IUCN Conservation Outlook Assessment 2014 **(archived)**
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Please note: this is an archived Conservation Outlook Assessment for Saryarka – Steppe and Lakes of Northern Kazakhstan. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Saryarka – Steppe and Lakes of Northern Kazakhstan

SITE INFORMATION

Country:
Kazakhstan
Inscribed in: 2008
Criteria:
(ix) (x)

Site description:
Saryarka - Steppe and Lakes of Northern Kazakhstan comprises two protected areas: Naurzum State Nature Reserve and Korgalzhyn State Nature Reserve totalling 450,344 ha. It features wetlands of outstanding importance for migratory water birds, including globally threatened species, among them the extremely rare Siberian white crane, the Dalmatian pelican, Pallas's fish eagle, to name but a few. These wetlands are key stopover points and crossroads on the Central Asian flyway of birds from Africa, Europe and South Asia to their breeding places in Western and Eastern Siberia. The 200,000 ha Central Asian steppe areas included in the property provide a valuable refuge for over half the species of the region's steppe flora, a number of threatened bird species and the critically endangered Saiga antelope, formerly an abundant species much reduced by poaching. The property includes two groups of fresh and salt water lakes situated on a watershed between rivers flowing north to the Arctic and south into the Aral-Irtysh basin. © UNESCO

SUMMARY

2014 Conservation Outlook

Good with some concerns

Effective management of the two component reserves of the site, recent extensions of these protected areas and the overall good state of its ecosystems and biota provide a good basis for a positive conservation outlook for this site. There are currently no confirmed high or very high threats to the site's values and two main issues that used to affect the site in the past (decreasing water level of freshwater lakes and water pollution, particularly with mercury) seem to have been addressed.

Current state and trend of VALUES

Low Concern
Trend: Stable

The state of the steppe and forest ecosystems of the site appears satisfactory and has benefited from the recent extension of the Korgalzhyn State Nature Reserve. Similarly measures undertaken to increase the water level and reduce water pollution, have helped improve the state of the site's lake and wetland ecosystems. The state of the site's flora and fauna is of low concern and stable.

Overall THREATS

Low Threat

There are currently no confirmed high or very high threats to the site's values and two main issues that used to affect the site in the past (decreasing water level of freshwater lakes and water pollution, particularly with mercury) seem to have been addressed. Additional current threats originate from poaching and legal hunting. Climate change as the main potential threat to the site and its potential effects on the site's values need further research, monitoring and analysis.

Overall PROTECTION and MANAGEMENT

Mostly Effective

Protection and management of the site are mostly effective, and some management areas are highly effective. The component protected areas receive support both from the relevant governmental bodies, as well as international organizations, such as UNDP, and projects many of which have also helped improve engagement of local communities. Funding, however, remains insufficient, particularly since some of the component protected areas (although not the World Heritage site) have been significantly enlarged recently.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **Processes sustaining steppe and forest**
Criterion:(ix)

The property contains over 200,000 ha of Central Asian steppe, with its associated biological and ecological processes (such as succession and seasonality), more than half of which is pristine, and which is part of the temperate grassland biome (Rachkovskaya and Bragina, 2012, SoOUV, 2008). Both component reserves of the site are complementary in terms of the ecosystem values represented, with Naurzum State Nature Reserve having five distinct terrestrial biomes including dry and semi-arid sandy scrub steppe, boreal forest, meadows and halophytic ecosystems, and the terrestrial part of Korgalzhyn State Nature Reserve being dominated by halophytic and hyper-halophytic systems (UNEP-WCMC, 2011).

▶ **Lake and wetland ecosystems**
Criterion:(ix)

The succession and seasonal dynamics of the hydrology, chemistry and biology of the lakes, with the diverse flora and fauna of the wetlands have evolved through complex wetting and drying cycles, and are of global significance and scientific interest (SoOUV, 2008). The freshwater and lake ecosystems represent a gradient of salinity from poor freshwater to hypersaline systems (UNEP-WCMC, 2011). Both component sites contain Wetlands of International Importance under the Ramsar Convention

(Wetlands International, 2012).

► Bird migration

Criterion:(ix)

The wetlands of Korgalzhyn and Naurzum State Nature Reserves are key stopover points and crossroads on the Central Asian migratory bird flyways and are of outstanding importance for migratory waterbirds on their way from Africa, Europe and South Asia to their breeding places in Western and Eastern Siberia (Schielzeth et al., 2008, SoOUV, 2008). Together with their breeding birds, they have the highest abundances of moulting and resting waterbirds in Asia. 15 million waterbirds pass through the Korgalzhyn-Tengiz lakes each year (UNEP-WCMC, 2011).

► Exceptional diversity of flora

Criterion:(x)

The steppe and lake habitats of Korgalzhyn and Naurzum State Nature Reserves sustain a diverse range of Central Asian flora. The site's steppe areas provide a valuable refuge for over half the species of the region's steppe flora (WHC, 2008). There are nearly 770 plant species recorded in the reserves, including many typical steppe species (e.g. representatives of the genera Stipa, Festuca, Helichrysum, Artemisia, Silene) and halophytes (e.g. Artemisia spp.). Naurzum State Nature Reserve also has forest assemblages dominated by Pine Pinus sylvestris and birch Betula pendula, Betula pubescens and Betual kirghisorum) and meadow communities. Both component reserves are also rich in aquatic flora, which is often dominated by Reed Phragmitis australis, Cat-tail Typha angustifolia and Club-rush Scirpus lacustris (UNEP-WCMC, 2011).

► Exceptional diversity of Central Asian fauna

Criterion:(x)

Korgalzhyn and Naurzum State Nature Reserves sustain a diverse range of Central Asian fauna, including 341 species of birds (112 breeding and 239 migratory/vagrant), 53 species of mammals, 10 of herpetofauna, 16 of fish and over 1,000 of invertebrates (UNEP-WCMC, 2011). They support vast numbers of migratory and resident birds, their most important biodiversity value, including substantial populations of many globally threatened species

(SoOUV, 2008). The latter include Lesser White-fronted Goose Anser erytrhopus (VU), Red-breasted Goose Branta ruficollis (EN), Dalmatian Pelican Pelecanus crispus (VU), Sociable Lapwing Vanellus gregarius (CR), and the breeding White-headed Duck Oxyura leucocephala, Saker Falcon Falco cherrug (EN), Eastern Imperial Eagle Aquila heliaca (VU), and Siberian Crane Leucogeranus leucogeranus (CR) (BirdLife International, 2012a, b, IUCN, 2012). The Korgalzhyn-Tengiz lakes provide feeding grounds for up to 15-16 million birds, including flocks of up to 2.5 million geese. They also support up to 350,000 nesting waterfowl, while the Naurzum lakes support up to 500,000 nesting waterfowl. The site is the northernmost breeding area of Pink Flamingos (Dybas, 2008). The site's steppe areas provide a valuable refuge for a number of threatened bird species and the Saiga Antelope Saiga tatarica (CR). There are also noteworthy populations of the endemic Steppe Pika Ochotona pusilla and other typical steppe fauna. At Naurzum State Nature Reserve there are also numerous species of the forest belt, for which the area forms the southern distribution limit (UNEP-WCMC, 2011).

Assessment information

Threats

Current Threats

Low Threat

There are currently no confirmed high or very high threats to the site’s values and two main issues that used to affect the site in the past (decreasing water level of freshwater lakes and water pollution, particularly with mercury) seem to have been addressed. Additional current threats originate from poaching and legal hunting.

► Dams/ Water Management or Use

Low Threat
Inside site

The water level of Tengiz Lake and other freshwater lakes depends on the

natural cycle of desiccation and re-flooding on the one hand, and water allocation from key tributaries including the Nura River on the other hand (IUCN, 2008). On a smaller scale, it is driven by the management of dams and sluices around and inside the site. In 2012 reconstruction of 3 dams – Ablayskaya (river Nura), Tabtsekskaya (Con and Kulanaptes Rievers) and Kushulekskaya (Noor) was completed. This should have improved fresh water balance significantly (IUCN Consultation, 2013).

► Water Pollution

Low Threat
Inside site

The Nura River transports industrial, agricultural and urban pollution from industrial and urban centres upstream (including the city of Astana) into the site (Ullrich et al., 2007, World Bank, 2012). The 6-year long World Bank funded project (Clean River) has helped significantly reduce the amount of mercury entering Nura river which was proven by a reduction in mercury found in fish.
(http//www.cleanriver.kz/)

► Commercial hunting

High Threat
Inside site

Poaching levels are reportedly low and restricted to the southern part of the Korgalzhyn State Nature Reserve. Legal hunting on waterbirds in several legal hunting areas outside the site may have an impact on the abundances of migratory waterbirds inside it, including threatened species. This is assessed as a low threat because only a few species are concerned. Mammal poaching appears to be at a relative modest level; however, concerns remain about the Saiga which are poached for their horns, which are sold to China for traditional medicine (IUCN Consultation, 2013).

► Livestock Farming / Grazing

Very Low Threat
Outside site

Grazing and haymaking takes place in only the buffer zone of the site, and is regulated in a way that it does not interfere with breeding birds or values of

the site (UNEP-WCMC, 2011). Grazing areas have been set aside in the Karaganda area (15.000 ha) and in the south of the Kustanai region.

Potential Threats

Low Threat

Climate change as the main potential threat to the site and its potential effects on the site's values need further research, monitoring and analysis.

► Temperature changes

Low Threat
Inside site
Outside site

Climate change is likely to affect the hydrological regime, ecosystem functioning and biodiversity of the site in the medium and long term, and its potential extent and impact on the property's values should be studied further.

Protection and management

Assessing Protection and Management

► Relationships with local people

Mostly Effective

The core areas of both component reserves of the site are uninhabited. There is some natural resource use by local people in the buffer zone, which appears not to create major conflicts. The component protected areas have run a number of projects to engage local communities into sustainable resource use in the surroundings, such as traditional agriculture, development of nature-based tourism programmes for visitors. In 2012 the Korgalzhyn State Nature Reserve has become part of the MAB network of biosphere reserves and a community engagement plan was developed as part of this process (IUCN Consultation, 2012).

► Legal framework and enforcement

Mostly Effective

In accordance with the Law of Kazakhstan of Protected Areas (1997), the land of the site is fully State-owned. The property consists of two legally established State Nature Reserves (SNR), which correspond to IUCN PA Category 1a. Each of the component protected areas has been legally established by a Government Decree (Government of the Republic of Kazakhstan, 2007). Naurzum SNR was first established in 1931 whereas Korgalzhyn SNR was first established in 1968. The legal protection has been judged to be adequate (IUCN, 2008). Enforcement is also adequate overall although reportedly there have been intrusions into Korgalzhyn SNR by poachers.

► Integration into regional and national planning systems

Mostly Effective

According to the nomination document, there are no specific local development plans relevant to the site but its component reserves are mentioned in relevant national documents including the National Action Plan for Nature Protection in the frame of the
State Programme 2030, and the national Strategies for Biodiversity Conservation (1999) and protected areas system development from 2006 till 2008 (Government of the Republic of Kazakhstan, 2007). No conflicts between conservation objectives and the local/national planning framework are documented.

► Management system

Mostly Effective

Both State Nature Reserves have separate administrations reporting to the Committee for Forestry and Hunting at the Ministry for Agriculture of Kazakhstan, including ranger services. Each reserve has a three-year management plan focusing particularly on protection, research and monitoring, education, interpretation and tourism, and expert training, as well as annual work plans. There is also a joint management plan for the entire property, but it is unclear how this relates to the individual PA management plans (Government of the Republic of Kazakhstan, 2007). The

management system of the site is considered adequate (IUCN, 2008).

▶ Management effectiveness

Mostly Effective

No formal management effectiveness assessment of the component reserves of the property has been published. Both SNRs have existed for a long time (Nuarzum since 1931 and Korgalzhyn since 1968) with a well established and reportedly overall effective administration, but monitoring and interpretation management could benefit from some improvement (IUCN, 2008).

▶ Implementation of Committee decisions and recommendations

Highly Effective

The only relevant Committee decision is Decision 32 COM 8B.8, which encouraged the State Party to consider further extensions of the property (WHC, 2008). This is underway, with the inclusion of the natural steppes west of Tengiz into Korgalzhyn State Nature Reserve (but not the World Heritage Site) in 2008. In 2012 the Sarykopa Lake became part of the Altyn Dala Nature Reserve (IUCN Consultation, 2013) located to the West of Lake Tengiz.

▶ Boundaries

Highly Effective

This is a serial site consisting of two component nature reserves with a buffer zone of at least 2 km around each of them. The boundaries are well-marked on the ground and were considered adequate at the time of inscription (IUCN, 2008). Korgalshyn SNR (but not the World Heritage site) has since been extended by 284,224 ha to the west, bringing its overall area to 543,171 ha. This extension was already considered and supported by the 2008 IUCN inspection mission. In addition, the Altyn Dala State Nature Reserve created in 2012 included the territory of the Sarykopa Zakaznik providing it with a higher level of protection. This area was originally envisaged as a part of the World Heritage site but excluded because of the then insufficient protection status (IUCN, 2008).

▶ Sustainable finance

Mostly Effective

The 2005 budgets for Korgalzhyn SNR and Naurzum SNR were in the order of USD 380,000 and 300,000, respectively, and were mainly sourced from the national budget. This was a dramatic increase compared to previous years. In addition to this budget, there has been relatively strong project funding from GEF/UNDP, GEF/UNEP and a number of conservation NGOs (Government of the Republic of Kazakhstan, 2007). However, more funding is needed for effective management of the significantly enlarged area.

► Staff training and development

Mostly Effective

Both component SNRs of the property are sufficiently staffed, with 59 staff in Naurzum and 51 staff in Korgalzhyn SNR. Staff are trained annually in subjects relevant to conservation, research and monitoring, interpretation and tourism management, etc. (Government of the Republic of Kazakhstan, 2007). However, there is reportedly room for improved interpretation skills and scientific capacity among the property’s staff.

► Sustainable use

Mostly Effective

There is only very limited sustainable use of some natural resources (e.g. fish) by rangers inside the State Nature Reserves (Government of the Republic of Kazakhstan, 2007), and some hay farming in the buffer zone. These are considered well managed and not a threat to the site’s values (UNEP-WCMC, 2011).

► Education and interpretation programs

Mostly Effective

Both component reserves of the site have websites providing some basic information (Forest and Hunting Committee of Ministry of Agriculture of Republic of Kazakhstan 2012a, b). Based on the visitor centres/museums in each SNR, there are regular school visits (UNEP-WCMC, 2011) and the reserves have also collaborated with local schools on some environmental educational programmes. New visitors’ centres have recently been built.

► Tourism and interpretation

Mostly Effective

Both SNRs have museums/visitor centres, and the one of Korgalzhyn SNR has been modernized with the support of GEF/UNDP. There are also some visitor trails, but in general visitor numbers are low (a few hundred to Naurzum and 1,000-2,000 to Korgalzhyn in the early 2000s) and tourism is not a major field of activity of the reserves (Government of the Republic of Kazakhstan, 2007). This is changing, however, and visitor management might become one of the key management areas. A new visitor centre was built in Korgalzhyn SNR in 2009 and in 2013 a new centre was built in Naurzum with an aim of not only attracting more tourists, but also providing employment opportunities for local people.

► Monitoring

Mostly Effective

There is some annual monitoring on the basis of the Chronicles of Nature (UNEP-WCMC, 2011), and using a standardized set of six indicators (Government of the Republic of Kazakhstan, 2007).
New monitoring systems were established in the framework of a GEF-funded project which included also provision of necessary equipment (IUCN Consultation, 2013).

► Research

Highly Effective

Naurzum SNR has produced ca. 600 reports and publications, mainly in the fields of zoology/ornithology, limnology, and forest soil ecology. A recent summary is provided by Rachkovskaya and Bragina (2012). Korgalzhyn SNR has produced ca. 300 reports and publications, mainly on limnology and ichthyology as well as soil and vegetation ecology (UNEP-WCMC, 2012). However, only a few of the existing publications are available in English, with a Web of Knowledge search for the property and its component PAs yielding little more than 20 hits (WoK, 2012). Additional research projects are underway. There are also research plans/strategies in both component reserves.

Overall assessment of protection and management

Mostly Effective

Protection and management of the site are mostly effective, and some management areas are highly effective. The component protected areas receive support both from the relevant governmental bodies, as well as international organizations, such as UNDP, and projects many of which have also helped improve engagement of local communities. Funding, however, remains insufficient, particularly since some of the component protected areas (although not the World Heritage site) have been significantly enlarged recently.

► Assessment of the effectiveness of protection and management in addressing threats outside the site

Some Concern

The main external threats to the values of the site are related to the quantity and quality of the water supply to it. Since these are not sufficiently understood, there is some concern about the effectiveness of the existing management regime to address them.

► Best practice examples

The comprehensive response of the State Party to suggestions to extend the protection regime to areas adjacent to the originally nominated property is an example of proactive conservation planning and should be applied in other sites as well.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► Processes sustaining steppe and forest

Low Concern
Trend:Improving

The state of the steppe and forest ecosystems appears satisfactory (IUCN, 2008), and has benefited from the recent extension of the Korgalzhyn State Nature Reserve to the West. However, fires along roads and tracks have caused some damage to these values of the site in recent years.

► Lake and wetland ecosystems

Low Concern
Trend:Improving

The freshwater lakes of the site, including Lake Tengiz, experienced a notable if moderate drop in water level in the past. However, in 2012 reconstruction of 3 dams – Ablayskaya (river Nura), Tabtsekskaya (Con and Kulanaptes Rievers) and Kushulekskaya (Noor) was completed. This should have improved fresh water balance significantly (IUCN Consultation, 2013). Water pollution has also significantly reduced thanks to a number of measures.

► Bird migration

Low Concern
Trend:Stable

The general conservation status of migrating birds at Korgalzhyn SNR was considered favourable in 2008. However, outside the reserve hunting, fishing and power line casualties may impair the conservation status of migratory birds, and should be monitored more carefully in the future (Schielzeth et al., 2008, BirdLife International, 2012a).

► Exceptional diversity of flora

Low Concern
Trend:Stable

Similar to the conservation state of the steppe and forest ecosystems that they compose, the state of terrestrial flora of the site was judged good in 2008 (IUCN, 2008).

► Exceptional diversity of Central Asian fauna

Low Concern
Trend:Improving

The Betpak-Dala Saiga population, to which the animals within the site belong, has been increasing for at least 15years and numbered 110.000 animals in 2012 (Saiga News, issue 15, 2012). Overall, the state of faunal biodiversity is considered of low concern at the moment.

Summary of the Values

► Assessment of the current state and trend of World Heritage values

Low Concern

Trend: Stable

The state of the steppe and forest ecosystems of the site appears satisfactory and has benefited from the recent extension of the Korgalzhyn State Nature Reserve. Similarly measures undertaken to increase the water level and reduce water pollution, have helped improve the state of the site’s lake and wetland ecosystems. The state of the site’s flora and fauna is of low concern and stable.

Additional information

Key conservation issues

► Risk of decreasing water level

Local

The water level of Tengiz Lake and other freshwater lakes depends on the natural cycle of desiccation and re-flooding on the one hand, and water allocation from key tributaries including the Nura River on the other hand (IUCN, 2008). On a smaller scale, it is driven by the management of dams and sluices around and inside the site. In 2012 reconstruction of 3 dams – Ablayskaya (river Nura), Tabtsekskaya (Con and Kulanaptes Rievers) and

Kushulekskaya (Noor) was completed. This should have improved fresh water balance significantly (IUCN Consultation, 2013).

▶ Hunting outside the property

Local

Many waterbirds conduct daily migrations to areas outside the property while present there. Some of these areas thus ecologically connected to the property are used as commercial hunting areas. Although no exact information is available on the impact of hunting outside the property on the conservation status of its avifauna, this needs to be monitored more carefully, and there may be a need for a mitigating management response (Schielzeth et al., 2008).

Benefits

Understanding Benefits

▶ Does management of the site provide jobs (e.g. for managers or rangers)?

The property offered ca. 110 jobs in 2008, in a poor and relatively remote area, a number that could probably be increased if the staff number would be set to a level adequate for the now increased size of the property. In addition, a significant number of jobs (possibly tens to hundreds of jobs in tourism) could be created in the course of sustainable tourism development and possibly the development of sustainable natural resource use schemes within the buffer zones of the property.

▶ Importance for research

The site has already contributed significantly to the overall scientific understanding of bird migration and Eurasian steppe ecosystems (UNEP-WCMC, 2011, Rachkovskaya and Bragina, 2012, Schielzeth et al. 2008). This benefit could be maintained and developed further.

▶ Contribution to education

The administration of the property has started concerted efforts to develop its interpretative and educational capacities (Government of the Republic of

Kazakhstan, 2007). Based on the visitor centres/museums in each SNR, there are regular school visits (UNEP-WCMC, 2011) and the reserves have also collaborated with local schools on some environmental educational programmes. New visitors' centres have recently been built.

► **Outdoor recreation and tourism**

Nature based tourism is practiced at a very moderate intensity on the property (IUCN, 2008). If developed in a responsible way, the site may offer a unique opportunity to experience a relatively undisturbed wilderness and the extraordinary avifauna of the property, particularly during migration seasons. This might also contribute significantly to income generation for its component PAs.

Summary of benefits

Because of its extraordinary conservation values and strict protection regime, the main benefits of the property are related to its nature conservation values and its role in knowledge generation. It also provides a sizeable number of jobs in an otherwise rather poor area. At the same time, the property has rich potential to maximize its socio-economic benefits in terms of education and experiencing nature, tourism and the overall socio-economic development of this relatively poor region of Kazakhstan.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Association for the Conservation of Biodiversity of Kazakhstan		Altyn Dala Conservation Initiative, including activities aimed at Saiga conservation near the property and connected to the upgrading of the Zarykopa Zakaznik, in line with recommendations of IUCN (2007)
2	The World Bank		Cleanup of mercury contaminated sediments around the Nura River
3	Naurzum NGO		Support of management and research at Naurzum SNR

№	Organization/ individuals	Project duration	Brief description of Active Projects
4	EcoMuseum Karaganda		Monitoring of WB Nura River Mercury cleanup project
5	UNDP		Several projects

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	N.A.	Development/upgrading of monitoring programmes for the site’s values, including hydrology and flora and fauna	
2	N.A.	Feasibility study aimed at determining carrying capacities and action plans for sustainable tourism development at both component PAs	

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