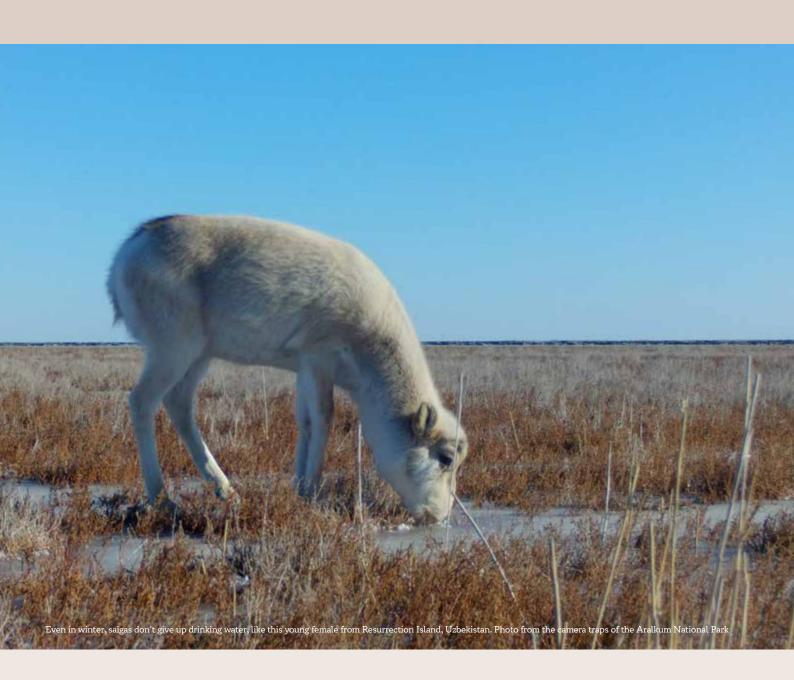


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FEATURE ARTICLE Editorial team China: Vera Voronova & Diana Baidauletova: Altyn Dala Initiative awarded Earthshot Prize for · Guihong Zhang, Qulong Education Ltd guihongzhang@foxmail.com **UPDATES** Kazakhstan: • Dr. Marina Chirikova, Institute of International Zoology m.chirikova@mail.ru Diogo Veríssimo & Amy Hinsley: CMS COP14 Diaries: Strengthening International Ties · Alyona Krivosheyeva, ACBK for Saiga Conservation......5 alyona.krivosheyeva@acbk.kz Reports from Saiga Day 20249 Mongolia: · Buuveibaatar Buuveibaatar, WCS-Kazakhstan Mongolia buuveibaatar@wcs.org Buyanaa Chimeddorj, WWF-Mongolia Mongolia chimeddorj@wwf.mn Buyanaa Chimeddorj: Mongolian saiga population hits 15,540. One day in the life of a community saiga conservationist. "GG-6" initiative receives more public Russia: · Professor Yuri Arylov, Kalmyk State engagement. Active engagement of eco-club students in Mongolian saiga University kalmsaiga@mail.ru · Dr. Anna Lushchekina. Russia Anna Lushchekina & Tatiana Karimova: Current state of the saiga population in the Institute of Ecology & Evolution saigak@hotmail.com Uzbekistan: • Dr. Elena Bykova Executive **ARTICLES** Editor, Institute of zoology, Rozhnov V. V. et al.: Trophic relationships between saigas and wolves in the North-West Pre-Caspian region in the context of spatial ecology 25 Uzbek Academy of Sciences ebykova67@mail.ru Kalyuzhnaya I. Yu. et al.: Current state of the saiga population in the Lake Elton Biosphere Reserve and adjacent Trans-Volga area · Alexander Esipov, Institute of zoolin Volgograd Region (Russia), based on 2018-2024 monitoring results28 ogy, Uzbek Academy of Sciences esipov411@gmail.com UK: · Professor E. J. Milner-Gulland [Advisory Editor], Oxford University ej.milner-qulland@zoo.ox.ac.uk • Dr. David Mallon [Reviewer], **IUCN Antelope Specialist Group**

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VERA VORONOVA1, DIANA BAIDAULETOVA1

Altyn Dala Initiative awarded Earthshot Prize for restoring saiga in Kazakhstan

The Altyn Dala Conservation Initiative (ADCI) from Kazakhstan won the prestigious international Earthshot Prize in 2024. They won the Nature Conservation and Restoration category for outstanding achievements in preserving Kazakh steppe ecosystems, in particular for restoring the saiga population and expanding the network of protected areas in the steppe zone to 5 million hectares, starting in 2008.

The Altyn Dala Conservation Initiative (ADCI) from Kazakhstan won the prestigious international Earthshot Prize in 2024. They won the Nature Conservation and Restoration category for outstanding achievements in preserving Kazakh steppe ecosystems, in particular for restoring the saiga population and expanding the network of protected areas in the steppe zone to 5 million hectares, starting in 2008.

ADCI was founded in 2005 as a longterm partnership between the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan, Association for the Conservation of Biodiversity of Kazakhstan (ACBK), Fauna & Flora International (FFI), Frankfurt Zoological Society (FZS) and Royal Society for the Protection of Birds (RSPB). The initiative's goal was to join forces to restore the saiga population and preserve the integrity of the Kazakh steppes.

The Earthshot Prize, founded by Prince William and Sir David Attenborough in 2020, is a prestigious award for innovations that contribute to the

restoration of our planet. The Earthshot Prize's goal is to solve urgent global problems in five main areas: protecting and restoring nature, cleaning air, reviving oceans, building a waste-free world, and fixing climate.

Since its foundation, ADCI's international partners have raised about \$9.5 million. These resources were used to strengthen and expand statefunded activities. The long-term approach made it possible to implement a series of important measures. They include:

- Developing a method to catch saigas and put satellite transmitter collars on them. Since 2009, 217 saigas have been collared. Specialists constantly monitor the animals' migration and have specified their concentration sites in different seasons. Linear infrastructure and protected areas are planned based on the recommendations from this programme.
- Launching a programme to reintroduce the Asiatic wild ass to central Kazakhstan. 37 animals have been transported to a newly established centre for wild ungulate reintroduction in the Altyn Dala Reserve, with enclosures almost 100 hectares in area and all the infrastructure needed for the implementation of projects to reintroduce wild ungulates and to conduct research work.
- Developing amendments to the law and preparing a biological justification for the inclusion of Przewalski's horse in Kazakhstan's list of rare and endangered species, which made it possible to launch a programme to restore this animal in Kazakhstan.



ACBK executive manager Vera Voronova with a long-cherished award from The Earthshot Prize. Photo by The Earthshot Prize

In June 2024, the first group of horses was successfully reintroduced to Kazakhstan in partnership with Prague Zoo.

- Implementing a joint programme in cooperation with the border and customs services to train dogs to track saiga horns and other wild derivatives. Dogs have already taken part in a few successful operations to prevent the trafficking of wild animals and their parts.
- Organising annual training sessions for law enforcement agents to enable them to use CITES standards, and preparing two guide-books for them.
- Examining the border with Uzbekistan in the south of the country with the assistance of the Border Service of the Republic of Kazakhstan and Okhotzooprom. This resulted in the upgrade of the border fence in several locations to allow free movement of saigas during their migration.
- Holding annual awareness raising events in rural schools within the saiga range and publishing four educational booklets in Russian and Kazakh about saigas and other steppe animals.

This integrated approach, the consolidation of protection measures by state rangers, and expansion of protected area network, have yielded significant results: Kazakhstan's saiga population reached 2.8 million individuals in spring 2024.

"Winning The Earthshot Prize is not merely a great honour for us. This is also a proof how cooperation in nature



Prince William, patron of The Earthshot Prize, with 2024 winners. Photo by Chris Jackson, Getty Images

conservation makes us so much stronger. The restoration of the saiga population is the result of concerted efforts by the state and research and public organisations in Kazakhstan and abroad. Our institution is deeply honoured to be a part of a successful long-term collaboration like this," said ACBK Executive Director Vera Voronova.

Apart from the saiga, Altyn Dala is working to preserve other rare

species, such as the Asiatic wild ass, Przewalski's horse, steppe eagle, sociable lapwing and more.

Earlier, in 2022, the United Nations Decade on Ecosystem Restoration Programme recognised Altyn Dala, along with ten other initiatives, as one of the world's ecosystem restoration flagships.

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Catching saiga antelopes to satellite-collar them. The ACBK has been collaring saigas since 2009, with a total of 217 individuals successfully collared. Photo by Adbuaziz Madyarov

DIOGO VERÍSSIMO¹, AMY HINSLEY¹

CMS COP14 Diaries: Strengthening International Ties for Saiga Conservation

We had the privilege of attending the 14th Conference of the Parties (COP14) of the Convention on Migratory Species (CMS) in the historic city of Samarkand, Uzbekistan in February 2024. This gathering brought together a diverse group of stakeholders, including conservation organizations, academics, and government representatives, all united in their commitment to conserving migratory species like the saiga antelope.

During COP14, we participated in several workshops and events that focused on the challenges facing saiga conservation, including ensuring the sustainability of the trade in saiga horn. One such workshop, organized within the framework of the US Fish and Wildlife Service (USFWS) funded project "Strengthening local capacity to lead evidence-based conservation of saiga in their native habitats in Kazakhstan and Uzbekistan", brought together representatives from University of Oxford, Fauna & Flora, the Association for the Conservation of Biodiversity of Kazakhstan (ACBK), the Saiga Conservation Alliance (SCA), and social scientists from Uzbek University and academic institutions.

The discussions centred around enhancing local expertise to guide evidence-based conservation efforts, and addressing issues such as poaching, trade, and sustainable management strategies across Kazakhstan and Uzbekistan. We had the opportunity to share our research findings, identify knowledge gaps, and collaborate with our colleagues to formulate priority research questions that will help advance conservation initiatives in the region. It was particularly rewarding to connect with social scientists from Tashkent and Nukus and discuss the potential for a joint project to explore the complex drivers and motivations behind poaching and the illicit trade of saiga antelope. By combining our diverse expertise and perspectives, we hope to better understand the intricacies surrounding saiga conservation and combat illegal activities more effectively.

Another highlight of this event was the focus on crime scripting, a social science method that dissects criminal activities through detailed narratives. By breaking down crimes into distinct steps, crime scripting helps us understand the planning and execution of illegal activities. This approach is particularly relevant to our ongoing efforts to understand and reduce the illegal wildlife trade, as it can help identify patterns and vulnerabilities that are crucial for intervention. We believe that this innovative approach has the potential to revolutionize the way we study and combat wildlife crime, and we are excited to be at the forefront of this emerging field.

Another significant event we attended was a workshop discussing the implications of saiga horn stockpile management for the legal and illegal trade. This event, also supported by USFWS, aimed to initiate a project investigating saiga horn stockpiles. Colleagues provided valuable insights based on their experience working with saiga horn and other species' stockpiles. They highlighted the importance of understanding the dynamics of stockpile management and how it can impact both legal and illegal trade. The workshop also provided an opportunity for networking among researchers working on different aspects of the illegal saiga horn trade, fostering new collaborative opportunities across NGO and academia. We left the workshop with a clearer understanding of the challenges and opportunities surrounding saiga horn stockpile management,



Opening ceremony of COP-14 in Samarkand, February 12, 2024. Photo by Olya Esipova



Participants in the Crime scripting and saiga horn stockpile management workshops. Photo by Alexander Esipov

particularly in the context of the discussions around the legal hunting for saiga which took place in Kazakhstan in 2023.

Throughout the conference, we liaised with collaborators from USFWS who manage the Species Catalyst portfolio. They are currently funding our research on the trade of saiga horn in Singapore and Japan, and may potentially fund future research into the trade of songbirds from the Guiana shield to the USA. These conversations provided valuable insights into

the priorities and strategies of one of the key players in the fight against illegal or unsustainable wildlife trade, and helped us identify potential areas for future collaboration.

One output of the conversations was the initial planning for a project focusing on saiga horn consumption states, specifically addressing the implications of potential future changes in the saiga's conservation status and the possible legalization of exports on demand reduction strategies, and ultimately on the conservation status of

saiga populations. This project would be led by the University of Oxford with the Wildlife Conservation Society (WCS) Mongolia and TRAFFIC Malaysia as collaborators. We are excited about the potential of this research to inform policy decisions and contribute to the ongoing debate about the role of legal trade in wildlife conservation.

Attending COP14 of the CMS in Samarkand was an invaluable experience, highlighting the importance of international cooperation in tackling the complex challenges facing saiga conservation. It was fulfilling to reconnect with colleagues and make new connections which we hope will fuel future work on the sustainability of the trade in saiga horn. It was also our very first time in Uzbekistan and it was very rewarding to get to know its intricate history and culture, in part no doubt due to the delicious Uzbek national dish, ploy - a culinary highlight that kept us fuelled throughout the conference!

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Diogo Veríssimo presents the results of the crime scenario group work. Photo by Alexander Esipov

ZEBO ISAKOVA1

WCN Fall EXPO 2024: a new look at global challenges

On 12th October 2024, I participated for the first time in the Wildlife Conservation Network's Fall Expo 2024 in San Francisco. This event was a real discovery for me: I was amazed by its scale and how deeply the participants were involved in global environmental initiatives. More than 400 people from around the world gathered under one roof to discuss the challenges the planet is currently facing and opportunities for biodiversity conservation. The participation of the Saiga Conservation Alliance in this event allowed us not only to present our work, but also to draw important conclusions for the further development of our projects.

WCN Expo is an international forum where every participant is interested in finding real solutions that can help save the planet. Our stand became a hub for discussing saiga conservation. Presenting our achievements and current projects, I realised that the protection of the saiga is not only our internal task, but also part of a global biodiversity conservation programme. Our field expeditions and work with local communities to restore ecosystems aroused interest

from our conservationist colleagues from around the world, and from visitors to the Expo, who were sincerely interested in our activities.

One of the main topics that sparked lively discussion was the preservation of ecosystems and the connectivity of landscapes. The Resurrection Island programme aims to create and maintain the Aralkum National Park, and this became a key element of our presentation. This project is expected

not only to contribute to the protection of the saiga, but also to strengthen cooperation between Uzbekistan and Kazakhstan, which would provide a basis for transboundary conservation of ecosystems. The great attention to this topic confirmed its international importance.

Another important theme was the development of ecotourism. Attendees were very interested in the idea of organising tourist routes for observing saigas in their natural environment. Indeed, this may help increase people's awareness of the importance of wildlife conservation and contribute to the sustainable development of local communities. This approach would make it possible to achieve environmental goals while also improving standards of living in the regions inhabited by the saiga. The discussion of these topics inspired us with new ideas on how to expand our programmes and ensure international support.

The seriousness of the topics considered at the WCN Fall Expo and the challenges we are facing convinced me of the importance of the work we are doing and strengthened my sense of responsibility. It was not a mere forum for exchanging ideas, but, rather, a platform where each participant was aware of their role in global efforts to protect nature. I saw that our work on saiga conservation was not just important, but absolutely essential for maintaining the ecological balance in Central Asia.

I was surprised by the interest shown and support rendered by the international expert community. This made me confident that our projects have the potential for growth, and that we



WCN EXPO Exhibition Hall, San Francisco, California. Photo by SCA



At the Expo, partners are happy to support each other – Elena Bykova (right) and Zebo Isakova (left) with Belinda Low Mackey (centre), co-organiser of Grevy's Zebra Trust. Photo by SCA

tion in an event like this opens up new horizons and provides new opportunities to develop our projects and create a sustainable future for the saiga and its habitat.

degradation. I am sure that participa-

can attract more resources for their implementation. I realised how important partnership and exchange of experience are for nature conservation.

In my opinion, the participation of the Saiga Conservation Alliance in WCN Fall Expo 2024 demonstrated the important role that Uzbekistan plays in global environmental initiatives. The event made it possible not only to expand our range of partners, but also to promote important projects related to nature conservation in Central Asia.

WCN Fall Expo 2024 became a source of new ideas for me and incentivised me to move on in my work. I realised that our mission to protect the saiga is inextricably linked to global challenges such as climate change and ecosystem



SCA exhibition table became a key platform for demonstrating our achievements and establishing new contacts. Photo by SCA

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ELMIRA MUSTAFINA¹

Saiga Day 2024: Kazakhstan

The motto of the Saiga Day in Kazakhstan in 2024 was "The Great Steppe is our common home." The holiday was celebrated in the schools of seven villages in five regions of the country – Kostanay, Akmola, West Kazakhstan, Mangystau and Jetisu, encompassing the habitats of all three of Kazakhstan's saiga populations. Jetisu region took part in the celebration for the first time. The activities were organised both within the schools and outdoors. The book Steppe Animals of Kazakhstan, published in Kazakh by ACBK in 2023, was an excellent guide for teachers to plan Saiga Day in 2024.

Exhibition, quiz and birdwatching

The village of Akhmet Baitursynov in Kostanay region in the very heart of the Betpakdala population's habitat, probably saw the grandest celebration. Over three months, teachers and active school students organised a series of events, which included the art exhibition "Betpakdala zhanuarlary" (Animals of Betpakdala) with an opening concert, a quiz with questions about steppe ecosystems based on the book Steppe Animals of Kazakhstan,

and open-air masterclasses in bird watching. The exhibition of school-children's art works was open to all the villagers and visitors until the end of 2024. The children felt particularly excited about the quiz, as that was the first time, they had participated in an event like this. Many children in this village are fond of bird watching, so this year the international Saiga Day included walking trips to watch birds. Through learning about birds living in their native land, children gain more knowledge about the links in steppe ecosystems.



Primary school students from Korgalzhyn village. Photo by Bekzat Aitzhanov



Participants in the quest, Akhmet Baitursynov village. Photo by Kulpash Molakhmet

Interactive activities about steppe animals and book presentation

Open lessons on the steppe ecosystem, which included the presentation of the book Steppe Animals of Kazakhstan, were held in several villages. They had different formats and were intended for schoolchildren of different ages. So, in the village of Bayandy, Mangystau region, in the Ustyurt saiga population's range, experienced regional specialists - environmentalist Adilbek Kozybakov and teacher Bakhytgul Zhaksylykova - had a meeting with high school students, where presented the book, gave an interactive lesson and answered the students' questions about the problems of protecting steppe animals. Such meetings and conversations with practising environmentalists help rural children choose their future careers: it is very important to train specialists from local communities.

In the village of Korgalzhyn, Akmola region, Saiga Day was organised for primary school students. ACBK specialist Bekzat Aitzhanov and volunteer student from Astana Amir Karimbai played games about steppe animals



Outdoors activity in Borsy. Photo by Asem Isakova

and their interrelationships with the children. The children also had a chance to acquaint themselves with the new book from the ACBK, draw animals, and read out their reports. Probably, the most interesting activity was to try walking in the shoes of a steppe animal, which all the children coped with perfectly. In the village of Borsy in West Kazakhstan region, the teacher Asem Iskakov took the children on had a walking trip into the wild, where they all read a book and solved various environment-related quizzes.

For the first time, the staff of the recently established Bokeyorda Reserve joined the celebration. With the support of ACBK, they organised an excursion for 15 schoolchildren from a summer camp in the village of Kaztalovka. Middle school students observed wild animals and learnt about the landscapes of their homeland. A reserve ranger told the children about the rich local biodiversity and about the study and protection of the saiga.

This year, schools from other regions of Kazakhstan, outside saiga range but where people know and love this animal, joined in the celebration of Saiga Day. So, ACBK specialists gave a series of open lessons for schoolchildren from villages in the south-east of Kazakhstan, near the Altyn Emel National Park. They also arranged meetings for teachers from 15 schools, where they presented two books in Kazakh published by ACBK. Akboken Zhane Onyn Tirshilik Ortasy (the Kazakh version of Saiga and Its Neighbours, published in 2022 by the Publishing House of the Wildlife Conservation Center), and Steppe Animals of Kazakhstan (ACBK Publishing House, 2023), are both recommended for use in school tutorials.

Year after year, Saiga Day is becoming increasingly popular in Kazakhstan, with more and more teachers and environmentalists willing to participate in it. We consider this to be an important result of the annual collaboration between the ACBK and local communities with the support of the Saiga Conservation Alliance.

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Trip with the staff of Bokeyorda nature reserve. Photo by ACBK.

Saiga Day 2024: Russia, Republic of Kalmykia

Kalmykia, whose territory is covered by extensive steppe inhabited by various animals including saiga, traditionally celebrates Saiga Day together with another holiday, Steppe Day, on 5th May. Elista, the administrative centre of Kalmykia, saw a schoolchildren's parade in honour of the steppe and saiga. The event was organised by the Chernye Zemly State Nature Reserve, whose objectives include promoting environmental education among the younger generation and drawing public attention to the problem of nature protection in general and the conservation of saiga in its natural environment, in particular. The opening ceremony was held in Druzhba (Friendship) Park. Mottoes and slogans invented by the children for their teams, banners with good wishes and calls to protect the saiga, and various performances (from theatrical plays through to musical numbers and dances in bright clothes resembling the blooming steppe in the spring) created a unique and festive atmosphere. Apart from being fun and exciting, this holiday was also an important lesson teaching the children about the wildlife and landscapes in their home area, which they learnt both while preparing for it and during the performance. The event closed with awarding the teams with diplomas from the Ministry of Education and Science of the Republic of Kalmykia and prize money from the Chernye Zemly State Nature Reserve.

As well as in Elista, Saiga Day was celebrated in remote villages, where steppe clubs have been established. The Khaglysheva Multidisciplinary Gymnasium in the village of Yashkul, which is a long-term base for the Zhivoye Naslediye (Living Heritage)

school club headed by Evgenia Samtanova, hosted the ecological festival entitled "Saiga – the Beauty of the Steppe", a series of themed lectures entitled "Journey to the centre of the steppe – the Chernye Zemly Nature Reserve", and the "Know the Nature of Your Native Land!" ecological quiz. That was a very exciting celebration, which benefited every participant and enabled them to learn many new things. Everyone who took part in the event was awarded a souvenir from the Chernye Zemly Nature Reserve.

Article based on:

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Parade on the Steppe and Saiga Day in Elista. Photo by Chernye Zemly Reserve

GALINA KALMYKOVA1

Saiga Day 2024: Russia, Astrakhan region

In 2024, Saiga Day in the Astrakhan region was marked by the announcement of the results of the "Nosy Wonder of Nature" drawing competition, which was launched in mid-April. More than 50 students of varying age from different schools in Liman District (permanent saiga habitat and the site of the Stepnoy State Nature Reserve) took part in the event. The fifteen students who won the competition were awarded prizes. However, their main award was a trip to the reserve on 5th June, World Environment Day. After they acquainted themselves with the structure of a ranger's station, listened to a story about the work of state rangers and saw a film about the inhabitants of the reserve, the children, accompanied by experienced workers, went to the steppe to see with their own eyes the creatures they had just seen on the screen. They were deeply impressed by seeing saigas coming to a watering hole.

The Bogdo-Baskunchak Nature Reserve also joined the celebration of the Saiga and Steppe Day. In cooperation with the Centre for Folk Culture and KNAUF company, staff of the reserve helped organise the "Saiga the Beauty of the Steppe" eco-art festival in Akhtubinsk. The programme included reading poems, giving masterclasses in designing tulips from origami, yarn, wood and balloons, and creating pyrographic saiga images. The children also performed mini-sketches about the protection of the steppe and saiga. The plays featured stylised characters of inhabitants of the steppe: mouse, hare, fox and a narrator named Soul of the Steppe. These characters



Yaroslav Sayapin, a winner of the drawing competition, Secondary School No. 2, Liman village. Photo by Galina Kalmykova

were on a mission to rescue the saiga and educate the Akhtubinsk boys and girls. Artistic teams from the town also took part in a concert. Younger children from Skazka Children's Theatre made headbands with an image of a saiga and gave a performance entitled "We Are the Children of Nature!"

The activities highlighted the richness and versatility of Russian wildlife, the complexity of ecosystems, and the importance and irreplaceability of each of its elements, one of which is the saiga. The participants in the art festival came to the unanimous conclusion that in the age of information technology and artificial intelligence, it would be wrong to detach oneself from nature, from what is vital and so dear to one's heart!



Participants in the art festival. Photo by Bogdo-Baskunchak Nature Reserve

Based on:

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SVETLANA AITKULOVA1

Saiga Day 2024: Russia, Volgograd region

Saigas from the Ural population are recorded increasingly often in Elton Nature Park. For a few years, staff from this reserve have organised various events within the regional

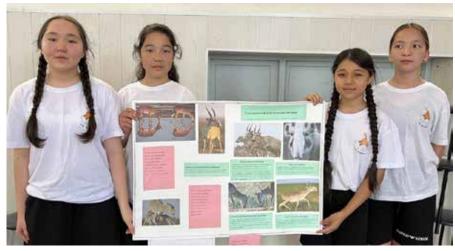
environmental and educational campaign "Let's save the saiga!". This year, the Park hosted Saiga Day. The celebration consisted of several activities: an environmental meeting on the theme

Drawing by Gleb Alexandrenko, winner of the competition. Photo by Elton Nature Park

"Let's save the saiga!", a guiz entitled "Let's visit the saiga!" and a drawing competition on the theme "Do not offend the saiga!".

The guiz consisted of several stages -Questions and Answers, Report the Danger, Fire in the Steppe, Steppe Inhabitants, and Collect Rubbish, It allowed the teams to show all their knowledge and skills. The winners were awarded souvenirs, diplomas and certificates. Other activities included reading poems, dancing, singing songs about the nature of the children's homeland, and preparing and presenting posters about the saiga. All this enabled the children to learn a lot more about this unique animal.

At the end, a jury judged the "Do not offend saigas!" drawing competition, which featured more than eighty works by school students from Pallasov, Staropoltav and Bykov Districts of Volgograd region, as well as by guests from Zhanybek District of West Kazakhstan. The day closed with a tour of Lake Elton.



Presenting a poster. Photo by Elton Nature Park

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ZEBO ISAKOVA1, NATALIA SHIVALDOVA2

Uzbekistan: The Great Steppe is our common home

The annual Saiga Day festival is not a mere environmental event. Rather, it is a loud call to action to save the unique inhabitant of the Ustyurt steppes. In recent years, Uzbekistan has significantly stepped up its efforts to protect the saiga, organising large-scale events aimed at raising awareness among schoolchildren, teachers and local communities.

The history of Saiga Day goes back more than ten years, when the Saiga Conservation Alliance made its first steps to conserve this species in Nukus and a number of small villages, such as Jaslyk, Kyrk-Kyz and Karakalpakstan, in Kungrad District of the Republic of Karakalpakstan. Later, the town of Muynak joined the movement. This day was recognised as a national event, when the president of Uzbekistan institutionalised it by Presidential Decree No. PP-171 on 31st May 2023, and its status was

further strengthened when the head of the Republic of Karakalpakstan declared 2024 the Year of the Saiga. These legislative measures were aimed at integrating saiga conservation into national environmental policy, stimulating the development of a number of awareness-raising activities, and enhancing conservation programmes.

Year after year, the Saiga Day in Karakalpakstan advances its educational potential, allowing the participants not only to gain theoretical knowledge about ecosystems, but also practical skills necessary for children, young people, and leaders of ecoclubs in the Ustyurt area.

The year 2024 was a real breakthrough in environmental education. This year, pupils did not just participate in traditional competitions, but also took a series of practical masterclasses, which significantly expanded their knowledge and improved their skills.

"The Great Steppe is our common home" was the main theme of Saiga Day. The organisers decided that it would be more useful and spectacular for children to hold part of the festival in the steppe. The first village to host Saiga Day was Kyrk-kyz and its school No. 31. The opening ceremony, accompanied by the Saiga Anthem, brought together all partners involved in organising the festival, including representatives of the SCA, EKOMAKTAB and Uz-Kor Gaz Chemical, as well as the staff of the Saigachy Complex Reserve and the Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Karakalpakstan.

The next village was Jaslyk and its school No. 54. Exciting training sessions, an environmental quiz, and short plays performed by young actors and actresses inspired a festive mood in every villager and once again reminded them of how important it was to care for the saiga and other residents of the Great Steppe.

There are two schools in Karakalpakstan, Nos. 26 and 56, each of which has a steppe club. These schools always compete, trying to organise the Saiga Day events in the best way possible. This results in a big



Students from Kyrk-kyz village drawing a poster about saigas and the steppe. Photo by Kristina Kuzmicheva



Schoolchildren during an excursion to the Saigachiy Reserve. Photo by Saigachiy Reserve

and bright festival delighting all the villagers and the school students in particular.

The town of Muynak features a very interesting and original club. It joined the network of steppe clubs only recently, but has become a very organic member of the harmonious Saiga Friends community. Active members of the Steppe Club from school No. 4 took part in planting saxaul on the

dry Aral Sea bed, one of the large-scale steps taken by Uzbekistan to curb the expansion of the Aralkum desert and prevent dust storms.

When the events in the villages came to a close, the leaders of the ecoclubs had an expedition to the Saigachy Complex (Landscape) Reserve. For many children, this was the first trip to the expansive steppe, which they would probably never forget. The spring steppe abounded in animals and plants, which the children had only seen in books and pictures. One of the programme's most important elements was training in the use of GPS trackers to monitor flora and fauna, which let the participants learn to use modern environment monitoring technologies to protect ecosystems. Communication with the Saigachy staff also proved very useful for them. They could see unique photos and videos taken by camera traps in the very heart of the reserve. Everyone felt very happy when they saw groups of saigas appearing in a frame. The young conservationists do not abandon hope that the saiga will one day come back to the steppes of Karakalpakstan.

Over the years, Saiga Day has evolved from a small local event into a large-scale and multifaceted educational platform, which draws attention to the problems of protecting this unique species. This event brings together thousands of participants, including schoolchildren, teachers, representatives of local communities and environmental organisations. Every year, the programme is becoming increasingly wider and deeper, offering more and more diverse and creative forms of interaction.



Talk about the saiga during the open lesson "The Great Steppe is Our Common Home", Jaslyk village. Photo by Kristina Kuzmicheva

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Kids from School No. 46 in Nukus showing how the Great Steppe and its inhabitants have changed over the years. Photo by School No. 46 (Nukus)



Steppe drama: schoolchildren from Muynak perform about saigas. Photo by school #4 (Muynak)



Join the movement to save the saiga! Photo by school #46 (Nukus)

STEFFEN ZUTHER1

Saiga populations in Kazakhstan continue growing

The annual aerial census of Saiga antelopes in Kazakhstan took place in the second half of April 2024. According to the Association for the Conservation of Biodiversity of Kazakhstan (ACBK), which was contracted to conduct the census, the overall number of saiga in the country is estimated at 2.8 million animals, which is about 900,000 more than in the previous year. This remarkable growth was probably possible due to effective protection from poaching, a still mostly intact habitat, and the absence of catastrophes like disease outbreaks or mass deaths due to drought or harsh winter conditions.

The Ural population is still the largest one globally, with 1.62 million saiga, which is a growth of 43.4% from last year. However, counting such large numbers with the currently used and officially approved method is challenging, as it is better suited for small to medium sized populations and evenly distributed animals. The saigas are mostly counted visually from a helicopter or from photos, which are taken on both sides of the aircraft during the

census flights. For the first time, animals of the Ural population which had gathered along the border with Russia were roughly estimated because counting animals from an aircraft along an international border is not possible. The resulting number was added to the survey results.

The Ustyurt population shows a strong growth of 60.2% since last year, reaching 63,600 saigas. This is a very

positive outcome given that it was threatened with extinction just 10 years ago. However, the problem of a fragmented habitat with a railway line going right across their range remains unsolved and might even become stronger with current plans to build a road next to it.

The Betpak-Dala population now numbers 1.15 million animals, growing by 54.3% since last year. It is the second largest population in the country and globally. For the first time, 15 flight hours were dedicated to a survey of an eastern group of the population, which has been counted from the ground so far. In order to test alternative approaches for counting saiga in large populations, the Tengiz group was counted in parallel using special photographic equipment, which is also used in drones, to take pictures of the whole survey and count them later with artificial intelligence. This analysis is still to be done and the outcome might guide a way to a future, new survey method.

The aerial survey of saiga in Kazakhstan comprised 215 flight hours and was organized by the State Entreprise "Okhotzooprom" on behalf of the Committee of Forestry and Wildlife of the Ministry of Ecology and Natural Resources of Kazakhstan (CFW). Apart from ACBK staff and "Okhotzooprom" rangers, the census was attended by representatives of the provincial branches of the CFW and supported by the Institute of Zoology.



Members of saiga aerial survey in 2024. Photo by ACBK

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Discussion of the route before the start of the survey. Photo by ACBK



A herd of saigas viewed from a helicopter. Photo by ACBK

Mongolian saiga population hits 15,540

The Mongolian saiga is critically endangered and only found in Mongolia. Every year experts from WWF-Mongolia and the network "Community conservationists for Saiga" take on the immense task of counting Mongolian saigas to monitor the population. The 2024 assessment was performed using the internationally recognized line transect method for assessing saiga distributions in the Shargiin Gobi, Khuis Gobi, Durgun steppe, Mankhan soum of Khovd province, Zavkhan soum of Uvs province, and Durvuljin soum of Zavkhan province. Experts did not observe any sick and dead Mongolian saigas during the assessment.

The team completed the census in November 2023 and the number of Mongolian saiga population is assessed to have increased to at least 15,540 individuals. Last year, the count was at least 13,925 Mongolian saigas. As protection improves and the population grows, the Mongolian saiga is expanding its range. This year, 21 individuals were recorded in the Naranbulag region of Uvs province, and locals said that they have been in the area since 2019. The number of other populations is also increasing.

B.Gantulga, Species senior officer from WWF-Mongolia said "The increase in the Mongolian saiga is the result of

many years of conservation efforts by the parties. Last summer was pleasant for saiga, unfortunately this doesn't happen every year. This winter is likely to be quite severe, which may put Mongolian saiga population in a critical condition again. Therefore, parties shall continue their strong conservation efforts."

As of 2014, there were 15,000 Mongolian saigas. Unfortunately, thousands of Mongolian saigas died in 2017 due to goat plague and dzud (the combined effect of the lack of grass, extreme temperature and heavy snowfall). Thus, the reintroduction of Mongolian saiga to create several independent populations could reduce the risk of drought, dzud, and infectious diseases substantially. Researchers also pointed out that the protection of Mongolian saiga range by the State and the reduction in illegal hunting is a way to save this extremely rare species from extinction.

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Mongolian saigas. Photo by WWF Mongolia

One day in the life of a community saiga conservationist

WWF-Mongolia closely collaborates with local school children-who are members of eco clubs and promotes public awareness on wildlife conservation through eco-club members' inputs within its programme areas. One recent effort was visits by members of "Community conservationists for Saiga" from Khukhmorit and Bayan-Uul regions of Gobi-Altai province to local schools to present about their daily conservation tasks. These include improving saiga habitats, inventories, and research. The meetings were attended by 52 eco-club members.

During the community conservationists' visits to the schools, a documentary was shown to the participants,

entitled "Mongolian Saiga" that produced by WWF-Mongolia. This documentary on the Mongolian saiga's biological and behavioral characteristics has now been seen by 842 YouTube users. The eco-club members also shared the documentary with friends and neighbors living in remote areas, where internet access is limited or unavailable, having downloaded the documentary on their phones. In addition, eco-club members shared the information about the community conservationists' daily tasks on their regions' and school bulletin boards and Facebook pages, for dissemination among their local communities. Their initiative is helpful in increasing public awareness on the Mongolian saiga and its conservation.

The saiga population counting methods presented by the community conservationists were interesting for the eco-club members. The community conservationists took the children to see the areas where camera traps are placed near natural springs visited by saigas. They travelled for over 100 km during the field visit, and planted endemic tree seedlings near a fenced, conserved, natural spring. A community conservationist, O. Baldan, of Khukhmorit region, donated 20 elm seedlings from his plot for this activity. This contribution motivated the children a lot. Based on his example, children also planted 200 aspen seedlings and 50 elm seedlings in a fenced plot in their school grounds. In support of the children's activity, the school administration appointed workers to assist in caring for and watering the planted seedlings during the summer vacation to ensure normal growth of the planted seedlings.

The eco-club members also gained insights on natural resources within their residential area and efficient use and restoration needs of these resources, while nature shares its numerous services "free of charge" with us humans.





Ecoclub members watching a documentary about the saiga. Photo by WWF Mongolia

"GG-6" initiative receives more public engagement

WWF-Mongolia started the "Gobi's Great 6" (GG6) initiative in 2016, to protect Gobi animals (Bactrian camel, Gobi bear, takhi horse, wild ass, Mongolian saiga, goitered gazelle) and their habitat, and to mobilize government and non-governmental organizations and communities. Today the initiative has expanded to become one of the biggest conservation measures in Mongolia. Parties meet each year to discuss how to protect these animals and plan their work. As a result, the "Gobi Great 6" animals have been protected to some extent. Each year, stakeholders gather to present their activities, exchange views on species conservation, and discuss actions to be implemented in the next year.

In October 2023, the event was successfully held in Govi-Altai province

under a call to "Be aware of wildlife friendly linear infrastructure". It was attended by 85 representatives from governmental and non-governmental organisations of Khovd, Govi-Altai, Zavkhan, and Bayankhongor provinces and specialists and rangers of Protected area administrations in western Mongolia. The participants had a chance to present their performance and share their views on their joint action plan for GG-6 species conservation.

The agenda included a discussion on impacts of linear infrastructure on wildlife habitats and mitigation measures. A key message was that migratory routes, food chains, ranges, and habitats of residential and migratory wild species must be at the heart of the design and construction of linear

infrastructure facilities. The participants released the "Ikh Mongol Els Declaration", covering three key issues: Firstly, participants agreed to submit a GG-6 conservation policy document to the Ministry of Environment and Tourism for incorporation into the sectoral development policy document. Secondly, conservation of wildlife habitats and ranges in their natural states is an important part of the species conservation. Thirdly, the declaration recommends effective cooperation between the parties, in particular the Ministry of Road and Transportation, to ensure implementation of existing national standards for wildlife friendly passages and their continued monitoring. For example, there are 7000 km of paved roads in Mongolia and 1000 km of them are in Khovd province. However, there are no wildlife friendly passages and only a few wildlife crossings signs on these the roads.

This year's event called for designation of a formal facilitators' team including public service representatives. Govi-Altai province promised to be a moderator of the GG-6 event and the parties expressed their willingness to support follow-up actions.

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Working moment of the GG6 meeting in Govi-Altai. Photo WWF Mongolia

Active engagement of eco-club students in Mongolian saiga conservation

WWF-Mongolia collaborates with ecoclubs at secondary schools and has co-organized various types of activities on environmental conservation, public awareness raising, and knowledge-sharing events on conservation topics.

This year's eco-club meeting in Zavkhan region of Uvs province was on the topic "Mongolian Saiga has returned to its historic range". The Mongolian saiga has rarely been seen in Zavkhan region, part of the species' historic range, since the 1950s. However, some individuals have started to be seen there since 2009. In 2023, 464 individuals were observed in Naranbulag, Ulgii, and

Zavkhan regions. This is why this topic was chosen for the meeting.

During the meeting, the documentary "Mongolian Saiga" (produced by WWF-Mongolia) was shown to participants. The eco-club students shared what they had done in the previous year, and agreed on what to do in the years to come. At the end of their discussions, the eco-club members decided to focus on promotional and awareness activities, for local herders and pasture users. This is because they want to keep the Mongolian saiga in their area free of disturbance and human-related threats (e.g. competition for rangeland) and prevent

population decline. In addition to the onsite event, the meeting contributed to dissemination of awareness on the Mongolian saiga, including its population status and role in natural conservation, via social media channels.

Moreover, the eco-club students planned some tasks (e.g. to mark the Mongolian saiga distribution ranges on a map and to install camera traps near some water bodies accessed by wildlife), to be done with direct inputs from the region's rangers. They also plan to share data from the cameras placed near the water bodies with local herders residing nearby. Organizers of the meeting said that the news about the return of the Mongolian saiga to its historic range and its increasing numbers have inspired the eco-club members to actively take part in the species' conservation. The eco-club students are full of willingness to share details on the species populations and engage in its conservation.

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Young members of the eco-club are excitedly discussing how they can help to save the saiga. Photo by WWF Mongolia

ANNA LUSHCHEKINA¹, TATIANA KARIMOVA¹

Current status of the saiga population in the north-west pre-Caspian region, Russian Federation

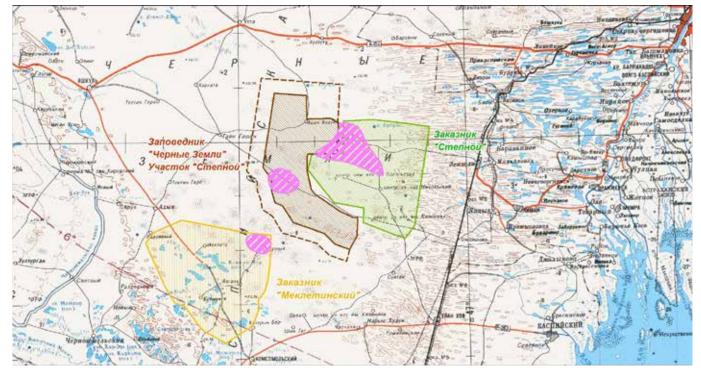
The saiga is listed in the Red Data Book of Russia and is one of the 13 priority animals for the Ecology national project, which in recent years, among other conservation activities, has taken a series of steps to protect and monitor the species.

The North-West pre-Caspian saiga population, which is currently completely isolated from other populations, inhabits the south-western part of the Astrakhan region and the eastern part of the Republic of Kalmykia. It has been growing steadily over the past 2-3 years. So, by late 2022, according to a satellite survey conducted with the help of artificial intelligence

(see SN 29), saiga numbers were estimated at 26,500-28,000 individuals. According to expert assessment carried out in late July 2024, numbers are now a little under 40,000, which has already exceeded the figure set to be reached by 2030 according to the State Conservation Strategy. One of the signs of population growth is that saigas are now increasingly

being recorded far outside protected areas, to which they have largely been restricted in recent decades. This indicates a tendency to restoration of the animal's former range. However, saiga migrations are somewhat prevented by numerous pastures fenced with "electric shepherds". Another problem observed in recent years is the death of saigas on roads.

Population growth depends on successful calving, which in 2024 went on as usual – for 10 days in the first third of May, when warm and dry weather settled in the region. According to a survey conducted in July this year by the rangers of the Chernye Zemli Nature Reserve, the birth rate was 1.4 saiga babies per female. Overall, at the time of the survey, the population consisted of 22% adult males (highest figure in the last 30 years), 32% adult females and 46% newborns of both sexes.



Calving sites of the saiga population in the north-west pre-Caspian area in 2024

The staff of the Chernye Zemli Nature Reserve, including the Mekletinsky Federal Reserve, both in the Republic of Kalmykia, and the Stepnoy State Nature Reserve in Astrakhan region, ensure that the saigas feel safe in the calving areas. One of the signs of the beginning of a calving period is the appearance of cinereous vultures, also listed in the Red Data Book of Russia. At that moment, these protected areas declare a "regime of silence", when signs are installed on nearby roads warning against trespassing on the territory in connection with saiga calving. Rangers intensify their patrolling activity, grazing is limited, and the reserves' specialists farmers livestock farmers within saiga habitats.

The staff of the protected areas, specialists from related regional offices, researchers from institutes under the Russian Academy of Sciences and other organisations are actively working to improve the conservation and restoration of the saiga population, develop and unify non-invasive monitoring approaches, study habitats and develop recommendations for their improvement and restoration, and pay more attention to education and awareness raising among local people. All these efforts are supported by businesses (LukOil and Sberbank) and environmental funds (such as "Beautiful Children in a Beautiful World").

Based on media materials:

- kommersant.ru/doc/6822240
- dzen.ru/a/ ZkN1DP3bwX6gHw-5
- astrakhan.aif.ru/society/vastrahanskom-zakaznikenachinaetsya-otyol-saygakov
- zapovednik-chernyezemli. ru/tpost/erhrzcon91-vzapovednike-chernie-zemlipodveli-itog



A young male in the Stepnoy Reserve. Photo by Vladimir Pankov

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Trophic relationships between saigas and wolves in the North-West Pre-Caspian region in the context of spatial ecology

Changes in the numbers of ungulates are often associated with pressure from predators. The north-western pre-Caspian region is the habitat of an isolated saiga population, whose size has been steadily growing in the last 2-3 years (about 40,000 individuals as of July 2024) thanks to measures taken by conservationists. The only predator that can noticeably affect saiga numbers is the wolf (Figure 1, 2). In order to specify the trophic relationships between wolves and

saigas in the context of spatial ecology, a project was launched in 2016 to study the population structure of wolves in the North-Western pre-Caspian region and their impact on saigas.

In the summer and autumn of 2016, a team of researchers collected field material from an area of 3,800 km², which included the Stepnoy Reserve (Astrakhan region), Chernye Zemli Reserve and Mekletinsky Reserve (both Kalmykia), as well as adjacent

territories. The specialists surveyed transects with a total length of more than 3,400 km, where they visually recorded saigas and specified their numbers. The material collected to study the wolf's biology included faecal samples. To assess the spatial structure of the predator population, the researchers identified wolf lairs and daytime locations of juveniles, as well as areas with higher concentrations of field signs (large accumulations of faeces and "scratches"). In addition, the team measured all pugmarks, based on which they established the sex and age compositions of wolf packs. All the material was geographically linked using the server-type NextGIS Mobile.

The project's first stage included the assessment of the wolf's diet and population structure, as well as the spatial distribution of the saiga. The material collected is still being processed.

To specify the wolf's diet, the researchers analysed 195 faecal samples. Fragments of food (hairs, bones and



Figure 1. Wolf at an artesian well near a herd of saigas in the Stepnoy Nature Reserve. Photo from a camera trap

other) were identified using a light microscope, by comparing them with reference samples.

Sites inhabited by wolf packs were identified based on approximate data on active breeding sites during the survey period, and on traces of wolf packs of the same sex and age with similar pugmark parameters, taking into account the distribution of marks. The team identified seven sites potentially inhabited by wolf packs, which overlapped the protected areas. At each site, we recorded signs of livestock herds. Lairs and daytime locations mark the core of a home range. whereas increased concentration of tracks and signs defines the boundaries of territories where neighbouring packs form a biological signal field. We examined 24 lairs and daytime locations and recorded 257 traces of passing wolf packs and 256 "scratches". The home range boundaries were delineated using the minimum convex polygon (MCP100%) method. The diet of each separate pack was identified.

While collecting materials, the researchers recorded saiga groups 107 times, whose spatial distribution

was estimated using an occurrence index. For this purpose, in the GIS, we superimposed a grid of 323 squares on the study area, 4×4 km each, 159 of which were surveyed "on the ground" and 139 of which were used in the subsequent analysis. In each surveyed square, we counted all observed saiga individuals and correlated them with the number and length of the transects, which enabled us to obtain the occurrence index. The squares inside the wolf's range were divided into two categories: those that were entirely within their home range and those crossed by boundaries.

The wolf's diet in the entire study area is shown in *Figure 3*. Saiga makes up half of the wolf's diet, livestock (sheep, goats and cattle) comprises 37% and other species only 13%. Given that other prey species, such as the raccoon dog, fox, rodents and other, are smaller in size than the saiga and livestock, the biomass of the wolf's food almost entirely consists of large animals. In 2016, although the numbers of livestock in the study area were much larger than those of saiga, the latter predominated in the wolf's diet,

which means wolves clearly prefer this species. The high proportion of live-stock in the wolf's diet indicates that in periods when the saiga is absent in the wolf's home ranges, the wolf forages for farm animals as a substitute for the saiga.

The diet of each wolf pack and the location of its home range is shown in Figure 4. Depending on the pack, saiga makes up from about one third to two thirds of the wolf's diet. The variation in the proportion of livestock in the diet is slightly higher. All wolf packs also forage for small prey. The saiga occurrence index in the squares entirely placed within one wolf pack's home range shows a weak positive correlation with its proportion in the predator's diet (Spearman, R=0.34, ns). The share of farm animals in the diet of a wolf pack shows a statistically significant negative correlation with the proportion of saiga antelope (Spearman, R=-0.9, p=0.006), which confirms that livestock is a substitute for saigas in the wolf's diet. Large predatory mammals are known to be under higher stress when hunting domestic animals than when foraging for wild ones. This is one of the probable reasons why the wolves in the north-western pre-Caspian region do not feed only on livestock, which is almost always available to them.

The size of a wolf pack in the north-west pre-Caspian region is a compromise between the number of individuals able to feed themselves and their offspring within the habitat and the number of individuals needed to hunt efficiently in the steppe conditions. The low density of prey individuals is why wolf ranges are large and overlapping. This arrangement of pack home ranges corresponds to the concept of



Figure 2. Saiga eaten by a wolf. Photo by A. A. Luschekina

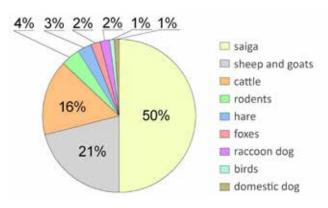


Figure 3. Wolf diet in the north-west pre-Caspian region in the summer and autumn of 2016, N=192 (N - records of prey remains in wolf faeces)

buffer zones. The overlapping parts of different packs' home ranges function as nature reserves for prey, where wolf packs avoid physical contact with each other and do not hunt. A comparison of the saiga occurrence index in squares placed entirely inside a pack's home range and those that include boundaries shows that on average saiga occurrence is four times higher in boundary areas (on the verge of statistical significance: Mann-Whitney test, U=1936, p=0.088). This indicates the existence of buffer zones in the spatial structure of wolf home ranges in the north-west pre-Caspian region.

Thus, the saiga is a key element of the wolf's diet in this area. The low and variable density of saigas associated with its migrations is an important factor determining the trophic relationship between wolves and saigas. The spatial structure of the wolf population in the region corresponds to the concept of buffer zones and can be stable when there is no anthropogenic pressure. Wolf families inhabit permanent sites, whose boundaries are maintained through active marking. These marks form biological signalling fields, which can be indicators



Figure 4. Approximate locations of the home ranges of wolf packs and their diets in the summer and autumn of 2016

for saigas as well. According to our research, wolves do not follow migrating saigas and do not leave their home ranges. Instead, they substitute the large animals in their diet, such as saiga, with livestock. So, livestock is included in the trophic relationship between the wolf and the saiga in this area, which means that these trophic relationships feature bidirectional ecological links between the predator and its prey species.

The authors thank the staff of the Stepnoy and Chernye Zemli State Nature Reserves for their support in the research.

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See also: M. D. Chistopolova, J. A. Hernandez-Blanco, A. D. Poyarkov, D. Yu. Alexandrov, A. A. Lushchekina, V. V. Rozhnov. Wolf diet in the northwest pre-Caspian region, depending on the spatial structure of the population // 6th All-Russian Conference on Animal Behaviour. Proceedings of the research conference. M.: KMK Partnership of academic publications. 2017. P. 175 (klex.ru/ow9).

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Current state of the saiga population in the Lake Elton Biosphere Reserve and adjacent Trans-Volga area in Volgograd Region (Russia), based on 2018-2024 monitoring results

The range of the Ural (Volga-Ural) saiga population currently covers most of western Kazakhstan and the adjacent trans-Volga parts of Saratov, Astrakhan and Volgograd regions in Russia, including the territory of Lake Elton Biosphere Reserve-Elton Nature Park.

The range of the Ural (Volga-Ural) saiga population currently covers most of western Kazakhstan and the adjacent trans-Volga parts of Saratov, Astrakhan and Volgograd regions in Russia, including the territory of Lake Elton Biosphere Reserve-Elton Nature Park.

Since 2018, as part of a state programme, park staff have been protecting and monitoring the species within the biosphere reserve and adjacent areas. This includes: visual observations and counts of saigas as part of patrolling and regular monitoring; information exchange with the Volgograd Regional Hunting Management organisation, the border service and local residents regarding encounters with saigas and their movements between Kazakhstan and Russia; monitoring of relevant publications in various periodicals and social networks; and

maintenance of a database on records of saiga herds and animal remains, which currently includes more than 180 entries.

In 2022, thanks to the Saiga Conservation Alliance Small Grants Programme, the biosphere reserve received equipment necessary to quickly make records and process monitoring data, which made it possible to obtain reliable new data on saiga occurrence in the protected area (Figure 1). This article presents the results of a comparative analysis of monitoring data obtained in the period January 2018 to October 2024. The data include a number of indicators, such as the dynamics of occurrence and numbers, seasonality, spatial distribution and herding (see previous publications in SN-25 and SN-27).

Saiga occurrence and numbers

Data analysis shows that during the entire observation period, saigas were recorded annually in the study area, mainly within Pallasovsk District. The total number of records is 179, increasing from 9-10 in 2018 and 2019 to 33-40 in 2022-2024. The number of saigas recorded in the area has a generally positive trend, but varies from year to year (*Figure 2*). In 2023, both indicators were record-high, with 40 encounters and a total of 123,500 individuals recorded.

It is obvious that the increase in occurrence and numbers of saiga in the study area is associated with the 12-fold increase in the Ural saiga population over the period (Table 1), which, according to official data from Kazakhstan, grew from 135,000 in 2018 to 1,620,000 individuals in 2024 (see article by S. Zuther in this issue), and the westward expansion of its range. This is partly confirmed by the results of a statistical analysis, showing a high correlation (Pearson's r=0.74) between the occurrence of saigas in Volgograd region and the total size of the Ural population.

The proportion of the population migrating from Kazakhstan to the study area shows a negative tendency, varies heavily from year to year, and correlates quite weakly (Pearson's r=0.441) with total saiga numbers in the Ural population. Interestingly, it was highest (19-20%) in 2019 and 2020, when the weather was quite dry and warm, and lowest (0.9%) in the humid and moderately warm year 2021. Therefore, saiga numbers in Volgograd region







Figure 1. Photos of saigas in the Lake Elton Biosphere Reserve taken by camera traps (top) and during field trips (bottom). Photos by GBU VO Elton Nature Park

largely depend on the weather and climate and the availability of food in the main part of the population range.

Seasonality and aggregation

Saiga antelopes are more or less regularly recorded in the study area throughout the year, although the occurrence and numbers are higher in the spring and summer (Figure 3). Saiga herds recorded in the region vary in size and sex and age composition and mainly have the following structure:

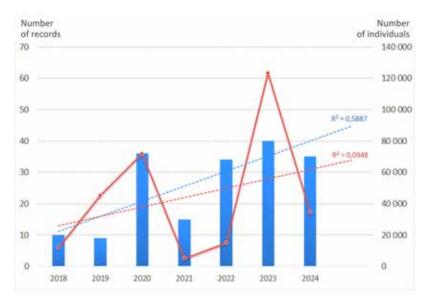


Figure 2. Dynamics of saiga occurrence and numbers in the Trans-Volga area of Volgograd region, 2018-2024

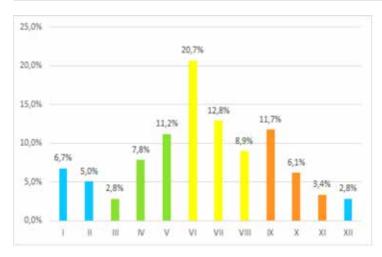


Figure 3. Seasonal dynamics of saiga occurrence in the Trans-Volga area of Volgograd region, 2018-2024

- single adult individuals recorded in the autumn and winter, both within Lake Elton Biosphere Reserve and in other parts of the Trans-Volga region – 16.8%;
- very small (5-20 individuals) and small (21-200 individuals) herds consisting of adult females and males, often with youngsters, regularly occurring within the Biosphere Reserve, probably leading a more or less sedentary lifestyle – 51.4%;
- very large herds and mass aggregations of saiga antelopes (>1,000

individuals), which make long trips between Kazakhstan and Russia from April to October, both in the northern part of the Trans-Volga area and in the Biosphere Reserve – 19.0% (Figure 4).

Saigas generally enter Russia from late April to June, that is, shortly before calving or immediately after it, mainly travelling in the daytime. However, most of the saigas return to western Kazakhstan within the following few days. The largest numbers of saigas entering the Russian territory were recorded:

- in the northern part of the Trans-Volga area – 20,000-30,000 individuals in mid-April 2019 and early May 2020;
- in the south-eastern part of the Trans-Volga area (in the Biosphere Reserve) – about 5,000 individuals in mid-June 2020 and more than 40,000 individuals in late May 2023.

Although females and youngsters were recorded every year throughout the summer, we have no confirmation of calving in the study area. Probably, this indicates key calving sites are located in the main part of the Ural range in western Kazakhstan. Yet, given the rapid population growth, it is highly probable that saigas do calve in the Trans-Volga area of Volgograd region.

Spatial distribution. Mapping shows that saiga migrations occur mainly in Pallasovsk District, bordering Kazakhstan, where the animals come around 15-20 km into Russia on average (*Figure 5*). However, there are individual records 60-70 km from the border, in Staropoltav and Bykov Districts.

Table 1. Saiga numbers in the Trans-Volga area of Volgograd region compared to the total count of the Ural population in Kazakhstan

	2018	2019	2020	2021	2022	2023	2024 (incomplete)
No. of saiga individuals recorded in the Trans-Volga area	8,100	45,200	71,400	5,100	14,900	123,500	34,500
Ural population size in Kazakhstan, No. of individuals	135,000	217,000	381,000	545,000	801,000	1,500,000	1,620,000
Proportion of the Ural population migrating to the Trans- Volga area, %	8.7	20.8	18.9	0.9	1.9	8.2	2.1

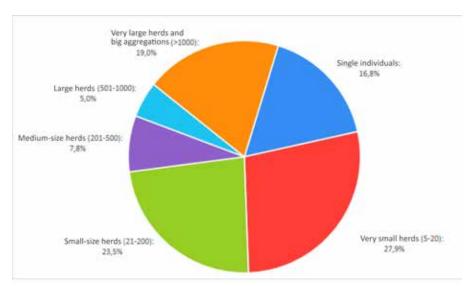


Figure 4. Herds of varying size recorded in the study region, 2018-2024

It has been established that saigas use the Trans-Volga area of Volgograd region in different ways during the year. In the north of the region, in Staropoltav District and in the northern part of Pallasov District, saiga antelopes are observed from late April to June during mass spring migrations, mainly in the border zone. Within the biosphere reserve, herds of varying size are regularly recorded almost throughout the year. Moreover, both migrating and sedentary herds are noticeably more often recorded in the reserve

(65.9%), which is due to the availability of large areas of desert-steppe pastures and watering holes suitable for saiga, as well as the absence of expansive arable lands, fences and serious disturbance (*Table 2*).

Locations most visited by saigas:

 northern part of the Trans-Volga area: Kulikov and Savinka villages (23 records, or 13% of the total), Limanny and Serogodsky villages (15 records, or 8.5%); south-eastern part of the Trans-Volga area, within the Lake Elton BR: Mt. Ulagan (26 records, or 14.5% of the total), Karabidayevka village and Sherkesh livestock breeding station (26 records, or 14.7%), Baikadan livestock breeding site (18 records, or 10.2%).

During the observation period, saigas were also recorded on the nearest watershed of Lake Elton (14 records, or 7.8%), that is, within Elton Nature Park, which confirms the importance of this protected area for saiga conservation.

Table 2. Occurrence and size of saiga herds in the Trans-Volga area of Volgograd region by district

Districts and their parts	Records			No. of individuals		Seasonality of
	No. of records	% of total number	No. of large herds and big aggregations	minimum	maximum	records
Pallasov District, northern part	49	27.4	18	1	30,000	Annually, late April to June; in 2023, also January to March
Pallasov District, southern part, within Lake Elton BR	118	65.9	16	1	40,000	Annually, throughout the year, maximum in June and July
Staropoltav District	9	5.0	3	1	15,000	May 2020, May- September 2023
Bykov District	3	1.7	_	1	1	May 2023

Faculty of Geography, Moscow State University,
 Moscow

Lake Elton Biosphere Reserve-Elton Nature Park, Elton

village, Pallasov district, Volgograd region

3 Volga-Akhtuba Floodplain Biosphere Reserve,
Srednyaya Akhtuba village, Sredneakhtubinsk district,
Volgograf region

^{*} Correspondent author: kalioujnaia@yandex.ru

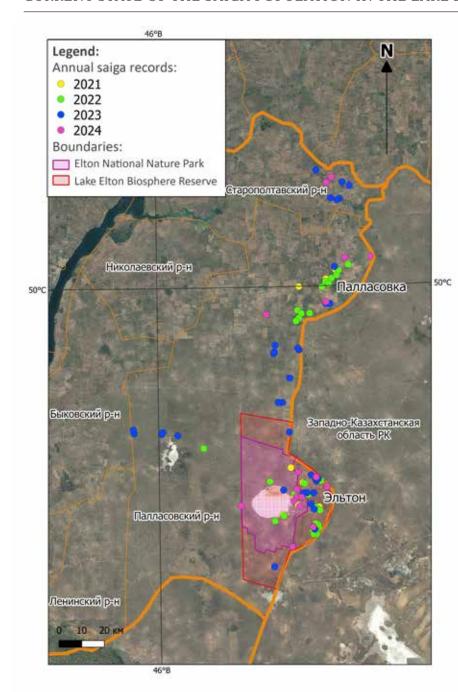


Figure 5. Saiga records in 2022-2024 within Lake Elton Biosphere Reserve and the adjacent territories

Старополтавский р-н – Staropoltavsky District Николаевский р-н – Nikolayevsky District Палласовка – Pallasovka village Быковский р-н – Bykovsky District Западно-Казахстанская обл. РК – West Kazakhstan region, Republic of Kazakhstan Эльтон – Elton Палласовский р-н – Pallasovsky District Ленинский р-н – Leninsky District

Selected new publications

Kashinina N.V., Lushchekina A.A., Sorokin P.A., Tarasyan K.K., Kholodova M.V. 2023. The modern state of the European saiga population (*Saiga tatarica tatarica*): mtDNA, DRB3 MHC gene, and microsatellite diversity. Integrative Zoology 00, 1–16. doi. org/10.1111/1749-4877.12700.

Hanski, E., Khanyari, M., Li, J., Bates, K.A., Zuther, S., Maiden, M. C. J., Kock, R., & Knowles, S. C. L. 2023. Gut microbiota of the critically endangered Saiga antelope across two wild populations in a year without mass mortality. Scientifc Reports 13: 17236, doi.org/10.1038/s41598-023-44393-z.

Serikbayevaa T., Akimzhanova D. Sh., Iskakovab Zh. A., Karagoishinc Zh., Akoyevd M.T., Dauletaliyeve T.N. and Baitanayev O.A. 2023. Saiga (Saiga tatarica) conservation strategy in Kazakhstan. Brazilian Journal of Biology 83, e275397. https://doi.org/10.1590/1519-6984.275397, doi.org/10.1590/1519-6984.275397.

Abdybekova A.M., Zhaksylykova A.A., Kushaliyev K.Z., Kidiraliyev E.Z., Kozhayeva A.R., Kuzhebayeva U.Z., Grachev A., Shevtsov A., Budke, C.M. 2023. A survey of the parasites of Ural saiga antelopes and Turkmenian kulans of Kazakhstan. International Journal for Parasitology. Parasites and Wildlife, 21, 232-236, doi.org/10.1016/j. ijppaw.2023.06.006.

Alikhanova S., Milner-Gulland E.J., Bull J.W. 2024. Exploring the human-nature nexus towards effective nature-based solutions: the Aral Sea case. Land Use Policy, Volume 139, 107073, doi.org/10.1016/j.landusepol.2024.107073.

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Myrzabayev, A., Ibraibekov, Zh., Bodeev, M., Britko, V., Yelshina, K., Tilla, Zh., Gongalsky, K. 2024. The current state of the saiga (*Saiga tatarica* L.) population in Betpak-Dala (Kazakhstan). Acta Scientiarum. Animal Sciences, 46, e69380, doi.org/10.4025/actascianimsci.v46i1.69380.

Chimeddorj, B., Bayartogtokh, B., Mallon D., Buuveibaatar, B., Bayandonoi, G., Ochirjav, M., Erdenebaatar, S., Gombobaatar, S. 2024. Ecology and conservation of the endangered Mongolian saiga (Saiga tatarica mongolica). Mong. Mongolian Journal of Biological Sciences, 22, 21-32, researchgate. net/publication/387106157_
Ecology_and_conservation_of_the_endangered_Mongolian_saiga_Saiga_tatarica_mongolica_Mong.

Chimeddorj B., Buuveibaatar, B., Galsandorj, N., Dolgorjav, S., Myanganbuu, N., Bayandonoi, G., Gombobaatar, S. 2024. From isolation to integration: assessing habitat connectivity of the endangered saiga antelope in Mongolia. Mammalian Biology, 104, 221-229, doi:org/10.1007/s42991-023-00391-2.

Saiga Hero

Our new hero is Aigul Fazylova, Deputy Director for Education at Secondary School No. 46 (Progress) in the city of Nukus, Uzbekistan. For many years, Aigul has been engaged in raising awareness about saigas. As soon as she graduated from university, young Aigul became an English teacher at a small school in a remote village in the north-west of Uzbekistan. Saiga antelopes lived not far from the village, but local people were not interested in their preservation. Aigul began to work with enthusiasm on raising the awareness of schoolchildren and their parents. Together with her husband, Koblan, they wrote the Saiga Anthem, which school students sing traditionally on every Saiga Day. Aigul has made a successful career in one of the best schools in Karakalpakstan, and today she helps organise events dedicated to the saiga, involving more and more children in the good cause of preserving this rare species and its steppe habitats.

Editor: When did you first become interested in wildlife?

Aigul Fazylova: As a schoolgirl, I became fascinated by wildlife. I remember how I watched TV programmes about nature all day long. My favourite one was In the World of Animals hosted by Nikolai Drozdov.

Editor: When did you first become interested in saigas?

AF: It was in 2012, when I was a teacher at school No. 26 in Kungrad District of Karakalpakstan, in the village of Karakalpakstan on the border with Kazakhstan. There I first met Alexander Esipov and Elena

Weimany

Bykova, representatives of the Saiga Conservation Alliance. Our acquaintance changed the monotonous life of the village. We began to receive more information about the saiga and its importance for the steppe in our homeland.

Editor: When did you start studying and protecting the saiga?

AF: Since 2012, we have been engaged in activities aimed at protecting the saiga and the environment. We annually hold the Saiga Day at our school in order to popularise this animal and help protect it.

Editor: What are the main challenges in your work?

AF: I consider the outdated stereotypical thinking of older people in remote areas of Karakalpakstan to be one of the main obstructions for nature protection. Take saiga hunting. For example, some old villagers within the saiga range believe this animal has for centuries been a game species, so why stop hunting it today. We can overcome



Aigul and her colleagues at the Summer Academy of Environmental Teachers in Kalmykia, 2018. Photo by SCA



Aigul with the international group of Saiga Ambassadors during the celebration of Saiga Day at the Progress School, Nukus, 2018. Photo by Alexander Esipov

these stereotypes through education and cultural exchange, when we develop a more objective and respectful attitude to nature.

Editor: What do you like most about the work?

AF: Working with children. They inherit our country, and our future depends on how well we bring them up. The role of children in our society cannot be overestimated. These little humans with pure hearts and immaculate world views have great potential. They are our hopes and dreams, hidden in their cheerful smiles and sparkling eyes. They are our reflection, but they have a chance to be better than we ever could be. Educating children requires a lot of responsibility and love. We must teach them to be kind, just, honest, and diligent. But it is equally important to give them the freedom of expressing themselves and developing their unique talents. Children need support and inspiration to achieve their full potential and benefit society. The modern world is changing at an incredible rate, and children will have to face challenges that their parents did not know. Therefore, it is important to prepare them for the future by developing their critical thinking skills and ability to adapt and work in a team. Education should not only help gain knowledge, but also bring up integrated and harmonious individuals.

Editor: What are the prospects for saiga conservation? What should be done first to help this species survive?

AF: In my opinion, the prospects for saiga have improved in recent years, because the importance of saiga protection has been widely promoted among the people. To conserve this species, it is necessary to combat poaching and raise people's awareness about the role of the saiga in the region's natural environment.

Editor: How long have you been working in the field of nature conservation? What has changed over the years, and what are the current trends in this area?

AF: I've been working in this field for about 12 years. Recently, modern technologies have become key to solving environmental problems and promoting sustainable development. Cuttingedge innovations continue to shape approaches to environmental protection and help us use resources more efficiently. Renewable energy, smart electronic networks, environmental monitoring technologies, smart cities and biotechnologies - all these innovations help reduce the negative impact of humans on the environment and create a more sustainable future. In 2024, advanced technologies continue to shape our attitude towards the environment and sustainability, offering new solutions to global challenges.

In memoriam

9th May 2024 was a grievous date for the entire academic community. Yuri Alexandrovich Grachev, an outstanding researcher, specialist in mammals, passed away, which caused a heavy loss for his numerous friends, colleagues and those who were lucky to be acquainted with this wonderful person. Yuri Grachev was a world-famous expert on the wildlife of Kazakhstan, who made a huge contribution to the conservation of a number of species, including saigas. Yuri Alexandrovich participated in many projects to study and protect this species. He was a member of the Saiga Conservation Alliance's executive committee since its founding. He also represented Kazakhstan on the editorial board of Saiga News. Today, we would like to pay tribute to this great scholar and wonderful person.

Yuri Alexandrovich Grachev was born on 11th December 1939 in the village of Vladimirovka, Lyskov District, Gorky (present-day Nizhny Novgorod) region, into a peasant family. In 1962, after graduating from high school and serving in the army, he moved to Kazakhstan, where he initially worked as a hunter for the Balkhash muskrat farm, and then at the Institute of Zoology, where he began as a laborathe Abai Kazakh Pedagogical Institute. Squirrel on riparian and island forests

tory assistant and junior researcher. At the same time, Grachev studied biology at the Faculty of Natural Sciences at In 1972, he successfully defended his PhD thesis entitled "Siberian Red



Yuri Alexandrovich on a field expedition to Aksu-Zhabagly (Western Tien Shan), 2003. Photo by Institute of Zoology, Ministry of Science and Higher Education of the Republic of Kazakhstan



in Kazakhstan", after which he worked for several years in nature reserves in Kazakhstan and Russia. In 1986, he returned to the Institute of Zoology of the Republic of Kazakhstan, where he stayed for many years.

Mammals always were Yuri Alexandrovich's main interest. Apart from squirrels, his other favourite objects of research were the bear and snow leopard. In the 1990s, the laboratory of mammal biology, for which Grachev was working, became an active participant in various international saiga projects, and he readily included this species in the range of his studies. In that period, he wrote a proposal for a special programme to conserve the saiga and submitted it to the Government of the Republic of Kazakhstan. Twenty years later, he initiated and managed the project "Assessing the impact of new linear infrastructure on saiga populations and developing measures to reduce harm to animals and their ecosystems in Kazakhstan" and a special saiga protection programme in Kazakhstan for 2024-2026. For many years, Yuri Alexandrovich was an active participant in many other programmes to



With the staff of the Institute of Zoology. Photo by Institute of Zoology, Republic of Kazakhstan

address saiga issues, where he did his best to ensure conservation and rational use of this unique species. He took part in a number of Saiga Conservation Alliance workshops and meetings and regularly attended the conferences of the parties to the Memorandum of Understanding and Sustainable Use of the Saiga Antelope, held in different years in Russia, Mongolia, Uzbekistan,

and Kazakhstan. He also presented his research on this topic at various international conferences.

Yuri Alexandrovich was an excellent field researcher, who knew perfectly well the mountains, steppes and deserts of Kazakhstan and the behaviour of animals inhabiting them. Aged 70, he had more stamina than many young

Yuri Grachev with colleagues from the Institute of Zoology at a meeting with the Executive Committee of the Saiga Conservation Alliance, Almaty, 2008. Photo by Alexander Esipov/SCA

people, who could not catch up with him, walking in the mountains. In any season of the year, he was bright, active and in good physical shape. As an aged man, he continued to participate in aerial surveys of saigas. The geography of his expeditions covered the vast territory of Kazakhstan and extended further, into the far and near abroad, and even Africa!

Grachev regularly published the results of his work. During his service for the Institute of Zoology, he authored more than 200 research publications. Yuri Alexandrovich's studies were included in a number of major works, such as Mammals of Kazakhstan (1977, 1981 and 1982), the Red Data Book of Kazakhstan (1978, 1991, 1996, 2010 and the latest 2024 edition currently in publication), Book of the Genetic Pool of the Fauna of the Kazakh SSR (1989), co-authored monographs on bears (1993) and saigas (1998), as well as Monitoring the Biological Diversity of the Aksu-Zhabagly Reserve (2002), Survey Methods for Basic Game and Commercial Animals of Kazakhstan (2003), and Mammals of the Kolsai Lakes National Park (2017). Yuri Grachev participated in more than 25 international conferences and symposia. His research papers are published in the highest-rated periodicals, including Nature (2003), Biological Conservation (2010), and Sustainability (2022). He regularly provided the results of surveys and information on the state of saiga populations in Kazakhstan in Saiga News, which for many years he edited together with Professor Amankul Bekenov. In recent decades, he was a member of the Kazakh branch of the Theriological Society of the Russian Academy of Sciences and the Saiga Conservation Alliance.



Yuri Alexandrovich at the Conference of the Parties to the CMS Memorandum of Understanding on Saiga Conservation in Tashkent, 2015. Photo by Alexander Esipov/SCA

Yuri Alexandrovich was happy to share his knowledge with young people in both private conversations and publications. In 2004, he participated in the filming of the documentary "Aline and the Saigas" by Marathon Production (Paris, France). The film was screened at the 15th International Wildlife Film Festival in Albert, France, in March 2005, where it won Prix de la Publique.

Yuri Grachev received numerous accolades for his achievements. For his successful research and organisational work, he was awarded diplomas from various ministries and departments. He became Laureate of the Moscow Society of Naturalists in 1988 and was granted the Veteran of Labor medal in 2019.

Yuri Alexandrovich was a hard-working, determined and extraordinarily kind-hearted person, for which he was held in love and respect by all his colleagues at the Institute of Zoology. The death of this remarkable scholar is a terrible loss to Kazakhstan, and although his students continue his cause, we will deeply miss this person, his ideas, knowledge and experience...

Marina Chirikova, Institute of Zoology, Kazakhstan

Yuri Grachev holds a special place in my heart as he was the first person with whom I worked when I first came to Kazakhstan in May 1993. He answered a handwritten letter which I sent to the Institute of Zoology, asking to come and visit them and collaborate on developing a saiga population model. This was a time when there were no other Western scientists engaging with their Institute, so it was really good of him and his Director, Professor Amankul Bekenov (see Saiga News 26), to take me in. Yuri was so

knowledgable, kind and welcoming that it's in large part thanks to him that I am still working on saigas 30 years later. He even organised a short expedition to take me to see saigas. I vividly remember this trip, we travelled for three days north from Almaty into the heart of the Betpak-dala population, looking for saiga herds, stopping to ask for directions at convenient yurts coincidentally whenever it got close to lunchtime! We finally found my first ever saiga baby at dusk, on its own in the sandy rut of our track, it was a magical moment. I don't think many research institutes in the Former Soviet Union at that time would have taken in a young Englishwoman, with no money and no track record, and treated her with such respect and kindness.

Yuri was a wonderful and generous collaborator. He shared his datasets and his extensive field knowledge with me and my students to produce joint papers on a wide range of topics regarding saiga ecology. He led field expeditions with my students to study parasites and diseases, life histories and reproduction, and use of forage resources. He was a true naturalist and a rigorous scientist with a sharp eye for detail. He also had a dry sense of humour and was very patient with our halting attempts to speak Russian and with our inadequacies in field skills.

I remember one particular conversation early in our time together, sitting in the back of a UAZ truck on the steppe and sharing a bottle of Scotch whisky which I'd brought (not much liked, inferior to vodka), and trying to find points of contact despite our lack of language overlap. We talked about Walter Scott, London smogs and the Latin names of the various species we'd encountered. I did feel very inadequate as

I had very little to say about Walter Scott and I was much less proficient in the Latin names of species than he was. I was able to confirm, however, that London wasn't smoggy any more.

Yuri was also a committed and enthusiastic founding member of the Saiga Conservation Alliance, whose inputs helped to shape the organisation. He was a member of the Editorial Board of Saiga News, and contributed thoughtfully to our meetings, particularly ensuring that our work was built on strong science. Yuri was not one for taking the limelight, he was quite reserved. But when he did speak, either in public or in one-to-one conversations, his inputs were always worth hearing. He was much more comfortable in the field than in the city, and continued to lead expeditions when most people would have retired. I considered him a true friend and will miss him deeply.

E.J. Milner-Gulland, Oxford University, Saiga Conservation Alliance, UK

The news of Yuri Alexandrovich's death made us realise how much we have lost. He was not only a good friend and colleague, but also an excellent specialist who devoted most of his life to the saiga. His papers were an important source of information and inspired us to further study of this amazing antelope. We met in person in the early 2000s, when a team of specialists from different countries started to implement an international interdisciplinary project covering the saiga range in Kazakhstan, Russia, and Uzbekistan, on which we worked in close cooperation with Yuri Grachev. Afterwards, I often had the pleasure of seeing Yuri Alexandrovich, listening to his

interesting stories about field surveys and just talking. Yuri Alexandrovich Grachev was one of the founders of the Saiga Conservation Alliance. Subsequently, he supported and contributed to international cooperation in the study and protection of this unique and important species.

We mourn the passing of Yuri Alexandrovich. I wish to express my condolences and say words of support to his family and friends. His death is a great loss to saiga conservationists and the entire world's zoological community.

Anna Luschekina, Saiga Conservation Alliance, Russia Valery Neronov and Tatiana Karimova Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences

Today we commemorate Yuri Alexandrovich Grachev, a person who left a vivid trace on the lives of each of us. His diligence, scrupulousness and creativity made Yuri Alexandrovich a unique specialist. We thank him for the years of collaboration, for his support and wise advice. May his soul rest in peace, and the memory of him will always warm our hearts.

Yuri Arylov, Kalmyk State University, Saiga Conservation Alliance, Russia

We will always remember Yuri Alexandrovich as a representative of the "Almaty zoologist clan." He was an intelligent man it was so nice to talk to, always ready to help by word and deed. We met him and the region's leading saiga expert, Professor Amankul Bekenovich Bekenov, when Uzbekistan was invited to a project to

study the reproductive biology of the saiga. That project, the first "saiga" project in our career, was initiated by Professor E. J. Milner-Gulland. We joined a solid and cohesive team of saiga protectors and felt immediately engrossed in the study of this species, which at that time was classified in our region as a common and abundant representative of game animals. In those years, which were not yet so gloomy for the saiga, Uzbekistan felt a need to count its numbers. Naturally, we asked our northern colleagues from Kazakhstan for advice, who were much more experienced in this matter. Yuri Alexandrovich, without delay, flew to Tashkent, shared his experience in conducting saiga surveys, and helped develop a methodology for Uzbekistan. Since then, we communicated regularly. Yuri Grachev was an inexhaustible source of all kinds of stories about various things that had happened to him during expeditions. You could hardly find a more experienced and knowledgeable, and at the same time very amiable and approachable person. For many years, we collaborated with Yuri Alexandrovich in our work for the Saiga News bulletin, where he was an editor. It is so hard to believe that he is not with us any more. However, he has left a great legacy in the form of his publications and students. But what is most important is that the animals, to whose protection he devoted so much knowledge, spirit and energy, have survived. And the saiga is one of the best examples. We think Yuri Alexandrovich was very happy and proud to observe the recovery of populations of this species.

Alexander Esipov and Elena Bykova, Saiga Conservation Alliance, Institute of Zoology, Uzbekistan

Acknowledgements

We would like to express our deep gratitude to all the people whose donations of money and time support the work of the Saiga Conservation Alliance. We are particularly grateful to the Wildlife Conservation Network and the U.S. Fish and Wildlife Service which supported this issue of the newsletter.

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