biofuel and hydropower.
133. Some noted the relevance of reflecting issues related to food security.
134. Some noted the relevance of spatial planning for this issue.
135. Some noted the relevance of sustainable supply chains and the importance of involving sectors.
136. Some noted the relevance of overconsumption under this issue.
137. With regard to fisheries, some noted that the elements under Aichi Target 6 remain relevant.
138. Some suggested the need for a target which reflects the potential for the sustainable use of biodiversity to contribute to the generation of jobs and income and for poverty alleviation.

2. Regulating services of nature

139. Some noted the need to focus on the benefits provided to people.
140. Some noted the relevance of issues related to green spaces, green infrastructure, sustainable development, sustainable urban development and ecosystem services.
141. Some suggested specific services that could be reflected under this issue, including pollinators, climate change regulation, freshwater availability and quality, ecological flows, poverty eradication and food security.
142. Suggested targets on this issue were:
 - (a) By 2030, Parties have taken steps to provide technical assistance for small and family farmers for the adoption of sustainable practices;
 - (b) By 2030, Parties have developed and adopted legal instruments to promote payment for ecosystem services in respect of activities associated with food security, forestry and sustainable agriculture.

3. Non-material (cultural) services of nature

143. Some noted the importance of referring to emotional, inspirational and psychological benefits of nature.
144. Some noted the importance of considering relational issues.
145. Some noted the relevance of approaches that provide recognition of the rights of nature or legal personhood.

4. Biosafety

146. Some noted that issues related to biosafety could be addressed under this cluster of issues and expressed in terms of safe use.
147. Some noted the relevance of the outcomes of the meeting of the Liaison Group on the Cartagena Protocol on Biosafety to this issue and noted the ongoing processes under the Cartagena Protocol related to the post-2020 global biodiversity framework.

148. Some noted the need to address the effects of biotechnology on traditional farming as well as the need for capacity-building and technology transfer in this respect.

149. Some noted that the outcomes of the first meeting of the Open-Ended Working Group on the Post-2020 Global Biodiversity Framework, and those of the Biosafety Consultation Workshop held in Nairobi in August 2019, are still relevant and should be used in drafting the post-2020 global biodiversity framework.

150. Some noted that biosafety should not remain under “cross-cutting issues” but could be better placed under “safe use”, and that this topic should be considered in its broad sense and not limited to the Cartagena Protocol. Some Parties suggested that the targets or sub-targets should address case-by-case risk assessment and risk management.

151. Some noted the importance of new technologies and, recalling that there is a need for much more discussion on synthetic biology and digital sequence information, referred to the upcoming meeting of the Ad Hoc Technical Expert Group on Digital Sequence Information on Genetic Resources under the process to develop the post-2020 framework.

5. Equitable sharing of benefits from the use of genetic resources

152. Some noted that, under this topic, the wording “access to genetic resources and the fair and equitable sharing of benefits arising from their utilization” should be used.

153. Some noted the importance of ensuring that the objective of the Convention on access and benefit-sharing is fully and effectively reflected in the framework. In this respect, some noted the need for an outcome target on this issue as well as a target which relates to the benefits or incentives provided to conservation and sustainable use.

154. Some noted that wording related to Aichi Biodiversity Targets 13 and 16 could be combined to create a new target on this issue.

155. Some noted the importance of reflecting traditional knowledge associated with genetic diversity on this issue.

156. Some noted that the ongoing process on digital sequence information might provide information relevant to a target on this issue.

157. Some noted that support to gene banks and associated support could be reflected under this target.

158. Some noted the need to refer to the monitoring of the use of genetic resources and noted the relevance of clearing-house mechanisms in this respect.

159. Some noted the need to promote domestic measures in accordance with the Nagoya Protocol and to publish them in the Access and Benefit-sharing Clearing House as part of this target.

160. Suggested targets on this issue were:

(a) Transfers of genetic resources, in whatever form, and benefit-sharing, compliant with national laws implementing international access and benefit-sharing conventions, have increased at least 10 per cent per year by 2035, compared to 2020, to promote conservation, sustainable use, benefit-sharing and the development of new cultivars and breeds, new medicines and new biotechnologies, as needed, to ensure food and nutrition security and health;

(b) To achieve, by 2030, an increase of X per cent in the number of *in situ* and *ex situ* conservation projects as well as sharing with holders of traditional knowledge, and in the number of projects to improve the livelihood, health and well-being of indigenous populations.

J. Tool, solutions and leverage points

161. Some noted that some of the actions in this section seemed prescriptive, and that Parties had differing approaches and systems in place to respond.

162. Some suggested that all targets on regulatory tools to address drivers and use should encompass considerations regarding their impacts on poverty in developing countries.
163. Some reiterated that many of the solutions under this heading related to mainstreaming and that many of the targets could be rolled under a separate heading of “mainstreaming”. In addition, some recalled the process for developing the long-term strategic approach for mainstreaming as an input for this topic.
164. Some suggested that, if the framework uses a driver-pressure-state-impact-response model, the responses should be organized to respond directly to the pressures. Some also suggested that the figure in document SBSTTA/23/INF/3 could provide a structure.
165. Some also suggested that sustainable consumption and ecological footprint should be linked, and the concept of green development was important. It was noted that operationalizing sustainable consumption and improving upon Aichi Biodiversity Target 4 were important to make it more concrete. In addition, the concept of sustainable supply chains should be included in the framework.
166. Some noted that some of the cross-cutting issues that came from the first meeting of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework were missing from the list provided in the annex to document CBD/SBSTTA/23/2/Add.4 and they should be included for consistency.
167. Some felt that there was some repetition with items here, such as values of biodiversity, which were also listed under previous sections.
168. Some were of the opinion that this was one of the most important sections as it deals with systems, structures and practices.
169. Some noted that there was a mix of what can be done at the global and national levels in this section, and this will become important when implementing.
170. Some noted that countries will need support to reach these targets and that this section links closely to the means of implementation.
171. Some suggested that there should be a target on intergenerational equity, as discussed at the first meeting of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework.

1. Incentives

172. Some suggested that positive incentives, including offsets and other elements, laws, regulations, policies and compliance and enforcement could be useful.
173. Some suggested that benefit-sharing could be looked at as an incentive.
174. Some suggested a new element could be added under incentives relating to small farmholders. Another new element suggested was sea- and landscape planning.

2. Laws, regulations and policies

175. Some emphasized the importance of having a target relating to environmental crime, wildlife crime or illegal wildlife trade under targets for laws.
176. Some noted the need for compliance and enforcement mechanisms and the necessary means for these.
177. Some suggested that a target could be developed on customary sustainable use.
178. Some discussed the importance of the interface between land management and sea management through spatial planning, environmental laws and policies covering spatial planning, i.e. ecological red-lining.

3. Sustainable consumption and production

179. Some felt that the landscape approach should be included.

180. Some felt that behavioural change will require communication and engagement and also to work on demand management for bio-products.

181. Some noted that there was repetition with terms such as footprint, supply chains and circular economy being relevant to several other sections.

182. Suggested targets on this issue were:

(a) “Up to 2030, Parties will, in accordance with national and regional priorities and policies, promote the coexistence of different agricultural systems, based on the continuous improvement, use and adoption of good practices, technologies and management that restore, preserve and foster the sustainable use of biological diversity, including the conservation of native vegetation in rural areas”;

(b) “By 2030, Parties have developed and adopted regulations to establish, according to ecosystems they have and their priorities, xx per cent of the area in farmlands dedicated to biodiversity conservation”.

4. Other issues for transformational change

183. Some agreed that consumption and waste are lever points and that sustainable consumption and demand management are important factors to consider. Natural capital approaches and accounting could be a sub-target that could promote this component.

184. Some reflected on the importance of keeping science and technology development for biodiversity policy in place.

185. Some felt that the title “other issues” could be renamed “major issues” to address issues relating to the indirect drivers and root causes of biodiversity loss and also suggested referring to CBD/SBSTTA/23/INF/14.

186. Some felt that tools and solutions, such as traditional knowledge, technology, research and awareness, now listed as enabling conditions are in reality leverage points. It was noted that these leverage points need targets that directly address them in order to give the framework more ambition and provide for transformational change.

187. Some noted that leverage points need to be flexible enough to consider national circumstances in order to avoid constraining countries.

188. Some suggested including elements from the annex to document CBD/SBSTTA23/INF/14, which links the Aichi Biodiversity Targets with IPBES proposals on “possible actions and pathways to achieve transformative change”.

K. Enabling conditions

1. National planning processes

189. Some noted the central importance of an implementation and review mechanism and that they looked forward to discussing the development of such a mechanism as part of the process to develop the global biodiversity framework.

190. Some noted the value of applying tools and such approaches as spatial planning and strategic environmental assessment and environmental impact assessments as part of national planning processes.

191. Some noted the need for alignment among Parties’ NBSAPs and improved collaboration on developing and using a common reporting framework and an integrated reporting system among the biodiversity-related conventions (for example the Data Reporting Tool – DART) in order to make data available for use under various processes, including the Sustainable Development Goals.

2. *Resource mobilization*

192. Some Parties expressed the need for new and incremental resources under the post-2020 global biodiversity framework. There was also a suggestion to calculate the resource needs for reaching the targets and that there could be a resource mobilization component as part of each target.

193. Some suggested that there should be a dual approach focused on both the provision of resources and the mobilization of resources from a number of sources, including the private sector.

194. Some suggested including considerations of private sector financing and information disclosure rules for banking systems either under this cluster of topics or under “tools and solutions”. The importance of including safeguards for the rights and livelihoods of indigenous peoples and local communities in biodiversity financing mechanisms was also noted.

195. Some noted that there is a need for much more discussion on resource mobilization and referred to the ongoing process for resource mobilization under the process to develop the post-2020 framework.

196. Some recalled the importance of Article 20 of the Convention and suggested that this topic should be a component of all the targets in the other topic areas.

3. *Capacity-building*

197. Some recalled that there is a need for much more discussion on capacity-building and referred to the ongoing process on this topic under the process to develop the post-2020 framework.

4. *Traditional knowledge*

198. Some suggested that there should be a separate target on this topic. One suggestion was to include due reward for traditional knowledge which is shared.

199. Some noted that the focus on this issue should be broader than just traditional knowledge and noted the need to refer to indigenous peoples and local communities generally.

5. *Knowledge and technology*

200. Some suggested that the two topics of knowledge and technology should be separated.

201. With regard to the knowledge, it was suggested that the topic could encompass traditional and other knowledge, knowledge management and information systems.

202. Some considered that access to knowledge, issues of knowledge absorption, and linkages with other targets should be included in addition to the generation of knowledge.

203. Some suggested that there could be a sub-target or an indicator addressing existing data gaps under each target.

204. Some noted the importance of new technologies as they impact on several fields, for example DNA barcoding.

6. *Awareness*

205. Some suggested that this topic is more about communication and education.

206. Some suggested that some advice could be requested from IPBES regarding the framing for communication of the *Global Assessment*, which is deemed by many to have been very successful.

207. Some suggested that messages could be framed not only around the state of nature but also on opportunities provided by nature for people.

208. Some noted that education was important in addition to awareness and that “connectedness to nature” should be included under this topic.

L. Cross-cutting

209. Some stressed the need for the Co-Chairs of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework to consider the cross-cutting issues that were reflected in the outcomes of the first meeting of the Working Group.
210. Some emphasized the importance of women and children as vulnerable groups.
211. Regarding gender, several Parties recalled the importance of a gender-based approach to sustainable use and conservation.
212. Some Parties indicated that there should be a target on women as active actors in the conservation and sustainable use of biodiversity, on how to reduce inequalities in women's access to ecosystem services, and on the roles, rights and leadership of women.
213. Some noted that a target should be developed on youth and intergenerational equity.
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