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**CMS PRIORITIES FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK AND
PRELIMINARY VIEWS ON ZERO DRAFT AND INDICATORS**

(Prepared by the Secretariat)

Summary:

This Addendum to Doc.17 on *CMS Contribution to the Post-2020 Global Biodiversity Framework* provides an update on CMS engagement and contributions to the post-2020 framework since October 2019.

ADDENDUM 2

CMS PRIORITIES FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK AND PRELIMINARY VIEWS ON ZERO DRAFT AND INDICATORS

1. As further described in Doc.17, the CMS Family has been actively engaging in the process to develop a post-2020 global biodiversity framework. This Addendum provides additional information, described below.
 1. Ecological Connectivity in the Post-2020 Global Biodiversity Framework
2. At its first meeting on 25 October 2018, the Working Group on the CMS Family inputs to the post-2020 framework determined that the conservation needs of migratory species can be best represented in the post-2020 global biodiversity framework through the concept of connectivity. The Working Group met for the second time on 18 November 2019 in Bonn. The discussions of the Working Group were complemented by the results of two informal meetings of experts who are working in the area of ecological connectivity that took place on 17 May and 11 November 2019.
3. Outcomes of these discussions included:
 - i. a definition of ecological connectivity,
 - ii. agreement that connectivity should be reflected in the post-2020 global biodiversity framework as both a stand-alone target, and also integrated into other relevant targets,
 - iii. a proposal for a standalone target and proposals for elements in other targets, and
 - iv. agreement that the post-2020 framework should include commitments to international cooperation, and NBSAPS should include reference to other biodiversity-related Conventions.
4. These outcomes were compiled in a formal submission to the Convention on Biological Diversity (CBD), which is contained in Annex 1 of the present Addendum. The CMS Secretariat also presented these outcomes at the Twenty-third meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, Montreal, Canada, 25 - 29 November 2019.
 2. Zero Draft of the Post-2020 Global Biodiversity Framework
5. The first meeting of the Open-Ended Working Group (OEWG) on the Post-2020 Global Biodiversity Framework, held in Nairobi in August 2019, requested the OEWG Co-Chairs and the CBD Executive Secretary to prepare a zero-draft text of the post-2020 framework for consideration at its second meeting planned for 24-29 February 2020 in Kunming, China.
6. The zero-draft text of the framework, including statements of purpose, the theoretical basis and the proposed goals and targets, was released on 13 January 2020 in a note by the Co-Chairs (CBD/WG2020/2/3). The note also contains an introduction giving the background and approach and suggestions for decisions that might be taken by the OEWG and later by CBD COP15.
7. Annex 2 of the present Addendum offers a preliminary analysis of document CBD/WG2020/2/3 from a CMS perspective based on the main CMS priority issues contained in Annex 1.

3. Indicators for global and national biodiversity targets – Experience and resources for development of the post-2020 global biodiversity framework
8. In the CBD Notification No. 2019-108 issued on 3 December 2019, the CBD Acting Executive Secretary, at the request of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), invited relevant organisations and others to review and provide comments on the document "*Indicators for global and national biodiversity targets - experience and indicator resources for development of the post-2020 global biodiversity framework*" (CBD/SBSTTA/23/INF/4).
9. The same preliminary list of indicators that may be used to assess progress towards the goals and targets of the framework was also included in an Addendum to the note of Co-Chairs realised together with the zero draft on 13 January (CBD/WG2020/2/3/Add.1).
10. Annex 3 of the present Addendum offers a preliminary analysis of these indicators from a CMS perspective based on the CMS priority issues contained in Annex 1. Such an analysis will be submitted to CBD in response to Notification No. 2019-108.

ECOLOGICAL CONNECTIVITY IN THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Background

1. The 48th Meeting of the CMS Standing Committee (2018) endorsed the establishment of a Working Group on the development of CMS Family contributions to the post-2020 Global Biodiversity Framework. The Working Group has met twice to date, on 25 October 2018 and 18 November 2019. It is composed of members of the CMS Standing Committee, members of the Sessional Committee of the CMS Scientific Council, NGOs and the Secretariats of the CMS Family instruments, thus involving both scientific and policy perspectives.
2. The Working Group highlighted the importance of the post-2020 Framework addressing international cooperation and coordination, and the need to reflect CMS priorities in a range of potential future targets. The Working Group also determined that the conservation needs of migratory species can be best represented in the post-2020 Global Biodiversity Framework through the concept of **ecological connectivity**.
3. The discussions of the Working Group have been complemented by collaboration with other experts who are working in the area of ecological connectivity. This includes two informal meetings on connectivity convened in Bonn, by the CMS and the IUCN Beyond the Aichi Targets Task Force in May 2019 and November 2019, which included members of the Working Group, the Connectivity Conservation Specialist Group of the IUCN World Commission on Protected Areas, and other experts. The lists of participants of this year meetings are available at.
 - [First Informal Meeting on Connectivity, 7 May 2019;](#)
 - [Second Informal Meeting on Connectivity, 11 November 2019;](#)
 - [Second Meeting of the WG on the CMS Family inputs to the post-2020 framework, 18 November 2019.](#)
4. Outcomes of the discussions in both the informal meeting and the meeting of the Working Group include:
 - 1) a definition of ecological connectivity,
 - 2) agreement that connectivity should be reflected in the post-2020 global biodiversity framework as both a ***stand-alone target***, and ***also integrated into other relevant targets***,
 - 3) a proposal for a standalone target and proposals for elements in other targets,
 - 4) the post-2020 framework should include ***commitments to international cooperation***, and ***NBSAPS should include reference to other biodiversity-related Conventions***.

Definition of ecological connectivity

5. The agreed definition is as follows:

“Ecological Connectivity is the unimpeded movement of species and the flow of natural processes that sustain life on Earth”.

6. The definition is accompanied by some supporting points that illustrate its key features, including points relating it to the specific context of individual MEAs. These supporting points are an open-ended list of examples that can be expanded and adapted as the context requires. At present they include the following:

Ecological connectivity encompasses:

- The conditions that are needed to support the movement of individuals and populations of species and the flow of natural processes on land, in the air and at sea;
- A central principle for ensuring ecological interlinkages and ecosystem services in line with social and cultural connections with nature, traditional knowledge systems, and the needs of human development;
- The conservation of existing intact ecosystems and the restoration of ecological integrity in ways that support the natural movements of animals;
- The conservation and recovery of species and ecosystem integrity in ways that support integrated risk management, including ecosystem-based approaches to climate change mitigation and adaptation, as well as disaster risk reduction.
- Connections across space and time;
- Connections facilitated by ecological networks and ecological corridors;
- Connections that are the basis for particular ecosystem services that benefit people;
- Connections that make animal migration possible;
- Connections that make pollination, dispersal, genetic mixing, hydrological cycling and other vital environmental processes possible;
- Connections within and across national borders;
- Connections that involve people and require cooperative approaches at all levels.

Other particular contextual amplifications can be added, for example:

In the CBD context, this particularly includes (*for example*):

- An approach for contributing to the achievement of all three CBD objectives in terms of:
 - conserving species by allowing movements and adaptation to environmental change, and addressing threats created by obstacles to movement;
 - safeguarding ecosystem services and functions that make important contributions to human survival; and
 - fostering sustainable development by supporting the functioning of agriculture, forestry and fisheries, as well as recreational and cultural activities.

In the CMS context, this particularly includes (*for example*):

- Systems that maintain the cyclical and predictable movements of animals through and between areas which may or may not be contiguous;
- An expression of conservation objectives in terms of whole migration systems and functionality of the migration process itself, not just the status of populations or habitats.

In the context of the Ramsar Convention on Wetlands, this particularly includes (for example):

- Hydrological connectivity at the river basin/river catchment scale;
- Scaled up wetland ecosystem restoration, linked to the UN Decade on Ecosystem Restoration 2021-2030.

In the UNFCCC context, this particularly includes (for example):

- Internationally-coordinated nature-based solutions incorporating ecological connectivity, as a holistic and essential component of the overall global efforts for climate change mitigation, resilience and adaptation.

In the UNCCD context, this particularly includes (for example):

- Actions designed to achieve targets for Land Degradation Neutrality (maintaining or enhancing the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security).

In the ABNJ context, this particularly includes (for example):

- Delivery of the ecosystem approach for the conservation and sustainable use of marine biodiversity beyond national jurisdiction;
- Geographical linkages of individuals and populations throughout their migratory cycles in areas beyond national jurisdiction.

A “standalone” target on ecological connectivity

7. The discussions referred to above, having considered several options for ways in which connectivity could/should feature in the post-2020 Framework, favoured the development of a “standalone” target, complemented by inclusion of connectivity in other parts of the post-2020 Framework.

8. A proposed standalone target on connectivity reads as follows:

“Coordinated approaches for maintaining and restoring ecological connectivity are integrated into national and local planning and management processes, and international cooperation, leading to improved conservation status of species, habitats and genetic diversity”.

9. Several other suggestions were highlighted in this context. These could be addressed either through notes/guidance on interpretation of the elements in this target, or through associated “sub-targets”, or both. Issues of measurement of progress towards achievement of the target were also raised, and these should be re-visited when attention turns to the development of indicators. The points include, for example:

- Ecological connectivity should be strengthened by (*inter alia*) including (x) % of the world in ecological networks or other spatial planning arrangements that maintain ecological connectivity. (Sub-target).
- Halting species population declines and improving the status of threatened species through improvements in ecological connectivity, including through international cooperation. (Sub-target – links also to possible successor targets to Aichi Target 12 on species conservation).
- International cooperation to promote ecological connectivity is integrated into [at least 50%] of legal and policy measures to preserve, manage, and restore ecosystems and species, at the national and local levels. (Sub-target).
- Ecological connectivity is restored, sustained and integrated in landscapes and seascapes through effective policy and conservation measures implemented at local, national, regional, and international levels. (Sub-target).

- “Structural and functional ecological connectivity is maintained, enhanced and restored”. (Suggested wording that could be incorporated in a sub-target).
- All countries have put in place measures that promote ecological connectivity to ensure effective conservation and management of migratory species. (Sub-target).
- Human activities are planned and implemented in ways that maintain and/or restore the conditions for ecological connectivity. (Sub-target).
- At least 30% of the world is covered by well-connected systems of protected areas and Other Effective Area-Based Conservation Measures (OECMs), and managed, where appropriate, as ecological networks. (Sub-target)
- Elaboration of what is envisaged by “processes”. (Guidance).
- Measuring coverage of the world by “well-connected” conserved areas (as for existing Aichi Target 11). (Indicators).

Opportunities for better reflecting ecological connectivity in other potential targets under consideration

10. A selection of themes and possible targets has been identified for reflecting connectivity. These include: **habitats, species, land-use change and climate change.**
11. Following the structure set out for SBSTTA 23 in document CBD/SBSTTA/23/2/Add.4, the priorities are grouped as follows:
- Under the theme “Biodiversity and conservation outcomes”:*
- **Habitats**
 - **Species**
- Under the theme “Direct drivers”:*
- **Land-use change**
 - **Climate change**
12. Suggestions on these were as follows:

Target topic	How connectivity could/should feature in new/revised targets
Biodiversity and conservation outcomes	
Habitats	<p><i>Reducing habitat loss</i></p> <ul style="list-style-type: none"> • If Aichi Target 5 is used as a basis for this, it should be amended to read (red text is proposed insertion); “The rate of loss of all ecologically connected natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced”. <p><i>Area-based measures</i></p> <ul style="list-style-type: none"> • Aichi Target 11 is viewed as an inadequate basis for a future target on this. The suggestion is for a new target (or a main target plus sub-targets) that could lead with the outcome (i.e. “biodiversity is effectively conserved by...”) and would potentially address some or all of the following elements: <ul style="list-style-type: none"> - The quality, integrity, resilience, functioning and connectivity of habitats in general (not just protected areas and OECMs). - Maintenance, enhancement and restoration of structural and functional ecological connectivity of habitats. - Establishment, protection, connection, buffering and effective management of protected and conserved areas and other areas of importance for the conservation of biodiversity. - Inclusion of all identified important areas for biodiversity in local, national and internationally-coordinated landscape-scale conservation regimes that give

	<p>due attention to (<i>inter alia</i>) connectivity. (Or a % coverage target/targets building on existing Aichi Target 11).</p> <ul style="list-style-type: none"> - Enabling delivery of benefits to people through enhanced connectivity (etc) of habitats. <p>Conservation/restoration of habitats important for carbon sequestration</p> <ul style="list-style-type: none"> • If Aichi Target 15 is used as a basis for this, it should be amended to read (red text is proposed insertion); “Ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, especially of ecological connectivity, thereby contributing to climate change mitigation and adaptation and to combating desertification”.
Species	<p>Improving species conservation status</p> <ul style="list-style-type: none"> • If Aichi Target 12 is used as a basis for this, it should be amended to read (red text is proposed insertion, bracketed text is possible deletion) “The extinction of [known threatened] species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained throughout their range”. <p>(If sub-targets of existing Target 12 are developed, one suggestion is to include a sub-target specifically on migratory species).</p> <ul style="list-style-type: none"> • Target 12 is however viewed as an inadequate basis for a future target on this. The suggestion is for a new target that would potentially address some or all of the following elements: <ul style="list-style-type: none"> - Halting of overall population declines, prevention of human-driven extinctions of known threatened species, and enhancement of the conservation status of (x) % of known threatened species. - Maintenance of species abundance, population health, natural population dynamics and connectivity. - Maintenance or enhancement of the conservation status of species through international cooperation and measures to maintain or restore ecological connectivity. <p>Minimizing genetic erosion</p> <ul style="list-style-type: none"> • If Aichi Target 13 is used as a basis for this, it should be amended to read (red text is proposed insertion) “The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity, including through the maintenance and restoration of ecological connectivity”.
Direct drivers	
Land-use change	<ul style="list-style-type: none"> • There is currently no Aichi target on this. This issue is encompassed in the standalone connectivity target proposed above; but a new target on land-use change could also address the need for land-use changes to be planned and implemented in ways that maintain and/or restore the conditions for ecological connectivity.
Climate change	<ul style="list-style-type: none"> • Ecological connectivity plays a critical role in responses to climate change. There is currently no Aichi target on climate change threats to biodiversity or on the role of biodiversity in climate change responses. The suggestion is for a new target that would potentially address some or all of the following elements: <ul style="list-style-type: none"> - Investment in internationally-coordinated nature-based solutions incorporating ecological connectivity, as a holistic and essential component of the overall global effort to achieve the goals of the Paris Agreement on Climate Change. - Ensuring that nature’s transformative potential, supported by ecological connectivity, is fully valued and realized in decision-making in relation to climate action.

	<ul style="list-style-type: none"> - Scaling up and mainstreaming of nature-based solutions for climate change mitigation, resilience and adaptation that support the conservation and restoration of biodiversity, within national governance, climate action and climate policy-related instruments, including Nationally Determined Contributions, Adaptation Communications, long-term low greenhouse gas emission development strategies, and in spatial planning that maintains and enhances ecological connectivity. - Protection and conservation of biodiversity, ecosystems and ecological connectivity 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 the capacity of ecosystems to store carbon. - Maintenance of the range of distribution of species and of the functioning of ecological connectivity required for this, including for example migration systems, through measures to ensure adaptation by species to changing patterns of seasonality, shifts in the location of necessary conditions for survival, etc. - Integration of climate change considerations into the design, connectivity and management of protected areas and other measures for the conservation and sustainable use of biodiversity.
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Other topics

13. Other topics in the table of themes and possible targets were also identified as open to enhancement with references to ecological connectivity and it was noted that opportunities exist primarily in relation to those listed below (and potentially to a number of others too). Details were not discussed in the meeting and are not provided here. However some initial internal thinking has been done on this and proposals will be elaborated in due course.

Potential post-2020 target topic	Existing Aichi Target link
Direct drivers	
(Drivers in general)	<ul style="list-style-type: none"> • (Not as such – suggestion to look at SPMS Target 7)
Use and value of nature	
(Various ecosystem services target possibilities)	<ul style="list-style-type: none"> • Target 14
Existence and intrinsic values of nature	<ul style="list-style-type: none"> • (None)
Enabling conditions	
Traditional knowledge	<ul style="list-style-type: none"> • Target 18
National (and local) planning processes and NBSAPs	<ul style="list-style-type: none"> • Targets 2 & 17
International cooperation (Not included in the SBSTTA document table, but merits addition).	<ul style="list-style-type: none"> • (None)

ZERO DRAFT OF THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Preliminary analysis of document CBD/WG2020/2/3 from a CMS perspective

Introduction

1. The CMS Secretariat engaged a consultant to provide an initial analysis of the zero draft, which is provided below.

Executive Summary

2. The needs of migratory species and the priority issues identified by the CMS are at present very weakly and incompletely reflected in the zero draft. The comments on this below are grouped under the following six headings:
 - Ecological connectivity
 - International cooperation
 - National Biodiversity Strategies and Action Plans and synergies among MEAs
 - Land-use change
 - Indicators
 - Other matters.
3. Specific **recommendations** for the Framework text are highlighted in **bold type**. The *highest priority recommendation* is to insert an additional Target on *ecological connectivity*, as proposed by the CMS Family Working Group with the support of a broad coalition of expert stakeholder bodies. Details of all the recommendations are explained in context in the sections which follow; but in summary they include:
 - Insert the previously proposed specific target addressing ecological connectivity.
 - Amend Goal (a) so that it is consistent with Target 1, by changing “area and integrity” to “area, connectivity and integrity”.
 - In Goal (b), add “throughout their range”, so the Goal will address species distribution as well as abundance.
 - In Goal (c), add reference to maintenance and restoration of ecological connectivity.
 - In Target 2, add the elements that were in Aichi Target 11 that relate to areas being “well connected” and integrated at wider scales.
 - Add a target or targets addressing the conservation status of species. (This issue is currently missing).
 - Amend targets 5, 7 and 8 to shift the emphasis towards controlling unsustainable use, and qualify references to sustainable use by requiring that this should be consistent with international commitments, and include the need for effective regulations, monitoring and enforcement..
 - In the Introduction and in the section on mechanisms, add reference to international cooperation as an important aspect of implementation (three suggestions made in the text).
 - In the Introduction, clarify that NBSAP updating should include attention to coordinated implementation of all biodiversity-related MEAs at national level.
 - In the Introduction, add reference to maintenance/restoration of ecological *processes* as part of the Framework’s theory of change, so that it is not only about maintaining/restoring species and habitats.

- In the preliminary draft monitoring framework (Addendum 1), include indicators for Goal 1 and Target 1 that address ecological connectivity as defined by CMS, rather than merely the connectedness of contiguous areas.
- In the proposed elements for a draft COP Decision (Annex II), add a paragraph to highlight the role of all the biodiversity-related MEAs.

Ecological connectivity

4. Despite the strong case made during various consultations, formal submissions and statements, a standalone target for ecological connectivity has not been included. The importance of reflecting connectivity properly in the post-2020 Framework in general, and the merits of a standalone target in particular, were recently again emphasised by participants at the *Thematic Workshop on Area-based Conservation Measures for the Post-2020 Global Biodiversity Framework* hosted by the CBD Secretariat in Montreal on 1-3 December 2019.
5. Ecological connectivity at present is referred to in only one of the proposed “action” targets for 2030 in the Framework, namely target 1, which reads: “Retain and restore freshwater, marine and terrestrial ecosystems, increasing by at least [50%] the land and sea area under comprehensive spatial planning addressing land/sea use change, achieving by 2030 a net increase in area, connectivity and integrity and retaining existing intact areas and wilderness.”
6. Paragraph 8 of the Introduction to the document emphasises that the success of the implementation of the post-2020 Framework will depend on learning from past experiences, and one of the aspects it identifies as arising from this is a need for “increased efforts to address the drivers of biodiversity loss”.
7. The description in paragraph 5 of the draft Framework of its Theory of Change refers to stabilization of biodiversity loss trends, and to recovery of natural ecosystems. These concepts potentially fail to cover the element of recovery (and maintenance) of ecological *processes* - including animal and plant population dynamics, and processes that operate across and between ecosystems, not only within them. The diagram that accompanies this refers instead to the three objectives of the CBD, and to “healthy resilient ecosystems and healthy species” (which is perhaps a somewhat more inclusive notion); and the 2050 vision (paragraph 9) refers to ecosystem services - but **it may be worth adding some wording in the first section C** (there are two section Cs) **to capture the “process” dimension explicitly**. (This would then be more likely to cover migration and other aspects of ecological connectivity).
8. The first of the five proposed goals (in paragraph 10 of the draft Framework) refers to maintaining and increasing the “area and integrity” of ecosystems. This is unlikely to be sufficient to cover ecological connectivity. Definitions of “integrity” in relevant contexts (such as the World Heritage Convention and the EU Habitats Directive) largely concern the integrity of individual areas, rather than networks of areas. For the latter, in the CMS context more emphasis has been put instead on the concept of “ecological network coherence”, which also features in the EU Directive, the Ramsar Convention and the OSPAR and HELCOM Conventions¹. Connectivity in this sense is a vital consideration in guiding strategies for conservation and spatial planning.

¹ This issue was explored at CMS COP11 – see in particular paragraphs 2.42-2.49 of document COP11.Doc.23.4.1.2 (https://www.cms.int/sites/default/files/document/COP11_Doc_23_4_1_2_Ecological_network_Strategy_E.pdf).

9. Moreover, even in relation to individual areas, it is not always necessarily the “integrity” of those areas that matters most for the conservation of migratory species of wild animals. The extent and the ecological functioning of the areas (including their connectivity) may be more important, and this applies just as much to highly human-modified systems (agricultural landscapes, cultivated forests, human-made wetlands, urban areas etc) as it does to more “naturally intact” systems.
10. The reference in the first outcome goal to “area and integrity” is in fact at odds with the translation of the same concept into the first of the proposed 2030 Action Targets in paragraph 12, which incorporates connectivity by referring to “achieving a net increase in area, connectivity and integrity”. The goal could be **amended so that the two are consistent**. (The reference in the target is not specifically to “ecological” connectivity, but that interpretation is probably sufficiently implicit from the context).
11. (The first goal also incidentally refers to “increases of at least [20%] by 2050”, but what a *percentage increase in integrity* could actually mean in practice is not easy to understand).
12. The proposed “species” goal (goal (b) in paragraph 10) refers to extinction risk and abundance. The CMS is concerned with maintaining ranges of distribution of species as well as their population numbers, but this “range” aspect appears not to be covered. In the CMS submission provided in November 2019 (“*Ecological Connectivity in the Post-2020 Global Biodiversity Framework*”) it was suggested to **add the words “throughout their range” in texts on this issue**, and the same recommendation is made again here.
13. Proposed goal (c) refers to maintaining/enhancing genetic diversity - in relation to this subject, the November submission from CMS also suggested to **add “including through the maintenance and restoration of ecological connectivity”**; and the same recommendation is made again here.
14. Concerning the targets to be included in the Framework, the CMS Working Group had recommended that it would be important to include a “standalone” target specifically addressing issues of ecological connectivity. This issue not only best represents the needs of migratory species, but it is also key to all three objectives of the CBD and to the mandates of other biodiversity-related MEAs. **The draft Framework does not yet incorporate such a target**. The text proposed by the CMS as likely to be the most operationally effective (supported in the original document by explanatory notes and ideas for possible sub-targets) is as follows:
 - “*Coordinated approaches for maintaining and restoring ecological connectivity are integrated into national and local planning and management processes, and international cooperation, leading to improved conservation status of species, habitats and genetic diversity*”.
15. Proposed target 2 relates to “protected areas and other effective area-based conservation measures”. By comparison to the corresponding target 11 in the Aichi Biodiversity Targets, this appears to have lost some key elements. The Aichi target referred to “effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures”; and it further referred to integration of such areas and measures into wider landscapes and seascapes. The elements of being *well connected* and being *integrated at wider scales* are critical to the migratory species interests of CMS in relation to this target, and we **recommend that these be added back in to the text**.

16. In doing this, it would also be important to correct the ambiguity in the Aichi target formulation whereby “well connected” has been read as attaching to the “systems of protected areas” but not to the “other effective area-based conservation measures” – in fact it must apply to both.
17. Further ideas relating to proposed target 2 were included in the CMS November submission as part of the potential sub-targets suggested for any standalone target on ecological connectivity. Whether taken up in that way or as part of proposed target 2, these could be worth considering. There were two in particular, as follows:
- *(In order to strengthen ecological connectivity): (x) % of the world is included in ecological networks or other spatial planning arrangements that maintain ecological connectivity.*
 - *At least 30% of the world is covered by well-connected systems of protected areas and Other Effective Area-Based Conservation Measures (OECMs), and managed, where appropriate, as ecological networks.*

Species targets

18. As mentioned above, there is no target related to 2030 included in the zero draft on species conservation and addressing the risks of extinction, although the zero draft does include as one of the outcome goals (b) on species: “The percentage of species threatened with extinction is reduced by [X%] and the abundance of species has increased on average by [X%] by 2030 and by [X%] by 2050”. The only proposed species targets relate to human use and trade, and it is unclear why this is the case. If it is because the species conservation objectives are regarded as being covered at the goal level instead, then that would appear to be inconsistent with the treatment of ecosystem conservation objectives, which are included at both levels (goal (a) and targets 1 & 2). The CMS has **previously made proposals for species related targets**, as follows:
- *Halting of overall population declines, prevention of human-driven extinctions of known threatened species, and enhancement of the conservation status of (x) % of known threatened species.*
 - *Maintenance of species abundance, population health, natural population dynamics and connectivity.*
 - *Maintenance or enhancement of the conservation status of species through international cooperation and measures to maintain or restore ecological connectivity.*
19. In addition, **changes should be made to targets 5, 7 and 8 to address unsustainable use, and measures needed to ensure that sustainable use is done consistent with international commitments, with an effective regulation, monitoring and enforcement in place.** This is all the more important given that recent research on the drivers of migratory species declines shows direct use to be potentially more significant than habitat loss.

International cooperation

20. In paragraph 8 of the Introduction to the document, the issues listed as needing greater attention in the light of experiences of implementing the Aichi Targets include strengthened national efforts for implementation and mainstreaming across all sectors; but there is no reference to transboundary or other international cooperation, which CMS experience suggests should also be a priority, on a par with these others.
21. Paragraph 3 of the draft Framework itself states that it “will be implemented primarily through activities at the national level, with supporting action at the subnational, regional and global levels”. The reference to “regional and global levels” allows cooperative action between countries to be inferred as part of this; but unless such action is emphasised explicitly, the key need for countries to work *together* on issues affecting shared species and habitats will be missing. This should be made **more explicit, for example by inserting at the end the words “including international cooperation”**. The footnote on page 8 that interprets the 2030 Mission refers to “concerted and strategic action”, but only in terms of that happening “across a range of issues” rather than across geographical areas.
22. Paragraph 7 of the draft Framework lists a number of guiding principles to be recognised in its theory of change, including (among others) gender equality, women’s empowerment, youth, gender-responsive approaches, the full and effective participation of indigenous peoples and local communities, and implementation in partnership with many organizations at the global, national and local levels. **This could be a suitable place to add a reference to internationally cooperative approaches (where relevant)**.
23. The “implementation support mechanisms” in paragraph 13 of the draft Framework include “technical and scientific cooperation”, but not specifically across national boundaries. The “enabling conditions” in paragraph 14 include “Partnerships to leverage activities at the local, national, regional and global levels”, and this may be more helpful in relation to international cooperation; but **it may be worth adding a more explicit reference in one or both of these places**.
24. The proposed elements of a draft CBD COP decision (Annex II) include the idea of “regional targets or commitments” to be developed by Parties, as appropriate. This could be a further basis for stimulating greater efforts towards certain forms of international cooperation, once the Framework has been adopted.

National Biodiversity Strategies & Action Plans, and synergy between MEAs

25. In paragraph 8 of the Introduction to the document, the issues listed as needing greater attention in the light of experiences of implementing the Aichi Targets include strengthened national efforts for implementation, including through National Biodiversity Strategies and Action Plans (NBSAPs) and associated planning processes.
26. Paragraph 3 of the draft Framework itself describes it as a framework for updating NBSAPs where necessary to respond to revised goals and targets; and the “measures to monitor, review and report on implementation” listed in paragraph 16 include reflecting the Framework in relevant planning processes including NBSAPs. The proposed elements of a draft CBD COP decision (in Annex II) accordingly include paragraph 6(b) which would urge Parties to update their NBSAPs as appropriate, to be in line with the Framework.
27. NBSAPs provide the key means at the national level to ensure more coherent implementation of the various MEAs to which a country is Party. While the draft Framework makes reference to synergies between biodiversity-related MEAs, it does not relate this to the national level. **The text could therefore be amended to provides that coordinated and mutually-reinforcing implementation of the various biodiversity-related MEAs should be included by Parties as a component of the updating of their NBSAPs in the context of the post-2020 Framework.** Beyond the NBSAPs too, such coordination and synergy should be an important consideration in other relevant planning processes at national level (including joint efforts for resource mobilization).

Land-use change

28. The November CMS submission suggested that it could be valuable for the post-2020 framework to include a target on land-use change. This had not been addressed in the Aichi Targets, and yet it was critical (among other reasons) to plan and implement land-use changes in ways that help to maintain and/or restore the conditions for ecological connectivity.
29. The new proposed target 1 therefore is a welcome step forward, including, as it does, reference to “increasing [...] the land and sea area under comprehensive spatial planning addressing land/sea use change” (although the syntax of this could be slightly refined). Proposed target 13 also includes reference to integrating biodiversity values into national and local planning, which is also very relevant for the conservation of migratory species.

Indicators

30. The document is complemented by two Addenda, containing Appendices to the draft Post-2020 Global Biodiversity Framework and a glossary of terms. One of the Addenda (CBD/WG2020/2/3/Add.1) contains a preliminary draft monitoring framework that specifies elements that should be considered in implementing each goal or target, and includes a preliminary list of indicators that may be used to assess progress towards the goals and targets.

31. The draft monitoring framework is provided for reference at the second meeting of the Open-Ended Working Group, but will not be negotiated until after the main text of the Post-2020 Framework itself is negotiated. Comments on it at the Working Group meeting will be entertained nonetheless, and it is due to be revised in the light of these, as well as the comments received on the peer review of indicators and other submissions called for.
32. The CMS has produced a separate submission in response to the invitation issued via CBD Notification No. 2019-108 (3 December 2019), with comments on the document "*Indicators for global and national biodiversity targets - experience and indicator resources for development of the post-2020 global biodiversity framework*" (CBD/SBSTTA/23/INF/4). Reflections on the indicators now identified in CBD/WG2020/2/3/Add.1 are contained in that separate submission which is contained in Annex 3 of the present document.
33. An additional issue which has now been put forward is the identification in the draft monitoring framework of a need to monitor "change in ecosystem connectivity and fragmentation" in relation to the proposed goal 1 and target 1. Clearly, indicators for this element remain to be developed, and the CMS will engage closely with the further work to be done on this. In particular, as pointed out in the separate submission on indicators, **this must not simply focus on the narrow issue of the connectedness of contiguous habitat areas, but instead it must address "ecological connectivity" as the latter has now been defined (see below), in particular to address connectivity as it affects migratory species where non-contiguous areas are concerned.**
 - *Ecological connectivity is defined as "the unimpeded movement of species and the flow of natural processes that sustain life on Earth". The definition is accompanied by some supporting points that illustrate its key features, including points relating it to the specific context of individual MEAs².*
34. (Note also that the text of goal 1 in the draft monitoring framework is the same as in the draft post-2020 framework itself, and therefore repeats the problem identified above in relation to the latter, namely that it is inconsistent with the corresponding target by omitting the word "connectivity". Since column B of the monitoring framework identifies connectivity as an element of the goal to be monitored, it is assumed that this mis-match of wording is unintentional, and that the text of the goal should be corrected).

Other matters

35. Proposed target 6 refers (*inter alia*) to the contribution to climate change mitigation and adaptation and disaster risk reduction that is to be made by nature-based solutions. If elaborated/interpreted correctly, the concept and practice of "nature-based solutions" is of high importance to the interests of CMS, including interests relating to ecological connectivity. Several suggestions concerning nature-based solutions for climate change mitigation and adaptation featured in the CMS position paper on the Post-2020 Framework that was submitted in November 2019, and these may be helpful if the target is elaborated further by sub-targets, guidance or other expanded detail.

² See Annex 1.

36. Although as mentioned above, the draft Framework emphasises the need to increase efforts to address the drivers of biodiversity loss, the proposed targets themselves at present appear to do little to address this, either in terms of direct drivers or indirect drivers. Target 14 refers to reform of economic sectors, and target 17 to “steps towards sustainable consumption and lifestyles”; but the role of key sectors such as agriculture or infrastructure development as drivers is not addressed.
37. Finally, the CMS Parties may be expected to address in due course the comment made in paragraph 9(e) of the Introduction to the document, which mentions that the governing bodies of all biodiversity-related Conventions may consider welcoming or endorsing the post-2020 Global Biodiversity Framework when it is eventually finalised. This sentiment should be developed further in the proposed elements for a draft Decision for CBD COP15 (Annex II), by **adding a paragraph to highlight the role of all biodiversity-related MEAs in implementing the Framework**, by means including coordinated implementation at national level, joint efforts for resource mobilization, and others.

INDICATORS FOR GLOBAL AND NATIONAL BIODIVERSITY TARGETS – EXPERIENCE AND RESOURCES FOR DEVELOPMENT OF THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Preliminary analysis of document CBD/SBSTTA/23/INF/4 from a CMS perspective

Drawing on indicators for the Aichi Biodiversity Targets

1. As a starting-point, the SBSTTA paper reviews the available indicators for the Aichi Biodiversity Targets, as included in the Strategic Plan for Biodiversity 2011-2020. Parties to the Convention on Migratory Species, in developing the Strategic Plan for Migratory Species 2015-2023 (SPMS), modelled the SPMS targets to a large degree on the Aichi Targets. There is therefore close compatibility between the two, but an added specificity of focus in the SPMS on the needs of migratory species conservation. The CMS Parties have identified a suite of indicators for the SPMS targets (see Annex B to the SPMS itself, <https://www.cms.int/en/document/strategic-plan-migratory-species-2015-2023-4>), which can be directly related to the Aichi Targets that correspond to them in each case.
2. The two frameworks are therefore mutually supporting. The SPMS however includes two targets which address issues that are additional to those covered by the Aichi Targets. These relate to governance processes and international cooperation; and so, in addition to the migratory species specifics mentioned above, the indicators which CMS is aiming to use to track the implementation of these two additional issues may offer an added-value contribution to any post-2020 framework that draws on indicators for the Aichi Targets.

Indicators at global, regional and national scales

3. The SBSTTA paper refers in various places to targets and indicators operating at either global or national levels, noting that the post-2020 biodiversity framework as a whole is global in nature. “Global and national” appears in sub-headings, and there is discussion on pages 4-5 of the uses of national indicators. In addition to the validity of this, however, it will be important to develop further the broader point made briefly in the introduction on page 2, namely that consideration should be given to the development of targets and indicators at multiple scales, including regional and subnational.
4. The regional scale is particularly relevant to the contribution that will be made through the Convention on Migratory Species, given that most of its “family” of daughter agreements address cooperation between countries at this scale, to encompass the migratory ranges of particular animal groups. Monitoring and reporting of the implementation of these agreements requires (and in some cases has generated) biodiversity indicators that operate at this scale.
5. Hence the principle emphasised on page 5 (that the next generation of targets should be established in close consultation with government policy and indicator experts to ensure that targets are measurable and scalable across countries) should apply also to policy and indicator experts operating at the regional scale, including in relevant bodies of the CMS daughter instruments.

6. Page 11 refers to translation or adaptation of global targets for use at the national level, and the need to develop indicators to match. There is probably scope for national indicators to have some relevance to most global targets, since any country (except perhaps landlocked ones in relation to marine-related targets) should be able to say something about the efforts that have been made within its territory, or the situation that applies in its territory. Some targets, however, will be seeking outcomes that can only be appraised at an international (regional or global) level - such as: the overall status of a species; the coherence of a protected area network; the functioning of an animal migration system; or the international cooperation required to support other aspects of ecological connectivity. Across the whole spectrum of indicators, therefore, not everything can be expected to translate to the national scale in the same way, and in the case of the example issues just mentioned, the most meaningful indicators will be those that are supra-national in nature.

Use of national report data and one-off studies

7. The SBSTTA paper points out that there are still major gaps in the availability of suitable indicators with global data for many of the Aichi Biodiversity Targets (page 7), but that assessments of progress towards the Targets can be supplemented by other sources where indicators are lacking (page 4). The approach taken by CMS may be of interest here, in two respects.
8. First, the indicator identified by CMS for assessing progress towards a particular target in the Strategic Plan for Migratory Species is defined in a number of cases as "National Report data"; and specific questions have been included in the format for National Reports to generate the requisite information.
9. A first summary of the results of this has recently been compiled as a mid-term review report on the implementation of the SPMS for COP13 (see document COP13/Doc.14.1/Annex.2, www.cms.int/sites/default/files/document/cms_cop13_doc.14.1_annex2_e.pdf).
10. National report information has been used by the CBD in assessing progress in implementation of the Strategic Plan for Biodiversity, for example in the 2016 analysis mentioned on pages 4-5 of the paper; but the information in the CBD reports in that case was not systematically structured to correspond with the targets in that Plan, to the same extent as the CMS has done with its own reports for the SPMS. That said, the new CMS format for National Reports is being used for the reporting cycle to COP13 for the first time, and its efficacy in gathering information to assess progress towards the achievement of the SPMS targets has still to be fully evaluated.
11. Recognising the challenge noted on page 4 of the paper that there is often a lack of national institutions with responsibility for the collection, analysis and communication of data and information on biodiversity, a second approach taken in the SPMS, for targets without any other available indicators, is to anticipate using occasional "one-off" studies to fill the gap. While Annex 3 of the SBSTTA paper notes that the Biodiversity Indicators Partnership excludes one-off studies from the indicators in its list, the CMS Parties have considered this approach to be a valid and pragmatic solution, at least in principle, where capacity for continuous regular data production does not exist and where no other solution is available for the time being. Options for progressing these are expected to be explored in the coming triennium within CMS.

Ensuring use of indicators in future

12. The SBSTTA paper notes (page 2) that the status of a list of indicators for the new framework will significantly affect how the indicators are developed and used, and (on page 8) that clarity of purpose, especially through identifying audiences and global policy applications, greatly facilitates the identification and development of relevant indicators. This is likely to be enhanced all the more if biodiversity indicators are seen not only as the province of the CBD, but as “owned” and operated by the global biodiversity community as a whole, particularly all the biodiversity-related MEAs.
13. Designing the indicators for maximum “inter-operability” of this kind at the outset will help to ensure this. It would be possible to map some very clear routes to uptake and utility for CMS purposes, if the post-2020 framework were to include targets that link well with CMS objectives and mandates. This will therefore be the case particularly if the framework explicitly covers issues concerning ecological connectivity, migration systems and international cooperation.
14. Capacity to operate indicators may clearly be an issue in some cases. The paper notes (page 5) that countries with institutions that have capacity and a mandate to produce and/or compile biodiversity data have stronger capabilities; but in the case of some indicators of relevant drivers and pressures, it will not necessarily be only “biodiversity” data that is required; and it will be important in such circumstances to consider institutions in other sectors as part of the capacity picture too.
15. There is a reference on page 8 of the paper to options for more transparent and frequently-accessible updates of indicator assessment information, through mechanisms such as the concept of a “TargetTracker” website. The CMS constituency would probably favour collaborating in any joint efforts to make this possible. One component of such a vision could be to factor in the reporting processes for all the biodiversity-related MEAs, since the meetings of their respective COPs or equivalent governing bodies would spread an array of already-existing milestones across the annual calendar. The CMS could help to enhance this still further, by factoring in also the reporting processes, MOPs and MOSs for the CMS Family instruments.

Identifying, selecting and (where necessary) developing indicators for the post-2020 framework

16. Two of the principles noted on page 11 of the SBSTTA paper for the future indicator regime are particularly important. The CMS constituency would particularly support the comment made there that development of indicators *in parallel with* the development of the framework and its targets will help to ensure that the necessary indicators and data-generating mechanisms are in place at the moment when targets are adopted. Similarly, the emphasis on the importance of using wording for targets in ways that make them *feasible to measure* is borne out by CMS experience with the Strategic Plan for Migratory Species (mentioned above); and this has been taken strongly into account in the proposals which CMS itself has made for potential targets for the post-2020 framework.
17. Table 1 in the paper presents some possible advantages and disadvantages of a limited set of future indicators compared with a more flexible framework of “indicative” indicators. One additional disadvantage of the “limited set” which may be important to consider is that, if the “limited set” is chosen as those measures that are simplest and most universal, this may miss the opportunity to use measures that speak specifically to the contribution being made to achievement of the framework’s targets by particular biodiversity-related MEAs, and which may already in any event be being reported/assessed by those MEAs for their own purposes.

18. The preceding comment may relate also to the concept of assessing various individual *elements* of the adopted targets (as done for the Aichi Biodiversity Targets for example by the IPBES analysis referenced on page 4 of the SBSTTA paper), as opposed to trying to construct indicators that attempt to measure progress towards a given multi-element target as a whole. This would be important for those potential future targets in which CMS (through the previous submissions referenced above) has proposed inclusion of specific elements concerning ecological connectivity.
19. Incidentally the same IPBES analysis is described as incorporating information about “countries’ stated intentions” to implement certain actions; but we would counsel against using any component of that kind in the future indicator regime, which should instead be based as far as possible only on evidence of real outcomes.
20. Annex 2 of the SBSTTA paper gives an extensive list of indicators that are currently available for use and are relevant to the themes of the Aichi Biodiversity Targets; and these are each related also to the 25 possible target topics identified in the separate SBSTTA document “*Observations on Potential Elements for the post-2020 Global Biodiversity Framework*” (CBD/SBSTTA/23/2/Add.4). Additional comments from a CMS perspective can be made on several of these, as follows:
- Protected Area Connectedness Index (“PARC-Connectedness”) (linked to possible target topics “Habitats” and “Land-use change”). This addresses an aspect of habitat connectedness, but it does not go far into “ecological connectivity” as the latter has now been defined (see previous CMS submission referred to above); and it will in particular not address the migratory species connectivity context where non-contiguous areas are concerned.
 - Protected Area Coverage of Key Biodiversity Areas (linked to possible target topics “Habitats” and “Land-use change”). It should in principle be possible to develop a disaggregated module of this indicator to focus specifically on areas of importance for migratory species, thus making it particularly useful for the Convention on Migratory Species. (Analogous approaches have been adopted in the past for example in relation to Important Bird Areas and wetlands, for use in the context of the Ramsar Convention).
 - Protected Connected (“ProtConn”) (linked to possible target topics “Habitats” and “Land-use change”). Same comments as for “PARC-Connectedness” above.
 - Living Planet Index (linked to possible target topic “Species”). Specific disaggregation of the LPI can be particularly useful and important; for example wetland species for the Ramsar Convention context and migratory species for the CMS context.
 - Red List Index (linked to possible target topic “Species”). Same comments as for Living Planet Index above.
 - Coverage by protected areas of important sites for mountain biodiversity (linked to several possible ecosystem services-related target topics). It should in principle be possible to develop an indicator of this kind relating to sites of importance for migratory species (and their associated/presumed ecosystem services, if appropriate).

21. According to page 2 of the SBSTTA paper, the intention would be to update it in future to incorporate more on potentially available indicators relating to the possible target topics of the post-2020 framework itself, i.e. not just those indicators that currently relate to the Aichi Biodiversity Targets. The CMS would therefore hope to see it addressing the indicators that would be needed for target elements that we have proposed on ecological connectivity; including a potential new standalone target on the subject, as well as elements in other targets on:
- Habitats
 - Species
 - Land-use change
 - Climate change
 - Direct drivers
 - Use and value of nature
 - Enabling conditions (including national and local planning processes, NBSAPs, and international cooperation).
22. The CMS stands ready to work with others on developing further thinking about indicators for these aspects in particular.