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Tashkent, Uzbekistan, 26-29 October 2015

OVERVIEW REPORT ON CONSERVATION STATUS AND MOU IMPLEMENTATION

Prepared by IUCN/SSC Antelope Specialist Group & the Saiga Conservation Alliance on behalf of the CMS Secretariat

1.0 Introduction

1. Pursuant to paragraph 6 of the Memorandum of Understanding (MOU), the Secretariat shall prepare an overview report compiled on the basis of information at its disposal pertaining to the saiga (*Saiga* spp).

2. National reports by the Signatories are a primary source of information for the overview report. The Secretariat provided the official MOU reporting templates to all MOU Signatories, Cooperating Organizations having signed the MOU and other organizations concerned with saiga conservation. Kazakhstan, Mongolia, the Russian Federation, Turkmenistan and Uzbekistan have all submitted national reports to the Secretariat. Twenty-four project report forms were returned. Other information available to the IUCN Species Survival Commission (IUCN/SSC) and the Saiga Conservation Alliance (SCA) was also used. This included project reports submitted to CMS and the Saiga Resource Centre, published materials from various sources, and *Saiga News*, which was recognized as a key mechanism for information exchange and coordination of the CMS MOU at the Second Meeting of Signatories (MOS2) in 2010, and by the Parties to CITES at COP16.

3. Pursuant to CITES Decision 16.100, the CITES Secretariat invited major saiga consumer and trading countries to provide information on the measures and activities undertaken to implement the Medium-Term International Work Programme for the Saiga Antelope (2011-2015). Japan, Malaysia and Singapore submitted reports to the CITES Secretariat.

4. Additional information was provided by the participants of the Saiga Technical Workshop (26-27 October 2015) that precedes the MOU Meeting.

5. The structure of this report follows the national report format endorsed by the First Meeting of the Signatories to the MOU in 2006. This report does not repeat the information provided in the national reports. It only summarizes the main issues.

2.0 Conservation Status of the Saiga

6. The status of the species is assessed here on the basis of the information available to IUCN/SSC and SCA.

7. At COP9 in 2008 CMS Parties adopted Wilson & Reeder (3rd edition, 2005, Mammal Species of the World) as the taxonomic reference for terrestrial mammals, which lists two saiga species: *Saiga tatarica* (equivalent to IUCN's *Saiga tatarica tatarica*) and *Saiga borealis* (equivalent to IUCN's *Saiga tatarica mongolica*). CITES has also adopted this taxonomy. However, since the best available genetic evidence (presented in Kholodova et al. 2006, *Oryx* 40, 103-107) supports the IUCN nomenclature, and most experts also apply this nomenclature, this document will use the names of the sub-species used by IUCN.

8. Saigas occur in five populations: Four are *S.t. tatarica*; north-west Pre-Caspian (Russian Federation), Ural (Kazakhstan, Russia), Ustiurt (Kazakhstan, Uzbekistan, Turkmenistan), Betpak-dala (Kazakhstan). One is *S. t. mongolica* (Mongolia). These populations are depicted in the map at Figure 1. A sixth population of *Saiga tatarica tatarica* in northwest China and adjacent areas of SW Mongolia became extinct by the 1960s.

9. National reports indicate latest numbers at the country level as: around 5,000 in the Russian Federation and declining; around 84,270 in Kazakhstan and an underlying upward trend; around 1,000 resident or seasonally present in Uzbekistan, and declining. No saigas have been observed in Turkmenistan for the last 15 years. The distinctive Mongolian subspecies was estimated to number 14,869 in 2014, and to be increasing. Although total numbers must be treated with caution (see paragraph 9), the best estimate of the global saiga population in 2015 is a minimum of 100,000 animals.

10. The extensive area of distribution, large differences between seasonal ranges, the saiga's nomadic way of life, and natural population fluctuations make accurate population estimates difficult to obtain and obscure population trends. Counts made using appropriate methods (aerial surveys with strip sampling in Kazakhstan, ground surveys with distance sampling in Mongolia) enable precision of the count to be estimated, and reduce (but do not eliminate) bias. Expert assessments, as carried out in the Russian Federation and Uzbekistan, are prone to unquantifiable levels of bias. For wide-ranging ungulates such as the saiga, even well-conducted counts are likely to be underestimates, and the degree of underestimation increases as the population gets smaller and more fragmented, because the animals are harder to detect. This means that population declines may appear worse and increases faster than they really are.

11. As illustrated by the mass die-offs which occurred in Ural in 2010 (estimated mortality 12,000 animals), and to a greater degree in Betpak-dala in 2015 (estimated mortality >150,044 animals), underlying trends of population recovery can be reversed very quickly in this species. This highlights the importance of ensuring that all saiga populations are large enough to withstand sudden catastrophic declines (whether from disease or other factors such as climate, new infrastructure or an upsurge in poaching). The total global population size is therefore, not a good measure of the overall conservation status of the species; that is more accurately portrayed by considering the status and trends in individual populations.

12. The status of saigas varies substantially between populations. Overall, however, the status of *Saiga* spp. has not improved since the Second Meeting of Signatories (MOS2) in 2010. Between 2011 and 2014, three out of five populations reportedly increased (Mongolia, Ural and Betpak-dala), and two declined (Russia and Ustiurt). Sadly in 2015, the Betpak-dala population suffered a substantial die-off, bringing numbers down to the 2008

level. This means that only two populations (Mongolia, Ural) have an improved status since MOS2.

Table 1. Populations of Saiga based on information collected for the 2015 CMS MOU meeting, compared with the same information for the previous two MOU meetings. The figures are not directly comparable between years and populations because of variations in survey effort and methodology.

Population	2006	2010	2015	Trend
NW Pre-Caspian[1] [RU]	15,000-20,000	10,000-20,000	4,500-5,000	Decreasing
Ural [KZ, RU][2]	12,900	27,140[3]	51,700	Increasing
Ustiurt [KZ, TM, UZ][2]	17,800	4,900	1,270	Decreasing
Betpak-dala [KZ][2]	18,300	53,440	31,300[4]	N/A
Mongolia [MN]	3,169	8016±1656	14,869[5]	Increasing
Total	67,169-72,169	103,496-113,496	103,639-104,139	

[1] Based on expert judgement rather than a population survey
[2] Numbers from Kazakhstan aerial survey (does not include resident populations in other countries [UZ particularly] or those outside survey area [Betpak-dala particularly]).
[3] 39,060 estimated in April 2010, 11,920 estimated died in disease outbreak May 2010
[4] Result of an aerial survey in June, counting adults only, not calves. The estimated population size in April 2015 was 242,500. This suggests that 211,200 adult saigas died in the disease outbreak in May 2015 [but see paragraphs 10 and 27]
[5] 2014 estimate based on a ground survey.

2.1 Summary of the status of the species by population

North-west Pre-Caspian population

13. The North-west Pre-Caspian population is centred around the Chernye Zemli Biosphere Reserve and Stepnoi/Tinguta Sanctuary. Its range covers two administrative regions of the Russian Federation; the Republic of Kalmykia and Astrakhan province, with sporadic occurrences in neighbouring regions.

14. The population's status is currently rather unclear due to the lack of a systematic range-wide monitoring programme. Monitoring is carried out by rangers of the Department of Animal Conservation of the Ministry of Natural Resources and Environmental Protection of the Republic of Kalmykia, with participation of experts from the governmental agency "Tsenterokhotkontrol", as well as additional information from rangers in the two protected areas collected in the course of their duties. There have also been pilot participatory monitoring programmes during the period 2008-12, extending the geographic range of saiga observations and engaging local people.

15. The population appears to have declined substantially since 2010, with an official estimate (based on expert assessment) of 4,500-5,000 individuals in 2014. This prompted the inclusion of the species on the Red List of the Autonomous Republic of Kalmykia in 2014. The Russian Federation is considering whether to put the species on the Federal Red List. Analysis of the participatory monitoring data suggested a sharp decrease in observed herd size in 2012 compared to previous years. There has been substantial public awareness and engagement activity and the protected areas are effectively patrolled, according to the National Report. However poaching appears to be continuing at a relatively high level; a

study in 2014 suggested that 34% ±9% of people in some villages in the saiga's range had eaten saiga meat over the previous six months.

Ural population

16. The Ural population is in the far west of Kazakhstan (West Kazakhstan province), between the Volga and Ural Rivers. It is a transboundary population, with some parts extending seasonally into Russia (Astrakhan province). Aerial surveys are carried out annually within Kazakhstan. *Okhotzooprom* and state rangers have an on-the-ground presence. A relatively small proportion of the population uses the Bogdinsko-Basgunchakskii reserve and Orenburg reserve in Russia (Astrakhan province), but there is no protected area in Kazakhstan.

17. A disease outbreak occurred in this population in May 2010, resulting in the death of 11,920 saiga over the course of ten days (with a peak over four days), estimated at about 30% of the adult population. This was followed by a die-off in 2011 in exactly the same location over 2-3 days, affecting about 400 animals; the remaining 4,000 animals calving in other areas were unaffected. Laboratory examination identified the presence of *Pasteurella multocida* and *Clostridium perfringens* in tissues collected. The cause of death was reported officially as pasteurellosis but the pathology was not adequately investigated to allow differentiation between pneumonic pasteurellosis or haemorrhagic septicaemia and/or Clostridial enterotoxaemia or other causes. There was evidence that a form of pasture-related toxicosis might have been a co-factor in the disease events even if a fulminating pasteurellosis was terminal. However, since then, the population has recovered, and by 2014 had reached its pre-die-off level, with a further increase in 2015.

18. Public engagement activities have been carried out since 2010 in Kazakhstan, including work with schools, some participatory monitoring and the opening of a small captive breeding facility linked to Zhangirzhan agrarian-technical university, where currently 14 saigas are kept, of which 6 were born in 2015.

Ustiurt population

19. The Ustiurt population occurs west of the Aral Sea (Aktobe and Mangystau provinces), and is a transboundary population. Most of the population is in Kazakhstan for most of the year, moving into Uzbekistan (Karakalpakstan Autonomous Region) in the winter. In the past, a proportion of the population migrated south through Uzbekistan to Turkmenistan. There is a small resident population year-round in Uzbekistan, including around a thousand in the region of Vozhrozhdeniye peninsula (Aral Sea) and the neighbouring Aral Sea coast.

20. Within the current range, the only protected area is the Saigachy State Sanctuary in Uzbekistan (1,000,000 ha). This reserve is in the process of being extended and re-designated to a higher level of protection. There are several protected areas within the recent range of this population (Kazakhstan: Buzachinskiy Wildlife Reserve; Turkmenistan: Kaplankyr State Reserve; Sarykamysh Sanctuary).

21. The Ustiurt population is in continuing decline, and has been since 1998. Estimated numbers in the Kazakhstan aerial survey (carried out in the spring, when the migratory part of the population is in Kazakhstan) have declined by 74% since 2010. Poaching is continuing in both Kazakhstan and Uzbekistan.

22. The population's range has large-scale transport routes (roads and railways) and pipelines passing through it, and the construction of a railway is being finalized, which further fragments the Kazakhstan part of the range. In 2011-12, a border fence was erected between Kazakhstan and Uzbekistan, and there is evidence from satellite-collared individuals that this has impeded migrations. It is also thought to facilitate poaching by channelling saigas into a few crossing points. The transboundary nature of the population leads to associated problems including implementation of protection, for example when poachers come into one country from the other and then return to evade enforcement. It also hampers monitoring, causing difficulties such as coordinating surveys at the same time and in the same manner to obtain a total population estimate.

23. Recent interventions have included social engagement projects in Uzbekistan, including education, a programme about alterative livelihoods aimed at women and a participatory monitoring programme. Some social engagement has also taken place in the Kazakhstan part of the range. Aerial and ground monitoring is carried out annually in spring in the Kazakhstan part of the range, and anti-poaching patrols operate in both countries, but with inadequate capacity for the large area which requires patrolling.

Betpak-dala population

24. The Betpak-dala population's historical range covers a large area of Central Kazakhstan, approximately from the Moinkum Sands/Chu River in the south (Zhambyl and south Kazakhstan provinces), to Lake Tengiz and the Karaganda region in the north (Karaganda and Akmola provinces). The Betpak-dala population suffered particularly badly from poaching in the late 1990s, due to its location comparatively close to Almaty, other large settlements and the Chinese border. However, the population has been increasing rapidly over recent years. Improved monitoring, social engagement, public awareness and law enforcement have had a positive effect on reducing poaching, although poachers are still being apprehended.

25. This population has had substantial investment in development of protected area networks by the Government of Kazakhstan, international and national NGOs and intergovernmental organizations. Many projects are currently underway, encompassing scientific research, anti-poaching, education and awareness. Aerial and ground monitoring is carried out annually, and there is a programme of satellite tracking of individual animals. Protected areas in the population's range cover a substantial area (particularly the Altyn Dala and Irgiz-Turgai reserves), and the first ecological corridor connecting key protected areas was designated in 2014.

26. During 2012-2014 the core calving population was closely monitored, including transects in 2014 to identify and weigh calves, estimate calf population and determine cause of any mortality. Background mortality was substantial, involving many hundreds and perhaps thousands of animals, including adults and calves from birth-related trauma (dystokia), weather changes leading to hypothermia in calves and some predation.

27. In May 2015, the population suffered a very large mass mortality event. Aerial surveys were carried out both before and after the event, and the resulting population estimates suggest an 88% population reduction from this die-off. However this figure needs to be interpreted with some caution because the post-die-off aerial survey was partial, and downward biases in population estimates are more likely in the summer when herds are

smaller and more scattered. Therefore it may be that more animals survived than this estimate suggests. However, the aggregations in Turgai (>60,000 adults) and Tengiz (>8,000 adults) which were closely monitored during these events showed an apparent 100% mortality, including calves; this is likely to have been the case in the other eleven die-off sites. Any surviving saiga antelopes that were detected during subsequent monitoring were probably from unaffected groups.

28. The mortality rate observed is virtually unprecedented in free-ranging ungulate communities and suggests deviation from biological norms, suggesting a complex interplay of various factors, which may be anthropogenic influence and or extraordinary environmental stressors. The proximate cause of death has been given as haemorrhagic septicaemia caused by opportunistic infection with *Pasteurella multocida serotype B*, but there is also evidence that about half the animals were also co-infected with *Clostridium perfringens* (another opportunist commensal parasite), causing an enterotoxaemia. Underlying predisposing factors are still under investigation. The Government of Kazakhstan has established a working group to investigate the disease outbreak and plans to allocate funding for research and monitoring. An international research team is working with the government to elucidate the causes of the mortality and explore possible responses.

Mongolian subspecies

29. Distribution of the Mongolian sub-species, *Saiga tatarica mongolica*, is centred on the Shargiin Gobi, Huisiin Gobi and Dorgon Steppe in western Mongolia. It comprises two sub-populations; the main population and a small northern sub-population (around 50 animals) which has been recorded consistently since 2013. This sub-population is potentially threatened with isolation due to planned road/rail construction. The nominate subspecies (*S. t. tatarica*) formerly occurred in southwest Mongolia but is now extirpated.

30. The population of Mongolian Saiga was estimated at 8016 ±1656 in 2010, using an aerial count. A population assessment has been carried out every year since 2012, focussed on distributions. In 2014, a ground count estimated the population at 14,869 with a 15% coefficient of variation. The two methods are not comparable, but it appears that the population is doing well. There has been a reported 13% increase in saiga range extent since 1998. Research carried out since 2012 has included calving site selection, calf mortality and migration, using radio-collaring. Genetic studies are also ongoing. An isotope study published in 2015 has confirmed the distinctiveness of the Mongolian population.

31. Sharga-Mankhan Nature Reserve (390,000 ha) was established in 1993 to protect populations of Mongolian saiga. The proposed Darvi mountain reserve would also cover the saiga range. Pasture reserves (in which habitat disturbance is prohibited, particularly mining) have been implemented over 35% of the saiga's range.

32. A national strategy on saiga conservation is under development. A mobile anti-poaching unit was working until 2013, but was halted due to lack of funding. A saiga ranger network has been set up to further support the governmental patrols. Substantial investment in public awareness includes educational programmes in the schools in the saiga range. There have also been initiatives to tackle cross-border trade with China, including capacity-building of customs officers.

Saigas in China

33. In China, *Saiga tatarica tatarica* formerly occurred in the Dzungarian Gobi of Xinjiang, northwest China, but they became extinct by the 1960s. There have been a few subsequent reports of saiga from this area that probably relate to wandering individuals from Kazakhstan. Reintroduction remains a future aim but there is no detailed implementation schedule at present. There is a successful captive breeding centre in Gansu province, under the Ministry of Forestry, currently numbering around 170 individuals.

3.0 Implementation of the Medium-Term International Work Programme (2011-2015)

34. This section provides a brief summary of information on progress towards the implementation of the MOU and Medium-Term International Work Programme (2011-2015). It starts with the summary of the implementation of international actions, and then summarize actions at the national level according to the format of the National Reports.

International Actions.

35. Since 2002 both CMS and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) have been working in close cooperation, with saiga antelopes as one of their joint target species. The CMS CITES Joint Work Programme 2015-2020, adopted at the 42nd meeting of the CMS Standing Committee (UNEP/CMS/StC42/Doc.6.1) and the 65th meeting of the CITES Standing Committee (SC65 Doc.16.2), outlines the current joint activities on saiga antelopes. These focus on the implementation of the Medium-Term International Work Programme associated with the MOU, joint meetings and fundraising efforts. Since 2015 a Joint CITES-CMS Programme Officer has been appointed, thanks to funding from the Government of Germany to strengthen implementation of the above-mentioned Work Programme between the two treaties. Capacity is further strengthened through the creation of a coordinator position for the Central Asian Mammals Initiative (CAMI), which was adopted at CMS COP11 in 2014 (Resolutions 11.1 and 11.24).

36. Within the framework of the CMS and the Saiga MOU, there have been a number of relevant international meetings during the reporting period. A meeting to discuss trade in saiga horn and Traditional Chinese Medicine (TCM) took place in Urumqi, China, in September 2010, under the auspices of both CITES and CMS, from which recommendations emerged directed particularly at consumer States. At CITES COP16 in March 2013, Decisions 14.91 (Rev. COP16), 14.93 (Rev. COP16) & 16.95 to 16.101 were passed, related to *Saiga* spp. These directed relevant Parties to collaborate to implement the MTIWP for 2011-15, and consumer and trading countries to support these actions financially. All relevant States were asked to provide information on their activities to the CITES Standing Committee and CMS, also via the Saiga Resource Centre and associated databases.

37. In February 2011, a CMS workshop was held in Kazakhstan on the implementation and technical coordination of the CMS Saiga MOU and other CMS mandates targeting large mammals in Central Asia. Participants included representatives from the various agencies responsible for managing saiga antelopes in Kazakhstan, as well as NGOs and experts. Saiga conservation priorities for Kazakhstan were discussed and the two organizations given the task of the technical coordination of the MOU, the Association for the Conservation of Biodiversity of Kazakhstan (ACBK) and the SCA reported on progress made. A number of recommendations emerged in order to enhance the implementation of the priorities of the

MTIWP, including the need to capacity building in the wildlife health sector to prevent and better manage mass mortality events and extending the programme for satellite-collaring of saigas.

38. The CITES Secretariat provided an overview of seizures of saiga parts and derivatives in the period from 2007 to 2012 to the 16th meeting of the Conference of the Parties to CITES in document COP16 Doc.Inf.4.

39. In June 2013 a workshop to review progress in implementing the Saiga MOU MTIWP was held in Astana, Kazakhstan. Participants included MOU contact points and experts from all signatory countries except for Turkmenistan, as well as additional international experts. The impact of infrastructure on saiga antelopes and its mitigation were discussed, specifically the border fence between Kazakhstan and Uzbekistan and the growing rail and road network across Central Asia. The guidelines on appropriate border fence design: Saiga Crossing Options: Guidelines and Recommendations to Mitigate Barrier Effects of Border Fencing and Railroad Corridors on Saiga Antelope in Kazakhstan, were presented and mitigation measures agreed. CITES Secretariat presented relevant outcomes of COP16, the Ustiurt Plateau Conservation Initiative was presented and coordination of the MOU discussed, including a more detailed discussion on the Saiga Resource Centre.

40. A first transboundary meeting of Range State rangers (with representatives from Kazakhstan, Russia and Mongolia, and from all saiga populations) took place in Kazakhstan in 2014, providing an opportunity for rangers focused on each saiga population to share common problems, issues, and experiences in anti-poaching.

41. In November 2014, CMS COP 11 adopted the Central Asian Mammals Initiative (CAMI), which is a regional initiative including a programme of work to integrate and build upon existing mandates under CMS for large mammals in the region. The CAMI programme of work includes saigas and tackles key threats, including poaching and linear infrastructure (Resolution 11.24). CAMI development benefitted from intensive stakeholder negotiations in 2014, including a regional meeting in September 2014 (Bishkek, Kyrgyzstan), to develop the programme of work. COP11 further adopted Guidelines on Mitigating the Impact of Linear Infrastructure and Related Disturbance on Mammals in Central Asia (Resolution 11.24), which are also directly relevant to saiga conservation and legally binding for all CMS Parties, including Mongolia, Kazakhstan and Uzbekistan.

The CMS Saiga MOU.

42. A proposal to amend the MOU to cover all saiga species (as defined by CMS; see paragraph 6) rather than just relating to *Saiga tatarica* was agreed by the Signatories at the 2010 meeting and Mongolia formally signed the MOU as a full Signatory on 10 September 2010. The MOU title was amended to "Memorandum of Understanding concerning Conservation, Restoration and Sustainable Use of the Saiga Antelope (*Saiga* spp.)". This means that all current *Saiga* spp. Range States are formal Signatories of the MOU and part of the international forum it creates. This significantly enhances conservation efforts regionally and globally.

43. At the 2010 MOS2, it was also agreed that some technical coordination responsibilities for the MOU would be undertaken by the Saiga Conservation Alliance and Association for the Conservation of Biodiversity in Kazakhstan in close collaboration with the CMS Secretariat.

International trade in Saiga and products, parts and derivatives thereof

44. Trade in saigas and their parts and derivatives is authorized but strictly regulated under the terms of CITES. Following very high levels of trade in the early 2000s, reported levels of international trade in derivatives and horns have declined substantially; however, trade has continued during the reporting period, predominately in horns, albeit at low levels (Table 2). Information for the period 2011-2013 suggests that main exporters globally were China and Hong Kong Special Autonomous Region, while Japan and Hong Kong were the main importers.

Table 2: Data on reported trade in saiga parts and derivatives, from the official CITES trade database held by the UNEP World Conservation Monitoring Centre. Data are only available up to 2013. Under Appendix 2 of CITES (where saigas are listed) both the importer and the exporter should report trade; discrepancies between the Importer and Exporter columns reflect incomplete reporting.

Product	Reported by	2011	2012	2013
Derivatives (items)	Importer	194		
	Exporter			
Derivatives (kg)	Importer	139		
	Exporter	17	12	
Horns (kg)	Importer	465	316	308
	Exporter	462	463	100

45. Several projects have been carried out during the reporting period in order to improve cross-border cooperation and capacity to intercept saiga horn shipments. These include joint training between Mongolian and Chinese border guards and customs officials, and training of border guards and officials in Kazakhstan. The recruitment of four sniffer dogs in 2014 has improved capacity to detect wildlife products including saiga horn passing through Kazakhstan's border. In China, market surveys have continued to observe saiga horn and saiga products on sale.

Population monitoring.

46. Kazakhstan has a comprehensive monitoring programme, covering nearly all of the country's range area. It comprises aerial surveys in all three populations, and monitoring of birth areas in Betpak-dala. In the Russian Federation, there have not been any aerial surveys during the period covered by this report, but ground-based monitoring by staff of the Chernye Zemli Biosphere Reserve and Stepnoi/Tinguta Sanctuary has provided expert assessments, supplemented by participatory monitoring to give information on distribution and herd size outside these reserves. Russia has also tested a non-invasive method for counting saigas using high resolution satellite images. In Mongolia, a comprehensive ground-based survey using distance sampling was carried out in 2014, but there is still no time-series of counts using comparable methods. In Uzbekistan, a combination of participatory monitoring using motorbike transects and ground surveys gives a general impression of population change. Please see paragraph 10 for discussion of the issues which affect the current monitoring programme.

Habitat and Protected Areas

47. Range State reports indicate moderate levels of habitat loss or degradation. Pasture quality is likely to have remained relatively high over the period covered by this report in most locations due to pressure from livestock grazing remaining low. In Mongolia, however,

livestock grazing pressure is high, there is more of an issue with competition for grazing, and habitat is reported as severely fragmented. Protected areas coverage is improving, especially for the Betpak-dala population in Kazakhstan. Table 2 lists protected areas containing saigas.

Populations shared between Range States.

48. There are two transboundary populations; Ural and Ustiurt. An agreement on conservation, restoration and sustainable development of the Ustiurt saiga population was signed by the Government of Kazakhstan and the Government of Uzbekistan on 17 March 2010 and ratified by Uzbekistan on 20 August 2010.

49. On 19 September 2012, an agreement on the conservation, restoration and use of the Ural population was signed by the Governments of Kazakhstan and the Russian Federation, and since then there has been annual exchange of information between the two on transboundary saiga movements. In 2015, the first meeting of the working group to coordinate activities under this agreement was held in Kazakhstan.

Laws, Institutions and illegal activities.

50. The saiga is legally protected in all countries of its breeding range; Kazakhstan, Mongolia, the Russian Federation, Turkmenistan, Uzbekistan, and in former Range State, China. In Mongolia and Uzbekistan it is a Red List species for which hunting is strictly prohibited. In the Russian Federation it is still listed as a game species overall, but in 2014, the Autonomous Republic of Kalmykia moved the saiga to a Red List species, meaning that any hunting is illegal. The saiga was added to Turkmenistan's Red List in 2011. In Kazakhstan, it remains as a game species, but in July 2012 the moratorium on the use of saigas and its derivatives was extended to 2020. Legal frameworks are generally adequate but increased patrolling and more stringent enforcement are needed for these to be fully effective.

51. Between 2010 and 2014, 224 incidents of illegal saiga hunting were recorded in Kazakhstan, and 8,594 horns were confiscated. In 2014 in Kazakhstan, 2,927 raids were carried out by law enforcement officials to verify compliance with environmental rules. In Uzbekistan in 2011, there was one case of confiscation of horns and one prosecution for poaching. A number of incidents of saiga horn trade have been detected in Mongolia, one of which (in 2014) led to a prosecution. No incidents were reported by Russia.

52. On 5 September 2013 a very large seizure of 4,470 antelope horns was made in China's Xinjiang Autonomous Region which borders Kyrgyzstan, but the species is not currently identified. In 2014, 296 kg of horns from Kazakhstan was seized in China. Japan reported five seizures of saiga parts and derivatives between 2012 and 2014. Of these, one seizure consisted of 100 horns and horn cuttings and four seizures consisted of medicinal products. Four of the shipments intercepted came from China and one from Korea.

53. According to the United Nations Office on Drugs and Crime (UNODC), the number of shipments of saiga parts and derivatives which were seized due to concerns about their legal status is declining (Table 3). Almost all the shipments intercepted came from China, consisted of medicinal products, and were seized in Europe and the United States. It is impossible, to extrapolate to how many individual saigas these seizures equate, as it is extremely difficult to know how many saiga parts go into a medicinal product.

Table 3. Number of seizures of saiga parts and derivatives by year, according to the United Nations Office on Drugs and Crime.

Year	Number
2010	100
2011	83
2012	74
2013	47
2014	46
2015 (to date)	1

Captive Breeding.

54. Captive breeding is being carried out in three centres in Russia, and two in Kazakhstan, with a total captive population currently numbering fewer than 200. In 2014, the Yahskul' saiga breeding centre in Russia suffered catastrophic mortality (cause still undetermined), dropping from 95 to 4 individuals over a few weeks in the summer. It remains closed until institutional issues are resolved. A captive breeding herd, currently numbering 170 animals, is also kept at the Wuwei Endangered Animal Breeding Center, Gansu Province, China. There is also a captive herd in semi-wild conditions at Askania Nova, Ukraine.

Threats.

55. National reports listed the following main threats:

	Nil	Low	Medium	High	Very high	Unknown
Hunting for meat		Mn,Tm		Ru	Kz,Uz	
Hunting for horns/trade	Tm			Mn	Kz, Ru,Uz	
Habitat loss		Uz,Tm	Kz, Ru	Mn		
Livestock competition	Uz	Ru,Tm		Mn		Kz
Disease	Uz	Mn		Kz		Ru,Tm
Climate		Kz,Uz	Ru,Mn,Tm			
Predation		Uz,Mn	Ru,Tm			Kz
Fragmentation	Tm	Ru,Mn	Kz,Uz			
Demographic factors		Uz,Tm	Mn	Ru		Kz
Barriers to migration		Mn	Ru,Tm	Kz,Uz		
Other (Please specify)						

There is agreement between Range States about what the main threat is; hunting for trade is seen as the major threat range-wide, and hunting for meat is also highlighted by three of the Range States.

56. However, there are also discrepancies which reflect the different threats facing each population. As expected, Kazakhstan rates disease as a major threat, while Russia is

concerned about demographic factors and Mongolia about livestock competition and habitat loss. The threat from barriers to migration is of high concern in Kazakhstan and Uzbekistan. In Turkmenistan the threats are generally low. There are some factors for which knowledge is lacking, but these tend to be factors of less immediate concern to the Range States.

Education and awareness.

57. Education and awareness activities have been carried out in all of the Range States, and increasingly these are coordinated, with collaboration to develop materials and share best practice (for example Steppe Wildlife Clubs and Saiga Days in Russia, Uzbekistan and Kazakhstan). The wide range of materials developed includes videos, cartoon books, posters, leaflets and murals. Much of the activity is directed towards children and is run in conjunction with schools. The Saiga Resource Centre is an online repository for materials including photos, videos, educational resources and literature.

Ecological studies.

58. In Kazakhstan, ecological studies have centred on monitoring of saiga birth areas in Betpak-dala, in order to understand factors influencing population productivity. In Mongolia, detailed studies of population parameters have been carried out during the reporting period including calf mortality and movement. Studies of individual movements using GPS collars have been carried out in Kazakhstan, in all three populations, providing information on the effect of the border fence, railways, and other factors on migration. Studies on habitat use, and its determinants, have been carried out using species distribution models for all of the populations.

Priority Actions.

59. Priority actions listed in the Range State reports are:

Kazakhstan: Carry out research on the causes, drivers and triggers of the 2015 mass mortality in the Betpak-dala population and take measures to combat mass mortalities in the future.

Russian Federation: Reform specialist mobile anti-poaching patrols; improve law enforcement measures, including anti-poaching; broaden monitoring, including carrying out aerial surveys; develop modern monitoring methods, including ground-based distance sampling and GPS tracking; control wolf numbers; continue to develop saiga ranching techniques; develop rapid methods for distinguishing the country of origin of saiga products; improve cooperation with saiga Range States and consumer countries and with CITES.

Uzbekistan: Carry out monitoring of population abundance and threats; strengthen protected areas (specifically the Saigachy sanctuary); work with local people to improve environmental awareness and participatory conservation actions; improve cooperation with oil and gas companies; improve transboundary collaboration with Kazakhstan on saiga conservation and particularly mitigating barriers to migration; increase international collaboration on conservation and research.

Mongolia: Strengthen law enforcement through improving the Saiga Ranger Network and develop other law enforcement measures; ensure smooth implementation and monitoring of pasture management plans at the soum level; maintain support for Eco Clubs in key saiga habitats.

Turkmenistan: Organize conservation actions in the event of saiga migrations into the country.

4.0 Evaluation

60. Based on the synthesis of the national reports and other available information the following achievements can be recognized:

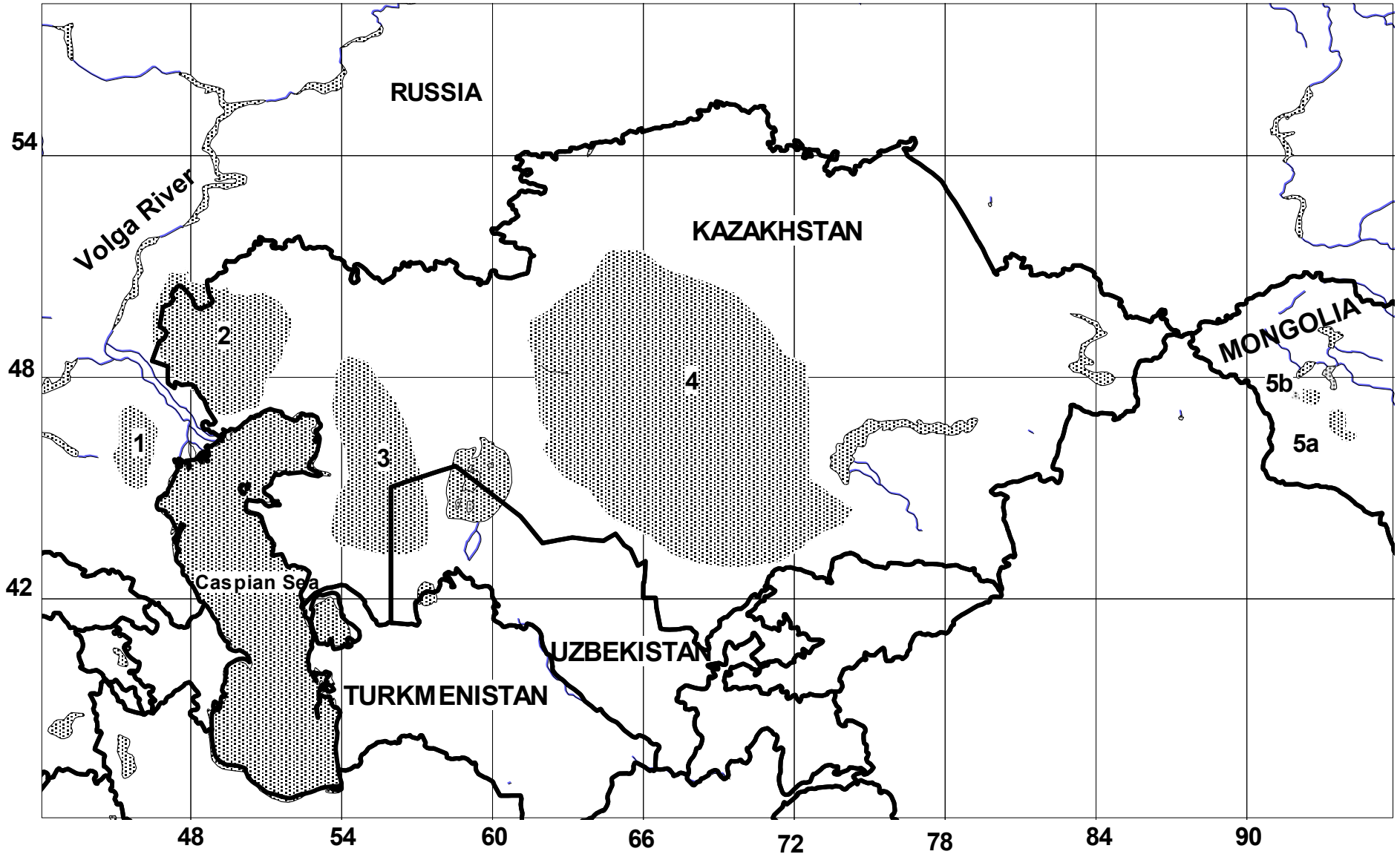
- The **status of the saiga and its conservation needs** are generally well understood at the international and national levels.
- A wide range of **conservation interventions** are being carried out by governmental and non-governmental organizations, covering the full range of priorities set out in the 2011-15 MTIWP.
- There is **collaboration and sharing of experience** between NGOs and other international and national actors, for example on social awareness raising, training of customs officials, and MOU coordination.
- There have been **arrests and successful prosecutions** of saiga poachers and traders in some parts of the range.
- There has been continuing investment in **improved monitoring** methods, particularly in Kazakhstan and Mongolia.
- **Protected Area coverage** has improved and new initiatives are underway (such as ecological corridors in Kazakhstan and the Saigachy reserve in Uzbekistan).
- Engagement has been initiated with the **private sector**, aimed at ensuring that their developments are sensitive to the conservation needs of saigas.
- **Public awareness** campaigns have been effective in improving knowledge of the saiga's conservation needs and the laws pertaining to hunting and trading of saigas.
- There has been a lot of energy and enthusiasm generated among young people and their teachers range-wide from schools-based **educational initiatives**.
- **International awareness** of the saiga has increased, and there is more information on the species and how to get involved in its conservation online via a range of social media and other outlets.
- The Government of China has expressed its commitment to **control trade** in saiga products and has expressed interest in contributing to international conservation efforts within the Range States.

61. Less progress has been achieved in the following areas:

- Anti-poaching efforts have intensified but **poaching** is still happening throughout the range, suggesting a need for further investment in improving effectiveness.
- **Monitoring** of trends in abundance is still inconsistent in quality, method and frequency between and within populations. Consistent annual monitoring is only being done in Kazakhstan.
- **Trends in abundance** are of severe concern in two populations (north-west pre-Caspian and Ustuirt), apparently principally as a result of ongoing high levels of poaching.
- **Linear infrastructure** (including railways, roads, pipelines, and a border fence) are currently impacting some populations, particularly Ustiurt and Betpak-dala, and will continue to affect populations unless mitigation is implemented.
- Since 2010, mass mortality from **disease** has affected both the Ural and Betpak-dala populations; in both cases, this reversed impressive increases in population size which had happened over the preceding several years. This highlights the importance of ensuring that all populations are large and resilient enough to withstand catastrophic events, the need better to understand the causes and drivers of mass mortality in saigas, and the need for continued capacity building in the wildlife health sector.

- Investment has been **unbalanced between populations**, such that the vast majority of the improvement in saiga status was due to one population, Betpak-dala. This means that the risk of loss of other populations (whether due to disease, poaching or other threats) has been masked by the apparent overall population increase. The mass mortality in the Betpak-dala population in 2015 demonstrates that a very large proportion of the global population can be lost very rapidly in these circumstances. Assessments of conservation progress need to be cognizant of population-level trends rather than just trends in overall abundance.
- **Evaluation** of the success of conservation interventions, sharing of best practice, and increased cooperation and information sharing are crucial now that programmes have been running for several years.
- **Captive breeding** is expanding, but there is a lack of agreed guidelines for husbandry, genetic management, studbook management and reintroduction. There is no captive herd within the current saiga range which is large enough to be viable in the medium term, and no captive population of the Mongolian sub-species.
- There is still **limited cooperation** between governments in managing shared transboundary populations, and between range states, consumer countries and the Traditional Chinese Medicine communities in supporting in situ conservation.

FIGURE 1: RANGE OF THE SAIGA ANTELOPE



Source: Milner-Gulland et al. (2001), Oryx

Table 2. Saiga Occurrence in Protected Areas						
Name	**Area (ha)**	**Category**	**Months Saiga present**	**Rut**	**Calving**	**Numbers**
Russian Federation						
Chernye Zemli Biosphere Reserve	121,115	Federal	Year-round	Yes	Yes	
Stepnoi Sanctuary	108,000	Regional	Year-round	Yes	Yes	
Tinguta Sanctuary	197,800	Regional	Year-round	Yes	Yes	
Mekletinskiy Sanctuary	102,500	Federal	Varies	Insignificant	Rarely	
Bogdinsko-Basgunchakskii Reserve	18,525	Federal	Rarely			
Bogdinsko-Basgunchakskii Sanctuary	53,700	Regional	Rarely			
Sarpinskiy Sanctuary	163,900	Federal	Rarely, in June			
Kharbinskiy Sanctuary	195,500	Federal	Very rare			
Kazakhstan						
Irgiz-Turgai Rezervat	763,549	VI	Spring-autumn, small groups in winter	Yes	Yes	c.500 (post die-off)
Korgalzhyn Reserve	543,171	Ia	Year-round	Yes	Yes	c.470 (post die-off)
Altyn Dala Rezervat	489,776	VI	Spring to autumn		Yes	
Naurzum Reserve	191,381	Ia	Summer	No	No	2-300 (2014)
Barsakelmes Reserve	160,826	1a	Year-round	?	?	A few 10s
Uzbekistan						
Saigachy Sanctuary	1,000,000	IV	October - May	November	May	100
Proposed						
Saigachy Sanctuary (redesignated)	1,080,800	1b	October - May	November	May	100
Mongolia						
Sharga-Mankhan	396,291		Year-round	Yes	Yes	14,000
Proposed						
Darvi mountain	45,000		Year-round	Possibly	Possibly	8,000
Turkmenistan						
Kaplankiyrskiy Reserve	275,735	Ia	December-March	No	No	Rarely observed
Sarykamysh Sanctuary	541,466	IV	December-March	No	No	Rarely observed