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for the Environment, Climate Action,
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SUDOCHYE LAKE SYSTEM RAMSAR SITE

Visitor Concept



MINISTRY OF ECOLOGY,
ENVIRONMENTAL PROTECTION
AND CLIMATE CHANGE OF THE
REPUBLIC OF UZBEKISTAN

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On behalf of
Federal Ministry for the Environment, Climate Action, Nature
Conservation and Nuclear Safety (BMUKN)

Germany 2025

SUDOCHYE LAKE SYSTEM RAMSAR SITE

VISITOR CONCEPT

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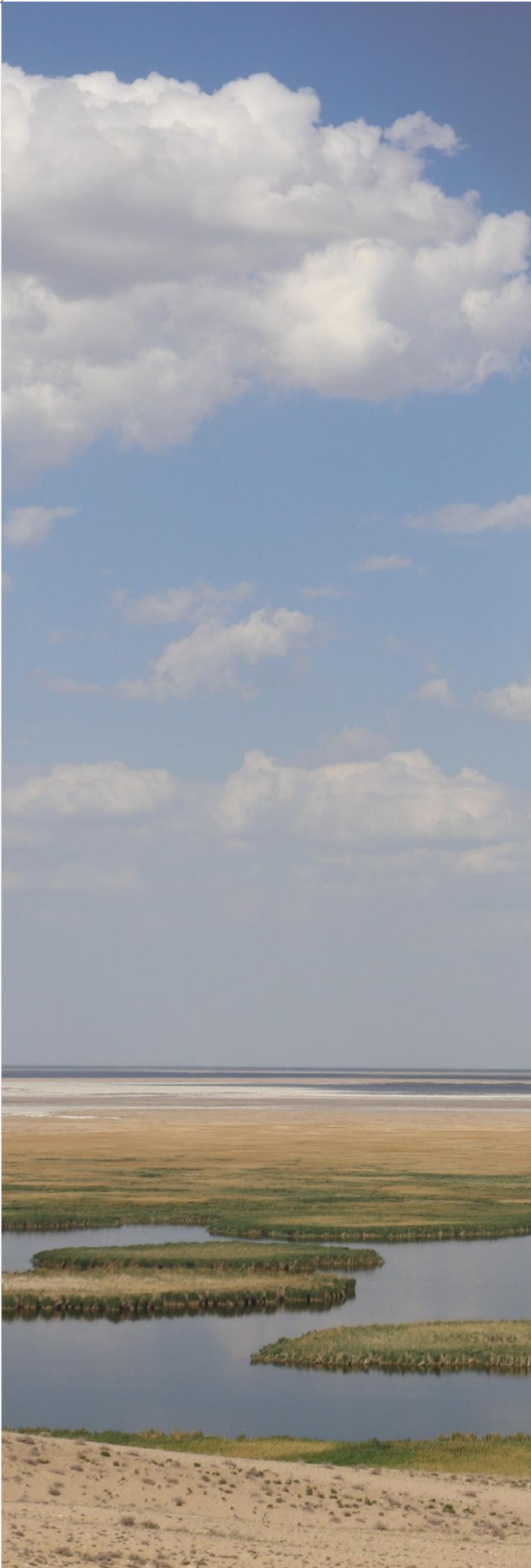
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1. SUMMARY

Lake Sudochye is no ordinary tourist destination. It is remote and located in a landscape undergoing dramatic transformation due to climate change. It is characterized primarily by a water shortage that worsens every year. This is particularly evident in the abandoned fishing village at Cape Urga.

Sudochye is thus a place where, in addition to birdwatching, one can also experience evidence of the past in the form of ruins. But due to the fact that this is a prehistoric seabed, the Earth's history is also evident here in the form of impressive rock formations and fossils.

The visitor concept is therefore based on a respectful, restrained approach to this special place. This applies to the ruins, whose existence must be preserved. Some of them can also be carefully used for tourism purposes, for example, by converting the old fish processing factory into visitor information facilities or even a small café with an attached souvenir shop.

Since the lake and its birdlife are virtually invisible from the shore, a bird-watching platform for tourists is to be built as the only new construction on site.

Old fishermen's huts, some of whose locations are still recognizable, could be rebuilt and used as a local museum to showcase the everyday life of fishing families of the past. Two huts could also be used for overnight guests who, for example, want to go stargazing or set off early for birdwatching tours.

Furthermore, information panels will introduce visitors to topics such as the avifauna and ecology of Lake Sudochye, history and geology.

Guided tours will also be offered, either as hikes, boat tours in historic wooden boats on the lake or with mountain bikes, which can be rented on site (including a small bike repair station) in order to generate additional income.

Tourism services should not be provided by rangers, but rather by qualified and registered tour operators (e.g., overnight stays in fishing huts, guided tours, and excursions). However, it is imperative that all tourism activities are conducted under strict supervision and only with prior ranger approval.

Overall, no foreign and artificial materials such as concrete, asphalt, artificial stone paving, or aluminum should be used. The unique atmosphere should also not be disturbed by artificial lighting, which would also have a negative impact on wildlife (especially birds and island animals).

The tourism concept follows a no waste policy, which means that no waste is stored or burned on site and ideally no waste is created at all.

Sudochye is therefore not intended to be a conventional entertainment resort, but rather a unique place for experiencing nature, where relaxation and tranquility, as well as experiencing nature and engaging with history and climate change, are the focus.

2. INTRODUCTION

2.1 Sudochoye Lake System Ramsar Site

Sudochoye is located in the administrative region of Muynak District in the western part of the republic of Karakalpakstan. Due to its rich birdlife, it was designated as "Sudochoye" ornithological reserve in 1991. In 2008, Sudochoye was listed as important bird area (IBA) in Uzbekistan. In the year 2023 it was added to the Ramsar Convention's list of protected wetlands. Today, Sudochoye Lake System is one of 5 Ramsar sites in Uzbekistan.

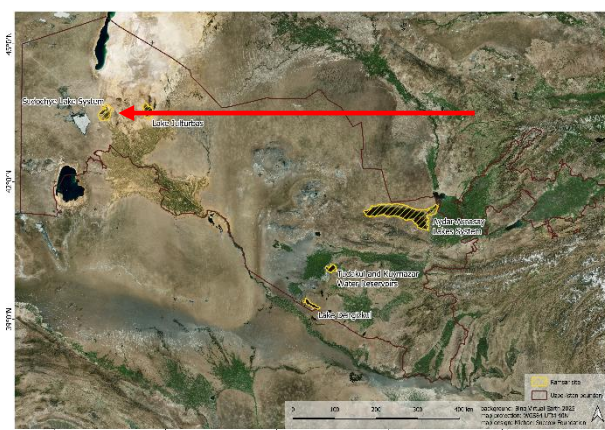


Figure 1. Location of Sudochoye lake in Uzbekistan

Source: Michael Succow Foundation

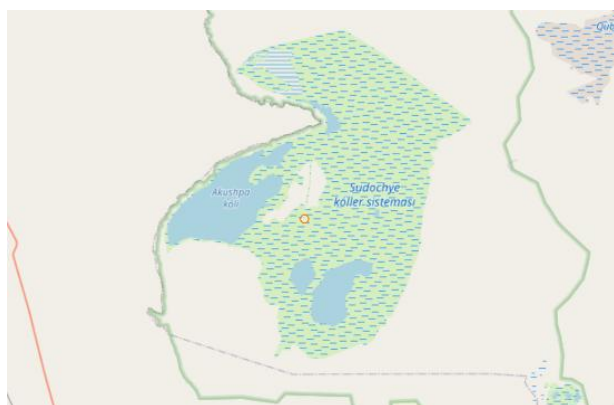


Figure 2. Sudochoye Ramsar Site

Source: www.ramsar.org

2.2 The Ramsar Convention and Tourism

According to the Ramsar convention, wetlands offer significant tourism opportunities that can be an important source of income for communities and national economies (Source: 'Tourism and wetlands: Insights from the Ramsar Site Information System | The Convention on Wetlands, The Convention on Wetlands, 2012). The Ramsar Convention supports contracting parties and other stakeholders in promoting and developing sustainable wetland tourism (Source: Resolution XI.7 on 'Tourism, recreation and wetlands' and the joint Ramsar-UNWTO publication, Destination Wetlands: Supporting Sustainable Tourism, published in 2012, exemplify the Ramsar Convention's commitment to sustainable tourism development (/ramsar.unwto tourism e sept2012.pdf).

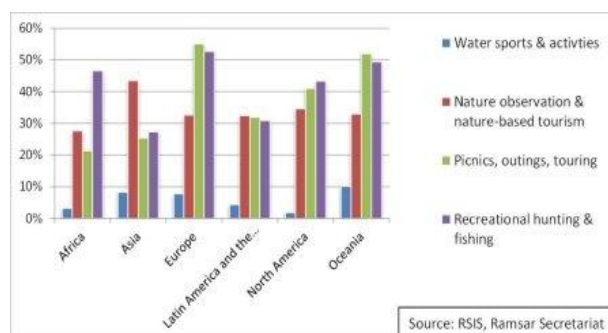


Figure 3. Global Overview of tourism activities in Ramsar sites across different regions

The Figure 3 provides an overview on tourist activities in Ramsar sites in different parts of the world. It shows that nature observation and nature-based tourism are the most common activities in Asia, while activities such as hiking are not of such great importance. However, Sudochoye would anyway hardly suitable for extensive hikes due to high solar radiation and extreme temperatures.

3. INITIAL SITUATION

The name 'Sudochye' originates from Karakalpak language and means 'fresh water'. The lake represents the last western wetland area of the Amudarya water system bordering to the eastern cliffs of Ustyurt Plateau. Once covering a surface of 350 km² and reaching up to 250 km in length, Sudochye was the largest water body in the Amudarya delta. With dropping water levels in the Aral Sea beginning in the 1960s, the size of Sudochye Lake in 1972 had already shrunk to a quarter.

Today, the area amounts approx. 64.67 km² and consists of four smaller lakes: Akushpa, Begdulla-Aydin, Karateren, and Bolshoe Sudochye. The average depth is around 1.5 m, depending on the water level which always changes according to the amount of water drained from agricultural use into the Amudarya river.

The Figure 4 shows the drying up of the lake, which is particularly evident along the former shoreline of Sudochye.



Figure 4. Sudochye Lake shore in front of the former Fish Processing Factory / former pier (2025)

Source: Eike Otto, sustainable-tourism.com

Sudochye Lake System Ramsar site, although protected, is affected by several anthropogenic impacts. Chemicals and pesticides from agriculture are drained into the lake and increasing temperatures, due to climate change, are warming up the water. This results in higher evaporation and low water levels, also due to massive water discharge for agriculture upstream the Amudarya causing less water availability to be drained to Sudochye Lake System as well.

The drainage water from agricultural usage is speeding up the salination of the lake, too. Other impacts to the ecosystem are for example bird hunting, reed fires or litter.



Figure 5. Amudarya River near Amudarya Biosphere Reserve (April 2025)

Source: Eike Otto, sustainable-tourism.com

Unfortunately, future prospects are also not promising, as the amount of water from the Amudarya river is becoming less from year to year. This is mainly caused by an increasing water demand from agriculture, housing, industrial use or simply the inefficient use of water due to unsealed water channels of flooding of fields. A new channel taking water from the Amudarya river, which is currently built in Afghanistan is also not sealed and contributes to additionally drying out the Amudarya river. Nevertheless, Sudochye today represents one of the last remaining wetlands in Karakalpakstan and therefore is of outstanding ecological value.

Numerous species such as birds and especially migratory birds, reptiles, insects or mammals like goitered gazelles or the caracal are depending on the lake. Although, as mentioned above, the aquatic ecosystem is impacted by the up-warming water and increasing salination, it still seems to be a habitat for several fish species (as reported by local experts).



Figure 6. Ustyurt-Plateau, painting T. Schewtschenko, 1849

Source: [Geschichte des Aralsees](#)



Figure 7. Ustyurt-Plateau today

Source: www.advantour.com

4. TOURISM DEVELOPMENT IN KARAKALPAKSTAN

4.1 Visitor Arrivals and Main Challenges

Sudochye Lake is located approximately 160 kilometres northwest of the city of Nukus, which, over the past years, has experienced a significant growth with several new hotels and restaurants. Today, Nukus attracts tourists after they have completed their tour along the ancient Silk Road cities. Main attractions are the Savitzky Museum, Muynak with the ship graveyard, in some cases tourists are also visiting the remaining Aral Sea in the newly formed Aralkum Desert. A mayor competitive advantage is the airport of Nukus with daily connections to Tashkent. International flights are offered from Urgench international airport, which can be reached in a 1,5 - 2 hours drive from Nukus. The average stay of tourists in Nukus amounts 2-3 days.

In 2024, Karakalpakstan welcomed about 200,700 international tourists and over 2 million domestic visitors. This surge was supported by the expansion of tourism infrastructure, including 67 tour operators, 13 travel agencies, and 112 accommodations ranging from modern hotels to private guesthouses. Additionally, the region increased its fleet of tourist-class vehicles to 123, enhancing mobility for visitors (source: karakalpakstan.travel, accessed: 18.06.2025)

The region has leveraged its rich cultural heritage and unique natural landscapes to attract tourists. Notable initiatives include the development of new tourist routes, the organization of fairs and festivals, and the establishment of cultural heritage sites such as the Savitsky Museum and the Chilpyk monument. These efforts have been complemented by the promotion of ecotourism projects around the Aral Sea, Ustyurt Plateau, and various lake (source: daryo.uz+1uzbekistan.travel+1karakalpakstan.travel+2diplomatmagazine.eu+2daryo.uz+2)

Tourism development in Karakalpakstan is, however, facing some challenges. First and foremost, the remoteness with long travel distances by car or bus from tourism hotspots like Bukhara or Samarkand is

likely to be a decisive limiting factor. Furthermore, weather conditions with extreme temperatures from minus degrees in winter to over 40°C in the summer months make it almost impossible to attract large numbers of tourists. Lacking accommodation facilities and -quality or lacking language skills are further challenges to be solved. Beyond the facts mentioned above, a mayor challenge is the limited travel season with just a few months (April to May or September to October).

4.2 Tourism Development Strategies for Karakalpakstan

On September 28, 2022, the Republic of Uzbekistan's Cabinet of Ministers published a decree as part of the country's overall national tourism strategy. The decree (No. 545) envisioned the development of tourism in the Republic of Karakalpakstan over a 4-year period, beginning in 2022 and continuing through 2026. As first step, the strategy 'Sustainable Growth of Tourism in the Republic of Karakalpakstan in 2023–2026' was elaborated. The aim is to diversify tourism products, improve services, and enhance infrastructure and to increase tourist arrivals in Karakalpakstan both from the domestic source market (aim: 996,000 in 2026) and almost quadrupling international tourist arrivals (aim: 180,000 in 2026).

Key objectives include:

- Infrastructure Development: Construction of 4- and 5-star hotels, expansion of transportation networks, and establishment of tourist villages along lakes such as Ashshykul, Akchakul, and Karatereng
- Human Capital Enhancement: Training multilingual guides proficient in English, Russian, German, French, Italian, Turkish, and Spanish.
- Tourism Product Diversification: Development of eco-tourism, cultural heritage, pilgrimage, archaeological, gastronomic, and safari tourism.

Such growth requires corresponding capacities in the accommodation sector and appropriate organizational and management structures in tourism. As first step, a destination management agency (DMO) in Nukus which was supported by GIZ's ECO ARAL project recently started operations in March 2025.

The strategy above also assumes that international tourists visit Karakalpakstan primarily as sustainable- and ecotourism destination, while local tourists are rather interested in religious tourism (which, however is rather relevant for Chiwa (Khorazm), Bukhara, or Samarkand) and the discovery of their cultural roots and traditions. It formulates the tourism vision and mission for Karakalpakstan as follows: 'By 2033 the Republic of Karakalpakstan will be a leading ecotourism destination within Uzbekistan, using its cultural, natural, and human resources to create memorable, high-quality experiences for all visitors'. Sudochoye Lake is highlighted as a key destination in this strategy, with plans to develop eco-tourism routes that integrate the lake's natural and cultural heritage

The 'Demand, Potential and Needs Analysis for Development of Ecotourism in the Republic of Karakalpakstan including Roadmap' was conducted with support of GIZ under the ECO ARAL Project in 2023. It describes prerequisites for the development of ecotourism, such as the required administrative framework, capacity building needs, sustainability criteria, market research and options for product development (incl. quality enhancement) in tourism.

The study concludes that Karakalpakstan has a great potential in ecotourism development. The needs analysis for the development of ecotourism in the Republic of Karakalpakstan defines following fields:

- Infrastructure Development: Improved transportation, accommodation (eco-lodges), waste management, and basic amenities are required.
- Capacity Building: Training for local communities in hospitality, ecotourism management, language skills, and sustainable practices.
- Environmental Protection: Conservation efforts and ecological monitoring to ensure sustainability and minimize tourism's negative impact.

- Marketing and Promotion: Strategic branding and promotion are essential to raise awareness and attract both domestic and international ecotourists.
- Policy and Governance: Clear regulatory frameworks, support for community-led initiatives, and partnerships with NGOs and private sector players.

To achieve this goal, following steps/ measures are recommended:

- Approved ecotourism guidelines (or certification schemes)
- Ecotourism policy, with guidelines for Integrated Planning and Management
- The direct financial benefits of tourism for conservation and local communities
- Design, construction, and operation of low-impact facilities according to international standards
- Professional ecotourism guides (being trained for at least 3 months) (compare chapter 8.2)
- Monitoring schemes regarding the environmental, biodiversity, and cultural impacts of tourism
- Strong stakeholder involvement
- Awareness-raising for community involvement in tourism.

4.3 Sudochoye Lake and Ecotourism, Experiencing Unspoiled Nature?

It may seem questionable that ecotourism is referred to as having the greatest potential in a region marked by climate change, water scarcity, and environmental damage. Usually, untouched nature and biodiversity are the basis for the success of ecotourism destinations. However, today nearly all nature-based destinations are affected by climate change, species extinction and other anthropogenic impacts.

Hence, ecotourism is no longer what is used to be in the past. In almost all parts of the world, nature is increasingly exposed to human impacts and hence not any more 'untouched'.

The change of ecosystems and living conditions is connected since decades to human civilization in Karakalpakstan and especially the Aral Sea region. Altered river courses, dry periods, and the abandonment of old settlements in desert areas, as well as new settlements which were always built along water

streams can still be impressively traced today at archaeological sites. Most ancient settlements follow former river flows.

A still relatively young example of a changing environment is visible in the former fishing village at Cape Urga at the western shore of Sudochoye Lake. The impressive atmosphere with ruins allows to develop exciting themes and stories to be told to tourists.

In hardly any other place in Karakalpakstan is the change of nature and human traces from a past time as clearly and drastically visible as here.

5. CURRENT TOURISM SITUATION AT SUDOCHYE LAKE

5.1 Tour Operators with Sudochoye in their Program

Tourism currently does not play a significant role at the lake and tourism statistics are not available at present. However, visits with international tourists are increasingly arranged by tour operators from Nukus. One example is Ayim Tours, a company usually dealing with groups of up to 15 travellers. As reported by the director (Mrs Ayjamal Taubaldieva), at present 17 local tour operators are offering tours to the picturesque Aral Sea desert landscape. Usually, the trips to Muynak and to the Aral Sea, which are lasting two days usually, include a stopover at Sudochoye Lake. Tourists either stay in Yurt Camps or a recently built hotel in Muynak. Source markets are mainly European countries, Russia and Far East (esp. China).



Figure 8. Tourism Group in Urga

Source: Instagram (yay.for.today) 2024

Overnight stays at Sudochoye Lake were organized by Ayim Tours in the past, but did not prove successful as it was too time-consuming and also not comfortable enough for international tourists. As there are already good accommodation facilities with appropriate infrastructure available in Muynak, tourists prefer to spend the night there.

Although the majority of visitors are visiting Sudochoye in organized groups, there are also some self-organized adventure tourists who come with own cars, tents and foodstuffs. These independent 4wd enthusiasts are not depending on services or any kind of tourist infrastructure. International or local birdwatchers represent another group visiting the lake individually.



Figure 9. Sudochoye Lake, first view from Ustyurt plateau on the way from Nukus

Source: Eike Otto, sustainable-tourism.com

The following table (google research, April 2025) provides an overview on local tour operators who promote Sudochoye in their travel programs:

COMPANY	TOUR	DURATION	PRICE
UZBEK TRAVEL TASHKENT office@uzbek-travel.com	Nukus – Kungrad – Ustyurt Plateau – Sudochoye – Nukus	1 day	2 Persons with guide: \$ 275 Max. capacity: 4 pax
AYIMTOUR NUKUS ayimtourtravel@gmail.com	Nukus – Muynak – Ustyurt Canyons – Aral Sea – Aktumsyk Cape – Kassarma Descent – Former Port of the Aral Sea – Kostrukba Village – Sudochoye Lake – Barsakelmes – Nukus	2 or 3 days	\$ 343, up to 14 people (3 per 1 car)
EURASIA TRAVEL TASHKENT info@eurasia.travel	Nukus, Muynak, Ustyurt Plateau, Aral Sea, Kurgancha Kala, Sudochoye Lake, Kungrad, Mizdakhan, Gyaur-Kala, Nukus	2 days	\$320 3 pax

COMPANY	TOUR	DURATION	PRICE
PEOPLETRAVEL TASHKENT info@peopletravel.uz	Nukus – Ustyurt Plateau – Barsakelmes – Sudochye Lake – Nukus	1 day	\$160 3 pax

At present all visits to the lake must be registered in advance with the responsible nature conservation authority. However, statistics about tourism at Sudochye Lake are not available and visitors are not counted or interviewed, as reported by local rangers. At present, there is also nothing offered to tourists. Two yurts which have been placed there to be commercially used by a woman as catering facility for tourists are currently empty due to a licensing issue. However, entrance fees will be charged in the near future. In summary, current tourism activities at Sudochye Lake are:

- International tourist groups of 5-15 people on their Aral Sea round trip (picnic, short walks at the lake)
- Self-organized off-road adventure tours, who are exploring the landscape of the former Aral Sea bed (picnic, camping at the lake)
- Ecotourism: birdwatchers, both local and international, as photos and videos on YouTube and Instagram show (day trips, camping)

5.2 Current Tourism Infrastructure at Cape Urga

Several constructions have been built recently, such as:

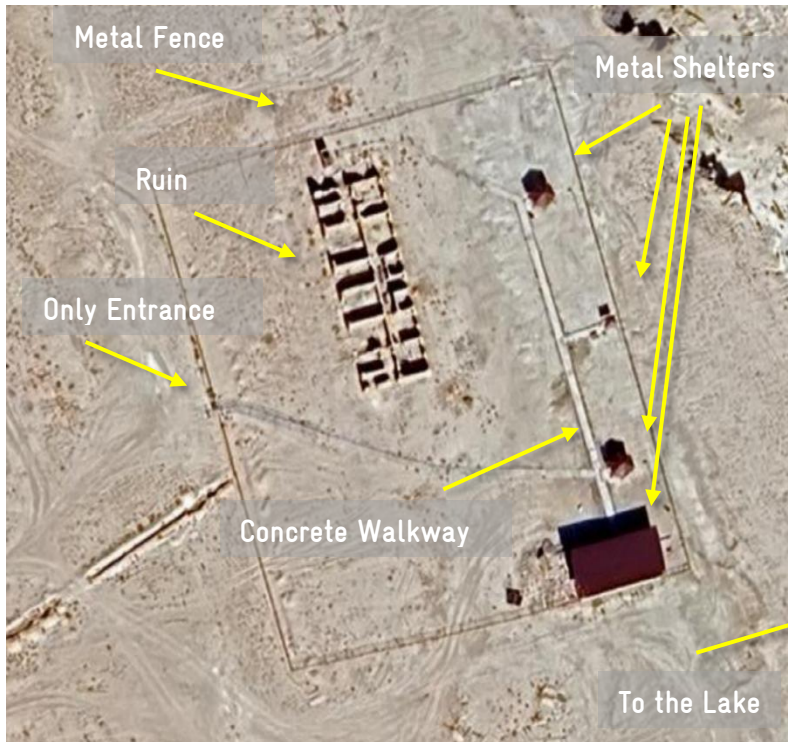
- A fenced area (as reported by the rangers, the fence should protect visitors from dogs)
- Concrete platforms as walkways
- Metal shelters with benches
- Light Poles
- Two yurts (on a concreted platform under corrugated shelter)
- Information panels which explain the history and ecology of the site
- The front facade of the Fish Processing Factory ruin renovated (not according to the historical model)
- A residential and accommodation building for the rangers

From their material and design, the constructions do not emphasize the uniqueness of the place. The covered seating areas do not even provide sufficient shade as metal roofs are too high, some are already partly damaged. The metal fence around the entire site is blocking the access to the lakeshore. The lampposts with LED light in a height of approx. 3m are both questionable for ecological reasons (light pollution/insects and birds) and impact the view to the starry sky at night for tourists.

The concreted walkways (concrete and water need to be transported to the site) are not only from environmental reasons questionable. They also do not fit into the landscape in a region with abundant natural stone deposits. Some of the tourist information boards are either not completed or are already damaged.

While great efforts and budgets were obviously invested in the construction of this barely suitable infrastructure, the surrounding area appears rather neglected. At the time of the visit, a lot of garbage was around, including construction waste, plastic cement bags and paint buckets, (which may have simply been left there after the infrastructure was built). On the other hand, no thought was given to the construction of reasonable toilets, which would have been needed urgently, as currently one toilet is in poor condition and an old stable is being used as a wild toilet.

5.3 Photos/ Overview of Tourism Infrastructure at Sudochye Lake



Source: Google Earth, Image taken 22.09.2024, Airbus Image, design by author

Figure 10. Constructions at Sudochye Lake

The picture left shows the so called ‚tourism zone‘ at Sudochye Lake with metal shelters, a fence, visitor information panels (some not completed), solar powered LED light poles and concreted walkways.

The fenced area includes a ruin of an old soviet military barrack.

Two empty yurts have been placed under the large metal shelter in the south.

The historical remains of old buildings, the former pier etc. are not maintained and partly collapsing, although they are important authentic remains of the former settlement, contemporary witnesses and of particular interest for tourists.



Source: Eike Otto, sustainable-tourism.com

Figure 11. Access road from Ustyurt Plateau down to Urga

The path is a popular photo motif (to be found on the internet) and highlights the character of an adventure tour to Sudochye.

Therefore, it should remain as it is!



Figure 12. Constructions at Sudochoye Lake

Attention should be also given to the shadow. The construction doesn't provide sufficient shelter from sun in the majority of time over the day. While metal is heating up the air, the locally availability of reed as a roofing would provide much more liveable conditions and looks much more cosy and friendly.

Source (pictures above): Eike Otto, sustainable-tourism.com



Figure 13. Fish Processing Factory Ruin

Source: Google Earth, Image taken 22.09.2024, Airbus Image, design by author



Source (pictures above): Eike Otto, sustainable-tourism.com

Figure 14. Ice cellar

The old ice cellar is a unique historic, and comparably cool shelter but nowadays is used as wild toilet, not inviting for a rest.



Source: [Fischfabrik von Urga](#) [Fischfabrik von Urga](#)

Figure 15. Fish Processing Factory

Front facade of the former Fish Processing Factory in its original shape



Source: Eike Otto, sustainable-tourism.com

... and after plastering/ painting (one window on the right side and one over the entrance bricked up)



Inside the Fish Processing Factory ruin



Backside of the Fish Processing Factory with picnic shelter in front and ranger house (view to Sudochye Lake)



Fish Processing Factory/ view from the location of the former boat pier (former poles were sawed off but are still visible in the ground)



Figure 16. Orthodox cemetery

Orthodox cemetery in front of the entrance of the so called 'tourism zone'

Source (pictures above): Eike Otto, sustainable-tourism.com

6. TOURISM DEVELOPMENT POTENTIAL

6.1 Ecotourism

According to international Organizations like UNWTO and IUCN, ecotourism is defined as form of tourism where nature and species (both flora and fauna) incl. geology are the main attractions.

However, the term ecotourism is not necessarily associated with a specific target group but with a demand for a specific experience. In consequence, other target groups besides the ecologically aware can also be attracted to ecotourism destinations like Sudochoye.

On the other hand, different tourism ambitions can be combined with ecotourism destinations, provided they are sustainable and not disturbing. For example, outdoor art and painting classes could be offered in co-operation with artists from Nukus or the Savitsky Museum at Sudochoye Lake. Such offers would also fit very well to the so called ‚silver agers‘. Older target groups are increasingly interesting in general. The aging societies (60+) are increasingly into focus as they are often fit enough for long haul travelling and activities like for example hiking and are looking for new destinations due to their high travel experience. Moreover, they are unbound (e.g., family, children) and thus have enough money and time.



Figure 17. Igor Savitsky Painting somewhere at the Aral Sea (Photo taken in the Savitsky Museum Nukus)

Source (Figures 10-12): Eike Otto, sustainable-tourism.com

On the other hand, elder generations are less flexible as the youth. This especially refers to hygiene standards (toilets) and the availability of medical aid.

Sudochoye has sufficient potential as ecotourism destination due to its biodiversity. The , State Nature Reserve "Sudoche-Akpetki" spans 84,000 hectares (according to Ramsar website) and counts among the most biodiverse wetland areas in Uzbekistan. The area is home to a diversity of vegetation types and ecosystems. It is the home to 25 animal and over 230 bird species, 15 of which are endangered and 20 listed in Uzbekistan's Red Book.



Figure 18. Way along the western shore of Sudochoye (to the south)

Today, herons, pelicans, swans, golden eagles, white-headed ducks and other bird species can be observed. In 2014, a significant population of pink flamingos was discovered which nowadays returns every year in March.



Figure 19. Sudochoye lake is barely visible from the shore due to Dense Reed



Figure 20. Ustyurt Plateau near Urga

Source: Eike Otto, sustainable-tourism.com

In comparison with the remaining lake of the former Aral Sea, a fairly rich community of aquatic animals of Aral origin has survived in Sudochoye, including marine shell infusoria, bryozoans, sea ring clam worm, copepods etc. were identified in Sudochoye Lake. The lake is also inhabited by several fish species including carp, crucian carp, grass carp, and pike-perch. Historically, the lake produced 2,000 tons of fish annually. Today only locals catch few fish for self-consumption with severely decreasing success.

Sudochoye Lake also impresses with its large reed beds. Reed meadows are, however, in an increasing depressed state due to a lack of moisture, an outbreak of locust plague and harvesting of reed by a factory nearby producing hardboards.

Ecotourism and Gender

Ecotourism at Sudochoye holds potential for empowering women economically, socially, and environmentally, as well. With initiatives that train women in sustainable practices, tourism entrepreneurship, and community engagement, women may carve out an important role in the development of a greener, more inclusive tourism industry. However, this will require addressing social barriers, access to resources, and cultural norms that may restrict women's full participation.

A successful example is a female entrepreneur based in Nukus which owns three nationally known hotels: Jipek Joli, Jipek Joli Inn and Jipek Joli Art, runs a local museum of Nukus history, and manages a tour operating company that organizes off-road trips around Aral Sea. This is a sector that clearly opens up opportunities for women.

The fact that women dominate the souvenir and trade market became also very evident at a workshop in Nukus when Sudochoye visitor concept has been presented. For the first time, more women than men took part, which was a completely different gender balance compared to all other workshops we did in 2025.

A professional field that is rather contradictory to traditional cultural rules and values particularly in rural Uzbekistan is becoming a ranger as a profession. At IBEX (Improvement Benchmarking and Evaluation Index) assessments for Southern Ustyurt National Park and Saigachy Landscape Zakaznik, both protected areas in a very similar environment as Sudochoye, conducted in charge of IUCN it became clear that working as ranger as a woman is completely out of imagination in Uzbek society.

The reasons given at the participatory assessments were, on the one hand, the role models in rural Uzbekistan, but also the extremely adverse conditions of being out in the desert for days in extreme heat or freezing cold, with male colleagues. Cars have to be repaired on the spot, which women can also do. However, these skills are not very common among women. As a ranger, one also have to be robust and authoritative towards people, who are mostly male, when issuing fines or similar.

Particularly supporting women-led ecotourism initiatives that prioritize sustainability, cultural heritage, and eco tourism can help create lasting positive change towards gender inclusivity.

6.2 Bird Watchers as Special Interest Group

Birdwatching is a form of ecotourism which is focusing on observing and photographing wild birds. It ranges from bird observation and discovery listing

to new species discovery competition. Birders, like backpackers, are often the first travellers to open up remote nature-destinations to the international market.

The gender background shows that birdwatching is both interesting for male and female respondents. Likewise, other demographic factors, namely age, domicile, educational background, type of work, and membership in conservation organizations indicate that birdwatchers come from various backgrounds, although there are differences in the proportions of each category. Birdwatchers commonly belong to the tourist groups with high educational background as their travel ambition combines recreation and scientific activities and therefore more attracts rather educated people.



Figure 21. Typical Equipment of Birdwatchers

Source: [Lintutornit](#) | [Espoon kaupunki](#)

Birdwatching is a specific segment of ecotourism which continuously grows and has high economical value especially for off-beaten destinations that are not able to attract tourists on a larger scale.

This target group requires relatively little infrastructure as bird identification is mostly carried out through visual observation. Simple observation huts or platforms and paths are sufficient, as the most commonly used equipment are a bird field guide and binoculars.

With regard to the ambition of Birdwatchers it is to be noted that the amount of self-observed bird species plays a particularly important role. In other words, it's the hunt for photos and the constant enhancement of

the individual collection, what makes birdwatching so attractive.

While ordinary birdwatchers collect 300-500 photos of species, professional birdwatchers can collect up to 10,000 bird species.

The importance of this target group is made clear by a figure from the USA: in 2021, 14.82 million people went for birdwatching in their holidays. But there are also other interests and priorities, such as Speed birders, the hectic birdwatchers, who want to see as many species as possible in 30 minutes and beat their own result or that of a competitor. Another group are the twitchers, which are the extreme athletes among the birders. They travel great distances, sometimes jetting halfway around the world to see just one rare bird.

However, there is also an ever-growing number of people who become birdwatchers when the opportunity arises. Although there are no exact statistics available, the number in Germany is estimated to be in the millions (the USA, for example, has 49 million birdwatchers, in England approx. 3 million). Their main ambition is to be outdoor, experiencing nature and observing birds in the wild. As early risers, Birdwatchers often need a very early breakfast.

Numerous events at international level, such as the global birdwatching trade fair provide good opportunities to market a birdwatching destination. The "British Birdwatching Fair" is Europe's largest ornithologists' meeting. Up to 20,000 birdwatchers from all over the world visit this fair in Rutland, England, every year. Another important annual event is the Sagres Birdwatching & Nature Activities Festival, which takes place at the south-western tip of Portugal in Sagres in October. Internationally, the World Migratory Bird Day is now celebrated in some 70 countries and includes festivals, education programs, presentations, film screenings and bird watching trips, all run by hundreds of volunteers and organizations.

The following table provides an overview on main segments within the Birdwatching market:

CATEGORIES	FEATURES
HARD CORE BIRDERS	- Highly dedicated - Impatient with less-skilled birders and crowds - Seek to increase „life list“ of species - Competitive - Not interested in interaction with other birders or locals - Own equipment - No or only little interest in other activities - Predominantly men - Less comfort needed - Travel long distances for rare birds - Rather difficult to handle, also marketing to Hard Core Birders more difficult - Represent approx. 10% of birding tourists
ENTHUSIASTIC BIRDERS	- Broad-based and knowledgeable nature lovers - Slower and more relaxed travelers - Tolerate other birders of all skill levels - Satisfied as long birds are seen - Comfortable in larger groups - Expect certain comfort - Interest also in cultural activities - Satisfaction comes partly from socializing with others - Slightly more women than men - Represent approx. 50% of birding tourists
CASUAL BIRDERS/ USUAL ECOTOURISTS	- Non specialist tourists - Combine birding with other tourism activities - Birding as add-on to other activities - Prefer viewing colorful emblematic species, less effort and more comfort - Interested in seeking something different from home - Prefer nature destinations accessible by road - Satisfaction comes from superficial interaction with nature - Represent approx. 30% of birding tourists

There is no information regarding the remaining 10% in the study mentioned below, but they could be tourists who visit birdwatching areas for other purposes and thus become unintentional birdwatchers. The average daily expenditures per day on birding tours ranges from \$70-180, but, however, depends very much on the attractiveness or type of species which can be observed.

(Source: [market-analysis-bird-based-tourism.pdf](#))

6.3 Historical Tourism

As mentioned above, Urga is a former fishing village at Sudochye Lake. The place with the settlement history, mix of cultures and the fishing tradition offers interesting themes that can be taken up and conveyed to visitors (storytelling). These mainly include:

- The forced settlement of Cossacks from the Ural, who brought their own form of Orthodoxy here after Patriarch Nikon of Moscow from 1875/1876 with their Orthodox graveyard in Urga
- According to information from the Internet, Polish prisoners of war were also forcibly settled in Urga by Stalin and returned to Poland in the years 1953-1955.
- In 1966 there were still almost 1,000 people living in Urga. The depiction of their daily life as fishermen in this barren environment, as well as cultural events and festivals, offer further interesting tourist themes, especially as the scarcity of water (drinking water) became an increasing problem.
- Another topic of interest for tourists is fishing, the boats and utensils used and fish processing

Numerous relics from the past are still visible, which include:

- 3 lighthouses (located on the plateau), which were built for long distance communication (fire towers)
- An old caravan route on the plateau, where the lighthouses were used to transmit messages
- Ruins of a former Soviet barrack
- The ruins of a Fish Processing Factory
- Christian Cemetery
- Islamic Cemetery
- Ruins of the former leper station
- Ruins of fishermen's houses
- Piles of jetties (sawed off, but still visible)
- Different relics found on the former Aral Sea and Sudochye Lake ground, which are today collected and sold to metal traders (could be used as exponates)



Figure 22. Ruin of an ancient light tower

Source: Eike Otto, sustainable-tourism.com

In summary, the area of Sudochye Lake is not only of ecological value but obviously also has an interesting

history which could be of interest for future tourism development strategies. However, Sudochye has a particular potential for the development of ecotourism, especially for birdwatching.

Sudochye potentially applies to several target groups such as tourists who are rather general interested in nature as well as special interest groups like birdwatchers.



Figure 23. Metal collectors

Source: Eike Otto, sustainable-tourism.com

Other potential tourism activities are geology and fossils, active tourism like mountain biking or hiking and stargazing. Examples for product development could include guided geological tours (e.g. with scientists), rental of mountain bikes and trips along the western lake shore (early morning/ sunrise or late evening) due to temperatures and impressive scenery. The same refers to hiking trips, which could also include stargazing at night and a candle light picnic at Ustyurt plateau. Another option is to offer rowing boat trips on Sudochye Lake with traditional wooden fishing boats.

The DMO in Nukus could organize a meeting with the metal collectors and -traders in order to identify artefacts and to sensitize them/ to establish a cooperation for saving historical items in future for tourism purposes. A corresponding budget would have to be agreed for purchases.

7. SWOT ANALYSIS

STRENGTHS

Nature, History and Climate Change as interesting themes for tourists

Possible newcomer effect as Sudochye is rather unknown

Flamingos as highlight, good to promote the destination with colourful photos

Not too far from Nukus and to Muynak with shipwreck graveyard as most prominent destination in the region (accessible from both places within half a day by car)

Interesting history of the former fishing village Urga with ruins and graveyards

Geology and landscape (Urstyurt plateau), primeval times and Tethys Sea, fossils

Different types of tourists already visiting the site

Actual topics climate change and related challenges for mankind, decreasing water resources, change in landscape and ecology

Darkness ant night, stargazing, shiny Ustyurt plateau

OPPORTUNITIES

Adapted, restrained and simply designed tourist infrastructure with local material that make reference to the history and landscape conditions

Addressing key topics such as nature/avifauna, history and culture, geology and climate change as a process for different target groups

Didactic design of information facilities with a clear thematic focus and structure/graphics

Infrastructure for ecotourism development (viewing platform, visitor interpretation, small cafe etc.)

Product development for additional local income generation such as guided tours, including special experiences such as night walks with picnics under the stars, mountain biking, rowing boats, offering simple food or fruit and drinks, development of suitable and locally produced souvenirs according to the aforementioned themes

Entrance fee (low, only to cover basic costs)

Environmental activities for engaged tourists with scientists

WEAKNESSES

Remoteness, accessibility time consuming, high travel costs

The landscape generally looks rather barren and dried out

No products offered

Lacking language skills of rangers

Existing infrastructure does not fit, impacting the natural beauty of the site (concrete, metal, fencing, LED-illumination)

Degradation of nature/ biodiversity (litter, bad water quality through chemicals/ fertilizer and pesticides, increasing salination, hunting)

Existing historical remains endangered and not protected

Changing and low water levels impacting the ecosystem

High temperatures in Summer, draught, health danger for tourists

Visitor interpretation facilities not convincing (didactical concept, quality of layout/ design and material)

Former Fish Processing Factory plastered and painted with modern material (not according to historical model)

No toilets

No medical aid and rescue facilities available on site

THREATS

Continuing drying out of the lake

Impact of climate change (heat, extreme weather events like storms, drought, decrease of biodiversity)

Unstable worldwide political situation leading to reduced travellers

Economic Crisis

Pandemic events

8. VISITOR CONCEPT

8.1 Overview on Recommended Measures

The general recommendation for developing tourism at Sudochye Lake System Ramsar site is to **reduce tourism infrastructure at to the absolute minimum**. Huge infrastructure investments like concrete buildings are not a prerequisite for income generation from ecotourism and might even contradict it. Any activities which would generate negative impacts the already weakened ecosystem should be avoided. This especially concerns areas such as gastronomy, accommodation and entertainment. Overnight stays could be offered in small quantities for a few people who book corresponding offers for the night (for example, stargazing) or the experience of sunsets or sunrises and birdwatchers who start their observations in the early morning. However, strict environmental rules should apply in this regard (waste, water conservation, circular waste, resource and consumption etc.).

Following tourism infrastructure is recommended:

- A small visitor centre with exhibition (Info panels explaining the history of the site), eventually with small cafe and souvenir shop in the old Fish Processing Factory ruin for further income generation
- Birdwatching viewing platform or tower with wooden walkway and small boat pier for lake excursions
- Reconstructed fishermen houses (1 as museum, 1 or max. 2 for accommodation)
- A nature trail with info panels about birdlife and ecology
- Info panels explaining geology and earth history
- 2 or 3 wooden rowing boats with life vests
- 2 composting toilets with small bathroom (incl. shower)
- Bike rent and repair station



Figure 24. Proposed Visitor Concept Sudochye lake Ramsar Site

Source: background image from Google Map 2025, design by author

All tourism related measures should follow the basic principles below:

- Use of local and natural material (if possible), wooden constructions and wooden boats need to be protected in order not to be used as firewood
- Eco design (incl. buildings after historical model)
- Preservation, partly re-use of existing building structures
- No new buildings (except visitor centre inside Fish Processing Factory ruin, eco toilets and reconstruction of traditional fishermen houses)
- Renewable energy (solar thermy and photovoltaic, small wind generator)
- No waste policy
- Illumination reduced to the absolute minimum
- Composting toilets
- Only ecotourism activities (such as hiking, biking, rowing bats, birdwatching)
- Income generation: entrance fees, tourism products (guided tours, bicycle or boat trips, small cafe and shop with souvenirs)
- All tourist activities under control of rangers (briefing of tourists, e.g. boat trip)

8.2 Proposal for a Visitor Interpretation Center

It is recommended to partially use the old Fish Processing Factory ruins as a visitor centre. About 2/3 of the area could be developed with natural and locally available materials to accommodate a small exhibition space with a cafe and souvenir shop, as well as a small office. The natural shading could create additional outdoor seating with a projecting canopy. It is important to preserve the original atmosphere of the old ruin. Additional information panels about the history of Urga with historical photos can be placed on the free walls. Alternatively, an open covered space would also be possible, as the following examples show.



Figure 25. Visitor interpretation in a shadowed place with natural ventilation/ Could be built in the ruin as well.

Source: Nature Park Fränkische Schweiz, Germany



Figure 26. Design proposal for an Open Pavillion with natural material (except roof) / Pavilion (Stuttgart University/ Germany)



Figure 27. Sustainability by using natural, locally available materials, Creating an attractive atmosphere for tourists

Source: Eike Otto, sustainable-tourism.com

8.2.1 Birdwatching Platform

A birdwatching platform will be the main attraction and will become an important photographic motif in the future. It must not only be designed in a natural and high-quality manner so that it does not appear intrusive, but it must also be built sturdily and sufficiently dimensioned. This makes the observation platform a remarkable landmark of Sudochye.

The following examples can be considered as a model:



Figure 28. Dilleviktower at Lake Dillevik/ Norway (3 mtrs high)

Source (Figures 20-21): [Birdwatching: The Dillevik bird tower | Nature Attractions | Trøgstad | Norway](#)



Figure 29. Information Board Birdlife at Dilleviktower at Lake Dillevik/ Norway



Figure 30. Yrjö Kokko bird watching tower, Hetta, Enontekiö in Lapland/ Finland

Source: [Birds Archives - Page 2 of 2](#)



Figure 31. Yrjö Kokko bird watching tower, Hetta, Enontekiö in Lapland/ Finland (front view)

Source: [Birds Archives - Page 2 of 2](#); [Visit Muotkajarvi, 2025 Travel Guide for Muotkajarvi, Enontekiö | Expedia](#)



Figure 32. Bird watching Shelter made from local reed and local elder tree, Baltic Sea / Germany

Source: [Ausflugsziel Karrendorfer Wiesen](#)

8.2.2 Rest Room and Composting Toilets

A restroom in an arid area needs to be equipped with water saving devices and solar thermy for water heating. The construction has to be safe (e.g. avoid that snakes or other dangerous animals can enter and hide) and easy to be maintained/cleaned.



Figure 33. Simple Bathroom, Shower

Source: (figure above) [Parks and Recreation Gallery - Laurance S. Rockefeller Preserve, Grand Teton National Park, WY](#); (figure below) [Komposttoiletten Geltinger Bucht | Transportable Räume](#)



Figure 34. LSR Preserve, Grand Teton National Park, USA

Source: (figure above) [Outdoor-Toilette stockbild. Bild von blau, felsen, architektur - 219975271](#); (figure below) [A Bumper installed in the town of Salses-le-Chateau - Kaab](#)

The major advantage of Eco-Toilets (so called Composting-Toilets) is the circular ecology. There is no water needed (a huge asset for drylands) and the product is natural compost / humus that may be used for gardening purposes or mulching if properly processed. It's not stinky and can be very hygienic in opposite to ordinary toilet sinks. But it demands a smart planning and proper construction procedure as well as regular maintenance and cleaning. Natural ventilation is another important aspect. It also needs to be safe against poisonous animals.

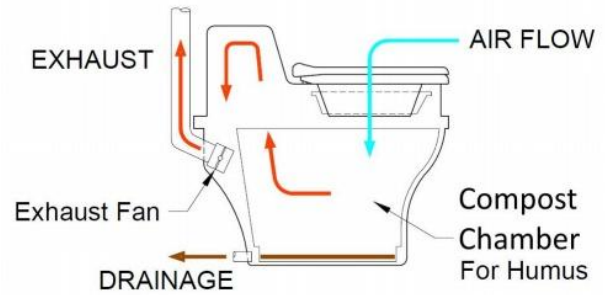


Figure 5: How EcoLet NE works.

Figure 35. Brief overview of a Function of a composting toilet

Source: [M-300_1-EcoLet-NE-Slimline-Owners-Manual.pdf](#)



Figure 36. Stainless steel toilet bowl

Source: [Campus Hock-WC | chromnickelstahl | 2000102732](#)

8.3 Cost Estimation and Financial Concept

The following positions are recommended to develop a minimal infrastructure at Sudochoye Lake that has as little impact on the environment as possible. This initial assessment also includes measures to protect the existing historic settlement remains as an essential component for future tourism development and the development of a visitor interpretation concept.

Category / Topic	Content	Expected Output	Cost estimation (Euro)
1 PLANNING AND CONCEPT			
1.1 Initial Situation	Inventory of building remains in the former village of Sudochoye, documentation of condition (walls, cemeteries, paths, former pier with wooden stakes in the ground, etc.), inspection of the lake area (possibly historical artifacts, fishing gear, ship parts or wrecks, etc.), determination of areas with garbage etc.	Contracting of a local consultant, tasks: description of initial situation (report with drone photos and mapping, including 2 online meetings) Study with photos, maps etc.	2.500
1.1 Restauration and Use Concept	Restoration concept for protection of ruins (by using historical building materials and a construction method). Identification of ruins which can be used/ rebuilt for tourist purposes and preliminary concept/ design.	Contracting of a local consultant, tasks: Concept under sustainability and cultural heritage protection criteria, three versions, final concept agreed with all relevant stakeholders (3 drafts, functional areas and location of visitor infrastructure such as information panels, birdwatching tower, visitor center/ Fish Processing Factory ruin, fishermen houses etc.), including 3 online meetings Concept with plan and sketches incl. cost estimation	3.200
1.3 Visitor Interpretation concept	Development of content, pictures, maps, photos and graphic design for the topics ecology, geology and history of the area of Sudochoye Lake. Content: species and ecology, birdlife, geology and earth history, 4 indoor panels (Urga fishing village) and 15 outdoor panels (design and technical planning/ consideration of specific outdoor conditions)	Contracting of a local consultant, tasks: Visitor interpretation concept and corporate design for all elements, incl. technical details (construction, print etc.), including 3 online meetings Concept with plan, sketches, technical details incl. cost estimation	5.500
1.4 Birdwatching Pier and Tower	Development of a technical concept for a pier with birdwatching tower at Sudochoye Lake (wood with construction details), suitable for 5 people at the same time	Contracting of a local consultant, tasks: Design concept inc. technical details with two options, agreement with stakeholders, cost estimation, including 2 online meetings Concept with plan, sketches, technical details incl. cost estimation	2.500

Category / Topic		Content	Expected Output	Cost estimation (Euro)
1.5	Fishermen houses	Design for the construction of 3 fishermen houses according to historical model, 2 for overnight stays (up to 4 tourists each), one as museum with historical furnishings, household items and fishing gear	Contracting of a local consultant, tasks: Design concept incl. technical details with two options, agreement with stakeholders, cost estimation, including 2 online meetings Concept with plan, sketches, technical details incl. cost estimation	2.500
Subtotal				16.200
2 IMPLEMENTATION (ON SITE)				
2.1	Waste Collection	Cleaning of the whole area (incl. lake shore), incl. transport of the waste to a waste disposal company in Nukus	4 workers, 1 week incl. transport and travel expenses, transport of waste to Nukus Waste removed and brought to professional treatment plant	2.500
2.2	Preservation of Ruins and Graveyard	Collection of material around the ruins, repair of walls in the historic way, renewal of wall joints. Graveyard: repair work (e.g. repair of wooden crosses, conservation through oil coating, repair of gravestones, without changing the historical character	4 qualified workers, 4 weeks, incl. construction material, tools, transport and travel expenses, with supervision of an architect qualified in monument preservation Further deterioration of historical structures is stopped	5.000
2.3	Construction Visitor Center, Cafe, Souvenir shop in the old Fish Factory Ruin, primarily with natural materials that are found locally	Reconstruction of a part of the Fish Processing Factory ruin (approx. 50%) as visitor center, with small cafe and integrated souvenir shop (approx. 40-50m ²), clay bricks, wooden windows and doors, thatched roof	6 qualified workers, 8 weeks, incl. construction material, tools, transport and travel expenses, with supervision of an architect qualified in traditional building and eco-architecture Unique and eco friendly design, adapted to local material and historical building design	35.000
2.4	Tree/ Vegetation	Planting of a shadowing native tree with bushes inside the Fish Processing Factory ruin, watering system with grey water from the cafe.	see above	300
2.5	Solar Panels with racks for ground mounting and cables to the information center, inverter and battery	Location behind the Fish Processing Factory ruin	see above	3.000

Category / Topic		Content	Expected Output	Cost estimation (Euro)
2.6	Interior furnishings and technical equipment visitor centre with cafe and souvenir sales	10 seats, 5 tables, shelves, interactive info panels, kitchen area with fridge, kettle, facilities for preparing simple snacks, crockery and cutlery, sink with water tank (approx. 250 liters with water pump) and connection to the septic tank	see above	1.000
2.7	Birdwatching Platform with wooden walkway	Stable, safe and weather-resistant wooden construction, wood from sustainable cultivation or recycling	6 qualified workers, 8 weeks, incl. construction material, tools, transport and travel expenses, with supervision of an architect qualified in traditional building and eco-architecture Stable and safe viewing platform in natural design/ with natural material, where birdlife of Sudoche can be viewed without disturbing the ecosystem/ birds	38.000
	Old Ice Cellar	Cleaning and restoration work	2 qualified workers, 3 weeks, incl. material	3.500
2.8	Reconstruction of three old Fisherman Houses	Material and construction according to historical model	6 qualified workers, 6 weeks, incl. construction material, tools, transport and travel expenses, with supervision of an architect qualified in traditional building and eco-architecture 3 fishermen houses which give an impression of the former settlement and way of life of fishing families	6.500
2.10	Septic tank	Exact size to be calculated	3 qualifies workers, 2 weeks, incl. construction material, tools, transport and travel expenses	2.000
2.11	Search/ collection of historical objects from the lake	Cooperation with scrap collectors and scrap dealer (contract with bonus for interesting historical items)	Permanent collection of artifacts from the lake related to recent history and ever-growing exhibition in front of the visitor centre	3.000
Subtotal				112.800
3 FURTHER PURCHASES FOR INCOME GENERATION THROUGH TOURISM				
3.1	3 Fishing/ rowing boats (wood, historical model from the Aral Sea) with 10 rescue vests and 6 walkie-	Wooden rowing boats after historical model for 5 persons each, incl. life vests	Original replica of a rowing boats as exhibited in the Aral Sea Museum in Nukus	4.500

Category / Topic		Content	Expected Output	Cost estimation (Euro)
		talkies (incl. charging station)		
3.2	5 Fully Mountain bikes	5 quality mountain bikes with full suspension incl. tools and repair kit	International brand with good test results in trade magazines	10.000
3.3	Picnic equipment	Eg. for night walks along Ustyurt Plateau, camping chairs, and table, camping tableware, torches	No single use plastic!	1.000
3.4	Binoculars and set of infocards	4 Binoculars (birdwatching)		1.500
3.5	First aid kit	Injuries, disinfection, serum	To be clarified with hospital in Nukus	1.500
3.6	UTV	Utility Task Vehicle for shopping, transport, supply and disposal, emergency cases etc. (petrol engine), electric about 20.000 without charging/ solar devices, incl. maintenance for two years	Petrol or Gasoline version	25.000
3.7	Financial reserves for repairs, renovations, etc.			15.000
Subtotal				58.500
Miscellaneous				6.000
Total (implementation on site)				177.300
4 DESTINATION DEVELOPMENT				
4.1	Online meeting with DMO in Nukus			
	Development of a logo and CI for Sudochye			3.000

Category / Topic	Content	Expected Output	Cost estimation (Euro)
4.2	Development of a flyer, print, 5.000 copies		4.500
4.3	Content creation social media, birdwatching websites and apps, tourism websites in Uzbekistan, media etc.	(Supporting DMO in Nukus by local expert)	2.500
	Training of 2 staff (language skills, housekeeping, cafe, souvenir shop, management of the site), to be organized by DMO		
	Employment of 2 staff for two years (incl. all costs)		30.000
4.4	Fam trip with local journalists and tour operators		6.500
Total (destination development)			46.500

Note: The cost estimation serves only for first orientation and need to be checked and calculated in collaboration with an architect. It is recommended that an invited architectural competition should be organized for the tendering and awarding of the planning and design services (incl. visitor interpretation facilities). 3 architects should be invited to develop alternative planning solutions with a cost estimation. Environmental aspects like nature conservation, energy efficiency and natural design should play a key role in tendering and awarding process. The results will be discussed by an independent jury (consisting of experts from nature conservation, tourism, architecture and public bodies). After the jury decision, one architect will be contracted to elaborate the selected solution (incl. technical details). Finally, the tendering and awarding of a qualified construction company and on-site construction supervision will be carried out.

9. RECOMMENDED FURTHER STEPS

9.1 Analysis of further tourism development potential

As it can be seen in google maps, several landscape structures are appearing south of Urga/ along the lakeshore. These structures should be visited and analysed as they could be of interest for tourists. For example, a mountain bike track, a hiking trail, visitor interpretation panels or even scenic resting places for bikers and hikers could be developed in or near ruins or interesting landscape formations like rocks. Some of the ruins could be carefully renovated with local material according to historical model as resting places which provide shade or could be just used as

interesting viewpoints. A publication and inventory of the historical sites around Sudochye has been published in 1978 (Srednov. 1978. Ancient and Medieval Culture of Southeastern Ustyurt, [Ed.] Kamalova S.K. Tashkent, “Fan” / Среднов. 1978. Древняя и средневековая культура Юго-Восточного Устюрта, под ред. С. К. Камалова, Ташкент: “Фан”)

During a meeting with the DMO in Nukus in April 2025 it was agreed that DMO staff will visit, analyse and categorize these locations both from their historical background, their accessibility and potential attractiveness for tourists. The following screenshots show examples of some structures:



Figure 37. Landscape structures

Source: Google Earth, Airbus image

A video by centralasia-travel.com contains interesting footage of various locations in the Sudochoye Lake system. Numerous ruins and other remnants of human settlement are visible, which are not any more existing. Hence, the video could be used for restauration purposes or visitor interpretation facilities:

[Video: abandoned fisher village Urga \(Uzbekistan\), Lake Sudochoye, Ustyurt Plateau](#)

9.2 Training of Nature Tour Guides

Training needs for nature tour guides are critical to ensure they can provide safe, informative, and enjoyable experiences for guests while protecting the environment.

Key training areas are:

Environmental and Ecological Knowledge

- Local Flora and Fauna: Identification, behaviours, habitats, and conservation status.
- Ecosystem understanding: wetland and desert ecosystems.
- Conservation Principles: Biodiversity importance, threats to ecosystems, and sustainable practices.

Tour Guiding Skills

- Communication Skills: Clear, engaging public speaking; storytelling; and adapting language to different audiences.
- Interpretation Techniques: Using themes, analogies, and interactive methods to make nature more relatable.
- Customer Service: Managing group dynamics, handling complaints, and ensuring client satisfaction.

Safety and First Aid

- First Aid and certification: Basic emergency response, particularly for remote locations.
- Risk Assessment: Identifying and mitigating potential hazards (e.g., wildlife encounters, rough terrain), such as scorpions, snakes etc.

- Emergency Procedures: Evacuation plans (e.g. in case of reed fires), communication systems, and survival skills.

Navigation and Outdoor Skills

- Map Reading and GPS Use: Essential for off-trail or remote guiding.
- Hiking/Backpacking Basics: Leading groups safely and efficiently.
- Leave No Trace Principles: Environmental stewardship in wilderness areas.

Cultural and Historical Knowledge

- Local Heritage: Indigenous knowledge, traditions, and history relevant to the tour location.
- Respect and Sensitivity: Understanding and sharing cultural narratives respectfully.

Legal and Ethical Training

- Environmental Regulations: Local/national laws governing protected areas and wildlife.
- Ethical Guiding Practices: Respect for wildlife, clients, and local communities.

Business and Logistics Skills

- Tour Planning and Management: Creating itineraries, managing time, and preparing equipment.
- Marketing and Sales: Basic knowledge of promotion and customer engagement.
- Sustainability Practices: Eco-friendly business operations and carbon footprint awareness.

Languages

- Preferably English, optional French, Spanish, Chinese

Potential partner: Silk Road University in Samarkand announced interest to establish a tour guide training course for ecotourism. Appendix 1 provides an example which could be carried out with practical exercises in Sudochoye.

9.3 Draft Visitor Interpretation Strategy

9.3.1 Introduction

Sudochye Lake as unique desert ecosystem offers an incredible opportunity for visitors to connect with nature, learn about the region's biodiversity, and understand the environmental challenges faced by desert lakes. This Visitor Interpretation Strategy aims to create meaningful, engaging experiences for visitors that enhance their understanding of the lake's ecological significance, cultural importance, and the desert environment as a whole. However, as mentioned above, there are more stories to be told. The history of Urga as former fishing village, the geology and earth history from the Tethys Sea to fossils which can be found today or climate change offer a wide range of interesting subjects. However, there is also the danger that the visitor information could become confusing. In this respect, it is crucial to set appropriate priorities here and to separate the different topics from each other, for example graphically or by using different colours.

It is also important to specifically address different target groups. For example, not every visitor is interested in the same level of detail in information. Children who consume different content than adults must also be considered.

An important aspect is a didactic overall concept that does not overwhelm visitors with specialist knowledge (e.g., scientific names of species). Where possible, interactive design elements should also be used (for example, to fold out, rotate, or look inside). Decisive is a professional, stable, ozone-resistant, and weatherproof construction that can also withstand deliberate damage attempts.

9.3.2 Purpose of Interpretation

The primary purpose of interpretation at Sudochye Lake is to:

- Foster a deeper appreciation for the ecological, cultural, and historical aspects of the desert lake.
- Raise awareness about the importance of wetland conservation and desert ecosystems.

- Promote responsible behaviour among visitors to minimize their impact on the fragile environment.
- Engage diverse audiences through informative, inspiring, and accessible interpretive activities.

9.3.3 Target Audiences

The interpretation strategy will address the following primary audience groups:

- **Nature Enthusiasts & Environmental Advocates:** People interested in desert ecosystems, biodiversity, conservation, and wildlife (esp. birdwatching).
- **Families and Casual Visitors:** Those looking for recreational experiences, such as picnicking, birdwatching, or enjoying nature.
- **Educators & Students:** Groups or individuals interested in learning about desert ecology, hydrology, and local culture.
- **Outdoor Adventurers:** Hikers, campers, and water sports enthusiasts who explore the lake and surrounding areas.
- **Local Groups incl. schoolchildren:** Offering an opportunity for local residents to connect with and learn about their natural and cultural heritage.

9.3.4 Key Themes for Interpretation

- Desert Ecosystems, Water and Wetlands
 - The delicate balance between the lake and the surrounding desert.
 - How the lake sustains life in an arid environment.
 - Importance of freshwater conservation and the challenges desert lakes face.
- Flora and Fauna
 - The diversity of plants and animals.
 - Specific species that thrive in or around the lake (e.g. migratory birds, unique plant species).
 - The role of the lake as a vital stop-over for migratory birds.

- Cultural Significance
 - The history of Urga and Indigenous communities in the past and their connection to the lake (fishing tradition etc.).
 - Old caravan routes and light towers for communication
 - The impact of the lake on the development of nearby former settlements and local cultures.
- Geology and Earth History
 - Tethys Sea, Fossils and Rock formations
- Climate Change and Water Scarcity
 - Understanding how climate change is affecting the lake and surrounding habitats.
 - Water management strategies in arid regions.
 - The human impact on natural water sources and the importance of sustainable practices.

9.3.5 Interpretation Methods & Tools

To create diverse, engaging learning experiences, the following methods and tools will be used:

- Interpretive Signage & Information Panels: Clear, accessible, and visually engaging signs along a nature trail, at the lakefront, and key lookout points. These will explain the ecological, cultural, and historical significance of the area in short, easy-to-understand text with pictures.
- Guided Tours & Programs: Ranger-led walks or boat tours around the lake, providing in-depth information on the lake's ecology, wildlife, and history. Specialized programs, such as nocturnal tours or bird-watching expeditions or stargazing will cater to specific interests.
- Interactive Exhibits: An interpretive centre (in the old Fish Processing Factory ruin) with hands-on exhibits on water conservation, desert plant life, and migratory birds. Interactive displays can include virtual reality simulations or augmented reality apps.

- Digital Interpretation: Mobile apps, websites, and QR codes on signage offering supplementary information, audio guides, or short videos on desert ecosystems, species, and conservation efforts.
- Art and Cultural Displays: Incorporating artwork from local Indigenous artists (Nukus!) or photography showcasing the beauty and fragility of desert environments. This could also include short films or storytelling sessions about the cultural significance of the lake.
- Seasonal Programs & Special Events: Organizing seasonal interpretive events such as environmental education festivals, and water conservation awareness days. These could coincide with local environmental milestones, like World Water Day.

9.3.6 Visitor Experience Management

- User-Friendly Infrastructure: Ensure that interpretive materials, trails, and facilities are designed with accessibility in mind, including children and quiet areas for reflection.
- Sustainability Practices: Encouraging visitors to minimize their ecological footprint through "Leave No Trace" principles. This includes educational outreach on waste management, protecting wildlife, and responsible water usage.
- Engaging Storytelling: Using storytelling to bring the natural and cultural history of the lake to life. Interactive narratives might include Indigenous creation stories, historical accounts of early explorers, or scientific explanations of the lake's unique ecology.

9.3.7 Partnerships and Collaborations

Successful interpretation relies on collaboration. Key partnerships include:

- Indigenous communities: Work with local Indigenous groups to ensure accurate

representation of their cultural and historical connection to the land and the lake.

- Local conservation organizations: Collaborate with environmental NGOs to create programs focused on conservation and sustainability.
- Local schools and universities: Engage academic institutions for research, field trips, and educational programming.
- Tourism boards and local businesses: Encourage sustainable tourism that supports the local economy while protecting natural resources.

9.3.8 Evaluation & Continuous Improvement

Evaluation of the strategy's effectiveness can be carried out through:

- Visitor Feedback: Collecting comments and surveys from visitors to gauge their experience and understanding of interpretive content.
- Observation: Monitoring visitor behaviour and engagement with interpretive displays and programs.
- Impact Assessments: Regular assessments of the ecological impact of visitor activities and the effectiveness of conservation education efforts.

These evaluations will guide the refinement of the interpretation strategy to ensure ongoing relevance and effectiveness in engaging and educating the public.

Conclusion

The Visitor Interpretation Strategy for Sudochoye aims to create an educational, engaging, and responsible visitor experience that highlights the significance of the lake as a vital resource within the desert ecosystem. By fostering a deeper understanding of the natural and cultural heritage of the lake, visitors will be inspired to support conservation efforts and become stewards of the environment.

9.4 Environmental Protection Strategy (Tourism Impacts)

Preventing damages caused by tourism in protected areas is a crucial challenge for conservationists and policymakers. The balance between promoting tourism for economic benefits and preserving natural resources requires well-thought-out measures. Key approaches that can help mitigate the negative impacts of tourism on protected areas are:

9.4.1 Implementing Visitor Caps and Quotas

- Why: Unregulated tourism can lead to overcrowding, which causes wildlife disturbance, walking off the paths, increased noise and waste. It also reduces the attractiveness of a site.
- How: Limit the number of visitors allowed per day or season to ensure that the environment isn't overwhelmed. This can be done by implementing a booking system or requiring permits for entry. At present, no statements can be made regarding the carrying capacity, as ecological framework conditions still need to be defined and this also depends heavily on the behaviour of visitors and the type and planning of the infrastructure on site.

9.4.2 Education and Awareness Programms

- Why: Tourists often unintentionally damage ecosystems by leaving trash, disturbing wildlife, or walking off trails.
- How: Provide visitors with educational materials or guided tours to raise awareness of the environmental importance of the area and appropriate behaviour while visiting (e.g., respecting wildlife, staying on marked trails).

9.4.3 Sustainable Tourism Certification

- Why: Encouraging businesses to adopt sustainable practices can reduce the negative impact on the environment.
- How: Implement a certification system where tourism operators must meet specific environmental standards, such as waste management, energy efficiency, and conservation efforts.

9.4.4 Zoning and Restricted Access

- Why: Some areas of a protected space may be more vulnerable to damage than others.
- How: Establish specific zones for different activities (e.g., recreational areas, wildlife observation zones, restricted access zones for sensitive ecosystems). Certain areas may be off-limits or only accessible with a guide.

9.4.5 Use of Technology for Monitoring and Management

- Why: Monitoring visitor behaviour and environmental health is essential for effective management.
- How: Use drones, cameras, and sensors to monitor tourist numbers, detect illegal activities (e.g., poaching or off-trail hiking), and assess the health of ecosystems in real time.

9.4.6 Tourist Impact Fees and Funds

- Why: Tourism can place a financial burden on protected areas, particularly when maintenance and conservation efforts are needed.
- How: Charge a small fee for entry or activities, with the funds being allocated specifically for

conservation, maintenance, and the development of sustainable tourism practices.

9.4.7 Enforcing Regulations

- Why: Without proper enforcement, tourists may ignore rules designed to protect natural areas.
- How: Strengthen enforcement of rules with on-site rangers or staff, regular patrols, and clear signage indicating restricted or sensitive areas.

9.4.8 Promoting Responsible Tourism Practices

- Why: Encouraging tourists to adopt responsible behaviours is key to reducing their impact on protected areas.
- How: Provide tourists with guidelines on how to minimize their environmental impact, such as packing out all trash, not picking plants, and keeping a safe distance from wildlife.

9.4.9 Research and Adaptive Management

- Why: The impact of tourism can change over time, so management strategies must be adaptable.
- How: Continuously monitor the effects of tourism on ecosystems, wildlife, and local communities, and adjust policies as needed to address emerging challenges.

By combining several of these strategies, the protected area can better cope with tourism pressures while still offering visitors a meaningful and sustainable experience. It's essential that conservation efforts take a holistic approach, considering both ecological and socio-economic factors. However, due to the remoteness of the lake, overcrowding is not to be feared in the foreseeable future. Even if larger groups of visitors were to come regularly, it is likely that only distances to ecologically sensitive wetland areas would have to be taken into account. Therefore, the question of carrying capacity can very probably be solved by

simple means (if necessary at all). Exceptions could be seasonal, e.g. during breeding or migratory periods, if visitors are also taken out onto the water in boats.

Before any steps for tourism development are being undertaken, the site's biodiversity needs to be analysed and mapped in detail.

This includes ecosystems, and habitat types (e.g., migratory bird routes, breeding and nesting sites.

Watering sites, unique vegetation). The map should determine which species or habitats are sensitive to human activities (such as nesting birds, breeding areas). The mapping must cover the entire season (i.e. at least the period of one year), Already existing impacts from human activities such as hunting, fishing, reed harvesting, pollution, trampling, invasive species etc. need to be identified and strictly be restricted.

10. MONITORING AND ADAPTIVE MANAGEMENT

The Ramsar Convention describes Issues for stakeholders to address in achieving sustainable tourism and recreation in and around wetlands (Resolution XI.7, annex 2), adopted in 2012, as follows:

iii) assessment, monitoring and management of tourism and recreation impacts are integrated into wetland management planning, including limits of acceptable change of the wetland ecological character; and importantly that this information is communicated to those responsible for tourism policy and planning and used to support adaptive management responses;

Systems for monitoring visitor impact regularly assess whether the strategy need adjustment to maintain ecological integrity has to be established by the nature conservation management authority as recommended in the following:

- Visitor Impact Monitoring: Regularly assess how visitors are affecting the site (e.g., litter, foot traffic, noise pollution) and adjust policies accordingly.

A key management issue is that unauthorized new trails and off-trail exploration trample vegetation are avoided as this causes trail braiding and disturbs riparian habitats. Unlawfully feeding of wildlife also needs to be avoided as it causes wildlife habituation. Garbage left behind (e.g., food wrappers, water bottles, and toilet paper) impacts wildlife and the scenic attributes of the area.

- Feedback Mechanisms: Set up channels for visitors to report issues or provide feedback on their experience, which can guide improvements.
- Social media: permanent review of social media posts
- Adaptive Strategies: Based on monitoring results, adapt visitor management strategies to ensure continued ecological integrity and sustainable tourism.

11. RECOMMENDATIONS FOR MARKETING AND BRANDING

According to the above mentioned 'Issues for stakeholders to address in achieving sustainable tourism and recreation in and around wetlands (Resolution XI.7, annex 2), adopted in 2012', the Ramsar logo and Ramsar mission has to be promoted to tourists who visit Wetlands of International Importance (Ramsar Sites). It also says that in any Wetland of International Importance (Ramsar Site) visited by tourists, the Ramsar logo is prominently displayed and the Ramsar mission promoted.

The strength of Sudochoye Lake clearly lies in its birdlife. It is therefore recommended to focus all marketing activities on this initially. As result, the entire external presentation of Sudochoye should be focused on birdlife (including communicating the Ramsar mission and use of the Ramsar logo). Such a Corporate Identity strategy for example, could be built on a logo could showing a pictogram-like flamingo flying over an expanse of water with reeds. Following pictures, for example, illustrate such content:

Birdlife and wetlands:



Source: [Bird Logo- Bilder: Stock-Fotos & - Videos. | Adobe Stock](#)



Source: [Traditionelles Vogel-Hieroglyphen-Symbol PNG- Und SVG-Design Für T-Shirts](#)



Source: [Creative and Modern Bird Logo Design. Grafik Von design~maker01 · Creative Fabrica](#)



Source: [Pink Flamingo Turf Services LLC | Fort Wayne IN | Facebook](#)



Source: [Flamingo simple logo](#)

Water



Source: [Cartoon See Wasser Logo, Cartoon Seewasser, Landschaft, Blau PNG und Vektor zum kostenlosen Download](#)

Reed



Source: [Namu ežerai | \(@namuezerai\) · Instagram-Fotos und -Videos](#)

Desert



Source: [Desert Landscape Logo Template vector image on VectorStock](#)

Rowing Boat



Source: [Stock-Vektorgrafik „Barque en bois - ombre noire“ | Adobe Stock](#)

Nukus Tourism Organization with the Tourism Committee of Uzbekistan could offer what birdwatchers require, including accessibility to habitats and knowledgeable guides. Sudochoye should not be promoted separately, but as part of the country's or birdlife and top birding sites. Feature charismatic, emblematic bird species should be highlighted in advertising.

Advertisements should be present in diverse media, not only websites, but also bird magazines, at birding festivals, on social media in appropriate languages and at local gastronomy and hotels. International events, such as the British Bird Fair can be used to market the country's bird tourism offerings.

Marketing should be focussing to middle-aged and elderly groups of both enthusiastic and casual bird watchers, as well as families.

Tour Operators: should be supported in developing specialized bird tours as well as tours that include bird watching combined with some other wildlife, nature-based, and cultural activities.

- the different species of birds that can be seen by destination, especially endemics, regional endemics and charismatic species are to be emphasized.
- It needs to be ensured there are well trained and knowledgeable guides in each destination and preferably fluent English-speaking guides to receive international birders.

The organisation of events like a Birdathon in combination with press work helps to draw attention to Sudochye as a birdwatching destination and thus establish it on the market.

In the next step, a design competition for graphic designers should be conducted. Logos, brochures, and information boards for tourists must follow a uniform basic concept that needs to be developed.

12. STAKEHOLDERS TO BE INVOLVED

The following list is to be understood as a recommendation and can be continuously expanded. It is advisable to appoint a lead partner, to regularly distribute new information so that all parties are on the

same level of knowledge, and to organize meetings (to reduce costs and avoid travel times, also online) at certain intervals.

Sudochoye-Akpetki" State Reserve	As the managing body of the Ramsar site
DMO Karakalpakstan in Nukus	Are in charge for destination management, product development, statistics etc., as expressed by the director in ecotourism tour guiding shall be developed future. Sudochoye counts among the most prominent ecotourism destinations in Karakalpakstan and hence is for DMO in Nukus of special interest.
Tourism Committee	Their task is (beyond others) to develop tourism information centres of which one is planned to be built at Sudochoye Lake System. However, it is not clear what kind of concept, design and purpose they are planning to implement. The only information provided was that any kind of commercial activities would not be permitted.
Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan	The Ministry is enforcing the development of tourism according to the tourism masterplan for Karakalpakstan. Sudochoye is a prior destination for ecotourism and especially birdwatching.
Local Hokimyat	The decision making public body at local level and representative of local inhabitants
Department for Ecotourism and Hunting	Their aim is to develop tourism infrastructure projects which will be tendered and be sold to investors. These are for example camping sites, picnic areas or small scaled accommodation facilities. The main focus lies on business in terms of developing and selling infrastructure which then will be used commercially.
Agency for Cultural Heritage under the Cabinet of Ministers	In charge for historical ruins and other cultural heritage (e.g. archaeological sites)
UNDP/GEF Project representatives	Environmental data, especially about water management and ecology, UNDP/GEF project could contribute to define ecological restrictions (incl. zoning) for tourism development at Sudochoye and also provide content to visitor interpretation facilities. Moreover they would have some financial means to carefully plan and implement the proposed task in a timely and adequate manner in the coming years.
Representative of Ramsar office in Uzbekistan and/or local office in Nukus	As above, ecological inputs, contribution to visitor interpretation facilities
Tour operators	Tour operators have an interest to develop Sudochoye either for day trips from Nukus, as special interest destination for Birdwatchers or as stopover for trips around the Aral Seabed.
Archaeological Institute in Nukus	Knowledge sharing, contribute to visitor interpretation facilities
Silk Road University Samarkand	The leading academic institution for tourism education could develop and provide trainings for ecotourism tour guiding (incl. issuing an exclusive certificate).

GIZ

As implementing partner for projects touching Sudochoye area:

Policy dialogue and knowledge management on climate protection strategies (DIAPOL-CE)

Ecologically oriented regional development in the Aral Sea region (ECO ARAL)

Supporting economic reforms and sustainable economic development in regions of Uzbekistan

Integrative and climate-sensitive land use in Central Asia (ILUCA)

Additionally recommended stakeholders:

Ayimtours

The leading tourism business in the region (Nukus to Sudochoye)

Birdwatching in Uzbekistan:

[UzSPB's Student Birdwatching Clubs](#)

Society for the Conservation of Biodiversity of the Republic of Karakalpakstan

NGO, Makset Kosbergenov

Association "Women of agrarian sphere of Uzbekistan"

Karakalpak Division of the Association, Bagila Jiemuratova

Specialized Tour Operators
(examples):

toustouzbekistan.com

[Birdwatching tour in Uzbekistan](#)

birdfinders.co.uk

[Birdfinders – Birdwatching Holidays – Uzbekistan](#)

centralasia-adventures.com

13. FINAL REMARKS

Sudochye Ramsar site is an area in transition. Hard to predict whether the lake will still exist in 10 years, depending on management decisions by the authorized bodies. What is certain, however, is that the changes occurring here due to anthropogenic influences will be particularly evident. This provides a wide range of opportunities for science and research. Conveying this in a vivid and comprehensible way could become one of the main attractions for Sudochye as a tourist destination. The challenge, however, primarily lies in the fact that the content arising from science and research will emerge over time and may also constantly change.

This results in completely new requirements for visitor information, which may potentially be oriented much more towards digital means and the inclusion of artificial intelligence in the future.

Thus, Sudochye is unlikely to be a classic natural area in the future where one can only enjoy the diversity of species, but rather an example of how a natural area is increasingly transformed by human influences.



Figure 38. Sudochye Lake March 2025

Source: Eike Otto, sustainable-tourism.com



Figure 39. Painting at the Fish Processing Ruin

Source: Image taken by Eike Otto, sustainable-tourism.com

ANNEX 1. Example Tour Guiding Training Course

Sample Training Curriculum and Checklist for a Nature Tour Guide Certification Program.

NATURE TOUR GUIDE CERTIFICATION PROGRAM

Duration: 4–6 weeks (modular structure, in-person and field-based)

MODULE 1: Environmental & Ecological Knowledge

Learning Objectives:	Topics Covered:	Checklist:
Identify local plant and animal species	Local biodiversity overview	✓ Complete species ID workbook
Understand basic ecosystem functions	Habitat types and their functions	✓ Lead a mini nature walk explaining 5 species
Explain key conservation threats and solutions	Invasive species and climate change Wildlife behaviour and tracking	✓ Pass ecological knowledge quiz (80%+)

MODULE 2: Tour Guiding & Interpretation Skills

Learning Objectives:	Topics Covered:	Checklist:
Communicate clearly with diverse groups	Public speaking and body language	✓ Deliver a 10-minute mock tour
Use storytelling and interpretation to educate	Interpretation methods (Tilden's principles)	✓ Develop a full-day itinerary and script
Manage group dynamics effectively	Tour script development Dealing with difficult guests	✓ Receive peer and instructor feedback

MODULE 3: Safety, First Aid & Risk Management

Learning Objectives:	Topics Covered:	Checklist:
Respond to emergencies calmly and correctly	Basic first aid and CPR (certification required)	✓ Pass First Aid/CPR certification
Conduct risk assessments in natural areas	Heat stroke, dehydration, bites, sprains Emergency protocols and radio use Group safety and evacuation plans	✓ Create a sample risk assessment plan ✓ Simulate a medical emergency scenario

MODULE 4: Navigation & Outdoor Skills

Learning Objectives:	Topics Covered:	Checklist:
Navigate trails using compass/GPS	Reading topographic maps	✓ Lead a short hike using map/compass
Practice Leave No Trace ethics	Compass use and wayfinding Sustainable hiking and camping	✓ Explain Leave No Trace principles ✓ Participate in a 2-day field trip

MODULE 5: Cultural, Historical, and Community Knowledge

Learning Objectives:

Share cultural and historical context of the land

Respect and promote local heritage

Topics Covered:

Indigenous and local community stories

History of conservation in the region

Local customs and traditions

Checklist:

- ✓ Research and present one local cultural story
- ✓ Conduct a mock tour with cultural focus
- ✓ Attend community speaker session

MODULE 6: Legal, Ethical & Business Practices

Learning Objectives:

Operate legally and ethically as a tour guide

Understand the basics of eco-tourism business

Topics Covered:

Local guiding laws, permits, insurance

Ethical tourism and animal interactions

Sustainable business models

Booking, budgeting, and pricing tours

Checklist:

- ✓ Review and sign ethical guiding pledge
- ✓ Draft a sample tour budget
- ✓ Participate in a role-play customer booking

Final Evaluation

✓ Written exam (knowledge test)

✓ Field assessment (guided nature walk)

✓ Oral interview (ethics and emergency response)

ANNEX 2. Presentation Visitor Concept and Discussion with Stakeholders in Tashkent and Nukus

Current Investment Environment on (Eco-) Tourism in Karakalpakstan, (Workshop July 3rd/ Tashkent and 4th/ Nukus)

Stakeholders	Plans concerning tourism development in Karakalpakstan	When	Comments
Tourism Committee under the MEEPCC	plan to build tourism infrastructure village tourism visitor center?	?	
Ecotourism & Hunting Department	establishing hiking trails offering tours planning online app to book tours	2026-2028	
UNDP/ GEF MEEPCC wetlands project	capacity development (ranger trainings on tourism skills possible)	2025-2026	
Diapol GIZ		ends 2025	
GIZ (incl. ILUCA, ECO ARAL, NaWi)		ILUCA ends 2026 Ecoaral ends 2025 NaWi ends 2025 with possible extension	
local hokimiyat	should function as a coordinator of investment initiatives	long term	
DMO	eventually to support local hokimiyat in coordination, synchronisation, efficient implementation and certification	long term	
private entrepreneurs	expect places / shops to sell souvenirs and other needs of tourists request advise on symbols or species to be used for branding Sudochoye		risks to contradict integrity of territory (example of fishfarm construction on territory of Sudochoye)
Agency of Cultural Heritage under the Cabinet of Ministers	in charge for maintenance of cultural heritage there should be a group of scientists to identify and document archaeologically relevant sites around Sudochoye and also document the maintenance needs and costs		weakness: state budget, obviously underfinance or improperly / inefficient allocated to maintain cultural heritage
NGO / CSO	conduct already international bird days, regular counts under UzSPB students club		opportunity: bird counts and other activities can be jointly implemented and organised with Youth, NGOs, State Sanctuary and Academia

Stakeholders	Plans concerning tourism development in Karakalpakstan	When	Comments
Ministry of Transport of Karakalpakstan	education center in Nukus, working title "Greenhouse"		opportunity: propose available funds of MEEPCC for Sudchoye visitor center to be used for an education center on Sudochye / Wetlands / Ramsar sites in Nukus
Youth	needs for environmental education initiatives to sensitize youth, most of all on litter constructions and environmental education shall always be child-friendly		opportunity: bird counts and other activities can be jointly implemented and organised with Youth, NGOs, State Sanctuary and Academia
Sudochye State Sanctuary	rangers conduct regular counts including international survey campaigns like birds winter counting etc.		opportunity: bird counts and other activities can be jointly implemented and organised with Youth, NGOs, State Sanctuary and Academia

ANNEX 3. Examples for Tourism in Ramsar Sites

Example1: Kakadu National Park (Australia)

Ecological and Cultural Significance: Kakadu is a UNESCO World Heritage Site and Ramsar Wetland, known for its diverse ecosystems, from wetlands to woodlands.

Visitor Strategy:

- Cultural and Ecological Education: Visitors are educated about both the natural environment and the indigenous cultural heritage through interpretive centres and ranger-led tours. The park offers an immersive experience that emphasizes local Aboriginal knowledge and traditional land management practices.
- Controlled Access to Sensitive Areas: Some areas, such as bird nesting sites, are closed during certain seasons to prevent disturbance, ensuring breeding success.
- Seasonal Management: During the wet season, the park encourages controlled access due to flooded areas, providing opportunities for birdwatching via boat tours while keeping land-based activities limited to designated paths.

Outcome: This combination of cultural education, seasonal restrictions, and low-impact activities allows for sustainable tourism that highlights the site's significance while protecting its unique habitats.

Example 2: The Everglades National Park (USA)

Ecological and Global Importance: A UNESCO World Heritage site and a Ramsar Wetland, the Everglades are home to numerous endangered species and provide critical ecosystem services.

Visitor Strategy:

- Low-Impact Recreation: Activities like kayaking, canoeing, and birdwatching are promoted, while activities like off-roading and motorized boats are restricted. This keeps noise and disturbance to a minimum.
- Guided Tours: Rangers and local naturalists guide visitors on specific eco-tours to reduce the chances of visitors inadvertently disturbing wildlife or damaging ecosystems.
- Adaptive Signage and Interpretation: Extensive use of educational signage helps visitors understand the delicate balance of the ecosystem and the importance of their behaviours in maintaining it.
- Volunteer and Citizen Science Programs: The park involves visitors in citizen science, such as invasive species monitoring and water quality assessments, giving them a deeper sense of involvement in conservation.

Outcome: By focusing on educational experiences and sustainable activities, the Everglades has successfully engaged visitors while reducing potential harm to sensitive habitats.

Example 3: Wadden Sea (Denmark, Germany, Netherlands)

Ecological Importance: A major Ramsar site recognized for its role as a key stopover for migratory birds along the East Atlantic Flyway.

Visitor Strategy:

- **Zoning and Seasonal Access:** The Wadden Sea has a clear zoning system where certain areas are closed to the public during the bird migration season (spring and autumn). Access to some islands is restricted during breeding times to protect nesting birds.
- **Eco-friendly Visitor Activities:** The region promotes eco-friendly activities such as guided walks, bike tours, and birdwatching. Local operators provide tours that educate visitors about the vital role the Wadden Sea plays in global biodiversity.
- **Sustainable Accommodation:** The local tourism industry supports eco-lodges and other sustainable accommodation options, reducing the overall carbon footprint of visitors.
- **Collaboration with Local Communities:** Local fishing communities are involved in tourism management, promoting sustainable seafood practices and engaging tourists in responsible consumption of local resources.

Outcome: The combination of zoning, low-impact tourism, and community involvement has helped balance visitor interest with the ecological needs of the Wadden Sea, ensuring long-term sustainability.

Example 4: Doñana National Park (Spain)

Ecological Significance: Doñana is one of Europe's most important wetlands, supporting rare species like the Iberian lynx and a wide range of migratory birds.

Visitor Strategy:

- **Educational Programs:** The park offers guided educational tours focused on both wildlife conservation and the cultural significance of the wetland. Rangers educate visitors about the importance of the park's biodiversity and the delicate balance between human activity and nature.
- **Controlled Visitor Numbers:** The park limits the number of visitors in sensitive areas, such as the marshlands, by offering regulated access and advance booking for tours.
- **Habitat Restoration and Monitoring:** Volunteers and citizen scientists are encouraged to participate in habitat restoration efforts, as well as data collection for monitoring species.
- **Sustainable Tourism Certifications:** Tour operators and businesses in the region are encouraged to obtain sustainability certifications to ensure responsible tourism practices.

Outcome: Doñana's strategy has led to controlled, low-impact tourism that educates visitors, fosters collaboration with local communities, and contributes to long-term conservation efforts.

Example 5: Sundarbans Mangrove Forest (Bangladesh, India)

Ecological and Cultural Importance: The Sundarbans, a Ramsar site, is a unique mangrove ecosystem and the home of the endangered Bengal tiger.

Visitor Strategy:

- **Ecotourism Initiatives:** Ecotourism is being promoted in the Sundarbans, with strict guidelines to minimize environmental impact. Small, boat-based tours allow visitors to observe wildlife from a distance without disturbing the habitat.
- **Local Involvement:** Local communities, especially those dependent on fishing and forest resources, are involved in tourism planning, benefiting from ecotourism jobs and taking on roles such as local guides and conservation educators.
- **Monitoring and Research:** Ongoing monitoring of tiger populations and other wildlife is supported by visitor fees, creating a direct link between tourism revenue and conservation efforts.
- **Sustainable Practices for Visitors:** A strict "leave no trace" policy is enforced to prevent littering and minimize human impact. Awareness campaigns for tourists educate them about the critical need for preservation.

Outcome: The strategy has provided a sustainable model for engaging visitors without compromising the ecological integrity of the Sundarbans, ensuring both conservation and community benefits.

6. Example: The Danube Delta (Romania, Ukraine)

Ecological Significance: The Danube Delta is one of Europe's largest and best-preserved river deltas, recognized for its rich biodiversity, including more than 300 species of birds.

Visitor Strategy:

- **Boat-Based Eco-Tours:** Given the extensive waterways, boat-based tours are the primary way to access the delta. Eco-friendly, electric-powered boats are promoted to reduce noise pollution and preserve water quality.
- **Guided Tours:** Tours are led by local ecologists and guides who provide in-depth education about the delta's delicate ecosystems, encouraging visitors to respect the area's rules, such as staying within designated zones.
- **Visitor Access Regulation:** To protect sensitive areas, such as nesting zones, access is limited during the breeding season. Only authorized guides can access certain parts of the delta during these times.
- **Local Community Benefits:** Local fishermen and guides are involved in tourism, ensuring that they benefit economically from sustainable tourism and play an active role in protecting the delta's biodiversity.

Outcome: By using boat-based tours, limiting access to sensitive zones, and involving local communities, the Danube Delta has successfully maintained a balance between conservation and tourism, with minimal environmental impact.

Example 7: Ramsar Site in the Ganges River Basin (India)

Ecological Significance: This region of wetlands within the Ganges River basin is crucial for waterbirds, fish migration, and providing ecosystem services like water filtration.

Visitor Strategy:

- **Clean Tourism:** With rising concerns over pollution, particularly plastic waste, the site's visitor management plan includes campaigns encouraging visitors to bring their waste back with them. The area offers eco-friendly alternatives such as reusable water bottles and biodegradable materials.
- **Rituals and Pilgrimages:** As the region is also important for religious and cultural practices, efforts have been made to integrate conservation into local religious tourism. Pilgrims are educated about respecting the natural surroundings during their visits.
- **Sustainable Boating:** In regions where boats are a key transportation method for tourists and locals alike, only low-emission or solar-powered boats are allowed, reducing pollution in the water.
- **Community-Led Ecotourism:** The community is encouraged to become involved in guiding and promoting eco-friendly tours. This helps foster respect for the environment, supports local livelihoods, and prevents over-tourism.

Outcome: The integration of cultural, ecological, and sustainable tourism has allowed this Ramsar site to balance religious significance with the conservation of the wetlands, supporting local economies while reducing negative environmental impacts.

Example 8: Walvis Bay (Namibia)

Ecological Significance: Walvis Bay is a vital Ramsar site in southern Africa, supporting large populations of flamingos and other migratory bird species. It also includes important marine ecosystems.

Visitor Strategy:

- **Eco-Friendly Transportation:** Walvis Bay restricts motorized vehicles in key parts of the site and promotes biking, walking, and eco-tourism shuttles to minimize emissions and disruption to wildlife.
- **Wildlife Watching:** The site is known for its birdwatching and whale watching opportunities. Eco-tourism operators are certified to ensure that their activities align with conservation goals, such as maintaining a safe distance from sensitive species like flamingos.
- **Environmental Awareness:** Extensive educational programs and visitor centres teach tourists about the significance of the bay for migratory birds, as well as sustainable fishing practices in the region.
- **Partnerships for Sustainability:** Local NGOs and conservation groups collaborate with tourism operators to ensure that visitor numbers remain at sustainable levels and that all tourism activities comply with environmental protection regulations.

Outcome: Walvis Bay has effectively reduced the impact of tourism through responsible management practices, engaging both tourists and locals in sustainable conservation efforts.

Example 9: Lake Tanganika (Tanzania, Burundi, Democratic Republic of Congo, and Zambia)

Ecological Significance: Lake Tanganyika is one of the world's largest freshwater lakes, home to unique fish species and supporting communities dependent on its resources.

Visitor Strategy:

- **Eco-Tourism Focus:** Tourists visiting the lake can take part in eco-friendly boat tours, fish-watching, and birdwatching. Emphasis is placed on promoting sustainable practices, such as responsible fishing and water management.
- **Conservation Projects:** Local guides are trained to lead tours that focus on conservation, such as highlighting the threats to biodiversity, including invasive species and water pollution, and encouraging tourists to follow environmental guidelines.
- **Community-Led Initiatives:** The local population is involved in both managing tourism and conserving the lake's biodiversity. This includes training local residents as guides, offering them incentives for responsible tourism practices, and creating awareness about the ecological importance of the lake.
- **Strict Regulations on Development:** Development around the lake is carefully regulated to prevent over-tourism and land-use change that could disrupt ecosystems. There are strict guidelines for how resorts and infrastructure should be built, including restrictions on wastewater disposal and waste management.

Outcome: The involvement of local communities and the focus on sustainable tourism practices have contributed to the protection of Lake Tanganyika while providing economic benefits to the local population.