Convention on the Conservation of Migratory Species of Wild Animals
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CMS/SPWG3/Doc.2

Indicators for the Strategic Plan for Migratory Species

Situation update for the Strategic Plan Working Group

September 2015

1. Introduction

1.1 The Strategic Plan for Migratory Species 2015-2023 (SPMS) was adopted by CMS COP11 in Resolution 11.2 in November 2014. Chapter 4 of the Plan, on "enabling conditions for implementation", outlines the proposed contents of a "Companion Volume on Implementation" to be developed after the COP by the intersessional Strategic Plan Working Group. One section of this Companion Volume is to address monitoring and indicators for tracking progress towards the 16 individual targets in the Plan.

1.2 Annex B of the Plan outlines the scope of existing or planned indicators that could (to varying degrees) accomplish this.

1.3 Resolution 11.2 (paragraph 9) creates the requisite mandate for the intersessional Working Group, and (paragraphs 8-9) confirms that its work will include elaboration of indicators for the SPMS, drawing as far as possible from existing work, such as that under the global Biodiversity Indicators Partnership. Annex 2 of the Resolution, which sets out Terms of Reference for the Working Group, states that its main objectives include developing new or identifying existing detailed indicators for the Strategic Plan, taking account of the headline indicators presented in COP11 document 15.2 (these are now included verbatim in Annex B of the Plan itself, mentioned above).

1.4 The Resolution then (paragraph 10) requests the CMS Secretariat to undertake a compilation of background material to feed into the efforts of the Working Group, including the work being undertaken by relevant specialist international fora on indicators, such as the global Biodiversity Indicators Partnership.

1.5 The present paper accordingly provides an update of relevant activities and material on these issues, principally covering the following:

- Further work within the CBD Ad Hoc Technical Expert Group on indicators
- The Biodiversity Indicators Partnership
- Synergy with indicator development in the Ramsar Convention
- Development of indicators for the Sustainable Development Goals

2. Further work within the CBD Ad Hoc Technical Expert Group on indicators

2.1 An Ad Hoc Technical Expert Group (AHTEG) on Indicators for the Strategic Plan for Biodiversity 2011-2020 was convened under the auspices of the Convention on Biological Diversity in 2010. It met in the UK in June 2011, and produced a report which formed the basis for the Biodiversity Plan's "indicative" framework of 12 headline indicators and 97 operational indicators, which duly became adopted "as a starting point" by the CBD Parties in their Decision XI/3 in October 2012.

2.2 CBD COP12 in October 2014 gave a renewed mandate to the AHTEG, to build on and where possible complete its earlier work, and in particular to give emphasis to ensuring complementarity and synergies with other MEAs and related processes, and to develop guidance on indicators and approaches to monitoring progress at the regional, national and sub-national levels. A second meeting for this purpose has been convened in Geneva from 14-17 September 2015.

2.3 A total of 16 documents accompanied the agenda for the September meeting, and the material in these documents represents the most complete overview of relevant recent developments in work on indicators for the Aichi Biodiversity Targets. The report of the AHTEG meeting is unlikely to emerge before the Working Group for the Strategic Plan on Migratory Species meets in October; but when the report does become available it will be a useful resource for the SPWG to draw upon in taking forward its own indicator work.

2.4 In the meantime, a short description of some items in a small selection of the most relevant AHTEG documents is given below.

Global indicators and sub-global approaches to monitor progress in the implementation of the Strategic Plan for Biodiversity (*Doc 1/2/Rev1*).

2.5 This document provides an introductory overview of the subject and a summary of a review of national approaches to assessing progress towards the Aichi targets, based on national reports to the CBD, a survey distributed to Parties and follow up interviews. The approaches revealed are divided into quantitative indicators, expert opinion, stakeholder consultation and case studies. Gaps in these approaches are also discussed, including the fact that many of the indicators that have been used are not necessarily specific to biodiversity or to monitoring the Strategic Plan for Biodiversity (noting at the same time however that using indicators developed for other processes can be cost-effective and may help to mainstream biodiversity across other domains).

2.6 Indicators have so far most often been used for Aichi targets 5, 11, and 12 while relatively few countries have used indicators to assess progress towards targets 2, 3, 13, 16, 17, 18 and 19. The more "socioeconomic" types of issues are less well served than the "traditional biodiversity" ones. The distinctions/relationships between measures of outcomes and measures of activity are usually not explored.

2.7 Different indicators may often be measuring the same things, but with different names, methodologies, baselines and definitions. This can make comparisons and aggregated trend analyses difficult, if not impossible. Some initiatives for greater harmonization and standardization (e.g. at regional level) are mentioned.

2.8 As part of the preparation of the 4th Global Biodiversity Outlook (GBO-4), information in CBD national reports was assessed to develop an overview of progress being made towards the Aichi targets, expressed for each target as either "moving away from the target", "no progress", "progress but at an insufficient rate", "on track to meet the target", or "on track to exceed the target". This provided a complementary assessment to the global indicators used in the GBO report. It would not however replace any of the existing indicators, and it would not be suited to making comparisons between countries (or even between regions).

2.9 Through the preparation of GBO-4 and the work of the Biodiversity Indicators Partnership, further indicators have been identified in addition to the 97 listed in the Decision XI/3 framework mentioned above, and these are listed in an annex to the AHTEG document. Many of them still have significant operational limitations.

2.10 One promising area of work seeks to use modelling approaches and "big data" integration techniques to bring together historical, recent and ongoing *in situ* species observations with remote sensing, to generate indicators of biodiversity change that can be used in tracking trends and in future scenarios. Examples include indicators being developed by some of the partners in the GEO-BON Working Group on Biodiversity Indicators. GEO-BON is also developing a regionally customizable online toolkit for facilitating national or regional biodiversity observation systems.

Review of the global indicator suite, key global gaps and indicator options for future assessment of the Strategic Plan for Biodiversity (*Doc Inf/1*)

2.11 This document identifies gaps in the current suite of indicators brought together under the BIP, and reviews potential indicators to fill these gaps, having regard to the list in CBD Decision XI/3. It also recommends a more thorough technical review of the priority gaps.

2.12 Most of the Aichi targets have at least one indicator identified as relevant, and a number of the indicators identified under the BIP can be disaggregated to monitor trends towards multiple Aichi targets. There are however currently no global indicators available under the BIP for Aichi target 2 (integrating biodiversity values in plans - see SPMS target 2); target 3 (incentives - see SPMS target 4) and 15 (contribution of biodiversity to carbon stocks, climate change mitigation/adaptation and combating desertification - partly relevant to SPMS target 11). Specific challenges for the development of indicators for these targets are discussed, and several suggestions for filling these gaps are identified.

2.13 For a number of the Aichi targets (e.g. targets 8, 14, 18 and 19), indicators have been identified but they are judged to be poorly aligned with the target description, meaning for example in the case of target 14 that while it appears to be well addressed, having four indicators associated with it, none of them captures all of the elements of the target. There are also some gaps in terms of spatial coverage, where the identified indicator currently provides information only for certain countries or areas. Some indicators also have low "temporal relevance" to the time-period covered by the Strategic Plan (data points are needed prior to and throughout the duration of the Plan period: the more data points, the greater the ability to generate accurate storylines of progress).

2.14 The potential additional indicators identified are presented as "opportunities, not recommendations". Their degree of readiness is classified in the same way as for the existing indicator set. Opportunities also exist to associate further indicators (including some that require little or no further development) with many of the specific subsidiary "elements" of the Aichi targets.

2.15 The information presented on individual indicators in this lengthy (143pp) document is organised according to a standard "factsheet" template. The factsheet information headings include:

- Indicator name and number
- Indicator/dataset summary
- Relationship with Aichi Target
    - Aichi Target
    - Aichi Target element
    - Alignment to Aichi Target
- Indicator/dataset coverage
    - Spatial coverage
    - Temporal coverage
    - Temporal relevance to Strategic Plan implementation
- Development status
    - Indicator category
    - Organisations/institutions responsible
    - For further information
    - Reason for indicator/dataset development
    - Probability of continued development
- Indicator/dataset description
- Scientific robustness (including peer review)

2.16 The document finally comments on the resourcing implications of the indicator processes that are now seen as necessary. Very few of the indicators, either the existing ones or the potential new ones, have sufficient long-term resourcing mechanisms in place, and in many cases this is restricting their spatial coverage and/or the scope for future updating.

Review of national approaches to assessing progress towards the Aichi Biodiversity Targets (*Doc Inf/2*)

2.17 This document provides the details of the review of national approaches mentioned in paragraph 3.5 above. It includes some useful insights into experiences of the value added by stakeholder engagement, and of overcoming the limitations of a single approach to data gathering for any given indicator by combining multiple lines of evidence (including both quantitative and qualitative data), while also noting the difficulties this may pose for consistency and replicability.

2.18 Reference is made to one country which carried out its assessment of progress by Strategic Goal, rather than by individual Aichi Biodiversity Target. This enabled a larger number of indicators, of more general relevance to the goal, to be used to make an assessment. At the specific target level the number of indicators would have been much less and it would have been more difficult to draw conclusions.

The use of indicators to assess progress towards the attainment of the Aichi Biodiversity Targets in the Fifth National Reports to the CBD (*Doc Inf/3*)

2.19 This document reviews the use of indicators at national level in 131 country reports submitted to CBD in 2014. Some key points emerging have already been referred to above in the summary of document 1/2/Rev1. Some information in the national reports would appear to lend itself to being turned into an indicator, but it has not necessarily been presented as such. Much of the information in the reports relates to earlier time-periods than the period strictly covered by the 5th report cycle itself.

2.20 The document reviews national indicator use in relation to each of the individual Aichi targets in turn. This provides a useful source of some ideas about methods and challenges in relation to the different topics covered by the targets, and this could be cross-related to the corresponding targets in the SPMS.

2.21 Some examples of national indicators used by particular countries are given: almost none of those mentioned have a specific focus on migratory species or migration processes, although many of course will have relevance to migratory species in combination with other biodiversity/ecological interests. The one exception is an indicator cited for the Netherlands entitled "accessibility of waters and rivers for migratory fish species" (for Aichi target 5, which links to SPMS target 10). The UK is reported as using an indicator (also for Aichi target 5) entitled "change in habitat connectivity for selected broad habitats in the wider countryside", although the work which generates the underlying data has been discontinued. In an intra-national context this would not be measuring progress of relevance to migration targets in the CMS-defined sense; but the methodology might be transferable for use at an international level.

Biodiversity policy response indicators (*Doc Inf/7*)

2.22 This 109-page document consists of a paper by the OECD on the types of policy response indicators that may be useful to monitor progress towards the achievement of Aichi Biodiversity Targets 3 (on incentives) and 20 (on resource mobilization), and it examines the extent to which six datasets and monitoring systems housed by OECD can be used for this purpose. There is also some discussion on interpretation of the two targets.

2.23 Target 3 has some relationship to the more specific SPMS target 4, and target 20 has some relationship to the more specific SPMS target 16. Disaggregating migratory species aspects from the more general systems used in the OECD's analysis may not be possible; but it may at least be important to track whatever advances CBD and OECD make in finding appropriate data and metrics for these two targets, in case something consistent with them can be done for the SPMS.

Using global biodiversity indicators and underlying data to support NBSAP development and national reporting (*Doc Inf/8*)

Barriers to the use of global indicators and datasets to support NBSAP implementation and national reporting processes (*Doc Inf/9*)

Overcoming the challenges to conservation monitoring: integrating data from *in-situ* reporting and global data sets to measure impact and performance (*Doc Inf/14*)

2.24 The existence of considerable uncertainty among practitioners about the scope for using global indicators at national level has been confirmed by the results of a survey undertaken earlier in 2015. There is also a perceived potential disconnect between the data being used to track the Aichi Targets nationally and globally, and data being gathered by conservation programmes at sub-national or ecoregional scales, since much data collection for monitoring conservation initiatives on the ground is organised principally according to the specific goals of the initiative concerned.

2.25 These three documents aim to provide support for overcoming these difficulties, demonstrating for example how a majority of the indicators brought together under the Biodiversity Indicators Partnership (see section 4 below) can also be used at the national level; and (illustrated mainly by WWF examples) how global datasets can be integrated with data collected by field staff to determine progress against multi-level organisational goals and to assess conservation impacts and programme performance.

3. The Biodiversity Indicators Partnership

3.1 The Biodiversity Indicators Partnership (BIP) provides an important platform for institutional linkages and technical collaborations on biodiversity indicators. It was established in 2006 to support the production of indicators for the global 2010 biodiversity target, and it has continued to support the development and reporting of global indicators for the Aichi Biodiversity Targets. Its secretariat is hosted by the UNEP World Conservation Monitoring Centre (UNEP-WCMC).

3.2 The BIP has identified feasible indicators (at varying stages of readiness and data availability) for each of the 20 Aichi Biodiversity Targets. Correspondences between the Aichi targets and the SPMS targets, supported by information on indicator readiness (from different sources), have formed part of the basis for the proposed indicators that currently appear in the SPMS.

3.3 Some of the BIP indicators are identified as relevant to more than one Aichi target. After taking these multiple occurrences into account, the BIP list currently contains a total of 45 indicators.

3.4 In principle the information presented on the BIP website (www.bipindicators.net) will continue to be updated as developments proceed, if resources allow. A comparison of the information available in September 2015 with that reviewed at the time of the SPMS adoption at CMS COP11 in November 2014 shows no change in the list of indicators, so there are no implications at this stage for the cross-matching process between the BIP list and the SPMS. Information on the BIP website concerning indicator readiness and published results has also not changed in this period; but further work undertaken by UNEP-WCMC is reflected in their support for the 2015 CBD AHTEG (covered in section 2 of the present paper above).

4. Synergy with indicator development in the Ramsar Convention

4.1 Subsequent to the adoption of the SPMS, the Parties to the Ramsar Convention on Wetlands adopted the 4th edition of the Ramsar Strategic Plan (2016-2024) at their COP12 in June 2015. Although the Ramsar Plan's 19 targets are not directly modelled on the Aichi Biodiversity Targets in the same way as those in the SPMS are, correspondences between the two target sets are tabulated in an annex to the Plan, so relevant links can be traced.

4.2 CMS and Ramsar have a long history of collaboration and seeking synergies, and in this context the CMS, through its Strategic Plan consultant, participated in a pre-COP meeting of the Ramsar Strategic Plan Working Group in November 2014, where experiences with indicator development were shared between the two Conventions.

4.3 At that stage, CMS work on elaborating indicators specifically for Strategic Plan purposes and their articulation with the Aichi Targets was further advanced than Ramsar's equivalent work. On the other hand, Ramsar's earlier experiences with adopting indicators of Convention effectiveness (2005), input to assessments for the global 2010 biodiversity target, and analyses which have disaggregated wetland specifics from more general biodiversity-based datasets, all offer lessons from which CMS may potentially benefit.

4.4 The adopted 4th Ramsar Plan defines (in its Annex 1) the titles of suggested indicators, data sources and baselines for each of the Plan's targets, and expects that these will be monitored primarily by Contracting Parties. In total, 70 indicators are listed. The adopting Resolution (Res XII.2) has mandated a small, regionally representative expert group to consider additional aspects to be monitored and assessed at global level, with input from various others and with regard *inter alia* to the need for indicators to address outcomes and effectiveness, and the need to minimize the cost of indicator implementation by using existing data and information flows, including through national reporting.

4.5 Despite differences in ecological focus, CMS and Ramsar share broadly similar challenges in operationalizing indicator systems of this kind, and the scope for synergy remains strong, helped by existing collaboration mechanisms such as the Biodiversity Indicators Partnership (see above). In particular, for example, both Conventions have an interest in teasing out a "sub-set" of the wider biodiversity story - a wetland sub-set in Ramsar's case, and a migratory species sub-set in CMS's case.

4.6 Accordingly a CMS representative also took part in the first meeting of the Ramsar expert group mentioned above, which was held in September 2015 back-to-back with the meeting of the CBD Ad-Hoc Technical Expert Group referred to in section 3 above.

The report of the Geneva meeting will be made available to the SPWG upon its availability.

5. Development of indicators for the Sustainable Development Goals

5.1 The Member States of the UN have agreed to construct a set of Sustainable Development Goals (SDGs) for the post-2015 period, as a successor to the Millennium Development Goals. An open-ended Working Group of the UN General Assembly has drafted 17 goals and 169 targets/potential targets, and these were adopted during a high-level plenary meeting of the General Assembly on 25-27 September 2015.

5.2 Document Inf/4 for the September 2015 CBD AHTEG meeting, discussed in section 2 of the present paper above, includes an indicative analysis that cross-matches the Aichi Biodiversity Targets to the most relevant SDG targets.

5.3 In March 2015, the UN Statistical Commission created an Inter-Agency Expert Group to develop proposals for a global indicator framework for the SDGs. The framework and the indicators are destined for adoption by the Statistical Commission at its 47th session in 2016.

5.4 In May 2015 the Expert Group compiled a proposed list of more than 300 priority indicators, based on a much longer list developed through consultation with various stakeholders. The list was considered in a first meeting of the Expert Group held in June, and a revised version was issued for an open consultation which ended on 4 September. The results of this will be considered in the Expert Group's next meeting which is planned for 26-28 October 2015.

5.5 As it currently stands (version dated 11 August 2015), the list includes over 200 proposed indicators. These have been aligned with the changes in the SDG goals and targets adopted by the intergovernmental negotiations and included in the final proposal "Transforming Our World: The 2030 Agenda for Sustainable Development" published on 1 August 2015.

5.6 The individual indicators have been evaluated on a three-point scale for their stage of development (existence of methodology and availability of data), and on a similar three-point scale for their feasibility, suitability and relevance to the particular targets for which they are proposed.

5.7 Naturally, most of these indicators relate to human development parameters. There are however important elements concerning ecosystem services and sustainable use of natural resources, and in several cases there are direct overlaps with aspects of the SPMS (highlighted below). Examples include:

(For SDG 1 on poverty eradication):

- Number of national action plans related to multi-lateral environmental agreements that support accelerated investment in actions that eradicate poverty and sustainably use natural resources. **(See SPMS target 5)**.

(For SDG 2 on food security and sustainable agriculture):

- Percentage of agricultural area under sustainable agricultural practices.

(For SDG 6 on water and sanitation):

- Percentage of receiving water bodies with ambient water quality not presenting risk to the environment or human health.
- Percentage of change in wetlands extent over time.

(For SDG 14 on marine resources):

- Proportion of fish stocks within biologically sustainable levels. **(See SPMS target 6)**.
- Number of countries implementing either legally or programmatically the provisions set out in regional seas protocols and ratification and implementation of the ILO Maritime and Fisheries Conventions.

(For SDG 15 on ecosystems and biodiversity):

- Coverage of protected areas. **(See SPMS target 10)**.
- Forest cover under sustainable forest management.
- Trends in land degradation.
- Red List Index. **(See SPMS target 8)**.
- Red List Index for species in trade. **(See SPMS target 7)**.
- Proportion of detected trade in wildlife and wildlife products that is illegal.
- Adoption of national legislation relevant to the prevention or control of invasive alien species.
- Red List Index for birds showing trends driven by invasive alien species.
- Number of national development plans and processes integrating biodiversity and ecosystem services values. **(See SPMS target 2)**.
- Official development assistance in support of the CBD.