

**ANALYZING GAPS AND OPTIONS FOR ENHANCING  
ARGALI CONSERVATION  
IN CENTRAL ASIA  
WITHIN THE CONTEXT OF  
THE CONVENTION ON THE CONSERVATION OF  
MIGRATORY SPECIES OF WILD ANIMALS**

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Species of Wild Animals (CMS), Bonn, Germany and  
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Central Asia**

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## ACRONYMS

ACBK	Association for the Conservation of Biodiversity in Kazakhstan
AEWA	Agreement on the Conservation of African-Eurasian Migratory Waterbirds
CACILM	Central Asian Countries Initiative for Land Management
CIC	International Council for Game and Wildlife Conservation
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CoP	Conference of the Parties
DZF	Denver Zoological Foundation
EU	European Union
FFI	Fauna and Flora International
FZS	Frankfurt Zoological Society
GEF	Global Environment Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (German International Development Cooperation Ltd.)
ICIMOD	International Centre for Integrated Mountain Development
IRSNB	Royal Belgian Institute of Natural Sciences
IUCN	International Union for Conservation of Nature
IUCN SSC	Species Survival Commission
IUCN SSC CSG	Caprinae Specialist Group
IUCN WCPA	World Commission on Protected Areas
MAS	Mongolian Academy of Sciences
MTIWP	Medium-Term International Work Programme
MoU	Memorandum of Understanding
MEA	Multilateral Environmental Agreement
NGO	Non Governmental Organization
PATCA	Pamir-Alai Transboundary Conservation Area
SCA	Saiga Conservation Alliance
TMU	Trust for Mutual Understanding
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WCS	Wildlife Conservation Society
WWF	World Wide Fund for Nature, formerly World Wildlife Fund

## EXECUTIVE SUMMARY

In November of 2011, as a result of the proposal submitted by Tajikistan and Kazakhstan, and supported by Kyrgyzstan, argali (*Ovis ammon*) was listed on the Convention for the Conservation of Migratory Species of Wild Animals (CMS) Appendix II at its 10th Conference of the Parties (CoP10). Taking into consideration the broader context in which the decision to list argali under CMS Appendix II has occurred, that is the identification of actions that seek to prioritize the growth of CMS and the CMS Family, this report is prepared to provide support to the parties of CMS and the Secretariat in their decision on the most suitable CMS instrument to effectively foster regional cooperation on conservation and sustainable use of argali. The assessment is financed under the Regional Program on Sustainable Use of Natural Resources in Central Asia implemented by GIZ on behalf of Government of the Federal Republic of Germany.

The report provides a brief introduction to the species, international status, its distribution, highlighting the transboundary elements, activities and barriers to its conservation. It then addresses the criteria listed in Resolution 10.16 developed in the framework of the resolution on the future Structure and Strategies of the CMS and CMS family (UNEP/CMS/Resolution 10.09 Annex II), in an attempt to provide guidance as to: why a transboundary approach to the management of the species is needed and a CMS-led instrument is a preferred way forward; and how it should be developed in order to make it successful, taking into consideration the limited capacity of the CMS Secretariat.

Argali are the largest of the world's wild sheep. They are distributed widely throughout Central and Inner Asia and are divided into 9 subspecies. They are classified by the International Union for Conservation of Nature (IUCN) as Near Threatened. They are critical for identifying ecological networks of conservation importance that in turn benefit a variety of animal and plant species. Moreover, argali are an important prey species for snow leopards (*Panthera uncia*) and wolf (*Canis lupus*). Trophy hunting of the species, where allowed, generates significant financial resources, which can be dedicated to the conservation of the species and improvement of local livelihoods. Many of the populations of argali do not recognize geopolitical boundaries that divide arbitrarily ecosystems that these species move through according to their seasonal migration patterns. A transboundary approach, driven by an ecosystem-based view, that can work through the physical and political barriers, is necessary to effectively conserve the species.

## THREATS

The reason for the unsatisfactory status of argali is a set of common threats across their range, including from over-hunting and illegal subsistence and commercial hunting. Other threats include: competition, displacement and disease transmission by domestic livestock; habitat loss and degradation caused by overgrazing, fuel wood collection, mining; and to some degree intolerance to human disturbance. While habitat characteristics change, the threats vary little across the range countries. The complexity of the threats makes it difficult to draw a simple set of interrelations between the different threats and to identify underlying causes of the threats. However, the following conclusions can be drawn:

- Poaching is prevalent in situations with weak law enforcement and/or lack of legal use opportunities;
- Trophy hunting schemes have shown success in some countries and situations. It is also true that in other cases trophy hunting has failed to stimulate conservation of argali and its habitats and has by itself caused negative impacts on the population and as well as increased poaching pressure;
- Habitat degradation and in particular competition with livestock are caused by a lack of regulations for the use of argali habitat for livestock breeding and other land use types;

- Decisions about management and use of argali, despite availability of monitoring data, are often rather driven by political and commercial interests than based on sound knowledge;
- While many threats and underlying reasons are similar between the Range States and affect all argali populations to a varying extent, practical lessons learnt from successful management approaches, experiences with legal and regulatory framework, methods and results of applied research, and monitoring data are hardly noticed beyond national borders; and
- Protected areas contribute to the conservation of argali and its habitats. However, more than often protected areas are insufficient to cover the year-round habitat requirements of argali. Inside the protected areas poaching, trophy hunting, livestock grazing and other activities take place. One of the reasons is lack of funding and staffing of protected areas, even in countries where trophy hunting creates significant revenues.

### **THE CHALLENGE OF TRANSBOUNDARY MANAGEMENT**

When argali move across the borders they may encounter impenetrable fences, degraded habitat and unregulated hunting. Communication-, funding-related, and legal and regulatory barriers intervene which affect the ability to implement transboundary initiatives in the region focused on argali. As a result the transboundary nature of most of the argali populations, adds certain additional challenges to their conservation. The barriers to migration (aside border fences, also linear infrastructure, local habitat destruction, occupancy of important migration sites by herders and others) reduce effective population sizes, cause genetic isolation and reduce access to suitable seasonal habitats. Fences can directly cause mortality if argali run into them and get injured. Reportedly poachers use fences and migration corridors for targeted poaching.

### **CONSERVATION, PROTECTION AND REGULATION OF USE**

Argali is listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (except for *O. a. hodgsoni* in China and *O. a. nigrimontana* of Kazakhstan, which are listed in Appendix I). The United States Endangered Species Act (ESA) lists argali as endangered, except in Mongolia, Kyrgyzstan, and Tajikistan, where they are listed as threatened. In the European Union (EU) argali are listed under Annex B of the EC Wildlife Trade Regulations, except for *O. a. hodgsonii* and *O. a. nigrimontana*, which are included in Annex A (EC Reg. No 709/2010 (amending EC Reg. No. 338/97)).

Argali is, as a species or in the context of a broader ban on hunting, formally protected from any extractive use in all of its Range States. Permits for trophy hunting on the basis of a quota are issued by the governments of Kyrgyzstan, Mongolia, Tajikistan and Uzbekistan. In the past this was also practiced in China and Kazakhstan (until 2003). Further, a number of protected areas in all Range States contribute to the legal protection of argali from persecution and direct habitat destruction.

Challenging the success of argali conservation activities is the fact that many Range States: do not have the resources to manage the species and protected areas or to carry out sophisticated research and monitoring activities; have not successfully defined a role for the sustainable use of the species and justified its value in the context of the conservation of the species; communicate in an unsatisfactory way at a local, national level and more so at a transboundary level; and don't have a coherent system of laws that defines what is permitted and where.

Over the past years, there have been several projects and activities in the range countries that have had an argali research and conservation component. Some of them were also developed with a view of creating some level of transboundary cooperation. The impact of such projects on the conservation of argali is difficult to assess as in most cases no evaluation reports are available and project lifetimes are usually too short to assess the impact on such dynamic systems as animal populations and their habitats. Research projects tend to provide scientifically well justified scientific results based on hard data.

However, the conclusions are often too vague for practical management decisions and their implementation. Further, scientific research projects are not always directly linked to conservation projects. In complex programmes, focusing for example on development of protected areas or broader environmental conservation, issues related to the conservation and sustainable use are sometimes not of the highest priority. Another problem is that lessons learnt in successful projects are rarely known in other Range States. Last but not least, project activities of one organization active in different countries are not necessarily connected to each other in a satisfactory way. Conservation issues of transboundary character like poaching, illegal trade, barriers to migration, cooperation in sustainable use and others are not yet addressed in a way and an intensity necessary to achieve results for the long-term conservation of argali.

### **TRANSBOUNDARY CONSERVATION OF ARGALI UNDER A CMS INSTRUMENT**

Argali are of a conservation status which would significantly benefit from the international cooperation that could be achieved through a CMS instrument. There are different CMS options, legally binding and non-legally binding, that could be developed and used for that purpose. Based on the overview of different CMS instruments, the combination of a non-binding MoU and Action Plan appears to be the most suited CMS instrument.

#### *SUBSTANTIATION OF THE CASE FOR A NEW INSTRUMENT*

In light of the discussions on the CMS Future Shape process, there are three CMS instrument options that could be considered:

- **OPTION ONE:** To merge existing species-relevant MoUs into a broader Central Asian migrating mammals MoU and action plan. In the framework of this option, parties could also consider three alternatives: a more narrow-focused Central Asian ungulate MoU, an MoU on migratory species in Central Asian mountain ecosystems and an MoU on snow leopards and argali. This option would be in response to the concern that the proliferation of MoU should be controlled, finances secured but at the same time ability maintained to implement activities for the species covered by such MoUs.
- **OPTION TWO:** This option would include developing an action plan and subsequently consider the development of an MoU.
- **OPTION THREE:** This option would entail developing an MoU and action plan for argali together. There are several CMS MoUs that generally serve as good models, including the Saiga Antelope, Bukhara Deer and Siberian Crane MoU. An Argali MoU and Action Plan could be developed under a broader Central Asian Strategy: a slightly modified version of this option would entail developing the Argali MoU and Action Plan under a common framework that outlines the main issues and common problems but allows for focus on individual species. However, as the timeframe for the development of the Central Asian Strategy is still unclear, the possible establishment of an Argali MoU and Action Plan should not be hindered by the absence of such Strategy.

#### *WHAT IS THE BEST INSTRUMENT FOR ARGALI?*

Transboundary management of argali alone under option three is complex given the countries involved, issues to be addressed, and the different legal systems and levels of protections accorded to the species. Weighing all the advantages and disadvantages, option three seems the most feasible and promising option for pursuing the conservation of argali.

#### *WHETHER THE PROPOSAL HELPS TO DELIVER A SPECIFIC EXISTING CMS COP MANDATE OR OTHER EXISTING CMS INITIATIVE*

When argali was listed under Appendix II, it was also identified as a Cooperative Action species (UNEP/CMS/Resolution 10.23). The Central Eurasian Aridland Mammals Action Plan (ScC17/Doc.13), submitted to the CMS Scientific Council in November 2011, is a first draft, intended

to stimulate discussion and identify further action needed to finalize the document in consultation with the Range States and other stakeholders, and to agree on next steps towards its implementation. Developing an MoU, single or multi-species, covering argali can help deliver on the goals of the Cooperative Action.

*THE FINANCIAL IMPLICATIONS OF THE PROPOSAL, AND WHAT PLAN FOR FINANCING THE INSTRUMENT IS IN VIEW*

Unlike CMS legally-binding agreements, MoUs and Action Plans have no regular secure funding but rely on voluntary contributions. Assuming, as it is currently, that most of the ongoing research conservation activities in the range countries are still carried out and funded by known NGOs and foundations, the added costs to consider for a possible CMS instrument are those related to: the communication activities and MoU/Action Plan coordination. If the assumption is different, i.e., that the expectation is also for the MoU coordinator to raise funding for research and conservation activities, hire as staff or consultants argali experts, then the costs to consider would be significantly higher.

Drawing on the experience of the Saiga antelope and Siberian crane MoUs, some key tasks of the MoU Coordinator would include: maintaining communication with the Range States and CMS Secretariat; facilitating an argali experts' network; supporting the elaboration of documents, such as the MoU and Action Plan and relevant reports; maintaining a website; acting as managing editor of an argali newsletter, which could be published two/three times per year and making arrangements for the translation of the newsletter in at least English, Russian and Chinese; and supporting the preparation of Range States meetings and technical meetings, if agreed upon. Covering the basic day-to-day costs of maintaining argali activities under a CMS instrument would be in the range of US 10,000 to 15,000 per year. This amount would include communication and translation costs and staff's salary, based on the assumption that this would be a part-time position in one of the Range States.

In view of a potential CMS instrument, funding will have to be secured for a meeting of experts and officials from the Range States to adopt a CMS instrument of their choice, which would include the relevant Action Plan. Convening a meeting of Range States of argali could cost somewhere in the range of US 50,000-75,000, if held in the region. This is calculated approximately based on the number of participants (1-3 from each Range State in addition to 5 international experts, and a representative from each of CMS, CITES, the EU and the US). Some of the participation costs could be covered by the Range State themselves. Similarly, the cost for the participation of experts could be covered by the NGO and institutions they represent.

*THE EXTENT TO WHICH THE FINANCING PLAN IS SUSTAINABLE IN THE LONG TERM*

The question of the financial sustainability of a possible CMS instrument on argali in the first place concerns the coordination of MoU and Action Plan and financing of Range States meetings and technical workshops. In the second place, it concerns the financing of the implementation of the activities under the Action Plan.

The first goal of a CMS instrument on argali is to ensure communication among Range States and leave the primary responsibility on the Range States and relevant departments, hunting concessionaires and NGOs currently in the Range States working on argali conservation issues to fund their own conservation and research activities. The next question is whether an argali CMS instrument should have a funding mechanism in the form of a trust or fund. Depending on the level of funding generated, some of the resources could go towards covering the costs of communication activities, meetings and workshops and, as available, conservation and research activities.

*WHETHER A NEW INSTRUMENT IS THE ONLY OPTION, OR WHETHER ALTERNATIVE  
OPTIONS EXIST, SUCH AS EXTENDING AN EXISTING INSTRUMENT*

Creating a new instrument is not the only option. One of the alternatives would be on focusing on revising, improving and adopting the Central Eurasian Aridland Mammals Action Plan and work in the priorities for argali conservation and research and transboundary collaboration. This alternative does not exclude setting up a working group inclusive of experts and managers from the Range States and does not exclude either the decision at a later stage to propose the adoption of an MoU and specific Action Plan.

*WHETHER A CMS INSTRUMENT IS THE ONLY OPTION, OR WHETHER THE SAME OUTCOMES  
COULD BE ACHIEVED BY DELIVERY THROUGH ONE OR MORE PARTNER ORGANIZATIONS,  
OR BY OTHER MEANS*

A CMS instrument is not the only option, but based on preliminary discussions with experts, international and local, as well as a survey that the IUCN World Commission on Protected Areas (WCPA) Transboundary Conservation Specialist Group has carried out looking at the effectiveness of transboundary conservation initiatives, a CMS instrument is likely to generate greater political engagement and be a catalyst for funding and action on the ground.

*WHAT OTHER SYNERGIES AND EFFICIENT WAYS OF WORKING CAN BE FORESEEN*

One of the recommendations under the Future Shape process, was to develop regional hubs to strengthen MEA implementation, possibly through cooperation with UNEP and other UN agencies and office. Having a Central Asia hub would be critical given the Central Eurasian Aridland Concerted Action and Cooperative Action, the Saiga antelope and Bukhara deer MoUs and the possible consideration of a CMS instrument on argali or extension of an existing one. Currently the UNEP/CMS Regional Officer for Central Asia has been seconded to the UNEP office in Moscow. This is a Junior Professional Officer (JPO) position paid by the German government, which will end in October 2013. Based on feedback from Range States during CoP10 (personal communication 2011) and the CMS Secretariat (personal communication 2012), this position is considered very important for the successful implementation of CMS Central Asian instruments.

As discussed earlier, for some of the MoUs, like the Siberian Crane and Saiga Antelope, the communication as well as technical coordination activities are outsourced to partner NGOs. A CMS instrument on argali could benefit from the same approach. In that context, there are two possible approaches that could be followed: one to establish an NGO dedicated exclusively to the conservation of argali and register it as a charity (in the UK and the US or both because of easier access to funding opportunities); the other to rely on existing NGOs for providing a coordination role.

Finally, it is important to involve from the outset representatives of MEAs, international organizations and initiatives whose work affects the conservation of argali or that can potentially dedicate activities and resources for its benefit. They include CITES, FAO and possibly the Central Asian Countries Initiative for Land Management (CACILM). Similarly, it is also advisable, given the sustainable use component and the importance of the species for trophy hunting, to involve the US Fish and Wildlife Services.

*POSSIBLE ROADMAP TOWARDS THE ESTABLISHMENT OF A CMS INSTRUMENT ON ARGALI*

There are several steps that can be foreseen leading up to the development of an Argali MoU and Action Plan and a functioning framework for carrying out tasks to ensure communication and exchange on the transboundary conservation of argali.

First of all, the current Argali network could be expanded to other experts, scientists, managers, conservationists and institutional members that could significantly contribute to discussions, knowledge



exchange and activities on argali. While at this stage the network has a purely informal nature and serves the purpose of information-sharing, in view of a development of a CMS instrument on argali it could develop into a formal network, with a mandate to serve specific MoU/Action Plan development-related purposes, including potentially the role of the MoU coordinator.

The second step would be to establish an argali working group composed of Range State representatives and selected experts, supported by the IUCN Caprinae Specialist Group and the IUCN WCPA Transboundary Conservation Specialist Group, given the transboundary nature of the species, issues and the expertise that this Group could provide especially on legal, institutional, and policy matters.

Once the MoU/Action Plan are adopted and the working group and argali network formalized, if Range States agree, it would be important given the number of Range States involved and the number of potential transboundary issues at hand, to set task forces under the working group.

Finally, “informal” focal points could be designated from the argali network in each Range State. Such focal points could work in close cooperation with the MoU Coordinator on gathering on a regular basis information on argali in their country.

*WHETHER AN ORGANIZATION OR (PREFERABLY) A COUNTRY HAS COMMITTED TO  
LEADING THE DEVELOPMENT PROCESS*

As of June 2012, Tajikistan and Kyrgyzstan expressed language of commitment. Mongolia could be willing to co-lead this effort. Developing a CMS instrument on argali could lead to involving China and Afghanistan, two countries that are not party to CMS.

*CONCLUSIONS AND RECOMMENDATIONS*

A CMS instrument or extension of an existing one can have important positive ramifications for the conservation of argali across its range, in the form of endorsing legal reforms in some of the range countries that are beneficial for the species; and stimulating joint monitoring activities and responses to common threats. It is also an opportunity to bridge the divide between conservation and sustainable use, and within that realm promote and endorse trophy hunting programs designed to ensure the conservation of the species. Finally, the CMS Secretariat should consider, with interested States and States Parties, funding options for extending the Regional Officer for Central Asia beyond its current term as well as explore options for basing that position in the region.

## 1. INTRODUCTION

1. Argali (*Ovis ammon*) are the largest of the world's wild sheep, with some males approaching 200 kg, and females typically ranging from 65 to 100 kg (Fedosenko and Blank 2005). They are distributed widely throughout Central and Inner Asia and are divided into 9 subspecies. Argali are classified by the International Union for Conservation of Nature (IUCN) as Near Threatened.
2. Argali are polygynous and moderately long-lived mammals, with males reaching senescence at approximately 9 years old (Geist 1997; Petocz et al. 1978; Schaller 2003). Age of senescence for females, is approximately 13 to 14 years (Geist 1997). Females are capable of becoming pregnant in the fall after their first birthday, and of giving birth the next spring. Female usually produces a single offspring, but some twins have also been reported (Schaller 1998). The sexes remain in segregated in single sex groups all year round except during the rut (Singh et al. 2010). The curled horns of the males are the largest of any wild sheep, and can reach 190cm in length per side (Schaller 2003). Females also have horns, but these do not curl beyond half- circle and are considerably less robust than the males'.
3. Argali occur in a variety of habitat types, ranging from rolling, high elevation steppe to more mountainous, rugged terrain. Regardless of the region where they are found, they are highly dependent upon grass and sedge meadows, which puts them in direct competition with livestock for food (Petocz et al. 1978, Schaller 2003, Harris and Winnie 2008), especially in the fall and winter: at a time when the species nutritional needs are at their peak, food is most scarce and of low quality (due to lack of re-growth), and effort required to find and access food under snow is highest. Even if argali winter range is not occupied by livestock in winter, if the area was heavily grazed by livestock late in the summer to early fall, grasses will not re-grow before winter and argali will experience depleted winter range (Winnie 2009). In the Eastern Pamirs, argali, especially in winter, also feed on teresken (*Ceratoides papposa*), which is collected by local people for heating purposes and is used by livestock.
4. In addition to seasonal horizontal movements and elevation shifts, in some areas, argali exhibit a seasonal shift in diet preferences that does not appear to be driven by changes in forage availability. They exhibit strong preferences for sedge meadows in the spring and summer (Petocz et al 1978, Schaller 2003, Harris and Winnie 2008, Winnie 2009), but shift to using grassy areas in the fall and winter. This shift is likely due to a change in sedge digestibility as it ages. In the spring and summer, when sedges are green, the ratio of digestible to indigestible material in sedges is relatively high and favors their use by argali. In the fall and winter, when sedges are no longer growing and are brown, this ratio decreases and argali turn to more easily digested grasses.
5. Argali play an important ecosystem role. They have a major impact on vegetation structure and composition through grazing, browsing, trampling, seed dispersal, and other interactions with plants. These interactions are important for the maintenance of healthy landscapes. They are also critical for identifying ecological networks of conservation importance that in turn benefit a variety of animal and plant species. Moreover, argali are an important prey species for snow leopards (*Panthera uncia*) and wolf (*Canis lupus*).
6. Argali is a species of significant economic value (Harris 1995). It has been identified as a "flagship" species of several initiatives (for example, the WWF Altay-Sayan Ecoregion Programme and the Wildlife Conservation Society (WCS)'s originally proposed Pamir Transboundary Protected Area) capable of increasing the attractiveness of a region, project or a protected area. The horns of adult males and the difficulty in approaching them make them valued by trophy hunters. Consequently, trophy hunting of the species, where allowed, generates significant financial resources, which can be dedicated

to the conservation of the species and improvement of local livelihoods. Trophy hunting is also viewed as an important alternative land-use in areas where agricultural and livestock production are marginal. However, the economic importance of the species has its challenges: valued for its meat and horns, the species is illegally harvested for commercial and subsistence purposes, which complicate the conservation of the species.

7. Many of the populations of argali do not recognize geopolitical boundaries that divide arbitrarily ecosystems that these species move through according to their seasonal migration patterns. But these boundaries hinder a holistic and cohesive approach to their conservation and management: in the shape of fences they physically they fragment the landscape as differing legislations and practices change it and sometimes degrade it, politically, these boundaries tend to often narrow communication, cooperation and joint activities to the potential detriment of the species. A transboundary approach, driven by an ecosystem-based view, that can work through the physical and political barriers, is necessary to effectively conserve the species.
8. In November of 2011, as a result of the proposal submitted by Tajikistan and Kazakhstan, and supported by Kyrgyzstan (currently not a CMS Party), argali was listed on CMS Appendix II at its 10th CMS Conference of the Parties (CoP10). Kazakhstan introduced the joint proposal with Tajikistan, noting their status as Near Threatened and the fact that their conservation requires a transboundary approach. Kazakhstan identified the saiga Antelope Memorandum of Understanding (MoU) as a good precedent for a possible argali MoU. Pakistan, India, Uzbekistan, the EU and its 27 member states, Saudi Arabia, WCS and WWF-Russia, supported the proposal (Earth Negotiations Bulletin 2011).
9. According to the text of the Convention, by listing a species under Appendix II, the parties “shall endeavor to conclude Agreements.” Species listed under Appendix II are considered to have an “unfavorable conservation status and (...) require international agreements for their conservation and management” or have “a conservation status which would significantly benefit from the international cooperation that could be achieved by an international agreement.”
10. At CoP10, parties adopted a resolution entitled “Priorities for CMS Agreements” (Resolution 10.16) (UNEP/CMS/Res.10.16), which provides guidance for the adoption of future agreements, which include MoUs. The Resolution lists criteria that need to be taken into consideration, when making any new proposals, recognizing, among other factors, that the development and servicing of agreements are subject to the availability of resources. The criteria include: substantiation of the case for a new instrument, based on an analysis of needs and gaps in current conservation provisions; whether the proposal helps to deliver a specific existing CMS CoP mandate or other existing CMS initiative; the financial implications of the proposal, and what plan for financing the instrument is in view; the extent to which the financing plan is sustainable in the long term; whether a new instrument is the only option, or whether alternative options exist, such as extending an existing instrument; whether a CMS instrument is the only option, or whether the same outcomes could be achieved by delivery through one or more partner organizations, or by other means; what other synergies and efficient ways of working can be foreseen; and whether an organization or (preferably) a country has committed to leading the development process.
11. Resolution 10.16 follows the outcomes of an inter-sessional process regarding the future shape of CMS, adopted by CoP 9 in 2008 (UNEP/CMS/Resolution 9.13). The decision to set up such a process stemmed from the recognition of a growing family of CMS instruments and the need to ensure their effectiveness. The working group that was established was asked to consider, *inter alia*, possibilities and options for various types of activities, such as the development of new agreements, possibilities and options for strengthening the cooperation with other international organizations and with other interested partners, and financial and institutional implications of all possibilities and options.

12. Since, the CMS family has grown even further, as it currently consists of seven binding agreements and 19 MoUs and actions plans. While the growth is an indicator of the success of the Convention, the responsibilities associated with these instruments are resource-intensive. Several delegates at CoP 10 expressed concern that a number of the instruments are effectively “dormant”, with little funding or activity. The period 2006-2010 has shown exponential growth of the CMS Family with the creation of 11 new agreements, ten MoUs and one legally binding agreement, with ten of these only receiving voluntary contributions and being serviced by the CMS Secretariat Policy and Agreements Unit (ERIC Ltd 2011). Finally, especially for those instruments supported by voluntary contributions, many delegates noted the uncertainty in the long-term stability of these instruments. Said that, a strong argument for using a CMS instrument for the conservation of a migratory species is that the funding and governance structure of a CMS MoU, for example, can provide an opportunity for non-parties to contribute to the implementation of the Convention (Earth Negotiations Bulletin 2011).
13. Taking into consideration the broader context in which the decision to list argali under CMS Appendix II has occurred, that is the identification of actions that seek to prioritize the growth of CMS and the CMS Family, this report will first provide a brief introduction to the species, international status, its distribution, highlighting the transboundary elements, activities and barriers to its conservation. It will then address the criteria listed in Resolution 10.16 developed in the framework of the resolution on the future Structure and Strategies of the CMS and CMS family (UNEP/CMS/Resolution 10.09 Annex II), in an attempt to provide guidance as to: why a transboundary approach to the management of the species is needed and a CMS-led instrument is a preferred way forward; and how it should be developed in order to make it successful, taking into consideration the limited capacity of the CMS Secretariat. There are several CMS instrument options which will be reviewed in the report, with a special emphasis on a multi-species and single-species MOU and Action Plan.
14. This report is prepared to provide support to the parties of CMS and the Secretariat in their decision on the most suitable CMS instrument to effectively foster regional cooperation on conservation and sustainable use of argali. The assessment is financed under the Regional Program on Sustainable Use of Natural Resources in Central Asia implemented by GIZ on behalf of Government of the Federal Republic of Germany.

## **2. METHODS**

15. This report relies on: the review of existing national legislation, conservation projects and research activities; peer-reviewed articles on argali and research reports as well as on an overview of selected CMS instruments, including: MoUs on the saiga antelope (including the Action Plan), Bukhara deer and Siberian crane; and the Sahelo-Saharan antelopes Action Plan, and the institutional aspects and success factors for their implementation. It also draws significantly on personal observations and conversations with key stakeholders from the range countries (agency officials, academy of sciences experts, NGOs, trophy hunting concessionaires and foreign hunters, held between October 2011 and April 2012), including conversations with: experts from the IUCN Caprinae Specialist Group (CSG), international and local conservation organizations involved in argali research and conservation efforts in some of the range countries; and members of international organizations that promote the sustainable use of wildlife (See Annex I for list of stakeholders consulted and Appendix II for sample of questions asked).
16. The report also draws on: a field mission to Tajikistan in September 2011 to discuss opportunities for transboundary conservation between Afghanistan, Pakistan, Tajikistan and China (WCS 2012); prior ethnographic research (Rosen 2008); and the 2006 report on the proposed Pamir Transboundary

Protected Area (WCS 2007). Finally it draws on: notes of and conversations with participants at the workshop organized on the Island of Vilm, in Germany, in March 2012, by the German BfN in cooperation with GIZ and CMS; CMS official documents; and conversations with CMS Secretariat staff.

17. Methodological limitations include limited availability of up to date information on the status and conservation needs of argali in China, India, Pakistan and Uzbekistan.

### **3. THE SPECIES**

#### **3.1 DISTRIBUTION AND TRANSBOUNDARY CHARACTER OF POPULATIONS**

18. Argali live over a vast geographic range, some living in distinct populations, some of them considered subspecies. Some are genetically isolated possibly as a result of natural, anthropogenic factors or a combination of both. As described in the introduction, they are the largest of the wild sheep.
19. This species is found in north-eastern Afghanistan (Badakhshan), China (Gansu, Inner Mongolia, Qinghai, possibly western Sichuan, Tibet, and Xinjiang), northern India (Ladakh, Sikkim, and Spiti), Kazakhstan (regions South Kazakhstan, Zhambyl, Almaty, Karaganda, East Kazakhstan and possibly Kyzylorda), Kyrgyzstan, Mongolia, northern Nepal (near the Chinese border), northern Pakistan (Gilgit-Baltistan), Russia (Republics Tuva and Altai), Uzbekistan (regions Farghona, Jizzakh, Samarqand, Navoiy), and Tajikistan (regions Sughd and Gorno-Badakhshan). There are no recent records of argali occurrence in Bhutan, although decent amount of argali habitat exists.
20. Most of the argali populations migrate across national borders and make them thus transboundary. The populations that migrate across national borders, and are thus transboundary, include:
  - *Ovis a. polii*. Moving across the Pamirs in Afghanistan, Tajikistan, Taxkorgan County in Xinjiang, China and Gilgit-Baltistan, Pakistan; Moving across in the proximity of where the Pamirs meets the Tian-Shan between Tajikistan, Xinjiang and South-East Kyrgyzstan;
  - *Ovis a. ammon*. Moving across the Altai in Kazakhstan, Mongolia, China and Russian Federation;
  - *Ovis a. collium*. Moving across Tarbagatay and Saur between Kazakhstan and China;
  - *Ovis a. karelini*. Moving between Kazakhstan, Kyrgyzstan and China;
  - *Ovis a. darwini*. Moving between Inner Mongolia (China) and the Gobi (Mongolia);
  - *Ovis a. jubata*. Likely extinct, Moving between Inner Mongolia (China) and the Gobi (Mongolia);
  - *Ovis a. hodgsoni*. Possibly along the borders between Sikkim (India) Nepal and Tibet (China); and
  - *Ovis a. severtzovi*. Between Batken (Kyrgyzstan), enclaves (confirmed observations near Sokh) of Uzbekistan located near Batken and Sughd (Tajikistan); and possibly in the Kyzylkum between Uzbekistan and Kazakhstan.
21. The ninth recognized subspecies, *Ovis a. nigrimontana* occurs only in Kazakhstan and does not migrate over state boundaries.

#### **3.2 THREATS TO ARGALI AND THE MAIN UNDERLYING CAUSES**

##### **3.2.1 THREATS TO ARGALI IN THE SINGLE COUNTRIES**

22. Argali is listed under the current IUCN Red List as Near Threatened, because it is believed to be in significant decline due to poaching and competition with livestock (Harris and Reading 2008). The IUCN Red List 2004 still separately evaluated each subspecies as follows: Altai argali as Vulnerable (VU—A2cde, C1); Gobi argali as Endangered (EN—C1); Kazakhstan argali classified as Vulnerable

(VU—A2cde, C1); Tibetan argali Vulnerable (VU—A2cde); Northern Chinese argali Critically Endangered (CR—C2a); Tien Shan argali Vulnerable (VU—A2cde, C1+2a); Karatau argali Critically Endangered (CR—C2b); Marco Polo argali Vulnerable (VU—A2cde, C1); and Kyzylkum sheep Endangered (EN—A2cde, C2b) (Wingard & Zahler 2006). The actual data on the status of argali and threats described here rely on information presented in the CMS Listing Proposal (2011), based on the information available in the IUCN Red List (Harris & Reading 2008), and were completed by additionally available data.

23. The Range States consider argali as threatened in their national Red Lists or Red Books respectively:
  - *Afghanistan*. No actual official status available;
  - *China*. No actual information available;
  - *India*. Listed as a threatened species by the Government of India;
  - *Kazakhstan*. Listed in the Red List as *O. a. ammon* - endangered (Category I); *O. a. collium* - rare (Category III); *O. a. karelini* - vulnerable (Category II); *O. a. nigrimontana* - endangered (Category I); *O. a. severtzovi* - endangered (Category I), possibly disappeared from the country;
  - *Kyrgyzstan*. Listed in the Red Book as *O. a. polii* – near threatened (Category 3); *O. a. karelini* - vulnerable (Category 2); and *O. a. severtzovi* – critically endangered or endangered (Category 1) (2007);
  - *Mongolia*. Listed as “Endangered” after the 2009 nationwide assessment;
  - *Nepal*. Vulnerable;
  - *Pakistan*. Critically endangered;
  - *Russia*. Listed in the Red Book of the Russian Federation;
  - *Tajikistan*. Listed in the Red Book; and
  - *Uzbekistan*. Listed in the Red Book.
24. The reason for the unsatisfactory status of argali is a set of common threats across their range, including from over-hunting and illegal subsistence and commercial hunting. Other threats include: competition, displacement and disease transmission by domestic livestock; habitat loss and degradation caused by overgrazing, fuel wood collection, mining; and to some degree intolerance to human disturbance. While habitat characteristics change, the threats vary little across the range countries (Fedosenko 1999, Namgail 2004, Maroney 2006, Namgail et al. 2007, Harris 2007, Schaller and Kang 2008).
25. Illegal hunting increases the mortality, and thus causes a decline of the population numbers. The use of automatic weapons, which compounds such losses, is common where these are readily available, for example in Afghanistan and in border areas of Tajikistan. Over-harvesting causes the alteration of age and sex structure of populations and can have adverse impacts on the genetic composition of argali populations.
26. In Kyrgyzstan a decline in trophy quality and number of trophy-sized rams is reported. So far no systematic analysis has been done to establish if this perceived decline is significant and if the number of old rams is reduced and/or if old rams achieve only a smaller horn size than in the past. In the first case over-harvesting of mature males might have caused lower representation of the older age classes in the population while in the latter case both, genetic consequences of selective hunting as well as changed habitat conditions may have played a role (Coltman et al. 2003).
27. Illegal trophy hunting and legal trophy hunting, if not accompanied by measures ensuring the support of local people and in particular of traditional hunters from local communities, can cause an increase in poaching pressure. In cases where local people feel deprived from their traditional rights, trophy hunting can become a pretext or excuse for poaching by local people, which have neither the right to hunt nor receive any benefits from the hunting operation.

28. Across the argali range, overgrazing is causing degradation and is thus considered the key factor of habitat destruction. It is a significant threat for argali populations in China, India, Russia, parts of Mongolia and Uzbekistan. In Kazakhstan, Kyrgyzstan and Tajikistan the reduced livestock numbers and contracted grazing areas after the country's independence have allowed a recovery of some of the argali habitats. However, there is evidence of numbers of livestock increasing and abandoned pastures again being used by herders. This trend may fast reverse this habitat recovery.
29. In Tajikistan another factor causing shortage of winter forage and general land degradation is the collection of teresken (*Ceratooides papposa*) for fuel by local people. Around herders' camps teresken is dug out by the herders. Teresken is collected in large quantities to meet the needs of local people in Murghab and adjacent villages. The most affected areas seem to be those where argalis are already absent due to poaching and grazing, but as easy accessible teresken stands are already overused the pressure increases in areas that overlap with argali and ibex habitats. (Michel and Muratov 2010) In Uzbekistan's Nuratau Range argali prefer shrubs for resting and hiding, thus fuel wood cutting causes habitat destruction in addition to overgrazing (Michel, personal communication 2012, based on observations 1993-2006).
30. Habitat loss resulting from resource extraction, like mining, is a minor and localized threat in Mongolia (Reading et al. 1998, 1999, 2001, 2005). However this assessment may change in light of recent increased mining pressure in the country (Watters, personal communication 2012). In Kyrgyzstan gold mining in the Kumtor area has devastated sections of argali habitat. Recently, news of a planned increase of the Kumtor mining area at the cost of the neighbouring Sarychat–Ertash Strictly Protected Area, for which in 2009 an area of 4,380 ha was excluded from the reserve, were reported (email newsletter Ecorassylka, message from NGO "Derevo Zhizni", Kyrgyzstan, January 2012). Local sources report that undestroyed habitats inside the broader mining area are used by argali due to effective protection from poaching. The animals do not appear to react to the disturbance caused by the heavy machinery (Davletbakov, personal communication 2010, Scott, personal communication 2012). In Tajikistan mining activities are planned in the argali range but the extent of areas affected will likely not reduce available habitat in a significant scale. The intrusion of foreign workers may lead to increase of poaching for meat and horns.
31. In general, argali appear to be extremely intolerant of human disturbance (Fedosenko 1999, Namgail 2004, Maroney 2006, Namgail et al 2007, Harris 2007, Schaller and Kang 2008 in Harris and Reading, 2008, Singh 2008). Thus the availability of suitable habitat can be limited due to disturbance (tourists, herders, herders' dogs). Observations in Tajikistan and Kyrgyzstan, however suggest that tolerance to disturbance is negatively correlated to poaching pressure. Poaching severely increases disturbance in contrast to trophy hunting, regulated in terms of season, take-off numbers, hunting locations and hunting methods. For this reason the animals flee from people and vehicles at long distance. As a result the presence of people makes large areas unsuitable as argali are shifting to areas with suboptimal habitat conditions. Reduced fitness and high-energy losses caused by fleeing from people can make the argali more vulnerable to predators, diseases and weather and by this the risk of mortality increases and reproduction declines (Michel and Muratov 2010). Where poaching is controlled, argali are more tolerant to livestock, humans and other disturbance. In hunting concessions in the Tajik Pamirs argali can be seen grazing together with free ranging yaks, or few hundred meters from herded livestock or herders' camps. In Kyrgyzstan argali even graze in the immediate proximity of heavy mining machinery (Michel and Scott, personal communication 2012). In Mongolia, they occur near herder camps (Singh, personal communication 2012).
32. Some of the strongest data suggesting competition with livestock as a limiting factor for argali comes from Ladakh, India, where Namgail et al. (2007) documented a group of argali shifting their habitat preference towards escape terrain and away from preferred foraging areas when livestock were present

- (Harris and Reading 2008). Singh (2008) showed that argali avoid the areas used by livestock, probably exacerbated by the presence of herding dogs which chase adult argali and prey on lambs.
33. Tourism development activities in both Ladakh and Sikkim not only destroy habitat, but also disturb wildlife. Although such activities are more prevalent at the margins of argali habitat, there is potential for some effects on argali (Singh 2008).
  34. Fragmentation into small isolated subpopulations is challenging the survival of argali in the Altai in Russia and Kazakhstan (Kashkarov et al. 2008), in the Inner Mongolia of China (Harris et al. 2009), and in India (Singh 2008). In the Aktau, Tamdytau, and Malguzar Mountains as well as the Turkestan Range (Uzbekistan and border areas of Kyrgyzstan and Tajikistan) very small, isolated populations of *Severtzov* argali are threatened by losses due to poaching and predation, inbreeding and harsh climatic conditions (Beshko, personal communication 2012). Despite the small population size, the argali in the Afghan Pamirs do not show reduced genetic diversity, due to migration of animals to and from Tajikistan and China (Harris et al 2010).
  35. Argali are reported to have been infected by livestock-introduced diseases such as pasteurellosis, rinderpest, malignant anthrax, foot-and-mouth disease (Sapozhnikov 1976, Ostrowski, personal communication 2011).
  36. In Afghanistan, poaching, in particular by Kyrgyz herders in the Big and Little Pamirs and in Wakhjir Valley, is generally considered to be a continuing threat to argali, the presidential ban on hunting notwithstanding. The problem has been aggravated as Kyrgyz herders were appointed to guard the border between Tajikistan and Afghanistan and received weapon and ammunition supplies (Ostrowski, personal communication 2011). As reported by the hunting concessions in the south east of Tajikistan, Kyrgyz from Afghanistan regularly hunt the transboundary argali population inside Afghanistan as well as within Tajik territory. In contrast the Wakhi, grazing their livestock on the northern slopes of the Wakhan Range (western edge of Big Pamirs), seem to refrain from illegally hunting to a large extent. Grazing pressure is high in the argali habitats in the Big and Little Pamirs in Afghanistan, but low or absent in the Waghjir. Intense summer grazing and year-round grazing in some valleys limits access to high quality pasture in the summer, thus leading to lower fitness, as well as reduces forage and habitat available for argali during winter. (Harris 2007, Winnie 2009)
  37. In China, poaching has been considered to be a substantial threat (Wang et al. 1997, Schaller 1998). In the mid-1990s however, a nationwide effort to confiscate guns from pastoralists substantially reduced the weaponry available for poaching. This, together with continued efforts to publicize the national law prohibiting killing protected species, appears to have reduced poaching during the last decade. At the same time however, efforts to settle pastoralists has increased habitat conflicts, because pastoralists typically intensified their use of productive grasslands preferred by argali, thus displacing them (Harris 2007 and personal observation 2010). In Inner Mongolia, poaching could still occur, either with or without the knowledge of border guards (Harris et al 2009).
  38. In India despite the ban on hunting, poaching is apparently still a problem in some areas of military presence along the border of India and China as both countries maintain a strong military presence along their Himalayan border regions. Continued instances of hunting by military are still a problem in Sikkim. Overgrazing and competition with livestock has been identified as a major threat to wild ungulate herbivores in the Indian Trans-Himalaya, with significant increases in livestock populations apparent in both Ladakh and Sikkim in recent decades. Argali have been shown to shift to more marginal areas (steeper, less productive sites) when livestock (sheep and goats) were moved into their habitat. Overgrazing by domestic yaks in Khangchendzonga National Park is also a major threat to



argali in Sikkim. Livestock herders are often accompanied by herding dogs, which chase and harass argali and sometimes kill their lambs (Singh 2008).

39. Like elsewhere, livestock grazing and poaching were considered the principal limiting factors to argali in Kazakhstan by Fedosenko (1999). Uncontrolled killing by those who carry firearms appeared to be common; local militia and customs officials had come to areas inhabited by argali and killed dozens with gun-machines (Harris and Reading 2008). Berber (1999, 2007) states that during the last decade the limiting factors for argali in Kazakhstan did not change significantly. In the first place is poaching but predation, especially by wolf, feral and shepherd dogs, and to a less extent competition with domestic livestock (sheep and goats) and human economic activities are a problem. Illegal hunting and competition with livestock has affected the status of *O. a. nigrimontana* in the Karatau mountains of Kazakhstan. The German bureau of the US-based Hunting Consortium LTD was also cited as offering hunts of this argali, although the import of the trophy in the EU was prohibited (CITES CoP 10 Proposal 10.38 to transfer *O. a. nigrimontana* from Appendix II to Appendix I). This argali now faces extinction.
40. Poaching and competition with livestock are also considered threats in Kyrgyzstan (Weinberg et al 1997). There is general consensus that habitat conditions for argali improved after Kyrgyzstan's independence in 1991, due to the collapse of the state-supported livestock sector and consequent reduction in grazing pressure in the Tian Shan (Farrington 2006). It is also true that during Soviet times, border areas were well-protected areas where access was restricted and no livestock grazing was allowed. Combined, these aspects contributed to high density of argali in these border areas. However, since 2000 there have been informal reports that livestock numbers have again risen. Remote pastures are increasingly re-occupied by livestock herders. The use of formerly abandoned and unused remote pastures is actively supported by internationally financed projects aimed at development and environmental protection (e.g. GEF, UNDP, World Bank, GIZ), often without consideration of conservation needs and land-use options provided by sustainable use of argali. The herders are usually allowed to carry firearms for protection of herds against wolves which are more than often used by them for poaching argali and ibex (Gries, personal communication 2011).
41. The main threat facing argali in Mongolia is poaching for subsistence and increasingly for their horns, which are being used in traditional Chinese medicine and as mounted trophies (Mallon et al. 1997, Reading et al. 1997, 1998, 1999, 2001, Amgalanbaatar 2002, Wingard and Zahler 2006). Also important are the impacts from pastoralists who displace argali, whose livestock feed on the same forage as argali, and whose dogs chase and even kill argali (Mallon et al. 1997, Reading et al. 1997, 1998, 2003, 2005, Wingard 2005, Amgalanbaatar et al. 2006). More minor and localized threats include unsustainable trophy hunting (Wingard and Zahler 2006). Subsistence poaching by miners in general represents a greater threat than actual mining activities, but this may change as the number of mines continues to grow rapidly. These threats remain important due to poor or non-existent law enforcement throughout most of the range. Very little money from trophy hunting currently supports conservation activities in Mongolia (Wingard and Zahler 2006).
42. Competition with livestock is also identified as a threat to *O. a. hodgsoni* in the northeast Mustang region in Nepal (Chetri and Pokharel 2005).
43. In Pakistan, in addition to disturbance from livestock (grazing in Khunjerab remains legal) (Knudsen 1999), increased access to the area through the Karakoram Highway is believed to increase poaching pressure (Hess et al 1997).
44. Unlike in Mongolia, domestic livestock herds in the Russian Altai were reported as having declined during the 1990s (Paltsyn 2001), providing a potential opportunity for expansion of the protected area

network in the Altai-Sayan area. This statement is strongly opposed by Kashkarov et al (2008). Total livestock numbers have increased during recent years at a level causing significant habitat destruction and disturbance. Due to occupation of pastures by herders argali are forced to use sub-optimal habitats, that is, summer pastures in winter (where forage availability and fleeing from wolves is hindered by snow) and winter pastures in summer (where vegetation is of low productivity due to high grazing pressure) (Kashkarov et al 2008).

45. In Tajikistan poaching on argali occurs outside protected areas as well as in Tajik National Park and in Zorkul Strictly Protected Area, in particular where the control by the hunting concessions is weak. Some experts and collaborators of hunting concessions estimate that annual off-take by poachers is around 1000 argali. Argali meat is consumed by the hunters, sold locally and in the regional centre (Michel personal observations, 2003-2011). The number of domestic livestock and the area of grazed pastures significantly declined after the end of the Soviet Union. By official statements currently livestock numbers are still below those of the Soviet Union. But livestock numbers are increasing and pastures abandoned during the last decades are again used for grazing. These trends are resulting in the fact that several areas grazed in past winters by large herds of argali were without sufficient forage in December 2009 and consequently argali were absent from those sites. Forage competition increases where herders have cut hay on alpine meadows. Thus the use of pastures and haymaking areas without due consideration of the needs for conservation of wild ungulates is the second most important limiting factor for the population numbers and trends of argali (Michel and Muratov 2010).
46. In Uzbekistan, *O. a. severtzovi* in the Nuratau range is also under pressure from illegal hunting, along with loss of habitat and competition with domestic livestock (Beshko, personal communication 2012).

#### **CONCLUSIONS:**

47. The complexity of the threats makes it difficult to draw a simple set of interrelations between the different threats and to identify underlying causes of the threats. However, based on discussions with many stakeholders in the Range States and in international conservation organizations as well as my analysis, the following conclusions can be drawn:
48. Poaching is prevalent in situations with weak law enforcement and/or lack of legal use opportunities. Where the hunting bans cannot be enforced, but at the same time the demand for hunts or products from argali cannot be satisfied in a legal way, illegal use becomes a serious problem. Unsustainable use tends to occur where incentives for sustainable use and conservation of the resource are absent. Legal use for becoming sustainable requires a series of conditions. These include clearly assigned long-term access and management rights and responsibilities. The legal user must have the interest and the power to exclude illegal users and he must be motivated to manage the population in a sustainable manner.
49. Trophy hunting schemes have shown success in some countries and situations. It is also true that in other cases trophy hunting has failed to stimulate conservation of argali and its habitats and has by itself caused negative impacts on the population and as well as increased poaching pressure. Behind these shortcomings is generally a situation in which: hunting permits have not been assigned to specific areas or there is a short-term assignment of hunting areas (therefore motivation is missing to invest in the conservation of the argali population); there is insufficient control by the state and/or there is presence of a corrupt system, with pricing of permits and use of revenues without adequate sharing arrangements for the local people and for management (including protected areas and population monitoring) of the argali and its habitats; there is lack of legal access by local traditional hunters to hunting on argali. A key problem for the sustainability of trophy hunting schemes is the underlying legal framework that lacks clear regulation and often provides contradicting legal and regulatory mechanisms for the allocation of hunting areas, setting and distribution of quotas and transparent allocation of proceeds from the sale of the hunting permits. This paves the way to corruption and unsustainable use. Lack of

political will, legal barriers and lack of organizational capacity of the communities hinder the development of community-based trophy hunting schemes in most Range States as well.

50. Habitat degradation and in particular competition with livestock are caused by a lack of regulations for the use of argali habitat for livestock breeding and other land use types. Conflicts between use of land for pasture grazing and hunting are common. Where regulations exist they are often not enforced, often because of lack of incentives. In most cases those who use argali habitats for other purposes do not have benefits from the conservation of good habitat conditions for argali. So far systems are lacking where benefits from sustainable use of argali outweigh the benefits from competing land-uses or at least stimulate a balance between competing land-uses with the goal of preserving the habitat requirements for argali.
51. Decisions about management and use of argali, despite availability of monitoring data, are often rather driven by political and commercial interests than based on sound knowledge. But poor management of hunting operations and inadequate quota are also the result of poor knowledge: data on distribution areas, population numbers and structures are often outdated or unreliable, research information is rarely translated into practical management recommendations and even more rarely these recommendations are applied in the practice. Research and population monitoring are expensive and while revenues from trophy hunting can be significant, hardly any is reinvested in applied research. Safari Club International, for example funded a research program in Tajikistan, but so far no results of practical management relevance have been made available (Singh & Milner-Gulland 2011 provide a review of monitoring methods and challenges of their application in Central Asia).
52. While many threats and underlying reasons are similar between the Range States and affect all argali populations to a varying extent, practical lessons learnt from successful management approaches, experiences with legal and regulatory framework, methods and results of applied research, and monitoring data are hardly noticed beyond national borders. Language barriers aggravate the problem. Cooperation among the Range States, in terms of exchange of experiences and knowledge would thus significantly contribute to the improvement of the situation.
53. Protected areas contribute to the conservation of argali and its habitats. However, more than often protected areas are insufficient to cover the year-round habitat requirements of argali. Inside the protected areas poaching, trophy hunting, livestock grazing and other activities take place. One of the reasons is lack of funding and staffing of protected areas, even in countries where trophy hunting creates significant revenues.

### **3.2.2 THREATS RELATED TO THE TRANSBOUNDARY NATURE OF ARGALI POPULATIONS**

54. The previously mentioned threats and factors come into sharper relief as the animals cross the borders. When argali move across the borders they may encounter impenetrable fences, degraded habitat and unregulated hunting. In one country they may be well managed and protected, in another they may be exposed to a plethora of threats. As Schaller and Kang (2008) write, any one country cannot adequately protect and manage the species and only through transboundary cooperation and joint conservation initiatives is this possible on a sustained basis. Communication-, funding-related, and legal and regulatory barriers intervene which affect the ability to implement transboundary initiatives in the region focused on argali. As a result the transboundary nature of most of the argali populations, adds certain additional challenges to their conservation.

55. In the absence of some coordinated monitoring of transboundary populations and sharing of data and information, it is difficult to have knowledge of the trends of those specific populations and to make properly justified management decisions.
56. For populations of argali, for which hunting is allowed in one or more countries, there is a risk that a hunting quota established in one of the countries may particularly impact a population, more vulnerable because of stress factors faced across the border (more livestock competition or illegal hunting pressure). At the other hand the potential of joint management of cross-border populations in the context of sustainable use have so far not been explored. Populations of *O. a. karelini* in the Northern Tianshan, moving between Kyrgyzstan and Kazakhstan as well as *O. a. polii* may provide such a potential, where even if hunts take place only in one country, cooperation and benefit sharing can contribute to conservation of the respective populations beyond borders.
57. Poaching by local people as well as illegal trophy hunting in some areas is of a cross-border character. Thus joint and coordinated efforts between the respective countries are necessary. So far joint or coordinated patrols and collaboration between nature protection staff, hunting concessioners, border police and customs officers inside and between the countries are rather the exception than the rule. Prevention of illegal trade of hunting trophies and parts of argali for other commercial uses require collaboration between the Range States.
58. Threats related to livestock such as the transmission of diseases (WCS 2012), but also habitat degradation and displacement of argali from optimal grazing grounds caused, can be of trans-boundary character (Kashkarov et al 2008).
59. Borders can have direct impacts on argali populations as they add physical barriers to migration. Border fences have been erected during the Soviet period along the borders between nowadays Kazakhstan, Kyrgyzstan, Russia, Tajikistan as part of the Soviet Union and China as well as Afghanistan. These border fences by their construction type can hardly be crossed by argali. During the last decades however, maintenance of these fence systems has deteriorated and at several sections argali can now move across the border.
60. Further border fences exist between China (Inner Mongolia) and Mongolia (Harris et al 2009), between India and China (Singh 2008), and between Mongolia and Russia (Kashkarov et al 2008). During recent years the formerly open borders between the newly independent states of the former Soviet Union have become demarcated and are increasingly fortified. In the future there is a risk that new border fences might be erected along these borders as it is currently discussed at the Kazakhstan-Uzbekistan border in the Ustyurt plateau, the home range of the saiga population with the most critical trend.
61. A case which excellently illustrates the transboundary problems argali populations face was recently reported. Perhaps unusually high mortality and dispersal movements of argali from south-eastern Pamirs in Tajikistan to the Little Pamir in Afghanistan were reported during the winter 2011-2012. According to Kyrgyz inhabitants of the Little Pamir, argali numbered in this area over a thousand individuals during late winter 2011-2012. Allegedly a remarkably high population size for this area at that time of the year. Kyrgyz community rangers counted, only in Tegermansu area, 586 argali individuals during March 2012. Respondents to the inquiries of Inayat Ali of WCS said that many of these animals were coming from Tajikistan. Community Rangers also reported an increased number of dead argali preyed or scavenged by wolves. Wakhi shepherds, who do not live in the area, interviewed by Ali claimed that because of this large influx of argali, illegal hunting by ethnic Kyrgyz in the Little Pamir occurred at a large scale during this period. However, this information is not confirmed by local inhabitants and community rangers. Winter 2011-2012 was deemed by Kyrgyz elders from the Little Pamir as exceptionally harsh, a situation likely also concerning the south-western Pamirs in Tajikistan.

Livestock also suffered severe losses (Inayat Ali, personal communication 2012). According to Stephane Ostrowski, WCS, these reports suggest that argali were in unusually high number in the area at the end of winter and early spring 2012. Increased energetic requirements of animals exposed to extreme cold conditions might have also explained the influx of argali into the Little Pamir, and particularly in Tegermansu, an area known to hold superior forage because of lack of livestock grazing. Similarly to livestock, argali might have suffered food shortage in Pamirs. Poor forage availability and extreme weather conditions might be at the origin of their death. Supporting this hypothesis, are two observations: the unusually close foraging promiscuity with yak, and the observed high level of predation or scavenging. The observation of freshly dead argali in mid June at the border fence in Tajikistan (Aziz Ali, personal communication 2012), could be the result of a later stage of starvation (an irreversible physiological situation during which animals are in terminal phase of protein catabolism and can no longer recover) because of winter stress. It is also possible that forage availability might have been insufficient in spring 2012 because of past overgrazing, and that winter-starved animals had difficulty recovering. What cannot be also entirely ruled out is that an epidemic health disorder affected the argali population in winter/spring. (Ostrowski, personal communication 2012)

62. Aziz Ali, Aga Khan Development Network, who visited Little Pamir in June 2012, reported the presence of 16 carcasses of argali along a 2-3 km stretch of the fence delineating the international boundary between Tajikistan and Afghanistan. According to him at least two of these animals had died recently. It is possible that these animals died because they hit accidentally the fence while chased, perhaps by predators (Aziz Ali, personal communication 2012), especially if it happened during night. The border fence between Tajikistan and Afghanistan might also pose an additional threat to the survival of argali during winter and spring, as starved animals are often seen to stay along physical obstacles, particularly fences. They usually aggregate along such fence, that they ride along back and forth in a desperate attempt to cross it. In doing so, what is left from their fat reserves is fast depleted, which precipitates them into unrecoverable starvation and death. Animals undergoing negative energy budgets (that is, using more energy than what they can gain from the environment) are also particularly vulnerable to predators, as they lack the energetic resources to withstand efficient escapes, particularly at the end of a seasonal starvation, such as in spring in Pamirs (Ostrowski, personal communication 2012). Ostrowski suggested investigating retrospectively by questioning trophy-hunting concessionaries in the south-east Pamirs of Tajikistan.
63. The border zone between countries of the former Soviet Union and China has been and is partly still an area with very limited access. Therefore, for instance, in Kyrgyzstan and in the past as well in Tajikistan, significant numbers of argali were found in these border zones. With the independence from the Soviet Union and economic hardships, however, border guards, poorly supplied with foodstuff, supported by local poachers have sharply reduced the argali populations in some of these areas.
64. The barriers to migration (aside border fences, also linear infrastructure, local habitat destruction, occupancy of important migration sites by herders and others) reduce effective population sizes, cause genetic isolation and reduce access to suitable seasonal habitats. Fences can directly cause mortality if argali run into them and get injured. Reportedly poachers use fences and migration corridors for targeted poaching. Genetic isolation between argali populations, spread over different Range States, has been investigated by Luikart et al (2011). The argali from China seems to be more isolated from the argali in south-eastern Tajikistan than the argali in Afghanistan. This relative isolation might be caused by the border fence between Tajikistan and China, which over large distances causes an effective barrier for argali migration and there is also a fence in the argali habitats at the border between Afghanistan and China. Only in the area of the Akbaytal pass a special about 4 km wide corridor for the migration of argali was left without a border fence between Tajikistan and China in the 1970s (Saidov 2007).

### 3.3 CONSERVATION, PROTECTION AND REGULATION OF USE

#### 3.3.1 INTERNATIONAL PROTECTION STATUS

65. Argali is listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (except for *O. a. hodgsonii* in China and *O. a. nigrimontana* of Kazakhstan, which are listed in Appendix I). The United States Endangered Species Act (ESA) lists argali as endangered, except in Mongolia, Kyrgyzstan, and Tajikistan, where they are listed as threatened. This is relevant, since “threatened” classification allows for importation of trophies from legally taken argali in those countries under specifically authorized permits from the U.S. Fish and Wildlife Service. Permits for importation of trophies are generally not authorized for taxa listed as Endangered. They can be authorized if “enhancement” is demonstrated. In the European Union (EU) argali are listed under Annex B of the EC Wildlife Trade Regulations, except for *O. a. hodgsonii* and *O. a. nigrimontana*, which are included in Annex A (EC Reg. No 709/2010 (amending EC Reg. No. 338/97)). Thus for import of argali or its parts to the EU export permit or re-export certificate issued by country of export and import permit issued by the EU Member State of destination are required.

#### 3.3.2 NATIONAL LEGAL PROTECTION AND PROTECTED AREAS

66. Argali is, as a species or in the context of a broader ban on hunting, formally protected from any extractive use in all of its Range States. Permits for trophy hunting on the basis of a quota are issued by the governments of Kyrgyzstan, Mongolia, Tajikistan and Uzbekistan. In the past this was also practiced in China and Kazakhstan (until 2003). Further, a number of protected areas in all Range States contribute to the legal protection of argali from persecution and direct habitat destruction. Some of the most important areas are mentioned below.
67. **Afghanistan.** All hunting in Afghanistan was banned by order of President Hamid Karzai in 2006. In 2009 argali were officially-listed as a Protected Species in Afghanistan, strictly prohibiting all hunting and trading of this species within the country.
68. There are currently no protected areas within the distribution of argali, although plans exist to establish a network of protected areas in the Wakhan range and the Waghjir-Tegermansu Complex.
69. **China.** Argali are classified as a Category II “key species” under the Chinese National Wildlife Law of 1988. Permits to take argali must be obtained from province-level authorities. Only the trophy hunting programmes have procured permits to take argali under this legislation. There are also some trophy hunting areas, which have reduced poaching but have not been effective in avoiding habitat conflicts (Harris 2007 and personal observations from Qinghai, 2010). Currently international trophy hunting is closed. According to Schaller and Kang (2008), only in China has the number of argali apparently increased during the past 2 decades, largely because of a guard force and confiscation of firearms from households.
70. Argali occur in a number of Chinese nature reserves, a designation that does not necessarily limit grazing, mining, and other activities that can affect argali. In Xinjiang, they occur in at least six nature reserves in Xinjiang. On the Tibetan Plateau, argali occur in the 247,120 km<sup>2</sup> Qiangtang Reserve in Tibet and the 83,000 km<sup>2</sup> Kekexili Reserve in Qinghai, as well as in scattered populations within the Sanjiangyuan Nature Reserve in Qinghai. In Gansu, argali occur in Yanchiwan Nature Reserve, and may occur in the Qilian Nature Reserve.

71. **India.** Argali are listed under Schedule I (Highest protection) of the Indian Wildlife Protection Act of 1972.
72. Argali are rare but present in Khangchengzonga National Park in Sikkim.
73. **Kazakhstan.** As species listed in the Red Book argali are considered as protected species and can be hunted only based on permits issued by the government. Limited trophy hunting used to be permitted, but since 2003 there have not been any legal hunts.
74. In 2004 a Strictly Protected Area was established in the Karatau Range for conservation of *O. a. nigrimontana*. Further special protected areas, national parks and strictly protected areas exist in the range areas of all other subspecies of argali.
75. **Kyrgyzstan.** Argali are listed in the Red Book and according to the law hunting is only possible with special permits from the government.
76. Several national parks and strictly protected areas, among them Sarychat-Ertash and Naryn Strictly Protected Areas.
77. **Mongolia.** Argali sheep are protected as “Rare” under the 2001 revision (Mongolian Government Act No. 264) of the 2000 Mongolian Law on Animals. General hunting of argali has been prohibited since 1953. Although protected from general hunting, trophy hunters can purchase licenses.
78. Approximately 14% of the species’ range in Mongolia is located within federal protected areas, including Altai Taivan Bogd National Conservation Park (NCP), Gobi Gurvan Saikhan NCP, Great Gobi Strictly Protected Area (SPA) and Turgen Uul SPA. Small populations likely occur in other federal and provincial (aimag) or county (soum) protected areas as well.
79. **Nepal.** The species is protected under HMG Nepal’s National parks and Wildlife Conservation Act, 1973
80. **Pakistan.** In Pakistan argali are legally protected and no hunting permits are issued.
81. Argali are found in Khunjerab National Park in Gilgit-Baltistan.
82. **Russia.** Hunting is legally banned as a species listed in the national Red Book.
83. Argali occur in the Altaisky Zapovednik, but most argali in the Russian Federation are still outside of protected areas.
84. **Tajikistan.** Hunting is legally banned as a species listed in the national Red Book and hunting is possible only for scientific purposes but in practice the government annually issues permits for trophy hunting.
85. In Tajik National Park more than 5000 argali occur during all seasons (Michel and Muratov 2009, WHS nomination 2011); and Zorkul Strictly Protected Area is home to about 1500 argali except in winter season with high snow cover (M. Alidodov, personal communication 2012).
86. **Uzbekistan.** The species is included in the Red Book of Uzbekistan and protected from general hunting, although limited trophy hunting is irregularly permitted by the government and export permits are issued.

87. Severtzov's argali are formally protected within the Nuratau Strictly Protected Area.

### **3.3.3 CHALLENGES IN THE PROTECTION ACTIVITIES OF THE RANGE STATES**

88. Challenging the success of argali conservation activities is the fact that many Range States: do not have the resources to manage the species and protected areas or to carry out sophisticated research and monitoring activities; have not successfully defined a role for the sustainable use of the species and justified its value in the context of the conservation of the species; communicate in an unsatisfactory way at a local, national level and more so at a transboundary level; and don't have a coherent system of laws that defines what is permitted and where.
89. First of all, in both Tajikistan and Kyrgyzstan, the challenge of limited funding in managing a functioning protected area was highlighted. For the Zorkul Zapovednik in Tajikistan, in particular, protected area staff emphasized the current absence of a park management plan, lack of consistent monitoring, low awareness of population numbers, inadequate infrastructure, and lack of capacity (Gulayozov, personal communication 2011). Across Gorno-Badakhshan Autonomous Oblast, stakeholders lamented the general lack of capacity in and outside of protected areas for management and research and a real need for improved coordination and cooperation (Local Stakeholder Consultations, September 2011).
90. Second, sustainable use in the form of trophy hunting can play an important role in the conservation of the species. It provides incentives, if distributed properly, for people to conserve the species rather than kill it illegally. Well-managed hunting concessions, having an economic interest in conserving the species, will also tend to be managed so that high quality habitat is preserved. In Kyrgyzstan hunting concessionaires lease key argali habitat from pasture user associations to prevent grazing of domestic livestock (information from area manager to Stefan Michel, Isle of Vilm, Germany 2012). At least two major hunting concessions in Tajikistan, "Murghab" and "Wakhan" have an interest in limiting livestock grazing (Personal observations 2011) but lack the formal means to do this.
91. In China, the current wildlife management policies are mostly focused on conserving populations by limiting mortality, rather than preserving habitat. One consequence is that hunting concessionaires are not empowered by the current legal system to intercede in the environmental review process when threats to wildlife habitats emerge. On the other hand, local pastoralists are provided little incentive to limit their livestock herds or pastures used in deference to wildlife. The public opinion, viewing hunting as simply leading to the killing of animals, struggles to recognize the role of hunting grounds as a means of preserving habitat and creating incentives for local people not to illegally kill the animals (Harris 2007). In 2006, after the Chinese State Forestry Agency announced a public auction of hunting quotas in line with new regulations (the 2004 "Administrative Permission Law"), there was concern that trophy hunting by foreigners was being allowed in China, and speculation about whether hunting was truly sustainable. In response to public concerns, the Agency suspended all foreign trophy hunting in 2006; the suspension remains in place today. The hunting applications of American hunters received by China in August of 2011 brought the issue back up in the media.
92. Similarly, in Mongolia hunting is not viewed positively and the general view is that protected areas are the only long-term option for the protection of the species. But in this case, there are more objective grounds that make the anti-hunting sentiment more objectionable. When initially developed, the 1995 Law on Hunting discussed sport hunting, but limited its application to foreign hunters. With Mongolia's improving economy, relaxed gun controls, and abundant supply of ammunition, a growing number of people rediscovered the sport. The current system has major flaws, for example there are no restrictions on where hunting can take place (outside of protected areas) and Mongolia's CITES implementation



regulation is in contravention of the convention by granting the management body the authority to exceed harvest quotas (Wingard and Zahler 2006). Moreover under the Law, revenue generated from argali trophy hunting is divided as follows: 70% to the federal government's general funds; 20% to the local district (soum); and 10% to the hunting organization: very little of this money benefits local people or conservation of the species. Since local governments generally receive no additional revenue from trophy hunting (the federal government simply reduces contributions to local governments that receive trophy hunting permits), many local governments are establishing protected areas to prevent future hunting. Recent proposals for community-based wildlife management programmes have not been successful so far, in part because community-based organizations are not entities recognized by the Mongolian legal system (Wingard and Zahler 2006). Moreover, since the current scheme for distributing revenue from the sale of the permits does not include a percentage for local communities, some sources cite that it is hard to clearly articulate the economic incentives argument of sustainable trophy hunting (Reading, personal communication 2012).

93. Third, the level of communication, especially at a transboundary level tends to be fairly poor. The level of communication and joint activities between Kyrgyzstan, China and Tajikistan along the border is still very low. Finally, while Tajikistan sources claim that there are foreign hunters coming into Tajikistan from Kyrgyzstan for illegal hunts, Kyrgyz sources claim that it is the opposite (Saidov, N., Saidov, A. and Davletbakov, personal communication 2012). Specifically, stakeholders in Tajikistan expressed the view that communication and cooperation with China, Kyrgyzstan and Afghanistan could improve. There was broadly cited: a lack of knowledge of ongoing research activities and population status of argali in China; missed opportunities to coordinate monitoring activities with Afghanistan; lack of coordination on anti-poaching efforts and illegal trophy hunting along the borders of Afghanistan and Kyrgyzstan. On the latter, some sources claim that in some areas the number of shot animals not always coincides with the number of issued licenses, with a part of trophies being illegally taken out of country through Kyrgyzstan without controls (Saidov, A. personal communication 2012; and stakeholder consultations, September 2011).
94. Fourth, there are a number of legal and regulatory barriers to a more effective management of the species, its sustainable use and access and benefit sharing. In Kyrgyzstan, in 1999, the Parliament adopted laws "On Environmental Protection" and "On the animal world" that regulate resource protection and use. According to the regulations on use of fees for use of objects of flora and fauna (Government decree no. 306 as of 13 June 2011), trophy hunting permit (current quota of 70 permits) proceeds are allocated in the following way: proceeds from the sale of ten permits are allocated for research and monitoring; the proceeds from the sale of remaining 60 are distributed as follows: 20% to support local communities' budget; 30% to support control and regulation activities of the State Forestry and Hunting Agency; 15% to a fund for the protection of nature and for funding protected areas; and 35% can be repaid to the concessioner to fund conservation activities implemented by him. Under the current scheme, concessioners earn income from their hunting business and can receive an additional subsidy for their management activities from the fee they pay for the hunting permits. Thus the effective permit price is actually about one third of the price in Tajikistan. Funding for protected areas from the state budget is relatively low and the share of the revenues from hunting permits does not contribute significantly to protected areas funding, with the result that park rangers are underpaid and are known take bribes from trophy hunting concessioners (smaller ones especially) to let foreign hunters hunt in the protected areas. Community-based trophy hunting organization models are possible but lack specific provisions in the current legal framework and have not been politically promoted so far. Finally, hunting areas are also used as grazing areas and there is no mechanism for establishing grazing exclusion zones in critical argali habitat, except the opportunity that concessioners lease critical pasture areas from the pasture user associations.

95. A new law “On hunting and wildlife management” is under preparation with the goal of strengthening incentive based approaches to conservation of species, including argali, and to allow for setting land-use restrictions for protection of key habitats for argali and other species especially during migration (Davletbakov, personal communication 2012). The most critical point is that in the draft presented by the parliament for public discussion the hunting of animals listed in the Red Book would explicitly be prohibited. If this regulation is adopted and enforced a hunting ban would remove any incentives for hunting area managers to protect argali. One of the mid-term effects of the new provisions should be reduction of hunting areas in the argali range from currently 54 to about 30, as the law would make it a condition for a hunting area to be newly assigned for the management of argali to be of a size of at least 70,000 ha. The proceeds from the sale of all the permits would be allocated as follows: 50% to the Hunting Department; 30% to support local communities’ budget in the places where the hunts take place; and 20% to support protected areas. The law introduces an area based management approach, so that permits for hunting in the future can only be issued where the hunting area is assigned to a legal entity. This will effectively promote the allocation of hunting management areas to local hunters and communities. The Hunting Department announced its intention to assign all hunting areas to non-governmental legal entities. Finally it will be possible to define, in the context of the planning of the borders of hunting concessions, grazing exclusion areas. The implementation of the new law, if adopted, will have its own set of challenges: first, given the possible political pressures, reducing the number of concessioners will be a difficult task and so will be removing the subsidy from the sale of the permits; and second, given that most of the good argali habitat is already assigned to the current trophy hunting concessions, it will be hard to set up community-based trophy hunting concessions that may qualify for a quota for argali, given that there would not be many argali in those areas (Davletbakov and Musaev, personal communication 2012).
96. In Tajikistan, management of trophy hunting on argali in this country was transferred in the early 1990’s to private concessions. Currently there are five concessions that are involved in trophy hunting on argali and that are part of the Hunters Association of Tajikistan. All hunting happens through these five concessions and during the last seasons permits were distributed only to this Association. Some of these concessions, two at least, play an important role in the conservation of the species, through monitoring and anti-poaching activities. There is one concession (“Badakhshan”), not part of the Association, but purchasing a limited number of permits from the Association, that is active in Tajik National Park. Revenues from the sale of hunting permits earned by the government during the 2010/2011 hunting season (with 51 Argali legally harvested) totalled more than 3.6 million Tajik Somonis (equivalent to roughly USD \$770,000). Sixty per cent of this amount is supposed to be spent on nature protection and local development in the district where the hunts took place. Some of the proceeds are apparently going to be used to fund a hydroelectric project in Murghab, which is supposed to reduce pressure on teresken (Saidov, N., personal communication 2012).
97. The hunting legislation of Tajikistan is currently based on the law “On the animal world”, other laws and regulations, which are outdated, contradictory and leave gaps in legal regulation. A working group of members of the Parliament, specialists from the Committee for Environmental Protection and subordinated structures has been meeting since 24 April 2011 to discuss the elaboration of a new hunting law. A draft has been sent to the Parliament for its consideration in March 2012. It is expected that this reform might lead to clarifying, *inter alia*, and improving how income from the sale of hunting permits should be allocated. According to the draft new law, revenues from payments should provide for monitoring, control, protection and reproduction of populations of game animals from the side of the state organs and hunting concessionaires and for local social-economic development (with a suggestion to allocate 40% of the permit fee for local development, 40% to a nature protection fund, half of this, i.e. 20% would be spent on protected areas management if hunting occurs on the territory of a protected area or in hunting grounds bordering a protected area and 20% for the monitoring and protection work by the managing state organs) (Michel, personal communication 2012).

### 3.3.4 INITIATIVES AND PROJECTS FOR CONSERVATION OF ARGALI

98. Over the past years, there have been several projects and activities in the range countries that have had an argali research and conservation component. Some of them were also developed with a view of creating some level of transboundary cooperation. Of note is the fact that, with the exception of the GIZ projects in the region, existing projects on sustainable land-use and nature resources tend to ignore the impacts on large mammals as well as their potential for sustainable land use.

#### CONSERVATION INITIATIVES IN SINGLE COUNTRIES:

99. **Afghanistan:** WCS has, since 2002, been implementing the USAID Afghanistan Biodiversity Conservation Program with the primary objective of conserving biological diversity in natural and managed terrestrial ecosystems in Afghanistan pursuant to the USAID Biodiversity Primary Code. The program has four major components: baseline surveys and data analyses of wildlife and wildlands in Afghanistan's three most biologically significant areas (Wakhan, Hazarajat Plateau, and Eastern Forests); strengthening laws, policies, and institutions to develop effective institutions, protected areas, and policies that will mitigate existing threats and increase opportunities for biodiversity conservation; development of community-based initiatives to better understand local threats to biodiversity, and design strategies for mitigating those threats; and a program of training and capacity building to assist Afghanistan's ability to manage its biodiversity (USAID Report 2007).
100. WCS's research work on argali has been focused on three questions: whether the very restricted distribution of Marco Polo sheep in the Big Pamir region is real (rather than simply being an artifact of limited sampling), and if so, what is causing it; what are there barriers to movement and gene flow among what appear to be disjunct sub-populations of Marco Polo sheep within Afghanistan's Wakhan corridor (as well as between these and neighboring sub-populations in Tajikistan, China, and Pakistan); and whether there is habitat use overlap or conflict between domestic livestock herds and March Polo sheep, and if so, could management options (such as grazing rotation schedules for domestic herders) mitigate these conflicts. Population estimates were generated, both through direct observation, and through capture-recapture methods based on individual genetic markers from fecal samples. As critical to understanding the status of argali populations within the relatively narrow Wakhan corridor was assessing their relationships with animals in adjacent countries, sampling equipment and instructions to colleagues in China and Tajikistan, were provided. (USAID Report 2007).
101. Some of the key highlights of the research conducted to date include: an estimated population size for female argali in the northern slopes of the Wakhan range (Big Pamir) of 172 animals (Harris et al 2010); and the conclusion that Argali populations appear to have high genetic variation and connectivity in the Pamirs within Wakhan District of Afghanistan, and Murghab (Tajikistan), but potentially are becoming isolated in Taxkorgan, China (Luikart et al 2011).
102. A recovery plan was drafted with the goal of restoring the argali population in the Wakhan to the levels and geographic range that could sustain managed subsistence and trophy hunting, maintain population connectivity and make argali sufficiently common to constitute a tourist attraction. Critical to achieving such goals would be to: restore important argali winter habitat; reduce forage competition with domestic livestock; protect remaining high quality argali habitats; and effectively eliminate human hunting pressure until population goals are achieved (Winnie, personal communication 2011). However, so far the plan is neither approved nor has the start of its implementation been reported.
103. At a community-level, WCS has been conducting extensive public outreach programs in the Wakhan, teaching about the benefits of conserving Marco Polo sheep populations both for the local communities from an economic point of view and for the country's biodiversity. Overall, it appears that the

community work, including anti-poaching activities conducted so far, have been successful in reducing the poaching pressure on Marco Polo sheep.

104. **China:** In 2011, the IUCN Species Survival Commission - Caprinae Specialist Group with funding from Safari Club International Foundation, Wild Sheep Foundation, Conklin Foundation and Grand Slam Club/Ovis organized a workshop attended by Chinese State Forestry officials, TRAFFIC and CIC. Participants discussed conservation and hunting in China and the need for developing IUCN guidelines on conservation trophy hunting (IUCN Report, not for distribution 2011).
105. **India:** Singh (2008) has studied animal-habitat relationships, distribution, habitat use, activity budgets, sexual segregation, competition with livestock and landscape-scale habitat modelling in high altitude rangelands of India with a focus on habitat use by argali. A study on the status and distribution of the Tibetan argali *Ovis a. hodgsoni* in Ladakh, India and the effect of a hunting ban was presented by Namgail et al. (2009).
106. **Kazakhstan:** The government of Kazakhstan has implemented a State programme on restoration of rare and endangered ungulate species and the saiga. Activities started under this programme are continued in the frame of an ongoing State programme on environmental protection. Some of the argali activities in the country focus on: improving population survey methods and new monitoring techniques; joint monitoring activities with Kyrgyzstan; understanding the genetic diversity of Argali; argali restoration in the Ulytau mountains; anti-poaching activities along the Kyrgyz border; and development of a pilot trophy hunting project (Berber, personal communication 2012). Further Kazakhstan participates in trans-boundary projects on the conservation of ecosystems in the Altai-Sayan Ecoregion, supported by WWF, UNDP, GEF and others (see below).
107. **Kyrgyzstan:** Before 2002, argali management activities included: year-round protection of argali habitat; anti-poaching; and wolf control (US Fish and Wildlife Services, Retention of Threatened Status for Argali in Kyrgyzstan, Mongolia, and Tajikistan 2002). A research programme for argali was approved by the government of the Kyrgyz Republic on October 11, 2010 (Kyrgyz Republic 2010) over a period of four years, continuing and enhancing the efforts on research and conservation started already in 2004, with the state programme on research, conservation and sustainable use of argali, approved by governmental decree Nr. 235 on April 7, 2004 (Kyrgyz Republic 2004). Some of the planned research activities include: further training for population monitoring, including joint monitoring activities with Kazakhstan as well as use of best available GPS-collars for studying migration of argali, genetic sampling and morphological analysis for better understanding of the variability and taxonomic status of argali.
108. The contribution to conservation of argali by the hunting concessionaires is not very well documented. In some of the large hunting concessions where argali are managed, anti-poaching and monitoring activities as well as predator control are implemented. It is possible some of these activities have contributed to stabilizing and increasing argali populations in some concessions, while in other concessions no effective conservation management is in place (Michel personal communication 2011, Davletbakov 2012).
109. The Regional Programme on Sustainable Use of Natural Resources in Central Asia implemented by GIZ on behalf of the German Government since 2009 supports activities on sustainable management of mountain ungulates focusing on legal framework development, capacity development for wildlife monitoring and improvement of hunting areas management, in particular, introduction of community based approaches. In this context in December 2010 and May 2011, a large-scale survey in key argali habitats of the country was carried out. The survey tallied in total 15,311 *O.a. karelini* and *a. polii* in the regions Issykkul, Naryn and Talas and 37 *O.a. severtzovi* in Batken region (Davletbakov 2012). All

assigned hunting concessions have been mapped in GIS. Substantial support has been provided to the development of the new hunting law that provides for clearer regulation and incentives for sustainable hunting and wildlife management. Activities on strengthening of the implementation of the CITES convention are also focused on. Community based management approaches are demonstrated in pilot areas and capacity building for a country wide allocation of hunting areas to groups of local hunters are underway.

110. WWF has been supporting anti-poaching activities in areas with argali. A similar anti-poaching programme is currently implemented by the German NABU (Michel, personal communication 2012).
111. **Mongolia:** The Mongolia's Argali Wildlife Research Center, the Denver Zoological Foundation (DZF), and the Mongolian Academy of Sciences (MAS) are cooperating on several argali conservation and research projects across Mongolia, including an interdisciplinary research and conservation project in Ikh Nart Nature Reserve, Dornogobi Aimag in cooperation with the Dalanjargal Soum Administration. Some of the research has focused on distribution, population dynamics, behaviour, social structure, genetics, the level of competition between argali and domestic sheep and goats, and protected area use. They have worked on conservation management measures in cooperation with State officials, local hunting and nonprofit organizations aimed at specifically addressing trophy hunting issues, to ensure that a substantial portion of future funds obtained from trophy hunting go to help conserve the species. They have also explored options for revenue generation, such as ecotourism, noting, however, that the reclusive nature of argali currently renders them less than ideal candidates for an ecotourism programme (Amgalaanbatar and Reading 2000).
112. In 2009, a study was carried out taking advantage of the presence of a radio-marked sample of argali in the Ikh Nart Nature Reserve to estimate abundance simultaneously using two independent methods: distance sampling and mark-resight sampling (Wingard et al 2011). In the same year, a nationwide survey was conducted across Mongolia, which developed an estimate of 19,701 argali.
113. Some of the future work may be focused on the argali in the Altai mountains, which have already been greatly reduced and fragmented as a result of illegal hunting and competition with domestic livestock (Reading, personal communication 2012). Some of these populations migrate across the border in Russia.
114. **Tajikistan:** Argali conservation activities have tended to be the responsibility of the hunting concessionaires. Typically, local authorities enter into agreements (contracts) with hunting concessionaires, to which are allocated certain sectors where international hunting is conducted. The hunting firm is responsible for conducting various activities including an annual survey of the game population, preventing poaching, and conducting management activities (Latifi, personal communication 2011). The Murghab hunting concession has been recognized as a model for other concessions for its conservation activities, including: the protection of all wildlife, a private anti-poaching team and monitoring of argali within the borders of the concession (Schaller 2005).
115. In 2003, in the Eastern Pamirs of Tajikistan, Schaller and Kang (2008) tallied 1,528 argali within selected census blocks totalling 1,977 km<sup>2</sup> (and in winter 2005, counted 2,200 animals within their South Alichur block in Murghab).
116. Activities on sustainable management of mountain ungulates are implemented in the framework of the GIZ Regional programme on Sustainable Use of Natural Resources in Central Asia in cooperation with the Nature Protection Team. They include activities on legal framework development, improvement of population monitoring and the management of assigned hunting grounds with focus on user groups based on local communities. In this context a survey was conducted on 8,170 km<sup>2</sup> in December 2009

by the Committee on Environmental Protection, in cooperation with the Academy of Sciences and the Nature Protection Team, a local NGO, and hunting concessionaires. The survey area included the accessible sites known for possible high concentration of argali. In total 23,711 argali in 510 herds were recorded (Michel & Muratov 2010). Of note is the fact that the 2009 argali survey has been the basis for lifting the ban on hunting and the reissuing of CITES permits for the export of argali trophies and for ultimately supporting the economies of the stakeholders involved in trophy hunting, including guides from local communities. The engagement of local hunting concessionaires willing to manage argali for their conservation has proved over the years an important tool for controlling illegal hunting activities.

117. There are other activities of relevance to argali conservation. First of all, the Committee on Environmental Protection submitted a proposal to designate Tajik National Park as a UNESCO World Heritage Site. In this context a management plan for the Tajik National Park was elaborated which includes several activities related to protection of argali and their habitats. Further, this nomination is an opportunity to review existing trophy hunting operations inside the Park and to consider the establishment of community-based trophy hunting areas. Second, Flora and Fauna International (FFI) is conducting a biodiversity assessment and capacity building activities in Zorkul Zapovednik. Third, Panthera has conducted a survey of argali in the valleys of Madiyan and Pshart in the Pamirs as part of the proposed establishment of a community-based trophy hunting area (McCarthy, personal communication 2012).
118. **Nepal:** There are no estimates of argali in Nepal. Shah (2003) reports of 24 argali observed in the Mustang region. There is one study conducted in the northeast Mustang region, where a population of 77 individuals has been reported from the Damodarkund area (Chetri and Pokharel 2005).
119. **Pakistan:** In the fall of 2011, there were 14 argali sighted in the Mishgar valley by a ranger of the local wildlife department (Khan, personal communication 2011), close to the China and Afghanistan borders. While there are more animals than those sighted, still the population-wide estimates are very low, somewhere below 100 animals (Khan, personal communication 2011).
120. **Russia:** WWF has started a long-term program to promote sustainable development in the Altai-Sayan region, which could have benefits for argali. See under the Altai-Sayan initiative.
121. **Uzbekistan:** There are currently no specific conservation or research initiatives on argali. In 1998 the estimate for the argali in the Nuratau and Koytash Ranges was 2,500 animals, of which 1800-1900 inside the Nuratau Strictly Protected Area. However assessments conducted in 2005/2006 suggest that argali numbers estimated for the Nuratau Strictly Protected Area, were unreliable and presented significant over-estimates (CMS Argali Listing Proposal 2011). A UNDP-GEF project on the establishment of a UNESCO biosphere reserve in the Nuratau range included activities on the improvement of monitoring and conservation of the argali population and assessed potentials for environmental tourism and sustainable hunting management.

#### **TRANSBOUNDARY CONSERVATION INITIATIVES:**

122. ***WCS Pamir Transboundary Protected Area Initiative between Afghanistan, China, Pakistan and Tajikistan:*** In 2006, WCS was the lead organization for the creation of a Transboundary Protected Area Afghanistan, China, Pakistan and Tajikistan, which listed argali as one of its flagship species. The creation of a Transboundary Protected Area in the Pamirs was thought to help facilitate collaborative management of the region's unique biodiversity, foster scientific cooperation, manage the impact of zoonotic diseases, encourage sustainable regional economic development and ecotourism, and promote diplomacy and cooperation among the four countries. After a first conference held in Urumqi, China in 2006, a second conference planned for 2007 was supposed to establish a Transboundary Conservation Commission, begin work with technical working groups, finalize the Action Plan developed in the first

conference. The timing of the second conference was delayed at the request of the Government of Tajikistan. WCS's strategy remained one of working with all four countries to seek an acceptable level and form of cooperation for the joint management of the region.

123. ***WCS Tajik Pamirs Transboundary Conservation and Management***: In 2011, a field mission through the Tajik Pamirs, followed by a workshop in Dushanbe, Tajikistan, were held under the auspices of the Committee on Environmental Protection of Tajikistan which provided an opportunity to resume discussions on options for transboundary conservation with Afghanistan, China, Pakistan and Tajikistan (WCS Report 2012).
124. ***WCS Ecosystem Health Initiative between Tajikistan, Pakistan and Afghanistan***: One of the goals of this project was to identify priorities for disease research (foot and mouth disease, brucellosis, plague, contagious caprinae pleuropneumonia, nutritional deficiencies, etc.) of national and international concern in the transboundary Pamirs region (WCS Report 2012).
125. ***Pamir-Alai Transboundary Conservation Area between Tajikistan and Kyrgyzstan (PATCA)***: Under this project, funded by the EU TACIS programme, a review of mammals was conducted with recommendations specific to what should be the research and conservation needs for argali in this transboundary region (Saidov 2007). A management plan was elaborated for the area but so far the plan was neither approved nor implemented.
126. ***Pamirs and Pamir-Alai Land Management (PALM)***: This UNEP-GEF project, implemented by UNU is territorially in a large extent focusing on the argali habitats in the Eastern Pamirs of Tajikistan and bordering areas in Kyrgyzstan. However, the project did not take into consideration argali and the ecological and economic potential of large mammals and their management and sustainable use.
127. ***ICIMOD-facilitated consultation between China and Pakistan***: In 2010, an MoU was signed between Xinjiang Uygur Autonomous Regional Forestry Department (XUARFD) and the Gilgit- Baltistan Forest, Wildlife Parks and Environment Department, Pakistan, for the conservation of wildlife species in the Pakistan-China border area with regards to generating and sharing knowledge about wildlife species and their habitats and developing a joint management plan addressing the issues of wildlife species and their habitats together with suggestive measures for minimizing negative anthropogenic influences on the environment and helping socioeconomic development of the local communities. Following that, in 2011, China participated in a consultation facilitated by ICIMOD, aimed at providing a platform to share the progress made towards the conservation of the ecologically contiguous landscape between China and Pakistan and to develop a common strategic framework of action for the landscape. The specific objectives were: to revisit and understand the conservation measures that have taken place in the past in the two adjoining protected areas in China and Pakistan; and share the process document on the significance, history and future of Sino-Pak collaboration for the socio- ecological development of the Karakoram-Pamir Landscape with a focus on adjoining protected areas; and to draft a strategic framework of action that provides direction for long-term collaboration to address regional transboundary biodiversity management and climate change adaptation issues in the area (ICIMOD Working Paper 2012).
128. ***Altai-Sayan Mega Connectivity Conservation Corridor Initiative between China, Russian, Kazakhstan and Mongolia***: Transboundary activities on the conservation of the Altai-Sayan region are ongoing since many years. During 2001 till 2004 the establishment of a transboundary biosphere reserve was considered. UNDP in collaboration with WWF over the years implemented GEF financed projects on biodiversity conservation in Kazakhstan, Mongolia, and China. More recently, in 2010, a multi-national workshop involving 72 participants convened at Ust Koksa in the Altai Republic of Russia to explore the possibility of establishing a Mega Connectivity Corridor along the Altai Mountain

Ranges of Central Asia. The Workshop was sponsored and facilitated by UNDP, WWF, the Katunskiy Biosphere Reserve Russia and IUCN World Commission on Protected Areas. The Mega Connectivity Corridor area includes existing and proposed transboundary protected areas along the Altai-Sayan watershed given this area coincides with the political borders of China, Kazakhstan, Mongolia and Russia (Worboys, personal communication 2012). Questions discussed at the 2010 workshop, included threats of infrastructure development such as the Russia-China Gas Pipeline through the Altai area; a hydro-electric dam development proposal; and, the construction of additional border fences such as the two border fences already built between China and Mongolia (Worboys personal communication 2012). A small *Ad Hoc* Working Group comprising representatives from the four Altai-Sayan transboundary countries was established in 2010 to facilitate the Mega Connectivity Corridor concept including its permanent co-operative (and voluntary) governance arrangements. The IUCN World Commission on Protected Areas (WCPA) agreed to convene this Working Group as an Ad-Hoc Working Group for the time it takes to achieve a permanent governance arrangement. One of the specific objectives was to develop the management-plan and nomination for the UNESCO Biosphere Reserve, supported by the German government, for the transboundary protected area "Altai" on the basis of Katunskiy State Nature Biosphere Reserve in Russia and Katon-Karagaiskiy State National Park in Kazakhstan (Worboys, personal communication 2012). Some of the activities include: the development of a management plan for the newly created Saïlyugemskiï national park and the establishment of new adjacent buffer zone and reserves; the establishment of "Ak-Cholushpa" national park in the middle of the northernmost habitat of argali; the establishment of a transboundary park connecting Saïlyugemskiï national park with Silkhemin Nuruu national park in Mongolia; and application for UNESCO World Natural Heritage status for the "Altai - Golden Mountain" which would include Ukok Quiet Zone, Saïlyugemskiï in Russia, Silkhemin Nuruu and Ta-Altai Van Bogd in Mongolia, Canas in China and Caton-Karagaiškogo in Kazakhstan. In 2011, a MoU was also signed between ICIMOD and the Russian Altai-Sayan-Baikal Alliance to catalyze and fund some of the conservation activities in this region (Badenkov, personal communication 2012).

129. Under this broader umbrella, WWF has started a long-term program to promote sustainable development in the Altai-Sayan region between Russia and Mongolia, including the conservation of argali, funded by UNDP and the GEF (Paltsyn 2011 and WWF Report 2011). Some of the planned activities include: the expansion of "Silkhemin Nuruu" and "Tavan Bogd Altai" national parks; and the introduction of limited grazing zones in areas of argali habitat.
130. ***The FAO/CIC led "Wildlife Initiative for Central Asia and the Caucasus" (WICAC):*** FAO has organized a series of so far four workshops between 2006 and 2010, focusing on development of legal framework and practice for sustainable management of wildlife in the context of hunting. Publications summarizing the state of the art and the requirements for hunting legislation have been produced in English and Russian.

### **3.3.5 GAPS AND BARRIERS TO THE CONSERVATION OF ARGALI**

131. The impact of the aforementioned projects on the conservation of argali is difficult to assess as in most cases no evaluation reports are available and project lifetimes are usually too short to assess the impact on such dynamic systems as animal populations and their habitats. The following conclusions are thus the result of own observations, analysis of project strategies and conversations with people involved in project implementation.
132. Research projects tend to provide scientifically well justified scientific results based on hard data. However, the conclusions are often too vague for practical management decisions and their implementation. Further, scientific research projects are not always directly linked to conservation projects. The consequences are twofold: first, research is not always related to management issues in a



way that the results would be applicable; and second, practitioners not always have a chance to become informed about the research, its results and the recommendations made. But even where research is an immediate component of a broader programme, the application of research results is not always obvious. The problem of limited access to research information becomes more serious in a trans-boundary context and is accelerated by language barriers.

133. In complex programmes, focusing for example on development of protected areas or broader environmental conservation, issues related to the conservation and sustainable use are sometimes not of the highest priority. However, there are programmes, which in a broader context address the issues of argali conservation. Then, conservation oriented projects sometimes have difficulties to deal with issues of hunting management. In particular, trophy hunting has a controversial reputation among the public at large in both the Range States as well as in donor countries. There are complex issues to be addressed as are access and user rights, setting and distribution of quota; determination of permit fees and allocation of revenues. All this can lead to tense situations for project managers and sometimes donors. This might be one of the reasons why projects more often concentrate on less critical aspects like writing of strategies and plans, public awareness activities and creation of alternative income sources. Projects addressing directly issues of hunting management at a local, national and even regional level are a rare exception.
134. Another problem is that lessons learnt in successful projects are rarely known in other Range States. Going back to hunting management, competition between concessionaries and companies hinder the direct exchange between hunting area managers inside the countries and more so between the countries. The broad WICAC initiative and so far two workshops organized by the German Bundesamt für Naturschutz (BfN) with support from GIZ have initiated some exchange of experience and personal communication among experts in the region. An exchange platform, the Argali Network, has been established but will require a permanent host, support and active involvement of interested stakeholders.
135. Last but not least, project activities of one organization active in different countries are not necessarily connected to each other in a satisfactory way. Communication can be intermittent and often language barriers hinder the communication even more. The problem becomes even more significant when activities are implemented in bordering countries by different organizations. Coordination of survey activities on argali populations, for instance between projects in Afghanistan, China and Tajikistan so far could not be achieved. This causes additional uncertainty about the status of this argali population. Between Mongolia and Russia such joint monitoring efforts are made under the Altai-Sayan initiative. Conservation issues of transboundary character like poaching, illegal trade, barriers to migration, cooperation in sustainable use and others are not yet addressed in a way and an intensity necessary to achieve results for the long-term conservation of argali.

#### **4. TRANSBOUNDARY CONSERVATION OF ARGALI UNDER A CMS INSTRUMENT**

##### ***4.1 INTRODUCTION***

136. Argali, given that a CMS Appendix II listing application was submitted and approved, are of a conservation status which would significantly benefit from the international cooperation that could be achieved through a CMS instrument. Based on the review of conservation and research activities in some of the argali range countries, there are a number of initiatives, regional and bilateral, that can potentially benefit argali habitat and their conservation, and thus be an argument against the need for a new species-focused instrument. Specifically, they include: the Altai-Sayan Mega Connectivity Conservation Corridor project between Russia, Kazakhstan, China and Mongolia; the MoU signed

between China and Pakistan which has led to an ICIMOD-facilitated consultation between these two countries on transboundary collaboration; and the WCS-led transboundary conservation initiative between China, Pakistan, Afghanistan and Tajikistan. While argali conservation may benefit from each of these initiatives, it is also possible that other elements may be prioritized (climate change, broader landscape conservation issues) over argali conservation and thus leave significant gaps that only a specific argali instrument could address. It is also possible that, should a CMS instrument on argali be developed, that some of these initiatives or parts of it could be brought under the same umbrella so that a set of consistent outcomes and activities on argali are defined. There are different CMS options, legally binding and non-legally binding, that could be developed and used for that purpose. Below is a review of such options.

#### ***4.2 CMS LEGALLY BINDING MULTILATERAL AGREEMENT***

137. In the case of a legally binding agreement, parties accept obligations and responsibilities under international law, which may raise the political profile and level of commitment needed to support action for the conservation of the species. Multilateral donors and government aid agencies may be more inclined to provide financial support for the implementation of formal intergovernmental agreements as these provide a permanent framework and commit governments to clear undertakings.
138. A legally binding agreement formalizes a clear framework, including regular meetings of the parties to review progress, and provides an opportunity for stakeholders to engage with the process. Fixed budget thanks to assessed contributions also allow for a certain level of stability and long-term planning. The formal, high-level nature of the instrument may provide greater political weight, especially since CMS is a multilateral environmental agreement administered by a UN Agency like UNEP. Regular formal reporting on progress with implementation is required. Potential for enforcement and sanctions, where provisions allow, in cases of non-compliance with the agreement.
139. However, legally binding agreements require lengthy, formal, intergovernmental negotiations before any agreement can be reached and ratification may also be protracted. They may also be seen as excluding the private sector and civil society from having an equal seat at the table, so that agenda setting and debate is dominated by governments. Many private-sector and civil society stakeholders may not wish to engage within a legally binding government-led framework. Many governments, especially in developing countries, may lack the capacity for implementation. Conservation of biodiversity typically ranks low among political priorities, therefore this type of agreement may not be a priority.

#### ***4.3 CMS LEGALLY BINDING BILATERAL AGREEMENT***

140. This agreement focuses responsibility for implementation on two governments. It may generate a greater sense of ownership and greater commitment to implementation by the countries concerned. However, it would have to be coordinated to avoid duplicate multilateral efforts or even undermine them. In order to cover all the argali populations, several bilateral agreements would be required which would become difficult for the CMS Secretariat to oversee. They would also lead to different regulatory frameworks with potentially very different and therefore not comparative monitoring and management.

#### ***4.4 CMS SINGLE SPECIES NON-BINDING MOU***

141. MoUs are relatively rapid to conclude, are generally concise and serve to focus attention and resources on the conservation needs of individual migratory species. They focus on the responsibilities and

implementation needs and priorities of Range States for the species, which may otherwise get lost in a multispecies framework. They can also promote the mobilization of human, technical and financial resources. Single-species instruments can be aspirational and are not necessarily accompanied by a financial instrument for its implementation. A proliferation of single-species instruments may overwhelm the capacity of governments, stakeholders and the CMS Secretariat to engage in discussions, meetings, reporting, monitoring and evaluation. However, cooperation between several single-species instruments and stakeholders responsible for the implementation may evolve on the ground clearly motivated by the needs and options in each of the Range countries.

#### ***4.5 CMS MULTI SPECIES NON-BINDING MOU***

142. An umbrella-like framework reduces the administrative burden on governments (and other stakeholders) and they may be perceived as having more weight than a single-species agreement. It has the potential to benefit broader biodiversity dependent on the habitats managed under the purview of the agreement. It can still serve as a vehicle for the conservation of individual species through the development and implementation of international single-species action plans. However, it may require a lengthier, formal, intergovernmental negotiations involving all key stakeholders before any agreement can be reached. The more species covered by an instrument, the more diluted the focus on any one species, including availability of funding for each species, unless there is strong overlap in terms of conservation needs. Available administrative budgets and additional financial resources to support implementation may be far below the level needed to address priority actions for all species covered. Multi-species MoUs, in order to fund the conservation needs of the species covered, might require a financial investment that is higher than under individual species MoUs.

#### ***4.6 CMS ACTION PLAN***

143. Action plans are an important non-legally binding instrument, more typically not a stand-alone document, but developed in combination with an MoU or legally-binding agreement. In some cases they are a precursor to the development of an MoU. Action plans are a road-map outlining outcomes and activities for the conservation of the species: they serve the purpose of identify underlying threats and the necessary conservation measures in a systematic manner, as well as monitoring.

#### ***4.7 CMS CONCERTED ACTION***

144. While not an instrument per se, CMS identifies species (normally Appendix I species) deserving of special attention by passing resolutions for Concerted Actions (UNEP/CMS Secretariat 2009). The legal instrument to be used is not indicated either, except by the request to use, if possible, existing bilateral and multilateral instruments. But it does assume the use of an action plan. Because the obligations of Concerted Actions are generated by the Convention itself, the responsibility for financing remains with the Convention (Devillers 2008).

#### ***4.8 CMS COOPERATIVE ACTION***

145. Not an instrument, but potentially a precursor to one, similarly to the Concerted Action. Cooperative Actions have been established through CMS Recommendation 5.2 (Co-operative Actions for Appendix II Species, CMS CoP5) The difference here is that Cooperative Actions are reserved for Appendix II species.

## CONCLUSION

146. Based on this overview of different CMS instruments, the combination of a non-binding MoU and Action Plan appears to be the most suited CMS instrument.

## 5. RESOLUTION 10.16 CRITERIA

### 5.1 INTRODUCTION

147. As outlined above, there are different options under CMS that could be pursued should Range States agree that the conservation of argali requires vigorous transboundary conservation and cooperation. The first question to answer is whether a new instrument is necessary, or whether there is an existing framework under which to bring argali-related transboundary conservation activities.

### 5.2 SUBSTANTIATION OF THE CASE FOR A NEW INSTRUMENT

148. In the context of the discussions on the CMS Future Shape process, three options were outlined: key reforms; improving conservation within existing structures; and improving conservation by altering the existing structure (UNEP/CMS Inf.10.14.10). Within the first option on key reforms, the proliferation of agreements without resources, was dealt directly by an activity themed “Actions to prioritize the growth of CMS and the CMS Family.” This is relevant to the understanding as to what options should be pursued for the transboundary conservation of argali. At CMS CoP10, this activity was assigned “high” priority and endorsed by the CoP (UNEP/CMS/Res.10.9/Rev.2 and annexes). This activity clarifies two goals, one short-term (by CoP 11 in 2014) and the other medium-term (by CoP 12 in 2017) that are relevant. The short-term goal is to have agreements and MoUs focused only on migratory species and to create criteria against which to assess proposed new potential agreements. These criteria need to include scientific justification, the added value of CMS involvement, existing and potential synergies, funding criteria and existence of a volunteer coordinator. The medium-term goal is to understand whether in some cases extending the scope of existing agreements or MoUs is better than developing new ones. However, it was also noted that existing instruments should not be forced into mergers and that attention should focus on closer working relationships between instruments dealing with similar species or on issues of common concern (UNEP/CMS 2010). In light of these considerations, there are three options that could be considered (see also the Table of Strengths and Weaknesses for each option in Annex III).

149. **OPTION ONE:** To merge existing species-relevant MoUs into a broader Central Asian migrating mammals MoU and action plan. This option would be in line with the medium-term goal of extending the scope of existing instruments rather than developing new ones. Three alternatives can be considered. The **first alternative** could entail merging the existing single species MoUs and action plans on saiga antelope and Bukhara deer into an instrument under the Central Asian Aridland Concerted Action and associated Cooperative Action. These two Actions were in due course intended to cover all threatened migratory large mammals of the temperate and cold deserts, semi-deserts, steppes and associated mountains of Central Asia, the Northern Indian sub-continent, Western Asia, the Caucasus and Eastern Europe. The Actions were going to include an Action Plan and status reports for all species concerned, initially centred on the Bactrian camel (*Camelus bactrianus*), wild yak (*Bos grunniens*), snow leopard (*Panthera uncia*), Bukhara deer (*Cervus elaphus bactrianus*) and Asiatic cheetah (*Acinonyx jubatus*) for the Concerted Action; and on wild ass (*Equus hemionus s.l.*), goitered gazelle (*Gazella subgutturosa*), Mongolian gazelle (*Procapra gutturosa*) and saiga antelope (*Saiga tatarica s.l.*) for the Cooperative Action (UNEP/CMS/Recommendation 9.1). A meeting between Range States and other interested parties of the Central Asian Aridland Concerted Action to discuss

development of an MoU or other binding or non binding instrument had been planned but has not yet taken place, mainly due to a lack of financial resources (UNEP/CMS, 2010).

150. In its review, UNEP-WCMC (2011) highlighted that the Central Eurasian Aridland Concerted Action and associated Cooperative Action, covering a large geographic area that has among the lowest density of protected areas of any global ecoregion and a unique megafauna needs to be strengthened through the formation of an appropriate funding mechanism, development of an MoU or other binding or nonbinding instrument and production of an Action Plan. UNEP-WCMC also emphasized that arrangement of a meeting between Range States and other interested parties should be a priority but that given the broad geographic scope and the range of species and types of threats it is critical to collaborate with international organizations and projects already operating in this landscape, as well as identifying clear priorities, activities, partners timescales and goals. At the Scientific Council, the CMS Secretariat presented the Central Eurasian Aridland Mammals Action Plan (ScC17/Doc.13). With the goal of generating greater ownership and ability to raise financial resources (given the limited resources that the Convention has), a comprehensive multi-species MoU, inclusive of all species identified in the two actions, could be developed and the draft Eurasian Aridland Mammals Action Plan used as basis for identifying threats, outcomes and activities.
151. A multi-species MoU under the umbrella of the Concerted Action and Cooperative Action has some advantages as well as disadvantages. Advantages include the fact that a number of these species, the Mongolian gazelle, goitered gazelle, saiga antelope and argali, face similar threats, including: poaching (for meat and horns); habitat loss and degradation (livestock grazing, agricultural development and mining); fragmentation of habitat (by fencing); disease; and skewed sex ratios (due to selective hunting of males) (Harris et al 2002). A multi-species MoU could have the potential ability to leverage greater financial resources. This could happen through the establishment of a funding mechanism. Costs could be saved in organizing meetings and Range States' participation could be maximized by attending one rather than multiple species-specific MoUs.
152. There are several disadvantages to consider: the size of the region makes it difficult to integrate species' activities into one MoU and Action Plan; Range States may have a difficult time prioritizing what species' activities to fund; and Concerted Action species activities may be prioritized with the result that Cooperative Action species activities may not receive sufficient attention and funding.
153. In the framework of this option, parties could also consider three alternatives: a more narrow-focused Central Asian ungulate MoU, an MoU on migratory species in Central Asian mountain ecosystems and an MoU on snow leopards and argali. These options would be in response to the concern that the proliferation of MoU should be controlled, finances secured but at the same time ability maintained to implement activities for the species covered by such MoUs.
154. In the case of a Central Asian ungulate MoU, which would cover currently listed and potentially listed species, the risk looms that the breadth is too wide and while in principle some of the threats might be similar, the habitat might be different and so maybe the adaptive actions required. In the response to UNEP-WCMC's questionnaire (2001), several respondents noted that even merging the saiga antelope and Bukhara deer MoUs would be detrimental to saigas, as the success of the existing instrument was dependent on the hard work and commitment (often voluntary) of individuals with a keen interest in saigas, and it would reduce the visibility of the species and its role as a flagship species, should the saiga antelope MoU be merged with other instruments.
155. The **second alternative** would require lumping species by ecosystem, and thus relevant to argali would be an MoU that addresses the conservation of migratory species in Central Asian mountain ecosystems. The species concerned would thus include: snow leopard, kiang, yak and argali. The issues

related to these four species are very different and it might be difficult to address them in a systematic way with one instrument. The overlap between the Range States is also very limited for kiang and yak, as these two species are restricted to the Tibetan plateau.

156. The **third alternative** stems from the consideration that: argali is a snow leopard prey, albeit not as key as ibex, blue sheep and markhor; there is an overlap in range, in fact the only range country for snow leopard that is not for argali is Bhutan (although historically it was); incentives for the conservation of argali, including sustainable hunting schemes, can lead to improving the conservation status of snow leopard, as the prey base is increased; conservation for the sustainable use of argali can also lead to viewing snow leopards as competitors and therefore in this case there could be a risk of a perverse incentive for their removal; both species are illegally traded. Based on this brief overview, there could be significant advantages in having an MoU for these two species. First of all, some of the monitoring and conservation activities could be combined. Second, the higher profile of the snow leopard could also generate resources for the conservation of argali. Third, cat conservation organizations like Panthera, the Snow Leopard Conservancy and Project Snow Leopard have knowledge and expertise on sustainable use of mountain ungulates, including argali, and could potentially contribute. An argument against this joint MoU rests on the question as to whether snow leopards need one and what are the added benefits of a CMS involvement. In fact, there is already an active network, the Snow Leopard Network, which has worked on the elaboration of a Snow Leopard Survival Strategy.
157. **OPTION TWO:** This option would include developing an action plan and subsequently consider the development of an MoU. In the CMS Family of instruments, one good example is the Action Plan for the Conservation and Restoration of the Sahelo-Saharan Antelopes and their Habitats developed under the relevant Concerted Action, which is likely to lead to the development of an MoU.
158. **Sahelo-Saharan Antelopes:** This action plan has been able to catalyze efforts of international NGOs, conservation institutions, governments. It has been successful in lobbying governments for high-level support and resolution of conflicts, and locating funding for on-site conservation action. This action plan was initially funded centrally by CMS through party contributions, (since Concerted Action species benefit from CMS funding). The plan also received contributions from parties, research institutes and the European Commission. There is also a CMS Working Group on Sahelo-Saharan Antelopes, which oversees the implementation of the Action Plan (Beudels et al 2005). The Action Plan also lists the American Zoological Association, the European Zoological Association and the IUCN Antelope Specialist Group, Captive Breeding Specialist Group and Reintroduction Specialist Group as partners (UNEP/CMS 1999). The initial ability to secure funding obviously has been critical to the successes of this Action Plan. A website of information on Sahelo-Saharan Antelopes is maintained by the Royal Belgian Institute of Natural Sciences (IRSNB) (IRSNB 2008). Finally, the Saharan Conservation Fund website contains information on species and programmes, and relevant meeting documents and technical reports (SCF 2011). However, the ability to raise funding has not endured the expected levels. At the second regional seminar on the conservation and restoration of Sahelo-Saharan Antelopes held in 2003, participants from range countries expressed their willingness to develop and conclude an Agreement or MoU under the auspices of CMS, noting that a MoU could provide a framework for the species' long-term conservation and management (UNEP/CMS 2003). This was also encouraged in UNEP/CMS Recommendation 9.2, along with updating the Action Plan itself (UNEP/CMS Secretariat 2010).
159. In a questionnaire administered by UNEP-WCMC (2011), a respondent noted that the Action Plan was too broad to achieve success across all species and Range States, with many activities having received no action, and that what was needed was a well-funded Action Plan focused on the very highest priorities. The perceived benefits of establishing an MoU were: improved access to

international/bilateral funding, establishment of a legal and institutional structure needed for the CMS Secretariat to support the Concerted Action, long-term stability for the activities identified in the Action Plan and access to other MEAs and international organizations with which CMS is associated (UNEP/CMS Secretariat 2003). According to a recent progress report, a first draft of an MoU has been created concerning conservation measures for the broader Sahelo-Saharan megafauna and the next steps will include the convening of a meeting of Range States, estimated to cost € 75,000 (UNEP/CMS Secretariat 2010). In summary, this is an option that could be pursued for argali, although the question is whether knowing in advance what the added benefits are of having a MoU (greater political weight, ability to mobilize more funding, establishment of a small governance structure and financial mechanism), it is more efficient to plan the development of both an MoU and an Action Plan in parallel.

160. **OPTION THREE:** This option would entail developing an MoU and action plan for argali together. There are several CMS MoUs that generally serve as good models, also for the challenges they each face. The examples described were chosen because of their geographical scope (saiga antelopes and Siberian crane are Central Asian species) and terrestrial mammal nature and similarity of threats faced (saiga antelope and Bukhara deer).
161. **Saiga Antelope:** The Saiga antelope MoU was proposed as good example for the development of an Argali MoU by Kazakhstan during CoP10 and members of the IUCN CSG (David Mallon, personal communication 2012). In the case of saiga antelope, there are currently 5 Range States that are now signatories. FFI, the Frankfurt Zoological Society (FZS), CIC, the IUCN Species Survival Commission, WCS, WWF, the Association for the Conservation of Biodiversity of Kazakhstan (ACBK) and the Saiga Conservation Alliance (SCA) are all signatories to this MoU (UNEP/CMS Secretariat 2010) There is a formal Range State meeting every 4 years, preceded by a Technical Workshop where the scientists/conservationists discuss progress and update or amend the Action Plan.
162. Emphasis is on the threats to saiga antelopes caused by uncontrolled hunting, illegal trade in horns and other products and destruction of habitats have contributed to recent population declines. To support the implementation of the MoU/Action Plan activities and review progress, a Medium-Term International Work Programme (MTIWP) for the periods 2007-2011 and 2011-2015 was adopted at Meetings of the Signatories in 2006 and 2010 respectively (UNEP/CMS 2010b). At the latter meeting, it was also decided that two NGOs, the SCA and ACBK, would jointly take over the coordination of the MoU to support its implementation. Their coordination activities includes the publication of “Saiga News” in 6 languages, maintenance of a database of experts and projects, and set-up of a saiga information website, in close collaboration with the UNEP/CMS Secretariat (UNEP/CMS 2011).
163. Achievements of this MoU include: an increase in conservation interventions and improved collaboration between governments and NGOs; an increase in the arrest and successful prosecution of saiga poachers and traders (IUCN/SSC Antelope Specialist Group and SCA 2010); the conservation status of four out of five saiga populations was reported to be stable or increasing, although population levels were still depleted compared with several years ago (UNEP/CMS Secretariat 2010); the MoU has been a catalyst for strengthening the cooperation between Kazakhstan and Uzbekistan through the signing of a bilateral agreement and development of an Action Plan to coordinate and strengthen transboundary conservation activities (UNEP/CMS 2011).
164. Lack of funding is cited as constraining the range of conservation activities of the MoU (UNEP/CMS 2010b). In response to the UNEP-WCMC questionnaire (2011), experts from Range States called for transboundary patrolling and monitoring for the Saiga Antelope MoU in the Ustyurt region especially and lamented widespread corruption and lack of political will.

165. ***Bukhara Deer:*** The Bukhara deer MoU came into effect in 2002 following signature by four of the five Asian Range States (Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan) as well as the CMS Secretariat, WWF and the International Council for Game and Wildlife Conservation (UNEP/CMS 2002). Afghanistan was recognized as a Range State in 2011 (UNEP/CMS 2011). The main tool for conservation activities is the Bukhara Deer Action Plan, updated at the First Meeting of Signatories to the Bukhara Deer MoU (UNEP/CMS 2011). Although the Bukhara deer MoU came into force in 2002, it has been mostly dormant until 2011. Nevertheless, the conservation status of the species had also improved in the meantime: while little information has been provided by the Range States on national activities, NGOs, in particular WWF was able to use the MoU very effectively. The joint saiga/Bukhara deer workshop held in Astana, Kazakhstan (February 2011), was a catalyst to re-initiate dialogue and discuss implementation and transboundary collaboration.
166. ***Siberian Crane:*** This MoU entered into effect in 1993 and all 11 Range States are Signatories, five of which are not party to CMS (Afghanistan, Azerbaijan, China, Russia and Turkmenistan). Under this MoU annual implementation reports are required and comprehensive conservation plans have been produced for all populations. The CMS Secretariat receives support from the International Crane Foundation (ICF) to coordinate the implementation of the MoU. The GEF funded a six-year (2003–2009) project to develop a flyway site network for Siberian cranes and other migratory waterbirds in Asia. GEF contributed US\$10 million leveraging a further US\$12.7 million in cofinancing. The project was implemented by ICF, through UNEP and in cooperation with CMS, China, Iran, Kazakhstan and the Russian Federation. Some of the problems with the implementation of the MoU that have been highlighted include: technical and capacity limitations in China and Iran as hindering effective implementation; as well as lack of operational coordination for the implementation of the conservation plans. At the 7th meeting of the Signatories to the MoU, held in 2010, participants discussed, among other important issues, the funding needs and sustainability of the MoU. Participants considered developing a Western / Central Asian GEF proposal with ICF and CMS; a mechanism for voluntary supplementary contributions paid at the same time as main CMS assessed contributions from CMS; and the possibility for some Range States to join the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) to tap on some available financial resources (Executive Summary, Memorandum of Understanding Concerning Conservation Measures for the Siberian Crane, MoS 7, 2010).
167. ***Argali MoU and Action Plan under a broader Central Asian Strategy:*** A slightly modified version of this option would entail developing the Argali MoU and Action Plan under a common framework that outlines the main issues and common problems but allows for focus on individual species. However, as the timeframe for the development of the Central Asian Strategy is still unclear, the possible establishment of an Argali MoU and Action Plan should not be hindered by the absence of such Strategy. Once the Strategy is developed, the Argali MoU and Action Plan, if established, could easily be integrated within.
168. **WHAT IS THE BEST INSTRUMENT FOR ARGALI?** Deciding what option suits best the conservation needs of argali requires careful balancing of various competing and equally important factors. As discussed above, the call to manage the growth of the CMS Family of instruments should not come at the expense of the Convention's contributions to conservation of listed species. If on surface, a multi-species platform, as discussed in option one and two, may seem a better integrated and resource-efficient means of pursuing the transboundary conservation of argali, setting priorities for funding and action in an overarching action plan may be challenging. Transboundary management of argali alone under option three is complex given the countries involved, issues to be addressed, and the different legal systems and levels of protections accorded to the species. Weighing all the advantages and disadvantages, option three seems the most feasible and promising option for pursuing the conservation of argali.



169. Regardless of the choice, a CMS instrument could provide an opportunity to generate knowledge exchange among Range States and identify conservation activities that can address the threats faced by argali populations. Particularly, if the emphasis is on the populations that are transboundary, it could provide a unique platform to address the threats that are specific to each of those populations, such as barriers to migration and specific livestock/wildlife competition issues as well as engage scientists, authorities and local communities of those countries in joint monitoring efforts and consistent responses to the threats faced. A new instrument under CMS could provide impetus for existing and planned conservation activities, political pressure to overcome barriers to the conservation and sustainable management of the species and catalyze resources, knowledge, scientific and local, within the region for the benefit of the species across its range. For a sample of what activities could be prioritized see the draft Action Plan prepared in anticipation of the Vilm Workshop in 2012 for discussion purposes (Annex IV) and views compiled by the participants at the Workshop (Annex V).
170. The CMS Secretariat noted (2003) that the “The Bukhara deer is one example of our stagnating after the successful conclusion of the MOU more than a year ago. There are a number of further examples where the competent authorities of CMS parties could show more commitment to assist developing countries as partners in implementing of CMS instruments.” While the engagement of the Secretariat is important, for a CMS instrument to be effective and serve the goals of the Convention and the conservation of the species, Range States and partner organizations need to maintain a proactive approach to support the knowledge exchange and conservation activities on the ground. Given the growth of the CMS Family, most of the burden on making the instrument a success should be on the Range States and participating conservation partners (whether intergovernmental institutions or NGOs). The CMS Secretariat can play an important political role, by helping with fundraising, by soliciting earmarked contributions from Parties for funding an argali MoU or argali activities under a multi-species MoU. But, it appears from the review of the above MoUs, that the NGOs directly involved in the conservation activities of the species covered by the MoU, can be instrumental in maintaining the knowledge exchange and the transboundary political dialogue at the basis of the development of a CMS instrument on argali. That said, absent CMS as a convening body, this dialogue can be hard to start and maintain.
171. Based on the ongoing and planned conservation and research activities across the range, as well as views expressed at the Vilm Workshop in 2012, including views of participants after the workshop, a CMS instrument could be the catalyst for the following:
- the development of argali management plans in all the range countries, including setting of common agreed goals and indicators and common approaches for the development of national strategic documents in compliance with relevant MEAs;
  - support for advancing legislation critical to the conservation and sustainable use of the species;
  - development of a platform for conducting joint research and surveys of transboundary populations of argali, including more systematic data and information-gathering and partnerships between scientific institutions, national and local stakeholders, international organizations, hunting area managers and NGOs;
  - the opportunity to have regular meetings for the exchange of information and to facilitate conservation activities;
  - the ability to attract funding support from the international community in conservation efforts;
  - support for transboundary protected areas in argali habitat;
  - establishment and promotion of trophy hunting concessions that agree to follow the IUCN Policy Guidelines on Trophy Hunting for Conservation (to be adopted at the IUCN Congress in September 2012) and more broadly systematic, coordinated and sustainable game management;

- and development of exchange programs for capacity building and exchange of best practices on hunting concessions.

172. Finally, a CMS instrument on argali could engage China and Russia, two non-CMS parties: the latter would fulfil the criteria under Actions to prioritize the growth of the CMS and the CMS Family as to whether a CMS instrument encourages participation (ERIC Ltd. 2011).
173. At a country-specific level, based on stakeholder consultations and workshop in Tajikistan (WCS 2011), review of the discussions on the establishment of a transboundary protected area between Afghanistan, Pakistan Tajikistan and China (WCS 2007) and answers from experts in all the range countries except India and Nepal, the following activities that a CMS instrument could support have been identified:
174. **Afghanistan:** The development of proposed protected areas and argali management plan; a forum for coordinating joint monitoring programs with Tajikistan, China and Pakistan; the development of a future wildlife hunting and conservation law that benefits local communities, including sharing of information on existing hunting programs and possible coordination of prices between countries; in-country awareness of conservation laws, the role of proposed protected areas, and argali conservation; and exchanges on the question of corruption and how it hinders argali conservation.
175. **China:** A forum discussion on the role of trophy hunting in conservation to help change the currently negative public perception; discussion on the impacts of mining on argali as well as option for improving management and education for relevant mining company personnel; current efforts to address the status of the 1158km<sup>2</sup> of land transferred in 2011 from Tajikistan to China and options for setting it aside as a reserve; and strengthening of research on the effects of border and pasture fences on argali migration patterns and promotion of relevant policy changes; conservation outreach activities in local communities; and development of management plans for protected areas with argali populations.
176. **Kazakhstan:** The expansion of the current network of protected areas in the Altai-Sayan ecoregion; improvement of population survey methods and new monitoring techniques; joint monitoring activities with Kyrgyzstan; argali restoration project in the Ulytau mountains; anti-poaching activities along the Kyrgyz border; and pilot transboundary trophy hunting area in the Tienshan mountains at the border with Kyrgyzstan.
177. **Kyrgyzstan:** Political support for hunting law reform; highlighting the role of hunting concessions in protecting argali; development of adaptive management plans for each hunting concession; anti-poaching activities; development of an agreement between hunting area managers and pasture committees; further training for population monitoring, including use of best available GPS-collars; and joint monitoring activities with Kazakhstan and Tajikistan.
178. **Mongolia and Russia:** Transboundary collaboration between Mongolia and Russia on argali monitoring and joint efforts to reduce poaching pressure; and discussions on the Altai-Sayan Mega Connectivity Conservation Corridor.
179. **Pakistan:** Existing transboundary health initiative aimed at improving wildlife veterinarian staffing for Gilgit-Baltistan, by providing national and international training for vets, and research the types of diseases that afflict argali; and the role of trophy hunting as a tool for creating incentives against poaching as well as the strengthening of local community-based conservation committees, including the inclusion of border guards as stakeholders.

180. **Tajikistan:** Use of alternative energy resources to reduce pressure on argali staples (teresken) and habitat; political support for hunting law development and transparency in allocation of benefits from the sale of trophy hunting permits; harmonization of monitoring techniques across all trophy hunting concessions, NGO and state scientists; joint monitoring (including through collection of genetic samples and radio-collaring) of argali with Kyrgyzstan, China and Afghanistan; and of *Severtzov* argali with Uzbekistan and Kyrgyzstan; and coordinated anti-poaching and prevention of illegal trade activities at borders with Afghanistan, China, Kyrgyzstan and Uzbekistan.
181. **Uzbekistan:** Establishment of a group of international experts for monitoring of population and habitats; and determination of migration routes across the border with Tajikistan and Kyrgyzstan and joint conservation activities on *Severtzov* argali.

### ***5.3 WHETHER THE PROPOSAL HELPS TO DELIVER A SPECIFIC EXISTING CMS COP MANDATE OR OTHER EXISTING CMS INITIATIVE***

182. When argali was listed under Appendix II, it was also identified as a Cooperative Action species (UNEP/CMS/Resolution 10.23). The Central Eurasian Aridland Mammals Action Plan (ScC17/Doc.13), submitted to the CMS Scientific Council in November 2011, is a first draft, intended to stimulate discussion and identify further action needed to finalize the document in consultation with the Range States and other stakeholders, and to agree on next steps towards its implementation. Developing an MoU, single or multi-species, covering argali can help deliver on the goals of the Cooperative Action. A multi-species MoU could facilitate coordination of activities and potentially reduce efforts. A single-species MoU could maintain the visibility of the species and their conservation concerns.

### ***5.4 THE FINANCIAL IMPLICATIONS OF THE PROPOSAL, AND WHAT PLAN FOR FINANCING THE INSTRUMENT IS IN VIEW***

183. Unlike CMS legally-binding agreements, MoUs and Action Plans have no regular secure funding but rely on voluntary contributions. The result is a piecemeal approach to conservation and a lack of medium to long-term planning. Conservation activities under the MoU also rely on voluntary contributions (ERIC Ltd 2011).
184. Experts from the Range States consulted, including international NGOs, expressed a preference for a financially-lean instrument, one that maximizes the use of funding available for conservation activities rather than expensive and frequent meetings. Several respondents expressed the view that the status of argali as a CMS listed species and the development of a CMS MoU could facilitate greater access to funding for conservation activities. This is consistent with WWF's experience with the Bukhara deer MoU. While the instrument in itself was dormant for many years, WWF was able to successfully fundraise for the conservation of the species using the existence of the CMS MoU.
185. Assuming, as it is currently, that most of the ongoing research conservation activities in the range countries are still carried out and funded by known NGOs and foundations (like WCS, Safari Club International Foundation, WWF and Denver Zoological Foundation), the added costs to consider for a possible CMS instrument are those related to: the communication activities and MoU/Action Plan coordination. If the assumption is different, i.e., that the expectation is also for the MoU coordinator to raise funding for research and conservation activities, hire as staff or consultants argali experts, then the costs to consider would be significantly higher. In the framework of this assessment, it is not possible to provide figures on the extent of these costs as they can vary extremely, depending on the number and nature of tasks to be fulfilled. Defining such figures could be a task for Range States to take on when developing the Argali Action Plan.

186. In the case of the Saiga antelope MoU experience, CMS has supported MoU communication by supporting the SCA with USD 10,000 in 2007 and USD 11,800 in 2008 for services which continue until today (Kuehl, CMS Secretariat, personal communication 2012). Funds have also been made available by the CMS Secretariat to the SCA and the Association for the Conservation of Biodiversity in Kazakhstan (ACBK) for technical MoU coordination. Under the agreement on MoU coordination no funds are made available, but CMS has concluded funding agreements with each of the organizations for Euro 7,500 each for technical MOU coordination as outlined in UNEP/CMS/SA-2/Doc/9. The funds were used by the SCA to set up a new website, the “Saiga Resource Centre.” ACBK is *inter alia* tasked with day-to-day communication with Range States and contributors to MoU implementation. Coordination activities are in general integrated into the regular work/projects of the two NGOs, which CMS assists with fundraising and sometimes with lending support for MoU related activities, such as small workshops (Kuehl, CMS Secretariat, personal communication 2012).
187. For the Siberian crane MOU, there is a Siberian Crane Flyway Coordinator in charge of coordinating the MOU, who has a part-time contract with the International Crane Foundation. CMS will cover her salary of USD 10,000 for the next year (Roettger, CMS Secretariat, personal communication 2012).
188. At present, the CMS Secretariat has not indicated whether it would be able to support financially some of the Argali MoU/Action Plan coordination activities.
189. While at this stage no secure source of funding exists for a CMS instrument that includes argali, several invitations to submit proposals targeted to supporting possible MoU activities (including those leading up to the adoption of a CMS instrument on argali) have been extended. They came (orally) from: Safari Club International Foundation, Wild Sheep Foundation, CIC and DZF. There are also US-based foundations that have in the past funded transboundary conservation initiatives in Central Asia, including the Art Ortenberg-Liz Claiborne Foundation and the Trust for Mutual Understanding (TMU). Range countries included by TMU grants are: Kazakhstan, Kyrgyzstan, Mongolia, Russia, Tajikistan and Uzbekistan. Finally, there are other options that parties could consider. First, some of the funding generated through trophy hunting can be used to support some of the activities of the MoU, especially technical meetings, beyond research and local level conservation and monitoring activities. The sale of permits creates revenues for the agencies/government, a share of which could be used to support the participation of Range States in the CMS instrument. Second, international hunting companies, trophy hunting concessionaries and/or local hunting and wildlife management community organizations, could charge a small conservation fee that would be dedicated to argali activities under the CMS instrument or provide for voluntary donations. In a survey on trophy hunting in China, asked whether they would charge a fee earmarked for conservation activities, four of the seven US hunting operators that participated responded affirmatively, with the mean acceptable surcharge being US 1,690 (in the early 90’s) (Harris 1995). Finally, parties could be asked to make an annual voluntary contribution to the CMS instrument (whether it is for the activities, communication or should it be established, a financial mechanism).
190. Drawing on the experience of the Saiga antelope and Siberian crane MoUs, some key tasks of the MoU Coordinator would include: maintaining communication with the Range States and CMS Secretariat; facilitating an argali experts’ network; supporting the elaboration of documents, such as the MoU and Action Plan and relevant reports; maintaining a website; acting as managing editor of an argali newsletter, which could be published two/three times per year and making arrangements for the translation of the newsletter in at least English, Russian and Chinese; and supporting the preparation of Range States meetings and technical meetings, if agreed upon. Covering the basic day-to-day costs of maintaining argali activities under a CMS instrument would be in the range of US 10,000 to 15,000 per

year. This amount would include communication and translation costs and staff's salary, based on the assumption that this would be a part-time position in one of the Range States.

191. In view of a potential CMS instrument, funding will have to be secured for a meeting of experts and officials from the Range States to adopt a CMS instrument of their choice, which would include the relevant Action Plan. For the Sahelo-Saharan megafauna meeting of Range States the meeting costs estimated were Euro 75,000. For the Central Asian Flyways, the estimate was Euro 135,000 (UNEP/CMS 2011). Costs varied because of the number of participants and location. Convening a meeting of Range States of argali could cost somewhere in the range of US 50,000-75,000, if held in the region. This is calculated approximately based on the number of participants (1-3 from each Range State in addition to 5 international experts, and a representative from each of CMS, CITES, the EU and the US). Some of the participation costs could be covered by the Range State themselves. Similarly, the cost for the participation of experts could be covered by the NGO and institutions they represent.

### ***5.5 THE EXTENT TO WHICH THE FINANCING PLAN IS SUSTAINABLE IN THE LONG TERM***

192. The question of the financial sustainability of a possible CMS instrument on argali in the first place concerns the coordination of MoU and Action Plan and financing of Range States meetings and technical workshops. In the second place, it concerns the financing of the implementation of the activities under the Action Plan.

193. A CMS instrument on argali does not require a complex bureaucracy. It requires a small team that combined can communicate effectively and fluently in English, Russian and Chinese and that can dedicate a small portion of their time to maintain the communication, connect researchers and managers in the Range States, prepare a newsletter twice a year that highlights argali activities across its range. As outlined, the costs of the communication and coordination can be small and manageable in the future.

194. A note on MoU Coordination (UNEP/CMS 2010c) highlights that as the number of MoUs has grown, the CMS Secretariat has increasingly sought to partner with collaborating organizations to support it in organizing Range State meetings and provide technically-oriented documentation and advice. It has also, in order to ensure that the MoUs and action plans are effectively implemented, been developing the theory and practice of outsourced "MoU coordinators." The long-term sustainability of an argali CMS instrument can rest on shifting some of the burdens to one or more cooperating NGOs or Intergovernmental Organizations (IGOs) with a reputation in argali research and conservation and financial stability drawing on the advice and technical support from relevant IUCN Specialist Groups. IUCN Specialist Groups members are all volunteers and are known for taking up often onerous coordinating and communication activities without compensation.

195. The ability for the MoU to raise funds over the years is critical to ensure its continuity and avoid that it becomes dormant. As described in the section above, the first goal of a CMS instrument on argali is to ensure communication among Range States and leave the primary responsibility on the Range States and relevant departments, hunting concessionaires and NGOs currently in the Range States working on argali conservation issues to fund their own conservation and research activities. Kyrgyzstan could continue dedicating some of the existing resources, since funds from the sale of some of the permits are allocated to research and management. If the proceeds from the sale of trophy hunting permits are properly allocated, Tajikistan should be able to dedicate resources to research and monitoring. NGOs working in the Range States can in cooperation with them leverage additional funding using the CMS instrument as an additional justification.

196. The next question is whether an argali CMS instrument should have a funding mechanism in the form of a trust or fund. Depending on the level of funding generated, some of the resources could go towards covering the costs of communication activities, meetings and workshops and, as available, conservation and research activities. Options are:

- A special argali fund housed within CMS: could be more likely to attract government contributions but some grant opportunities may not be available and the overhead may be very high;
- Fund housed within the “MoU Coordinator”: elements to consider are the ability of the NGO to attract funds from some stakeholders but not others, level of overhead and perceived bias towards specific projects if the NGO is based in some range countries and not others; the alternative, should there be more coordinators to have multiple funds; and
- *Ad hoc* fund established externally in some country where ability to attract funding is maximized. Depending on the country, there are some advantages and disadvantages in terms of tax and ability to attract funding.

#### ***5.6 WHETHER A NEW INSTRUMENT IS THE ONLY OPTION, OR WHETHER ALTERNATIVE OPTIONS EXIST, SUCH AS EXTENDING AN EXISTING INSTRUMENT***

197. As discussed, creating a new instrument is not the only option. One of the alternatives would be on focusing on revising, improving and adopting the Central Eurasian Aridland Mammals Action Plan and work in the priorities for argali conservation and research and transboundary collaboration. This alternative does not exclude setting up a working group inclusive of experts and managers from the Range States and does not exclude either the decision at a later stage to propose the adoption of an MoU and specific Action Plan.

198. The other alternative, in the framework of the Concerted and Cooperative Actions, is working towards the development of a multi-species Action Plan or a Central Asia ungulate Action Plan with the potential of developing an overarching MoU: this Plan could technically be the extension of existing instruments, i.e. the Saiga antelope and Bukhara deer MoUs. As the Future Shape Report on Options (ERIC LTD 2011a) indicates, with many species facing a number of the same impacts and threats on their populations, habitats and ecosystems, extending existing instruments could develop synergies that could maximize the conservation outcomes for target species and their habitats. However, it is unclear whether in practice that would be the case. The merger of existing instruments (Bukhara deer and Saiga antelope MoUs) could be time consuming and require new signatures as well as require financial resources of its own. A merger would not necessarily result in the merger of communication, websites and coordination, with the result that would be still multiple MoU coordinators with financial needs of their own. A specific argali MoU/Action Plan has higher chances to attract funding from organizations with specific interest in the species, than if argali conservation was addressed under a multi-species MoU.

#### ***5.7 WHETHER A CMS INSTRUMENT IS THE ONLY OPTION, OR WHETHER THE SAME OUTCOMES COULD BE ACHIEVED BY DELIVERY THROUGH ONE OR MORE PARTNER ORGANIZATIONS, OR BY OTHER MEANS***

199. A CMS instrument is not the only option, but based on preliminary discussions with experts, international and local, as well as a survey that the IUCN Transboundary Conservation Specialist Group has carried out looking at the effectiveness of transboundary conservation initiatives, a CMS instrument is likely to generate greater political engagement and be a catalyst for funding and action on the ground (IUCN Transboundary Conservation Specialist Group Survey 2012).

200. First, David Mallon, IUCN Caprinae and Antelope Specialist Groups, highlighted his experience with the Saiga antelope MoU in explaining why a CMS instrument should be a preferred path for argali

(Mallon, personal communication 2012). He highlighted that this MoU has advanced the conservation of the species, generated attention; not diverted funding away from in situ conservation; and provided a useful platform for engaging the Range States and (crucial for saiga) China, the main end-user country involved in the trade in saiga horn, thanks to a close collaboration with CITES. Second, a CMS instrument can give a species like the argali a higher profile and potentially secure direct government engagement at a high level provided the Range States sign the MoU. Third, the perceived neutral character of CMS can be instrumental in overcoming rivalries and even hostility that might exist among NGOs involved in various forms of argali conservation and research activities.

201. There are alternatives to a CMS instrument: one is a bilateral agreement approach and the other an NGO-led multi-country initiative. None of these options exclude the development of a CMS instrument. In fact, a CMS instrument can be an umbrella for such initiatives. For example, the Saiga antelope MoU is at the basis for the decision of Kazakhstan and Uzbekistan to sign a bilateral agreement for joint anti-poaching efforts (UNEP/CMS 2011).

202. But the opposite could also be true, that in absence of an MEA platform, like CMS, that can maintain the political engagement or remind parties to renew it, bilateral agreements and NGO-led initiative are more under risk of not being sustainable in the long-term. Based on discussions with representatives from Range States, there are political reasons why bilateral cooperation arrangements may be harder to develop on its own, for example, in the case of: Uzbekistan and Tajikistan; Uzbekistan and Kyrgyzstan; Tajikistan and Kyrgyzstan; China and Tajikistan; and China and Kyrgyzstan. Lack of trust and difficulty in communicating bilaterally are cited as reasons for a unanimous preference for an initiative facilitated by CMS, with the involvement of relevant IUCN Specialist Groups. Some stakeholders expressed the view that CMS could provide the much needed neutrality and help broker disagreements, specifically on the science and methods, genetics and “accountability” for some of the human-caused threats the species suffers from (poaching for example), among the Range States involved (Davletbekov, personal communication 2012).

203. On NGO-led multi-country initiatives: in the IUCN Survey (2012) some participants suggested that the appointment of an NGO can be an effective temporary measure as long as an exit strategy and continuity are secured from the start, and as long as the NGO does not take over the decision making process. Others indicated that state leadership is more important than NGO involvement. With an exclusively NGO-led process there is also a risk some important activities or projects may not be pursued or encouraged because in conflict with the goals of the organization. For example, a conservation organization that does not support hunting as an incentive for conservation, may not want to promote hunting as a tool. Alternatively, an organization supported by foreign hunting groups may, but not necessarily, have partial views on the establishment of community-based trophy hunting organizations or protected areas.

204. As the Saiga antelope MoU example shows, NGOs could efficiently work in the framework of a CMS instrument to, *inter alia*: coordinate the development of an action plan, harmonize monitoring protocols and identify elements of functioning local community wildlife and hunting management. Rotating responsibilities could be established among the Range States and NGOs (in their MoU Coordinator role) so that the MoU does not appear to serve the interest of a specific population or country.

### **5.8 WHAT OTHER SYNERGIES AND EFFICIENT WAYS OF WORKING CAN BE FORESEEN**

205. On a more general note, one of the recommendations under the Future Shape process, was to develop regional hubs to strengthen MEA implementation, possibly through cooperation with UNEP and other UN agencies and office. This came in response to the perceived need by some of the Parties for more on the ground conservation work and local presence of CMS (ERIC Ltd. 2011). Having a Central Asia

hub would be critical given the Central Eurasian Aridland Concerted Action and Cooperative Action, the Saiga antelope and Bukhara deer MoUs and the possible consideration of a CMS instrument on argali or extension of an existing one. A regional hub would greatly enhance synergies between such existing instruments and possibly stimulate CMS ratification (of China and Russia for example). Administrative costs could be reduced by exploring possible cost-sharing arrangements with other UN Agencies based in the countries in Central Asia. Currently the UNEP/CMS Regional Officer for Central Asia has been seconded to the UNEP office in Moscow. This is a Junior Professional Officer (JPO) position paid by the German government, which will end in October 2013. Based on feedback from Range States during CoP10 (personal communication 2011) and the CMS Secretariat (personal communication 2012), this position is considered very important for the successful implementation of CMS Central Asian instruments.

206. As discussed earlier, for some of the MoUs, like the Siberian Crane and Saiga Antelope MoUs, the communication as well as technical coordination activities are outsourced to partner NGOs: the International Crane Foundation for the Siberian Crane and SCA and ACBK for the Saiga antelope. This outsourcing process has been formalized with a note on MoU Coordination (UNEP/CMS 2010c). A CMS instrument on argali could benefit from the same approach. In that context, there are two possible approaches that could be followed: one to establish an NGO dedicated exclusively to the conservation of argali and register it as a charity (in the UK and the US or both because of easier access to funding opportunities); the other to rely on existing NGOs for providing a coordination role. In both cases, the IUCN Specialist Group, and more specifically a working group supported with expertise by the IUCN Caprinae and Transboundary Conservation Specialist Groups can provide scientific, technical and legal guidance.

207. Finally, it is important to involve from the outset representatives of MEAs, international organizations and initiatives whose work affects the conservation of argali or that can potentially dedicate activities and resources for its benefit. They include CITES, FAO and possibly the Central Asian Countries Initiative for Land Management (CACILM). Similarly, it is also advisable, given the sustainable use component and the importance of the species for trophy hunting, to involve the US Fish and Wildlife Services.

208. **ARGALI CONSERVATION NGO ESTABLISHMENT OPTION:** The SCA is a good model to look at. It is a network of conservationists and institutional members working together towards the mission of restoring the saiga antelope. It was established in 2006 and registered as a UK charity in 2010. It is an international organization, with a focus on all the saiga's Range States. It has a Steering Committee, that makes executive decisions, Trustees who oversee the governance of the charity, an executive assistant and a volunteer network, typically of Masters and PhD students. Beyond the support from CMS, it has received support from several institutional members, including CIC, FFI and WWF Mongolia, as well as Disney Club Penguin Coins For Change, Disney Worldwide Conservation Fund, the Mohamed bin Zayed Species Conservation Fund, the People's Trust for Endangered Species, Rufford Small Grants Foundation, IUCN Save our Species programme, and the Wildlife Conservation Network (WCN), since the Alliance is a member thereof. It is also a membership organization, so contributions can be made by individual members.

209. Establishing an argali NGO could be an option, especially if registered in a way to attract tax deductible donations (like in the US or UK) and making the NGO eligible for foundation grants. However, given that there are already some organizations involved in the conservation of argali, the question is whether setting up yet another NGO in this context is truly necessary. Also a new NGO would compete with existing ones for funding: based on a recent conversation with a member of the UK Darwin Initiative Advisory Committee, projects that are more likely to be funded are those that can show that they have the human and technical capacity to execute them (Personal communication 2012).



This is of course not too relevant if the primary purpose of the NGO is communication, which can be overseen by one individual with translation assistance. But should the goal be to view the NGO as a way of attracting funds for conservation activities, then the capacity consideration would come into relief.

210. **RELYING ON EXISTING NGOs FOR PROVIDING COORDINATING ROLE OPTION:** This option would entail relying on one or more NGOs or institutions for communication. Assuming the organizations chosen for this role are involved in argali research and conservation, this added role could help the organizations themselves leverage more funding for their activities on argali. International NGOs currently involved in argali activities include: DZF, FFI, Panthera, WCS (with presence in some of the Range States, including Afghanistan, China, Mongolia and Pakistan), WWF Mongolia and Russia. Only two national NGOs across all Range States are known to be intensively involved in argali conservation and research at a national level: the Argali Wildlife Research Center in Mongolia and the Nature Protection Team in Tajikistan (with support from GIZ). WCS has expressed an interest to be involved as a “contributing organization” but at this time cannot commit to taking on a leadership role on this (Zahler, personal communication 2012).
211. **INVOLVEMENT OF CITES:** Argali is a CITES Appendix II listed species, except the subspecies *O. a. nigrimontana* and *O. a. hodgsonii*, which are included on CITES Appendix I because of their endangered status. Questions related to nomenclature (as it affects the status of the species in the Appendices) and export permits of argali trophies are in the purview of the Convention, since the goal of the convention is to ensure the trade in the species is not detrimental to its conservation status. Under the MoU between the CITES and CMS Secretariats, there are a number of activities to be undertaken jointly: under the joint action plan for the period 2012-2014, the activities of relevance include harmonization of taxonomy and nomenclature and joint actions for the conservation and sustainable use of shared species (the list provided in the action plan is also indicative and was drafted before the listing of argali under Appendix II) (UNEP/CMS Secretariat 2011).
212. Conversations with the CITES Secretariat have confirmed the interest of the Convention to be involved in the activities of a planned CMS instrument on argali (CITES Secretariat, personal communication 2012). Of relevance is the fact that one of the Range States, Tajikistan, has not acceded to CITES yet, but work in that direction is under way.
213. **INVOLVEMENT OF FAO:** The Food and Agriculture Organization of the UN (FAO) has had a long standing interest in the topic of sustainable use and supported with CIC, the WICAC process leading to workshops and studies on developing principles for wildlife laws in Central Asia that incorporate a sustainable use component (Morgera and Wingard 2009).
214. **UNITED STATES FISH AND WILDLIFE SERVICES:** In the United States, CITES is often superseded by the provisions of the US ESA and by other domestic laws. These laws impose stricter standards than CITES regarding the import of a number of Appendix II species, such as the argali populations listed as “endangered” under the Act. The ESA imposes an “enhancement” standard for approving trade of such Appendix II argali sheep. There are two reasons why the US should be included as a stakeholder in MoU related activities. First, should there be a change in the conservation status of any of the argali populations, there could be repercussions in terms imports of trophies in the US. Second, given the number of hunters and hunting organizations based in the US that hunt and promote argali hunting, the US could play an important role in promoting transparency and equity in the allocation of proceeds from the sale of hunting permits where hunting is currently allowed. If US hunters were not allowed to legally import trophies argali, the price of the permits would likely drop. Examples are provided by looking at the cost of the Suleiman straight-horned markhor (*Capra falconeri megaceros*) permit which is much lower compared to that of the Astor flare-horned markhor (*Capra*

*falconeri falconeri*): the cost of the Astor markhor permit can be up to US 90,000 while that of the Suleiman markhor is in the US 40,000 range.

At this stage the United States Fish and Wildlife Service (USFWS) has not been approached about possible involvement although a representative of the USFWS International Division of Conservation has expressed an interest in the initiative during CMS CoP10 in Bergen.

215. **CACILM:** CACILM is a partnership between Central Asian countries and international donor community to combat land degradation and improve rural livelihoods and adapt to climate change in Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan. It also supervises a knowledge network, which facilitates sharing of information and knowledge among organizations. Given that the conservation and sustainable use of argali can be an alternative or additional land-use to livestock rearing and thus have a profound consequence on the land by lessening degradation and erosion, CACILM should be invited to participate in the possible development of a CMS instrument and help identify current and future projects that could benefit the conservation of argali.
216. **CONCLUSIONS:** Based on this overview, the proposed vision for maintaining functioning argali transboundary collaboration under a CMS MoU is to either designate one or more NGOs as MoU Coordinators or to set up an Argali Conservation Network as a new NGO, preferably with institutional membership of NGOs and other organizations already active in argali conservation. The MoU Coordinator could then liaise with the Argali Conservation Network and with the proposed working group on argali, both including experts from and advised by the IUCN Caprinae and Transboundary Conservation Specialist Groups.
217. **POSSIBLE ROADMAP TOWARDS THE ESTABLISHMENT OF A CMS INSTRUMENT ON ARGALI:** As a result of the workshops held on the Island of Vilm, in Germany, in 2011 and 2012, participants from argali Range States indicated the importance of having a platform for sharing information on argali research. Developed by CMS with support from GIZ, the platform called “Argali Network” consists of an initial wordpress website and a mailing list, which includes the participants to the workshops. To date there have been 721 hits on the website, with 248 hits of the presentations to the second workshop between March – April 2012 and 84 hits in May 2012). The information on the website has been provided by experts from the Range States.
218. There are several steps that can be foreseen leading up to the development of an Argali MoU and Action Plan and a functioning framework for carrying out tasks to ensure communication and exchange on the transboundary conservation of argali.
219. First of all, the current Argali network could be expanded to other experts, scientists, managers, conservationists and institutional members that could significantly contribute to discussions, knowledge exchange and activities on argali. While at this stage the network has a purely informal nature and serves the purpose of information-sharing, in view of a development of a CMS instrument on argali it could develop into a formal network, with a mandate to serve specific MoU/Action Plan development- and implementation-related purposes and in future even becoming the MoU Coordinator.
220. Some exchanges have followed on the nature of this network with a GIZ expert (Kathrin Uhlemann), the Chair of the IUCN Species Survival Commission (Simon Stuart), the Chair of the IUCN CSG (Marco Festa-Bianchet), the IUCN WCPA Transboundary Conservation Specialist Group Executive Committee and the Deputy Director of the IUCN’s Global Species Programme and focal point for CMS (Jean-Christophe Vie) as well as managers and practitioners from some of the Range States. During those exchanges emphasis was placed on ensuring a free flow of information exchange among Range States and stakeholders. Members of the CSG stressed the need for “not reinventing the wheel”,

emphasizing that the work leading up to the development of a CMS instrument and action plan on argali should build on the expertise and knowledge of argali practitioners and scientists, some of which are current members of the IUCN CSG. Nurali Saidov, CMS Scientific Councillor for Tajikistan and from Kyrgyzstan, Askar Davletbakov, National Science Academy, and Almaz Musaev, Deputy Head, Hunting Department at the State Agency on Environment Protection and Forestry, welcomed the involvement of the IUCN CSG (personal communication 2012) in the lead up to the development of an MoU as well as its possible implementation, akin to the role the IUCN Antelope Specialist Group plays with the Saiga MoU. In the context of the Saiga MoU, this group is perceived as “a key resource for materials and advice on what would be useful for the Saiga research and conservation community” (CMS Secretariat 2006).

221. In that context, discussions followed with the IUCN CSG on: the merits of a possible CMS instrument on argali and the Specialist Group’s involvement; the possibility of expanding the current groups to include more members from the Range States;
222. and the benefits of having an argali working group supported scientifically, technical and – if desired – organizationally by the IUCN CSG and the IUCN WCPA Transboundary Conservation Specialist Group, given the transboundary nature of the species, issues and the expertise that this Group could provide especially on legal, institutional, and policy matters. Both the IUCN CSG and WCPA Transboundary Conservation Specialist Group expressed support for the initiative, if key range States would officially endorse the establishment of a working group and provide the needed mandate from the countries. The IUCN CSG asked to identify new members from the Range States (Festa-Bianchet, personal communication 2012)
223. Therefore, the second step would be to establish a working group. The group would be a smaller one, consisting of selected representatives from each of the Range States, like experts, practitioners (including hunting concessionaires), CMS Focal Points, as well as international experts e.g. from CMS Secretariat, representatives from the CITES Secretariat, US Fish and Wildlife, experts from the CSG and IUCN Transboundary Conservation Specialist Group. Benefits of establishing support to the argali working group by these the two Specialist Groups could be the following: stability, given that IUCN Specialist Groups mostly rely on experts to contribute on a volunteer basis; the possibility for the MoU Coordinator, once the MoU and Action Plan are adopted, to rely on an existing website and newsletter, should funding for a separate website and newsletter not be available at the beginning; and the ability to leverage the IUCN affiliation for additional funding.
224. Once the MoU/Action Plan are adopted and the working group and argali network formalized, if Range States agree, it would be important given the number of Range States involved and the number of potential transboundary issues at hand, to set up task forces under the working group in charge of a specific “transboundary population” (for example argali in Tajikistan, Pakistan, China, Afghanistan and Kyrgyzstan). Such task forces could discuss the specific threats pertaining to that smaller geographical scale: disease, livestock competition or the impact of a particular fence or mining development.
225. Finally, “informal” focal points could be designated from the argali network in each range State. Such focal points could work in close cooperation with the MoU Coordinator on gathering on a regular basis information on argali in their country. This could be a mechanism to streamline communication and gathering of information between the MoU Coordinator and the Range States. However it should not preclude spontaneous sharing of information from members of the argali network with the MoU Coordinator.

## **5.9 WHETHER AN ORGANIZATION OR (PREFERABLY) A COUNTRY HAS COMMITTED TO LEADING THE DEVELOPMENT PROCESS**

226. As of June 2012, Tajikistan and Kyrgyzstan expressed language of commitment. According to Rich Reading, (personal communication 2012) Mongolia could be willing to co-lead this effort, given the country's involvement in the transboundary conservation initiative with Russia. During CMS CoP10 representatives from the BMU in Germany and the Ministry of Environment of Italy have also expressed support for the process (personal communication 2011). Another representative of the Ministry of Environment of Italy renewed such support during the CITES Animals Committee meeting together with CITES (personal communication 2012) and FAO. Given GIZ's presence in the region, the emphasis on sustainable use of natural resource and the organization's plan to continue to support the sustainable use of wildlife activities in Kazakhstan, Kyrgyzstan and Tajikistan at least, it is perceived as important partner in this effort. At the NGO level, in addition to WCS expressing an interest in being a contributing organization, CIC, Safari Club International Foundation and DZF solicited proposals to fund some of the activities.
227. Developing a CMS instrument on argali could lead to involving China and Afghanistan, two countries that are not-party to CMS. The Deputy-Director of the National Environmental Protection Agency of Afghanistan expressed his country's interest in joining CMS and specifically expressed support for a CMS instrument on argali (Malikyar, personal communication, November 2011) The US Fish and Wildlife Service could also be involved, as both responsible for regulation of imports of argali user and as potential donor.

## **6. CONCLUSIONS AND RECOMMENDATIONS**

228. Argali is a species that has long been recognized as one that requires collaboration and communication among different countries. Listing the species under CMS Appendix II, recognizes not only its migratory nature, but also the transboundary nature of its threats: barriers to movement, different levels of protections, illegal hunting and trade in its parts. While on surface a matter that falls under the jurisdiction alone, it underscores the need to address the roots of the problem: why was the species illegally hunted and what impacts these hunts have on the population? And if a trophy is smuggled from one range country to the other, what can these two countries do to prevent that? Perhaps, in a facilitated and neutrally perceived environment, to discuss their needs and seek help.
229. A CMS instrument or extension of an existing one can have important positive ramifications for the conservation of argali across its range, in the form of endorsing legal reforms in some of the range countries that are beneficial for the species; and stimulating joint monitoring activities and responses to common threats. It is also an opportunity to bridge the divide between conservation and sustainable use, and within that realm promote and endorse trophy hunting programs designed to ensure the conservation of the species.
230. With those considerations in view, the CMS Secretariat should, in the process leading up to the development of an MoU designate a person, NGO or network who could immediately, on behalf of the CMS Secretariat and in cooperation with the Regional Officer for Central Asia communicate with the CMS focal points and officially assess their countries' level of commitment to developing a CMS instrument or extending an existing one, including whether any of such States wish to lead the process. In that context, such person should present the options discussed in this report, including CMS instrument options, *modus operandi* and assessment of what organizations should be involved and in what role. If the interest and commitment is confirmed, such person could also assist the CMS Secretariat in reaching out to potential funders and encourage them to make a written pledge. Should

funding be confirmed to support at least the minimum resources needed to fund coordination and communication-related activities the following could be foreseen: representatives from Range States, including experts as well as invited representatives from relevant NGOs, IGOs and MEAs and international experts (drawing on the current Argali network) should formally meet to adopt an MoU, designate MoU Coordinators; and agree on a schedule of work and timetable, considering, if parties so decide, the suggestions provided in this report. Depending on the choice of instrument, timing, steps required and responsibilities may vary should the decision be to extend an existing instrument, parties to other MoUs, Bukhara deer and saiga antelope, would have to be consulted as well.

231. Finally, in light of the benefits described, the CMS Secretariat should consider, with interested States and States Parties, funding options for extending the Regional Officer for Central Asia beyond its current term as well as explore options for basing that position in the region.

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## ANNEX I

### *LIST OF STAKEHOLDERS CONSULTED BETWEEN SEPTEMBER 2011 AND APRIL 2012*

#### **AFGHANISTAN**

National Environmental Protection agency

Ghulam Mhd Malikyar, Deputy Director

malikyar@gmail.com

*(discussed participation of Afghanistan in possible CMS instrument)*

#### **Wildlife Conservation Society**

Peter Zahler, Deputy Director, Asia Programme, pzahler@wcs.org

David Lawson, Afghanistan Country Director, dlawson@wcs.org

Zalmai Moheb, Field Scientist, Afghanistan Programme, [zmoheb@wcs.org](mailto:zmoheb@wcs.org)

Stephane Ostrowski, Afghanistan Programme, [sostrowski@wcs.org](mailto:sostrowski@wcs.org)

Inayat Ali, Afghanistan Programme, iali@wcs.org

*(discussed threats to argali, benefits of a CMS instrument and possible MoU Coordinator role)*

John Winnie, Adjunct Professor, Montana State University, jwinniejr@msn.com

*(discussed threats to argali and value of transboundary cooperation based on his work in Afghanistan and Tajikistan)*

#### **CHINA**

Aili Kang, WCS Country Programme Director, akang@wcs.org

Lu Zhi, Shan-Shui, luzhi@shanshui.org

Rich Harris, University of Montana and IUCN Red List Authority for Caprinae, [rharris@montana.com](mailto:rharris@montana.com)

*(discussed fence issue between Tajikistan and China and threats to argali)*

#### **INDIA**

Scientists and NGOs

Taej Mundkur, Programme Manager - Flyways, Wetlands International Headquarters and

CMS Appointed Councillor (Asiatic Fauna), taej.mundkur@wetlands.org

Navinder Singh, Navinder.Singh@slu.se

*(discussed benefits of a CMS MoU on Argali)*

#### **KYRGYZSTAN**

Askar Davletbakov, National Science Academy, askar\_davl@rambler.ru

Almaz Musaev, Deputy Head, Hunting Department at the State Agency on Environment Protection and Forestry

Kathrin Uhlemann, GIZ Senior Advisor, kathrin.uhlemann@giz.de

*(discussed threats to argali, benefits of a CMS instrument and country's level of commitment)*

#### **KAZAKHSTAN**

Alexander Berber, Head Regional Branch, Forestry and Hunting Committee of the Republic of Kazakhstan, [berber05@mail.ru](mailto:berber05@mail.ru)

*(Discussed threats and priorities for Kazakhstan for argali)*

## **MONGOLIA**

Scientists and NGOs

Richard P. Reading, Vice-President for Conservation, Denver Zoological Foundation, RReading@denverzoo.org

Gana Wingard, Mongolia Programme Director, Denver Zoological Foundation

*(discussed conservation of argali in Mongolia and country's interest in a CMS instrument)*

## **PAKISTAN**

Abdul Munaf Qaimkhani, DIG-Forest, Ministry of Environment

CMS Scientific Councillor and Focal Point, amqaimkhani@yahoo.com

Amjad Virk, National Project Coordinator, Sustainable Land Management Project (SLMP), Ministry of National Disaster Management, amjad.virk@slmp.org.pk

*(discussed CMS instrument and community-based sustainable use model)*

Scientists and NGOs

Mayoor Khan, WCS, mkhan@wcs.org

Shafqat Hussain, Trinity College and Project Snow Leopard, Skardu, [Shafqat.Hussain@trincoll.edu](mailto:Shafqat.Hussain@trincoll.edu)

*(discussed threats, sustainable use and information on argali in Pakistan)*

## **RUSSIA**

Mikhail Paltsyn, WWF, paltsyn@mail.ru

Yuri Badenov, Academy of Sciences, [yubaden@mail.ru](mailto:yubaden@mail.ru)

*(Discussed threats to argali and the Altai-Sayan initiative)*

## **TAJIKISTAN**

Committee for Environmental Protection, Tajikistan

Nurali Saidov, Head of the State Enterprise of Natural Protected Areas of Committee of Environmental Protection and CMS Scientific Councillor, nsaidov70@yahoo.com

Kholmumin Safarov, State Forestry Agencies and Hunting and CMS Focal Point

*(discussed support for CMS MoU on argali)*

Hunting Concessions and related stakeholders:

Atobek and Zafar Bekmurodi, "Murghab", atobek1960@mail.ru

Shavqat Lalbekov, "Wakhan"

Kokul Kasirov, "Nuri Kuhiston"

Karakul Sohikbulov, "Vostok"

Alikhon Latifi, Hunters' Association of Tajikistan

*(discussed sustainable use issues and access and benefit sharing)*

Scientists and NGOs:

Abdusattor Saidov, Director Institute of Zoology and Parasitology, Academy of Sciences, abdusattor.s@mail.ru

Stefan Michel, Wildlife Expert, Nature Protection Team, Stefan.michel.de@gmail.com

Tom McCarthy, Snow Leopard Programme Executive Director, Panthera, [tmccarthy@panthera.org](mailto:tmccarthy@panthera.org)

George Schaller, gschaller@panthera.org

*(discussed community-based hunting, argali research in Tajikistan, threats, cooperation with Kyrgyzstan)*

## **OTHERS**

CITES Secretariat

John Scanlon, Secretary-General, [jscanlon@cites.org](mailto:jscanlon@cites.org)

Jonathan Barzdo, [jbarzdo@cites.org](mailto:jbarzdo@cites.org)

Marceil Yeater, [myeater@cites.org](mailto:myeater@cites.org)

*(discussed cooperation with CMS on argali)*

CMS Secretariat

Melanie Virtue, [mvirtue@cms.int](mailto:mvirtue@cms.int)

Christiane Roettger, [croettger@cms.int](mailto:croettger@cms.int)

Aline Kuehl, [akuehl@cms.int](mailto:akuehl@cms.int)

*(discussed servicing of MoUs)*

IUCN Species Survival Commission

Simon Stuart, Chair, [simon.stuart@iucn.org](mailto:simon.stuart@iucn.org)

David Mallon, Chair, Antelope Specialist Group, [d.mallon@zoo.co.uk](mailto:d.mallon@zoo.co.uk)

Marco Festa-Bianchet, Chair Caprinae Specialist Group, [m.festa@USherbrooke.ca](mailto:m.festa@USherbrooke.ca)

Mike Hoffmann, Senior Scientist, [mike.hoffmann@iucn.org](mailto:mike.hoffmann@iucn.org)

*(discussed merits of an argali MoU)*

IUCN Secretariat

Jean-Christophe Vie, Deputy-Director, Global Species Programme, [jean-christophe.vie@iucn.org](mailto:jean-christophe.vie@iucn.org)

*(discussed merits of an argali MoU)*

Safari Club International Foundation

Matthew Eckert, [meckert@safariclub.org](mailto:meckert@safariclub.org)

*(discussed merits of argali MoU, funding and action plan)*

International Council for Game and Wildlife Conservation - CIC

Mikko Rautiainen, [m.rautiainen@cic-wildlife.org](mailto:m.rautiainen@cic-wildlife.org)

*(discussed funding, merits of MoU)*

Wild Sheep Foundation

Raymond Lee, [rlee@morgensen.com](mailto:rlee@morgensen.com)

*(discussed funding and research in Tajikistan)*

## ANNEX II

### A SAMPLE OF QUESTIONS ASKED:

#### ***TRANSBOUNDARY CONSERVATION, CMS MOU PARTICIPATION AND FINANCING***

What do you know about transboundary conservation and what do you perceive being the benefits or risks?

Transboundary cooperation – when you hear that word what does it evoke? What are the concerns?

What could you see as being the benefits of cross-border collaboration? What are the major obstacles in your opinion?

What is the role of NGOs in a future MoU?

What do you think of the possibility of co-financing some of the activities of an argali MOU (meetings, conservation activities, monitoring) with proceeds from sale of trophy hunting quotas?

What do you see as benefits of a CMS MoU? Can the same be achieved through bilateral cooperation?

What do you propose as means of financing the MoU?

What NGOs could fill the MoU Coordination Role?

What is the role of international NGOs and experts in implementing MoU activities?

What are the best CMS MoU models for a possible argali MoU?

#### ***COUNTRY-LEVEL PROTECTIONS/THREATS TO ARGALI***

How are argali protected in your country? How is use regulated? And how do you assess the impact of these efforts?

What do you see as the biggest threats in your region? Rank from highest to lowest the biggest threats: Overhunting, overgrazing, lack of management /enforcement and lack of funds to implement conservation.

What would you suggest as management strategies or policies to address the biggest threats?

#### ***ARGALI ECOLOGY AND MANAGEMENT***

Have you noticed changes in wildlife migration patterns?

Have you noticed seasonal changes of the use of the land by argali? If yes, which ones and what type?

What are the factors affecting current population levels of argali? What management strategies should be implemented to improve such population levels?

What research activities are currently underway?

#### ***SPECIFIC THREATS: LIVESTOCK COMPETITION, DISEASE, OVERGRAZING***

Competition with livestock, disease transmission and carnivore conservation: Should it be a mandate under an MoU to address, among others:

the creation of livestock exclusion zones; vaccination of livestock for diseases that can be transmitted to argali; and safeguards for carnivores that prey on argali, as often they are removed for killing a resource that with trophy hunting becomes very valuable?

Are you concerned about livestock/wildlife interactions?

Do livestock and ungulates share the same range?

What disease have you seen in your livestock and local wildlife?

#### ***SPECIFIC THREATS: POACHING***

Is poaching a problem in this area?

Are there traders or other individuals offering incentives to poach argali? For meat or horns? Is there illegal trophy hunting?

***PROTECTED AREA MANAGEMENT AND GAPS***

What is the breakdown of funding sources for wildlife/protected area management?

How much staff do you have?

What are your needs?

What level of visitation do you have?

***HUNTING FOR CONSERVATION***

What is the possibility of generating fees and revenue for conservation?

What do you see as challenges to sustainable hunting as a tool for conservation?

What are the obstacles to making sure those local communities derive economic benefits from a sustainably managed trophy-hunting programme?

What do you see as obstacles to allocating quotas to community-based wildlife and hunting organization?

What do you see as critical elements of a community-based wildlife and hunting organization?

How are proceeds from the sale of hunts allocated?

What monitoring activities do you carry out to determine the sustainability of hunting?

What tools are potentially available to generate more funding for management of the game species as well as improve the livelihoods of local communities?

***COMMUNITY-BASED CONSERVATION EFFORTS***

How are local communities involved in wildlife management and protected area management?

Are you interested in ecotourism opportunities? If yes, how do you think they can be profitable to your level of satisfaction? What are the obstacles to tourism development?



### ANNEX III

#### STRENGTHS AND WEAKNESSES OF CMS INSTRUMENT OPTIONS

Option	Aims and Objectives	Institutional and Organizational Impacts (including Future Shape process)	Financial Impacts	Conservation Impacts
<p><b>Action Plan on Argali (without MoU)</b></p>	<p>Conservation of the species through transboundary cooperation and collaboration.</p>	<p><b>Pros:</b> Action Plans are generally developed to be dynamic, adaptive documents that can guide Range States and partner organizations in planning their conservation activities.</p> <p><b>Cons:</b> Without an MoU they are thought of not having sufficient credibility to attract international/bilateral funding. They may also not be viewed as providing long-term stability for the activities identified therein. They might lack the political backing. Also, if it is only an Action Plan without any institutional framework behind, they may never get implemented</p>	<p><b>Pros:</b> Given that they do not necessarily require formalized coordination, financially they can be very flexible. Action Plans can be used to identify priorities activities that Range States and partners could pursue directly and seek funding independently.</p> <p><b>Cons:</b> They generally do not provide for a mechanism to receive funding.</p>	<p><b>Pros:</b> Since they are adaptive documents they can be revised to reflect the conservation needs on the ground in absence of a complex and political process.</p> <p><b>Cons:</b> There could be limited buy-in and consistent engagement absent a coordination mechanism.</p>
<p><b>MoU and Action Plan on Argali</b></p>	<p>Conservation of the species through transboundary cooperation and collaboration.</p>	<p><b>Pros:</b> Could stimulate engagement of non Parties to CMS;</p> <p>Does not require specific governance structure.</p> <p>If volunteer coordinator(s) is/are identified, it is still in line with the</p>	<p><b>Pros:</b> If outsourced to partner organizations, the MoU may not be costly for the CMS Secretariat;</p> <p>For communication and basic coordination activities it requires a budget of US 10,000-15,000 /year</p>	<p><b>Pros:</b> Possible increase in conservation interventions and improved collaboration between governments and NGOs;</p> <p>Catalyst for bilateral activities to address specific threats.</p>

		<p>recommendations under the Future Shape process.</p> <p><b>Cons:</b> If it becomes dormant, the question of proliferation, superficial satisfaction of Resolution 10.16 criteria may come into question along with the entire process of relying on MoUs for the conservation of migratory species.</p>	<p>which can be easily fundraised.</p> <p><b>Cons:</b> Should a coordinator not be identified, it would be costly for the CMS Secretariat to maintain. Range States meetings can be expensive (in the US 50,000-75,000 range), more so if held outside of the region.</p>	<p><b>Cons:</b> Corruption and change in governments in some of the countries may limit the impact of some of the activities.</p>
<p><b>Central Asian Migrating Mammals MoU and Action Plan</b></p> <p><b>Achieved by merging existing Central Asian migrating mammals MoUs and Action Plans into a broader one which would include: the Bactrian camel, wild yak, snow leopard, Bukhara deer, Asiatic cheetah, wild ass, goitered gazelle, Mongolian gazelle, saiga antelope and argali.</b></p> <p><b>Or</b></p> <p><b>Central Asian Ungulate MoU and Action Plan</b></p> <p><b>Which would include saiga antelope, Bukhara deer, argali and potentially the</b></p>	<p>To strengthen the Concerted and Cooperative Actions and enhance cooperation and collaboration on the relevant species and their habitat.</p>	<p><b>Pros:</b> It would be consistent with the Central Asian Aridland Concerted Action and associated Cooperative Action.</p> <p>This option would be in line with the Future Shape process recommended medium-term goal of extending the scope of existing instruments rather than developing new ones.</p> <p>There could be greater synergies between species' activities.</p> <p><b>Cons:</b> It is unclear whether a broader MoU would facilitate smoother planning of activities. Organizing reporting tasks could be more time-consuming, as well as Range States</p>	<p><b>Pros:</b> This MoU could have the potential ability to leverage greater financial resources. This could happen through the establishment of a funding mechanism. Costs could be saved in organizing meetings and Range States' participation could be maximized by attending one rather than multiple species-specific MoUs.</p> <p>In the case of the Snow Leopard and Argali MoU, there could be more resources leveraged given the profile of the snow leopard.</p> <p><b>Cons:</b> Range States may have a difficult time prioritizing what species' activities to fund; and Appendix I</p>	<p><b>Pros:</b> A number of these species face similar threats and could benefit from a holistic approach and possible synergies.</p> <p>In the case of the Snow Leopard and Argali MoU there is an overlap of Range States; the 2 species tend to inhabit some of the same landscape; sustainable use of argali can lead to a better prey base for snow leopards.</p> <p><b>Cons:</b> Risk of losing focus and of reducing the ability to get coherent scientific and technical advice on specific problems.</p> <p>On the Snow Leopard and Argali MoU the argument that there are</p>

<p><b>goitered and Mongolian gazelle.</b></p> <p><b>Or</b></p> <p><b>Migratory Species in Central Asian Mountain Ecosystems MoU and Action Plan</b></p> <p><b>Snow Leopard and Argali MoU and Action Plan</b></p>		<p>meetings which may have a greater number of participants. In addition to that, MoU Coordination roles would have to be much more comprehensive than if for a single species.</p>	<p>species might be prioritized over Appendix II species and thus activities related to the latter may not receive sufficient attention and funding.</p> <p>Realistically it is not likely that one expert alone can have the necessary skills to provide technical advice and support for all species covered by one MoU.</p> <p>Contributions from the hunting sector, including foundations, would be very unlikely.</p>	<p>already sufficient attention and resources dedicated to snow leopards which make an MoU redundant.</p>
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## ANNEX IV

### ***TRANSBOUNDARY CONSERVATION OF OVIS AMMON (ARGALI SHEEP) ACROSS ITS RANGE – DRAFT LOGFRAME FOR ACTION PLAN (FOR DISCUSSION ONLY)***

(Prepared by T. Rosen with help from Matt Eckert, Safari Club International Foundation)

**Goal:** Conservation of argali sheep throughout its range through transboundary conservation and collaboration activities and sustainable use of the species: such should include guidelines for sound community-based natural resource wildlife and hunting initiatives and transparent mechanisms for the allocation of benefits from sustainable use.

Outcomes	Outputs	Activities
<p>Improve the conservation status of the species across its range through sound science-based management and community involvement</p>	<p>Restored or maintained populations to the levels and geographic range that can re-establish or enhance, if applicable, connectivity (in-country and across the border) and allow argali populations to maintain/sustain hunting (subsistence/trophy).</p>	<ul style="list-style-type: none"> <li>• Establish monitoring protocols for regular surveys that use consistent and accepted methodologies.</li> <li>• Reduce resource competition with domestic livestock by creating livestock-free/limited grazing areas if known to be Important argali habitat.</li> <li>• Protect existing prime argali habitat that is currently not exploited for other uses.</li> <li>• Reduce illegal hunting/poaching by:               <ul style="list-style-type: none"> <li>- building the capacity of protected area/community rangers to discourage or prevent illegal hunting/poaching;</li> <li>- through social science/ethnographic methods understand the motives for illegal hunting: to feed families, to sell meat or horns; illegal trophy hunting; or sport. Depending on the motives a specific set of responses may be required.</li> </ul> </li> <li>• If other economic activities, such as mining, are a concern for argali conservation, conduct a research to understand the impact of such activities on the species.</li> <li>• Reduce threat of disease transmission by promoting vaccination livestock for diseases transmittable to wildlife (brucellosis, foot and mouth, etc.) and limiting resource competition.</li> <li>• Ensure through research and outreach that the role of carnivores in the ecosystem is recognized; measures to reduce the conflict with livestock are reduced; and that especially hunting concessions and community-based wildlife and hunting organizations deriving economic benefits from hunting accept carnivores' presence.</li> </ul>

<p>Improve the legal and regulatory framework for the management and sustainable use of the species.</p>	<p>Developed, refined or adopted (depending on the country in question) a set of laws that ensure the conservation of the species and, if the species can sustain it, sustainable use (subsistence/trophy hunting).</p> <p>Specifically, the hunting, pasture, land tenure and species conservation laws should be consistent with each other and create an enabling environment for the management of the species.</p>	<p>Hunting Law: the law should, <i>inter alia</i>:</p> <ul style="list-style-type: none"> <li>- enable area-based hunting models;</li> <li>- define or refer to a regulation that determines hunting seasons;</li> <li>- community-based hunting management;</li> <li>- define how the different levels of government and their bodies interact (State Forestry, Hunting Agency, Local Agency, whenever applicable vis a' vis Committee on Environmental Protection/Environmental Protection Agency/Ministry of Agriculture – all these need to be examined on a country by country basis) and for example what is the body that sets the hunting quota and criteria for setting harvest levels and modifying them;</li> <li>- explain the access and benefit sharing arrangements (ie, how the proceeds from the sale of permits are allocated) and ensure that local communities derive a percentage of those benefits. The percentage allocated to the State could go towards funding protected area needs/species monitoring and conservation efforts; and the country's participation in transboundary and international activities related to the species. The law could refer to a regulation to be drafted between State/local level authorities and relevant communities that defines criteria to be met for the local communities to receive the money. Criteria could include the obligation to use part of the money for compensating farmers that have reduced their herd size for accommodating argali habitat needs or farmers that are taking active measures to accept carnivores' presence. Above all, the key is to create a clear and traceable mechanism.</li> <li>• The pasture law should provide some guiding principles on grazing, measures to avoid degradation and livestock/wildlife interactions and rules depending on the legal status of each area: mixed use, exclusion zones, etc.</li> <li>• The land tenure law: arrangements between national/regional/local levels of authority and hunting concessions/local conservancies and organizations may be weak and non-lasting, with the risk that organizations/concessions that are successfully conserving the species through sustainable use are at greater risk of losing their right to manage the land. Clarifying the terms of land lease/rental could be a step towards reducing that uncertainty.</li> <li>• Species Conservation Law: depending on the country, laws should be harmonized and amended, whenever applicable, to reflect the possible role of sustainable use, roles and responsibilities of the institutions involved (regulatory, policy and scientific).</li> </ul>
<p>Recognizing the</p>	<p>Established community-</p>	<ul style="list-style-type: none"> <li>• Help local communities organize themselves or</li> </ul>

<p>role of community resource management (CRM) as a foundation for sustainable development and species conservation. <u>Establish and Support effective CRM models.</u></p>	<p>level organization or improved the effectiveness and the governance system of existing ones, as needed.</p>	<p>improve their existing organization systems;</p> <ul style="list-style-type: none"> <li>• Building on existing knowledge of models that have failed and models that work, identify the specific needs of the community and provide support, including support in marketing themselves as a hunting or tourism destination;</li> <li>• Draft in a participatory way a bylaws clarifying roles and responsibilities and promoting, <i>inter alia</i>: <ul style="list-style-type: none"> <li>- collective management and self-interest; and</li> <li>- species adaptive management activities.</li> </ul> </li> </ul>
<p>Enhance transboundary conservation and collaboration on argali.</p>	<p>A functioning network of range countries' argali experts, policy makers, representatives of local communities and hunting concessions, that effectively collaborate, communicate, share experiences, conduct surveys together, provide impulse for transparency, more effective laws and conservation activities.</p>	<ul style="list-style-type: none"> <li>• Draft a Programme of Work that clarifies the following: <ul style="list-style-type: none"> <li>- How often the Range States will meet (under an MoU);</li> <li>- How often technical meetings among Range States will be held</li> <li>- Organization of work (setting up of task forces or working groups on specific transboundary populations or activities)</li> <li>- Joint activities: and</li> <li>- Funding needs and how the parties will pursue those.</li> </ul> </li> </ul>

## ANNEX V

### **SUM UP OF SUGGESTIONS FOR THE ACTION PLAN, COLLECTED DURING THE WORKSHOP AT ISLE OF VILM, MARCH 2012**

#### **Outcomes**

1. Argali is sustainably managed based on the best available data and research
2. Argali is sustainably used for the benefit and with support of local communities
3. The habitat and connectivity of the argali range is restored and maintained
4. Appropriate institutional legal and policy framework is in place

<b>Outcomes</b>	<b>Outputs</b>	<b>Activities</b>
1	<p><i>1. Scientific research\data component</i></p> <p>Current List(database on MPS (Marco Polo Sheep) in Afghanistan            Publish papers and reports on Argali ecology and biology (MON);            Establish Central Database for all relevant publications, Plans etc. (translate into many languages) (MON).            Carrying out scientific research on the state of populations (KAZ);            Carrying out surveys and monitoring based on the best available techniques (KAZ)            Taxonomic studies of mountain sheep (KAZ);            Study of the migration routes (Kaz);            Create a data bank on derivatives, and blood markers (KAZ);            Joined monitoring and science program (Rus)            Regularity on the carrying out the research (Kyrg)            Defined taxonomic status (Kyrg)            Defined migration routes (Kyrg)            Research on the livestock influence on the Argali (Kyrg)</p> <p>There is reliable information about the distribution of habitats, migration routes, the size, composition and trends in populations of argali (Taj);            There is information about argali and the relationship of populations of predators(predator impact) (Taj)            There is information / data on the results of hunting collected with accordance to scientific methods; (Taj)</p> <p>There is reliable information on the status of habitat, food resources, vegetation, forage potential for recovery (Taj)</p> <p><i>2. Capacity building for scientific experts</i>            Trained biologist, Wildlife Vets, Ecologists (capacity building) (Mong);            The organization of training seminars to exchange</p>	<p>Collect and collate available data on MPS (Afg)</p> <p>Establishment of the group of international experts for monitoring of population and habitat on the territory of Uzbekistan (UZB);            Determination of migration routes to match the border services for better monitoring of activities in the border zone (UZB);            To select biotope sites for annual monitoring of argali and their habitat and breeding sites; (UZB);</p> <p>Defining the most suitable methods of population surveys (KAZ);            Determination of the appropriate observation points to observe the argali, based on modern accounting methods (KAZ);            Development of monitoring techniques (KAZ);            The special education for conducting the monitoring (Kyrg);</p> <p>Constant surveys by hunting area managers; state scientific authorities; (Taj)            Conducting of different types of research; (Taj)            The introduction of uniform methods of documentation of the results of all hunting area managers; (Taj)</p>

	<p>experience on the artificial breeding of mountain sheep, to review the existing practices and their results (UZB);</p>	
2	<p><i>1. A model pilot community-based trophy hunting program (Mong.);</i>          Defining the appropriate place for the model trophy hunting program based on the sustainable use of argali (KAZ);          Defining the appropriate place for establishment of the transboundary experimental territory for the sustainable use of argali (KAZ)</p> <p><i>2. Engagement of local community</i>          Supportive and actively involved local community (Mong.)          Working with local people living in remote mountain regions, promoting and attracting them to work for the protection of mountain sheep (UZB);          Improvement of the relations with the local populations (Kyrg);          Vet control of livestock in the habitat – Alternative income for locals (RUS);          Cooperation and engagement of local communities (Taj)          Environmental Education Program (RUS);</p> <p><i>3. Sustainable hunting area management</i>          The role of the hunting concessions in the preservation of the argali is recognized (Kyrg);          Conducting hunting management plan (zone of peace, comfortable size of hunting concessions) (Kyrg);          Appropriate quality management of the hunting concessions (Kyrg);          Hunting is carried out according to specific requirements (including minimum age of trophy males); (Taj)</p> <p>There are management plans for hunting concessions established; (Taj)          Restructured outfitter hunting program (Mong.);</p> <p><i>4. Capacity building for staff of hunting area management and local hunters</i>          Education programs for the hunting area managers for the proper management of the concession (Kyrg);          Improvement of the hunting ethics through international hunting organizations ( e.g. CIC) (reforming the system of hunting records); (Taj)</p>	<p>Conducting the explanatory work with hunting area managers and the local population (Kyrg);          Активное вовлечение местного населения в работу ох; PR campaign on the role of the hunting concessions in protection of argali (Kyrg);          Development of adaptive management plans for each hunting concession (Kyrg);          Anti-poaching measurements and actions (Kyrg);          Expertise on the capacity of CBNRM on the argali population in and out of the Tadjik National Park; (Taj)</p>
3	<p><i>1. Habitat improvement, including transboundary</i>          Delineation of extractive use areas (Mong.);          During the planning of mining and infrastructure development project argali habitat is taken into consideration (Kyrg);</p>	<p>Establishment of nurseries (KAZ);          Capture of breeding stock for nurseries; (KAZ);          Breeding argali in captivity (KAZ);          Restoring nutrient chains,</p>



	<p><i>2. Improvement of migration roots</i> Protection of critical habitats and corridors (Mong.); Argali ancestral migration routes is restored (Kyrg);</p> <p><i>3. Nature protected areas establishment\improvement, including transboundary</i> The organization of new protected areas for conservation and reproduction of argali in the historical habitat (UZB); Establishment of new and improving the existing nature protected areas; (KAZ) Sailugem NP + add clusters (Rus) Extention of Ubsunur NR – Isagaan-Gol WR (Rus) Extention of Mongolian NP(Rus)</p> <p><i>4. Population measurements, including re-introduction where needed</i> Restored habitat \ the number of argali in the historic habitat (Tadj) Reintroduction of the Kazakh argali in the historical habitat (KAZ); CBWM in Mongolia – reintroduction in Khuvs gul area; Creating of necessary conditions and specialized nurseries for breeding and re-introduction of argali in the nature of the example ecocenter Djeiran in Bukhara region (UZB);</p> <p><i>5. Restored rangelands (Mong.);</i> Partial alienation or transfer of domestic sheep farms to maintain grazing land in the habitats of argali (UZB); The amount and distribution of livestock is regulated (Taj) Teresken is preserved; (Taj)</p> <p><i>6. Pasture management improvements</i> System of pasture use by communities - Community inspections (RUS); Resolved haying and grazing of livestock, taking into account the needs of conservation of argali - a solution within the inter-farm and adaptive management plans in the concessions; Pastures are regulated with account of argali habitat; (Taj)</p>	<p>settling with argali (KAZ); The phased release of argali in wild (KAZ); Development of the comprehensive scientific project (KAZ); Establishment of the new strictly protected areas (KAZ); Data collection and storage in the main vet center in Astana (KAZ);</p> <p>Conduction of the intergovernmental negotiations on the ITS with China (Kyrg); Environmental impact assessment on the exploration; (Kyrg); Actively lobbying the conservation or argali (Kyrg); Develop the agreement between hunting area managers and pasture committee; (Kyrg) To develop the pasture management plan (Taj); To reduce usage of teresken by local population through promotion of the alternative energy sources and energy savings; (Taj)</p>
4	<p><i>1. Common framework for National Management Plans</i> Complete and implement the MPS Management Plan for Afghanistan (Afg) Argali National and Local Management Plan (Mong);</p> <p><i>2. Improvement of national legal framework</i> Ecological expertise of Economic Projects – Pasture law – Anti-poaching brigades (Rus); Extraction Law – Mongolia (mining – Institutional</p>	<p>To achieve a permission of limited take off of argali in the model areas for the experiment on the sustainable use of wild sheep (KAZ); Establishment of the international institutions for control and coordination of projects on sustainable use of argali in the pilot hunting areas (KAZ); To include the relevant regulation in the adaptive management plan; (Taj)</p>

<p>optimization of the managements of local PAs) (Rus)  Legal framework for resident Hunting (Mong);  Revised hunting law to require benefit sharing for local people, conservation and monitoring (research, transparent, external oversight) (Mong);  The Law on Hunting is adopted and enforced, as well as other relevant regulation (Taj)</p> <p>Rangeland Management Law passed (Mong);  Revised Ranger law to allow them to carry gun and give them the power of arrest (Mong);  Changes in Administrative and Criminal legislation – rights of regional PA inspectors (Rus);  Preparation of a draft resolution to the binding structure and the subordination of all protected areas to one agency (UZB);  Changes to legislation to promote hunting concession in carrying out conservation measures for rare animals (KAZ)  Changes to the budget in the part of the distribution of fees from quotas (20% of the local budget, 20% for protection measures) (KAZ);</p> <p>Amend the law to protect hunting area managers in case of withdrawal of the trophy (KAZ);  There are appropriate legal framework (laws and regulations) which gives the necessary rights to hunting area managers (Kyrg)  The law regulating pasture and other forms of nature use is contributing to the conservation of wild animal species and their habitat (Taj)  Prolongation of the state program on protection of rare species of ungulates (KAZ)</p> <p><i>3. Cross-boundary policy development</i>  Cross-boundary Agreements established (Mong);  Transboundary NR – program for transboundary cooperation (Rus);  Develop the cross-border action plan for the conservation and proper protection of mountain sheep in the season of migration (UZB);  Strategy and CAP are developed by Russia and Mongolia (Rus)  WNH Russia – Mongolia – China – Kazakhstan (Rus);  Agreements between customs (Rus);  Agreement about border fences (Rus)</p>	<p>Hunting concessions are lobbying  Hunting law; (Kyrg)  Development of the relevant legal framework (Kyrg)  Improved system of distribution of funds from payments for the use of game animals (Taj);</p>
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## ANNEX VI

### *TERMS OF REFERENCE*

#### **Analyzing Gaps and Options for Enhancing Argali Conservation in Central Asia within the context of CMS**

*GIZ Regional Program on Sustainable Use of Natural Resources in Central Asia*

Bishkek, 14th February 2012

#### **SUMMARY STATEMENT OF REQUIREMENT**

A contractor is required to: (1) assess the current needs and gaps for improved conservation and management of the argali (*Ovis ammon*) in Central Asia in national, regional and trans-boundary contexts and (2) analyse and specify the role of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) in this regard. The analysis should result in an options paper identifying ways to progress argali conservation in Central Asia, in particular discussing the potential benefits and challenges of developing a new instrument for the conservation of argali under the aegis of the Convention on the Conservation of Migratory Species of Wild Animals (CMS).

#### **BACKGROUND**

Following the proposal from Tajikistan and Kazakhstan, the argali was listed on Appendix II of the Convention at the 10th CMS Conference of the Parties (COP10) in November 2011. Both countries as well as other important Range States of the species such as Kyrgyzstan and Afghanistan have expressed interest in coordinating the trans-boundary conservation of the argali under CMS. At the same time, COP10 has adopted Resolution 10.16 which lists a set of criteria that need to be taken into consideration, when making any new proposals for agreements.

GIZ, which has a strong interest in species conservation and sustainable use in the region, has offered to assist the CMS Secretariat with this analysis.

#### **ISSUES TO BE ADDRESSED**

An analysis is required prior to considering development of a CMS instrument. In accordance with CMS Resolution 10.16, the survey should address the following considerations:

- (a) substantiation of the case for a new instrument, based on an analysis of needs and gaps in current conservation provisions;
- (b) whether the proposal helps to deliver a specific existing CMS COP mandate or other existing CMS initiative;
- (c) the financial implications of the proposal, and what plan for financing the instrument is in view;
- (d) the extent to which the financing plan is sustainable in the long term;
- (e) whether a new instrument is the only option, or whether alternative options exist, such as extending an existing instrument;
- (f) whether a CMS instrument is the only option, or whether the same outcomes could be achieved by delivery through one or more partner organizations, or by other means;
- (g) what other synergies and efficient ways of working can be foreseen; and
- (h) whether an organization or (preferably) a country has committed to leading the development process.

#### **METHODS**

The analysis will be based on the following:

- Review of the relevant literature on CMS, as well the status of, and conservation action on, *Ovis ammon*;
- Review of the current landscape of agreements, initiatives and projects related to the conservation of argali and their habitat in Central Asia;
- Written or verbal inquiries with Range States and key stakeholders known to be involved in argali conservation in the region
- Written or verbal inquires with relevant CMS secretariat staff, and other stakeholders knowledgeable about the operations of CMS, particularly in respect to the implementation of agreements.

Travel to the region is not foreseen under this contract.

## **OUTPUT**

The contractor shall provide a final report addressing the issues identified above. The report should include: an explanation of the purpose of the analysis; documents evaluated; and the methodology used. The report should also: underline any methodological limitations; identify major concerns; and present evidence-based findings, conclusions and recommendations.

The report will be written in English with numbered paragraphs and can include charts and tables.

## **TIMETABLE**

The assignment is expected to have duration of 3 months, covering the period March – May 2012, and consist of approximately 20 working days. It will be undertaken according to the following schedule:

### **ACTION/PRODUCT TIMELINE**

Definition of a preliminary table of contents of the report in consultation between the contractor, GIZ and the CMS Secretariat and a compilation of first findings	01 - 20 March 2012
Submission of the first draft of the report to the CMS Secretariat	01 May 2012
Submission of comments on the draft report by the CMS Secretariat	15 May 2012
Submission of the final report by the contractor, addressing the comments on the first draft	31 May 2012

The contractor will work in close collaboration with the CMS Secretariat and GIZ Regional Program.

GIZ is looking forward to receiving offers, outlining relevant skills and experience from interested candidates by 22 February 2012. Please send your offer, together with a detailed Curriculum Vitae to: [zaynura.sabzalieva@giz.de](mailto:zaynura.sabzalieva@giz.de).

For any clarifications concerning these Terms of Reference, you can contact Christiane Roettger, Associate Regional Officer for Central Asia at the CMS Secretariat; email: [croettger@cms.int](mailto:croettger@cms.int), Tel.: (+49 228) 815 2425 and Kathrin Uhlemann, Senior Advisor Regional Program on Sustainable use of Natural resources in Central Asia of GIZ, email: [kathrin.uhlemann@giz.de](mailto:kathrin.uhlemann@giz.de), Tel.: ++996 772 552911.