SAIGA CONSERVATION ALLIANCE

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SAIGA NEWS

Providing a six-language forum for exchange of ideas and information about saiga conservation and ecology

Photo by Anna Luschekina

In memory of Uldis Knakis (1939 – 1970), who died at the hands of poachers

…That fateful September morning Uldis Knakis and driver P. Volokhov drove out to count saigas. Climbing to the top of a wooden topographic tower, Knakis noticed a car on the steppe. Realising that they were being chased, the poachers rushed to escape. Lighting the poachers' lorry with headlights, Knakis noticed saiga horns in it. As they understood that they would not escape, the poachers aimed their guns at the inspectors. Knakis fell on to the shoulder of his courageous friend. The wound proved fatal.

Uldis Knakis.

26 September 2010 marked forty years since the tragic death of Uldis Knakis. Upon graduating from the Irkutsk Agricultural Institute he worked as an inspector on the Kalmyk steppes, where he established the first specialised saiga antelope protection team. Back then, in the 1960s and '70s, poachers killed animals by their hundreds and thousands, driving them to their deaths in vehicles, and shooting them on the move.

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WCN Wildlife Conservation Network

WWF

Wildlife Conservation Society

WCS China

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It was very hard to fight this type of poaching - the poachers almost always were able to escape as soon as they spotted inspectors. Saigas died *en masse* in irrigation canals which stretched for hundreds of kilometers. Builders did not think to include special places for the animals to cross, and once in the concrete traps they were unable to get out.

In the pages of the newspapers, Knakis called upon the people to take urgent measures to protect saigas, and was successful - a well-equipped, specialised team of inspectors was set up. Special measures for the construction of passes over irrigation canals were taken. Uldis Knakis had big plans. Unfortunately, the accident claimed his life when he was only 31 years old. The murderer was never found.

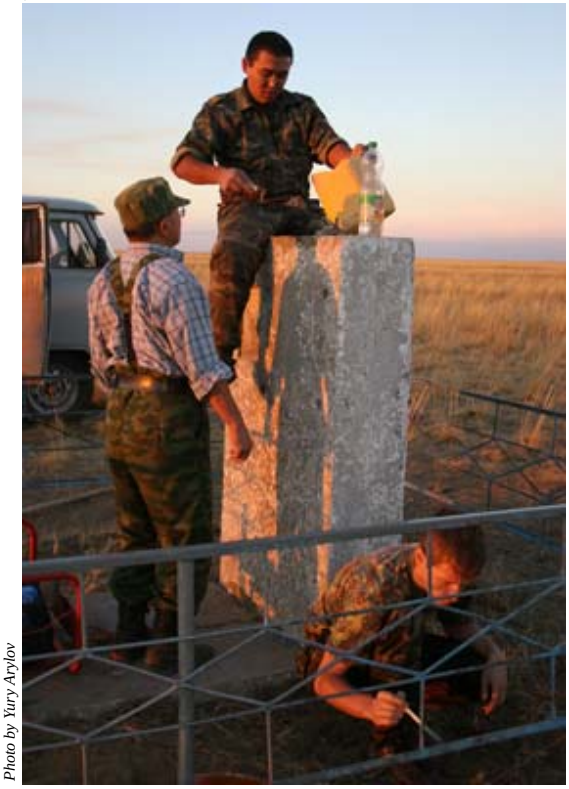

Photo by Yury Arylov

Reconstruction of the monument to Uldis Knakis.

A monument was erected in the place of his death, in Yustinsky district. A youth squad named after U. Knakis was established at the Irkutsk Agricultural Institute. This year, to mark the anniversary of his death, the Saiga Conservation Alliance supported the initiative of their Kalmyk colleagues to renovate the monument and establish a memorial marble plate.

For additional information please contact Yu. N. Arylov at kalmsaiga@mail.ru.

Updates

Second Meeting of the signatories of the CMS MOU on saiga conservation is a great success

By E.J. Milner-Gulland
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The Memorandum of Understanding on saiga conservation under the Convention on Migratory Species came into force in September 2006. At that first meeting, a Medium Term International Work Programme (MTIWP) was agreed, with a range of prioritised actions towards the goal of halting, and where possible reversing, the decline of saigas over the next five years. On September 7th-10th 2010, the signatories to the MOU and saiga experts met again in Ulaanbaatar, Mongolia, to review progress, agree a new MTIWP for the next five years, and to consider a range of other issues.

The meeting was notable for its atmosphere of cooperation and sense of purpose, and the open way in which issues were discussed and consensus reached. I am sure that this openness is having a beneficial effect on the conservation status of the species itself through more effective and integrated actions. The fact that people are able to meet each other personally every few years under the CMS banner, discuss issues face to face and reach agreement, is a major factor in improving conservation effectiveness.

The first two days were taken up with a technical workshop, at which participants discussed the documents prepared for the meeting by the Saiga Conservation Alliance and the IUCN-SSC Antelope Specialist Group, on behalf of the CMS Secretariat. These were an overview report on the status of the saiga antelope, a report on progress towards implementation of the previous MTIWP, and a revised MTIWP for the period 2011-2015. Detailed and helpful comments were made by the delegates to the meeting, resulting in much improved documents for adoption by the formal meeting of the signatories to the MOU on 9th-10th September. The technical meeting also had a number of expert presentations illustrating progress made under the different themes of the MTIWP.

Photos by Alexander Esipov

Opening of the the CMS MoU meeting.

Photos by Alexander Esipov

Signing of MoU by Mongolia, SCA and ACBK.

Although there are still substantial issues with the accuracy and bias of the monitoring procedures for saigas, the evidence suggests that in four of the five saiga populations, the dramatic decline that characterised the 1990s and early 2000s has been halted, and in some cases there are clear signs of quite dramatic recovery. The Ustiurt population is still under substantial pressure, and there is a real danger of losing this population unless urgent action is taken. The Russian population is also facing a difficult time, and the Ural population was recently hit hard by a mass mortality episode. However there has been substantial progress in most aspects of the MTIWP, including public engagement, trade, monitoring and protected areas. Despite the concerns that still exist about some populations, the documentation and presentations at the meetings clearly demonstrated how far saiga conservation has come since the first meeting of the signatories, and should be a source of pride for all involved.

The meeting also moved saiga conservation forward in other ways. In a very welcome and necessary development, Mongolia was included as a range state, which went along with a broadening of the MOU to cover the genus *Saiga*, rather than just the sub-species *tatarica*. Two new collaborating organisations signed the MOU; the Saiga Conservation Alliance and the Association for the Conservation of Biodiversity in Kazakhstan, both of which have been very active in saiga conservation over several years. These two organisations also jointly took up the Secretariat's challenge to provide a coordination mechanism for the MOU.

After the CMS meeting, the Saiga Conservation Alliance took the opportunity to hold its annual meetings, at which Olga Klimanova, Director of ACBK, was welcomed to the SCA's steering committee, and Professor A. Bekenov was elected to Honorary

Membership in light of his long and distinguished service to saiga conservation (see article later in SN).

The CMS meeting was hosted by WWF-Mongolia, who did an amazing job, not only in organising the logistics of the meeting so smoothly, but in making the delegates feel welcome in Mongolia. The Ministry of Forestry hosted a memorable meeting dinner where we experienced the fresh air and wide horizons of the Mongolian countryside, along with some extraordinary throat singing and dancing, which was a welcome respite from days and nights of hard work in a conference room!

I came away from this meeting feeling that the hard work that all the delegates had put into saiga conservation since 2006 had been vindicated by real progress on the ground. Conservation of the saiga antelope is moving towards a new era of collaboration, with a focus on the role of the species in the wider ecological and social landscape. The meeting has energised us for the major challenges which still lie ahead.

Editors' Note: All the meeting documents are available at http://www.cms.int/species/saiga/2ndMtg_Mongolia/2nd_saiga_range_states_meeting.html.

China engages in conservation and sustainable use of the Saiga Antelope

By Robert W G Jenkins
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In convening an international workshop on the conservation and sustainable use of saiga antelope, China demonstrated its desire to engage in international efforts to conserve the species.

The workshop, held in Urumqi, Xinjiang Autonomous Region on 27-29 September 2010, was hosted jointly by the CITES Management Authority of China together with the Secretariats of the Migratory Species Convention (CMS) and the Convention on International Trade in Endangered Species of wild Fauna and Flora (CITES) in association with the Xinjiang Forestry Department. Range States of saiga antelope were represented by delegates from Kazakhstan, Mongolia, Russian Federation and Uzbekistan. The Urumqi workshop followed on the heels of the second meeting of signatories to the CMS Memorandum of Understanding concerning Conservation, Restoration and Sustainable Use of the Saiga Antelope, which adopted a revised Medium Term International Work Programme for the Saiga Antelope for the period 2011-2015.

The workshop was opened with welcoming addresses by senior government officials and representatives of the two international conventions, followed by a series of key-note presentations providing different perspectives on the conservation problems facing saiga antelope. These key-note addresses were followed by presentations from the range states which summarised the current conservation status of the species in each country and the various management and enforcement actions being undertaken as well as the challenges being faced by each range state. In response to the activities identified in the Medium Term International Work Programme that was adopted in 2006 for the period 2007-2011, the five MOU signatories (Kazakhstan, Mongolia, the Russian Federation, Turkmenistan and Uzbekistan) have undertaken a range of activities (e.g. surveys and monitoring, increased anti-poaching patrols, community education and awareness programmes) to achieve greater protection for saigas and facilitate recovery of the populations.

Photo by Zhang Yangang

Opening Session-Urumqi Workshop.

Photo by Zhang Yangang

Workshop Plenary.

The CITES Management Authority of China elaborated measures that have been taken within China to strengthen law enforcement and detection of illegal shipments of saiga horn. Stocks of legal saiga horn in China were being inventoried, registered and sealed in coded and traceable containers. Companies manufacturing traditional medicines that contain saiga horn must identify the package with a coded, non-reusable label. Only labeled medicines are available to the public according to government-established quotas

Saiga horn is an important ingredient in a range of traditional pharmaceutical products. It was extremely useful therefore that the traditional Chinese medicine industry, as a principal consumer of saiga horn, was well represented at the workshop. In addition to explaining the range of ailments for which saiga horn is used as treatment, the industry advised that it was currently reviewing the range of products containing saiga horn as well as researching the efficacy of alternatives. The China Association of Traditional Chinese Medicines expressed a

desire to ensure that the wild resource is effectively conserved and harvested on a sustainable basis.

Medicines expressed a desire to ensure that the wild resource is effectively conserved and harvested on a sustainable basis.

On the second day, two working groups were established to examine in more detail: i) conservation and management requirements for the wild resource; and ii) sustainable use and trade regulation respectively. Following some very useful discussions, the two working groups reported their findings to plenary.

The workshop concluded with a visit to the nearby Tianshan Wild Animal Park where, after viewing the variety of different species on exhibit, delegates were the guests of Mr Yang Gang, Deputy Governor of Xinjiang Autonomous Region, at a delicious banquet of local cuisine.

The Urumqi workshop provided a valuable forum to further refine the range of actions identified in the CMS Work Programme for 2011-2015. Furthermore, and perhaps more importantly, the workshop, for the first time, brought together representatives of saiga range states and representatives of the traditional Chinese medicine industry. The event enabled an exchange of views between all participants as an essential first step to exploring potential synergies and cooperation in the future.

A summary report on the outcomes and recommendations of the workshop in Russian and English is available on the CMS website: http://www.cms.int/news/PRESS/nwPR2010/10_oct/nw_Saiga_151010.htm.

WCN 2010 Wildlife Conservation Expo

By Anthony Dancer
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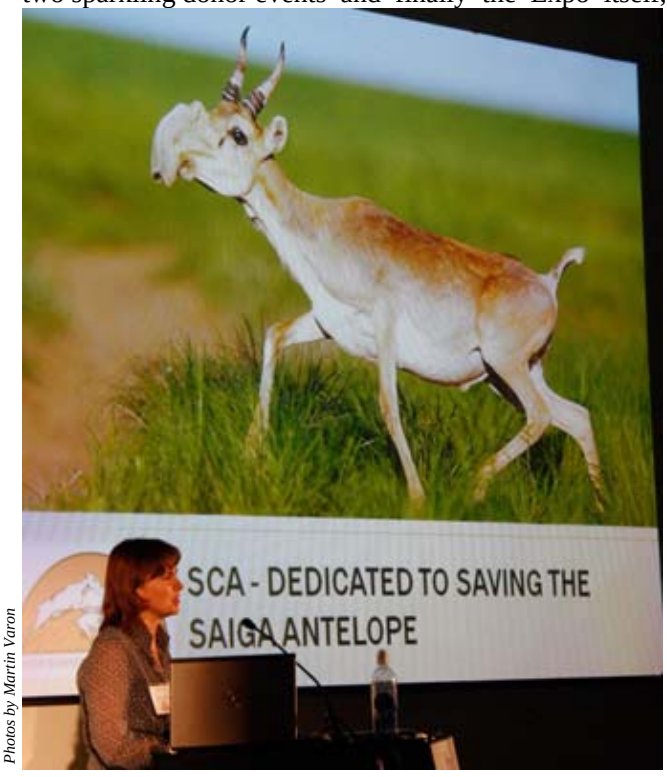
The Wildlife Conservation Network (WCN) held its 9th annual Wildlife Conservation Expo week between 28 September and 3 October 2010 in the San Francisco Bay Area, California. The SCA have held partner status with WCN for a little over four years now; a relationship which provides the SCA with valuable support in the form of fundraising, back-office expertise, networking and international exposure. This support culminates in the SCA's inclusion in the yearly Expo week, an exceptional and multi-faceted event which provides vital assistance for the year ahead.

The week broke down into three stages: a series of workshops for the assembled partner conservationists, two sparkling donor events and finally the Expo itself,



Photos by Martin Varon

SCA presentation by Elena Bykova at Mission Bay Conference Center, San Francisco.

Photos by Martin Varon

Members of the public at the Expo.

which was open to the public. The topics covered in the workshops were many and wide-ranging: from marketing and fund-raising techniques; to making the most of web-based conservation tools. Crucially, they all provided an insight into methods which are not traditionally available to smaller conservation groups, but which can result in tangible improvements in cash-flow and operational practices; ultimately freeing up conservationists to focus on on-the-ground preservation of the species they support.

Both donor events were spectacular affairs, bringing the great and the good of the Bay Area directly together with the charities they help sustain. Face-to-face contact with people working in and from the range states of endangered species helps to forge personal relationships and inspire confidence that financial support is being directed to where it is needed most. These events also emphasise that there is considerable international interest in preserving species at risk of extinction and, consequently, cause for hope.

The Expo Day was a chance to raise awareness amongst the general public of the plight of the species in question, some of which they may not have previously known existed, and was well attended with more than1,000 guests attending the weekend's events.

The conservationists' presentations (including by the SCA's Elena Bykova) are available for viewing at http://wildlifeconservationnetwork.org/events/expo_videos.html. This year's Expo also benefited from the attendance of actor Edward Norton, a fellow conservationist and the UN Goodwill Ambassador for Biodiversity. Mr. Norton presented inspirationally at all three events and his presence will no doubt do much to raise the profile of the target species and WCN's network.

This year's Expo was again a successful one for the saiga antelope and the SCA, with substantial interest from both the public and donors and many old friends in attendance. Admiration was generally expressed for all people working to preserve the saiga in its range states. Further funding and donations were generously provided, for which we at the SCA are extremely thankful. Finally, we would also like to offer our sincere thanks to WCN's staff and volunteers, whose efforts are proving invaluable in the fight to conserve this wonderful species.

Photos by Martin Varon

Introductory speech by actor Edward Norton, Garden Party.

Media reports

Uzbekistan and Kazakhstan agree on cooperation for saiga conservation

On 20 August 2010 the President of Uzbekistan, Islam Karimov, approved an international agreement with the Republic of Kazakhstan on the protection, restoration and sustainable development of saiga populations. The agreement was signed on 17 March 2010 during a visit to Uzbekistan by Nursultan Nazarbaev, the President of the Republic of Kazakhstan. According to the agreement, both sides will take independent measures for saiga conservation in their own countries, according to national laws. The two states will coordinate the organisation of saiga population monitoring, and will use the results of the monitoring in their conservation planning.

For more details please follow the links: http://www.centrasia.ru/newsA.php?st=1283503140 *and* http://www.regnum.ru/news/fd-abroad/ecology/1321545.html#ixzz0yP6lF8r.

Ustyurt landscape conservation transboundary dialogue

On August 9th-12th 2010, a meeting took place in Tashkent, Uzbekistan, on planning and assessment of the "Ustyurt Landscape Conservation Initiative", hosted by the State Committee for Nature Protection of the Republic of Uzbekistan. This was followed by a workshop on monitoring, and an evaluation of the effectiveness of nature conservation activities in Ustyurt. The goal of the meeting was to familiarise all parties with this biodiversity conservation initiative and to clarify the roles

Photo by Alexander Esipov

The meeting in Tashkent: Paul Cowles, Pact, during the workshop on monitoring and evaluation of the effectiveness of nature conservation activities..

of collaborators and stakeholders. In addition, the participants discussed approaches to the assessment of biodiversity threats and drivers of biodiversity loss in the region. Participants included officials from the State Committee for Nature Protection of the Republic of Uzbekistan, legislators from the Oliy Majlis, Uzbekistan's parliament, international organisations, scientists, members of the public and journalists. Project partners include: the State Committee of Nature Protection; the Institute of Zoology of Uzbek Academy of Sciences; the Uzbek Society for the Protection of Birds; the international NGO Fauna and Flora International (FFI); and Pact Inc. The meeting's discussions were practical and constructive.

More details are available at: http://www.econews.uz/index.php?option=com_content&view=article&id=703.

Photo by Committee for Forestry and Hunting Kz

The meeting in Astana. Paul Hotham, FFI, and Bakytbek Dusekeev, the Committee for Forestry and Hunting sign the MoU.

A similar event took place in Astana, Kazakhstan, hosted by the Forestry and Hunting Committee of the Republic of Kazakhstan, on October 18th-21st 2010, to discuss the initiative's programme in the Kazakhstan part of the Ustiurt plateau. Participants included officials from the Committee for Forestry and Hunting, inspectors from the Aktyubinsk and Mangistau regional Committee for Forestry and Hunting, representatives of the State Enterprise Okhotzooprom , FFI, Pact Int., and the Association for the Conservation of Biodiversity in Kazakhstan. The Committee for Forestry and Hunting and FFI signed a Memorandum of Understanding confirming their cooperation in the framework of this initiative and in particular on the conservation of saiga antelope.

Please follow the link for more details: http://www.oopt.kz/news/detail.php?ID=2436.

The Ustyurt Landscape Conservation Initiative is made possible by the American people through the U.S. Agency for International Development (USAID) / SCAPES – Sustainable Conservation Approaches in Priority EcosystemS Program and the UK/DEFRA Darwin Initiative.

Kazakh government adopts a programme on conservation and rehabilitation of natural ecosystems

The government of the Republic of Kazakhstan has approved a programme on the conservation and restoration of natural ecosystems for the years 2010-2014, involving expenditures totalling 163.5 billion tenge. The programme will encompass a range of activities: development of the green economy; reduction of anthropogenic effects on the environment and health; conservation and rehabilitation of natural ecosystems; and development and improvement of the quality of environmental management systems. The government plans that programme will lead to a 10% increase in saiga antelope numbers by 2014.

Please follow the link for more details: http://static.zakon.kz/kazakhstan/183661-zhasyl-damu-programma-sokhranenija-i.html.

Kazakhstan believes it a point of honor to stop illegal hunt of saigas

Kazakhstan's Ministry of Agriculture and Water Management continues to toughen its stance on the illegal killing of saigas, according to media reports. Mr Erlan Nysanbaev, head of the Committee for Forestry and Hunting, made this position clear at an interdepartmental meeting aimed at establishing a common approach to saiga protection, held on 22 November 2010. At present, although precedents have been set regarding the imposition of fines and confiscation of property, the Criminal Code leaves it to the judiciary to decide on the severity of sentencing. Officials of the Ministry of Agriculture believe that fines and confiscations should be mandatory, and all legal loopholes should be closed. This standpoint was supported by the Ministry of Internal Affairs and the General Prosecutor's office. An amendment to the Crinimal Code in this regard has been submitted to Parliament.

In addition, the Kazakh Ministry of Agriculture proposed prohibiting the publication of advertisements for the sale of saiga horn. The price of 1 kg of saiga horn in the saiga range is up to 35,000-50,000 tenge (USD230-240); in Almaty the price reaches 200,000 tenge (USD1300), whilst in China the price increases to USD4000. The Kazakh Ministry of Agriculture requested that the Ministry of Internal Affairs pays more attention to the investigation of criminal cases involving illegal saiga hunting. The Committee of Forestry and Hunting, in conjunction with Okhotzooprom, has compiled and distributed lists of potential poachers to units of the General Prosecutor's Office and the Ministry of Internal Affairs. Mobile border patrols will be established in order to improve wildlife trade surveillance.

More details are available at: http://www.centrasia.ru/newsA.php?st=1290498300, http://www.kazpravda.kz/c/1283464537 *and* http://tengrinews.kz/kazakhstan_news/91049.

Saiga law change suggested in Kazakhstan

According to the Committee of Forestry and Hunting of the Kazakh Ministry of Agriculture, the prohibition on saiga hunting, including collecting, stocking, purchasing or selling of horns and other parts, has been extended until 2020. In addition, Mr Marat Orazaev, Vice-Minister of the Kazakh Ministry of Agriculture, made a statement on 23 November 2010, suggesting that shooting a saiga should result in three year's imprisonment. He made the statement at the presentation of a draft law amending legislation on forestry, fauna and protected territories. At present, only poachers hunting animals included in Kazakhstan's Red Book of Endangered species are imprisoned. The suggested changewould impose a similar punishment on people killing other designated species of animals and plants, such as the saiga antelope.

More details are available at: http://www.kt.kz/?lang=rus&uin=1133168926&chapter=1153528209.

Saiga reserve to be established in Western Kazakhstan

Media reports suggest that a reserve, to be named "Bokeiorda-Zhaiyk", is to be established in the range of the Ural saiga population by 2013, including the area in which an outbreak of pasteurellosis was recorded in 2010 (see SN11). *More details are available at:* http://www.express-k.kz/show_article.php?art_id=46894.

Saiga numbers continue to decline in Kalmykia

According to experts from the federal agency "Tsentrookhotkontrol" and the Ministry of Natural Resources for the Republic of Kalmykia, saiga antelope numbers have dropped tenfold in the last decade, to around 10,000 individuals, and are continuing to decline. At a working meeting between the Minister for Natural Resources and Ecology of the Russian Federation and the Head of the Republic of Kalmykia, Alexei Orlov, held on 22 December 2010, it was announced that the Russian Ministry of Nature would consider the regional ministry's suggestions regarding improvements in the conservation activities of Chernye Zemli State Biosphere Reserve, and would prepare a package of measures aimed at saiga conservation.

More details are available at http://eco.rian.ru/danger/20101222/312103262.html.

Shell to support programme of saiga conservation in Kalmykia

On 26 August 2010, the largest foreign investor in Russia, Royal Dutch Shell plc (Shell), and the Government of the Republic of Kalmykia, signed an agreement supporting measures aimed at the conservation and rehabilitation of Kalmykia's saiga population. Shell will invest 3 million roubles (around US$100,000) into the conservation of this species. The programme includes: a status survey of Kalmykia's saiga population; a study into saiga movement patterns; habitat protection; poaching control; and activities raising awareness among local residents.

Photo by Elista.org.

Kalmykian Prime Minister, Mr Oleg Kichikov (left), and the Executive Vice President of Royal Dutch Shell plc for Russia and the Caspian Region, Mr Charles Watson (right), sign the agreement on saiga conservation.

Kalmykia's Ministry of Natural Resources, Environmental Protection and Energy Development will be responsible for implementing the programme. This agreement has resulted in the establishment of the Department for Saiga Conservation, comprising four staff, with plans for the purchase of a vehicle and further necessary equipment. Monitoring of the programme will be carried out by UNDP Russia.

More details are available at: http://www.elista.org/elista/shell-podderzhit-programmu-po-sohraneniyu-ischezayuschey-populyatsii-saygaka-v-kalmyikii-3.html.

New calendar devoted to saiga antelopes published in Kalmykia

The launch of the calendar, entitled "Save the saiga – our living heritage", took place on 21 December 2010, timed to coincide with the closing of Kalmykia's Year of the Saiga. The publication was prepared by the Centre for Wild Animals, in conjunction with the company Megafon. The goal of this publication is to raise public awareness of the need for saiga conservation. Each calendar month has a picture of a saiga at that particular time of year and a message of support from someone working towards saiga conservation in Kalmykia. Local celebrities and representatives of international conservation organisations were in attendance at the launch and expressed their support for saiga conservation.

For more information please contact Yu.N. Arylov at kalmsaiga@mail.ru.

Saiga Antelopes Star at the 3rd Xiaozhou Art Festival

The 3rd Xiaozhou Art Festival was held in Guangzhou, China, in October 2010, with over 2,000 artists, professionals and students present at the opening ceremony, 50,000 visitors enjoying the festival, and over 10 different media organisations providing coverage. A special exhibition addressing the conservation of endangered wildlife was developed for the festival by the Xiaozhou Arts Festival Organizing Committee, the Animal Protection Association of Guangzhou Academy of Fine Arts and the Diancuifeng Design Studio, with support from the Wildlife Conservation Society (WCS) China Program.

Photos by Wildlife Conservation Society

The main billboard of the festival.

The exhibition combined unique forms of artistic expression with graphs and charts to deliver a strong message to visitors that the illicit wildlife trade has driven species into extinction, eliciting a good response from the audience. Saiga antelopes were a star of the exhibition, with saiga conservation videos, pictures and public participation activities revealing that unrestrained demand and excessive use of saiga horn has wiped out China's entire saiga population, and also threatens the survival of saiga antelope populations in neighboring countries.

The illegal trade in Guangzhou has long been considered as one of the major threats to biodiversity in China and globally. Illegally smuggled wildlife is traded for food, pets, decorations and medicine in local markets in Guangzhou, including saiga horn.

For more information please contact Fenglian Li, WCS China, fli@wcs.org.

Photos by Wildlife Conservation Society

Discussion of the IUCN Ret List Status of different species.

24 newborn saigas growing well in Gansu Endangered Animals Research Centre, China

Photos by Gansu EARC

Saiga herd with calves at Gansu Endangered Animals Research Centre.

When the Gansu Centre was founded in 1987, on the southern edge of the Tengger Desert, twelve saiga antelopes were the first endangered species to be introduced. In 1993 the saiga enclosure was enlarged to 30 hectares, allowing the animals to forage freely. The captive saiga population has fluctuated over the last 20 years, with saiga numbers reaching a high of 33 in 1997, but decreasing to 9 in 2000. The situation has improved in recent years, with 22 newborns in 2009 and 24 in 2010, increasing the current total population size to 80, with a sex ratio of 1:1. The Chinese government hopes that the species can eventually be reintroduced to part of its historical range within the country. Given the small number of original animals and the aim of reintroduction, the Centre is keen to increase its herd by introducing new animals from other countries, and is seeking collaborators to do this.

For further information please contact Gansu EARC, jianggeapple@126.com and Aili Kang, akang@wcs.org.

Cases of poaching and illegal trade

Ural population

August 2010

Four poachers were caught red-handed on the steppes of Akzhar, Western-Kazakhstan, having tried to escape on two motorbikes with 12 saiga horns from nature conservation officers and veterinary police.
More details are available at:
http://www.kazpravda.kz/c/1282863423.

November 2010

In Western Kazakhstan 27 dead saigas with bullet wounds and horns removed were found 40 km from Azhibai Village. *More details are available at:* http://kt.kz/?lang=rus&uin=1138536468&chapter=1153527210.

Ustyurt population

August 2010

In Shalkarsky district, Aktyubink province, Kazakhstan, an Okhotzooprom inspector shot and killed a hunter trying to escape the scene of a crime, on 26 August 2010. Whilst patrolling the area, Okhotzooprom workers noticed a motorcyclist in the steppe. He ignored their demands to stop and tried to escape, whilst firing in their direction with a sports rifle. In response to shots making contact with their vehicle, an inspector fired warning-shots with an AKS-74, accidentally hitting the motorcyclist, who later died at the scene. The gun and a bag of saiga horns were found near the dead motorcyclist. An investigation has found that the inspector was justified in his actions.

More details are available at:
http://www.lenta.ru/news/2010/08/26/shot/

November 2010

In Baiganinsky district of Aktybinsk province, Okhotzooprom inspectors detained two residents of Oporny Village, Mangystau province, who were illegally hunting saigas. The inspectors found 20 dead saiga females, 9 juveniles and one horned male.

More details are available at:
http://inform.kz/rus/article/2326892.

Betpakdala population

June 2010

Two men were detained in Zhangeldynsky district, Kostanai province, for hunting saigas. A rifle and a pair of saiga horns were confiscated from the two suspects, aged 35 and 44. A criminal case is underway.
More details are available at:
http://kt.kz/?lang=rus&uin=1133168020&chapter=1153522089.

October 2010

On Thursday 28 October 2010, officers of the Irgizsky District Department of Internal Affairs and Okhotzooprom stopped a vehicle near Atanbas, in Zhaisanbaisk district. The vehicle belonged to the Irgizsko-Torgaisky nature reserve, and contained a driver and two passengers. Part of a saiga carcass and an unregistered 12-gauge double-barrelled shotgun were found inside the vehicle. A criminal investigation is under way. *More details are available at:*
http://vesti.kz/society/67674.

November 2010

The trial of two residents of Zban village, who were detained in August 2010 for the illegal hunting of saigas, was held in Zhangeldinsk district, Kostanai province, on 24 November 2010. The court decided to fine the poachers 700,000 tenge each, with additional damages of 282,000 tenge. The trial was the final stage of an operation carried out by officers of Kazakhstan's Ministry of Internal Affairs, codenamed "Poacher". The operation uncovered more than 3000 violations of nature-conservation laws, including rules on the keeping and carrying of firearms, with fines totaling 5.5 million tenge imposed.

More details are available at:
http://www.express-k.kz/show_article.php?art_id=46051.

Okhotzooprom rangers detained three Kyzylorda residents, in an off-road Toyota Land Cruiser, on 26 November 2010. The vehicle contained 11 saiga carcasses, and was stopped 30 km north of the saiga's wintering grounds in Akshala, Karaganda province.

On the same day, Okhotzooprom inspectors from Kyzylorda base station detained two citizens of the Russian Federation, in a vehicle containing 24 saiga horns, 7 wild boar carcasses and two guns. They were detained near Bogdok, Karaganda province. A criminal case hahs been instigated. For more information see the 2 December 2010 edition of Svoboda Slova newspaper.

North-Western Pre-Caspian Population

July 2010

Officers of the Chernozemelsk militia detained a 27-year-old resident of Artezian Village, who had been illegally hunting saigas. Three saiga carcasses, six horns, an unregistered rifle, a hacksaw and a knife were confiscated from the crime scene. An action for has been submitted to the Public Prosecutor's Office.

More details are at
http://kalmykia-online.ru/index.php?option=com_content&task=view&id=1340&Itemid=30.

November 2010

Chernozemelsk district court, Kalmykia, found a former district militia officer of Narn-Huduksky region, Valery Mukabenov, and two local residents, Luzin Sangadjiev and Adam Khalidov, guilty of illegally hunting saigas, on 1 November 2010. On 11 March 2010 the poachers shot 19 saigas (see Saiga News 11). The condemned were given suspended sentences and fined 484,500 roubles for environmental damage.

More details are available at:
http://eco.rian.ru/danger/20101102/291706624.html.

Photo by Kazakhstan Today

Articles

Results of the satellite collaring programme in Betpak-dala, 2009/10.

Albert Salemgareev, Orken Shaimukhanbetov, Steffen Zuther, Sergey Sklyarenko

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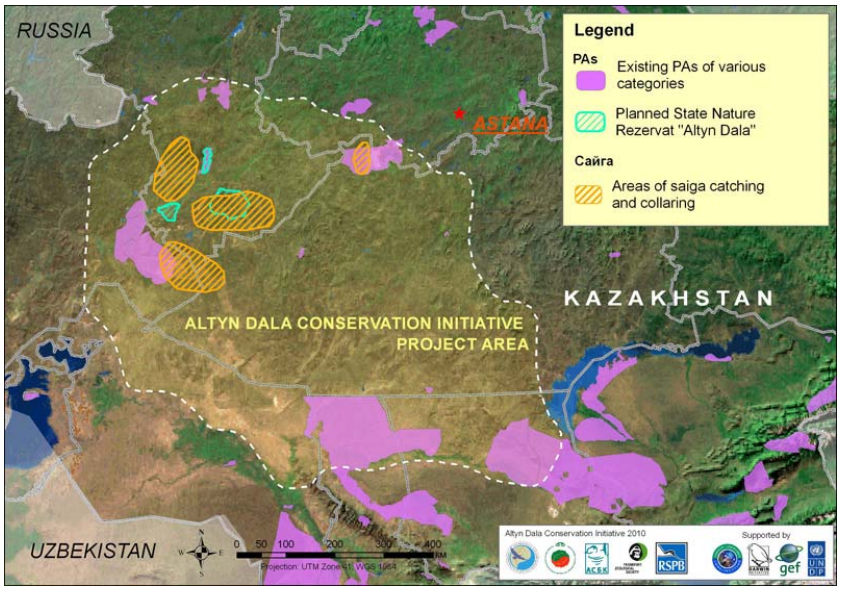
Under the Altyn Dala Conservation Initiative (ADCI), the Association for the Conservation of Biodiversity of Kazakhstan (ACBK) has been catching and collaring saigas in Betpak-Dala population since autumn 2009. The aim of the programme is to use satellite telemetry to gather reliable data in order to identify saiga wintering locations, calving areas, and migration routes, and to increase the effectiveness of anti-poaching work for this population.

Of 20 collars deployed in October 2009, 13 are still transmiting signals. Five out of seven of the lost collars were found in the steppe and collected for redeployment. These and 20 newly-purchased collars were subsequently deployed on female saigas of the Betpak-Dala population in autumn 2010.



Map. Saiga collaring areas in Betpak-Dala.

In order to catch the saigas we used a method developed during last year's fieldwork: the so-called "mobile nets method". There is no method of catching animals that offers a 100% guarantee of animal welfare, but our experience over the last two years indicates that the mobile nets method minimises the risk of injury and overheating to saigas. For this method cross-country motorcycles and two cars are used to chase saigas into two nets (length about 25-35 m, height about 2,5-3 m). The time limit for chasing is 4-5.5 minutes depending on the air temperature, the ground conditions, and the condition of the animal being captured. Animal handling is limited to a maximum of 4 minutes. Each captured animal is measured and blood samples are taken for DNA-analysis, as well as hair and faecal samples, and any ectoparasites. All animals get an intramuscular injection of 3ml of vitamin solution for quick recovery after release.

The collars used were GPS Plus collars from Vectronic Aerospace (http://www.vectronic-aerospace.com). These use GPS to determine animal coordinates and the Globalstar satellite system to transmit data from the location in the field to the recipient via email. This technique has the advantages of a comparably low energy demand; very precise coordinates due to the use of GPS; daily data transmission allowing immediate use of information; and high reliability of data transmission.

The weight of one collar is about 600g which should not pose a problem to saigas, as it represents only 2-3% of body weight. During the critical period of the first two weeks after catching and handling, no negative consequences for the health of the animals were observed, and there is no evidence of long-term effects.

During the 2009/10 project period 92.4% of transmissions were successful, enabling researchers to track saiga positions on a daily basis. The lifetime of the collars deployed last year is expected to be more than two years.

Photos by Steffen Zuther

A saiga is released with a collar around her neck.

After this period, the collar opens using programmable self-release mechanism, leaving the collar to fall off once a piece of cotton fabric decays. After battery replacement and repairs the collars can be used again.

Saiga telemetry provides valuable information concerning several scientific and conservation questions. For instance, the data from the 2009 deployment helped to improve the anti-poaching work of state rangers, contributed to the planning process for the 2010 aerial survey transects, led to the discovery of important calving areas within the "Altyn Dala" planned State Nature Reserve and the "Akkum" wildlife management area, and of a large accumulation of animals (about 25,000) prior to the rut. The collars also enabled us to identify rutting areas, and to produce a map of areas of high density to support the identification of new protected areas.

This programme is being conducted by ACBK in conjunction with with the Committee of Forestry and Hunting (Ministry of Agriculture of the Republic of Kazakhstan), the State enterprise Okhotzooprom, Frankfurt Zoological Society (FZS), and the Royal Society for the Protection of Birds (RSPB). It has been significantly supported by the Gregor Louisoder foundation, the Darwin Initiative, the Global Environment Facility (GEF), the Deutsche Gesellschaft fuer Technische Zusammenarbeit and the Centre for International Migration and Development on behalf of the German ministry for Economic Cooperation and Development.

After collaring saigas in Betpak-Dala the ACBK and Okhotzooprom team continued their work in an area west of the Aral sea, in the range of the Ustiurt saiga population. In this area, 6 collars were deployed in collaboration with Tottori University (Japan), the Institute of Zoology, Uzbekistan, and Institute of Zoology, Kazakhstan, and with Fauna & Flora International's UNDP SCAPES initiative on Ustiurt landscape conservation.

Feasibility study for trophy hunting of Saiga Antelopes using a community management approach

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Following interest shown in investigating the feasibility of sustainable trophy hunting of saiga antelopes in the Medium Term International Work Programme (MTIWP) of the Convention on the Conservation of Migratory Species agreed in 2006, a study into the potential for community based trophy hunting of saigas was undertaken.

Trophy hunting has been shown to be a potentially useful tool in raising revenue for local communities and preserving species and habitats. It is practiced with varying degrees of success with other ungulate species in several locations. Involving communities in the management of a conservation based scheme, rather than using solely government management, allows local people to feel that their interests are included and encourages them to place value on biodiversity. A community based trophy hunting program (CBTHP) offers rural communities the opportunity to gain revenue from an alternative livelihood and take part in wildlife resource management.

Photo by Navinder Singh

Saiga male.

However, there are a number of issues and problems that can arise, and other examples show that trophy hunting is not always a suitable approach, potentially causing population declines. In order to investigate the potential of trophy hunting as a tool for saiga conservation, a model was developed simulating the effect of trophy hunting on the dynamics and structure of the saiga population.

Results from the model suggested that a CBTHP focused on adult males is feasible, and could be sustainable, so long as external factors such as climate remain similar to the past. Climate change models from the Intergovernmental Panel on Climate Change (IPCC), published in 2007 predict that in there will be decreases in summer precipitation and increases in winter precipitation in the saiga range, which may lead to more extremes of weather, and hence to higher saiga mortality.

The potential for saiga antelopes to rapidly increase their population due to high rates of fecundity, early female sexual maturity, lifelong productivity, and adult females frequently producing twins, indicates that as a species they could be suitable for sustainable trophy hunting. Trophy hunting would target adult males in the population, which could cause sex bias, which may impact on population productivity if it is too extreme. Age differences cannot be reliably assessed after the male is 1.5 years old, making imposing a minimum age limit difficult, although the hunting season could be delayed until after the rut, giving older males a breeding opportunity.

Adult males are known to be able to fertilise harems of up to 12 females, male numbers therefore can drop to relatively low numbers before there is an effect on female fecundity, which is the major driver of population productivity. A possible drawback may be that removal of too many of mature adults can lead to a young age structure in the remaining population; young males may suffer more with the exertions of the rut and potentially suffer increased mortality in the winter months. It has also been shown previously that intensive trophy hunting interfered with territorial and mating behaviour in sable antelopes, which in turn led to an extended birth period and a higher rate of calf mortality. Late born offspring may have lower body weights entering the winter, which may hinder their survival through those months, especially if the winter is harsh.

One of the main hindering factors to a CBTHP for saigas is the high level of poaching previously experienced. To tackle this, legal deterrents need to be strictly enforced, and rural people need to be involved in active prevention of poaching. To encourage this sort of involvement a financial incentive to rural people could be helpful. Interviews conducted in 2005 (Kuhl, 2007) with a group of regular saiga hunters showed that the majority of the money that they make from poaching comes from the sale of saigas for meat, and much less through the sale of horns for traditional Chinese medicine (TCM). They aimed to earn $1107 from each hunt (2005 prices), harvesting approximately 50-60 saigas; 15-24 of these being adult males. Any benefits from a trophy hunting scheme would need to match these profit levels to be attractive to local saiga hunters.

Central Asia is a popular destination for trophy hunting. Many species are can be hunted in the region and many tour operators offer hunting packages. It is currently illegal to hunt saigas but prices for comparable species range from $250 to $850 per kill. The 15-24 male saigas taken during the interviewed hunting group's harvest are potentially worth $10,500-$16,800 at the higher end of trophy hunting prices, and $3,750-$6,000 at the lower end, easily out-stripping earnings from meat and horn sales from 50-60 mixed-sex poached saigas; albeit earned over a longer timescale and with the money going to different stakeholders.

It would be essential for a community management committee to have strong leadership acceptable to the whole community, which would facilitate the management of relationships between community members, technical support, available resources and visitors. To counter the possibility of corruption i.e. misappropriation of funds, falsification of census data or illegal/unlicensed hunts, full transparency is essential in the reporting of all aspects of the hunts. Without this a CBTHP may lose credibility with international hunting organizations and conservation agencies, and potentially lose support for the program in the communities themselves.

The vast distance covered by saiga migrations means that only certain communities would be in range of the saiga population during a trophy hunting season. This brings up the question of whether all communities that may want to be involved in a CBTHP could benefit from it. Research needs to be carried out as to how to address this problem, how poaching can be discouraged in communities which cannot benefit from trophy hunting, and what alternative livelihood options may be viable for them.

Population dynamics of the saiga in the North-West Pre-Caspian

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Interest in the saiga population in the north-western (NW) pre-Caspian continues unabated. This is due to atypical changes in population size over the last fifteen years. Sixty years of population monitoring suggests that a sharp increase in numbers always follows a decline. It happened once in the mid-1960s, and again in the second half of the 1980s. Yet another peak in numbers was recorded in 1996. However, the decline in numbers up to the year 2000 resulted in a 15-fold drop in population size. Furthermore, the expected rapid population increase following this decline has not taken place, with expert opinion suggesting no increase in numbers since the last full count 2004. The current status of the population is assessed as being catastrophic for quite understandable reasons.

It is customary to think that patterns observed in the past will continue into the future. Let us use this principle and consider an index of hunting quotas. I shall not dwell on the logical basis of this index, but note that it should be relatively closely linked to population size. A quota is established on the basis of the biological characteristics of a population and, first and foremost, should follow the dynamics of population size. If the quota cannot be fulfilled, then we can presume that the population size was lower than estimated, all else being equal.

In 1980 it was standard practice to use nets to catch saigas (Maksimuk, 1982), but it is important to note the biological implications of this method. The choice of the area in which to set up the net is not accidental in relation to the spatial distribution of the population at the time; the net is usually established in places where saigas are known to aggregate or pass through. This is because setting up the net can take up to half a day, and with limited time, net hunting is not viable where animals are scarce. Hence only animals in medium to very large sized herds were targeted for capture, and solitary or scattered groups were not represented in those captured in net hunts. The largest herd driven to the net during experimental captures was 2,000 individuals. Teams captured on average 478 individuals per day (based on the catches made on 82 team-days in 1983). It is worth noting that 4 to 5 teams were able to fulfill their quotas of 20,000-90,000 individuals between 1980 and 1985, with hunting occurring in one month periods during this time.

This technology was extremely effective at catching saigas, and so is a rather accurate tool for estimating population abundance. This is because all hunting trips were motivated by the desire to earn as much money as possible in a short period. Although population size and biological characteristics varied over time, the effectiveness of the technology was constant.

Let us consider the history of net hunting in the NW pre-Caspian (fig. 1). Before 1986, all the quotas were fully met by net hunters. In 1986, the quota (20,000 animals) was not met for the first time. This situation was repeated in 1990 and 1996. In 1996 the estimated population size was 300,000 individuals.

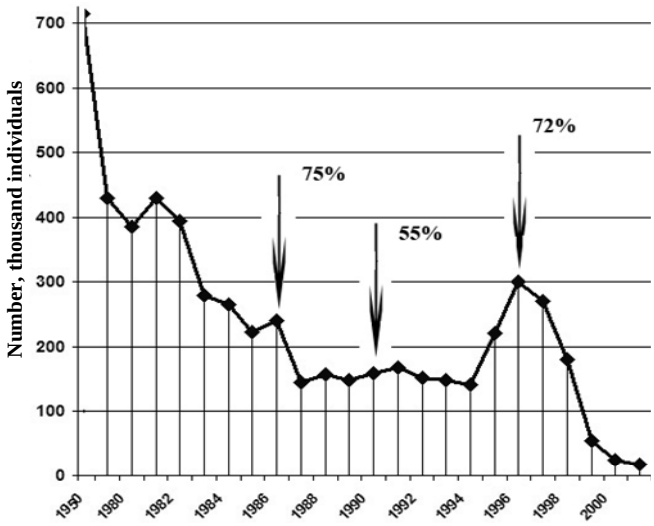

Figure 1.
Saiga population size in thousands, plotted for different years from 1950 to 2002. The arrows indicate the years in which the quotas were not fulfilled, and the percentages the proportion of the quota that was taken.

Logically, the failure to fulfil the quota suggests that there were not enough herds that were large enough to net hunt, and the population size was lower than estimated. In the 1980s an attempt was made to improve saiga monitoring (Pronyaev et al., 1988). Without dwelling on details of the methodology, the data suggested that population size was up to 50% lower than that estimated using aerial counts, suggesting that the maximum population size in 1996 was in fact 150,000 individuals.

The identification of a lower limit is difficult, but it is probably around 60-80,000 saigas. Based on this estimate of the bias in aerial surveys, we see that the situation after 1996 was not as catastrophic as it appears. If we use the trend between years rather than the absolute numbers (1996, 300,000; 1997, 270,000 etc.), the following sequence of saiga numbers can be obtained: 1996, 150,000; 1997, 135,000; 1998, 90,000; 1999, 27,500; 2000, 12,500, etc. This produces population estimates very similar to the results of recent counts.

However, this re-estimation of the numbers only partly removes the question of the current "crisis" state of the population. It remains unclear why substantial population growth has yet to be observed.

In the 1990s a theory was put forward suggesting that there were in fact two saiga ecomorphs in the NW pre-Caspian (Sokolov et al., 1998). This enables us to look at the biology of this population in a different way. Rozhkov & Pronyaev (1994) proposed a mechanism for artificial selection between the ecomorphs, caused by hunting.

Discussing the causes of the population depression, B.D. Abaturov (2007) draws attention to the large-scale transformation of saiga habitats in the NW pre-Caspian. The current plant cover does not provide high-quality forage for saigas. Animals of the atypical ecomorph are characterised by little movement, a low growth rate and a low level of reproduction, and these increased in the population compared to the mobile, fast growing ecomorph that requires higher quality forage. Most females of the slow-growing form do not breed in the first year of life, and their twinning rate is low. The selective nature of the net hunt in the 1980s also contributed to the increase in this ecomorph.

Between 1991 and 1996, numbers of the typical (fast-growing) ecomorph did not increase, which is why the quota was not fulfilled in 1996, perhaps due to natural selection. This does not contradict the fact that the pastures are not nutritous enough to support this ecomorph. This is why we are not seeing the typical scenario of rapid increase in the population following a decline in numbers.

In all probability, this is similar to the situation observed in the late 19th-early 20th century (Zhirnov, Maksimuk, 1998). That time, the population depression lasted 20-30 years, with numbers increasing only in the pre-war years. If we take the year 2000 as the start of the current population depression, the "revival" of the population will happen in 10-20 years.

Probably, we shouldn't call the current population state a depression. We should instead talk about a new, less productive equilibrium for the ecosystem, of which the saiga is a part. The transition to this state took place over a minimum of 15 years since the 1980s. It is also clear that fluctuations in population abundance are still taking place in the NW pre-Caspian; however, they are on too small a scale to be recorded by current population counts.

There are not enough data to carry out a similar analysis for saiga populations in Kazakhstan. However, the character of their dynamics over the last century, and since the mid-1980s (a decline, a slight increase in numbers and then a sharp decline) suggest that the situation is similar to that in the NW pre-Caspian, although the mechanisms may differ in their details.

Photo by Anna Luschekina

Saiga population in the NW pre-Caspian region.

Results of a participatory monitoring programme in Uzbekistan in years 2009-2010

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Bearing in mind the cost and other limitations of direct counts of saiga antelopes, we used particpatory monitoring to assess the status of saigas in the Ustiurt region of Uzbekistan, based on surveys of local residents. We surveyed mainly former hunters, who know the area well, living in the villages of Jaslyk, Karakalpakia and Kubla Ustyurt. We collected data from October 2009 to April 2010, when saigas are present in the area, including the autumn migration from Kazakhstan, the rut, spring migration northward, and the beginning of calving.

In total the monitors recorded 1217 saiga individuals, including 36 males, 1045 females, 36 young saigas and 100 individuals of undentified sex, in herds varying in size from 5 to 50 individuals. This produced an expert estimate of saiga numbers during this period of about 2000 individuals. The 2009-2010 winter, like the previous winter, was snowy, with snow depths of around 50cm, and up to 1m in places. The mass migration southwards was recorded in January, one month earlier than usual. The return migration also took place later than usual — in late March-early April. In January-February the snow was deep and strong winds were blowing. There were few of saiga surveys in that period due to the impassability of the area to traffic, so that local residents did not go to the steppe (which, of course, was beneficial for saigas). The highest number of surveys was in March after the thaw. As in previous years, saigas were mainly concentrated in the northern part of the Plateau.

Photo by Alexander Esipov

Discussion on saiga migratory routes in Uzbek Ustyurt with saiga monitors.

We also obtained data on saiga poaching. In total, 91 individuals were recorded as having been killed, mostly females. This is because of a lack of males in the population rather than selection; males are preferentially killed due to the high demand for their horns leading to a high black market price. Males of all ages are killed. Adult females are usually killed for meat (for hunters' own consumption, as well as the local and international trade). The most saigas killed per hunting trip was 10, on average 2.8 individuals were killed. During the survey period, hunters also illegally shot four goitered gazelles in southern Ustyurt. Our data are a minimum estimate, as not all observers report these data in detail. However, they report that poaching does occur, the intensity of poaching, and the methods used.

The observers did not observe any natural mortality of saigas due to lack of forage or predators. Wolf encounters were recorded twice in January 2010 in the northern part of Karakalpak Ustyurt (tracks of two individuals and a sighting of one individual).

We have used this survey method since 2007, supported by Fauna & Flora International. We have now built a long-term network of observers. The difficulty is in identifying a key person with the necessary knowledge, which he is prepared to share. If the method is carefully applied and the data critically examined, then this method is able to give objective information on numbers, population structure of saigas and seasonal distribution at a comparatively low cost. However, this method cannot replace regular population counts. To improve the accuracy of the data, there is a need to increase observer motivation, improve their counting methods and record-keeping, and train them in the use of appropriate field equipment. This method is a useful adjunct to other monitoring methods (ground and aerial counts and ecological research) within a wider monitoring programme. One of the positive results of this method is the involvement of the local population in monitoring, a close relationship which promotes a favorable climate for additional conservation actions.

The mystery of the saiga deaths in the Volga-Ural region

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The death of 12,000 saigas from the Ural population during calving in spring 2010 (*see Saiga News, 11*) would have been a great surprise, if similar mass mortality had not been recorded in 1984 and 1988. Pasteurellosis, the pathogen of which is always present in animals, is officially considered to be the cause of the mortality. The other option is that the deaths are a result of ingestion of toxic substances (http://www.inform.kz/rus/article/2274833).
However, neither of these options can explain the survival of young saigas, which were in direct contact with, and consumed the milk of, their dying mothers.

In my view, the mortality was caused by suffocation due to a acute abdominal swelling. This was caused by the fermentation of plant remains because of overfeeding on wet grass. This explanation is based on a multifaceted analysis of the events in that period, as well as long-term experience of captive breeding of saigas at the Janybeksk station, situated in the range of the Ural population. Janybeksk station is on the Russian-Kazakh border and is shared by the Kazakh Scientific-Industrial Forestry Centre and the Institute of Dendrology of the Russian Academy of Sciences. It is here that B.D. Abaturov, K.O. Larionov, B.I. Petrishchev, A.E. Subbotin and M.V. Kholodova conducted their studies on the feeding behaviour of captive saigas, up to 2007.

Saiga calving always coincides with rapid grass growth. If this grass is very wet after rain, particularly if there are legumes in the forage, this can lead to acute abdominal distension. Steppe alfalfa, a legume, is the main catalyst of fermentation of plant remains in the rumen.

Consider the ecological situation in the saiga calving ground in 2010. They were in this area for the first time. The plant cover is typical of the heavy soils of the Volga-Ural region, with desert and semi-desert plant communities growing in elevated areas and steppe communities dominated by grass-cereal associations, of which steppe alfalfa is a component, found in depressions.

On the night of 14th May, up to 42.6 mm of precipitation (average 27 mm) was recorded in the area. Precipitation over 40 mm is extremely rare in that area (6 cases in 59 years). Under these conditions, water fills all the depressions and the grass becomes very wet. On the night of 15th May, dew remained until 08.00am. On the night of 16th May there was rain again (3mm). As we can see, the weather was extremely wet in the period when the saigas died.

Saigas feed actively just before dawn, so there is no doubt that they were eating this wet young grass. At our request, K.O. Larionov analysed the contents of the rumen of a dead saiga. This analysis showed that just before death their forage was 93% legumes, grass and shrubby plants. The most prevalent species was alfalfa (26%), and Medicago sp., Potentilla sp. and Polygonum sp were also present.

Photo by Pavel Sapanov

A typical landscape in the area of the saiga mass mortality, August 2010.

It is generally accepted that overfeeding on wet young alfalfa inevitably leads to abdominal distension in domestic ruminants, and it appears that saigas also suffer from this problem. It is noteworthy that a severe snowy winter, an exhausting spring migration and the weakening of females after giving birth preceded the mass mortality. Presumably the males were in a different area, which is why they were not killed. Small herds of surviving young saigas (apparently they were too young to eat succulents), stayed in the birth areas until autumn.

It is important to experimentally confirm our version of the reasons behind the death of thousands of saiga females. As there is no natural protection from this condition, it is important to radically revise our approach to conservation. In my opinion, it would be optimal to carry out the necessary scientific studies as part of a programme of designating a nature reserve ("Bokeiorda-Zhaiyk") using the infrastructure and scientific knowledge of the Janybeksk station.

The author is grateful to B.D. Abaturov and K.O. Larionov, as well as I.K. Ilimisov, an expert on saiga antelopes, for their advice and assistance.

"Biosan" software for conservation planning

Dolgorjav Sanjmyatav

WWF Mongolia Programme Office

BioSan is a database management software based on GIS, designed for the collection, compilation and processing of data on the abundance and structure of mammal and bird populations and spatial data on distributions. The software allows the collation and processing of data on a wide range of taxonomic groups using the same methodology and in real time, and the analysis of seasonal and spatial variation in population size and distributions. This can serve as the basis for developing and implementing wildlife conservation plans and activities.

Initially, the software was designed based on the methodology for collecting primary data on alpine, forest and steppe ungulates, snow leopards, marmot and water bird species developed by the Institute of Biology of the Mongolian Academy of Sciences. The software was later developed with assistance from the WWF Mongolia Program Office and has been copyrighted.

BioSan software enables conservationists to digitize primary data on wildlife habitats, and enables data to be quickly processed and exchanged between stakeholders, decision makers and donors in a quick and reliable way.

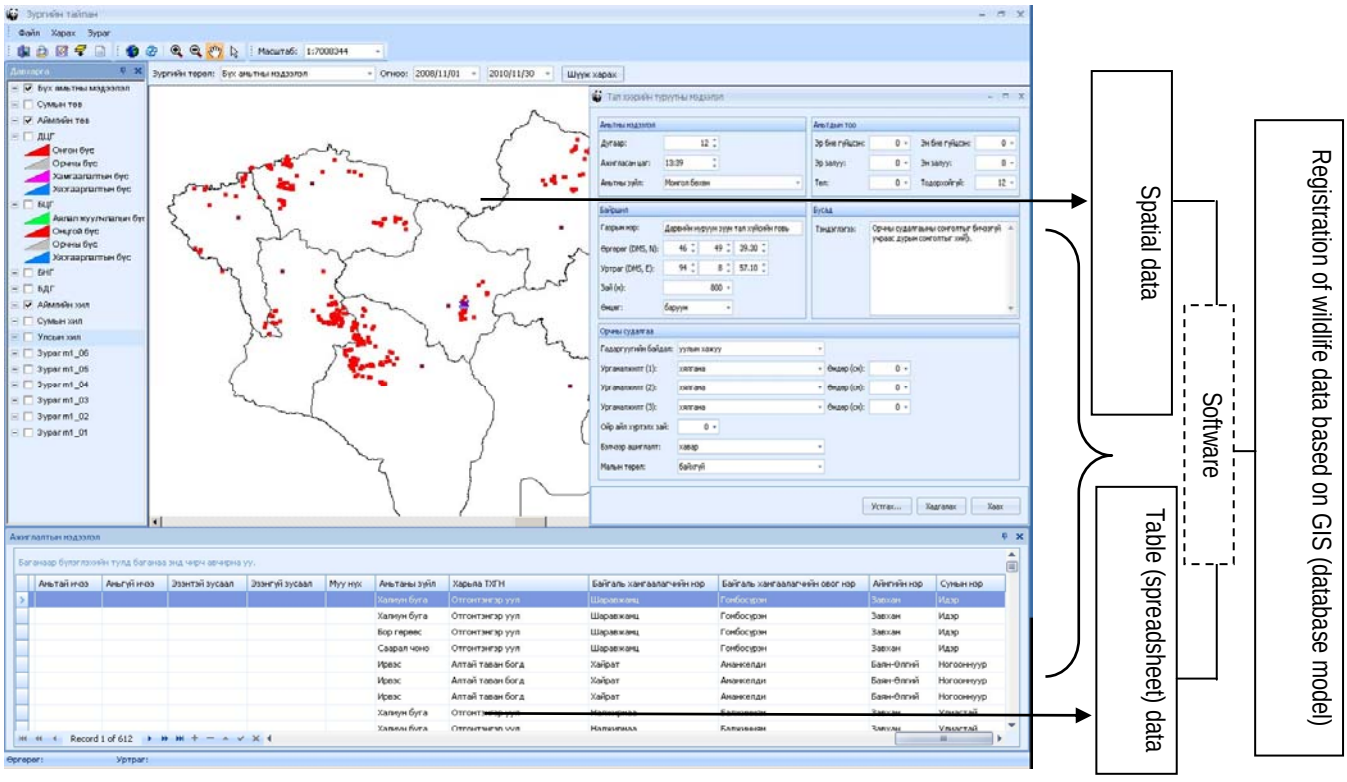

Figure 1. Software structure

Questionnaire survey for Saiga conservation in Guangzhou

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In order to raise conservation awareness and reduce the consumption of saiga horn and the body parts of other endangered species in Traditional Chinese Medicine (TCM), WCS China Program launched a bus advertisement campaign near the TCM wholesale markets in Guangzhou. The campaign ran from February to July 2010, and involved two advertisements on ten buses along the no. 6 route which passes by the TCM wholesale markets. The advertisements had the potential to be read by more than 150,000 people over the six month period.

Photo by Wildlife Conservation Society

Volunteers conducting questionnaire survey.

In order to understand the saiga conservation awareness of people who visit the markets frequently and evaluate their change in attitude, knowledge and behaviour after the bus campaign, WCS China Program conducted surveys both prior to and after the campaign. A total of 413 and 460 responses were collected, respectively.

The pre- and post- campaign surveys indicate that the bus advertisement was not an ideal medium to reach the key target audiences and spread the conservation message. However, some of the responses showed that the advertisements had increased awareness of the issue. On completion of the campaign, 75% of responders agreed that the saiga had suffered from exploitation for medicines, an increase from 55% in the pre-campaign surveys (Fig. 1). Although there was no significant change in people's behaviour, some respondents expressed their realisation that the Saiga antelope population was driven to extinction in China by the illegal wildlife trade.

This survey indicates a generally positive opinion towards Saiga and their protection. 55% of respondents know that Saiga horns are illegal to sell, 65% of responders agreed that the Saiga population worldwide will suffer from the unsustainable use of Saiga horns for TCM use, and 35% agree that domestic buffalo horn can be used as an alternative medicine to Saiga horns.

Generally, in this region, people have a positive attitude towards Saiga, and some of them have watched wildlife conservation videos or TV programmes made by wildlife conservation organizations or government offices.

The results of our study show that although bus advertisement isn't an effective medium to conduct conservation education, public awareness about conservation is generally high. People receive a diverse range of conservation messages in more interactive ways, such as TV, internet, cell phone, news, etc, and may not have enough interest in bus campaigns. Future education and outreach campaigns can refer to the survey results to assist in the development of more attractive methods to spread conservation messages.

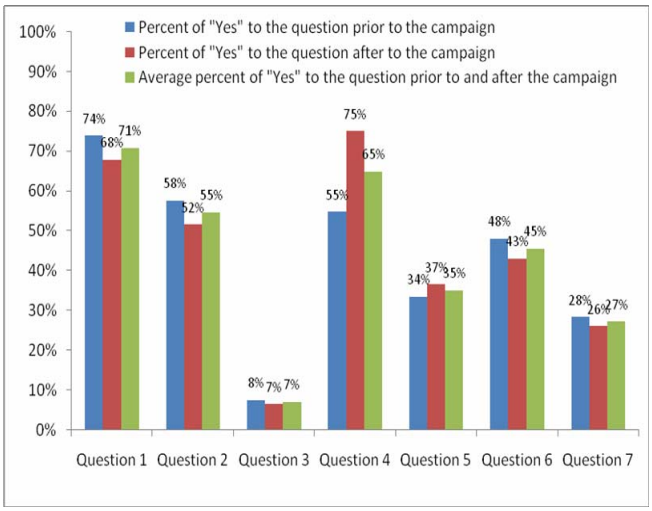

Fig1.
Percentage of responders answering yes to survey questions prior to and after the bus advertisement campaign.

Questions include:

1) Have you heard of Saiga horns being used in TCM? **2)** Do you think Saiga horns are illegal to sell? **3)** Did you buy Saiga horns as Chinese medicine within the past 6 months? **4)** Do you agree Saiga populations will suffer from using their horns in TCM? **5)** Do you agree domestic buffalo horns can be used as a substitute for Saiga horns? **6)** Have you taken the no.6 bus before? **7)** Did you see an advertisement about wildlife conservation in the last three months?

Saiga heroes

Note from the Editors:

In this new section of Saiga News we honour people who have made a major contribution to saiga conservation. We will feature people working in all countries and doing different jobs, but whose dedication to saigas is an inspiration to us. The first of our Saiga Heroes is Professor Amankul Bekenov. If you would like to nominate a Saiga Hero, please contact E. Bykova.

Professor Amankul Bekenov, first Honorary Member of the Saiga Conservation Alliance

Photo by E.J. Milner-Gulland

Prof. Bekenov plays with my little son Rowan.

At the Annual Meeting of the Saiga Conservation Alliance in Ulaanbaatar, Mongolia, on 11th September 2010, Professor Amankul Bekenov was voted the SCA's first Honorary Member in recognition of his tireless service for saiga antelope conservation over many years. The Steering Committee of the SCA is proud to have served with this distinguished scientist. As the Chair of the SCA, I would like to pay a personal tribute to a long-standing friend and colleague.

Amankul Bekenov's research covered both field work and analysis, and concerned the ecology and conservation of a range of mammal species. His excellence in science led to him being awarded the State Prize of the Republic of Kazakhstan in 1982. His work also led to the publication of four books over the period 1969-1985, on "Mammals of Kazakhstan", for which he and the other members of the editorial team were awarded first prize in 1988 by the Moscow Society of Naturalists, for the best work in the field of natural history. Professor Bekenov has written many monographs and articles on the ecology and conservation of the saiga antelope in Kazakhstan, and together with his close colleague Dr Yuri Grachev, is the leading authority on this species in the country. Between 1978 and 2010 he has been an author of the mammals section of the Kazakhstan red data book, which gives ecological and conservation information about 40 species in need of strict protection.

Professor Bekenov was Director of the Institute of Zoology of the Kazakhstan Academy of Sciences for many years. In this capacity, and also in his current role as the Director of the Institute's Laboratory of Theriology, he has guided the Institute's research programme into Kazakhstan's mammal species, and also led the scientific components of the Government's conservation and wildlife management policy. Part of the success of Kazakhstan's wildlife management policy must be attributed to the dedication and hard work of Professor Bekenov and his Laboratory over many years.

I first met Professor Bekenov in 1995 when I visited Kazakhstan for the first time. I was very excited to meet him and his team, as they were a major centre of research excellence in saiga ecology, and I had read many of their papers. Professor Bekenov was very welcoming and inspiring, and there began an ongoing research collaboration which is still producing novel and conservation-relevant results, and which involved a wide range of international collaborations between researchers in Central Asia and Europe. Our work in these first years was mostly funded by the European Community through the INTAS scheme, and covered parasites and diseases of saigas and livestock, the effects of rangeland degradation on saiga movement ecology and saiga genetics.

Over the years, I have been very grateful for Professor Bekenov's support not just for my own research projects, but also for the stream of students who I sent from my university to study in his Laboratory. The subsequent success of these young researchers (of whom there are at least 8) is testament to his guidance and supervision and to his team's research excellence.

Professor Bekenov was a founding member of the SCA, and a strong advocate for the importance of international cooperation for research and conservation of this species. He has worked extremely hard for the Alliance, and is particularly influential in the editorial board of Saiga News, ensuring that the bulletin has a reputation for scientific rigour and excellence. I am proud to be a colleague and a friend of Professor Bekenov and I look forward to long years of continued collaboration with him.

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Project round-up

Mainstreaming Biodiversity into industrial development of the Ustyurt Playeau

Photo by Denis Nuridjanov

Spectacular views in Ustyurt plateau.

Uzbekistan's steppes are the one of the last remaining examples of globally threatened dry temperate grassland biomes. The primary threat facing the Uzbek steppes is increasingly oil-and-gas exploration. The GEF/UNDP project "Mainstreaming Biodiversity into Uzbekistan's Oil and Gas Policies and Operations" started in 2010. Its objective is to mainstream biodiversity conservation into Uzbekistan's oil-and-gas policies and operations, and to demonstrate how this can be done in the Ustyurt Plateau. The main project partner is the State Committee for Nature Protection of the Republic of Uzbekistan. The project will remove systemic, regulatory and knowledge barriers to realizing its objective, which will be achieved in two ways: i) Enabling the policy, legislative, and institutional environment for mainstreaming biodiversity conservation considerations in the oil-and-gas sector, and ii) Demonstrating biodiversity mainstreaming technologies in oil-and-gas operations on the Ustyurt Plateau. The immediate global benefits will have a positive impact on an area greater than 2 million hectares. This will ensure population stability of a number of threatened species, including Houbara bustard, Caracal fox, Goitred gazelle, Ustyurt urial and the Saiga antelope.

The long-term goal to which the project will contribute is that all ongoing and future oil-and-gas operations in Uzbekistan minimize their adverse impacts on biodiversity so that the conservation prospects of the affected ecosystems are greatly improved.

- Activities at the systemic level will help ensure that the enabling environment is in place for progressive mainstreaming actions even after project completion.
- Activities at the pilot site level will enable stakeholders to "ground truth" the new legal and policy frameworks, and test and develop new tools for mainstreaming.

For more details please contact Mr. Abduvakkos Abdurahmanov, Head of Environment and Energy Unit, abduvakkos.abdurahmanovundp.org.

Photo by Alexander Esipov

Winter landscape in Ustyurt plateau.

SOS saiga! – a new project in Ural

The project "Building public engagement for conservation of the Ural saiga population following a mass die-off" was initiated in August 2010 with the financial support of the Save Our Species programme, the People's Trust for Endangered Species, FFI, and the Disney Wildlife Conservation Fund. The project was the initiative of the Saiga Conservation Alliance, in response to the mass death of saigas in Ural in May 2010 (see Saiga News, 11). The project leader in Kazakhstan is the Association for the Conservation of Biodiversity in Kazakhstan (ACBK), in partnership with the Committee for Forestry and Hunting (CFH) of the Kazakh Ministry of Agriculture, the Provincial branch of the CFH in Western Kazakhstan, the rural akimats (administrations), schools and local residents. The research components of the project will be carried out in collaboration with Imperial College London and Uralsk University.

In the education and information part of the project, saiga books and educational posters on the ecology of steppe species and ecosystems will be distributed to the teachers in rural schools in the targeted area. Besides, members of the ACBK students' club in Uralsk and inspectors will conduct information meetings with different target groups in the project villages, distribute materials and show a film about saigas.

In conclusion, a saiga expedition will be organized. All these events are aimed at the development of a caring attitude towards the saiga as the living symbol of the unique landscape of the Kazakh steppes, whose numbers have dramatically declined in the last few years due to human actions.

To assess the results and effectiveness of the events, a survey of local residents will be carried out in the beginning and the end of the project. It will show the degree of the change in the attitude of people to the saiga conservation and how significantly their knowledge of the biology and ecology of this species and steppe ecosystems has been improved.

Another important component of this project is developing a programme of participatory monitoring of the saiga involving local residents living in direct proximity to its range area. It is envisaged that the information campaign will reveal candidates who are willing to carry out this monitoring. During the preliminary meetings which were held in the project areas in December 2010, all stakeholders, including akimats, schools and inspectors, showed their interest in this project and their readiness to participate in it and support all the events connected with it.

For additional information, please contact Olga Klimanova, the project coordinator, at: olga.klimanova@acbk.kz.

Profile of the 2010 Saiga Conservation Alliance Small Grant winners.

The 2010 small grant programme of the Saiga Conservation Alliance was generously supported by WCN and CIC, allowing us to select four exceptional in-country saiga conservationists for financial support. The programme supports grassroots conservation activity for saigas in the wild, funding self-contained projects costing <$2000 and lasting up to one year in length. All projects must explicitly address priority actions within the medium term work programme of the Convention on Migratory Species' MOU on saiga conservation, ensuring that they make a direct and clear impact in an area that has been highlighted as particularly timely and necessary. The main aim of the competition is to build capacity in-country, particularly targeting people who are not able to access international support from large NGOs for their work. We provide continuing networking support for previous winners, hoping that by bringing them into the SCA family, we can help them to access resources and inspiration to continue their work. This year we had four excellent winners, tackling a broad selection of issues in diverse locations.

Fenglian Li, of the Wildlife Conservation Society's (WCS) China Program, intends to use the grant to expand upon the work of 2009 small grant winner Guihong Zhang, addressing the illegal trade of saiga antelope horn in Guangzhou, China (see the Article above and in SN11).

Specifically Fenglian's program aims to continue to monitor the level of saiga horn trade activity in the Qingping Traditional Chinese Medicine (TCM) market, to conduct an educational outreach program for people engaged in this trade, and to support the work of local TCM law enforcement agencies. Guihong Zang's project established the availability and price of saiga products within Guangzhou's TCM market. Fenglian plans to build upon this work to establish the source, route and final destination of saiga products, allowing for a fuller understanding of the underlying trade mechanism and facilitating geographically focused education and enforcement efforts. Fenglian's work is particularly important as it addresses the demand side of illegal saiga trade, an area which has traditionally been underrepresented in saiga conservation.

Gunbat Gundensambuu is a Masters student at the National University of Mongolia, studying for a degree in ecology and conservation. The ecology of the Mongolian saiga antelope has featured in Gunbat's previous studies and will form the basis of his MSc thesis. He has also worked in saiga conservation directly with WWF Mongolia.

Gunbat intends to use the grant to research the food habits of the Mongolian saiga and the extent that these overlap with those of domestic livestock. There is anecdotal evidence for competition between the two for forage and water, potentially hampering saiga conservation efforts, but as yet no formal study has been undertaken. Gunbat's work, which will be conducted in the Sharge Nature Reserve in Western Mongolia, will address this deficiency and could be used in the development of sustainable rangeland use plans which promote cohabitation of people and saiga antelope.

Aizada Nurumbetova is the director of the "Keuil nury" Centre for Social Support of Women in Karakalpakstan, Uzbekistan. Nurumbetova's grant will be used to develop alternative sources of income for inhabitants of the Ustyurt plateau in Uzbekistan by training local women in needlework, embroidery and the production of handicrafts. This work both reduces the requirement for illegal poaching by providing alternative sources of income and raises awareness. Indeed the trained women are then able to act as advocates for saiga conservation in their families and communities. This project will build on the development of women's cooperatives in Jaslyk village and extend the programme to other villages.

Pavel Amosov is deputy director for science at Bogdinsk Baskunchak nature reserve in Astrakhan Province, Russia. Amosov has been working in the reserve for 2 years and is responsible for monitoring the status of the reserve's vertebrate populations. Prior to this appointment he was a university lecturer in the zoology of vertebrates, and continues to lecture in addition to his current role. He intends to use the grant money to study the number, distribution and migration routes of saiga antelope that pass through the Baskunchak Lake area. This information will be used to facilitate protection of saiga during their migration and to inform the development of visitor media.

Many congratulations to all four winners!

New saiga publications

Singh, N., Milner-Gulland, E.J. (2011) Conserving a moving target: Planning protection for a migratory species as its distribution changes. *Journal of Applied Ecology* **48**, 35-46.

Using 25 years of aerial monitoring data, we identified changes in the spring distribution and predicted densities of saigas in Betpak-dala, Kazakhstan, to prioritize areas for protection under scenarios of climate change together with changes in disturbance and population size. The current distribution is strongly influenced by disturbance, whereas climate had a stronger influence in the past. The area of highly suitable habitat has halved and become fragmented in the last decade. The existing and proposed PAs are relatively complementary and perform well under most scenarios of future climate change. However there is a need to widen the geographical scope of PA planning if potential future high suitability areas are to be effectively protected.

Photo by Navinder Singh

Young saiga female.

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