



CONVENTION ON MIGRATORY SPECIES

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SEVENTH MEETING OF THE SIGNATORIES TO
THE MEMORANDUM OF UNDERSTANDING
CONCERNING CONSERVATION MEASURES
FOR THE SIBERIAN CRANE (*Grus leucogeranus*)
Bonn, Germany, 10-12 June 2010
Agenda Item 7.1

STRATEGIC CONSIDERATIONS TOWARDS PROMOTING SUSTAINABLE WATERBIRD HARVESTING PRACTICES IN WESTERN/CENTRAL ASIA

(Discussion paper prepared by Crawford Prentice on behalf of ICF and the UNEP/CMS Secretariat)

SUMMARY

1. The Siberian Crane and other globally threatened waterbird species, and the regional populations of migratory waterbirds have been seriously impacted by unsustainable hunting activities in Western/Central Asia. The widespread occurrence of such uncontrolled practices represents a major obstacle for any attempts to reintroduce the Siberian Crane in this region. Political instability and war remain significant constraints to effective responses in some parts of the region. Information on harvesting is sparse and incomplete, therefore there is a weak basis for science-based management of hunting activities.
2. On the other hand, good experience and guidelines exist from other nearby regions to support efforts in Western/Central Asia. Many of these approaches can be relatively easily transferred, if the political will and adequate resources exist. In addition, there are some examples of good practice within the region that can be further developed.
3. The first response should be baseline national assessments of waterbird harvesting, using a standardized approach involving a stakeholder consultation process.
4. At the same time, a regional Code of Practice for Responsible Hunters should be developed, which can be adapted by each country in consultation with stakeholders.
5. Secondly, meetings should be organized to discuss priority hunting issues with relevant stakeholders and experts. This should address spring hunting as a priority. An international conference should be planned to present best practice on sustainable hunting and waterbird management to raise awareness among policy-makers and develop a regional harvest framework.

6. Demonstration projects should be developed for key localities or sub-regions that are of international importance for migratory waterbirds and threatened species, where hunting is a major conservation issue, and as far as possible, where initiatives can build on past experience and existing capacity. These should incorporate targeted education and awareness programmes focusing on hunters. Awareness programmes should convey the key message that hunters are an essential part of the solution. Capacity building should be conducted for hunting organizations that are able to contribute effectively towards more sustainable practices, including participation in conservation programmes.

7. Project concepts should be developed to support the implementation of various actions that can be used to approach donors. These should vary in size and scope, including:

- ***Regional or national project support for conducting national assessments to establish baselines, identify trends and design response measures. Response measures would include reform of legislation, enforcement, policies, institutional frameworks, capacity building, education and awareness-raising, etc.***
- ***Regional education and awareness-raising campaigns targeting hunters and related stakeholders, ideally in partnership with hunting organizations in order to achieve mutually beneficial goals. These should publicise codes of practice and use mass media according to targeted communications plans.***
- ***Meeting of the Crane Working Group of Eurasia on spring hunting, linked to consultations with stakeholders.***
- ***International conference on sustainable hunting to present best practice examples and raise awareness.***
- ***Demonstration activities at key sites involving community participation, development and awareness raising. Criteria for site selection would include presence of major waterbird concentrations including threatened species, significant hunting/harvesting issues, and the possibility to build on existing experience and capacity for greater effectiveness.***
- ***Sustained long term support for small scale grass-roots projects at specific sites where community education and participation is critical, especially where serious constraints exist for the implementation of larger international technical assistance projects.***

8. Recognition that hunters are an essential part of the solution is key to success. Hunters have common interests, especially in habitat conservation and maintenance of waterbird populations, and can support conservation efforts through increased political leverage and financial contributions.

9. Projects should aim to achieve benefits for local communities, ecosystems and wildlife beyond the Siberian Crane and other primary concerns for greater sustainability.

10. It should be recognized that addressing unsustainable hunting practices across this region is a long term prospect, although more localized successes could be expected in the short term.

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PURPOSE AND SCOPE OF THIS DOCUMENT

This document aims to provide an overview of the conservation challenges currently provided by unsustainable waterbird harvesting practices, especially in Western/Central Asia. It indicates available experience and tools that could potentially be applied towards addressing this issue and suggests options for moving forward within the framework of the Conservation Plans under the CMS MoU on the Siberian Crane and for possible development of new initiatives.

The focus is on promoting sustainable waterbird harvesting (hunting and trapping) through systematic national programmes and interventions at “hotspots” where unsustainable practices are having a major impact, supported by regional technical assistance.

This document focuses on conservation issues related to waterbird harvesting and not other types of hunting (for other bird groups such as passerines, or mammals) although it is expected that such groups may benefit from improvements to national programmes on wildlife exploitation.

The main geographical emphasis is on Western/Central Asia in view of the hunting mortality problems already identified in this region for the Siberian Crane in particular, representing a major obstacle to reintroduction efforts. However, it is recognized that practices in East Asia may also present significant conservation issues, such as spring hunting across Siberia.

DEFINITIONS

Sustainable Use: The definition of sustainable utilisation (hunting in this case) given in the Convention on Biological Diversity (CBD) is - “the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations”.

Sustainable hunting: The use of wild game species and their habitats in a way and at a rate that does not lead to the long-term decline of biodiversity. Such use maintains its potential to meet the needs and aspirations of present and future generations, as well as maintaining hunting itself as an accepted social, economic and cultural activity (based on the definition of “Sustainable Use” in Article 2 of the Convention on Biological Diversity (CBD)). When hunting is conducted in such a sustainable manner, it can positively contribute to the conservation of wild populations and their habitats and also benefit society.

Hunting: The pursuit and/or take of wild game species by all methods permitted by law... Motivations for this activity include consumption (use of meat, hides, furs and/or trophies), recreation, and/or management of game populations.

Game: Game species include all wild avian and terrestrial mammal species for which hunting is legally permitted.

(Source: European Charter on Hunting and Biodiversity, 2007)

Sustainable hunting of migratory birds: the hunting of migratory birds that neither causes nor contributes to population declines or major changes in the behaviour or distribution of hunted species and which respects the rights of all users of the environment.

(Sustainable Hunting Project, 2007).

ABBREVIATIONS AND ACRONYMS

AAPGs	Addis Abbaba Principles and Guidelines on the Sustainable Use of Biodiversity
EAAFP	East Asian – Australasian Flyway Partnership
AEWA	African – Eurasian Waterbird Agreement
CAF	Central Asian Flyway
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species
CMS	Convention on Conservation of Migratory Species of Wild Animals
CMS MoU	CMS Memorandum of Understanding
EU	European Union
FACE	Federation of Associations for Hunting and Conservation of the EU
GEF	Global Environment Facility
Ramsar Convention	Convention on Wetlands of International Importance Especially as Waterfowl Habitat
SCWP	UNEP/GEF Siberian Crane Wetland Project
UNEP	United Nations Environment Programme
WOW Project	Wings Over Wetlands Project – the UNEP/GEF African-Eurasian Flyways

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1. THE NEED FOR A REGIONAL STRATEGY ON SUSTAINABLE WATERBIRD HARVESTING

1.1 Hunting as a Mortality Factor for the Siberian Crane

The text of the **CMS Memorandum of Understanding Concerning Conservation Measures for the Siberian Crane** recognizes the threat posed by hunting to the conservation of the Siberian Crane and states that the signatories agree to work together to provide strict protection for the species, implement the provisions of the Conservation Plans and facilitate exchange of scientific, technical and legal information needed to coordinate conservation measures.

The foreword to the Report of the Sixth Meeting of Siberian Crane Range States (Conservation Measures for the Siberian Crane, Fourth Edition, 2008) summarizes the issue as follows:

*Differences in conservation status of the Siberian crane populations of the Eastern, Western and Central Flyways engender varied conservation responses: In the Eastern Flyway, the main focus remains in-situ conservation, defensive measures against threats to habitats caused by rapid economic development, and improving information on the status and distribution of the species. In the Western and Central Flyways, the main focus is on preparing the way for restoration efforts. **This involves controlling the factors that have caused population declines, most notably through the education of hunters and enforcement of relevant species protection laws, coupled with improving protection of the key sites throughout the migration cycle.***

For all of the above, continued international cooperation through an effective mechanism recognized by the governments of the Range States remains essential.

The national reports to the same meeting provide more detail on the nature of the threats posed by hunting to the Siberian Crane and other migratory waterbirds, actions taken and planned responses. From this, it can be inferred that hunting is a general threat to the species throughout its range in Western and Central Asia, where numbers are so low that even isolated cases are significant. However, the actual situation varies significantly within and between countries with a number of key areas (outside protected areas) being of particular conservation concern: the South Caspian lowlands of Iran, migration routes and staging areas in Afghanistan and Pakistan, Azerbaijan, Russia (Dagestan) and northern Kazakhstan. These are shown very approximately in **Figure 1** below.

Observations in Turkmenistan and Uzbekistan have shown that very often Siberian Cranes were sighted in flocks of Eurasian and Demoiselle Cranes. This makes Siberian Cranes very vulnerable, because the main threat for the Central Asian population is traditional hunting along the flyways especially in Afghanistan and Pakistan. Crane hunting was formerly widespread in these countries but has recently been outlawed in all areas. However, hunting is difficult to control especially in tribal areas. Following the collapse of the USSR, hunting escalated in Kazakhstan and Uzbekistan. Probably shooting was the primary cause of the attrition of the Siberian Crane along central flyway.

Siberian Cranes were never numerous at the main wintering site of the Western flock at Fereydoon Kenar in Iran. A maximum of 9-14 birds spent the winter here during the 1970s and 1980s. Due to various factors such as the space demands of the cranes, natural mortality, illegal hunting, and habitat destruction, the population has dwindled. Also affecting the western flock, the collapse of the USSR precipitated a period of economic strife in Azerbaijan. Hunting regulations were not enforced and it is probable that many Siberian Cranes were shot during their passage over Azerbaijan and other areas along their long migration route. (Ilyashenko et al., 2009).

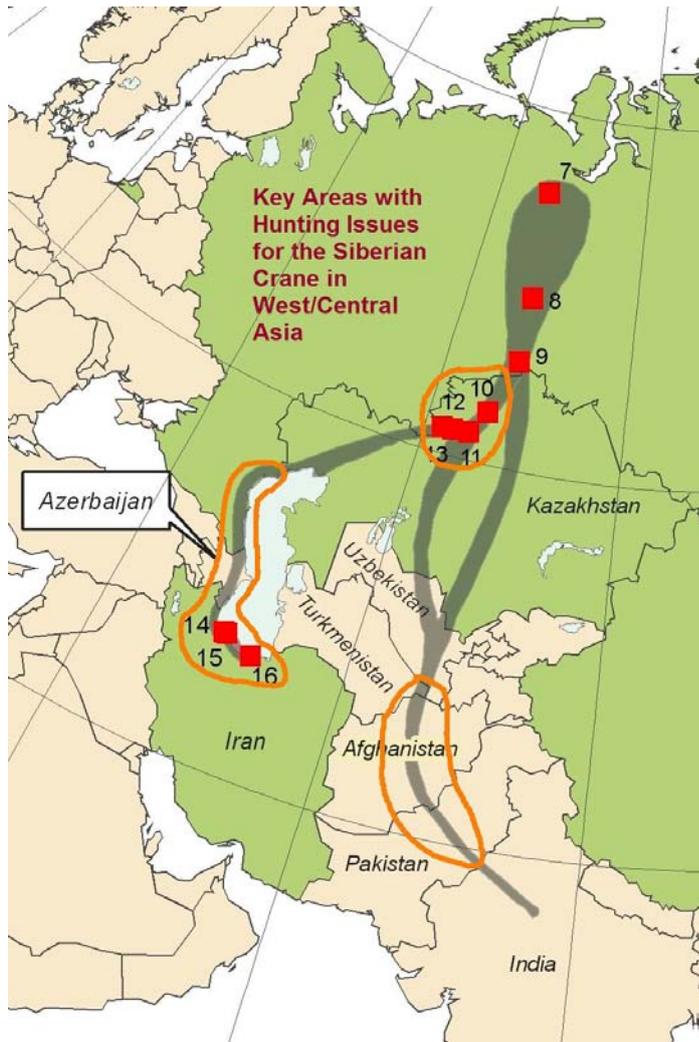


Figure 1. Key areas with hunting issues for the Siberian Crane in West/Central Asia (Base map drawn by Zoe Rickenbacher, International Crane Foundation). Orange polygons show the areas of concern.

For the eastern population, hunting threats appear less significant overall in comparison to other threats, but with the main causes of mortality identified in Yakutia as poaching, lead poisoning and chick death. Past problems with poaching and poisoning in China have apparently been brought under control, but continued monitoring and enforcement remain important.

Further information is provided in the Conservation Plans for each of the three populations, where progress from 2004-2007 is summarized and priorities for 2007-2009 identified under 1.1 *Determine and monitor all prevailing threats of all types to the Siberian Crane and its habitats*; and 1.2 *Strengthen and improve legislation and enforcement for crane protection*; with additional relevant information included in other sections such as on *education and awareness* and *protection and management of habitats*.

1.2 Hunting as a Conservation Issue for Waterbird Populations in Western/Central Asia

While this document supports a response to hunting as a threat to the Siberian Crane under the CMS MoU, it is important to recognize the wider issue as it affects many other migratory waterbirds using the same flyways. The range of the Siberian Crane overlaps three major waterbird flyways recognized by CMS – the African-Eurasian Waterbird Flyway, the Central Asian Flyway (CAF), and the East Asian-Australasian Flyway (see **Figure 2**).

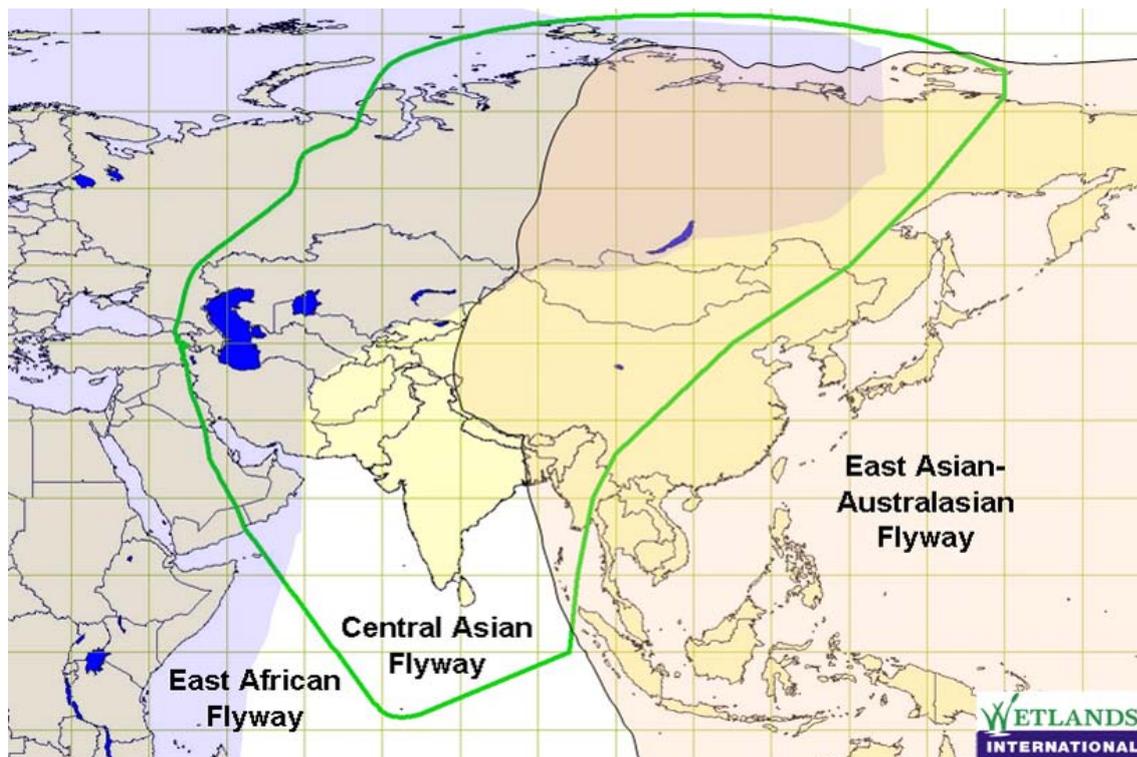


Figure 2. Major waterbird flyways covering Eurasia (Source: Wetlands International)

The Central Asian Flyway covers at least 279 migratory waterbird populations of 182 species, including 29 globally threatened and near-threatened species (CAF Action Plan) that breed, migrate and spend the non-breeding (winter period) within the region (including the Critically Endangered Siberian Crane, Sociable Lapwing and Slender-billed Curlew, Endangered Red-breasted Goose, etc).

Of the 182 species covered by the CAF Action Plan, 17 and 103 are included in Appendix I and II respectively of the Convention on Migratory Species (CMS). Besides geographical overlap there is also a substantial overlap in species between CAF and AEWA. Out of the 279 migratory waterbird populations in the CAF, over 50% (145 populations) are covered by the CMS African-Eurasian Waterbird Agreement (AEWA). AEWA covers 554 populations of 255 species of migratory waterbirds.

The East Asia-Australasian Flyway is home to over 50 million migratory waterbirds - including shorebirds, Anatidae (ducks, geese and swans) and cranes - from over 250 different populations, including 28 globally threatened species. There are currently 700 sites recognised as internationally important to migratory waterbirds along the flyway, many of which are located adjacent to human settlement and vulnerable to rapid social and economic development pressures.

The regular population estimates and status reviews for all waterbird populations world-wide indicate that:

- 40% of waterbird populations for which trend data are available at the global level are decreasing
- 34% are stable
- 17% are increasing
- 4% have become extinct

Although not all waterbirds are migratory the trends for just the migratory populations are very likely to be similar. In Asia as a whole, 62% of waterbird populations are in decline or have become extinct and only 10% show an increasing trend (Wetlands International, 2006).

In addition, 16% of waterbird species in Europe, Africa, the Middle East and Central Asia are classified as globally threatened or near-threatened, and 23% of waterbird species in the Asia-Pacific region. (BirdLife International, 2008).

1.3 Unsustainable Waterbird Harvesting

Regional waterbird populations in West/Central Asia are significantly affected by hunting practices. These impacts include unsustainable methods used for legally hunted species, and illegal hunting practices including killing of globally threatened and other nationally protected species. While there are many information gaps due to a widespread lack of systematically collected data and related research, population trends for a number of waterbird species are cause for conservation concern and a number of threatened species are at risk from hunting. For example, it is thought that hunting in this region is a significant threat to the Critically Endangered Siberian Crane and Slender-billed Curlew, and to the Endangered Red-breasted Goose and Vulnerable Lesser White-fronted Goose. Eurasian and Demoiselle Cranes are also known to be hunted and trapped in significant numbers in this region.

Sustainable use objectives under AEWA and the CAF Action Plan aim at improved coordination of waterbird harvesting throughout the entire flyway of a species but this is difficult to achieve in reality, as in most countries no harvesting (bag) statistics are in place and thus knowledge about the total numbers of waterbirds taken from a population are not known. Thus, the overall effects of taking on populations are not fully known, and in many cases it is not clear whether or not extensive hunting is causing population declines. There are a few threatened or endangered species that have been well studied, and for which relevant information is available. In addition to the Siberian Crane, a good example is the Lesser White-fronted Goose *Anser erythropus*, for which recent intensive research has shown that increased adult mortality caused by hunting in the staging and wintering grounds, particularly in Central Asia, is almost certainly the main reason for the decline of the species, and a real threat for its survival (Jones *et al.* 2008).

2. POLICIES AND RECOMMENDATIONS OF MULTILATERAL ENVIRONMENTAL AGREEMENTS

Principles and guidelines for the sustainable use of biodiversity have been adopted by global conventions including the Convention on Migratory Species (CMS), Convention on Biological Diversity (CBD), Ramsar Convention on Wetlands (guidance on wise use of wetland resources) and CITES.

2.1 Convention on Migratory Species (CMS) and the Sustainable Use of Biodiversity

CMS *Resolution 8.1 on Sustainable Use* (see **Annex 1**) acknowledges the special requirements and fragility of CMS-listed migratory species and the need to engage all countries and peoples in their conservation, including the need to provide full protection to CMS Appendix 1 species. It also recognizes that sustainable use may provide incentives for conservation and restoration because of the social, cultural and economic benefits that people could derive from that use and that, in turn, sustainable use cannot be achieved without effective conservation measures.

This resolution also acknowledges the *Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity* (AAPGs) adopted by the Parties to the Convention on Biological Diversity (CBD), and recognizes that the implementation of the AAPGs by Parties, where appropriate, could contribute to reducing many of the causes of loss of migratory species and lead to better conservation of habitats for migratory species. A Working Group of the CMS Scientific Council is currently following up on the practical application of these guidelines in the CMS context.

CMS Parties are also bound to provide appropriate protection to migratory species listed in CMS Appendix I and to formulate agreements for the conservation and management of species listed in Appendix II.

2.2 The CMS Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)

AEWA covers some countries in Western and Central Asia. In Article II of this Agreement, Parties agree, as a fundamental principle, to take co-ordinated measures to maintain migratory waterbird species in a favourable conservation status or to restore them to such a status. To this end, the Parties agree to apply general conservation measures prescribed in Article III of the Agreement, as well as a number of more specific actions determined in the Action Plan appended to the Agreement. If populations of migratory waterbirds are to be maintained in a favourable conservation status, it is essential that any exploitation of these populations be carried out on a sustainable basis. Article III, paragraph 2 (b) of the Agreement requires that Parties ensure that any use of migratory waterbirds is based on an assessment of the best available knowledge of their ecology, and is sustainable for the species as well as for the ecological systems that support them. In paragraph 4.1.1 of the Action Plan (see **Annex 2**), Parties are required to co-operate to ensure that their hunting legislation implements the principle of sustainable use as envisaged in the Action Plan, taking into account the full geographical range of the waterbird populations concerned and their life history characteristics.

Guidelines developed under AEWA (AEWA Secretariat 2005a) promote the establishment of 'harvest frameworks' at both international and national levels, and identify a series of steps to assist Range States in adopting a sustainable approach to the harvesting of waterbirds. These guidelines are discussed further in **Section 3.1**.

2.3 Central Asian Flyway Action Plan

The Meeting to conclude and endorse the proposed *Central Asian Flyway Action Plan to Conserve Migratory Waterbirds and their Habitats* took place in New Delhi, India, from 10-12 June 2005. This was the second official meeting of the Central Asian Flyway (CAF) Range States since they first met in Tashkent, Uzbekistan, in 2001, to discuss a draft action plan for the CAF and various legal and institutional options to support an action plan's implementation. The New Delhi meeting finalized the draft Action Plan's text. Wetlands International in consultation with the CMS Secretariat revised the Action Plan to incorporate technical comments received from the Range States following the New Delhi Meeting. While the text remains to be officially adopted by the Range States, the CMS Secretariat notes in the document that Range States, interested organizations and experts may wish to draw from the principles and actions reflected in the Action Plan as a basis to prioritise their on-going work to conserve the migratory waterbirds and habitats of the Central Asian Flyway. CMS will also work actively with the Range States, other interested States, international organisations and Wetlands International to support the Action Plan's interim implementation at the flyway level.

Section 4 of the Action Plan deals with managing human activities, under which 4.1 Harvesting / Hunting lists 12 action points for Range States to implement. Section 4.2 Livelihood Support Activities also relates to the sustainable use of migratory waterbirds, through action points relating to the management of traditional uses, and evaluation of the costs, benefits and other consequences of uses of waterbird resources (see **Annex 3**).

2.4 Convention on Biological Diversity (CBD)

National Biodiversity Strategies and Action Plans developed within the CBD framework provide an important basis for national policies on biodiversity conservation and sustainable use.

CBD Decision VII/12 on Sustainable Use (Article 10) adopted the *Addis Abbaba Principles and Guidelines (AAPGs) on the Sustainable Use of Biodiversity* and invited Parties to the Convention, other Governments and relevant organizations to initiate a process for the implementation of the AAPGs, *inter alia* (Secretariat of the CBD, 2004).

2.5 Ramsar Convention on Wetlands

The Ramsar Convention provides extensive guidance on the interpretation and implementation of its requirement for the “Wise Use” of wetlands in numerous Resolutions (most recently in Resolution IX.1) and technical documents. While this is constantly evolving, *Handbook #1 on the Wise Use of Wetlands* (Ramsar Convention Secretariat, 2007) provides a conceptual framework for the wise use of wetlands and the maintenance of their ecological character, which lie at the very heart of the Ramsar Convention. An updated definition of “wise use” is given as follows:

“Wise use of wetlands is the maintenance of their ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development”

It is noted that this is consistent with CBD’s overarching “ecosystem approach”. In addition, the *Addis Ababa Principles and Guidelines for the sustainable use of biodiversity*, adopted by CBD in 2004 (CBD COP7 decision VI/12), focus attention on the sustainable use of components of biological diversity. These guidelines cover a similar range of implementation interventions at similar levels of detail to the original Ramsar Wise Use Guidance and “toolkit”.

Ramsar guidance on community participation in wetland management (Wise Use Handbook #5 - Ramsar Convention Secretariat, 2007) is among the most relevant of the Wise Use provisions in relation to the sustainable harvesting of waterbirds, based on guidelines adopted by Resolution VII.8 *Guidelines for establishing and strengthening local communities’ and indigenous people’s participation in the management of wetlands*.

2.6 Convention on International Trade in Endangered Species (CITES)

CITES Resolution Conf. 13.2 (Rev. CoP14) on the *Sustainable use of biodiversity: Addis Ababa Principles and Guidelines* <http://www.cites.org/eng/res/13/13-02R14.shtml> urges the Parties to make use of the *Principles and Guidelines for the Sustainable Use of Biodiversity*, also taking into account scientific, trade and enforcement considerations determined by national circumstances; to share experiences on sustainable use at the national level; and to take effective measures at policy and institutional level to ensure synergy between their implementation of CITES and CBD at the national level *inter alia*.

CITES listing of species affected by international trade is generally reflected in national species protection legislation.

2.7 Regional Policy Frameworks in Western/Central Asia

There are no comprehensive regional efforts specifically to promote sustainable hunting practices in Western/Central Asia, although cooperation on the environment exists through various mechanisms including the Caspian Convention and Caspian Environment Programme (see <http://www.caspianenvironment.org/newsite/index.htm>), and the UNECE-led Environment Strategy for Countries of Eastern Europe, Caucasus and Central Asia (see: <http://www.oecd.org/dataoecd/55/13/35958166.pdf>).

The five Central Asian countries signed an Agreement of Cooperation in the field of Environmental Protection and Sustainable Environmental Management (1998) and developed the basis for joint actions including a Regional Environment Centre. Interstate Sustainable Development Commission Meetings were held with the participation of donor organizations, organizational issues solved and regional priorities on sustainable development identified. This has resulted in a UNEP-led Regional Environmental Action Plan for Central Asia (see: <http://www.rrcap.unep.org/centralasia/>).

These mechanisms provide opportunities for sharing information and developing international cooperation on environmental issues as well as a framework for international agencies (e.g. UN and EU agencies) to support activities that contribute towards solving targeted environmental problems in the region.

3. GUIDELINES AND BEST PRACTICE FROM OTHER REGIONS

This section presents some of the most useful and relevant experience from other regions that could be applied to West/Central Asia. It is not comprehensive, but highlights some approaches and tools that could be of particular value.

3.1 AEWA Guidelines

Guidelines on the Sustainable Harvest of Migratory Waterbirds have been published by AEWA (AEWA Secretariat, 2005), based on the principles and guidance of CMS, as well as the Convention on Biological Diversity, and the Ramsar Convention. These guidelines promote the establishment of 'harvest frameworks' at both international and national levels, and a series of steps to assist Range States in adopting a sustainable approach to the harvesting of waterbirds.

The principle feature of the guidelines is a series of steps to guide Parties towards implementing a sustainable harvest framework. To ensure that any harvest of migratory waterbirds is sustainable, each country should take the following steps:

- Step 1: Conduct baseline assessment of the scale of hunting of waterbirds
- Step 2: Commit to and support international harvest management
- Step 3: Introduce or revise systems to manage harvests at the national level
- Step 4: Adjust harvest frameworks to address national objectives
- Step 5: Set the nation's hunting regulations [or revise them]
- Step 6: Introduce procedures to maintain high standards amongst hunters
- Step 7: Minimise the negative impacts of hunting
- Step 8: Introduce, where possible, the monitoring of hunting harvests
- Step 9: Raise awareness of the value of hunting and of sustainable practices amongst hunters and non-hunters

*This process is equally applicable to West/Central Asia and further details are available in the guidelines themselves. Here it is noted that while some steps need to be taken in sequence, others can be implemented in parallel (e.g. Step 9 on awareness raising and education of hunters to raise standards), and the actual needs of each country will vary with its specific circumstances. At this stage, particular emphasis should be given to the first two steps (see **Section 4**).*

3.2 The flyway approach to the conservation and wise use of waterbirds and wetlands: A Training Kit

Launched in May 2010 by the Wings Over Wetlands project (see: www.wingsoverwetlands.org), the Flyway Training Kit is designed to build capacity to plan, implement, monitor and engage in effective flyway-scale conservation of migratory waterbirds and wetland habitats in Africa and Eurasia.

The result of a broad collaborative effort among many donors, partners and training institutes across the African-Eurasian region, the Flyway Training Kit will be available in English, French, Arabic and Russian. The package includes three modules with comprehensive text, case studies and exercises supported by ready-to-use presentations, as well as accompanying CDs with a range of additional material. The kit is designed to assist in targeted trainings that can be customized by topic as they relate to flyway conservation, wetland management and migratory waterbird conservation.

Module two on Applying the Flyway Approach to Conservation includes a section (2.3) on principles of wise use of migratory waterbird populations and preconditions for applying wise use principles. This includes information on waterbird taking, sustainable taking, hunting thresholds and quotes, hunting seasons, harvesting models, wise use principle and harvesting, preconditions for applying wise use principles for waterbirds, wise use principles under AEWA, some case studies, and trade.

This comprehensive educational resource can easily be applied towards the purpose of building capacity for sustainable harvesting of waterbirds in the West/Central Asia region, both within the scope of AEWA and beyond.

PRINCIPLES FOR WISE USE OF MIGRATORY WATERBIRD POPULATIONS AND PRECONDITIONS FOR APPLYING WISE USE PRINCIPLES – KEY POINTS

1. Taking of waterbirds, in whatever way, should not cause population decline.
2. Sustainable hunting of migratory birds neither causes nor contributes to population declines or major changes in behaviour or distribution of hunted species.
3. Birds should not be hunted at breeding or moult sites or on spring migration.
4. Ramsar and AEWA have developed wise use principles and guidelines. The AEWA guidelines on sustainable harvest of migratory waterbirds should be considered by the CMS MoU range states
5. Capacity-building and awareness are important in promoting wise use.
6. Hunters are key stakeholders for the conservation and sustainable use of waterbirds.
7. It is necessary to monitor and regulate trade in migratory waterbirds.

Adapted from: Boere & Dodman (2010)

3.3 EU Sustainable Hunting Initiative

There has been a lot of controversy over the compatibility of hunting with certain requirements of the EU [Birds Directive](#). The controversy is often fed by differing interpretations of those requirements.

Consequently, the European Commission recognised the need to start a new dialogue with a view to developing co-operation between governmental and non-governmental organisations concerned with the conservation and wise and sustainable use of wild birds. A ‘Sustainable Hunting Initiative’ was launched by the Commission in 2001 aiming at improved understanding of the legal and technical aspects of the Directive’s provisions on hunting as well as developing a programme of scientific, conservation and awareness raising measures to promote sustainable hunting under the directive. See:

http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/index_en.htm#huntingguide

In order to develop such a dialogue a series of ten measures was proposed. These have broadly the main aims to improve the legal and technical interpretation of the directive’s provisions relating to hunting, to develop a programme of scientific, conservation and training/awareness measures, and to draw a charter on Sustainable Hunting within the framework of the Birds Directive. The ten proposed measures included the following.

Legal framework for hunting management

The EU Birds (Directive 2009/147/EC on the conservation of wild birds) and Habitats directive (Directive 92/43/EEC) fully recognise the legitimacy of hunting as a form of sustainable use. They do limit this activity to certain species and provide rules governing their exploitation. This includes a requirement that migratory bird species are not hunted during their return migration to their breeding grounds. These controls on hunting are intended to ensure a balance between the activity and the long-term interest of maintaining healthy and viable populations of huntable species. This provides the legal framework for the management of hunting, while member states fix the actual dates for national hunting seasons.

Guide on hunting under the EU Birds Directive

The first outcome of the EU Sustainable Hunting initiative was the publication in 2004 by the Commission of a Guide on Hunting under the Birds Directive, which provides clear guidance on how Member States should be reflecting the principles laid down in the directive in their national measures for regulating hunting. See:

http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/hunting_guide_en.pdf

Management Plans for Hunttable Species with Unfavourable Conservation Status

The "Birds Directive" allows for certain species to be hunted, which are listed in Annex II of the Directive. Since the adoption of the Directive in 1979, regular monitoring reports from BirdLife International are indicating that certain hunttable species are considered to have an unfavourable conservation status. The Commission is therefore supporting the preparation of management plans for several species listed in Annex II. These can be downloaded from the same website:

http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/managt_plans_en.htm

Sustainable Hunting Agreement

In 2004, the key partners – BirdLife International and FACE (the Federation of Associations for Hunting and Conservation of the EU) – have reached an agreement on ten points which will enable hunting to continue within a well-regulated framework, whilst fully respecting the provisions of the Directive. See:

http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/charter_en.htm

European Charter on Hunting and Biodiversity

The annual meeting of the Parties (Standing Committee) to the Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 1979), adopted the European Charter on Hunting and Biodiversity in November 2007. The Committee recommends Contracting Parties to the Convention to take into consideration the European Charter on Hunting and Biodiversity and apply its principles in the elaboration and implementation of their hunting policies so as to ensure that hunting is carried out in a sustainable way.

This charter is meant to reinforce the implementation and coherence of global and European biodiversity instruments such as the Convention on Biological Diversity and the European Community's Birds and Habitats Directives, and is fully supportive of the EC's Sustainable Hunting Initiative. See:

<https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=1294516&SecMode=1&DocId=1436274&Usage=2>

and a simpler version produced by FACE: <http://www.face.eu/Documents/Charter.EN.FIN.pdf>

PRINCIPLES OF THE EUROPEAN CHARTER ON HUNTING AND BIODIVERSITY

- Principle 1 – Favour multi-level governance that maximises benefit for conservation and society**
- Principle 2 – Ensure that regulations are understandable and respected**
- Principle 3 – Ensure that harvest is ecologically sustainable**
- Principle 4 – Maintain wild populations of indigenous species with adaptive gene pools**
- Principle 5 – Maintain environments that support healthy and robust populations of harvestable species**
- Principle 6 – Encourage use to provide economic incentives for conservation**
- Principle 7 – Ensure that harvest is properly utilised and wastage avoided**
- Principle 8 – Empower local stakeholders and hold them accountable**
- Principle 9 – Competence and responsibility are desirable among users of wild resources**
- Principle 10 – Minimise avoidable suffering by animals**
- Principle 11 – Encourage cooperation between all stakeholders in management of harvested species, associated species and their habitats**
- Principle 12 – Encourage acceptance by society of sustainable, consumptive use as a conservation tool**

Support for the Natura 2000 Conservation Network

The European Commission launched an awareness-raising programme on Natura 2000 - the Natura 2000 Networking Initiative, continued as the [Natura 2000 Networking Programme](#). This programme aims to promote awareness and understanding of Natura 2000 sites. Within this initiative, a dedicated awareness-raising programme on Natura 2000 among hunters was supported by the Commission. For more details on this initiative, see www.facenatura2000.net.

European Bag Statistics Scheme

The European Commission is supporting an improved bag statistics scheme in Europe, being developed by FACE in cooperation with BirdLife International, and several bodies such as the European Environment Agency. The overall objective is to ensure a common scheme for the collection of hunting bag statistics, along with their scientific interpretation and proper use. This initiative was formally launched in 2006. See: <http://www.artemis-face.eu/>.

Overall, the EU Sustainable Hunting Initiative builds on considerable existing capacity, through national and federated European organizations concerned with hunting and conservation. With EU enlargement, considerable challenges remain in terms of harmonization of legislation and practices, but a strong legal framework exists, backed by sound scientific information over much (not all) of the region. Aside from this developing legal-scientific framework for hunting management, progress has been made in recent years in developing partnerships between conservation and hunting organizations, a good lesson for other regions.

3.4 The Sustainable Hunting Project

The Sustainable Hunting Project - “Building Capacity for Sustainable Hunting of Migratory Birds in Mediterranean Third Countries” (2004-2007) was established to tackle the complex underlying issues leading to unsustainable and often indiscriminate hunting of migratory birds. Funded by the EU LIFE-Third Countries Fund, it was implemented by a partnership of BirdLife International, AEWA, the Society of the Protection of Nature in Lebanon (SPNL, BirdLife in Lebanon) and Association “Les Amis des Oiseaux” (AAO, BirdLife in Tunisia) The project goal was “*to strengthen the management of bird hunting in selected North African and Middle Eastern countries of the Mediterranean region to reduce excessive, indiscriminate and illegal hunting of migratory birds, promote more sustainable hunting practices and enhance the compliance of international and regional agreements on the conservation of migratory birds*”.

The Project worked through a series of regional initiatives and model collaborative projects involving government, hunting and conservation groups. Tunisia and Lebanon were chosen as the focal countries in North Africa and in the Middle East respectively, in order to demonstrate the range of activities aimed at achieving sustainable hunting which could be replicated in other countries. Quantitative information on hunting methods was extremely limited before the project, and it still remains difficult to ascertain the true scale of illegal hunting. In a four-month period in 2005, SPNL researchers estimated that 1,780 storks, cranes and pelicans and 3,640 raptors were shot or trapped in the main hunting localities in Lebanon.

The Project reviewed current bird hunting, its management and impact, socio-economic and cultural importance, potential alternatives, and 'best practice' for hunting of migratory birds in region and published a series of synthesis reviews that will act as a resource for national governments and other interested stakeholders. It also developed a comprehensive set of *Guidelines* for decision makers, and a *Code of Practice for Responsible Hunting* for hunters, both of which were published in English and Arabic. AAO worked with the national federation of hunters' associations to include the Code of Practice, together with the annual hunting decree, in a hunter's guide in pocket format which is issued to all registered hunters and law enforcement bodies in Tunisia.

The project's educational activities aimed to promote responsible behaviour among hunters, and improve general public awareness of migratory birds. There was a special focus on school children, to educate the next generation of potential hunters. SPNL produced a comprehensive educational program for school children, which included full interactive resources for teachers (in both English and Arabic). In early 2007, AAO launched a project targeting young people involved in the trapping of thousands of migratory birds in the oases of southern Tunisia with a broad public awareness campaign during the spring migration period.

Governments in the region have agreed to strengthen national compliance with relevant international agreements and conventions. Lasting partnerships have been established between governments, hunters' organisations and conservation NGOs, ensuring that progress on sustainable hunting will continue after the project. BirdLife International intends that the achievements of the Sustainable Hunting Project will be used as tools to build on in future flyway regional projects in the region, such as the Soaring Bird and Wings Over Wetlands projects. The project has provided a platform at both regional and national levels for continuing to improve the management of bird hunting in the region, and to promote more sustainable hunting practices.

The main outputs are available from the project website at http://www.birdlife.org/action/change/sustainable_hunting/ including:

- **Eight national reports** on migratory bird hunting from the eight project countries, which provided the first up-to-date information on hunting in many countries;
- **Seven regional synthesis reports** on key topics relevant to the conservation of migratory birds and the management of hunting;
- Regional "*Guidelines for moving Towards Sustainable Hunting of Migratory Birds in MTC countries*" which will serve as a model document for hunting management in the region over the coming years;
- "*Code of Practice for Responsible Hunting of Migratory Birds in MTC Countries*" which provides a quick summary of best practice for hunters;
- *Regional Action Plan for moving towards responsible hunting and the conservation of migratory birds in the Southern and Eastern Mediterranean region (2008-2013)*;
- **Awareness raising** materials on globally threatened birds and the threat of hunting;
- **School education programme** to educate the next generation of potential hunters.

The project's systematic approach and regional outputs developed through a consultative process provide a good model for other regions. While the general format and structure of the regional action plan and guidelines can be replicated for another region such as West/Central Asia, the actual content needs to be carefully tailored to the specific issues, legal, administrative and institutional frameworks and other factors through consultation with relevant stakeholders within each country to be of practical value. In this regard, the partnerships formed between government authorities, hunters and conservation bodies are of great importance. Finally, it is clear that these mechanisms and tools need to be accompanied by practical actions on the ground to achieve sustainable changes in hunting practices.

3.5 Assessment of Bird Hunting along the Adriatic Flyway

This assessment of *Bird Hunting along the Adriatic Flyway* was conducted within the framework of the project *Protection of Priority Wetlands for Bird Migration (Adriatic Flyway) in the Dinaric Arc Ecoregion through Integrated Site and River Basin Management*, jointly implemented by WWF MedPo and EuroNatur, financially supported by the MAVA Foundation. The assessment covered the European countries of Albania, Bosnia-Herzegovina, Croatia, Montenegro, Slovenia and Serbia (Schneider-Jacoby and Spangenberg, 2010).

Each year, far more than two million birds are shot along the Adriatic Flyway. Assumed reasons for that are intensive hunting activities by more than 200,000 hunters plus many poachers and guests, inadequate legal frameworks concerning bird hunting in most countries as well as insufficient control of the existing laws in the countries located along the Adriatic Flyway. The only exception is Slovenia. The main aim of the assessment was to analyse the current legal frameworks as well as the actual situation concerning bird hunting in all countries located along the Adriatic Flyway, in order to verify the above assumption and to gain a clear picture about the respective standards in each country.

As a first step, the following measures were assessed in each country, rating the situation on a 1 to 5 scale with **1** being the lowest and **5** the highest rating:

1. Control of hunting
2. Monitoring of quantity of birds shot
3. Length of hunting season
4. Hunting during stages of reproduction
5. Hunting during the return
6. Birds open for hunting
7. Impact of hunting on endangered species
8. Illegal Hunting
9. Hunting Ban Areas
10. Trend
11. Trade in Birds

The results from these rankings were summed up and divided through the amount of criteria (11). This led to an overall ranking (see **Table 1**), showing that the only country along the Adriatic Flyway corridor which has good standards in bird hunting is Slovenia (total rating 4), which implemented the EU Bird Directive in an exemplary manner and protects all migrating birds. In Slovenia, according to the recent hunting law, only six bird species are still open for hunting.

More detailed conclusions were made, but the general approach is perhaps of most potential interest, showing how structured assessment based on questionnaire surveys and interviews can provide an overview of the hunting situation for a region or subregion.

Tab.1.: Evaluation of the State of Bird Hunting

Countries Entity	AL	BIH Fed	RS	MNE	SRB	HR	SLO
Control of hunting	1	1	1	1	2	3	4
Monitoring of quantity of birds shot	1	1	1	1	1	1	4
Length of Hunting Season	1	1	1	1	1	2	3
Hunting during stages of reproduction	2	1	1	1	1	1	3
Hunting during the return	1	1	1	1	1	2	5
Number of bird species open for hunting	1	1	1	2	2	2	4
Impact on endangered bird species	1	1	1	1	1	1	5
Illegal bird hunting	1	1	1	1	1	1	4
Hunting Ban Areas	2	2	2	3	2	3	3
Trend Analysis	1	1	1	4	2	4	5
Trade in Birds	1	1	1	1	3	4	5
	1,18	1,09	1,09	1,55	1,55	2,18	4,09

5	excellent
4	good
3	fair
2	insufficient
1	poor

Source: Schneider-Jacoby and Spangenberg (2010)

3.6 Hunting and Waterfowl Management in North America

Waterbird hunting is generally practised according to a regulatory and management framework based on scientific data on waterbird population trends and harvesting rates. International coordination between Canada, the United States and Mexico is provided through the North American Waterfowl Management Plan <http://www.nawmp.ca/>. The North American Waterfowl Management Plan is an international action plan to conserve migratory birds throughout the continent. The Plan's goal is to return waterfowl populations to their 1970s levels by conserving wetland and upland habitat. The Plan is a partnership of federal, provincial/state and municipal governments, non-governmental organizations, private companies and many individuals, all working towards achieving better wetland habitat for the benefit of migratory birds, other wetland-associated species and people. The Plan's unique combination of biology, landscape conservation and partnerships comprise its exemplary conservation legacy. Plan projects are international in scope, but implemented at regional levels. These projects contribute to the protection of habitat and wildlife species across the North American landscape. In fact, the North American Waterfowl Management Plan is considered one of the most successful conservation initiatives in the world.

Hunters play a significant role in habitat conservation, especially through organisations such as “Ducks Unlimited” and funds generated through the “Duck Stamps” scheme for hunting licences. Please see the following websites for further information.

US Fish and Wildlife Service
<http://www.fws.gov/hunting/>

Ducks Unlimited
<http://www.ducks.org/>

Ducks Unlimited Canada
<http://www.ducks.ca/>

4. PROPOSED APPROACH FOR WEST / CENTRAL ASIA

4.1 Regional Strategy

Waterbird hunting in West / Central Asia is widespread, often deeply rooted in tradition and culture, linked to livelihoods and socio-economic conditions in many cases, and mostly carried out on an individual basis. These factors combine to indicate that a long term, systematic approach is required to provide the education, organization and management needed to achieve more sustainable hunting practices on a wide scale. Experience and guidelines from other regions provide a solid basis for developing such an approach, which should be implemented by national governments with the support of all stakeholders and technical assistance from non-governmental organizations.

The long term goal of the regional strategy would be to:

Establish sustainable waterbird hunting practices in all countries

This goal implies compliance with the guidance of related multilateral environmental agreements (CMS, CBD, CITES and Ramsar Conventions, *inter alia*) on the sustainable use of biodiversity and the promotion of related conservation measures such as species protection, habitat conservation, stakeholder participation and environmental education.

It is proposed that agreed actions should be included in the Conservation Plans for the CMS MoU on the Siberian Crane.

The first two steps of the AEWA guidelines on sustainable waterbird harvesting provide a logical starting point for countries (see **section 3.1**):

Step 1: Conduct a baseline assessment of the scale of hunting of waterbirds

The numbers of each population of migratory waterbirds harvested within the West/Central Asian region (overlapping AEWA and CAF regions) are incompletely (or poorly) known. Further guidance on baseline assessment of the scale of hunting of waterbirds needs to be developed. This information is vitally important and is needed to:

- consider the sustainability of hunting harvests;
- introduce protection measures where they are needed to conserve threatened or vulnerable species;
- assess the socio-economic importance of waterbird hunting;
- contribute to an assessment of trade in migratory waterbirds (see AEWA Guidelines No.6: *Guidelines on regulating trade in migratory waterbirds*).

>> *It is therefore recommended that countries carry out baseline surveys of waterbird harvesting, especially in areas of particular importance for Siberian Cranes and other globally threatened birds. Surveys should include areas outside national protected area systems where waterbird hunting is prevalent.*

- >> *National assessments should consider the points listed for the Assessment of Bird Hunting along the Adriatic Flyway (see **section 3.5**), such as: measures for the control of hunting, monitoring of quantity of birds shot, length of hunting seasons, hunting during stages of reproduction, hunting during the return migration (spring hunting), legal huntable species, impact of hunting on endangered species, illegal hunting, hunting bans, trends and trade in birds.*
- >> *It is recommended that countries assess national laws related to waterbird hunting and to consider gaps in legislation. They should also assess the effectiveness of enforcement practices.*
- >> *International organizations should assist with the design of survey methodologies to ensure that these are comparable between countries.*
- >> *Baseline surveys should be linked to other project interventions as far as possible, especially in areas where hunting is a recognized conservation issue, or where community participation goals are being pursued.*

Step 2: Commit to and support international harvest management

Any international harvest framework should be based on clear and unambiguous objectives for harvest management, these being related to the conservation status of particular waterbird populations. Analysis of the best available monitoring data for waterbirds (see AEWA Guidelines No.9: *Guidelines for a waterbird monitoring protocol*) and hunting harvests would allow informed judgement about sustainable levels of hunting harvest.

The harvest framework should address the following:

- which species may and may not be hunted;
- policies to be adopted to protect endangered 'look-alike' species;
- the seasons when hunting may occur;
- the maximum length of the seasons;
- whether bag limits would be appropriate;
- wise and unwise hunting practices, resulting in a code of practice to ensure that high standards are maintained (note – this could be adapted from existing codes of practice for other regions – see Bibliography for examples).

After appropriate consultation, a harvest framework would be adopted as the goal for Range States to aim for in setting their own harvest regulations. Such frameworks should be synergistic with existing treaties and conventions.

- >> *Assessment of current national waterbird harvesting frameworks should be conducted in relation to the above-listed issues in order to identify priorities for national action.*
- >> *The assessment will also allow common regional positions to be developed on the action needed based on scientific assessments of species conservation status, and the current status of national frameworks.*
- >> *Stakeholder consultation processes should be followed to conduct these assessments in order to obtain a complete and balanced view of the issues.*
- >> *International organizations should assist in developing standardized approaches for the assessments so that results are comparable between countries (see the example of the Adriatic Flyway in **Section 3**).*

>> *A regional Code of Practice for Responsible Hunters should be developed to promote high standards among hunters, which can be adapted by each country in consultation with stakeholders, and distributed (for example, with annual hunting licences). See Bibliography section on Codes of Practice for examples.*

4.2 Organize meetings to discuss priority hunting issues with relevant stakeholders and experts

Spring hunting is generally banned in Europe and North America on the basis that hunting kills at this time of year impact the breeding populations of birds. Yet it has been identified as an issue of particular conservation concern in parts of Siberia in Russia and other countries within this region. For instance, in Chita region (Far Eastern Russia), waterbird populations have suffered a serious drought and numbers of breeding birds have declined significantly. Under such conditions, additional mortality from spring hunting can have a very serious impact on populations. There is a need to raise awareness amongst hunters and policy-makers towards a science-based approach to waterbird management, which will benefit hunters, waterbird populations and wetland ecosystems.

>> *The annual meeting of the Crane Working Group of Eurasia should discuss spring hunting.*

>> *A meeting should be organized to discuss spring hunting with key stakeholders from different regions of Siberia / Central Asia.*

>> *An international conference should be planned to present best practice on sustainable hunting and waterbird management to raise awareness among policy-makers and develop a regional harvest framework. Presentations at other international meetings should also be planned.*

4.3 Demonstration projects at key sites

Demonstration projects should be developed for key localities or sub-regions that are of international importance for migratory waterbirds and threatened species, where hunting is a major conservation issue, and as far as possible, where initiatives can build on past experience and existing capacity.

These should incorporate targeted education and awareness programmes focusing on hunters. Awareness programmes should convey the key message that hunters are an essential part of the solution.

Capacity building should be conducted for hunting organizations that are able to contribute effectively towards more sustainable practices, including participation in conservation programmes and developing collaboration between hunting organizations, government agencies, protected area managers and other stakeholders.

Experience should be transferred both within the W/C Asian region and with other regions.

4.4 Project Concepts

>> *Project concepts should be developed to support the implementation of various actions that can be used to approach donors. These should vary in size and scope, including:*

- ***Regional or national project support** for conducting national assessments to establish baselines, identify trends and design response measures. These would include the assessment issues listed in 4.1 above. Response measures would include reform of legislation, enforcement, policies, institutional frameworks, capacity building, education and awareness-raising, etc.*

- **Regional education and awareness-raising campaigns** targeting hunters and related stakeholders, ideally in partnership with hunting organizations in order to achieve mutually beneficial goals. These should publicise codes of practice and use mass media according to targeted communications plans.
- **Meeting of the Crane Working Group of Eurasia on spring hunting**, linked to consultations with stakeholders.
- **International conference on sustainable hunting** to present best practice examples and raise awareness.
- **Demonstration activities at key sites** involving community participation, development and awareness raising. Criteria for site selection would include presence of major waterbird concentrations including threatened species, significant hunting/harvesting issues, and the possibility to build on existing experience and capacity for greater effectiveness.
- **Sustained long term support for small scale grass-roots projects** at specific sites where community education and participation is critical, especially where serious constraints exist for the implementation of larger international technical assistance projects.

5. Bibliography on Sustainable Waterbird Harvesting

Introduction

This bibliography has been compiled in the course of developing guidance on sustainable waterbird harvesting (within the wider context of sustainable hunting) for the West/Central Asian region under the framework of the CMS MoU on the Siberian Crane. It consists of the following parts:

- 1) Guidelines on sustainable waterbird harvesting
- 2) General references
- 3) Websites for selected organizations concerned with sustainable hunting
- 4) Websites for selected projects concerned with sustainable hunting
- 5) Single species action plans

At this stage, the bibliography does not include national publications on sustainable hunting for MoU range states except where these have been published in the international literature.

Guidelines on sustainable waterbird harvesting

AEWA Secretariat 2005a. AEWa Conservation Guidelines No. 5: Guidelines on sustainable harvest of migratory waterbirds. Technical Series No.19. Prepared by Wetlands International. Adopted by AEWa MoP2 in 2002. Last updated 19-4-2005

http://www.unep-aewa.org/publications/conservation_guidelines/pdf/cg_5new.pdf

AEWA Secretariat 2005b. AEWa Conservation Guidelines No.6. Guidelines on regulating trade in migratory waterbirds. Last update 19-4-2005

http://www.unep-aewa.org/publications/conservation_guidelines/pdf/cg_6new.pdf

Sustainable Hunting Project, 2007. Regional Action Plan for moving towards responsible hunting and the conservation of migratory birds in the Southern and Eastern Mediterranean Region 2008-2013. BirdLife International, Cambridge, UK.

http://www.birdlife.org/action/change/sustainable_hunting/PDFs/SHP_Regional_Action_Plan_FINAL.pdf

Sustainable Hunting Project, 2007. Guidelines for Moving Towards Sustainable Hunting of Migratory Birds in the Mediterranean Countries of North Africa and the Middle East. BirdLife International, Cambridge, UK.

http://www.birdlife.org/action/change/sustainable_hunting/PDFs/SHP_Guidelines_FINAL_Oct_06.pdf

Guidance document on hunting under Council Directive 79/409/EEC on the conservation of wild birds (the Birds Directive 2008):

http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/hunting_guide_en.pdf

Federation of Associations for Hunting and Conservation of the EU. European Charter on Hunting and Biodiversity. <http://www.face.eu/Documents/Charter.EN.FIN.pdf>

Convention on the Conservation of European Wildlife and Natural Habitats, 2007. European Charter on Hunting and Biodiversity. Final Draft. Document T-PVS (2007) 7 revised.

<https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=1294516&SecMode=1&DocId=1436274&Usage=2>

Codes of Practice for Hunters

Sustainable Hunting Project, 2006. Code of Practice for Responsible Hunting of Birds in MTC Countries. BirdLife International, Cambridge, UK.

http://www.birdlife.org/action/change/sustainable_hunting/PDFs/SHP_CodeofPractice_%20FINAL_Oct_06.pdf

The British Association for Shooting and Conservation has produced a comprehensive series of Codes of Conduct for various hunting practices, including a Code of Good Shooting Practice, Wildfowling, and for Sporting Agents and Guides Offering Inland Goose Shooting:

<http://www.basc.org.uk/en/codes-of-practice/>

General references

Aarhus (1998). The Convention on Access to Information, Public Participation Decision-Making, and Access to Justice in Environmental Matters Obtained from

<http://www.unece.org/env/pp/documents/cep43e.pdf>

AEWA Secretariat. Undated. Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) Annex 3. Action Plan (Version adopted by MOP4)

http://www.unep-aewa.org/documents/agreement_text/eng/wrd/aewa_agreement_text_2009_2012_annex3.doc

Balmaki, B. & Barati, A. 2006. Harvesting status of migratory waterfowl in northern Iran: a case study from Gilan Province. Eds. G.C. Boere, C.A. Galbraith & D.A. Stroud. *Waterbirds around the World*. The Stationery Office, Edinburgh, UK. Pp.868-869.

http://www.jncc.gov.uk/PDF/pub07_waterbirds_part6.3.8.pdf

BASC 1994. *Shooting: Countryside Sport and Conservation. A Teacher's Resource Pack*. British Association for Shooting and Conservation, Rossett, U.K.

Begbie, E. (ed.) 1989. *The New Wildfowler*. Third Edition. Stanley Paul, London.

Beintema, N. 2001. *Lead poisoning in waterfowl, International Update Report 2001*. Wetlands

International – AEME, Wageningen, The Netherlands

Bhima, R. 2006. Subsistence use of waterbirds at Lake Chilwa, Malawi. *Waterbirds around the world*. Eds. G.C. Boere, C.A. Galbraith & D.A. Stroud. The Stationery Office, Edinburgh, UK. pp. 255-256. http://www.jncc.gov.uk/PDF/pub07_waterbirds_part3.4.11.pdf

BirdLife International 2008. Threatened birds of the world 2008. CD-ROM. BirdLife International, Cambridge, UK.

Boere, G.C., C.A. Galbraith & D.A. Stroud (eds). 2006. *Waterbirds around the world*. The Stationery Office, Edinburgh, UK. 960pp.

Deplanque G. & Ojey, T. 2006. The Wetlands International Waterbird Harvest Specialist Group: challenges and objectives. Eds. G.C. Boere, C.A. Galbraith & D.A. Stroud. *Waterbirds around the World*. The Stationery Office, Edinburgh, UK. Pp.874-875.

Dodman, T. & G. Boere. 2010. The flyway approach to the conservation and wise use of waterbirds and wetlands: A training kit. Module 2: Applying the flyway approach to conservation. Section 2.3 principles of wise use of migratory waterbird populations and preconditions for applying wise use principles. Pp.19-30. Wings over Wetlands – the UNEP-GEF African-Eurasian Flyways Project <http://www.flywaysproject.org/>

Forstner, M., Reimoser, F., Hackel, J., & F. Heckl, (2003). Criteria and Indicators of Sustainable Hunting. Monographien Band 163 (English version of Monograph No. 158 (2001)). Umweltbundesamt GmbH (Federal Environment Agency Ltd.), Austria. Available at <http://www.biodiv.at/chm/jagd>

Freese, C.H. (ed.) 1997. *Harvesting Wild Species: Implications for Biodiversity Conservation*. Johns Hopkins Press, Baltimore and London.

Harradine, J. (ed.) 1992. *Wings in Waterfowl Research and Management*. Proc. 2nd Meeting IWRB Hunting Research (Wing Studies) Group. Saarbrucken, Germany, 9-10 April 1992. Wetlands International, Slimbridge, U.K.

Ilyashenko, E., Mirande, M., Sorokin, A. and G Archibald. 2009. The current status of the Siberian Crane *Grus leucogeranus*. In: Prentice C, editor. Conservation of Flyway Wetlands in East and West/Central Asia. Proceedings of the Project Completion Workshop of the UNEP/GEF Siberian Crane Wetland Project, 14-15 October 2009, Harbin, China. Baraboo (Wisconsin), USA: International Crane Foundation.

Jones, T., Martin, K., Barov, B., Nagy, S. (Compilers). 2008. International Single Species Action Plan for the Conservation of the Western Palearctic Population of the Lesser White-fronted Goose *Anser erythropus*. AEWa Technical Series No.36. Bonn, Germany. http://www.unep-aewa.org/activities/working_groups/lwfg/lwfg_ssap_130109.pdf

Kanstrup, N. 2006. Sustainable harvest of waterbirds: a global review. *Waterbirds around the World*. Eds. G.C. Boere, C.A. Galbraith & D.A. Stroud. The Stationery Office, Edinburgh, UK. Pp 98-106. http://www.jncc.gov.uk/PDF/pub07_waterbirds_part2.2.7.pdf

Laws, T. & Y. Lecocq 1996. The contribution of European hunting organisations in Anatidae conservation. In: M. Birkan, J. van Vessem, P. Havet, J. Madsen, B. Trolliet & M.

Lexer, W., F. Reimoser, J. Hackl, F. Heckl & M. Forstner (2005). Criteria and Indicators of Sustainable Hunting – The Austrian Assessment Approach. Wildl. Biol. Pract. 1(2): 163-183.

- Madsen, J. 1998. Experimental refuges for migratory waterfowl in Danish wetlands. II: Tests of hunting disturbance effects. *J. Appl. Ecol.* 35: 398-417.
- Madsen, J. & A.D. Fox 1995. Impacts of hunting disturbance on waterbirds - a review. *Wildlife Biology* 1: 193-203.
- Madsen & Fox (1997), The impact of hunting disturbance on waterfowl populations: The concept of flyway networks of disturbance-free areas. *Gibier faune sauvage* 14: 201-209.
- Madsen, Pihl & Clausen (1998), Establishing a reserve network for waterfowl in Denmark: a biological evaluation of needs and consequences. *Biological Conservation* 85: 241-256.
- Matthews, G.V.T. (ed.) 1990. *Managing Waterfowl Populations*. Proc. IWRB Symposium, Astrakhan, 1989. IWRB Special Publication No.12. IWRB, Slimbridge, U.K.
- Moser (eds.), Proceedings of the Anatidae 2000 Conference, Strasbourg, France, 5-9 December 1994. *Gibier Faune Sauvage, Game Wildl.* 13: 1257-1260.
- Nichols, J.D. & F.A. Johnson 1996. The management of hunting of Anatidae. In: M. Birkan, J. van Vessem, P. Havet, J. Madsen, B. Trolliet & M. Moser (eds.), Proceedings of the Anatidae 2000 Conference, Strasbourg, France, 5-9 December 1994. *Gibier Faune Sauvage, Game Wildl.* 13: 977-990.
- Pain, D.J. (ed.) 1992. *Lead poisoning in waterfowl*. IWRB Special Publication No.16. IWRB, Slimbridge, U.K.
- Ramsar Convention Secretariat, 1999. Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands (Resolution VII.8). http://www.ramsar.org/pdf/res/key_res_vii.08e.pdf
- Ramsar Convention Secretariat, 2007. *Wise use of wetlands: A Conceptual Framework for the wise use of wetlands*. Ramsar handbooks for the wise use of wetlands, 3rd edition, vol. 1. Ramsar Convention Secretariat, Gland, Switzerland. http://www.ramsar.org/pdf/lib/lib_handbooks2006_e01.pdf
- Ramsar Convention Secretariat 2007. *Participatory skills: Establishing and strengthening local communities' and indigenous people's participation in the management of wetlands*. Ramsar handbooks for the wise use of wetlands, 3rd edition, vol. 5. Ramsar Convention Secretariat, Gland, Switzerland. http://www.ramsar.org/pdf/lib/lib_handbooks2006_e05.pdf
- Schneider-Jacoby, M. and Spangenberg A. 2010. Bird Hunting along the Adriatic Flyway. An Assessment of Bird Hunting in Albania, Bosnia-Herzegovina, Croatia, Montenegro, Slovenia and Serbia. Euronatur www.euronatur.org
- Secretariat of the Convention on Biological Diversity, 2004. The Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (CBD Guidelines) Montreal: Secretariat of the Convention on Biological Diversity 21 p. www.cbd.int/doc/publications/addis-gdl-en.pdf
- Secretariat of the Convention on Biological Diversity, 2004. Decision VII/12 on Sustainable Use (Article 10). <http://www.cbd.int/decision/cop/?id=7749>

UN Economic and Social Council 2003. Environmental Partnerships in the UN ECE Region: Environment Strategy for Countries of Eastern Europe, Caucasus and Central Asia - Strategic Framework. ECE/CEP/105/Rev.1. 27 June 2003.
<http://www.oecd.org/dataoecd/55/13/35958166.pdf>

UNEP/CMS Secretariat, 2006. Central Asian Flyway Action Plan for the Conservation of Migratory Waterbirds and their Habitats. UNEP/Convention on Migratory Species Secretariat, Bonn, Germany.
UNEP/CMS Secretariat, 1999. Conservation measures for the Siberian Crane. 1st edition. CMS Technical Series Publication No. 1. UNEP/Convention on Migratory Species Secretariat, Bonn, Germany.
http://www.cms.int/reports/TECH_SERIES/TechSeries1_SibCrane.pdf

UNEP/CMS Secretariat, 2002. Conservation measures for the Siberian Crane. 2nd edition. CMS Technical Series Publication No. 7. UNEP/Convention on Migratory Species Secretariat, Bonn, Germany.

UNEP/CMS Secretariat, 2005. Conservation measures for the Siberian Crane. 3rd edition. CMS Technical Series Publication No. 10. UNEP/Convention on Migratory Species Secretariat, Bonn, Germany.

UNEP/CMS Secretariat, 2008. Conservation measures for the Siberian Crane. 4th edition. CMS Technical Series Publication No. 16. UNEP/Convention on Migratory Species Secretariat, Bonn, Germany.
http://www.cms.int/publications/TechSeries/SibCrane16/siberian_crane_TC16.htm

Wetlands International, 2006. Waterbird Population Estimates. Fourth Edition. Wetlands International, Wageningen, The Netherlands.

Websites for selected organizations concerned with sustainable hunting

Artemis Centralized Database on Bag Statistics for the EU
<http://www.artemis-face.eu/>

Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)
<http://www.unep-aewa.org/>

British Association for Shooting and Conservation
<http://www.basc.org.uk/en/>

Convention on the Conservation of Migratory Species of Wild Animals
<http://www.cms.int/>

Ducks Unlimited
<http://www.ducks.org/>

Ducks Unlimited Canada
<http://www.ducks.ca/>

EU Environment – Nature Conservation and Sustainable Hunting
http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/index_en.htm

EU: Key Concepts document on Period of Reproduction and pre-nuptial Migration of huntable bird Species in the EU (details for each species)
http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/key_concepts_en.htm

Federation of Field Sports Associations of the EU (FACE)

<http://www.face.eu/index-en.htm>

Game & Wildlife Conservation Trust (UK)

<http://www.gwct.org.uk/>

International Council for Game and Wildlife Conservation (CIC)

<http://www.cic-wildlife.org/>

Intergroup Sustainable Hunting

<http://www.face.eu/Intergroup/IG.htm>

US Fish and Wildlife Service

<http://www.fws.gov/hunting/>

Wetlands International Waterbird Harvest Specialist Group

<http://www.wetlands.org/Aboutus/Specialistgroups/WaterbirdHarvestSpecialistGroup/tabid/1252/Default.aspx>

Websites for selected projects and programmes concerned with sustainable hunting

Birdlife International Sustainable Hunting Project

http://www.birdlife.org/action/change/sustainable_hunting/index.html

EU Life Projects involving hunting

<http://ec.europa.eu/environment/life/themes/animalandplants/lists/hunting.htm>

EU Life Lesser White-fronted Goose Project (WWF Finland)

http://www.wwf.fi/english/finland/lesser_white_fronted/

North American Waterfowl Management Plan

<http://www.nawmp.ca/>

Single Species Action Plans

Conservation Action plans for a range of migratory waterbirds can be downloaded from the following websites:

http://www.cms.int/publications/cms_tech_series.htm

http://www.unep-aewa.org/publications/technical_series.htm

ANNEX 1: CMS Resolution 8.1 on Sustainable Use



CONVENTION ON MIGRATORY SPECIES

Distr: GENERAL

UNEP/CMS/Resolution 8.1*

ORIGINAL: ENGLISH

SUSTAINABLE USE

Adopted by the Conference of the Parties at its Eighth Meeting (Nairobi, 20-25 November 2005)

Aware of the special requirements and fragility of CMS-listed migratory species and the need to engage all countries and peoples in their conservation throughout the world;

Emphasizing that CMS prohibits the taking of Appendix I species except in specific circumstances as specified in Article III, paragraph 5;

Recalling that CMS Article V, paragraph 4 (f) in the Guidelines for Agreements prohibits the taking of migratory species of the order Cetacea where such taking is not permitted for that migratory species under any other multilateral agreement;

Further recalling Resolution 7.9, which reaffirms the interest of CMS to develop strong collaborative arrangements with other biodiversity-related instruments and international organisations;

Acknowledging that sustainable use (both consumptive and non-consumptive) may provide incentives for conservation and restoration because of the social, cultural and economic benefits that people could derive from that use and that, in turn, sustainable use cannot be achieved without effective conservation measures;

Further acknowledging that the Parties to the Convention on Biological Diversity (CBD) adopted the Addis Ababa Principles and Guidelines (AAPGs) and that Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) have initiated studies of the potential roles of the AAPGs in contributing towards implementation of CITES requirements for species included in the CITES Appendices; and

Recognizing that the implementation of the CBD AAPGs by Parties, where appropriate, could contribute to reducing many of the causes of loss of migratory species (e.g., by-catch, unsustainable harvesting, overexploitation, unsustainable hunting and other negative impacts) and lead to better conservation of habitats for migratory species;

* Revised version March 2006.

*The Conference of the Parties to the
Convention on the Conservation of Migratory Species of Wild Animals*

1. *Instructs* the Scientific Council to examine the applicability and usefulness of the AAPGs within the context of CMS for improving the conservation status of relevant migratory species listed under the CMS Appendices;
2. *Urges* the Scientific Council to liaise with other Conventions, Parties and NGOs to gather and share information on relevant studies on the AAPGs;
3. *Invites* Parties, other Governments, international organizations and other relevant organizations to support the aforementioned work, *inter alia*, by providing appropriate financial assistance and relevant data and information; and
4. *Requests* that the Scientific Council reports its findings to the ninth meeting of the Conference of the Parties.

ANNEX 2 - Extracts on Hunting from the AEWA Action Plan

4.1.1 Parties shall cooperate to ensure that their hunting legislation implements the principle of sustainable use as envisaged in this Action Plan, taking into account the full geographical range of the waterbird populations concerned and their life history characteristics.

4.1.2 The Agreement secretariat shall be kept informed by the Parties of their legislation relating to the hunting of populations...

4.1.3 Parties shall cooperate with a view to developing a reliable and harmonized system for the collection of harvest data in order to assess the annual harvest of populations...

4.1.4 Parties shall endeavour to phase out the use of lead shot for hunting in wetlands as soon as possible in accordance with self-imposed and published timetables.

4.1.5 Parties shall develop and introduce measures to reduce, and as far as possible, eliminate the use of poisoned baits.

4.1.6 Parties shall develop and implement measures to reduce, and as far as possible, eliminate illegal taking.

4.1.7 Where appropriate, Parties shall encourage hunters, at local, national and international levels, to form clubs or organisations to co-ordinate their activities and to help ensure sustainability.

4.1.8 Parties shall, where appropriate, promote the requirement of a proficiency test for hunters, including among other things, bird identification.

UNEP/AEWA Secretariat. Undated. Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) Annex 3. Action Plan (Version adopted by MOP4)

http://www.unep-aewa.org/documents/agreement_text/eng/wrd/aewa_agreement_text_2009_2012_annex3.doc

ANNEX 3 - Extracts on Hunting from the Central Asian Flyway Action Plan

4 Management of Human Activities

4.1 *Harvesting/Hunting*

4.1.1. Range States shall review their national policy and legislation in the field of hunting activities and waterbird protection with a view to implementing international guidelines to encourage harmonization, stricter protection of threatened species and sustainable exploitation of quarry species.

4.1.2. Range States shall cooperate to ensure that their relevant legislation implements the principle of sustainable use as envisaged in this Action Plan, taking into account the full geographical range of the waterbird populations concerned and their life history characteristics.

4.1.3. Range States shall develop and improve/modify their relevant legislation in terms of sustainable exploitation of quarry species and strict protection of threatened ones.

4.1.4. The Secretariat shall be kept informed by the Range States of their legislation relating to the harvesting/hunting of populations listed in Table 2. [Status of Biogeographic Populations of Migratory Waterbirds in the Central Asian Flyway Action Plan]

4.1.5. Range States shall provide measures for sustainable use in particular for species that are listed in any national/regional Red Data Book/Red Data List even if they are not globally or regionally threatened.

4.1.6. Range States shall develop and implement necessary measures to eliminate, or reduce, as far as possible, illegal taking, poaching, and unsustainable hunting practices of populations listed in Table 2, such as use of poisoned baits, mist netting, trapping, explosives, and control gun ownership to deter illegal taking.

4.1.7. Range States shall eliminate illegal trade of populations listed in Table 2.

4.1.8. Where appropriate, Range States shall encourage hunters to organise themselves into associations/societies (at local, state/provincial, national and international levels) to coordinate their activities and share their responsibilities for sustainable use of migratory waterbirds. Range States shall develop their own local and state/provincial systems to regulate harvesting/hunting in the context of internationally acceptable sustainable use principles²².

4.1.9. Range States shall promote the education and training of hunters for the conservation and sustainable use of waterbirds, including through hunting associations and shall endeavour to make mandatory hunter proficiency tests as a condition for the issue of hunting licences. The proficiency test for hunters should include, among other things, waterbird identification including of target and non-target species.

4.1.10. Range States shall reduce as far as possible the lead poisoning in waterbirds by gradual phasing out of lead shot and its replacement by non-toxic shot. They shall endeavour to phase out the use of lead shot for hunting in wetlands by the year 2015.²³

4.1.11. Range States shall initiate efforts to collect and publish harvest data/hunting statistics on migratory waterbirds, in order to be able to establish the international coordination of sustainable waterbird harvest in the future.

4.1.12. Range States shall cooperate with a view to developing a reliable and harmonized flyway wide system for the collection of harvest data in order to assess the annual harvest of populations or, when

this is not possible, assess the annual harvest of the species listed in Table 2. They shall provide the Secretariat with estimates of the total annual take for each population or, when this is not possible, assess the annual harvest of the species.

Footnotes:

22 CBD Decision VI.13 (Sustainable Use) provides guidelines for the sustainable use of species, including migratory species. < www.biodiv.org/decisions/ >.

23 Please note that a target for phasing out lead shot was set for the year 2000 for AEWA Contracting Parties.

This target would continue to apply to Parties within the existing AEWA Agreement Area if the CAF Action Plan is brought within AEWA. AEWA Resolution 2.2 requests Contracting Parties to enhance their efforts to phase out lead shot and also to report back to the Third Meeting of Parties (October 2005). CAF Range States that are outside the AEWA Agreement Area would endeavour to meet the 2015 target.

4.2 Livelihood Support Activities

4.2.1. Range States shall support the development of sensitive and appropriate ecotourism at wetlands and other habitats holding concentrations of populations listed in Table 2, where and when such activities do not impact harmfully on the waterbirds and their habitats.

4.2.2. Range States shall review and promote traditional uses and, develop management practices that are sustainable in reference to migratory waterbirds and their habitats²⁴.

4.2.3. Range States shall endeavour to evaluate the costs, benefits and other consequences that can result from consumptive and non-consumptive use at selected wetlands and other habitats with concentrations of populations listed in Table 2 and, where necessary, seek cooperation from competent international agencies and organizations ²⁵. They shall communicate the results of any such evaluations to the Secretariat.

4.2.4. Range States shall give adequate attention to gender issues while developing and implementing alternative livelihood options to manage wetlands and other habitats important to migratory waterbirds.

Footnotes:

24 Ramsar Resolution VIII.14 (New Guidelines for Management Planning for Ramsar Sites and other Wetlands) provides a useful framework for wetland management planning < www.ramsar.org/key_guide_mgt_new_e.htm >.

25 CBD Decision VI.13 (Sustainable Use) provides guidelines for the sustainable use of species, including migratory species. < www.biodiv.org/decisions/ >.

UNEP/CMS Secretariat, 2006. Central Asian Flyway Action Plan for the Conservation of Migratory Waterbirds and their Habitats. UNEP/Convention on Migratory Species Secretariat, Bonn, Germany.