UNEP

CBD

CONVENTION ON BIOLOGICAL DIVERSITY

Distr.
GENERAL

UNEP/CBD/COP/5/INF/28
10 May 2000

ENGLISH ONLY

CONFERENCE OF THE PARTIES TO THE
CONVENTION ON BIOLOGICAL DIVERSITY
Fifth meeting
Nairobi, 15-26 May 2000

HOW THE IMPLEMENTATION OF THE CONVENTION ON MIGRATORY SPECIES COMPLEMENTS THE IMPLEMENTATION OF THE CONVENTION ON BIOLOGICAL DIVERSITY: NOTE BY THE UNEP/CMS SECRETARIAT

Note by the Executive Secretary

1. At the request of the Secretariat of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), the Executive Secretary is circulating herewith, for the information of participants in the fifth meeting of the Conference of the Parties, a note prepared by the CMS Secretariat and the United Nations Environment Programme (UNEP) on how the implementation of the Convention on Migratory Species complements the implementation of the Convention on Biological Diversity.

2. Appended to the note is a study commissioned by UNEP and the CMS Secretariat entitled "A Guide to the Complementarities Between the Convention on Migratory Species and the Convention on Biological Diversity".

2. The submission is being circulated as it was received from the CMS Secretariat.

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UNEP/CMS Secretariat

A Guide to the Complementarities Between the Convention on Migratory Species and the Convention on Biological Diversity

Lyle Glowka
Biodiversity Strategies International

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Editorial Note and Acknowledgements

The primary goal of *A Guide to the Complementarities Between the Convention on Migratory Species and the Convention on Biological Diversity* is to provide the factual basis for the Conferences of the Convention on Migratory Species (CMS) and the Convention on Biological Diversity (CBD), their secretariats and individual Contracting Parties to establish some of the complementarities between the two conventions. It is particularly targeted to supplement the CBD COP's further consideration of CBD COP Decision III/21. This decision requested the CBD Executive Secretary, in consultation with the CMS Secretariat "to evaluate how the implementation of that Convention can complement the implementation of the Convention on Biological Diversity through its transboundary co-ordinated and concerted action on a regional, continental and global scale".

It is hoped that the Guide will contribute to a better understanding of:

- The importance of migratory species in biodiversity conservation and sustainable use efforts;
- How the CMS Instruments support and can continue to support the CBD's implementation; and
- The possible synergies between the CMS Instruments and the CBD.

The primary reference sources for the *Guide* are the substantive obligations and work programmes of the CMS Instruments (i.e., CMS and the subsidiary agreements adopted under its auspices) and those of the CBD. The Guide also draws heavily and in some cases verbatim from the CMS publication *Guide to the Convention on Migratory Species*. This is particularly the case for the italicised text that provides the framework for Section 2.0 and some of the text for Box 1.

A number of people have assisted me with the CMS/CBD Complementarities Guide, sometimes under tight deadlines, including Liam Addis (Bonn, Germany), Sheila Aggarwal-Khan (Nairobi, Kenya), Suhel Al-Janabi (Bonn, Germany), Linette Eitz Lamare (Bonn, Germany), Jens Enemark (Wilhelmshaven, Germany), Ivonne Higuero (Nairobi, Kenya), Douglas Hykle (Bonn, Germany), Olivier Jalbert (Montreal, Canada), Bert Lenten (The Hague, The Netherlands), Anni Lukacs (Bonn. Germany), Jennybeth Mina (Bonn, Germany), Mike Moser (Devon, United Kingdom), Patricia Moss (Bonn, Germany), Arnulf Mueller-Helmbrecht (Bonn, Germany), John O'Sullivan (Cambridge, United Kingdom), David Pritchard (Cambridge, United Kingdom), Colin Rees (Washington DC, USA), Andreas Streit (Bonn, Germany), Ruediger Strempel (Bonn, Germany), Marie-Christine van Klaveren (Monte Carlo, Monaco).

Robert Vagg of the CMS Secretariat provided me with very valuable editorial and substantive comments on very short notice.

The preliminary findings of the study upon which this publication is based were presented in Paris, 30-31 March 2000 at *Biodiversity and Environmental Law: An International Colloquium in Tribute to the Memory of Cyrille de Klemm*.

My thanks go to all of these people, and others, for their assistance in making this publication possible. I, however, remain responsible for any weaknesses that remain.

Lyle Glowka
Biodiversity Strategies International
Bonn, Germany
May 2000

Executive Summary

The Third Meeting of the Conference of Parties to the Convention on Biological Diversity (CBD COP and CBD) requested the Executive Secretary, in consultation with the Secretariat of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), "to evaluate how the implementation of that Convention can complement the implementation of the Convention on Biological Diversity through its transboundary co-ordinated and concerted action on a regional, continental and global scale" (CBD COP, Decision III/21). The Convention on Migratory Species (CMS) and its subsidiary agreements have complemented and will continue to complement the CBD's implementation through its transboundary co-ordinated and concerted action on a regional, continental and global scale.

The CMS Instruments operate at the global and regional levels in the context of a specific globally significant component of biological diversity: migratory species. CMS is the only global biodiversity-related treaty that addresses comprehensively migratory species. This is in contrast to the CBD which addresses biodiversity comprehensively, but does not specifically address migratory species.

The CBD's obligations are more general in nature and are defined ultimately at the country-level through the biodiversity planning process. The biodiversity planning process is the primary opportunity for a country to identify issues related to migratory species. The CBD COP has urged its Parties to incorporate fully migratory species and their habitats into biodiversity strategies and action plans. Th extent to which this has taken place is unknown.

The CMS Instruments provide the basis for their Parties, who may or may not be Parties to CBD, to deepen their treatment of migratory species through specific conservation and management plans for individual and groups of migratory species and to do this in global and regional legal frameworks that encourage and support co-operative action. Most significantly, the CMS Instruments make the important link between individual and groups of migratory species, their habitat needs, the other components of biodiversity they depend on and interact with as well as the various threats facing these species. Consequently, the CMS Instruments fill a major area left incomplete by the CBD's design.

Major complementarities exist between the CBD and the CMS Instruments at the substantive obligation level and at the work programme level.

At the substantive obligation level, Table 1 demonstrates that complementarity is especially apparent for the CBD ecosystem and species-based measures, those on identification and monitoring, research and training, public education and awareness, information exchange and technical and scientific co-operation. Significantly, capacity building is an issue relevant to all of these measures. Important intersections also occur on processes and activities that affect biodiversity, the CBD's most innovative and potentially far-reaching provisions.

At the work programme level Table 2 demonstrates that some or all of the CMS Instruments support the thematic areas addressed thus far by the CBD. The CMS Instruments cut across and already provide substantial support to nine CBD crosscutting and other areas within its work programme, particularly the ecosystem approach, indicators, assessment and monitoring, protected areas, public education and awareness and sustainable use (including tourism).

The CMS Instruments can further support the CBD work programmes in a number of ways. The mode of collaboration can be by:

- Direct participation in meetings organised to address these issues;

- Making materials such as guidelines available through the CBD Clearing House Mechanism;

- Providing case studies;

- Ensuring information exchange between the secretariats; and

- Facilitating expert participation through government nominations to the roster of experts.

Immediate emphasis could be given to possible joint CMS/CBD examination of the ecosystem approach as it relates to migratory species and the usefulness of migratory species as biodiversity indicators. Technical workshops could be contemplated.

At the institutional level, co-ordination is increasing between the secretariats, the CMS Scientific Council participates in SBSTTA meetings and the CMS Instruments can make many substantive contributions to the CBD CHM. The CMS Scientific Council may wish to consider inviting a member of SBSTTA to observe its meetings.

At the secretariat level, the CBD COP may wish to consider asking its secretariat to designate a senior level focal point to liase with the CMS Instruments. It may also wish to consider asking its secretariat to participate in CMS COP meetings. Finally, the Parties to the subsidiary CMS agreements, most of whom are Parties to the CBD, may wish to examine options for expanding the possibilities of their secretariats to co-operate and collaborate with the CBD to promote synergies.

Significantly, the CMS COP and the conferences of four other CMS subsidiary agreements have recognised that there is a great need to financially support migratory species projects. Many if not all of the Parties to these instruments are also Parties to the CBD.

It is noteworthy that the CMS COP has:

- Urged developed Party States of CMS, whether or not Range States, to sponsor initiatives by developing countries;

- Asked the CMS Secretariat to promote development of cost effective projects particularly to benefit those migratory species most endangered by extinction;

- Asked the CMS Secretariat to develop closer relations with development assistance multi-lateral agencies operating on global and regional levels that (1) may affect migratory species covered by CMS or (2) that could include migratory species as part of a broader strategy; and

- Recognised the need to intensify linkages with the CBD and the GEF to implement relevant COP decisions and to develop pilot projects demonstrating (1) complementarities between CMS and the CBD and (2) the basic need to fill the gap in the funding mechanism of GEF for biodiversity-related projects.

The CBD COP and CMS COP may wish to consider a range of options related to financing migratory species projects. One option that could be considered is to work with GEF, World Bank, the regional development banks and bilateral agencies to explore how migratory species can be "mainstreamed" into donor assistance work. They may also wish to consider encouraging their Parties to review how funds dedicated to biodiversity-related work could be used to fund projects directly or indirectly beneficial to migratory species.

Despite a number of challenges, migratory species projects, focusing on an ecosystem approach, have been funded through the CBD's financial mechanism. Experience is growing with funding migratory species projects through GEF but because of the complexities involved project development is still in a pilot or an evolutionary state.

With regard to the CBD financial mechanism, the CBD COP may also wish to:

- **$** Clarify the desirability of funding migratory species projects under the CBD financial mechanism;

- **$** Emphasise the need to take a flexible migratory range approach;

- **$** Encourage GEF and the implementing agencies to work together, perhaps in collaboration with the CMS Secretariat, to review the implications for GEF funding of the "ecosystem approach" and the "country-driven" criteria as they are applied to migratory species projects. This might include a determination of the extent to which migratory species have been integrated into national biodiversity strategies and action plans; and

- **$** Encourage the GEF and the implementing agencies to work together, perhaps in collaboration with the CMS Secretariat, to further clarify the incremental cost concept as it applies to migratory species projects.

Even without encouragement from the CBD COP, the GEF may also wish to consider some of these suggestions. In addition, it may wish to explore the possibility of developing an operational programme on migratory species, especially if CMS and CBD eventually operate a joint programme on migratory species and biodiversity.

Finally, the CBD COP may wish to recognise migratory species as globally significant components of biodiversity that, as a biodiversity conservation and sustainable use issue, cut across many aspects of the CBD work programme and should be integral to it, perhaps as a joint work programme between CMS and the CBD. Consequently it may wish to consider placing migratory species on the medium-term work programme for further consideration. It may also wish to consider the desirability of designating CMS as a lead partner on the conservation and sustainable use of migratory species.

1.0 Introduction

The Conference of Parties to the Convention on Biological Diversity (CBD COP and CBD), at its third meeting, requested the Executive Secretary, in consultation with the Secretariat of the Convention on Migratory Species of Wild Animals (CMS), "to evaluate how the implementation of that Convention can complement the implementation of the Convention on Biological Diversity through its transboundary co-ordinated and concerted action on a regional, continental and global scale" (CBD COP, Decision III/21).

At CBD COP IV, the UNEP/CMS Secretariat submitted a progress report entitled "Linkages and Co-ordination Between the Convention on the Conservation of Migratory Species of Wild Animals and the Convention on Biological Diversity" (UNEP/CBD/COP/4/Inf.22/Rev.1). Under Section IV (Conclusions) COP IV was requested to postpone the consideration of Decision III/21 until COP V "because the implementation of co-ordinated plans has not yet advanced far enough satisfactorily to explain to the CBD COP, as requested in its decision III/21, paragraph 7(b), the usefulness and effectiveness of the complementary work under CMS".

This Guide is intended to provide the factual basis for the CMS and CBD Conferences, their secretariats and individual Contracting Parties to establish some of the complementarities between the two conventions. It is particularly targeted to supplement the CBD COP's further consideration of Decision III/21. It is hoped that the Guide will contribute to a better understanding of:

- The importance of migratory species in biodiversity conservation and sustainable use efforts;
- How the CMS Instruments support and can continue to support the CBD's implementation; and
- The possible synergies between the CMS Instruments and the CBD.

The Guide begins with a brief overview of migratory species (Section 2.0). It demonstrates that migratory species are unique globally important components of biological diversity whose conservation and sustainable use must take place across their migratory range in the Range States concerned. As a component of biological diversity actions to improve or maintain the conservation status of migratory species contribute to the conservation and sustainable use of biodiversity.

Section 3.0 continues by describing how the CMS Instruments (CMS, its agreements and their integrated conservation, management and action plans) provide the basis to move beyond *ad hoc* actions by individual States with regard to migratory species. CMS is the only existing comprehensive global legal instrument that provides the basis for transboundary co-ordinated and concerted action for migratory species across their migratory range.

The CMS Instruments and their mode of operation are described while their intersections with the Convention on Biological Diversity's substantive obligations are highlighted. This section demonstrates that the various treaty obligations and action plans of the CMS Instruments complement at least twenty-three of the CBD substantive obligations.

Sections 4.0 and 5.0 examine the CBD work programme and those of the CMS Instruments. These sections demonstrate that migratory species are an issue that potentially crosscuts the entire CBD work programme. They also show that the CMS Instruments have been making and can continue to make substantial contributions to the CBD's work programme.

Section 6.0 briefly examines institutional issues including financing migratory species projects, in particular the availability of funding through the CBD's financial mechanism.

Finally, Section 7.0 makes some specific recommendations for the further examination of migratory species and the role of CMS in complementing the CBD's further implementation.

2.0 Migratory Species: Important Unique Global Components of Biological Diversity

Animal migration is a global phenomenon and represents one of nature's most awe-inspiring spectacles. Migration describes the periodic movement of animals from one geographical area to another, often in a cyclical and predictable manner.

A wide variety of animals migrate. Antelopes, dolphins, marine turtles, bats and many species of birds are some of the best-known examples of migratory species, but fish such as sturgeon and insects such as monarch butterflies also migrate.

The number of migratory species in the world is not definitively known. The Global Registry of Migratory Species, which is being developed by the University of Bonn in co-operation with the CMS Secretariat, places the number at 4000-5000 species. Other sources estimate between 8000 and 20,000 species.

Many animals migrate in response to biological requirements. The need to find a suitable location to breed and raise young, and to find favourable areas in which to feed at different times of the year, is a biological requirement typical of many migratory species. In extreme cases, this may require migrating to locations thousands of kilometres apart. Good examples of this are provided by some species of whale such as the northern right whale, and birds such as the albatross, the Siberian crane and the Arctic tern.

Migratory species inhabit a wide range of habitat. The habitats of migratory species are found in marine and coastal ecosystems, inland waters ecosystems, forest ecosystems, agricultural ecosystems, dry land ecosystems, mountain ecosystems and even urban environments. Within their migratory range some species, in particular migratory birds, may rely on habitats in more than one ecosystem.

2.1 The Risks Posed by Threats within a Migratory Range

One advantage of migration is that it allows a species to periodically exploit resources in areas that would not be otherwise suitable for continuous use. Importantly, migration also means that these animals are biologically dependent on the specific sites they find at the end of their journey and along the way. Consequently, migratory species are especially vulnerable to a wide range of natural and human-related threats.

Long migrations make some migratory species particularly vulnerable because habitat loss or other threats may cause regular relocation that, in turn, carries additional risks to their survival. Habitat loss and degradation at key sites needed at different stages in the migratory species' life and migratory cycles - sometimes called "bottleneck areas" - are the primary threats faced. Habitat loss at breeding sites, feeding grounds and resting or stopover sites present some of the gravest threats to migratory species. Other threats include those posed by hunting, fishing (incidental take or by-catch), pollution, alien species (invasive species and hybridisation) and general disturbance from human activities such as noise or tourism.

For example, ninety percent of the Atlantic population of the shelduck moults in one area in which oil exploration is currently taking place. A single oil spill could wipe out almost the entire population.

Migratory river dolphins and certain fish species are at risk from existing and planned dams that present physical barriers to their migration. Raptors migrating between Range States with different legal regimes on protection and exploitation are also threatened. In some Range States nesting pairs are protected during the breeding season, while in other Range States within their migratory range hunting is allowed year round.

The insidious threats of land degradation, including desertification, deforestation and climate change, impact on habitat and food availability. Individual and cumulative threats at important habitats and along migration routes are detrimental to the conservation status of many migratory species and have left some species critically endangered and at the brink of extinction.

2.2 Migratory Species: Valuable Components of Biodiversity Tying Ecosystems Together

The global importance of many migratory species as a component of biological diversity goes beyond their aesthetic values. Migratory species provide a number of *values to humankind* that parallel those of biodiversity mentioned in the CBD preamble. Examples include the ecological role played by ungulates in maintaining Sahelo-Saharan desertic and semi-desertic habitats, the genetic purity of the Bactrian camel, the socio-economic uses that many coastal communities have for marine turtles, the scientific values of some migratory species as indicators of ecosystem health, the educational and cultural values of cranes and the recreational values that many migratory species provide especially waterbirds.

It is important to emphasise that species and their populations are a component of biodiversity. In other words they contribute to the variety of life on Earth.

Species populations are biodiversity's basic building blocks - they are tangible manifestations of species and genetic diversity that contribute to and rely on ecosystems. Migratory species are a unique component of biodiversity because they move between States. They also move between States and areas beyond the limits of any national jurisdiction.

Conserving and sustainably using migratory species populations conserves intra- and interspecific diversity, within and between their populations. Migratory species conservation and sustainable use also benefit other components of biodiversity thereby benefiting biodiversity overall. For example, though the full extent is still fairly unknown and requires more research and monitoring, migratory species have *intricate interrelationships with nonmigratory or resident plant and animal species including endemics*.

What is certain is that carefully planned and executed efforts to conserve and sustainably use migratory species, especially their habitat, can almost always have significant "knock-on effects" beneficial to other associated resident and migratory species. Consequently, conservation and sustainable use actions targeted throughout a migratory species' range can also benefit significantly biodiversity throughout that range. Furthermore, some migratory species - those that are highly endangered or highly visible such as the Siberian crane and the slender-billed curlew - can act as "flagship species" because efforts to conserve them can draw attention to biodiversity conservation needs that improve prospects for their survival, that of other species, their habitat and a particular ecosystem as well.

Migratory species are also living threads that *tie or link widely scattered ecosystems together*. Migratory species' regular visits across long distances demonstrate not only their dependence on many of the world's ecosystems, but that those same *ecosystems are interdependent*. With their specific habitat and other requirements, some migratory species could be used as indicators of habitat and ecosystem health and, therefore, they may be useful as biodiversity indicators.

For example, the slender-billed curlew, a migratory shorebird that in 1994 was estimated to have declined to 200-300 individuals, is not directly hunted. There is unsubstantiated evidence however that habitat loss driven by agricultural conversion in key areas within its migratory range may be the primary cause of the bird's decline. Agricultural conversion is coincidentally the major cause of biodiversity loss worldwide.

Approaches taken to identify and eliminate the threats to the slender-billed curlew and its habitat could benefit greatly the species itself, species associated with its habitats and the ecosystems in which the habitats are found and, therefore, biodiversity overall. More research, monitoring and funding will be needed to establish the basis for using migratory species as indicators of biodiversity.

More broadly, migratory species may be *indicators of global change*, such as climate. For example, climate change may cause migratory routes to change as migratory species move to fulfil their nutritional or other requirements. Monarch butterflies are expanding their range to the north. The White Stork has expanded its range to the northeast into Russia. The changing migratory routes of whales are the subject of a working group established under the auspices of the International Whaling Commission. Expanded efforts including research, monitoring and funding are needed to establish why these and other migratory routes are shifting and to understand their implications.

2.3 Migratory Species: Common Biological Resources, Common Range State Responsibility to Conserve and Sustainably Use and the Need for Co-operation across a Migratory Range

Migratory species represent *common biological resources* and a *common natural heritage* because they move between States on their way to various habitats that fit their biological requirements. In some cases migratory species also move between States and areas beyond the limits of national jurisdiction, such as the high seas. The only other comparable but more limited example in biodiversity is transboundary ecosystems shared between two or more States.

As a common biological resource, migratory species provide every "Range State"[1] with different values. According to international law every Range State has the right to draw on these values pursuant to its own policies.[2]

At the same time, international law establishes that a Range State has the *individual responsibility* to ensure that the activities within its jurisdiction or control do not cause damage to the environment of other Range States or of areas beyond the limits of national jurisdiction. This is especially important for migratory species because threats within one jurisdiction have repercussions for the species throughout its entire range. In other words, threats in one State that adversely impact a migratory species diminish the possibility of other States located along a migratory route to also use and enjoy it.

Likewise, the beneficial impacts of individual actions by States to conserve and sustainably use migratory species as they pass within their jurisdiction or control are diminished by unmitigated threats in other Range States. The difficulties single Range States face to determine the biological and ecological requirements of a migratory species throughout its entire range in order to take appropriate action at the national level compounds this. Lack of information, financial resources and capacity are the primary problems. Perceptions of migratory species may also hinder individual State action.

For example, migratory animals often arrive in huge numbers for very short, seasonal periods (sometimes called "bottleneck seasons"), rely on the availability of natural resources and potentially cause great damage to local human populations. Often they are regarded as pests and are eliminated in considerable numbers (e.g., birds because of crop damage, dolphins and seals because they reduce fish harvests).

[1]A "Range State" in relation to a particular migratory species is any State...[or regional economic integration organisation]...that exercises jurisdiction over any part of the range of that migratory species, or a State, flag vessels of which are engaged outside the national jurisdictional limits in taking that migratory species" (CMS, Article I(1)(h)).

[2]See for example, CBD Article 3 (Principle).

Thus far, on a global scale, many migratory species are benefiting only as a result of *ad hoc* and *isolated conservation measures taken in various countries*, as they deem appropriate. Individual State action to conserve and sustainably use a migratory species can help its chances for survival when conditions change elsewhere. This may be especially the case in bottleneck areas and seasons.

But co-ordinating individual actions via international co-operation throughout a migratory range is the only practicable way to ensure additional benefits are derived for the concerned Range States and the migratory species at issue. In other words, to achieve conservation and sustainable use objectives many migratory species *require concerted action* and these actions must be *co-ordinated* internationally among Range States through *co-operative efforts.* It can be expected that *concerted/co-operative research, monitoring and conservation actions are more efficient and cost effective* than *ad hoc* individual measures in the Range States concerned.

That Range States share a *common responsibility* to undertake co-operative action to create the conditions to conserve migratory species as a global resource throughout their entire life cycle and migratory range. This is the fundamental principle underlying international co-operation on migratory species.

The principle of common State responsibility to conserve and sustainably use migratory species as a common biological resource is the foundation of CMS (CMS, preambular para. 5). It complements effectively the CBD's affirmation that the conservation of biodiversity is the common concern of humankind (CBD, preambular para. 3) and that within those areas under their jurisdiction or control States have the responsibility to conserve biodiversity and use biological resources in a sustainable manner (CBD, preambular para. 5).

3.0 Providing the Basis for Transboundary Co-ordinated and Concerted Action on Migratory Species: How the CMS Instruments Support the CBD's Substantive Obligations

The need for countries to co-operate to conserve wild animals that migrate across national boundaries, or between areas of national jurisdiction and areas beyond the limits of national jurisdiction (e.g., the high seas), was recognised in Recommendation 32 of the United Nations Conference on the Human Environment (1972). This catalysed the subsequent adoption of CMS (Bonn, 1979). It entered into force on 1 November 1983.

Over twenty-years later, CMS membership has broadened considerably. As of 1 June 2000, CMS will have 67 Parties from five geographic regions: Africa (22), Latin America and the Caribbean (6), Asia (7), Europe (30) and Oceania (2).

CMS aims to conserve migratory[3] (avian, marine and terrestrial) species over their entire range. CMS is elegant in its simplicity, functionality and flexibility.

As a true framework convention CMS provides the basis for its Parties to collect and evaluate reliable scientific data on the conservation status of hundreds of migratory species. Based on this Parties can then take concrete actions to conserve migratory species and their habitats in three ways.

First, its Parties are to adopt strict protection measures for migratory species that are in danger of becoming extinct throughout all or a significant proportion of their range (CMS, Article II(3)(b) and Article III). These are listed in Appendix I of the Convention.

Second, its Parties are encouraged to conclude "agreements" to conserve and manage migratory species listed in Appendix II (described below)(CMS, Article II(3)(c) and Article IV). This is based on the principle that every group of species has different living requirements and these need to be reflected in international agreements specific to their needs.

Third, its Parties are to undertake joint research and monitoring activities relating to migratory species (CMS, Article II(3)(a)).

The range of agreements that can be negotiated under CMS is an excellent example of its flexible nature (described further in Box 1). CMS can quickly target specific actions to those migratory species most in need.

Box 1. The Flexible Nature of the Convention on Migratory Species

Appendix I lists migratory species that are endangered. This determination is based on the best scientific evidence available (CMS, Article III(2)).

Appendix I currently includes more than 85 species. Some of the most notable migratory species listed include the Siberian crane, white-tailed eagle, hawksbill turtle, Mediterranean monk seal and dama gazelle.

[3]CMS defines "migratory species" as "the entire population or any separate part of the population of any species or lower taxon of wild animals, a significant proportion of whose members cyclically and predictably cross one or more national jurisdictional boundaries" (Article 1, para 1(a)); the word "cyclically" relates to a cycle of any nature, such as astronomical (annual etc.), life or climatic, and of any frequency; the word "predictably" implies that a phenomenon can be anticipated to recur in a given set of circumstances, though not necessarily in time (see Resolution 2.2 of the Conference of the Parties, Geneva 1988).

Migratory species can be removed from Appendix I when the CMS Conference of the Parties (CMS COP) makes two determinations. First, that reliable evidence indicates that the species is no longer endangered. Reliable evidence includes the best scientific evidence available. Second, that the species is not likely to become endangered again because its removal from Appendix I causes it to lose its protective status (CMS, Article III(3)).

CMS Parties that are Range States of Appendix I species must, at minimum, take three direct actions:

- Prohibit the "taking"[4] of individual animals;
- Conserve and restore important habitats; and
- Counteract factors that impede their migration, and control other factors that might endanger them.

Limited exceptions to the taking prohibition are allowed. The most notable exemption in terms of the CBD's implementation is that allowed for taking "to accommodate the needs of traditional subsistence users of such species" (CMS, Article III(5)(c)).

Appendix II lists migratory species which (1) have an unfavourable conservation status that require international agreements for their conservation and management, and (2) have a conservation status which would significantly benefit from the international co-operation deriving from an international agreement (CMS, Article IV(1)).

CMS Parties are to endeavour to conclude agreements for Appendix II species where these would benefit the species (CMS, Article IV(3)). Priority is to be given to those species with an unfavourable conservation status (CMS, Article IV(3)). The endangered species listed in Appendix I can also be listed in Appendix II.

These agreements in effect are separate international treaties whose object according to CMS is "to restore the migratory species concerned to a favourable conservation status or to maintain it in such status" (CMS, Article V(1)). Importantly, Parties to agreements do not have to be Parties to CMS, the parent convention (CMS, Article V(2)). This pragmatic approach expedites conservation action.

CMS further directs that each agreement should:

- Deal preferably with more than one species (CMS, Article V(3)); and
- Cover the species' whole range (CMS, Article V(2)).

CMS provides additional guidelines for the content of agreements. These need to be considered in relation to the particular species being addressed. The substantive guidelines have led to agreements that contain provisions that parallel the CBD's obligations on, for example, ecosystems, species, threats, research and public awareness.

At the same time the agreements go beyond the CBD in scope and detail because of the specificity needed to address individual and groups of migratory species. Most notably the guidelines provide that each agreement should include provisions to *inter alia*:

[4] "Taking" is "hunting, fishing, capturing, harassing, deliberate killing or attempting to engage in any such conduct" (CMS, Article I(1)(i))

- **$** Maintain a network of suitable habitat;
- **$** Conserve, restore and protect habitat;
- **$** Create co-ordinated species conservation and management plans;
- **$** Provide new favourable habitats or reintroduce the species into favourable habitats;
- **$** Identify periodically factors potentially harmful to the species' conservation status;
- **$** Address and exchange information on threats including factors impeding migration, substances harmful to migratory species, illegal taking and alien species;
- **$** Undertake co-operative research and monitoring;
- **$** Establish emergency procedures; and
- **$** Provide for public awareness.

In addition to agreements on Appendix II species, CMS encourages its Parties to "take action" to conclude other agreements to conserve any population or geographically separate part of the population of any species of wild animals which periodically cross-jurisdictional boundaries (CMS, Article IV(4)).

Article IV(4) has five practical implications. First, targeted legally binding agreements can be developed and concluded tailored to the specific needs of individual or groups of migratory species. Second, under this category of agreement, the geographic coverage does not have to extend to the whole migration range of the species concerned. Third, the species covered does not have to be listed in Appendix II. Fourth, the species does not even have to fall within the narrow definition of "migratory". Fifth, the basis has been provided to develop new administrative-types of agreements called memoranda of understanding (MOU).

The CMS COP recognised the need for fast and flexible international instruments such as MOU. MOU can achieve objectives similar to those of legally binding agreements. But unlike legally binding agreements, the commitments reflected in MOU are not mandatory. The advantage of MOU is that they can be negotiated and implemented very quickly.

An MOU co-ordinates short-term measures to be taken by the Range States at the administrative and scientific levels. Consequently, lengthy ratification procedures are avoided. For the time being MOUs are directed towards immediate protection measures for endangered species.

MOU cannot create new commitments for the Range States involved and reflect refinements of already existing commitments. This allows the ministries of the Range States concerned to conclude an MOU to initiate immediate concerted protection measures for seriously endangered species until a more elaborate conservation strategy can be prepared and adopted. The actions to be taken collectively and more specific measures to be implemented in each country are described in the MOU.

As a demonstration of their flexibility, MOU can evolve into more formal and legally binding CMS agreements if the members agree. MOU can also be incorporated into an action or conservation management plan that could lead to a broader and more comprehensive CMS agreement later.

Furthermore, the CMS Instruments represent a continuum of specificity. In other words, the general obligations of CMS itself give way to more concrete obligations reflected in subsequent agreements and action plans negotiated under CMS auspices.

Importantly, even where the actual legal instrument may seemingly not be very detailed, its accompanying conservation and management plan (or action plans), along with the decisions of its Parties, all help to focus and particularise the actions the Parties need to take to improve or maintain the conservation status of the individual or group of migratory species addressed. Invariably, these actions will meet or exceed the broader, more general obligations embodied in the CBD.

Action plans represent the most detailed manifestations of an agreement's obligations. They are integral to the agreements concluded. They address activities that the group of States party to a particular instrument needs to take, as well as more specific actions each individual State should take.

Action plans are flexible. They are kept under review by the Conference of Parties of the respective agreements and evolve as the conservation status of the migratory species addressed changes. Such decisions are influenced by available scientific information, some of which may be generated under the agreement.

Eight instruments[5] have now been concluded to address Appendix II and other migratory species. In addition, an action plan on Sahelo-Saharan antelopes was adopted in 1998. A number of additional co-operative actions are underway to address other migratory species such as the Houbara and great bustards, the great cormorant, albatross, northern Indian Ocean marine turtles and sturgeon.

Table 1 indicates that the existing CMS Instruments intersect with at least twenty-three of the CBD's substantive provisions. In other words, the provisions of the CMS Instruments require their Parties to undertake a number of actions that coincide with those required by the CBD. This is especially apparent for the CBD ecosystem and species-based measures (Article 8), those on identification and monitoring (Article 7), research and training (Article 12), public education and awareness (Article 13), information exchange (Article 17) and technical and scientific co-operation (Article 18).

Perhaps the two most important intersections have to deal with CBD actions applicable to processes and activities that affect biodiversity, the CBD's most innovative and potentially far-reaching provisions. Like CBD Articles 7(c) and 8(l), all CMS Instruments require their Parties to identify threats to the migratory species that they address and to regulate or manage those threats.

In addition, all CMS subsidiary agreements require their Parties to endeavour to make present uses of biodiversity compatible with conservation and sustainable use (CBD Article 8(i)). This is a key consideration where long-standing human activities, such as hunting and fishing, pose a threat to migratory species and their habitat.
The important point to take away from this comparison is that the primary mode of operation of the CMS Instruments is at the global and regional levels in the context of a specific, globally significant component of biological diversity: migratory species. This is in contrast to CBD obligations that are more general in nature and are defined ultimately at the country-level through the biodiversity planning process.

The biodiversity planning process is the only mechanism required by the CBD through which migratory species can be considered at the national level. Furthermore, since priorities listed in the resulting biodiversity strategy and action plan are the basis for financial decisions under the CBD's financial

5The concluded agreements are the (1) Agreement on the Conservation of Seals in the Wadden Sea (1990); (2) Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) (1991); (3) Agreement on the Conservation of Bats in Europe (EUROBATS) (1991); (4) Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) (1995); (5) Agreement on the Conservation of Cetaceans of the Mediterranean and Black Seas (ACCOBAMS) (1996); (6) Memorandum of Understanding Concerning Conservation Measures for the Siberian Crane (1993); (7) Memorandum of Understanding Concerning Conservation Measures for the Slender-billed Curlew (1994); and (8) Memorandum of Understanding Concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa (1999).

mechanism overseen by GEF, overlooking migratory species issues can have important financial ramifications (see Section 6.2).

CBD COP Decision III/21 urged CBD Parties to fully incorporate migratory species and their habitats into their biodiversity strategies and action plans. The CMS Instruments provide the basis for their Parties and non-Party Range States, who may or may not be Parties to CBD, to deepen their treatment of migratory species through species-specific conservation and management plans and to do this in global and regional legal frameworks that encourage and support co-operative action. The extent to which migratory species are addressed in national biodiversity strategies and action plans is unknown.

Most significantly, the CMS Instruments make the important link between individual and groups of migratory species, their habitat needs and the various threats with which these species are faced. Action is targeted at global, regional, national and local levels.

4.0 The CMS Instruments Intersect With All CBD Thematic Areas

Table 2 indicates that the CMS Instruments cut across all thematic areas addressed thus far by the CBD. This is accomplished in varying degrees of detail and no effort will be made here to examine every way in which the CBD work programme is supported and deepened by the CMS Instruments. What follows are highlights of the strongest areas of intersection drawn from Table 2. Contributions to the CBD work programme are suggested.

4.1 Marine and Coastal Biodiversity

Table 2 indicates that five of the CMS Instruments (CMS, Wadden Sea Seals, ASCOBANS, ACCOBAMS and Turtles) deal directly with marine and coastal biodiversity. Two others, AEWA and the Slender-billed Curlew MOU, also address migratory waterbirds whose migratory ranges may include marine and coastal ecosystems. Table 2 shows that with the exception of mariculture at least two CMS Instruments address each programme element of the CBD marine and coastal biodiversity work programme.

CMS and AEWA address alien species for both terrestrial and marine environments. Under CMS, Range State Parties are to strictly control alien species introductions, or control or eliminate already introduced alien species if they endanger or are likely to endanger appendix I species (CMS, Article III(4)(c)). Furthermore, according to the guidelines for CMS, agreements for appendix II species should provide for the strict control of aliens that are detrimental to the migratory species addressed (CMS, Article V(5)(e)).

AEWA and its action plan are particularly explicit on alien introductions as they affect migratory waterbirds in the agreement area (AEWA, Article III(2)(g) and Action Plan, para. 2.5.1). Deliberate releases of non-native waterbirds and other animals and plants are prohibited. Precautions are to be taken to avoid accidental escapes of non-native captive birds. Measures are to be taken to ensure that introduced non-native species and hybrids do not pose a potential hazard to birds listed in AEWA Table 1.

AEWA Parties could generate case studies on alien species and migratory waterbirds as a contribution to the CBD's marine and coastal work programme, or the CBD's broader work on alien species.

The CBD programme elements on integrated coastal area management (ICAM), marine and coastal living resources and marine and coastal protected areas have the most intersections with CMS Instruments. The implementation of the Wadden Sea Seals Agreement, ASCOBANS, ACCOBAMS, the Slender-billed Curlew MOU and the Turtles Agreement all support implementation of these CBD programme elements. Especially noteworthy is the fact that the Seals Agreement and the two cetacean agreements target species high in the food web of five readily definable marine areas: the Wadden Sea, the Baltic and North Seas and the Black and Mediterranean Seas. The approaches taken under these agreements all contribute to regional, and hence ecosystem, approaches to conserve and sustainably use the biodiversity of these four water bodies.

For example, the Seals Agreement preamble importantly recognises seals as an "irreplaceable component of the Wadden Sea ecosystem and important indicators of its condition". Furthermore, its conservation and management plan (CMP) importantly recognises that "the seals of the Wadden Sea belong to one population and are an integrated part of the Wadden Sea ecosystem".

Seals will be examined to determine if they can be used as indicators of the condition of the Wadden Sea environment, especially with regard to pollution, a critical threat. Pollution monitoring is a key component of this endeavour (Seal Agreement, Article VIII). An important additional component of the indicator work, and other seals work, is co-ordinated research and monitoring by the Parties on population trends, seal migration and seal population parameters (Seals Agreement, Article V).

The Seals Agreement also recognises the importance of creating a network of protected areas in the seals' migration areas and the importance of an adequate number of reserves. Reserves are to be monitored to ensure that they cover the main seal birth, nursery and resting areas. Seals are to be protected from undue human disturbances within the agreement area such as fishing by-catch and airplane noise. This is to take place inside and outside protected areas.

The key priority actions of ASCOBANS that relate to the CBD marine and coastal biodiversity work programme include developing action plans to implement the agreement's CMP. Focus areas include pollution reduction, direct and indirect interactions between small cetaceans and fishing activities, reducing direct and indirect disturbances, monitoring status, population studies and education and promotion (ASCOBANS MOP1, Res. 2 and CMP, paras. 1-5).

Parties are to undertake further research on small cetaceans that will focus on abundance, life history, migration patterns and population structure (ASCOBANS MOP2, Resolution on Further Implementation of ASCOBANS and CMP, para.2). Co-ordinated and shared investigations between Parties and international organisations on population/stock status and seasonal movements, important areas for survival and present and potential threats are also envisioned.

Key threats to small cetaceans in the agreement area are by-catch and human disturbance. The ASCOBANS advisory committee will continue to gather and assess by-catch information (MOP1, Res. 2). Guidelines will be developed to reduce other human disturbances (ASCOBANS MOP1, Res. 2).

Finally, ASCOBANS encourages its Parties to work with others to develop criteria to define marine protected areas for small cetaceans (ASCOBANS MOP1, Res. 2).

ACCOBAMS and its conservation plan have yet to enter into force. They focus on many of the same issues as ASCOBANS, but apply to large and small cetaceans covered by the agreement and will be relevant to the CBD's marine and coastal biodiversity work programme when they enter into force. The ACCOBAMS Conservation Plan has particularly strong language on threats to cetaceans including those posed by fishing activities and related by-catch and pollutants (ACCOBAMS Conservation Plan, paras. 1 and 2).

Drift nets longer than 2.5 km are to be banned. Legislation is to be enacted to prevent the discard and drift of fishing gear and to require the immediate release of cetaceans caught as by-catch. Pollutants are to be regulated.

In addition, Parties are to collect and analyse data on direct and indirect interactions between humans and cetaceans concerning *inter alia* fishing, industrial and tourist activities and land-based and marine pollution. From this, remedial actions are to be taken. Guidelines and codes of conduct will be developed to facilitate regulation and management.

Finally, Parties are to create a network of specially protected areas in the agreement area (ACCOBAMS Conservation Plan, para. 3). These are to correspond to the needs of cetaceans.

The Seals Agreement, ASCOBANS and ACCOBAMS can contribute to key activity areas in each of the three CBD marine and coastal biodiversity programmes elements. All three agreements are key mechanisms in ICAM. They promote adequate protection of areas for reproduction as well as other habitats important to migratory species. They are key regional instruments to reduce and control sea- and land-based sources of pollution that impact not only upon the migratory species that they target but other species as well.

The organisms targeted by the three agreements may be useful as indicators upon which to base decision-making. The Seals Agreement, ASCOBANS and ACCOBAMS make important contributions to research, monitoring and assessment of coastal ecosystems and their living resources.

Experience gained from identifying key habitats on a regional basis, from focussing action and developing policies to prevent physical habitat alteration and destruction and establishing marine protected areas for seals and cetaceans could contribute valuable information to the CBD's work on marine protected areas. The agreements could also contribute to the CBD activities on research and monitoring into the value and effects of marine protected areas and the development of criteria to establish and manage marine protected areas.

Information exchange is promoted between each agreement's Parties. The information generated pursuant to these instruments could make important contributions to the further development of the CBD especially if made available through the CBD Clearing House Mechanism (CHM). Experts within these fora could contribute to the CBD's roster of experts if nominated by their respective governments.

4.2 Inland Waters Biodiversity

Table 2 indicates that four of the CMS Instruments are relevant to the CBD work programme on inland waters biodiversity. CMS, the AEWA and, to a lesser extent, the Siberian Cranes MOU and the Slender-billed Curlew MOU directly address inland waters biodiversity.

Collecting, reviewing and assessing information on the conservation status of migratory species is the primary mode of operation of CMS and its instruments. As the only global convention addressing comprehensively migratory species, including those that depend on and are a component of inland waters biodiversity, CMS is the major global repository of expertise in this area. AEWA, however, could make the most important contribution to the CBD inland waters biodiversity work programme.

The AEWA, with a mode of action similar to CMS, is the major regional repository of expertise on African-Eurasian waterbirds. In particular, AEWA requires its Parties to carry out surveys of poorly known areas to identify populations of migratory waterbirds within its scope of application (AEWA Action Plan, para. 5.1).

Furthermore, harmonised and joint research and monitoring into the biology and ecology of migratory waterbirds is to take place (AEWA, Article III(2)(h)) along with studies on the effects of wetlands loss, degradation and disturbance on the carrying capacity of wetlands used by the species it covers (AEWA Action Plan, para. 5.6). Parties are to exchange information including the results from research, monitoring and conservation programmes (AEWA Action Plan, para. 6.4).

The AEWA has two important additional features to support the implementation of its action plan. These will contribute greatly to inland waters biodiversity conservation and sustainable use.

First, nine sets of conservation guidelines have been developed under AEWA (AEWA Action Plan, para.7.3). The guidelines have already been promulgated to address nine important subject areas within the agreement area:

- **$** Preparing single species plans;
- **$** Identifying and tackling emergency situations;
- **$** Preparing site inventories;
- **$** Managing key sites;
- **$** Harvesting sustainably migratory waterbirds;
- **$** Regulating trade in migratory waterbirds;
- **$** Developing ecotourism at wetlands;

- Reducing crop damage, damage to fisheries and other forms of conflict between waterbirds and human activities; and

$ Developing waterbird monitoring protocols.

The guidelines represent an extremely important source of "how to" information for AEWA Parties and may be adaptable to situations outside the agreement area.

Second, regularly updated international reviews in seven enumerated areas important to the AEWA's implementation will be completed. Among these, international reviews will be completed to survey (1) population status and trends, (2) information gaps, (3) the network of sites used by migratory waterbirds in the agreement area and (4) the status of introduced non-native waterbird species (AEWA Action Plan, para. 7.4).

In addition to their existing contributions, the work of CMS and, in particular, AEWA could contribute greatly to the CBD work programme by generating concrete information on migratory species that are components of inland waters biodiversity and that rely on the same within their migratory range. Further collaboration between the CBD and these instruments can support the CBD work programme elements on:

$ Assessing the status and trends of inland waters biodiversity and identifying options for conservation and sustainable use;

- SBSTTA's complementary work to *inter alia* (a) develop an improved picture of inland waters biodiversity, (b) disseminate regional guidelines for rapid assessment, (c) compile examples of alien invasive species' impacts and (d) use protected areas to conserve and sustainably use inland waters ecosystems (CBD COP, Decision IV/3);

$ The further elaboration of CBD Annex I for inland waters biodiversity in particular criteria and classification of inland waters ecosystems between the CBD and Ramsar; and

$ The review by CBD Parties of methodologies to assess inland waters biodiversity.

The mode of collaboration can be by direct participation in meetings organised to address these issues, making materials such as guidelines available through the CBD CHM, case studies and information exchange between the secretariats and expert participation through government nominations to the roster of experts.

4.3 Forest Biodiversity

Table 2 indicates that four CMS Instruments are relevant to the CBD work programme on forest biodiversity. CMS and the EUROBATS Agreement directly address migratory species that are components of or rely on forest biodiversity. AEWA, the Siberian Cranes MOU and the Slender-billed Curlew MOU address migratory species that may be transient components of or rely on forest biodiversity along their migration routes. Future CMS Instruments may address the African elephant and mountain gorillas.

The CBD forest biodiversity work programme is research-oriented, although SBSTTA V recommended expanding the work programme to practical actions to urgently address forest biodiversity conservation and sustainable use measures (SBSTTA, Recommendation V/7). The fourth element of the work programme addresses research and technological priorities identified by SBSTTA II in recommendation II/8.
Some of the proposed CBD research areas to which the CMS Instruments may already be contributing include:

- $ Developing criteria and indicators for forest quality and biodiversity conservation;
- $ Identifying options to mitigate fragmentation such as corridors;
- $ Analysing scientifically the ways that human activities (in particular forest management practices) influence biodiversity; and
- $ Assessing ways to minimise or mitigate negative influences.

The CMS Instruments may be able to make other contributions to developing the ecosystem approach as it relates to forest biodiversity (CBD programme element one) because conserving and sustainably using migratory species demands the application of ecosystem approaches and approaches to address species-specific threats and other needs across a particular migratory range (see Section 5.2).

The CMS Instruments may also contribute to the CBD forest biodiversity programme under programme element two (identifying and minimising or mitigating the negative influences of human activities on forest biodiversity). In this context, EUROBATS could make an important contribution because chemical timber treatments and forestry practices are addressed within EUROBATS.

For example, Parties to EUROBATS are to replace timber treatments highly toxic to bats with safer alternatives (EUROBATS, Article III(8)). The approval and use of remedial timber treatment products used by Parties should account for possible effects on bats (EUROBATS MOP2, Res. 8). Assessment methods are to be refined.

More important, EUROBATS recognises that forest loss or unsympathetic management results in the loss of bat roosting and foraging opportunities and represent significant threats to bats in the EUROBATS agreement area. The EUROBATS work programme includes a transboundary project to develop guidelines on bat-friendly forestry practices in Europe (MOP2, Res. 4).

Country level surveys will assess the implications to bats of current forestry practices, including deforestation, afforestation, reforestation, management, design, age structure and species composition. The value of general conservation initiatives and those specific to bats, as well as the distribution and continuity of forest patches, will be investigated.

The objective is to use this information as the basis for policy change or proposed actions. The application of consistent standards throughout the entire agreement is sought. When completed, the forestry guidelines could be shared through the CBD CHM.

4.4 Agricultural Biodiversity

Table 2 indicates that five CMS Instruments intersect with the draft CBD agricultural biodiversity work programme.

Agricultural practices include such activities as conversion, overgrazing and pollution from agricultural runoff. Some agricultural activities such as agricultural conversion are major threats to wetlands important to migratory waterbirds, while some activities may actually sustain migratory species populations.

For example, the wetland habitats of the Siberian crane are increasingly threatened throughout its migratory range. But its western population over winters in the flooded harvested rice fields of northern Iran along the southern shores of the Caspian Sea. To help to secure the crane population, the action plan for the western population seeks to obtain long-term leases in large sections of the rice fields with low pesticide levels (Siberian Crane Action Plan, para. 1.3.1).
The Sahelo-Saharan antelopes present another example. They must compete with livestock for suitable grazing areas and over-grazing has led to habitat damage. The Djerba Declaration accompanying the Sahelo-Saharan Antelope Action Plan calls for investigations into the species' role

in habitat restoration and the relationship between antelope and cattle species. Educational programmes to counteract the effects of over-grazing by domestic stock will be instituted (Antelopes Action Plan, para. 2.3.2).

Persistent organic chemicals in agricultural runoff bioaccumulate in migratory waterbirds, seals and cetaceans. They can cause chronic and acute adverse effects, even death. These chemicals also can directly threaten migratory bats and their food sources. The CMS Instruments work to counter these threats.

For example, EUROBATS requires its Parties to assess carefully the impact of pesticides such as anti-parasitic drugs and to give advice to land managers on their effects on bats (EUROBATS MOP2, Res. 8). AEWA directs it Parties to ensure adequate statutory controls on agricultural chemicals and pest control procedures (AEWA Action Plan, para. 3.2.4). The Seals Agreement directs Parties to reduce pollution levels into the Wadden Sea "from whatever sources" (Seals, Article 8).

Pollution reduction is a priority area for action plans under the ASCOBANS CMP (ASCOBANS CMP and MOP1, Res. 2). ACCOBAMS Parties will be required to collect and analyse data on direct and indirect interactions between humans and cetaceans in relation to *inter alia* land-based pollution such as pesticides and other chemicals in agricultural runoff (ACCOBAMS Conservation Plan, para. 2).

Migratory species, especially birds, can also damage crops and aquaculture operations. The AEWA has developed conservation guidelines on reducing crop damage, damage to fisheries and other forms of conflict between waterbirds and human activities (AEWA Action Plan, para. 7.3). Some of the AEWA exemptions to the taking of enumerated waterbird species include those to prevent serious damage to crops, water and fisheries (AEWA Action Plan, para. 2.1.3).

In addition to the substantive work they already carry out, the primary additional contribution the CMS Instruments can make to the CBD's draft agricultural biodiversity work programme is to promulgate experience and lessons learned in the form of case studies under programme element two (Adaptive Management).

Through their Contracting Parties, the CMS Instruments can specifically contribute to one of the proposed activities: identifying and disseminating information on cost-effective practices and technologies, and related policy and incentive measures, to enhance the positive and mitigate negative impacts of agriculture on biodiversity. CMS Parties also party to the CBD could nominate experts on the relationship between migratory species and agricultural biodiversity to the CBD agricultural biodiversity roster of experts.

4.5 Dry and Sub-humid Biodiversity

Migratory species are especially prevalent in dry and sub-humid climates. Table 2 indicates that the draft CBD work programme on dry and sub-humid biodiversity could be supported by work undertaken by five CMS Instruments: CMS, AEWA, the Siberian Cranes MOU, the Slender-billed Curlew MOU and the Sahelo-Saharan Antelopes Action Plan.

The AEWA and the Siberian crane and slender-billed curlew instruments address migratory waterbirds that use wetland ecosystems in dry and sub-humid landscapes within their migratory ranges. The Antelopes Action Plan addresses a terrestrial or land-based species.

The primary focus of these instruments is to improve or maintain the conservation status of the targeted species, including protecting and restoring their habitat. Research and monitoring are the primary tools for determining the conservation status of the targeted species. Therefore, each of the

instruments could support all of the following activities under the assessment component of the draft CBD work programme:

- Assessing the status and trends of the biodiversity of dry and sub-humid lands;
- Identifying specific areas of particular value for biodiversity or under threat pursuant to CBD's annex I;
- Developing indicators;
- Building knowledge on the processes that affect biodiversity of dry and sub-humid lands;
- Identifying local and global benefits; and
- Identifying and disseminating best management practices.

Consideration could be given to consolidating available information and providing case studies.

The CMS Instruments' action-oriented approach is to tailor conservation and sustainable use activities throughout a species' or group's entire migratory range. This coincides with dry and sub-humid biodiversity management which may need to take place at local, national and regional levels according to an ecosystem approach combined with measures that are species-specific. The primary tools for this are protected areas and strict species protection leading to managed use.

Protected areas need to target suitable habitat areas. Migratory corridors between areas of suitable habitat may need to be created or maintained. Habitat restoration may also be needed and represents an especially important aspect of the CMS Instruments such as the Antelopes Action Plan.

Strict protection giving way to the possibility for sustainable use, especially regulated hunting supported by educational measures, is an element of AEWA and the Antelopes Action Plan. To attain this in part, AEWA requires the enumeration of international single species action plans for designated waterbird species. National single species action plans are required in enumerated instances as well (AEWA Action Plan, paras. 2.2.1 and 2.2.2).

Sustainably using some of the Sahelo-Saharan Antelopes will first require captive breeding for purposes of reintroduction and reestablishment, combined with strict protection measures for those individuals surviving in the wild and to be reintroduced. Appropriate forms of animal husbandry will need to be encouraged to prevent conflicts, restore range conditions and prevent over-grazing. Possibilities for alternative livelihoods based on the antelope will be sought. A primary activity will be valorisation of the antelope within the migratory range.

All of the measures just described will provide the basis for the CMS Instruments to support the second element of the draft CBD work programme: targeted actions in response to identified needs. Demonstration sites under these instruments could contribute to the proposed network of designated demonstration sites, case studies could be undertaken, and improved consultation, co-ordination and information gathering and sharing could take place between the CBD, UNCCD, Ramsar and the CMS Instruments (SBSTTA, Recommendation V/8).

5.0 Intersections with CBD Crosscutting and Other Issues

Table 2 indicates that the CMS Instruments intersect with all the "crosscutting and other areas" addressed thus far by the CBD. This is accomplished in varying degrees of detail. This study highlights some of the intersections.

5.1 Alien Species

Invasive alien species are specifically addressed in CMS and the AEWA. Their provisions have been described in Section 4.1 on marine and coastal biodiversity.

In addition to their ongoing substantive work on aliens, case studies submitted by their respective Parties are another way the CMS Instruments could contribute to the CBD aliens work programme (SBSTTA, Recommendation V/3). Furthermore, the CMS Instruments could work with the CBD Executive Secretary on potential joint work programmes dealing with aliens. This would support the recommendation from SBSTTA V to COP V to request the Executive Secretary to co-operate with international bodies, such as CMS, with the aim to co-ordinate work on alien species and to report to SBSTTA's sixth meeting on potential joint work programmes (SBSTTA, Recommendation V/3).

5.2 Ecosystem Approach

The CMS Instruments early on recognised that holistic and integrated measures were needed to address migratory species conservation and sustainable use. This is because the habitats of migratory species are found within a wide range of ecosystems across a number of Range States. Maintaining the structure and function of these ecosystems is therefore critical to the ultimate survival of migratory species and their habitats. Therefore, the CBD's ecosystem approach should be useful as a tool for migratory species conservation and sustainable use.

But solely focussing on habitat conservation may not produce the best results if other threats and needs unrelated to habitat go unaddressed. For example, ecosystem level and species-specific threats in one Range State can negatively impact a migratory species throughout its entire range. Therefore, to ensure maximum success, in most cases a species' migratory range should be taken as the management level. In other words, something approximating a "migratory range approach", is desirable to achieve for almost all migratory species. Co-ordinated regional actions are needed for this to occur. A good example of the migratory range approach is the "fly-way approach" adopted for migratory birds under AEWA, the Siberian Crane MOU and the Slender-billed Curlew MOU.

Ideally, conservation and sustainable use actions deployed in a migratory range approach would operate flexibly at two interrelated levels. First, habitats important to migratory species must be conserved and sustainably used through an ecosystem approach.

Second, species-specific threats and other needs such as assessment and monitoring, capacity building or public education and awareness must be addressed. This is because migratory species move between habitats, ecosystems and Range States and in many cases they are subject to species-specific threats along the way. In addition, information on threats and conservation status is incomplete and conservation and sustainable use efforts are constrained by limited and varied capacity and awareness within Range States.

Flexibility is a key consideration. A blend of ecosystem and species-specific actions may need to be developed on a case by case basis. The blend will depend on the circumstances. Furthermore, some situations may favour approaches focussing on single species or groups of species.

The geographical scope of the migratory range approach may also vary depending on the circumstances. For example, action in only one Range State would not necessarily be precluded provided it is informed by the threats to and needs of the species' in other Range States.

Flexibility is especially needed in two situations. For example, emergency situations involving highly endangered populations may require targeted actions at very localised levels. This has been the case for the Cap Blanc Colony of Mediterranean monk seals in Mauritania and the Bactrian camel in China. In addition, there may be instances where relieving threats to migratory species at a particular bottleneck site within a Range State may be advantageous and should be considered because it will help the species throughout its range.

Because of the need to operate flexibly at two levels, migratory species do not fit neatly into the CBD's evolving concept of "ecosystem approach", especially as it is presently applied through the Convention's financial mechanism (see Section 6.2). In fact, the migratory range approach as just described operates at a management level higher than the ecosystem approach.

The principles and guidance recommended by SBSTTA V to COP V recognise that the "ecosystem approach does not preclude other management and conservation approaches, such as...single species conservation programmes...but could...integrate all these approaches and other methodologies to deal with complex situations" (SBSTTA, Recommendation V/10). Furthermore, it is recognised that there is "no single way to implement the ecosystem approach, as it depends on local, provincial, national, regional or global conditions". Therefore it appears that a migratory range approach is not precluded by the ecosystem approach. By incorporating the ecosystem approach as an operative element, the migratory range approach supports the former's further application.

In addition to their existing substantive contributions, the CMS Instruments together can make important additional contributions to the CBD process to further elaborate the ecosystem approach particularly as it relates to migratory species. Case studies could be submitted and lessons shared by those Parties to both CMS and CBD to demonstrate how the ecosystem approach applies to different migratory species within the context of the migratory range approach. These could be disseminated through the CBD CHM.

The CMS Instruments could also provide comments and advice to SBSTTA in its elaboration of guidelines to implement the ecosystem approach (SBSTTA, Recommendation V/10). As input into this undertaking, the CMS and CBD Secretariats could work together to examine the role of the ecosystem approach in the migratory range approach needed for migratory species. A joint technical workshop could be considered. This could also support the further examination of the ecosystem approach as it is applied to migratory species projects under the CBD's financial mechanism (see Section 6.2).

5.3 Global Taxonomy Initiative

Taxonomic information for migratory species has a number of gaps. For example, an accurate figure has yet to be established on the total number of migratory species in the world.

CMS hopes to overcome this important gap through the Global Registry of Migratory Species, which is being developed in co-operation with Bonn University. The Global Registry is envisaged as a contribution to the Global Taxonomy Initiative. The information will also be made available through the CMS WWW site and the CBD CHM. This would support COP Decision IV/1 whose annex suggested making taxonomic information, literature and checklists available in electronic form.

In addition, CMS could participate in the short-term activities recommended to COP V to prioritise the most urgent global taxonomic needs as they pertain to migratory species (SBSTTA, Recommendation V/3).

5.4 Incentive Measures

In contrast to the CBD, CMS does not directly address incentive measures though it is addressing the related issue of sustainable use (see Section 5.9).

Command and control legal measures have been the primary mode of action to ensure strict protection and provide for sustainable use. Notwithstanding this, Table 2 indicates that five CMS Instruments are examining incentive measures to either support command and control legal measures or as alternatives to them.

For example, EUROBATS Parties are to consider protecting roost sites and feeding habitat sites by applying statutory or voluntary measures (MOP2,Res. 8). The Turtles Agreement (para. 3) states that national action plans should take into account the needs of local people.

The action plans to the Siberian Crane MOU emphasise rewards and incentives to the local people of the central and western populations (Central and Western Population Action Plans, para. 1.1.6). Conservation incentive programmes are to be developed for waterfowl hunters in Iran (Western Population Action Plan, para. 1.1.7).

Spectacular assemblages of migratory waterbirds can generate financial and other incentives for local communities to conserve the birds themselves and the habitats and ecosystems upon which they depend as well. In so doing, associated species sharing the same habitats and ecosystems may also be conserved benefiting consequently biodiversity overall. Ecotourism could provide additional incentives for subsequent sustainable uses such as hunting. Parties to AEWA are to evaluate costs, benefits and other consequences of ecotourism at selected sites (AEWA Action Plan, para. 4.2.2).

The Action Plan for the Conservation and Restoration of Sahelo-Saharan Antelopes was concluded under CMS auspices in 1998 to address six species of antelope. Five of the six are extremely endangered with one perhaps being extinct in the wild. If the conservation status of these antelopes could be stabilised local communities could put them to socio-economic use thereby creating an incentive to further conserve and sustainably use the populations. There are a number of possibilities for subsistence and sport hunting, use of the leather and ecotourism.

The Antelopes Action Plan and the Djerba Declaration, an output of the Seminar on the Conservation and Restoration of Sahelo-Saharan Antelopes (1998), recognise the socio-economic potential of these antelopes and the direct and indirect incentives that could help to ensure their conservation and sustainable use. To create direct incentives, surplus animals will be exploited, while the animals will be studied for other uses such as wildlife viewing, hunting and game farming.

Also recognised is the need for protected areas to include buffer zones where local communities can benefit from the natural resources located there. Participatory approaches to decision making on conservation actions will be promoted to create indirect incentives.

In addition to their existing work, Parties to the CMS Instruments could share through the CBD CHM lessons learned from their work on incentive measures in the form of case studies.

5.5 Indicators, Assessment and Monitoring of Biodiversity

There are enormous information gaps on migratory species. Notwithstanding this, many actions under CMS, such as listing in its appendices and negotiating additional agreements, are based on the availability of basic scientific information. This information describes the conservation status of the particular species or group of species in question.

Information is collected from experts in the field both from individuals and scientific organisations. It is then compiled, some of it for the very first time.

The CMS Instruments generate new and additional information on migratory species through this process. The CMS COP and individual Parties and non-Parties that are Range States use this information to determine whether further action is needed for a migratory species. One of the most

important contributions the CMS Instruments have made to regional and global biodiversity conservation and sustainable use efforts has been to provide fora into which this scientific information can be introduced and used as the basis for conservation and sustainable use actions.

Under the CMS Instruments scientific information drives decision-making. Decision-making is science-based. Assessment and monitoring is at the heart of determining conservation status.

All of the CMS Instruments require their Parties to research and monitor the migratory species they address. Parties are to exchange this information amongst themselves. EUROBATS is an informative example of the work that CMS Instruments undertake because the distribution and migratory patterns of many migratory bats are still unknown.

EUROBATS has been effective in its work to assess and monitor bat populations throughout the agreement area. It has developed consistent methodologies that could be applied throughout the agreement area.

In 1998, at its second meeting, the EUROBATS Meeting of Parties (MOP) directed Parties to use "Guidelines on the Recommended Methodologies to be Employed for the Monitoring of Bat Species in Europe". The guidelines recognise that no single methodology would be appropriate for all European bats and that each species may require individual monitoring methodologies. The guidelines provide guidance on general monitoring methodologies as well as methodologies for a limited number of specific species and species groups.

The MOP took a number of decisions to support further monitoring and assessment. It cited the need to establish a database of monitoring activities and results, to regularly monitor multi-species assemblages of bats and to develop methodologies for sample surveys of flying bats. In addition, roost sites for rare bat species and important bat feeding habitats need to be identified (MOP2, Res. 2 and 8).

AEWA provides another good example. Paragraph 5.2 of the AEWA action plan requires Parties to endeavour to monitor the populations of listed waterbirds. The results are to be made available to international organisations so that population status and trends can be reviewed. Under paragraph 5.3, Parties are also required to co-operate to improve bird population measurements as a criterion to describe population status.

Finally under paragraph 5.8, Parties agree to co-operate with relevant international organisations to support research and monitoring. To facilitate monitoring throughout the agreement area, conservation guidelines for a waterbird monitoring protocol have been promulgated under AEWA.

The guidelines examine the value of monitoring to conserve migratory waterbirds. They also review existing monitoring practices and provide guidance to develop national waterbird monitoring schemes for international conservation efforts. Waterbird assessment and monitoring under AEWA will also be facilitated by regularly updated international reviews of (1) population status and trends, (2) information gaps, and (3) the status of introduced non-native waterbird species (AEWA Action Plan, para. 7.4).

Assessing the status and trends of biodiversity is an activity common to all of the CBD thematic approaches. The contribution of the CMS Instruments to these aspects of the CBD work programme has already been mentioned earlier.

CBD COP IV adopted the recommendations of SBSTTA III on biodiversity indicators. A two-track approach was recommended.

The first track would focus on sectors and components of biodiversity that are reasonably well known and understood. Indicators known to be operational would be used. The second track would focus on

longer-term programmes involving research and capacity building in areas that need further development (SBSTTA, Recommendation III/5).

A liaison group was formed and a proposed core set of quality and pressure indicators was elaborated for SBSTTA V. Migratory species, however, were not listed as possible indicators even though some species may be useful as indicators of biodiversity. This may be due to the country-specific focus taken and the emphasis placed on indicators for national reporting under the CBD. In addition, SBSTTA may not have been aware of the potential usefulness of migratory species as indicators.

In addition to their existing work, under the activities proposed by SBSTTA to COP V the CMS Instruments could contribute to;

- Developing a set of principles to design national-level monitoring programmes and indicators;

- Elaborating a key set of standard questions and a list of potential available indicators that may be used by CBD Parties at the national level as well as in national reporting and for regional and global overviews; and

- Regional co-operation on indicators, monitoring and assessment and any regional workshops initiated by the CBD.

The experiences of the CMS Instruments and their Parties could be shared as case studies through the CBD CHM.

Guidelines developed under the CMS Instruments could also be shared via the CBD CHM. Joint CMS/CBD work to explore the usefulness of migratory species as biodiversity indicators could be envisaged, perhaps through a technical workshop.

5.6 Biodiversity Impact Assessment and Minimising Adverse Impacts

None of the CMS Instruments specifically refer to environmental impact assessment, although all CMS Instruments require their Parties to address the threats posed by certain activities.

Projects, programmes and policies that may result in habitat loss or other threats to biodiversity should be subject to environmental impact procedures. The environmental impact procedure should determine whether migratory species exist in a project area or will be affected by proposed programmes or policies. If so, potential individual and cumulative impacts on migratory species should be identified. Steps should be taken to eliminate, minimise or mitigate negative impacts identified.

SBSTTA IV has recommended that COP V request it to further develop guidelines to incorporate biodiversity-related issues into legislation or processes on environmental impact assessment (SBSTTA, Recommendation IV/6). The application of the precautionary principle and the ecosystem approach in impact assessment would also be addressed. The guidelines are to be completed for further consideration by COP VI.

The CMS Scientific Council was specifically referenced by SBSTTA as a collaborating agency. It could contribute insight into the application of impact assessment to migratory species especially as it relates to the "migratory range approach" described earlier. In addition, the Parties to the CMS Instruments also party to the CBD could submit case studies on the subject for subsequent distribution by the CBD CHM.

5.7 Protected Areas

Protected areas are key tools with which to conserve and sustainably use migratory species. Table 2 indicates that the work programmes of all the CMS Instruments address protected areas.

The CMS COP at its fifth meeting decided that in conjunction with Range States, Parties should develop a network of critical sites as protected areas throughout the migration routes of species (CMS COP, Res. 5.4). This decision will likely benefit significantly the various thematic areas of the CBD because protected areas are common to all. In particular, this will likely benefit the joint work programme of Ramsar and CBD.

The CBD COP has not addressed protected areas as a subject although they are addressed in the various thematic areas described earlier in Section 4.0. Protected areas will be addressed by CBD COP VII.

The contributions that are and could be made by the CMS Instruments to the CBD thematic work programmes have been described earlier in Section 4.0. In addition to these, the CMS Instruments could also contribute to the CBD's future protected areas work programme by contributing expertise on the role of protected areas in migratory species' conservation and sustainable use, especially in the context of the "migratory range approach".

5.8 Public Education and Awareness

Public education and awareness has been recognised by the majority of CMS Instruments as fundamental to efforts to conserve and sustainably use migratory species. CMS directs that all agreements should provide to make the general public aware of the contents and aims of the agreement being concluded (CMS, Article V(5)(n)). Only the Turtles MOU lacks a provision on public education and awareness.

The Seals Agreement requires its Parties to take measures to make the general public aware of the conservation status of seal populations in the Wadden Sea, as well as the measures needed to improve their conservation status (Seal Agreement, Article 10). The general public is to be informed about the agreement itself as well.

Under ASCOBANS, the general public is to be provided with information to support the agreement's aims and to facilitate sighting and stranding reports of small cetaceans (ASCOBANS CMP, para. 3). In particular, fishermen are to be provided with information to facilitate by-catch reports and the delivery of dead specimens.

Under EUROBATS, each Party is to promote bat conservation and promote public awareness of its importance (EUROBATS, Article III(4)). A primary goal is to improve the perception of bats among the general public, particularly emphasising education (EUROBATS MOP2, Res. 8). Education and training are targeted to those groups that come across bats in their work. To overcome the stigma of bats and to increase awareness, the EUROBATS Secretariat cosponsors the annual European Bat Night and the annual European Bat Festival, two unique and very popular activities.

AEWA targets its public education and awareness efforts on waterbirds and the wetlands upon which they depend. Parties are to develop and maintain awareness programmes on the conservation issues surrounding migratory waterbirds and the objectives of the agreement (AEWA, Article III(2)(j)). People living in and around wetlands, wetland users and local authorities and decision-makers will be targeted by programmes and information materials (AEWA Action Plan, para. 6.3).

To promote "wise and sustainable use" of the wetlands within the agreement area supporting enumerated waterbird species, AEWA requires its Parties to prepare and distribute information materials on the regulations and standards needed to achieve this standard (AEWA Action Plan, para. 3.2.4). This is to be supplemented with information on the benefits of the regulations and standards to people and wildlife.

At present, the ACCOBAMS Interim Secretariat compiles and circulates an information bulletin on issues relevant to the instrument's future implementation. When it enters into force, ACCOBAMS will require its Parties to address education within the context of the agreement's conservation, research and management measures. These are enumerated in the Conservation Plan (ACCOBAMS, Article II(3)(e)). More specifically Parties are to co-operate to organise education programmes (ACCOBAMS Conservation Plan, para. 5).

Education is also an important component of the Siberian Crane MOU and its action plans (Siberian Cranes Action Plans Western and Central Populations, paras. 1.1.2, 1.1.3 and 1.1.5). Education programmes are targeted at schools and hunters along the migration route. The mass media will publicise Siberian crane conservation efforts. Local people will be educated to protect cranes and their wetland habitats in areas where the birds are located.

The action plan to the Slender-billed Curlew MOU requires the Parties to initiate hunter educational programmes to help distinguish between different birds that look similar to the slender-billed curlew and are hunting targets (Slender-billed Curlew MOU, para.3). The importance of protecting the slender-billed curlew will be emphasised.

Finally, the Sahelo-Saharan Antelopes Action Plan emphasises public education programmes for local communities. It also notes the importance of integrating communities into conservation projects from the start (Antelopes Action Plan, para. 2.1.3). Tour operators will be provided with information (Antelopes Action Plan, para. 2.1.4) and diplomatic services will be provided with information to curb poaching (Antelopes Action Plan, para. 2.1.5). Importantly, education programmes will be conducted to counteract the effects of over-grazing by domestic livestock (Antelopes Action Plan, para. 2.3.2).

CBD COP IV decided to integrate public education and awareness into all of its sectoral and thematic items. It will review progress made at COP VII. In addition to their existing work in this area, and to further support the CBD's work, the Parties to the CMS Instruments also party to the CBD could share experiences with the CBD through case studies. These could be made available through the CBD CHM.

5.9 Sustainable Use (Including Tourism) of the Components of Biodiversity,

The importance of sustainable use is growing within the CMS Instruments though the term is not actually used in the Convention's text. CMS addresses both the conservation and management of migratory species and therefore implicitly addresses the issue of sustainable use. Still, the CMS COP decided that future CMS agreements should incorporate directly "sustainable use" consistent with conservation measures (CMS COP IV, Res. 4.4).

Under the CMS Instruments sustainable use is addressed in three areas. The areas relate to:

- **$** Direct and indirect uses of migratory species (e.g., taking and tourism);
- **$** Management where protection measures have benefited migratory species to the point where growing populations conflict with certain human activities; and
- **$** The impacts of threatening activities (e.g., incidental losses such as fishing by-catch).

Sustainable use as it relates to the first area - direct and indirect uses - is premised generally on the principle that maintaining or improving the conservation status of individual or groups of migratory

species throughout their migratory range will enable them to be used sustainably, especially by local communities. A key consideration, as well as a complication, is to ensure that use is sustainable throughout a particular migratory range taking into consideration the larger population. To ensure this, systematic research and monitoring are required. The system established under AEWA is the most sophisticated of all the CMS Instruments.

AEWA is based around a listing process comprising (1) strict protection for endangered species; (2) appropriate conservation measures for species with an unfavourable conservation status, with enumerate instances for use; and (3) co-ordinated use among Range States of species with a favourable conservation status. Species of waterbirds addressed are found in Table 1 annexed to the instrument. The AEWA COP takes into consideration existing research and monitoring and will regularly update the table, taking into consideration success controls.

Five CMS Instruments address direct and indirect uses of migratory species. These are ACCOBAMS, the Siberian Crane and African Marine Turtles MOU, AEWA and the Antelopes Action Plan.

When it enters into force, ACCOBAMS will address interactions between humans and cetaceans especially tourist activities (ACCOBAMS Conservation Plan, para. 2). For example, Parties will be required to collect and analyse data on whale watching activities, a growing concern in the Mediterranean Sea because of the potential for these activities to harass whales.

Other instruments such as the Siberian Crane MOU and the African Marine Turtles MOU will work towards sustainable use when the conservation status for these species stabilises. Future CMS work on sturgeon and the African elephant will also work towards sustainable use once the conservation status of these species stabilises.

The sustainability of direct and indirect uses has been most directly addressed in the AEWA and the Antelopes Action Plan for tourism, hunting and trade.

Migratory waterbirds have enormous potential for tourism because their spectacular assemblages concentrate in certain wetlands. This can generate financial and other incentives for local communities to conserve the birds themselves and the habitats and ecosystems upon which they depend as well. In so doing, associated species sharing the same habitats and ecosystems may also be conserved. This may provide the basis for subsequent sustainable use such as hunting. Without proper management however, ecotourism can also threaten the natural resource base that supports the birds and habitats that the visitors come to see.

Recognising the potential benefits and pitfalls, Parties to AEWA are to encourage co-operative programmes to develop “sensitive and appropriate ecotourism” at all wetlands, except in the core zones of protected areas holding concentrations of enumerated endangered populations of species (AEWA Action Plan, para. 4.2.1). Parties are also to evaluate costs, benefits and other consequences of ecotourism at selected sites (AEWA Action Plan, para. 4.2.2).Importantly, conservation guidelines have been promulgated on the development of ecotourism at wetlands.

AEWA is particularly strong on sustainable hunting and trade practices. For example, the Parties are to ensure that their hunting legislation implements the principle of sustainable use envisaged in the action plan (AEWA Action Plan, para. 4.1.1.). This is to take into account the full geographical range of the concerned waterbirds and their life history characteristics.

Conservation guidelines have been promulgated on sustainable harvest of migratory waterbirds. These are designed to promote “harvest frameworks”. Harvest frameworks would operate at national and international levels. A series of steps is provided to help Range States adopt a sustainable approach to waterbird harvesting. Conservation guidelines have also been promulgated on regulating trade in migratory waterbirds both internationally and, more important, domestically.

The Sahelo-Saharan Antelopes Action Plan is an excellent example of using conservation techniques to provide the basis for future sustainable use. Experience in Southern Africa has demonstrated that stabilising and improving the conservation status of these antelopes could provide opportunities for local communities to use them socio-economically. An incentive would be created to further conserve and sustainably use the populations.

For example, the antelopes' meat is tender and delicately flavoured. Antelope skin can be processed into fine leather. Furthermore, the species are very attractive. Consequently, these antelope could be important to tourism, both for hunters and photographers.

Under the Antelopes Action Plan and the Djerba Declaration means will be found to allow surplus animals to be exploited, while other uses such as wildlife viewing, hunting and farming will be studied to establish the animals' longer-term value. Conservation decision making will become more participatory, protected areas with buffer zones will be designed keeping in mind the need for local communities to have access to natural resources located there, tour operators will be targeted for public education and awareness campaigns and hunting legislation will be reviewed and revised.

The second area of sustainable use addressed by the CMS Instruments involves use and management issues where protection measures have benefited migratory species to the point where growing populations conflict with certain human activities and need to be managed.

Migratory species, especially birds, can damage crops and aquaculture operations. The great cormorant and its impact on aquatic biodiversity and aquaculture operations in Europe are a good example of this. An action plan to address this issue is being developed under CMS auspices.

AEWA has developed conservation guidelines on reducing crop damage, damage to fisheries and other forms of conflict between waterbirds and human activities (AEWA Action Plan, para. 7.3). Some of the AEWA exemptions to taking enumerated waterbird species include those to prevent serious damage to crops, water and fisheries (AEWA Action Plan, para. 2.1.3).

The CMS Instruments also address the impacts of threatening activities on migratory species, the third area of sustainable use addressed. Two contexts are discernible.

Firstly, in addition to their obligations to strictly prohibit taking appendix I species when they are Range States (CMS, Article III(5)), CMS Parties are to prevent, remove, compensate or minimise the adverse of effects of activities or obstacles impeding or preventing these species' migration (CMS, Article III(4)(b)). Secondly, CMS provides that agreements for appendix II species should have provisions to (1) identify factors harmful to the migratory species' conservation status and (2) eliminate or compensate for activities harmful or obstacles to migration. Taking and control under an agreement is to be based on sound ecological principles (CMS, Article V(5)(j)). Action should be co-ordinated to suppress illegal taking (CMS, Article V(5)(k)).

By-catch of seals and cetaceans is one very important area of work under CMS. The sixth CMS COP reaffirmed Parties' obligations to protect from by-catch migratory species including seabirds, marine turtles and cetaceans (Res. 6.2). Parties with fisheries that are Range States to appendix I and II species are encouraged to share and further develop practical and effective mitigation devices for these animals.

The Seals Agreement, ASCOBANS and ACCOBAMS all address by-catch. For example, the Seals Agreement strives to reduce the number of seals caught as by-catch and those drowned in fyke nets(Seals Agreement Action Plan, para. 2). Seal by-catch is to be monitored.

ASCOBANS is working toward defining a target "to restore and/or maintain biological or management stocks of small cetaceans at the level they would reach when there is the lowest possible anthropogenic influence" (MOP2, Resolution on Incidental Take). A short-term goal of 80% or more

of carrying capacity is sought. The general objective is “to minimise (i.e., to ultimately reduce to zero) anthropogenic removals within” an as yet to be determined time frame.

When it enters into force, ACCOBAMS will ban drift nets greater than 2.5 km long (ACCOBAMS Conservation Plan, para. 1). Parties will need to introduce or amend fishing legislation to prevent fishing gear discard and drift. Cetaceans caught incidentally will need to be released.

The CMS Instruments also address other threatening activities. For example, EUROBATS addresses pesticide use and forestry practices as they affect migratory bats. The CMS Instruments also address the indirect impacts of hunting on migratory species.

For example, hunting threatens the Siberian crane and the slender-billed curlew. It is addressed in the CMS Instruments covering them. Under the Cranes MOU threats from lead hunting shot will be identified and mitigated, hunting season practices will be identified and programmes will be created to enlist hunter support. Conservation incentive programmes will be developed for hunters.

The Slender-billed curlew is not directly hunted. But the Slender-billed Curlew MOU will lead to legal regulations to protect these birds from being taken incidentally (e.g., mistakenly) during hunting. Hunter education will increase. Bans on taking birds similar in appearance to slender-billed curlews will be enforced. Hunting bans will be instituted in sites important to the slender-billed curlew.

To further contribute to the CBD’s work programme, the Parties to the CMS Instruments could contribute case studies and participate in the process to elaborate sustainable use guidelines under the CBD. These were two of the activities SBSTTA V recommended to COP V (SBSTTA, Recommendation V/12).

6.0 Institutional Linkages between CMS and the CBD

6.1 Co-operation between the Secretariats, Subsidiary Scientific Bodies and the CBD Clearing House Mechanism

The CMS COP recognised early on the importance of co-operation between the CMS and CBD institutions.

At its fourth meeting, the CMS COP decided that CMS should establish a partnership between *inter alia* the secretariats of the CBD and the other biodiversity-related conventions (Res. 4.4). At the secretariat level, a senior level focal point would have responsibilities to liaise with these bodies. The heads of the CBD and CMS Secretariats concluded and signed on 13 June 1996 an MOU on their future communication and co-operation.

At its fifth meeting, the CMS COP adopted "Objectives and Action Points for the Triennium 1998-2000 (Res. 5.4). Objective 8.1 invites CMS Parties and the CMS Secretariat to implement the CBD/CMS MOU. It also confirmed that CMS should strengthen or establish new partnerships with the CBD institutions.

The CMS Standing Committee and Scientific Council were encouraged to communicate with the respective bodies in question, participate in their meetings and report back to CMS bodies. The CBD has invited a member of the CMS Scientific Council to sit as an observer at its meetings and a member has done so. At its sixth meeting, the CMS COP invited SBSTTA to observe the meetings of the CMS Scientific Council (CMS COP, Res. 6.7).

With regard to its secretariat the CBD COP may wish to consider asking it to designate a senior level focal point to liaise with the CMS Instruments. It may also wish to consider asking its secretariat to participate in CMS COP meetings. All of these suggestions may further concretise the steps already taken to build co-operation and collaboration between the secretariats.

One area that requires further examination is how to increase the possibilities for co-operation and collaboration between the CBD Secretariat and the secretariats of the other CMS Instruments. Presently, even though the other CMS Instruments oversee important components of biological diversity, and their work contributes to the conservation and sustainable use of biodiversity and, therefore, the CBD's implementation, their secretariats have extremely limited means to co-operate and collaborate with the CBD.

Limited mandates, constrained budgets for activities such as travel to international meetings and small staffs all limit the possibility for the ASCOBANS, EUROBATS, Wadden Seals Agreement and AEWA Secretariats to build synergies with the CBD. Contracting Parties, many if not all of whom are Parties to the CBD, should examine this situation if the quest for synergy between the CBD and the CMS Instruments is to become a reality.

The CBD CHM could become a key means through which to develop co-operation between the two conventions. The CBD CHM could be used as a tool through which the public could be made more aware of migratory species issues. The CMS information management plan has recognised this. The CBD CHM will be used to promote CMS and share information on migratory species and increase information flow between the biodiversity-related conventions (CMS COP, Res. 6.5). The Global Registry of Migratory Species will be an important contribution to the CBD CHM (see Section 5.3).

The preceding indicates that linkages are being built between the CMS and CBD institutions. These linkages could be strengthened even more if work programmes were compared with the aim of establishing complementarities and, therefore, synergies between the instruments. This Guide could facilitate the process. It highlights a vast number of complementarities between CMS and CBD and their work programmes that already exist.

With such a review and other information, the CBD COP could perhaps then recognise migratory species as globally significant components of biodiversity that, as a biodiversity conservation and sustainable use issue, cut across many aspects of the CBD work programme and should be integral to it. It could then decide whether migratory species should be placed on the medium-term work programme for further consideration. The CBD COP could also consider the desirability of designating CMS as a "lead partner" on the conservation and sustainable use of migratory species.

6.2 Financial Mechanism

Projects to conserve and sustainably use migratory species present at least five challenges for funding. These challenges need to be considered by the CBD and CMS Conferences as the CBD financial mechanism and its supporting body of guidance evolves. These challenges also need to be considered by GEF, its implementing agencies and other donors such as the World Bank, the regional development banks and bilateral sources.

First, projects must occur within a framework of ecological knowledge on the migratory species at issue. There are great knowledge gaps for a number of migratory species. For example, in many cases, complete migratory routes are unclear. Key breeding, resting and feeding areas may not be known. More information is also needed to identify threats and their root causes. Consequently, assessment and monitoring are key concerns that need to be addressed by all of the CMS Instruments and in most migratory species projects.

Funding, however, is very difficult to secure for the basic scientific work that needs to undertaken, not only to provide data for the CMS processes, but that needed for project design, implementation and follow-up. Taking a migratory range approach (see Section 5.2) compounds this problem because scientific work should be initiated at the Range State level and co-ordinated, compiled and shared across the migratory range.

Second, the threats to migratory species may vary across their migratory range. Threats may vary within a Range State.

For example, while habitat loss or degradation is typically the most common threat to migratory species throughout their range, hunting pressures may exist in some Range States while in others impediments to migration may present the most problems. Therefore to be most effective efforts to conserve and sustainably use migratory species should address the various threats that are present in as many Range States as practicable in the migratory range concerned. Even with the frameworks provided by the CMS Instruments, co-ordinated action to address the varying threats is difficult to achieve.

Third, successful approaches will vary with the circumstances. Standardised approaches may not create the most effective results because the situations for migratory species tend to be so complex. Case by case approaches may be needed. Therefore an important guiding principle for project conceptualisation and funding decisions is the need to maintain flexibility and encourage innovation as the situation demands. As a project is conceptualised and later considered for funding other guiding principles should be kept in mind.

For example, one guiding principle to keep in mind is the need to usually involve more than one Range State in a project because a threat in any one of the Range States - hunting, by-catch, pollution or the loss or degradation of critical habitat - could be detrimental to the species' ability to survive in the other Range States. In other words threats in one State can negatively impact a migratory species throughout its entire range.

Similarly, if they are not considered in project design, threats in other Range States can undermine efforts in the targeted Range State. Consequently, a "migratory range approach" will probably be the management approach of choice in many situations.

A migratory range approach should combine, in a transboundary context, (1) an ecosystem approach to conserve and sustainably use habitat and ecosystems with (2) a species-specific approach (single or group of species) that focuses on particular threats as well as for example assessment and monitoring, capacity building (including legislation) and public education and awareness.

A migratory range approach would involve as many Range States as is practicable for conservation and sustainable use efforts to be successful, keeping in mind the multiple logistical, co-ordination, capacity and financial issues that will arise. These factors, and the needs of the migratory species at issue, highlight the importance of keeping in mind another guiding principle: the scope of the migratory range approach may vary for each project.

For example, while the general principle should be to work across a particular migratory range with a number of different Range States, in some cases individual projects targeting individual countries could be enormously beneficial especially if their design is informed by the situations in other Range States. Depending on the circumstances, for example, country-specific individual projects addressing bottleneck areas or emergency situations could be extremely useful provided they are informed by the needs across the migratory range.
The practical advantage of designing projects either across the migratory range, or at very least with the migratory range in mind, is the ability to better ensure that the project itself does not undermine efforts in other Range States. Such an approach would also help to ensure that the situation in other Range States is supportive of and does not undermine the efforts proposed. Consequently, there will be a greater likelihood that the financial resources expended will have the intended impact.

A final guiding principle is the need to determine the proper blend of ecosystem and species-specific techniques in a project. The blend will likely vary for the migratory species concerned, the Range States involved and the objectives to be achieved. A sole focus on habitat conservation may not produce the best results if other threats unrelated to habitat are not addressed. For example, in some bottleneck areas migratory birds are seen pests by the local people of communities whose farms or fishponds are subject to the birds' seasonal visits. Furthermore, in some situations single-species approaches may be desirable, in other situations action may be best focussed on groups of migratory species.

Fourth, it is very difficult to finance migratory species projects sustainably, especially across a species' migratory range. In contrast to the CBD, the CMS Instruments have not been endowed with financial mechanisms.

AEWA does allow its meeting of Parties to establish a small grants facility (AEWA, Article VI(V)(4)). Its first meeting of Parties created this and it will become operational by the second meeting (AEWA MOP1, Res. 1.7).

In the past and at present, the ability to develop and undertake projects has been very constrained by limited funds. Traditional bi- or multilateral sources have been brought together to fund projects that are limited in scope because the money available was not enough to extend across a species' migratory range. Donors typically place conditions on how and where money can be spent. These do not necessarily address the needs of migratory species in question. These problems, combined with the inefficiencies of having to develop piecemeal projects across a migratory range and to secure multiple donors, makes for an inefficient and in-cohesive means to fund migratory species projects.

One approach to this situation that could be considered is to "mainstream" migratory species into donor development assistance work. This may need to occur in three contexts:

- **$** Specific migratory species projects;
- **$** Other biodiversity-related projects; and
- **$** Other projects that may impact upon migratory species.

Fifth and finally, clear guidance to fund migratory species projects through the CBD financial mechanism is lacking. This may have its origins in the fact that migratory species are not specifically mentioned in the body of the Convention's obligations, though they are mentioned in Annex I of Article 7 (Identification and Monitoring)[6]. In addition, migratory species are also not specifically mentioned in the COP's programme priorities for the financial mechanism, though endemic species are mentioned. Very encouragingly however the CBD COP at its third meeting urged Parties "to ensure that migratory species and their habitats are fully incorporated into national strategies, plans and programmes to preserve biological diversity" (CBD COP, Decision III/21). The extent to which this has taken place is unknown.

Importantly, the CBD COP also invited Contracting Parties "to relevant biological diversity-related conventions to explore opportunities for accessing funding through [GEF] for relevant projects, *including projects involving a number of countries*, which fulfil the eligibility criteria and guidance provided by the [CBD COP] to the [GEF]" (emphasis added) (CBD COP, Decision III/21). Multiple country projects are relevant to migratory species but this guidance is not clear: it must be interpreted to extend to migratory species.

The ambiguity of the guidance is especially problematic since a prevailing criterion for GEF funding is the "country-driven" nature of the project and a heavy reliance on priorities identified in national biodiversity strategies and action plans. While this is not problematic for migratory species projects designed by individual countries it is problematic for regional projects within a particular migratory range.

In practice, most if not all countries eligible for funding under the CBD financial mechanism may find it very difficult to conceptualise, develop and execute in a co-ordinated way regional projects amongst themselves without outside support from international NGOs. Therefore, the country-driven criterion for GEF funding may act as barrier for otherwise important projects. Its application to migratory species projects needs further review.

A further complication is that migratory species conservation and sustainable use efforts do not fit neatly into the "ecosystem approach" as it is presently applied and interpreted in the biodiversity focal area by the GEF and the implementing agencies. As described earlier in this section and in Section 5.2, this is because migratory species projects usually need to operate both at the ecosystem and species-specific levels. The blend will vary with the circumstances. A pure ecosystem approach applied to migratory species may prevent other non-habitat-related threats and other needs such as research and monitoring, capacity-building, public education and awareness from being funded.

Finally, the application of the incremental cost concept to migratory species projects needs additional clarification. Establishing a baseline in multi-country projects is a problem for migratory species projects because of the different needs of each country. This is so even though the transboundary nature of migratory species as shared or common global biological resources helps to readily define the "global environmental benefits" of projects designed to conserve and sustainably use them.

Despite the five key challenges just described, migratory species projects, focusing on an ecosystem approach, have been funded through the CBD's financial mechanism.[7] UNEP, with GEF funding, has provided valuable support to facilitating the development of these migratory species projects for funding.

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6 Parties are to identify and monitor *inter alia* "Ecosystems and habitats...required by migratory species" and, more indirectly, "Species and communities which are...threatened...or important for research into [biodiversity conservation and sustainable use], such as indicator species. Relatedly, Parties are to identify threats to these species (Article 7(c)) and regulate or mange them (Article 8(l)).

7 These include two short-term response projects (Lop Nur Nature Sanctuary Biodiversity Conservation (Bactrian Camels) and Rescue Plan for the Cap Blanc Colony of the Mediterranean Monk Seal); two PDF Block B Grants (Conservation of Globally Significant Wetlands and Migration Corridors Required by the Siberian Crane and Other Globally Significant Migratory Waterbirds in Asia; Migratory Waterbirds in the African-Eurasian Flyway).

In addition, the GEF Secretariat is presently conducting a portfolio review of GEF assistance addressing migratory species under GEF's operational strategies and programmes. In all experience is growing with funding migratory species projects through GEF but, because of the complexities involved, project development is still in a pilot or an evolutionary state.

The need for funding from GEF and elsewhere is very great. However, the diversity of sources is very limited. Presently, GEF is the only available funding source that can operate on the large scales required to address migratory species.

The later CMS Instruments such as AEWA and the Cranes, Slender-billed Curlew and Turtles MOU, whose Parties are primarily developing countries or countries with economies in transition, have recognised the need for more funding. Over the course of a number of its meetings, the CMS COP has also recognised the growing financial need. Many if not all of the Parties to these instruments are Parties to the CBD

For example, the Strategy for the Future Development of the Convention noted that developed party States to CMS, whether or not they are Range States, should be urged to sponsor initiatives by developing countries (CMS COP, Res. 4.4). The CMS Secretariat has been asked to promote development of cost-effective projects in particular to benefit appendix I species, those that are most endangered by extinction (CMS COP, Res. 5.4).

The Secretariat has also been asked by the CMS COP to develop closer relations with multilateral agencies operating on global and regional levels that provide development assistance to projects that (1) may affect migratory species covered by CMS or (2) could include migratory species as part of a broader strategy (CMS COP, Res. 5.4).

The CMS COP has recognised that CMS should intensify linkages with the CBD and the GEF to implement relevant CBD COP decisions and to develop pilot projects demonstrating "(i) the complementarity of CMS in the implementation of CBD and (ii) the basic need to fill the gap in the funding mechanism of GEF for biodiversity-related projects" (CMS COP, Res. 5.4).

Only a handful of options are discernible to help the funding situation for migratory species projects. One possibility is for Parties to the CMS Instruments to establish financial mechanisms under their instruments. Aside from the unclear legal basis to do so, an additional complication is the number of countries that could realistically contribute funds and the possibility of fragmentation and inefficiency.

A more realistic second option is for developed and other Parties, supra-national and international agencies to review how funds presently dedicated to biodiversity-related work could be used to fund projects directly or indirectly beneficial to migratory species. The respective CBD and CMS Conferences of Parties may wish to consider encouraging their Parties to undertake such reviews. An important consideration is that regardless of whether they are Parties to CMS, CBD Parties are obliged to conserve and sustainably use migratory species as components of biodiversity.

A third option could include a range of measures taken by the CBD COP with regard to the CBD's financial mechanism that could be taken together or individually. For example, the CBD COP could clarify or refine its invitation in Decision III/21 to the Parties of other biodiversity-related conventions. Relatedly, to help clarify the situation for migratory species projects under the CBD funding mechanism, the CBD COP might offer clearer additional guidance to GEF that migratory species projects are eligible for funding.

Furthermore, the CBD COP might encourage GEF and the implementing agencies to work together, perhaps in collaboration with the CMS Secretariat, to review the implications of the "ecosystem

approach" and the "country-driven" criteria for GEF funding as they are applied to migratory species projects. The review might include a determination of the extent to which migratory species have been integrated into national biodiversity strategies and action plans.

The CBD COP could encourage the GEF and the implementing agencies to work together, perhaps in collaboration with the CMS Secretariat, to further clarify the incremental cost concept as it applies to migratory species projects.

Even without encouragement from the CBD COP, the GEF may also wish to consider some of these suggestions. In addition, it may wish to explore the possibility of developing an operational programme on migratory species. This might be especially worthwhile if the CBD COP eventually declares CMS to be a lead partner with the CBD on migratory species issues (see Sections 6.1 and 7.0).

7.0 Conclusion and Recommendations

This Guide has demonstrated the many ways in which CMS has complemented and will continue to complement the CBD's implementation through its transboundary co-ordinated and concerted action on a regional, continental and global scale.

The mode of operation of the CMS Instruments is at the global and regional levels in the context of a specific globally significant component of biological diversity: migratory species. CMS is the only global biodiversity-related treaty that addresses comprehensively migratory species. This is in contrast to the CBD, which addresses biodiversity comprehensively, but does not specifically address migratory species even though they are a unique global component of biodiversity.

The CBD's obligations are more general in nature and are defined ultimately at the country-level through the biodiversity planning process. The biodiversity planning process is the primary opportunity for a country to identify issues related to migratory species. The CBD COP has urged its Parties to incorporate fully migratory species and their habitats into biodiversity strategies and action plans.

The CMS Instruments provide the basis for their Parties, who may or may not be Parties to CBD, to deepen their treatment of migratory species through specific conservation and management plans for individual and groups of migratory species and to do this in global and regional legal frameworks that encourage and support co-operative action. Most important, the CMS Instruments make the important link between individual and groups of migratory species, their habitat needs, the other components of biodiversity they depend on and interact with as well as the various threats facing these species. Consequently, the CMS Instruments fill a major area left incomplete by the CBD's design.

Major complementarities exist between the CBD and the CMS Instruments at the substantive obligation level and at the work programme level.

At the substantive obligation level, complementarity is especially apparent for the CBD ecosystem and species-based measures, those on identification and monitoring, research and training, public education and awareness, information exchange and technical and scientific co-operation. Significantly, all of these measures are related to capacity building. Important intersections also occur on processes and activities that affect biodiversity, the CBD's most innovative and potentially far-reaching provisions.

At the work programme level some or all of the CMS Instruments support the thematic areas addressed thus far by the CBD. The CMS Instruments cut across and already provide substantial support to nine CBD crosscutting and other areas within its work programme, particularly the ecosystem approach, indicators, assessment and monitoring, protected areas, public education and awareness and sustainable use, including tourism.

This Guide makes a number of suggestions on how the CMS Instruments could further support the CBD work programmes. The mode of collaboration can be by:

- **$** Direct participation in meetings organised to address these issues;
- **$** Making materials such as guidelines available through the CBD CHM;
- **$** Providing case studies;
- **$** Ensuring information exchange between the secretariats; and
- **$** Facilitating expert participation through government nominations to the roster of experts.

Immediate emphasis could be given to possible joint CMS/CBD examination of the ecosystem approach as it relates to migratory species and the usefulness of migratory species as biodiversity indicators. Technical workshops could be contemplated.

At the institutional level, co-ordination is increasing between the secretariats, the CMS Scientific Council participates in SBSTTA meetings and the CMS Instruments can make many substantive contributions to the CBD CHM. The CMS Scientific Council may wish to consider inviting a member of SBSTTA to observe its meetings.

At the secretariat level, the CBD COP may wish to consider asking its secretariat to designate a senior level focal point to liase with the CMS Instruments. It may also wish to consider asking its secretariat to participate in CMS COP meetings. Finally, the Parties to the subsidiary CMS agreements, almost all of whom are Parties to the CBD, may wish to examine options for expanding the possibilities of their secretariats to co-operate and collaborate with the CBD to promote synergies.

Significantly, the CMS COP and the conferences of four other CMS subsidiary agreements have recognised that there is a great need to financially support migratory species projects. Many if not all of the Parties to these instruments are also Parties to the CBD.

It is noteworthy that the CMS COP has:

- Urged developed Party States of CMS, whether or not Range States, to sponsor initiatives by developing countries;

- Asked the CMS Secretariat to promote development of cost effective projects particularly to benefit those migratory species most endangered by extinction;

- Asked the CMS Secretariat to develop closer relations with development assistance multi-lateral agencies operating on global and regional levels that (1) may affect migratory species covered by CMS or (2) that could include migratory species as part of a broader strategy; and

- Recognised the need to intensify linkages with the CBD and the GEF to implement relevant COP decisions and to develop pilot projects demonstrating (1) complementarities between CMS and the CBD and (2) the basic need to fill the gap in the funding mechanism of GEF for biodiversity-related projects.

The CBD COP and CMS COP may wish to consider a range of options related to financing migratory species projects. One option that could be considered is to work with GEF, World Bank, the regional development banks and bilateral agencies to explore how migratory species can be "mainstreamed" into donor assistance work. They may also wish to consider encouraging their Parties to review how funds dedicated to biodiversity-related work could be used to fund projects directly or indirectly beneficial to migratory species.

Despite a number of challenges, migratory species projects, focusing on an ecosystem approach, have been funded through the CBD's financial mechanism. Experience is growing with funding migratory species projects through GEF but, because of the complexities involved, project development is still in a pilot or an evolutionary state.

With regard to the CBD financial mechanism, the CBD COP may also wish to:

$ Clarify the desirability of funding migratory species projects under the CBD financial mechanism;

- Emphasise the need to take a flexible migratory range approach;

- Encourage GEF and the implementing agencies to work together, perhaps in collaboration with the CMS Secretariat, to review the implications for GEF funding of the "ecosystem approach" and the "country-driven" criteria as they are applied to migratory species projects. This might include a determination of the extent to which migratory species have been integrated into national biodiversity strategies and action plans; and

- Encourage the GEF and the implementing agencies to work together, perhaps in collaboration with the CMS Secretariat, to further clarify the incremental cost concept as it applies to migratory species projects.

Even without encouragement from the CBD COP, the GEF may also wish to consider some of these suggestions. In addition, it may wish to explore the possibility of developing an operational programme on migratory species, especially if CMS and CBD eventually operate a joint programme on migratory species and biodiversity.

Finally, the CBD COP may wish to recognise migratory species as globally significant components of biodiversity that, as a biodiversity conservation and sustainable use issue, cut across many aspects of the CBD work programme and should be integral to it. Consequently it may wish to consider placing migratory species on the medium-term work programme for further consideration. It may also wish to consider the desirability of designating CMS as a lead partner on the conservation and sustainable use of migratory species.

Table 1 – Complementarities between the CBD and CMS Instruments[8]									
CBD Provisions	**CMS Instruments**								
	CMS	**SEALS**	**ASCOBANS**	**EUROBATS**	**AEWA**	**ACCOBAMS[9]**	**CRANES**	**CURLEW**	**TURTLES**
1.0 Ecosystem-based actions									
1.1 Site Specific Actions									
1.1.1 Establish protected area system (art. 8(a))		x		x	x	x	x		
1.1.2 Develop guidelines to select, establish and manage protected areas (art. 8(b))				x	x				
1.1.3 Develop sustainably areas adjacent to protected areas (art. 8(e))					x				
1.2 Non-site specific actions									
1.2.1 Establish system of areas where special measures need to be taken to conserve biodiversity (art. 8(a))	x	x			x		x		x
1.2.2 Develop guidelines to select, establish and manage special areas (art. 8(b))									
1.2.3 Promote ecosystem and natural habitat protection (art. 8(d))	x	x			x		x	x	
1.3 Degraded ecosystems									
1.3.1 Rehabilitate and restore degraded ecosystems with plans (art. 8(f))	x	x			x				
1.3.2 Develop and implement remedial action plans by local populations in biodiversity degraded areas (art. 10(d))									
2.0 Species-based Actions									
2.1 In situ Actions Involving Species									
2.1.1 Maintain viable populations (art. 8(d))	x	x	x	x	x	x	x	x	x
2.1.2 Regulate/manage biological resources important for biodiversity (art.8(c)); adopt measures to use biological resources to avoid or minimise impacts on biodiversity (art. 10(b))	x	x			x	x		x	
2.1.3 Protect and restore threatened species and populations *inter alia* with plans and legislation (arts. 8(f), (k) and 9(c))	x	x	x	x	x	x	x	x	x
2.2 Ex situ Actions Involving Species									
2.2.1 Adopt ex situ conservation measures (art. 9(a))									
2.2.2 Establish and maintain ex situ conservation facilities (art. 9(b))									
2.2.3 Regulate/manage collecting from natural habitats for ex situ purposes (art. 9(d))									

[8] Based on a review of CMS agreement provisions and selected provisions of integral action plans.
[9] Yet to enter into force.

Table 1 – Complementarities between the CBD and CMS Instruments[8]									
CBD Provisions	**CMS Instruments**								
	CMS	**SEALS**	**ASCOBANS**	**EUROBATS**	**AEWA**	**ACCOBAMS[9]**	**CRANES**	**CURLEW**	**TURTLES**
3.0 Genetic Resources Actions									
3.1 Regulate access to genetic resources to ensure benefit-sharing (arts. 15, 16 and 19)									
4.0 Actions Applicable to Processes and Activities Affecting Biodiversity									
4.1 Identify processes and activities that threaten biodiversity (art. 7(c)) and regulate/manage them (art. 8(l))	x	x	x	x	x	x	x	x	x
4.2 Introduce EIA procedures for projects, programmes and policies (art. 14(1)(a) and 14(1)(b))					x	x			
4.3 Endeavour to make present uses and conservation/sustainable use compatible (art. 8(i))		x	x	x	x	x	x	x	x
4.4 Regulate/manage living modified organisms and share information (arts. 8(g) and 19(4))									
4.5 Prevent introduction, eradicate or control alien species (art. 8(h))	x				x				
5.0 Cross-cutting or General Actions									
5.1 Develop strategies or plans and integrate biodiversity considerations into decision-making and various sectors, programmes and policies (arts. 6(a), 6(b) and 10(a))					x		x	x	x
5.2 Identify and monitor biodiversity (art. 7)	x	x	x		x	x	x	x	x
5.3 Indigenous and local communities									
5.3.1 Respect, preserve and maintain knowledge, innovations and practices (art. 8(j))									
5.3.2 Exchange indigenous and local knowledge (art. 17(2))									
5.3.3 Protect and encourage customary use of biological resources (art. 10(c))	x								x
5.4 Research and training (art. 12)	x	x	x	x	x	x	x	x	x
5.5 Public education and awareness (art. 13)	x	x	x	x	x	x	x	x	
5.6 Technology transfer (arts. 16 &19)									
5.7 Information exchange (art. 17)	x	x	x	x	x	x	x	x	x
5.8 Incentive measures (art. 11)									
5.9 Financial resources (arts. 20 & 21)					x		x	x	x
6.0 Co-operation									
6.1 Co-operate in areas beyond limits of national jurisdiction and matters of mutual interest (art. 5)	x					x			x
6.2 Co-operate to provide financial and other support for in situ and ex situ conservation (arts. 8(m) and 9(e))						x			
6.3 Co-operate to use scientific advances in biodiversity (art. 12(c))									

Table 1 – Complementarities between the CBD and CMS Instruments[8]									
CBD Provisions	**CMS Instruments**								
	CMS	**SEALS**	**ASCOBANS**	**EUROBATS**	**AEWA**	**ACCOBAMS[9]**	**CRANES**	**CURLEW**	**TURTLES**
6.4 Co-operate to develop educational and public awareness programmes (art. 13(b))									
6.5 Co-operate in technical and scientific matters (art. 18)	x	x	x	x	x	x	x	x	x
6.6 Co-operate when biodiversity is likely to be seriously threatened in another State, areas beyond limits of national jurisdiction and in emergencies (art. 14(1)(c-e))	x	x			x	x			
6.7 Intra-national co-operation between government and private sector (art. 10(e))									
7.0 Institutional Considerations									
7.1 Conference of Parties (art. 23)	x	x	x	x	x	x	x	x	x
7.2 Subsidiary Body (art. 25)	x	x	x	x	x	x			
7.3 Clearing-house Mechanism (art. 18(3))						x			
8.0 Miscellaneous									
8.1 Values of biodiversity (preamble 1)	x	x		x	x				
8.2 Biodiversity's importance for maintaining life support systems (preamble 2)	x	x				x			
8.3 Biodiversity conservation as a common concern of humankind (preamble 3)	x					x			
8.4 State responsibility to conserve biodiversity and sustainably use components (preamble 5)	x	x				x	x	x	x
8.5 Anticipate, prevent and attack causes of significant reduction or loss of biodiversity at source (prevention) (preamble 8)	x	x	x	x	x	x	x	x	x
8.6 Precautionary principle (preamble 9)	x[10]				x				
8.7 Financial and technological assistance to developing countries (preamble 16)					x	x			
8.8 Intergenerational equity (preamble 23)	x			x	x	x			

[10] Future agreements should incorporate the "precautionary principle" (CMS COP Res. 4.4).

Table 2 – Complementarities between the CBD Work Programmes and those of the CMS Instruments										
CBD Provisions	**CMS Instruments**									
	CMS	**SEALS**	**ASCOBANS**	**EUROBATS**	**AEWA**	**ACCOBAMS[11]**	**CRANES**	**CURLEW**	**TURTLES**	**ANTELOPES**
1.0 CBD Thematic Areas										
1.1 Marine and coastal biodiversity										
1.1.1 Integrated coastal area management (e.g., promoting ICAM, indicators, key habitats)	x	x	x		x	x		x	x	
1.1.2 Marine and coastal living resources(e.g., institutional collaborative links, information exchange, ecosystem approach, components of and threats to ecosystems)	x	x	x		x	x		x	x	
1.1.3 Marine and coastal protected areas (e.g., research and monitoring on MCPA effects and values, develop MCPA criteria)	x	x	x		x	x		x	x	
1.1.4 Mariculture										
1.1.5 Alien species	x				x					
1.1.6 Roster of experts	x	x	x		x	x		x	x	x
1.2 Inland waters biodiversity										
1.2.1 Status and trends and options for sustainable use	x				x		x	x		
1.2.2 Criteria for national elaboration of CBD Annex I	x				x		x	x		
1.2.3 Review assessment methodologies	x				x		x	x		
1.2.4SBSTTA work programme (e.g., status and trends, conservation and sustainable use)	x				x		x	x		
1.2.5 Roster of Experts	x				x		x	x		
1.3 Forest biodiversity										
1.3.1 Ecosystem approaches	x			x	x		x	x		
1.3.1 Human influences and mitigation	x			x	x		x	x		
1.3.2 Criteria and indicator methodologies	x			x	x		x	x		
1.3.3 Research priorities	x			x	x		x	x		
1.3.4Technical experts group	x			x	x		x	x		
1.4 Agricultural biodiversity[12]										
1.4.1 Assessments										
1.4.2 Adaptive management	x			x	x		x	x		x
1.4.3 Capacity building										
1.4.4 Mainstreaming										
1.4.5 Roster of experts	x				x		x	x		x
1.5 Dry and sub-humid biodiversity[13]										
1.5.1 Assessments (e.g., status/trends, valuable areas, indicators, processes, local and global benefits, best management practices)	x				x		x	x		x

[11] Yet to enter into force.
[12] Based on draft programme of work recommended by SBSTTA V.
[13] Based on draft programme of work recommended by SBSTTA V.

Table 2 – Complementarities between the CBD Work Programmes and those of the CMS Instruments										
CBD Provisions	**CMS Instruments**									
	CMS	**SEALS**	**ASCOBANS**	**EUROBATS**	**AEWA**	**ACCOBAMS[11]**	**CRANES**	**CURLEW**	**TURTLES**	**ANTELOPES**
1.5.2 Targeted actions (e.g., protected areas, restoration, responsible resource management, economic valuation, migratory corridors, sustainable livelihoods)	x				x		x	x		x
1.5.3 Roster of experts	x				x		x	x		x
1.6 Mountain biodiversity[14]										
2.0 CBD Cross-cutting and Other Areas										
2.1 Aliens	x				x					
2.2 Ecosystem approach	x	x	x	x	x	x	x	x	x	x
2.3 Global Taxonomy Initiative	x									
2.4 Incentive measures				x	x		x		x	x
2.5 Indicators, assessment and monitoring	x	x	x	x	x	x	x	x	x	x
2.6 Biodiversity impact assessment	x									
2.7 Protected areas	x	x	x	x	x	x	x	x	x	x
2.8 Public education and awareness	x	x	x	x	x	x	x	x		x
2.9 Sustainable use, including tourism	x	x	x	x	x	x	x	x	x	x

[14] Still to be developed by CBD COP.