





# CONVENTION ON MIGRATORY SPECIES

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MEMORANDUM OF UNDERSTANDING CONCERNING CONSERVATION, RESTORATION AND SUSTAINABLE USE OF THE SAIGA ANTELOPE

FOURTH MEETING OF THE SIGNATORIES TO THE MEMORANDUM OF UNDERSTANDING CONCERNING CONSERVATION, RESTORATION AND SUSTAINABLE USE OF THE SAIGA ANTELOPE Russian Federation, Online, 28 – 29 September 2021

#### OVERVIEW REPORT ON CONSERVATION STATUS AND MOU IMPLEMENTATION

(Prepared by the Saiga Conservation Alliance for the CMS Secretariat)

## **Summary:**

This report was prepared based on the National Reports and Project Reports submitted to the CMS Secretariat. A revision was issued to include the updated National Reports received by the Secretariat until August 29, 2021. The second revision was issued to correct the information on Mongolian Saiga. The document provides an overview of the information provided in these reports, in accordance with Paragraph 6 of the Saiga MOU.

## **Action requested:**

Take note of the document.

#### 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 Antelope (*Saiga* spp). This report was prepared by the Saiga Conservation Alliance with input from other organisations<sup>1</sup> on behalf of the CMS Secretariat.
- 2. Due to the global pandemic, the 4<sup>th</sup> Meeting of the Signatories to Saiga MOU (MOS4), to be hosted by the Russian Federation, had to be rescheduled to take place in September 2021, instead of 2020 as originally planned. However, as the year 2020 marks the end of the current Medium-Term International Work Programme (MTIWP) and in line with the five-years reporting cycle of the MTIWP, the CMS Secretariat invited Signatories and cooperating organisations to provide information on the measures and activities undertaken to implement the MTIWP 2016-2020 as a basis for the present overview report.
- 3. Funding to prepare this report was made available by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) through the Federal Agency for Nature Conservation (BfN). The report was updated in August 2021 using CMS core funding to incorporate the most up-to-date information, including monitoring results of spring 2021, in order for the MOS4 to be able to consider the most accurate and up-to-date information available.
- 4. National reports by the Signatories and the Project Reports by Cooperating organizations that were submitted to the CMS Secretariat are a primary source of information for the overview report. Other information available to the SCA was also used. This included additional 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 technical information exchange in coordination of the CMS MOU at the Second Meeting of Signatories (MOS2) in 2010, and by the Parties to CITES at CITES COP16.
- 5. In line with the Saiga MOU, the CMS Secretariat invited Signatories and cooperating organisations to provide information on the measures and activities undertaken to implement the Medium-Term International Work Programme for the Saiga Antelope (2016-2020). Four countries (Russian Federation, Uzbekistan, Kazakhstan, Mongolia), three within-country entities (Protected Areas in Russia) and ten cooperating organisations submitted reports to the CMS Secretariat by 30th September 2020. However, the Mongolian National Report was submitted as a project report, therefore some information was lacking and has been supplied by Mongolian cooperating organisations instead.
- 6. Additional information was provided by the participants of the Saiga Technical Workshop (April 2019, Vilm island, Germany), where Signatories and Cooperating Organizations provided up-to-date information about the current conservation status of Saiga and developed a new draft MTIWP 2021-2025.

<sup>1</sup> Prepared by E.J. Milner-Gulland on behalf of the Saiga Conservation Alliance. Reviewed by David Mallon on behalf of the IUCN-SSC Antelope Specialist Group. Input given by Anna Lushchekina (Russian Academy of Science), Elena Bykova (Institute of Zoology, Uzbekistan), Katalina Kecse Nagy (TRAFFIC), Stephanie von Meibom (TRAFFIC), Chimeddorj Buyanaa (WWF-Mongolia), Buuveibaatar Bayarbaatar (WCS-Mongolia), Steffen Zuther (FZS).

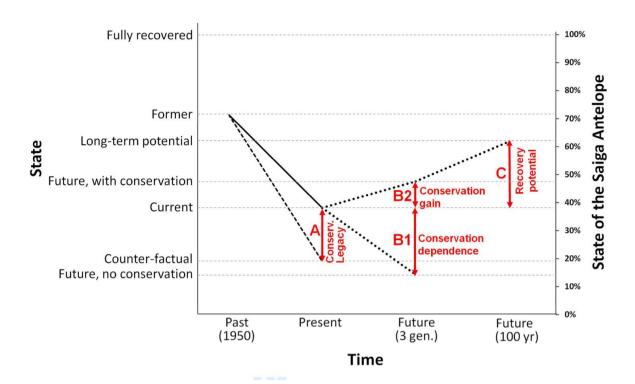
- 7. In 2021 updated National Reports were provided by Uzbekistan and the Russian Federation, which were used to update the population estimates and provided additional information on legislative changes and poaching incidents. Additionally, information from the aerial surveys carried out in April 2021 (provided by ACBK) were used to update population estimates for Kazakhstan. The updated National Report of Kazakhstan was submitted to the CMS Secretariat after the extended deadline of August 29, 2021 and could not be taken into account in this overview. The updated national report of Kazakhstan is available on the <a href="Saiga MOS4 website">Saiga MOS4 website</a>.
- 8. This report does not repeat in full the information provided in the national reports or project reports. It only summarizes the main issues. It also does not repeat information reported in previous Overview Reports, concerning activities carried out and conservation issues occurring in previous reporting periods. Previous overview reports can be found at the CMS's Saiga MOU website (https://www.cms.int/saiga/en).

## 2.0 Conservation Status of the Saiga

- 9. The status of the species is assessed here on the basis of the information available to the compilers of this report, including from National Reports, NGO reports, and expert input.
- 10. At COP9 in 2008 CMS Parties adopted Wilson & Reeder (3<sup>rd</sup> 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. Despite the best available genetic evidence (presented in Kholodova et al. 2006, *Oryx* 40, 103-107) supporting the IUCN nomenclature, and most experts also applying this nomenclature, this document will use the official CMS COP-adopted nomenclature.
- 11. Saigas occur in five populations: Four are *S. tatarica*; North-West Pre-Caspian (Russia), Ural (Kazakhstan, Russia), Ustyurt (Kazakhstan, Uzbekistan, and historically Turkmenistan), Betpakdala (Kazakhstan, Russia). One is *S. borealis* (Mongolia). These populations are depicted in the map at Figure 1. A sixth population of *S. tatarica* in northwest China and adjacent areas of SW Mongolia became extinct by the 1960s.
- 12. The latest numbers at the country level are as follows: around 10,000 in Russia and increasing; around 842,000 in Kazakhstan and increasing; 150-200 in Uzbekistan and declining. No Saigas have been observed in Turkmenistan for the last 20 years. The distinctive Mongolian species is estimated to number a minimum of 5,070, and is increasing following a major die-off in 2016/2017, which saw numbers drop to around 3,000 individuals. Although total numbers must be estimated with caution (see paragraph 13), the best estimate of the global Saiga population in 2021 is a minimum of 857,170.
- 13. 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 Russia 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 population gets smaller and more fragmented, because the animals are harder to detect. This means that population declines may appear worse than they really are, and increases faster than they really are.

- 14. As illustrated by the mass die-offs which occurred in Ural in 2010 (estimated mortality 12,000 animals), to a greater degree in Betpak-Dala in 2015 (estimated mortality >200,000 animals, 88% of the Betpak-Dala population), and in Mongolia in 2016/17 (estimated mortality 5,000, 54% of the population), 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 of individual populations.
- 15. The status of Saigas varies between populations and countries. Between 2015 and 2021, four out of five populations reportedly showed consistent population increases (pre-Caspian, Ural, Ustyurt and Betpak-dala), and one declined dramatically but is now recovering to some extent (Mongolia). The Mongolian population was particularly hard-hit by a substantial die-off in 2016/17, exacerbated by drought and harsh winters and continuing competition with livestock. The Saiga population in Uzbekistan is at critically low levels, with movement from Kazakhstan curtailed by infrastructure and threatened by poaching and climate change. Overall, although not yet recovered to the levels seen in the 1980s and 1990s, the status of *Saiga* spp. has improved substantially since the Third Meeting of Signatories (MOS3) in 2015.
- 16. In 2018, the Saiga was the first species to be assessed under the IUCN's new Green Status of Species initiative to provide an indication of the difference conservation has made to date (conservation legacy, A), the potential for further conservation gain over the next 10 years if current conservation actions are effectively implemented (conservation gain, B2), the species' dependence on continuing conservation (conservation dependence, B1), and its long-term recovery potential (C)². The results demonstrate how sharply the conservation status of the Saiga reduced between 1950 and 2018, but that conservation has made that decline much less severe than it would otherwise have been, and that the species is highly dependent on continued conservation action, both in the short term and so that it can reach its recovery potential.

<sup>2</sup> Assessment done by E.J. Milner-Gulland, reviewed by David Mallon and published here: https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/cobi.13112



**Figure:** Green Status assessment for the Saiga Antelope. The graph shows the positive impact made by conservation to date (A - the difference between the solid line and the dotted line is the difference between the status of the Saiga now and its estimated status if there had been no conservation - the status is twice as good, at 40% recovered, as it would have been without conservation, at 20% recovered). Also showing the importance of continued conservation action over the next 10 years (B1 - in the absence of continued conservation, the Saiga would be only 15% recovered rather than 40% recovered as it is now). Also showing the potential for further recovery in the next 10 years if the MTIWPs of the Saiga MoUs are fully implemented (B2- estimated to improve from 40% recovered to 50% recovered). The estimated long-term recovery potential (C) is 60% recovered. The Saiga can never be 100% recovered because parts of its historical range are no longer suitable.

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Table 1. Populations of Saiga based on information collected from national governments for the 2021 CMS MOU meeting, compared with the same information for the previous three MOU meetings. The figures are not directly comparable between years and populations because of variations in survey effort and methodology.

| Population                        | 2006          | 2010                | 2015                | 2021                 | Trend in 2020           |
|-----------------------------------|---------------|---------------------|---------------------|----------------------|-------------------------|
| NW Pre-Caspian¹ [RU]              | 15,000-20,000 | 10,000-20,000       | 4,500-5,000         | 10,000               | Increasing              |
| Ural [KZ, RU] <sup>2</sup>        | 12,900        | 27,140 <sup>3</sup> | 51,700              | 545,000 <sup>6</sup> | Increasing              |
| Ustyurt [KZ, TM, UZ] <sup>2</sup> | 17,800        | 4,900               | 1,270               | 12,000 <sup>6</sup>  | Increasing <sup>7</sup> |
| Betpak-dala [KZ] <sup>2</sup>     | 18,300        | 53,440              | 31,3004             | 285,000 <sup>6</sup> | Increasing              |
| Mongolia [MN]                     | 3,169         | 8016±1656           | 14,869 <sup>5</sup> | 8,451 <sup>8</sup>   | Increasing <sup>9</sup> |
| Total                             | 67,169-72,169 | 103,496-113,496     | 103,639-104,139     | 860,45110            | Increasing              |

<sup>&</sup>lt;sup>1</sup> All numbers are based on expert judgement rather than structured population surveys

<sup>&</sup>lt;sup>2</sup> Numbers from Kazakhstan aerial survey (does not include resident populations in other countries [UZ particularly] or those outside survey area [Betpak-Dala particularly]).

<sup>&</sup>lt;sup>3</sup> 39,060 estimated in April 2010, 11,920 estimated died in disease outbreak May 2010

<sup>&</sup>lt;sup>4</sup> 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]

<sup>&</sup>lt;sup>5</sup> 2014 estimate based on a ground survey.

<sup>&</sup>lt;sup>6</sup> 2021 spring estimate from Kazakhstan (provided by the ACBK)

<sup>&</sup>lt;sup>7</sup> Decreasing in Uzbekistan

<sup>&</sup>lt;sup>8</sup> November 2020 estimate

<sup>&</sup>lt;sup>9</sup> Following a major reduction in 2016/17 to a low of around 3000 individuals

<sup>&</sup>lt;sup>10</sup> Assuming 100 resident individuals in Uzbekistan

## 2.1 Summary of the status of the species by population

North-west Pre-Caspian population

- 17. The North-west Pre-Caspian population is centred around the Chernye Zemli Biosphere Reserve and Stepnoi Sanctuary. Its range covers two administrative regions of the Russian Federation; the Republic of Kalmykia and Astrakhan province, with sporadic occurrences in neighbouring regions. Half of the range consists of natural landscapes, 40% is pasture and 10% of the range is covered by settlements.
- 18. The population's status is currently rather unclear because a systematic monitoring programme using the same methodology throughout the range has not yet been implemented. Monitoring is carried out by specialists of the Ministry of Natural Resources and Ecology of Russia, the Service for Nature Management and Environmental Protection of the Astrakhan Region, the Ministry of Natural Resources and Environmental Protection of the Republic of Kalmykia, the state reserve "Chernye Zemli", the "Stepnoi" Sanctuary, WWF Russia and the Russian Academy of Science.
- 19. The population appears to be increasing based on expert assessments from ground surveys in 2016-2021, and based additionally on drone footage in 2019-2020. The percentage of males in the population (assessed visually and using expert assessment) has risen from 6% in 2016 to 18% in 2020.
- 20. In 2016, there were 6 instances of poaching (involving 5 Saiga individuals) reported in the Chernye Zemli reserve. In 2017 there were 2 (2 Saigas), in 2018 1 instance (1 Saiga), and none since 2019. However there have been 23 instances of horn confiscation in the reporting period, involving 7576 horns in total. These were spread throughout the year, and generally the origin and final destination of the horns were not known; where the final destination was known (9 instances) it was China. Almost all of the instances were road vehicles stopped within or near Saiga range, often by border guards. Two involved trains and one was a package in Moscow.
- 21. All Protected Areas have created artesian watering places for Saigas. They also carry out anti-poaching patrols, population monitoring, awareness and educational campaigns and fire management activities.
- 22. Other conservation activities include ecological education, with ongoing Steppe Clubs in a number of schools, and celebrations of Saiga Day and Day of Migratory Species. In 2018, there was a Summer Academy bringing teachers from Russia, Kazakhstan and Uzbekistan together to exchange ideas and experiences.
- 23. In December 2018, Astrakhan State university hosted a seminar on education as a component of Saiga conservation. In 2019, experts, NGOs and government representatives started to develop a National Strategy for Saiga conservation up to 2030 which is in the final stages of inter-departmental approvement. A Roadmap for implementation of a Federal project on Saiga conservation was approved by the Ministry of Natural Resources in May 2021.

## Ural population

- 24. 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, Volgograd, Saratov, Samara, Orenburg provinces). Within Kazakhstan, aerial surveys are carried out annually and *Okhotzooprom* and state rangers have an on-the-ground presence. A relatively small proportion of the population uses the Bogdinsko-Basgunchakskii state reserve, "Baskunchak" regional natural park (Astrakhan province), "Elton" regional natural park (Volgograd province), and Orenburg state reserve in Russia (Orenburg province). There is no protected area in the Kazakhstan part of the range. In Russia about 5% of the range is built-up while 80% is fields and pastures.
- 25. In 2016 and 2017, small groups came into Russia in May-July, in 2018 a group of about 25,000 was observed in the same period, in 2019 at least 300 in May, and in 2020 in June-July up to 100,000 were observed. All estimates are from observations and expert assessment.
- 26. Public engagement activities have expanded in the Kazakhstan part of the range, including work with schools and Steppe Clubs. In 2016, an international meeting of rangers was held in the Ural region (for rangers from Kazakhstan, Russia and Uzbekistan) to train them in various key skills.
- 27. Aerial and ground monitoring is carried out annually in Kazakhstan, and there is a programme of satellite tracking of individual animals.
- 28. In March 2021, a program of cooperation on specially protected natural areas between Russia and Kazakhstan was approved.

#### Ustyurt population

- 29. The Ustyurt 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 has migrated south through Uzbekistan to Turkmenistan. There is a small resident population year-round in Uzbekistan, including in the region of Vozhrozhdeniye peninsula (Aral Sea) and the neighbouring Aral Sea coast. There are indications that some movement of Saigas into Uzbekistan may be occuring via the dry Aral Sea bed; these could be individuals from the Betpak-dala population. Less than 10% of the Saiga 's range in Uzbekistan is converted for human use.
- 30. Within the current range, the only protected area is the Saigachiy Reserve in Uzbekistan (8481 km²). This reserve was redesignated in 2016 as a Landscape Reserve, with a higher level of protection, and its borders changed to better reflect Saiga habitat. There are several protected areas within the recent range of this population (Kazakhstan: Buzachinskiy Wildlife Reserve; Turkmenistan: Kaplankyr State Reserve; Sarykamysh Sanctuary). In 2020, a new National Natural Park was established (South Ustyurt).

- 31. The Uzbekistan component of the Ustyurt population is continuing to decline. Estimated numbers, based on transect drives (2016-19), camera traps (2020), and expert opinion, are around 150-200 individuals. The estimated sex ratio in February 2020 (based on camera traps in the Saigachiy reserve) is 1 male to 10 females. Estimated numbers in the Kazakhstan aerial survey (carried out in the spring, when the migratory part of the population is in Kazakhstan) increased substantially between 2015 and 2021. However, numbers are still critically low at around 12,000, for a population which numbered over 250,000 individuals only a few decades ago.
- 32. Poaching is continuing in both Kazakhstan and Uzbekistan. The Government of Uzbekistan has not made any confiscations or arrests related to Saiga poaching or trade in this period.
- 33. Aerial and ground monitoring is carried out annually in spring in the Kazakhstan part of the range, there is a programme of satellite tracking of individual animals, and antipoaching patrols operate in both countries. In Kazakhstan during this reporting period, new NGO-initiated monitoring teams were started to complement and coordinate with the State-run units, including an informant network.
- 34. The population's range has large-scale transport routes (road and railways) and pipelines passing through it, and the construction of the Shalkar-Beyneu railway across the Saiga's range in 2013-2015 has completely halted southerly migration (according to telemetry data obtained in 2017-2019). In 2011-2012, a border fence was erected between Kazakhstan and Uzbekistan, and there is evidence from satellite-collared individuals that this has impeded migrations. However mitigation measures were taken in 2015 (comprising 125x1 km passages over 150 km of border fence and one 11 km passage). Telemetry data suggests that some Saigas have crossed between Uzbekistan and Kazakhstan since then. Within Uzbekistan, Saigas have not been recently observed crossing either the A380 road (currently being upgraded) or the Kungrad-Beyneu railway. Crossings and mortalities on these and the Trans-Central Asia gas pipelines have not been observed, possibly because of the very low population size in Uzbekistan currently.
- 35. 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.
- 36. Recent social engagement interventions in Uzbekistan have included educational programmes (Steppe Clubs, eco-camps, marathon runs) and a participatory monitoring programme. Social engagement in the Kazakhstan part of the range includes community-based conservation programme and educational activities. In 2016-2017 in Uzbekistan, a series of seminars was held to improve collaboration between sectors responsible for Saiga conservation, including customs officials, researchers, and the State Committee for Nature Protection (national and for Karakalpakstan). Additional conservation interventions will be carried out from 2021 onwards in Uzbekistan, related to a mitigation plan for the A380 road.

## Betpak-dala population

- 37. 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). Occasionally the population spreads into Russia and Uzbekistan, when the population is large enough. In Russia, these movements occurred in 2016-2017 in May-July, but were prevented from 2018 onwards due to the erection of an impassable border fence between Russia and Kazakhstan.
- 38. 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 (apart from the major reduction as a result of the 2015 mass die-off). Improved monitoring, social engagement, public awareness and law enforcement have had a positive effect on reducing poaching, although poachers are still being apprehended. A new threat is on the horizon with the planned Centre-West road project in Kostanay and Akmola provinces, which would cross through major calving areas and disrupt migratory routes.
- 39. This population has had substantial investment in development of protected area networks by the Government of Kazakhstan, international and national NGOs and intergovernmental organizations. Protected areas in the population's range cover a substantial area (particularly the Altyn Dala and Irgiz-Turgai reserves). In 2016, the expansion of the Irgiz-Turgai Reserve substantially increased the area under protection in this population (adding 410,000 ha), with the additional area being based on Saiga range as determined from satellite telemetry.
- 40. Many projects are currently underway, encompassing scientific research, antipoaching, education and awareness. Aerial and ground monitoring is carried out annually, and there is a programme of satellite tracking of individual animals. In 2018 four tourist trips were organised to visit Saigas in this population.

#### Mongolian species

- 41. Distribution of the Mongolian (sub-)species, *Saiga borealis*, is centred on the Shargiin Gobi, Khuisiin Gobi and Dorgon Steppe in western Mongolia. The nominate (sub-)species (*S. tatarica*) formerly occurred in southwest Mongolia but is now extirpated.
- 42. Following the mass mortality from Peste des Petits Ruminants (PPR) in 2016/17, a working group on wildlife health has been established. A number of stakeholder meetings have been held to develop an integrated wildlife health strategy and monitoring approach. An outbreak response strategy has been developed with international bodies (including the FAO and OIE).
- 43. The population was estimated at 750 following severe dzud conditions in winter 2001/02. Numbers steadily increased, reaching an estimated 10,907. By late 2019, Saiga range had also increased by an estimated 140% since 2007, reaching 40,006 km². In 2016/17 an outbreak of peste de petits ruminants (PPR) reduced numbers by 54.5%. Since then, numbers are slowly recovering, with the population being estimated at 6,411 (3,689-11,142) in December 2018. The population assessment carried out in January 2020 by WWF-Mongolia and the Saiga Rangers Network showed that the population size had increased to 7,667 (95% CI = 5,074–11,724) individuals, an increase of approximately 20% since the last survey in December 2018, and 8,451 in November 2020, helped by favorable conditions in summer 2019. The assessment was

- performed using the internationally recognized line transect method in the Shargiin Gobi, Khuisiin Gobi, Dorgon steppe, Mankhan soum of Khovd province, Zavkhan soum of Uvs province, and Durvuljin soum of Zavkhan province.
- 44. In May 2017, 10 adult female Saiga were satellite collared. A total of 30,140 individual GPS locations had been collected up to March 2019. Genetic studies are also ongoing. An isotope study published in 2015 has confirmed the distinctiveness of the Mongolian population.
- 45. Sharga-Mankhan Nature Reserve (390,000 ha) was established in 1993 to protect populations of Mongolian Saiga. In May 2020, the Khomiin Tal National Park was established, which has contained around 30-50 Saigas for at least the previous 4 years. Pasture reserves (in which habitat disturbance is prohibited, particularly mining) have been established over 35% of the Saiga's range. Natural spring-heads are being fenced to protect these water sources from livestock.
- 46. A Saiga ranger network of 11 local people is continuing to support governmental patrols, and is adopting the SMART system of data entry. Substantial public awareness activities include educational programmes in the schools in the Saiga range and nationwide. In 2017 a plan to prevent wildlife crime was initiated.
- 47. Disease prevention, surveillance, and monitoring are carried out under the SNAPP funded "Steppe Health" project. Activities include educating local officials and communities on Saiga conservation and disease prevention; stakeholder meetings with local veterinary officials, protected area authorities, environmental agencies and local herders; development of disease risk mapping for Saigas and wildlife; and disease outbreak response guidelines especially for PPR.
- 48. The Feasibility study of reintroduction/translocation of Mongolian saiga in order to set up a second population was completed by researchers from National University of Mongolia. Currently, WWF-Mongolia is collaborating with the IUCN Antelope Specialist Group and WWF's Wildlife Practice in development of the Action Plan for 2021-2030 which is expected to be completed in 2021.

#### Saigas in China

49. In China, Saiga 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. Numbers reached around 170 individuals but then crashed due to disease and other causes; in early 2019 only around 20 remained.

## 3.0 Implementation of the Medium Term International Work Programme (2016-2020)

50. This section provides a brief summary of information on progress towards the implementation of the MOU and Medium-Term International Work Programme (2016-2020). 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.

- 51. 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 42<sup>nd</sup> meeting of the CMS Standing Committee (UNEP/CMS/StC42/Doc.6.1) and the 65<sup>th</sup> 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.
- 52. Within the framework of the CMS and the Saiga MOU, there have been a number of relevant international meetings during the reporting period. Most recently at CITES COP18 in August 2019, a number of decisions related to Saiga were adopted (Decisions 18.270-274). These direct, among others, Range States, important consumer and trading countries to implement the *Medium-Term International Work Programme for the Saiga Antelope for 2016-2020* [MTIWP (2016-2020)] and for 2021-2025 [MTIWP (2021-2025)], and encourage the range States to establish internal market controls for Saiga parts, (including registration of stockpiles, labelling of parts and products, and registration of manufacturers and traders). The Decisions also state that, subject to funding, the CITES Secretariat should consult with, and support, Range States and major consumer and trading states to manage their stockpiles and improve stockpile management. In addition to the CITES Decisions adopted at CITES COP18, CITES Parties also adopted a zero quota for wild specimens traded for commercial purposes, which entered into force on 16th November 2019.
- 53. In April 2019, a joint CMS-CITES technical workshop was held on Vilm Island, Germany. It was jointly organized by the Secretariats of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) as well as the International Academy for Nature Conservation of the German Federal Agency for Nature Conservation (BfN INA) with funding from the German Ministry of the Environment, Nature Conservation and Nuclear Safety (BMU). Participants included representatives of the Saiga MOU Signatory States and China, as well as NGOs and experts. A revised Medium Term International Work Programme for 2021-2025 was drafted, for consideration at MOS4. More activities organized by the CMS Secretariat are described in the Report of the Secretariat (UNEP/CMS//MOS4/Doc.4).
- 54. In CITES Doc. SC70 Doc.58., the CITES Secretariat provided an analysis by the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) of reported trade in specimens of Saiga spp. for 2007-2016, and an overview of seizure data for 2015 to 2017, extracted from the CITES annual illegal trade reports and the WorldWISE database of the United Nations Office on Drugs and Crime (UNODC). The document suggested that legal international trade in Saiga parts and derivatives seemed to decline overall in the last decade, with a shift towards trade in finished products, and was largely limited to transactions between a few Asian nonrange States. The number of reported seizures and the amount of Saiga specimens involved remained small, with most instances referring to seizures of medicines outside Asia or Saiga Range States.
- 55. On 28-29 August 2017, a meeting was held in Moscow hosted by the Russian Academy of Science bringing together captive breeding experts to discuss the status of captive Saiga populations and the potential of captive breeding for conservation.

The CMS Saiga MOU.

- 56. NABU joined the Saiga MOU as a cooperating organisation at MOS3 in 2015, bringing the number of cooperating organisations to nine.
- 57. Technical coordination for the MOU has continued to be undertaken during this period by the Saiga Conservation Alliance and Association for the Conservation of Biodiversity of Kazakhstan in close collaboration with the CMS Secretariat.

International trade in Saiga and products, parts and derivatives thereof

- 58. Trade in Saigas and their parts and derivatives was authorized but strictly regulated under the terms of CITES, as an Appendix II species, until 2019. At the Conference of the Parties to CITES in August 2019, however, a zero export quota for wild specimens traded for commercial purposes was adopted, de facto banning the export for commercial purposes of all Saiga specimens of wild origin from Saiga range States (not including second-generation captive-bred animals, export of trophies for non-commercial purposes and re-exports of Saiga specimens from non-range States).
- 59. Reported levels of international legal trade in derivatives and horns have continued to be low over the period, although information is only available for 2015 and 2016<sup>3.</sup> The only countries for which trade was reported in this period were China, Singapore, Hong Kong and Japan. Studies of domestic consumption within a major consumer nation, Singapore, in 2018 showed a high level of usage of Saiga products, with a large-scale public survey suggesting that around 20% of Chinese Singaporeans had used a Saiga product in the previous 12 months. The volume of horn in the major Saiga stockpiles in China and Singapore is not known.

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 2016. 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.

| Exporter  | Importer  | Term     | Reported by | 2015 (kg) | 2016 (kg) |
|-----------|-----------|----------|-------------|-----------|-----------|
| China     | Japan     | Horns    | Exporter    | 111.52    |           |
|           |           | Medicine | Importer    | 149.23    | 339.51    |
|           |           |          | Exporter    | 74.52     | 331.48    |
|           | Singapore | Horns    | Importer    | 20.35     | 11.65     |
|           |           |          | Exporter    | 25.80     |           |
|           |           | Medicine | Exporter    | 110.36    | 158.34    |
| Hong Kong | Japan     | Horns    | Importer    | 181.00    |           |
| Japan     | Hong Kong | Medicine | Importer    | 27.29     |           |
| •         |           |          | Exporter    | 22.93     |           |

60. Projects to support improved effectiveness of trade monitoring and control include a report in 2018 on hotspots and routes for illegal trade in Saiga horns through Kazakhstan, as well as a number of training events for law enforcement officials (including judges) in how to collect evidence towards an efficient prosecution. A data collection protocol and database for monitoring illegal activities in Kazakhstan has also been developed and was implemented in 2019. 19 sniffer dogs have been trained to help border guards to detect illegal wildlife trade in Kazakhstan over the reporting period, 17 of which are still in service. Kazakhstan now has a joint national workplan for illegal wildlife trade and has hosted a number of regional workshops on improving wildlife monitoring.

<sup>3</sup> From: https://cites.org/sites/default/files/eng/com/sc/70/E-SC70-58.pdf

61. In Mongolia, the Ministry of Internal Affairs hosts a platform for the prevention of environmental crimes, focussed on Mongolia's rare species, including Saigas. Established in 2017, this platform incorporates all government efforts in this area into a single workplan to improve effectiveness.

## Population monitoring.

- 62. Kazakhstan has a comprehensive monitoring programme, covering nearly all of the country's range area. Since 2016, substantial effort has gone into developing a consistent methodology for spring surveys and applying it to all three populations. It comprises both aerial surveys and ground vehicle surveys, as well as monitoring of calving and rutting in all three populations. Unfortunately this monitoring was not possible in 2020 due to COVID-19. Kazakhstan has also started implementing the SMART monitoring system for rangers in all three populations.
- 63. In the Russian Federation, aerial surveys using drones have been trialled but are not yet operational. Ground-based monitoring by staff of the Chernye Zemli Biosphere Reserve and Stepnoi Sanctuary has provided expert assessments, supplemented by participatory monitoring to give information on distribution and herd size outside these reserves.
- 64. In Uzbekistan, a combination of participatory monitoring using motorbike transects and ground surveys gives a general impression of population change.
- 65. In Mongolia, a comprehensive aerial survey was carried out in 2009/2010, and range-wide population monitoring using the distance sampling line transect approaches has been carried out annually since 2011. Additional surveys are undertaken in critical situations. These surveys are led by WWF-Mongolia. A Saiga ranger network has been carrying out monthly monitoring and patrolling in core Saiga areas since 2015, and has been using SMART since July 2019 to improve effectiveness and support systematic data collection.

## Monitoring types undertaken by range states during the reporting period (based on National Reports):

| Population          | Aerial<br>Surveys | Ground<br>surveys | Participatory<br>monitoring | Satellite<br>tracking | Expert assessment | Disease<br>surveillance | Other                                    |
|---------------------|-------------------|-------------------|-----------------------------|-----------------------|-------------------|-------------------------|--|
| Ustyurt             | Ustyurt           | Uz, Kz²           | Uz <sup>2</sup>             | Kz <sup>2</sup>       | Uz                | Kz                      | Uz, Kz:<br>Camera<br>traps. Kz:<br>SMART |
| N-W Pre-<br>Caspian | Ru <sup>1</sup>   | Ru                | Ru                          |                       | Ru                | Ru                      | Faecal<br>sampling <sup>1</sup>          |
| Ural                | Kz <sup>2</sup>   | Kz <sup>2</sup>   | Ru                          | Kz <sup>2</sup>       | Ru                | Ru, Kz                  | SMART                                    |
| Betpak-<br>dala     | Kz <sup>2</sup>   | Kz <sup>2</sup>   | Ru                          | Kz <sup>2</sup>       | Ru                | Ru, Kz                  | SMART                                    |
| Mongolia            |                   | Mn                | Mn                          | Mn                    |                   |                         | SMART                                    |

- 1. Experimental only (to test methods)
- 2. Protocol available

66. Note that ground surveys using systematic transects e.g. distance sampling methodology, are implemented only in Kazakhstan and Mongolia. In Russia and Uzbekistan surveys consist of visual observations while driving on set routes, usually in the course of patrolling. This means that bias is likely, but hard to assess (see paragraph 13. Similarly participatory monitoring and disease surveillance are more or less structured and repeatable in format depending on the country concerned (Uzbekistan has a structured participatory monitoring programme). Please see paragraph 13 for discussion of the issues which affect the current Saiga monitoring programmes range-wide.

## Habitat and Protected Areas

- 67. Range State reports indicate varying levels of habitat loss, degradation and fragmentation. Pasture quality is likely to have remained relatively high over the period covered by this report in most locations due to livestock grazing pressure remaining low. In Ural, however, there is increasing concern about conflict between the increasing Saiga population and local residents, fuelled by competition for pasture and water, and concern about disease transmission.
- 68. In Mongolia, livestock grazing pressure is high, there is an issue with competition for grazing, and habitat is reported as severely fragmented. The Saiga's main water sources are seasonally occupied by herders and their livestock, limiting access for Saigas. Approximately 24.3% of Saiga range in Mongolia is under State protection and 20.9% is within local protected areas, as of May 2019.
- 69. Protected areas coverage is good and improving in Russia, Uzbekistan, Mongolia, and in the Betpak-dala population. Protected Areas for Saigas are not present in the Kazakhstan part of the Ustyurt population's range or the range of the Ural population. Table 2 lists protected areas which currently contain Saigas (seasonally or permanently) or have done so in the relatively recent past.
- 70. The Altyn Dala Conservation Initiative in Kazakhstan expanded in 2016 to include the Ural and Ustyurt populations in addition to Betpak-dala. This means that the project area covers about 75 million hectares. The initiative is a collaboration between international and national NGOs and national and regional governmental bodies, which aims to provide an integrated approach to planning and implementation of sustainable land management with the Saiga as its focal species.

## Populations shared between Range States.

71. There are two major transboundary populations; Ural and Ustyurt. In both cases, bilateral transboundary agreements are in place for Saiga conservation (since 2010 for the Ustyurt population, since 2012 for the Ural population). The Betpak-dala population also could extend into Russia and Uzbekistan, although entry into Russia was prevented from 2018 onwards by a border fence, and it is still unclear whether there is movement of Saigas from Betpak-dala into Uzbekistan.

#### Laws, Institutions and illegal activities.

72. 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, Turkmenistan and Uzbekistan it has been a Red List species for several years, for which hunting is strictly prohibited. It was placed on the Red List in Russia on 24th March 2020, also prohibiting all hunting. In Kazakhstan, it remains legally listed as a game species, but in 2016 the moratorium on the use of Saigas and its derivatives was extended to 2023. Legal frameworks are generally adequate but increased patrolling and more stringent enforcement are needed for these to be fully effective.

- 73. Between 2016 and 2020 (first 6 months) there have been 297 arrests for Saiga offences in Kazakhstan. In the same period, 6,001 horns and 2,109 carcasses were seized. The Uzbekistan national report mentions no cases of confiscation of horns or poaching in this reporting period, although in 2016-17 there were at least 3 cases of illegal trade registered, with 41 pairs of horns confiscated. In Russia there have been a few cases of poaching and 23 horn seizures, comprising >7000 horns.
- 74. According to the United Nations Office on Drugs and Crime's (UNODC) wildlife crime report for 2015-2017, several Parties seized small quantities of medicines containing or claiming to contain Saiga Antelope (mostly at airports). Two seizures referred to small numbers of horns, and one seizure to six poached Saiga Antelopes. Cases were reported by: Canada (5 cases); China (5); Czech Republic (5); Germany (1); Japan (3); Mongolia (1); Netherlands (11); New Zealand (64); Norway (1); United Kingdom (3); United States of America (USA) (60); and Uzbekistan (1). During the same period, seizure records in the UNODC's WorldWISE database highlight an additional 59 seizure cases by: Austria (2); Germany (5); Netherlands (16); and the USA (36). Most cases comprised pharmaceutical products/medicines. The seizures made in the former three countries were mainly at airports. The purpose of the seized specimens reported by the USA included personal use (31), but also commercial trade (5). Saigas were not mentioned in the 2020 UNODC Wildlife Crime report.

## Captive Breeding.

75. As of August 2017, a survey of captive breeding centres found that there were c. 907 Saiga in eight captive or semi-captive facilities: 117 in four facilities in Russia (including Living nature of the steppe - Rostov, 88 adults; Saigak breeding centre - Astrakhan, 16 adults); 20 at two facilities in Kazakhstan; 170 at the Wuwei Breeding Centre in Gansu, China; and c. 600 at the Askania Nova centre in Ukraine. There is no captive breeding currently in Uzbekistan. The population in Wuwei crashed to about 20 by early 2019. Saigas in Askania Nova are kept in extensive semi-captive conditions and live animals are sold to raise income to fund the centre. In their National Reports, the Governments of Kazakhstan and Uzbekistan state that there is no captive breeding of Saigas, while in their 2021 National Report Russian Federation reported 153 captive Saigas (including juveniles) in two captive breeding centres.

#### Threats.

## 76. National reports\* listed the following main threats:

|                                 | Nil | Low               | Medium  | High   | Very high | Unknown |
|---------------------------------|-----|-------------------|---|--|-----------|---------|
| Illegal hunting for meat        | Mn  | Kz                | Ru <sup>a</sup> , Ru <sup>b</sup> ,<br>Ru <sup>c</sup>      |  | Uz        |         |
| Illegal hunting for horns/trade |     |                   | Uz  | Ru <sup>a</sup> , Ru <sup>b</sup> ,<br>Ru <sup>c</sup> , Mn,<br>Kz |           |         |
| Habitat loss                    |     | Uz, Kz            | Ru <sup>b</sup> , Ru <sup>c</sup>                           | Ru <sup>a</sup> , Mn   |           |         |
| Livestock competition           |     | Uz                | Ru <sup>a</sup> , Ru <sup>b</sup> ,<br>Ru <sup>c</sup> , Kz | Mn   |           |         |
| Disease                         | Uz  |                   | Ru <sup>a</sup> , Kz  | Ru <sup>b</sup> , Ru <sup>c</sup> ,<br>Mn                          |           |         |
| Climate                         |     |                   | Kz  | Uz, Ruª,<br>Ruʰ, Ruc,<br>Mn  |           |         |
| Predation                       |     | Uz, Mn,<br>Kz     | Ru <sup>a</sup> , Ru <sup>b</sup> ,<br>Ru <sup>c</sup>      |  |           |         |
| Fragmentation                   |     |                   | Uz, Ruª,<br>Ruʰ, Ruc,<br>Kz                                 | Mn   |           |         |
| Demographic factors             |     | Mn                | Ru <sup>a</sup> , Ru <sup>b</sup> ,<br>Ru <sup>c</sup> , Kz |  |           | Uz      |
| Barriers to migration           |     |                   | Ru <sup>a</sup> , Ru <sup>b</sup> ,<br>Kz                   | Ru <sup>c</sup> , Mn   | Uz        |         |
| Other<br>(Please specify)       |     | Ru <sup>1,a</sup> | Ru <sup>1,b,c</sup> , Mn <sup>2</sup>                       |  |           |         |

## Additional threats specified:

- 1. Retaliatory poaching due to damage to agriculture Russian populations: a) N-W Pre-Caspian, b) Ural, c) Betpak-dala
- 2. Retaliatory action (killing, driving away)
- \* Note the Mongolian assessment is from WWF/WCS
- 77. The Range States agree that illegal hunting is a major threat. In Uzbekistan the concern is hunting for meat, while in the other countries hunting for the international horn trade is seen as more serious. As expected, disease is rated as a major threat for the Ural population (by the Russian Federation) and for the Mongolian population. Climate change is also rated as a High threat by all countries except Kazakhstan. The Range States also rate barriers to migration as a major threat. There is only one factor for which knowledge is lacking (demographics in Uzbekistan) and only Uzbekistan gives Very High ranks to threats (barriers and illegal hunting).
- 78. A comparison with the Overview Report for MOS3 (2015) shows that some of the threats have become more acute, specifically Climate Change and Barriers to Migration. But overall, perceived threat levels are lower across most categories.

#### Education and awareness.

79. 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, Saiga Days, Day of Migratory Species and Teachers' Academies 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.

80. In Kazakhstan, ecological studies have included monitoring of Saiga birth areas in Betpak-dala, in order to understand factors influencing population productivity. There have also been substantial studies on Saiga disease following the 2015 mass-mortality 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. Currently, 42 individuals are collared in Mongolia to explore distributions and movement patterns. The data are being used to justify a new protected area and expansion of existing protected areas.

#### Priority Actions.

81. Priority actions listed in the National Reports of Saiga MOU Signatories (and complemented by WCS/WWF for Mongolia) are:

#### Kazakhstan:

- Shut down the illegal trade in Saiga horns, through eliminating demand for horns and halting poaching;
- Study of Saiga diseases.

#### Russian Federation:

- Expand ranger teams;
- Create a transboundary ranger team;
- Provide crossing points for Saigas in the Russia-Kazakhstan border fence;
- Strengthen efforts against poaching and illegal trade;
- Take preventative measures against epizootic diseases.

## Uzbekistan:

- Strengthen the capacity of the staff of Saigachy reserve;
- Increase the number of state inspectors;
- Install signs and organize protection of watering places:
- Continue to raise professional standards of inspectors/rangers (introduction of SMART patrolling, carrying out monitoring and counting of Saigas and other rare species);
- Conduct regular awareness-raising work with the populations of surrounding villages, including participation in Saiga Day, Protected Area Day; increase knowledge of the needs and priorities of local inhabitants;
- Develop an educational programme for schools within which excursions and ecological lessons will be conducted;
- Conserve groups of Saigas in the Pre-Aral region (strengthen protection, establish a protected area) on the existing bed of the Aral Sea and adjoining areas in Saiga habitat (Vozrozhdenie Island and adjoining area);
- Strengthen bilateral cooperation with the Republic of Kazakhstan within the framework of the Agreement signed in 2010.

### 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;
- Complete and aprove the species action plan for 2021-2030.

#### 4.0 Evaluation

- 82. Based on the synthesis of the national reports and other available information the following achievements can be recognized:
  - First, and most importantly, the species has, overall, **increased in abundance** across its range.

#### This is because:

- 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 in all range states, by governmental and non-governmental organizations, covering the full range of priorities set out in the 2015-20 CMS MTIWP.
- The Saiga MoU under the Convention on Migratory Species has been effective at bringing stakeholders together to plan and report on interventions and to share news and technical expertise.
- This has led to collaboration and sharing of experience between NGOs and other international and national actors, for example on social awareness raising, law enforcement, population monitoring, disease surveillance, and MOU coordination.
- There have been arrests and successful prosecutions of Saiga poachers and traders in some parts of the range and overall it appears that poaching rates have declined.
- Expanded or re-designated protected areas and landscape-scale initiatives have been put in place (e.g. Saigachiy reserve in Uzbekistan, expanded Altyn Dala Conservation Initiative).
- There has been continuing investment in improved monitoring methods, particularly in Kazakhstan and Mongolia, such that our understanding of Saiga population trends is improved.
- Public awareness campaigns have been carried out to improve 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 remained high (particularly as a result of the two major mass mortality episodes), and there is more information on the species and its conservation online via a range of social media and other outlets.

## 83. Concerns exist in the following areas:

- Population sizes are still too low in three populations (Mongolia, North-West Pre-Caspian and Ustyurt, particularly in Uzbekistan), meaning that they are still at risk of extirpation.
- **Poaching** and trade in Saiga products is still happening throughout the range, suggesting a need for further investment in improving anti-poaching effectiveness.
- **Demand for Saiga products** in consumer countries is still high, stockpiles are unmonitored and there is limited action to curb illegal trade outside the range states.

- Despite improvements in rigour for some populations, **monitoring** of trends in abundance is still inconsistent in quality, method and frequency. Transboundary monitoring is not coordinated.
- **Linear infrastructure** (including railways, roads, pipelines, and a border fence) are impacting all three *S. tatarica* populations, particularly Ustyurt and Betpak-dala, and these impacts will worsen with upcoming infrastructure projects, unless mitigation is implemented (including re-routing where necessary).
- Mass mortality from disease is still an issue, with the 2016/17 PPR outbreak in Mongolia having a major impact. As further outbreaks are likely (including as a result of vector spread under climate change), there is need for more proactive monitoring and control measures, particularly at the wildlife/livestock interface. The potential for major die-offs from disease highlights the importance of ensuring that all populations are large and resilient enough to withstand catastrophic events.
- The CITES decision to place a zero quota on international trade in wild-sourced Saiga products is likely to accelerate a pre-existing trend towards commercial captive breeding facilities (either within or outside the range), with unknown consequences for the illegal trade in wild-sourced products.
- Conservation-focussed captive breeding facilities are not well organised into an international network and are therefore not fulfilling their potential. There are no agreed guidelines for husbandry, genetic management, studbook management and reintroduction. There is no captive herd within the Saiga range which is large enough to be viable in the medium term, and no captive population of S. borealis. The large captive herd in Ukraine is not well integrated into international conservation efforts.
- The successful restoration of the Ural population brings with it the increasing threat of resentment of Saigas by local livestock herders, increasing competition for grazing and water. The recent disease outbreaks are contributing to concern that Saigas may transmit diseases to livestock. These issues are also felt in other populations, particularly in Mongolia. As Saiga populations recover, as livestock herds expand, and as human influence on the Saiga 's habitats increases (e.g. through infrastructure), Saigas will increasingly be squeezed into smaller, and potentially less suitable, areas, and negative interactions with humans will become more frequent and acute.
- The impacts of **climate change** on Saigas could be severe but are still poorly understood; modelling and vulnerability assessments are needed to predict these impacts so that proactive action can be taken to mitigate them.
- There is very little **rigorous evaluation** of the impacts of conservation actions, to feed into future planning of conservation priorities and investments.
- More substantial funding is required from international donors and from national governments, to support the implementation of priority actions under the MTIWP

FIGURE 1: RANGE OF THE SAIGA ANTELOPE

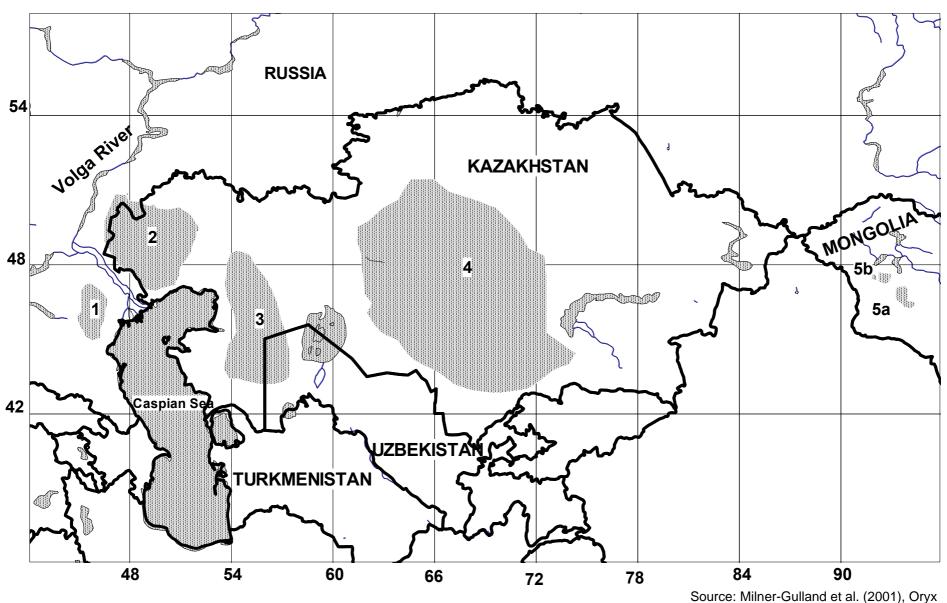


Table 2. Protected Areas relevant to Saiga conservation

| Name   | Area (km²) | Category                | When Saiga present, which population  | No. rangers                    | No. vehicles | No. motorbikes |
|--|------------|-------------------------|---------------------------------------|--------------------------------|--------------|----------------|
| Russian Federation                                   |            |                         |                                       |                                |              |                |
| Chernye Zemli Biosphere Reserve (zapovednik)         | 5,842      | Federal                 | Year-round, N-W pre-Caspian           | 46                             | 30           | 3              |
| Stepnoi Sanctuary (zakaznik)                         | 1,080      | Regional<br>(Astrakhan) | Year-round, N-W pre-Caspian           | 10                             | 5            | 4              |
| Bogdinsko-Baskunchakskiy nature reserve (zapovednik) | 185        | Federal                 | Summer, Ural                          | 11                             | 6            | 0              |
| Baskunchak nature park                               | 395        | Regional<br>(Astrakhan) | Summer, Ural                          | 7                              | 4            | 0              |
| Elton nature park                                    | 1,056      | Regional<br>(Volgograd) | Summer, Ural                          | 4                              | 1            | 0              |
| Orenberg reserve (zapovednik)                        | 382        | Federal                 | Summer, Ural, Betpak-dala             | 24                             | 5            | 3              |
| Kazakhstan   |            |                         |                                       |                                |              |                |
| Irgiz-Turgai Rezervat                                | 763,549    | VI                      | Spring-autumn, small groups in winter |                                |              |                |
| Korgalzhyn Reserve                                   | 543,171    | la                      | Year-round                            |                                |              |                |
| Altyn Dala Rezervat                                  | 489,776    | VI                      | Spring to autumn                      |                                |              |                |
| Naurzum Reserve                                      | 191,381    | la                      | Summer                                |                                |              |                |
| Barsakelmes Reserve                                  | 160,826    | 1a                      | Year-round                            |                                |              |                |
| Uzbekistan   |            |                         |                                       |                                |              |                |
| Saigachiy Sanctuary                                  | 8,481      | Landscape reserve       | Oct-May, Ustyurt                      | 13<br>(2 admin, 11<br>rangers) | 4            | 0              |

| Name                     | Area (km²) | Category                 | When Saiga present, which population | No. rangers | No. vehicles | No. motorbikes |  |  |  |
|--------------------------|------------|--------------------------|--------------------------------------|-------------|--------------|----------------|--|--|--|
| South Ustyurt            | 14,471     | National Natural<br>Park |                                      | 23          | 3            | 0              |  |  |  |
| Mongolia                 | Mongolia   |                          |                                      |             |              |                |  |  |  |
| Sharga-Mankhan           | 396,291    | Nature Reserve           | Year-round, core population          | 3           | 0            | 2              |  |  |  |
| Khomyn Tal NP            | 4,111      | National Park            | Year-round, small (~30 indivs)       | 8           | 6            | 5              |  |  |  |
| Khar-Us Lake NP          | 8,530      | National Park            | Year-round, core population          | 13          | 2            | 13             |  |  |  |
| Khar Azargiin nuruu NR   | 1,926      | Nature Reserve           | Year-round, core population          | 1           | 0            | 1              |  |  |  |
| Khyargas Lake NP         | 3,413      | National Park            | Year-round, small (~60 indivs)       | 2           | 0            | 2              |  |  |  |
| Mongol els NP            | 203,000    | National Park            | Year-round, small (~60 indivs)       | 1           | 0            | 1              |  |  |  |
| Bukhun LPA               | 1,697      | Local protected area     | Year-round, small (~60 indivs)       | 0           | 0            | 0              |  |  |  |
| Proposed                 |            |                          |                                      |             |              |                |  |  |  |
| Darvi mountain           | 45,000     | Local protected area     | Year-round                           |             |              |                |  |  |  |
| Sharga-Mankhan extension | Unknown    | Nature Reserve           | Year-round                           | 3           | 0            | 2              |  |  |  |