



Convention on the Conservation of Migratory Species of Wild Animals (CMS)

Secretariat provided by the United Nations Environment Programme (UNEP)

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THE CMS AND THE 2010 GLOBAL BIODIVERSITY CHALLENGE

(Report by the World Conservation Monitoring Centre)

1. Background

In April 2002, the Sixth Meeting of the Conference of Parties to the Convention on Biological Diversity (CBD COP) adopted a strategic plan for the convention (decision VI/26). Within the strategic plan, Parties commit themselves to “*achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national levels as a contribution to poverty alleviation and to the benefit of all life on Earth*”.

During the same month, Ministers responsible for CBD implementation met to discuss *inter alia* the contribution of the Convention to the World Summit on Sustainable Development (WSSD). In the resulting Ministerial Declaration, the Ministers resolved to “*strengthen ... efforts to put in place measures to halt biodiversity loss ... at the global, regional, sub-regional and national levels by the year 2010*”, and asked WSSD to “*reconfirm the commitment to have instruments in place to stop and reverse the current alarming biodiversity loss at the global, regional, sub-regional and national levels by the year 2010*”.

In September 2002, world leaders meeting at the WSSD in Johannesburg agreed a Plan of Implementation for achieving sustainable development, building on past agreements and achievements (UN Doc. A/CONF.199/20). In Paragraph 44 of this plan are several key points of relevance to CMS:

- The Convention on Biological Diversity is recognised as “*the key instrument for the conservation and sustainable use of biological diversity and the fair and equitable sharing of benefits arising from use of genetic resources*”.
- The 2010 target for significant reduction in the rate of loss of biodiversity is implicitly endorsed in the statement that “*achievement by 2010 of a significant reduction in the current rate of loss of biological diversity will require the provision of new and additional financial and technical resources*” and a range of further actions.
- The importance of encouraging effective synergies between the Convention on Biological Diversity and other multilateral environmental agreements was recognised, within the context of their respective mandates, responsibilities and concerns.

By Resolution 7.10, the Seventh Meeting of the CMS Conference of the Parties acknowledged that to achieve the 2010 target States will need to place special emphasis on the conservation of migratory species and their habitats, both individually at national levels, and through coordinated concerted and co-operative actions across migratory ranges.

It is important to place the 2010 target in the context of other key international goals and targets relating to environment and development. In September 2000, the UN General Assembly adopted the Millennium Declaration (UN Doc. A/RES/55/2). This declaration incorporated all of the key goals and targets relating to

human development that had been developed and adopted over the previous decade. In his “*Road map towards the implementation of the United Nations Millennium Declaration*” presented to the UN General Assembly the following year (UN Doc. A/56/326), the UN Secretary General identified eight goals and 18 associated targets.

In decision VII/9, the CBD Conference of Parties requested its Executive Secretary to explore with the UN Secretary General the opportunity to establish the 2010 target as an interim milestone in achieving the Millennium Development Goal 7 of ensuring environmental sustainability by 2015. Meanwhile the UN Secretary General’s Millennium Project is actively considering the best ways of achieving the Millennium Development Goals (MDGs), and this includes increasing recognition that biodiversity is an important factor in achieving the full range of MDGs, and not just the one on environmental sustainability.

2. Assessing progress in meeting the global biodiversity challenge

Soon after 2010 the global community will need to know what action has been taken to address this target, and the extent to which these actions have been successful. It will therefore need assessments of:

- i) The extent to which measures have been put in place to halt biodiversity loss at all levels (global, regional, sub-regional and national); and
- ii) Change in the status of biodiversity over time, so as to be able to assess whether or not there has been reduction in the rate of loss.

In May 2003, the CBD Secretariat, the UNEP World Conservation Monitoring Centre and UNDP on 2010 - The Global Biodiversity Challenge, convened a meeting in London jointly. The aim of the meeting was to articulate a framework of action for addressing the 2010 target, and to raise awareness of the target with a wide range of international organizations and processes. Key to this meeting was recognition that while the CBD needed to play a leading role in achieving and reporting on the 2010 target, the target itself was “owned” by everyone, and everyone had a role to play.

Participants at the meeting agreed that there needed to be increased collaboration between all stakeholders both to ensure coordinated action in work towards the targets and to assess progress effectively. In the latter regard they further agreed that a small set of global indicators should be developed for communication purposes, and to support policy intervention, however it was recognised that this needed to be based on existing processes, and on existing assessment and monitoring programmes wherever possible.

Based on the report of this meeting (UN Doc. UNEP/CBD/COP/7/INF/22), and other papers including one on the potential contribution of existing processes as building blocks in reporting on the 2010 target (UN Doc. UNEP/CBD/SBSTTA/9/INF/27), the CBD Subsidiary Body on Scientific, Technical and Technological Advice discussed the issue in November 2003. Subsequently, the CBD Conference of Parties at its seventh meeting in February 2004 adopted decision VII/27, in which the COP *inter alia*:

- Agreed that a limited number of trial indicators be developed and used in reporting progress in achieving the 2010 target;
- Invites related conventions, assessment processes and relevant organizations to contribute reports and information that assist the monitoring of progress towards the 2010 target; and
- Invites the UNEP World Conservation Monitoring Centre to support the CBD Secretariat in facilitating the compilation of information necessary for reporting on achievement of the 2010 target.

The same decision also adopts a provisional framework of goals and targets “*in order to clarify the 2010 global biodiversity target adopted by decision VI/26, help assess progress towards the target, and promote coherence*”

among the programmes of work of the convention". These would complement the existing goals of the CBD Strategic Plan.

3. The Convention on Migratory Species (CMS)

The Convention on Migratory Species aims to conserve migratory species over the whole of their range and provides a framework within which Parties may act to conserve migratory species and their habitats by:

1. Adopting strict protection measures for migratory species that have been categorised as being in danger of extinction throughout all or a significant proportion of their range (listed in Appendix I of the Convention);
2. Concluding Agreements for the conservation and management of migratory species that have an unfavourable conservation status or would benefit significantly from international co-operation (listed in Appendix II of the Convention); and
3. Undertaking joint research and monitoring activities.

Appendix I currently comprises 107 taxa, comprising 31 mammals, 66 birds, 8 reptiles and two fish. Appendix II currently comprises 175 species, subspecies or populations of species as well as a number of higher taxa, including some entire families. All are vertebrates with the exception of the Monarch Butterfly *Danaus plexippus*.

There are currently six agreements in place, covering:

- Conservation of Seals in the Wadden Sea
- Conservation of Populations of European Bats
- Conservation of Small Cetaceans of the Baltic and North Seas
- Conservation of African-Eurasian Migratory Waterbirds
- Conservation of Cetaceans of the Black Sea, Mediterranean & Contiguous Atlantic Area
- Conservation of Albatrosses and Petrels

There are also seven memoranda of understanding covering:

- Conservation measures for the Siberian Crane
- Conservation measures for the Slender-billed Curlew
- Conservation measures for Marine Turtles of the Atlantic Coast of Africa
- Conservation and management of the Middle-European population of the Great Bustard
- Conservation measures for Marine Turtles of the Indian Ocean and South-East Asia
- Conservation and restoration of the Bukhara Deer
- Conservation measures for the Aquatic Warbler

The Convention currently has 85 Parties, all of which are also Parties to the Convention on Biological Diversity. States may become Party to an Agreement or signatory to an MoU concluded under CMS auspices without being Party to the Convention itself.

4. Potential implications for the Convention on Migratory Species

CMS is one of the very few global multilateral environmental agreements (MEAs) that deals explicitly with the conservation of species and their habitats. It therefore directly addresses one of the key components of biodiversity and one of the three objectives of the CBD, the conservation of biological diversity. Moreover, its mandate explicitly covers those species that have populations that regularly occur in more than one country.

Responsibility for conserving these species and for reporting on their status transcends national boundaries and therefore requires a process over and above national reporting.

CMS is therefore in a position to respond to the “global biodiversity challenge” in a number of ways. This would include the following:

- Explicit recognition that the 2010 target is relevant to the CMS and its activities, and appropriately communicating this both internally and externally;
- Recognition that CMS itself will want to report internationally on the action that it has taken to achieve the 2010 target, and the results of this action; and
- Development of indicators based on migratory species that can help assess progress in achieving the 2010 target.

Also relevant is the assessment of the effectiveness of the convention in achieving its own objectives as defined in the strategic plan for the convention, and already discussed in the context of the Performance Working Group set up by Resolution 6.4.

The Chairmen of both the Standing Committee and the Scientific Council attended the London meeting, and subsequently a paper was drafted for the 26th Meeting of the Standing Committee in July 2002. That meeting resolved that CMS should contribute to the process to develop the 2010 indicators, and requested the assistance of the UNEP World Conservation Monitoring Centre. This paper, while touching on other issues, is primarily concerned with indicators of success in achieving the 2010 target.

5. Biodiversity indicators

Information reported by Parties to CMS and to Agreements concluded under the auspices of CMS, along with additional information on relevant species, may be useful for generating indicators to help assess progress towards the 2010 target. The aim of this section is to address some of the possibilities, and some of the associated issues.

Before doing so, it is important to say that one of the key issues that will need to be addressed is how the indicators and associated indices are to be used, as this will help define the form they take and the information used.

5.1 Species population trend indicators

Composite indicators based on changes in populations of species over time can be very useful measures of change in biodiversity. A national level example is the wild bird indicator used by the UK government as one of its headline indicators of sustainable development (at <http://www.sustainable-development.gov.uk/indicators/headline/h13.htm>), while at global level the most widely recognised example is the Living Planet Index (LPI) developed by WWF and UNEP-WCMC.

These indicators can be generated in a number of different ways, but essentially combine information on different populations sampled to derive a composite measure of change in those populations. They can be applied at any scale and can make use of any number of data sets. The minimum information required is at least two separate comparable population counts or estimates separated by at least one year in time.

For migratory species, there are, in theory, many different options for generating indicators. At global level it would be possible, given enough data, to generate a composite migratory species index, using available information on any population of any migratory species, that is not confining species only to those included in the appendices to CMS.

A very wide range of more narrowly specified indices could also be produced such as those covering:

- Migratory species in particular higher taxa (birds, mammals, reptiles, fishes);
- Migratory species in particular biomes (marine, freshwater, terrestrial);
- CMS Appendix-I species or Concerted Action Species;
- CMS Appendix-II species or Cooperative Action Species;
- Groups of species for which there are Agreements;
- Populations of species covered by CMS in States Party to the Convention; or
- Populations of species covered by Agreements in parties to those Agreements.

Where data are available, these higher-level indicators can be disaggregated to produce a wide range of more specific indices, for example one covering migratory mammals in the Sahelo-Saharan region, or marine turtles in the Indian Ocean and South East Asian Region.

5.2 Data availability issues

There are a number of constraints on the ability to generate species population trend indices owing to uneven coverage of the available data. The biases can be geographical, taxonomic and ecological.

For example:

- More population data are available for developed countries than developing countries. Some countries in Europe and North America have datasets of species populations, going back many years, based on annual censuses and surveys, but these are exceptional. For most of rest of the world, data availability is patchy.
- More population data are available for birds, mammals and some marine fish species than for other species groups. Species that have good time-series population data are those that have been subject to long-standing monitoring efforts, whether because they are commercially important, of conservation importance, or simply easier to count.
- Among terrestrial ecosystems more population data are available for grassland species than forest species, and among aquatic ecosystems more data are available for marine than freshwater species, with the exception of water birds.

Geographic biases could become even more pronounced if only species populations in States Party to CMS are considered. Countries in Europe, Africa and Australia are well represented among the 85 current States Party to CMS, whereas large parts of Asia and the Americas, are underrepresented. However several countries that are not Party to CMS are Party to agreements, contributing to bilateral agreements or taxon-specific agreements.

Birds also dominate the appendices to CMS, although this is probably representative of migratory species as a whole.

5.3 Potential datasets

Some of the major datasets by biome include the following:

Freshwater:

- Waterbirds: Wetlands International has organised and managed International Waterbird Counts since 1967, initially for Europe and the Middle East, later extended to a global coverage with most of Africa, Asia and the Pacific in the 1980s and 1990s and more recently the Americas. The specialist groups maintain databases of varying detail and quality. Most of the specialist groups are acting on a voluntary basis, resulting in wide variation in data input and quality both spatially and temporally. Regular updates on a global level are produced on a three-year cycle.

- Fish: Information on the sturgeon species could be compiled from existing national databases/datasets in a number of countries.

Marine:

- Seabirds: Information is available from selected seabird colonies throughout the world (Europe, North and South America, Australia, New Zealand); and from the CAFF seabird working groups for Northern circumpolar species.
- Albatrosses and Petrels: Good summary information with BirdLife Partnership. Globally datasets could be developed through ACAP, based on national surveys at colonies.
- Cetaceans: Global (OBIS-SEAMAP), North Atlantic (NAMMCO), North Sea and Baltic (ASCOBANS; CoML), Mediterranean and Black Sea (ACCOBAMS). International Whaling Commission.
- Marine Turtles: Tropical and sub tropical focus (IOSEA-MoU Marine Turtle IMapS).
- Fish: Some Great White Shark information, based on catch data, but very little Whale Shark information.

Forest/other terrestrial ecosystems:

- Birds: Bird Observatories and Ringing Stations in many locations have various long-term data series back at least four decades. Several European bird observatories and ringing stations have been gathering data on migratory birds at particular locations with active migration (e.g., Falsterbo, Gibraltar, Randecker Maar, Bosphorus). Some of these have long-term data series going back to the 1960s. Apart from Europe other countries, mostly outside CMS member range, like the Americas e.g., Cape May Bird Observatory in the USA, maintains counts of the north-eastern raptor populations, wintering raptor censuses, habitat use and stopover ecology studies of migrating hawks and owls, and winter bald eagle surveys), China, Russia, Japan, etc., have also established a long term series of ringing and monitoring active migration.
- Bats: There should be a growing body of information on bats. The EUROBATS Action Plan for 2003-2006 (Resolution 4.9) recognises ongoing monitoring of nine species (which represent a diverse biology, a wide range of different mostly forested habitats and as many as possible member countries), and proposes the addition of two more species. Netherlands, Germany and the UK have been most advanced in establishing national monitoring programmes (also in accordance with their obligations under the Bern Convention). In addition, several training programmes for Eastern European countries have been organised by the UK. The agreement secretariat has been asked to establish a database for the monitoring drawing on national monitoring data.
- Others: There is substantial information going back many years for high profile species and populations of, for example, Gorilla and African Elephant.

5.4 Data quality issues

The range of potential sources and types of population trend data means that it is important to consider both the quality and representativeness of each data set before incorporating population data into a trend index.

Basic criteria for data quality include:

- Location and area represented by the population estimates should be clearly specified or ascertainable;
- The methods used should be specified;
- The time series should be as long as possible; and
- Compatible methods should be used through the time series.

Where more than one population time-series exists for a species, these can be combined if the sets are compatible (i.e., independent and in the same units), or the series with the most information selected (either that of longest duration, or that covering the highest proportion of the distribution or population of that species). In most such indices (e.g., the LPI) the data are logged, so that the contribution each population makes to the index is independent of the size of that population.

6. Relationship to trial indicators proposed by the CBD Conference of Parties

At the recent Conference of Parties, the CBD decided to trial indicators in a number of areas specified in annex I to the decision. The following are likely to be the ones of particular interest to CMS and its Agreements.

Trends in extent of selected biomes, ecosystems and habitats: noting that this is likely to have a significant impact on certain species that are associated with particular biomes, ecosystems and habitats.

Trends in abundance and distribution of selected species: noting that CMS should be well placed to provide information relating to migratory species.

Change in status of threatened species: noting that a significant number of migratory species are under threat in at least some part of their range.

Coverage of protected areas: because of the potential for analysis of the coverage of key areas for migratory species by protected areas.

Connectivity/fragmentation of ecosystems: because of the impact that fragmentation and lack of connectivity can have on migratory species.

7. Partnerships with other international programmes and agreements

There are many other international agreements and programmes at both global and regional levels that may have information relevant to assessing and monitoring the status of migratory species on the CMS appendices, or could be a useful partner in the process of assessing and monitoring status. It would seem appropriate for CMS to review the extent to which these initiatives could contribute (noting that some are already collaborating with CMS and its related Agreements in some areas).

The following categories of initiative and examples draw on an information paper submitted by the CBD Executive Secretary to SBSTTA last November. The CBD Secretariat and UNEP-WCMC prepared the paper, entitled "*Using existing processes as building blocks in reporting on the 2010 target*" (UN Doc. UNEP/CBD/SBSTTA/9/INF/27). However, in reviewing this information, and suggestions on potential partnerships, it is essential to remain aware that the primary source of information is that provided by States Party.

i) Other multilateral environment agreements concerned with the conservation of biological diversity: including the Convention on Biological Diversity, the Convention on Wetlands, CITES (CMS and CITES share a number of species) and the World Heritage Convention. The Ramsar Convention, for example, is in the process of considering the development of indicators to assess the effectiveness of that convention, and there may be species indicators that could be developed jointly.

ii) Regional biodiversity-related multilateral environment agreements and programmes: including regional seas conventions and programmes, Conservation of Arctic Flora and Fauna, CCAMLR, Bern Convention, Natura 2000, and so on. The Bern Convention and Natura 2000, for example, cover a number of species also on the CMS appendices, and information is being collected by these initiatives on sites and the species and habitats on those sites. Is there potential for collaborative work on indicators building on this material.

iii) Other biodiversity-related multilateral environment agreements and similar initiatives: including the Convention to Combat Desertification, the UN Framework Convention on Climate Change, and the Agreement for the implementation of the provisions of the UN Law of the Sea relating to conservation and management of straddling fish stocks and highly migratory fish stocks. The Desertification Convention, for example, is relevant because a significant number of migratory species are found in arid, semi-arid and dry sub-humid areas.

iv) International assessments: including the Millennium Ecosystem Assessment, Global International Waters Assessment, Global Environmental Outlook, and the IUCN Red List of Threatened Species. For example, the red list process, particularly with respect to birds, is now based on objective information and in many cases on datasets that go back for some time. Many of the Appendix I species in particular are on the red list.

v) Information compiled by intergovernmental agencies: including the UN agencies, the European Environment Agency, the ASEAN Regional Centre for Biodiversity Conservation, the Central American Commission for Environment and Development, the South Pacific Regional Environment Programme, and so on. For example, FAO has compiled substantial information on fish stocks over many years, and the EEA has been significantly involved in compilation of information from a range of European countries, and both may have datasets of relevance to CMS.

vi) Initiatives of international non-governmental and specialist networks: including IUCN and its commissions and their specialist groups, WWF, Wetlands International, and BirdLife International. The BirdLife partnership, for example, as well as contributing red list information on birds also has substantial further information on areas important for birds and on flyways going back many years.

vii) International research and monitoring networks: including the UNESCO Man and Biosphere Programme, the Global Invasive Species Programme, International Long Term Ecological Research Network, the Sahara and Sahel Observatory, the shorebird monitoring networks in the Americas and Asia, and the International Tundra Experiment. An outstanding question is whether there are ways, for example, of using ILTER or one of the other networks to assist in monitoring populations of migratory species, particularly since the United States is not party to the Convention?

viii) Other international initiatives: including information networks such as the Inter-American Biodiversity Information Network, and supporting initiatives such as the Global Biodiversity Information Facility. An outstanding question is whether a project could be developed with IABIN to use their networking of data in the Americas to identify datasets that exist on migratory species in the Western Hemisphere and ways to bring the existing data and monitoring programmes together in a useful manner for the Convention?

8. Reporting and reporting formats

CMS should also start considering whether it will itself want to report in the coming years on the steps that it has taken to achieve the 2010 target, and the results of those actions. If it does, then consideration should be given soon to the form that that report will take, and how it will be compiled. If it is to be compiled from information that is already available from existing datasets and national reports, then little further needs to be done. However, if such a report requires further research, analysis and revision of national reporting formats to ensure adequate and appropriate input from States Party, then such action takes time to achieve.

It is assumed here that CMS will want to report on its actions and achievements, and the following is offered as a very preliminary outline of what such a report might contain:

- A perspective on the **2010 target and the role of CMS** and the Agreements negotiated under its auspices in working to achieve that target at all levels.

- An assessment of the *threats faced by migratory species*, concentrating on those threats that particularly affect migratory species, and the ways in which these threats have changed over time.
- A review of the *actions taken by CMS* and its agreements at all levels to ensure the conservation of migratory species.
- An overview of the *interactions between CMS* and other initiatives that are resulting in improved conservation of migratory species.
- An assessment of the *status of migratory species*, and the change in status over time, in order to try to address the effectiveness of CMS and its agreements in reducing the rate of biodiversity loss.

9. Recommendations

The following are suggested as a preliminary series of recommendations that the Scientific Council may wish to consider. Decisions taken on these recommendations will have implications for the Convention's Strategic Plan and implementation plans, and the Scientific Council may wish to consider this as it reviews the recommendations proposed.

- On time series datasets:** Encourage Parties to CMS and to the CMS Agreements to provide time-series data on migratory species in their reports to that Convention or other means, and/or to provide details on where such data may be found.
- On links to the Living Planet Index:** Incorporate, whenever possible, such information into the data available from the Living Planet Index, in order to establish a baseline against which trends on migratory species could subsequently be measured.
- On development of indices:** Request UNEP-WCMC, in collaboration with the CMS Scientific Council, the technical bodies of the CMS Agreements and in partnership with other organisations, to produce a preliminary set of population trend indices for migratory species to be reviewed by the Council at its 13th Meeting and transmitted to the Eighth Meeting of the CMS Conference of the Parties with appropriate recommendations for consideration.
- On rapid assessment tools:** Consider extending the rapid assessment tools for Appendix I species that UNEP-WCMC is already developing and testing on behalf of the Council and the CMS Secretariat, commencing with concerted action species. This trial, which will be reported on at the Scientific Council meeting, will deliver information on the status of each species, CMS reported actions and other actions by country.
- On development of an indicator programme:** Develop proposals for a costed indicators programme that would propose the means for obtaining and managing relevant data on a regular basis, and identification of who would contribute. This would be presented to the Council at its 13th Meeting and transmitted to the Eighth Meeting of the CMS Conference of Parties with appropriate recommendations for consideration alongside the proposed set of population trend indices for migratory species.
- On links with CBD:** Request the CMS Secretariat to inform the CBD Secretariat, SBSTTA and COP of the steps being taken by CMS, recommending the incorporation of information on migratory species appropriately into the work being carried out by the CBD. This may include participating in appropriate CBD liaison group and Ad Hoc Technical Expert Group meetings.

- g) ***On links with other international initiatives:*** Establish a process to explore synergies with other initiatives on this issue, building in particular on relationships that already exist. A valuable first step could be exploration of potential collaboration on indicators in wetlands with the Convention on Wetlands, and in drylands with the UN Convention to Combat Desertification.
- h) ***On review of other indicator initiatives:*** Review existing biodiversity indicators and indices at national and international levels to assess the extent to which they already reflect the status of migratory species and can be drawn upon or built upon.
- i) ***On reporting and reporting formats:*** Decide on whether or not CMS proposes to report on the actions it is taking to support achievement of the 2010 target and, if so, what form that report should take and who it should go to. A proposal based on this would go to the Eighth Meeting of the CMS Conference of Parties for review and adoption.
- j) ***On revision of this draft paper:*** This paper is a rolling draft that could be significantly improved following the initial advice of the CMS Scientific Council, and with further input from CMS and Agreement Secretariats.

UNEP-WCMC would welcome the opportunity to work with the CMS Secretariat and the Scientific Council to implement the above recommendations, in the context of both its work with CMS on the Information Management Plan, and with the CBD on the 2010 target and indicators.