Regional Flyway Initiative · Site Study

May 2026

RFI Priority Site · Ögii Lake

Prepared by Ding Li Yong & Mike Crosby, with additional input from Billy Fairburn, Kelvin Peh, Evelyn Pina-Covarrubias, Stefano Barchiesi and Radhika Bhargava

BirdLife International, University of Southampton, University of Singapore

Asian Development Bank

General Site Information

Country	Mongolia			
RFI Site Name	Ögii Lake			ID052
City/ Municipality, Province, Region	Ögii subdistrict, Ögiinuur soum, Arkhangai aimag			
Geographical coordinates	47.77ºN, 102.7ºE		Area	12,600 ha
Key species	Whooper Swan, Bar-headed Goose, Swan Goose, White-naped Crane, Great Bustard, Siberian Taimen *Hucho taimen*			
Key habitats (biomes)	mountain steppe, grasslands and wetlands			
Key ecosystem services	Provisioning services (fresh water), regulating services and cultural services (tourism)			
Key drivers of change	Overgrazing and unsustainable tourism; environmental pollution from waste disposal			
Conservation status (mark all that applies)	☐	Protected Area	☐	Flyway Network Site
	☐	Ramsar Site	☐	Others _____
IBA/ KBA name (and number) and other designations	Ögii Lake			
Management Stakeholders	MECC, Ögiinuur soum, Arkhangai aimag governments; WSCC Mongolia			
With management plan?	5 years			
Project concept themes	Waste management, rangeland management, site management			
Length of project				
Sector/s	Waste (solid, water) management, animal husbandry			
No. of potential beneficiaries				
Indigenous Peoples	☐	No	☐	Yes, _____
Anticipated Implementation Risks	wildlife disturbance by tourism infrastructure establishment			
Estimated Project Budget (US$)	11,750,000			
Potential Source/s of Financing	☐	Loan (to be identified)	☐	Private Sector
	☐	Grant (to be identified)	☐	Public-Private Partnership

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Abbreviations

ADB	Asian Development Bank
AWC	Asian Waterbird Census
CSR	Conservation Status Review
DMC	Developing Member Country
EAAFP	East Asian-Australasian Flyway Partnership
IBA	Important Bird and Biodiversity Area
IUCN	International Union for the Conservation of Nature
KBA	Key Biodiversity Area
MECC	Ministry of Environment and Climate Change
MAS	Mongolian Academy of Sciences
MCST	Ministry of Culture, Sports, Tourism, and Youth
MOFALI	Ministry of Food, Agriculture, and Light Industry
NGO	Non-governmental Organization
NP	National Park
NR	Nature Reserve
NSPA	Numrug Strictly Protected Area
NUM	National University of Mongolia
RBA	River Basin Authority
RFI	Regional Flyway Initiative
SPA	Strictly Protected Area
TESSA	Toolkit for Ecosystem Services Assessment
USD	United States Dollars
WCS	Wildlife Conservation Society
WSCC	Wildlife Science and Conservation Center Mongolia

Executive Summary

Much of north-central Mongolia falls within the upper catchment of the Selenge River Basin, with the Orkhon River, Mongolia's longest, flowing northward from the Khangai mountains before meeting with the Selenge in Russia. Ögii Lake in Arkhangai Province is located in the Selenge-Orkhon Forest Steppe ecoregion and spans an area of 12,600 ha of mountain steppe, grasslands and wetlands, with the 2,500 ha Ögii Lake its main hydrological feature. The Khogshin Orkhon River is the principal inflow of Ögii Lake and enters the wetlands from the west, and the lake is drained by the Khooloin. The Ögii Lake is recognized as among the most important wetland sites for migratory waterbirds in north-central Mongolia, and supports significant congregations of at least nine waterfowl species, including Bar-headed Goose *Anser indicus*, Whooper Swan *Cygnus cygnus*, and Swan Goose *Anser cygnoid* (VU). The White-naped Crane *Antigone vipio* (VU) and the Great Bustard *Otis tarda* (EN) occurs in small numbers. Ögii Lake was designated as a Ramsar site in 1998, however still lack of national level protection status. It is also recognized as an EAAFP Flyway Network Site, and falls under the jurisdiction of Orkhon River Administration, Tsetserleg town and MECC.

The steppe grasslands in and around Ögii Lake is grazed by small numbers of herding households but accessibility of the site to Ulaanbaatar and Kharkhorin means that it is increasingly popular on major tourist circuits. Several tourist ger camps have been established around the lakeshore and it is estimated that the lake draws 20,000 tourists annually (as of 2025) largely for nature tourism activities such as leisure activities and sport-fishing. The increased pressure from tourism is acknowledged by stakeholders to be a major driver of change at the site and has contributed to increased solid waste and water pollution at the site and disturbances to the wetland ecosystem. Overgrazing by increasing livestock herds kept by local households is also expected to increase grassland degradation over time, while reducing water quality at the lake. Over time, studies of Ögii Lake's hydrology have projected a gradual shrinkage of the lake to unsustainable use of water and the longer-term impacts of climate change (increased frequencies of droughts).

Key priorities for improved management of the site are the strengthening and expansion of Ögii Lake's site management and zonation plan, to ensure that the ecologically most sensitive parts of the wetland are well protected and excluded from grazing. There is also scope for sustainable managing surrounding areas of mountain steppe for livestock grazing. The expansion of research and monitoring facilities at Ögii Lake's (e.g. research and bird banding stations) led by WSCC Mongolia provides the infrastructure and capacity for stronger environmental and biodiversity monitoring work, while the presence of a wetland interpretation center provides a key piece of infrastructure for strengthening local capacity in the environmental sciences and evidence-based management. Another priority for site management is to address environmental pollution arising from tourism activities; this should involve the establishment of new facilities to store solid waste (e.g. plastics) and expanding local capacity in improving the management of solid waste and water pollution discharges into the lake.

1. Background of the Regional Flyway Initiative

In July 2021, the Asian Development Bank made a commitment to develop a long-term Regional Flyway Initiative (RFI) in the East-Asian Australasian Flyway (EAAF) (Sovereign Project 55056-001) to protect and restore priority wetland ecosystems and the associated ecosystem services they provide in the EAAF, the most threatened migratory bird flyway globally. The Initiative is slated for implementation in nine ADB developing member countries (DMCs) in East, South and Southeast Asia: Mongolia, People's Republic of China (PRC), Bangladesh, Viet Nam, Cambodia, Philippines, Thailand, Malaysia and Indonesia. In 2023, the geographic scope of the RFI was further extended to two DMCs in Southeast Asia and the Pacific respectively, Lao PDR and Papua New Guinea.

The primary aim of the RFI is to enhance and expand the existing efforts in conserving and managing wetlands of the highest priority for migratory birds within the EAAF through innovative loan and grant financing, and at scale. Consultations and analyses over the development period help identify key interventions to strengthen the management of wetlands, enabling the implementation of nature-based solutions while strengthening biodiversity protection. Over time, the RFI seeks to leverage collaborative opportunities by developing partnerships among important stakeholders including national governments, civil society organizations, communities, regional organizations like the East Asian-Australasian Flyway Partnership (EAAFP), development agencies, the private sector, and other relevant entities.

Through the RFI Technical Assistance (TA) implemented over the RFI's development phase from 2021 to 2024, BirdLife International takes the lead in providing and coordinating technical support for development of the RFI. This is carried out in collaboration with the EAAFP and a consortium of international non-governmental organizations including Wetlands International and the Paulson Institute, as well as two universities, namely the University of Southampton, UK and the National University of Singapore. Over the development phase, the TA team undertook a site selection analysis to identify priority wetland sites in all 10 countries based on recent bird data benchmarked against internationally accepted criteria under the Convention on Wetlands of International Importance (or Ramsar Convention), EAAFP Flyway Network Sites and Important Bird and Biodiversity Areas (IBAs). The team further developed ecosystem services profiles for prioritized wetlands using a multi-pronged approach used the TESSA ecosystem services assessment tool, and data-driven modelling of water-based ecosystem services and stored carbon.

In Mongolia, a total of 48 wetland sites were initially assessed through published data in the Mongolia IBA Inventory (see Batbayar & Tseevenmyadag 2005), a review of the peer-reviewed literature, and consultations with technical experts. Of these, a total of (12) wetlands were ranked, defined and identified to be RFI priority sites on the basis that they support more than 1% the flyway population of at least one EAAF migratory waterbird species. Four (4) of the RFI wetland sites identified lie with the Amur-Heilongjiang Basin in eastern Mongolia, most notably a cluster of sites around Dornod and Sukhbaatar provinces, including Mongol Daguur SPA, Khurkh-Khuiten, Buir and Tashgain Tavan lakes. Two of the RFI sites, including Terkhiin Tsagaan and Ögii Lakes lie within the catchment of the Yenisey River, with outflows into the Selenge River. The remaining wetlands identified are endorheic lakes in the Altai or Gobi region. At least 48 EAAF species exceeded the 1% threshold at the site level in Mongolia, including nearly the entire breeding and staging population of the Swan Goose (Batbayar et al. 2013; Damba et al. 2021).

2. Site profile of Ögii Lake

Location: Ögii Lake is located in the valley of the Orkhon River to the north of the main Khangai ridge in the upper catchment of the Orkhon, 350 km west of Ulaanbaatar in Ögiinuur soum, Arkhangai aimag. The Khogshin Orkhon River is the principal inflow and enters the lake from the west, and the lake is drained by a smaller river, the Khooloin Gol.

Area: 12,600 ha

Altitude: 1,332-1,454 meters a.s.l.

Geographical coordinates: 47.77ºN, 102.7ºE

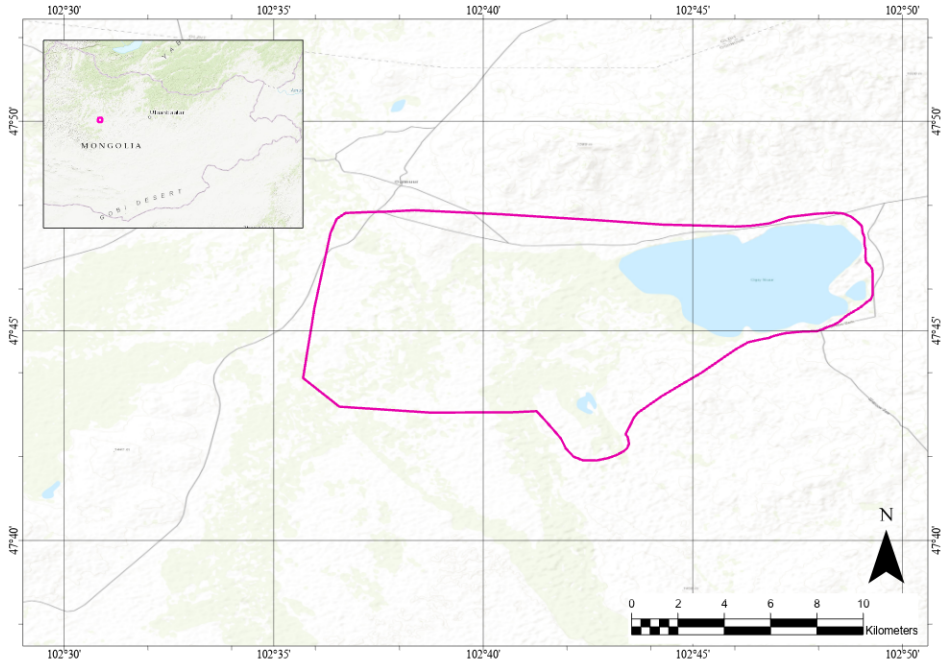

Figure 1. Map of Ögii Lake boundaries with inset map showing location of the site in eastern Mongolia (Map: Evelyn Pina Covarrubias).

Description of site: Ögii Lake is a mesotrophic (having a moderate amount of dissolved nutrients) freshwater lake with a surface area of 25.1 km^2 and an average depth of 5.3 metres (maximum 16 metres), with about 40% of the lake less than 3 metres deep and 50% supporting macrophyte (aquatic plant) growth. There are extensive wet grasslands on the alluvial plain at the western end of the lake, with river channels, marshes and pools edged by reedbeds along the inflow and outflow of lake. The remainder of the site comprises grassy steppe with abundant Chee grass *Stipa splendens* and typical mountain steppe with *Caragana* spp. bushes, and wet meadows with short vegetation. As a result of evaporation, Lake Ögii is estimated to have lost an area of ~2.0 km^2 between 1970 and 2014 (Orkhonselenge et al. 2024).

Site administration, management and land tenure: Ögii Lake was designated as a Ramsar site in 1998, as a local protected area in 2006, as an IBA in 2009 and as an EAAFP Flyway Network Site in 2016. The site is state owned and under the jurisdiction of Orkhon River Basin Administration, Tsetserleg town of Arkhangai Province, and the Ministry of Environment, and Climate Change. Although the site is state owned, the management authorities are the local Governor of Ögiinuur County, Arkhangai Province in collaboration with Wildlife Science and Conservation Center and Ugiinuur Information Centre.

Social and economic values: Intensive livestock grazing takes place at Ögii Lake throughout the year, which has resulted in overgrazing and grassland degradation, and have led to degradation of lakeside vegetation (Navaadorj et al. 2025). Socio-economic interviews with local stakeholders including herders found that 67.3% of households have experienced declines in livestock productivity (Navaandorj et al. 2025) while water quality in the lake showed elevated concentrations of phosphate levels (Amgalan et al. 2020). Improved animal husbandry practices including grazing management is important for the people living around the wetlands. A small-scale commercial fishery operates at Ögii Lake. Droughts have led to a reduction in the water levels in the Orkhon, and man-made steppe fires may pose an additional threat to the site.

Recreation and tourism activities are on the increase at Ögii Lake, and it is often crowded with local tourists in July and August. An Information Centre and a nearby Observation Centre have been established and are being actively used by birdwatchers and general tourists brought to the site by local and overseas companies, who organize small-scale kayaking, fishing and wildlife watching safaris. Some of the tourism and recreation activities are poorly managed, which is leading to disturbance of waterbirds during the breeding and molting season by people and boat engine noise, and pollution by waste.

3. Biodiversity value of Ögii Lake

3.1. Key habitats

Ögii Lake is a mesotrophic (having a moderate amount of dissolved nutrients) freshwater lake with a surface area of 25.1 km^2 and an average depth of 5.3 metres (maximum 16 metres), with about 40% of the lake less than 3 metres deep and 50% supporting macrophyte (aquatic plant) growth. There are extensive wet grasslands on the alluvial plain at the western end of the lake, with river channels, marshes and pools edged by reedbeds along the inflow and outflow of lake. The remainder of the site comprises grassy steppe with abundant Chee grass *Stipa splendens* and typical mountain steppe with *Caragana* spp. bushes, and wet meadows with short vegetation.

3.2. Importance for migratory waterbird species

Ögii Lake was identified a candidate RFI site because the available data shows that it supports internationally important populations of the migratory waterbirds (Table 1), defined as those species which have exceeded the 1% population estimates from the Conservation Status Review (CSR1) (Mundkur & Langendoen 2022; Batbayar & Tseveenmyadag 2009), together with published data from the peer-reviewed literature. A review of the candidate RFI sites was conducted by panels of national and international (EAAFP, Wetlands International and BirdLife) ornithological experts. The data used was this assessment was compiled from Batbayar and Tseveenmyadag (2009), together with the available count data from the peer-reviewed literature. A review of the candidate RFI sites was conducted by panels of national and international (EAAFP, Wetlands International and BirdLife) ornithological experts.

Table 1. List of migratory species (based on the EAAFP list of species) with globally significant congregations in Ögii Lake. See also Batbayar & Tseveenmyadag (2009) and Mundkur & Langendoen (2021).

Species name	IUCN	CSR1 score
Swan Goose *Anser cygnoid*	EN	>1%
Great Crested Grebe *Podiceps cristatus*	LC	>1%
Bar-headed Goose *Anser indicus*	LC	>1%
Whooper Swan *Cygnus cygnus*	LC	>1%
Ruddy Shelduck *Tadorna ferruginea*	LC	>1%
Common Goldeneye *Bucephala clangula*	LC	>1%
Common Crane *Grus grus*	LC	>1%
Northern Lapwing *Vanellus vanellus*	NT	>1%
Mute Swan *Cygnus olor*	LC	>1%

Ögii Lake supports a very small population of the globally threatened and near threatened Dalmatian Pelican *Pelecanus crispus* (NT), Swan Goose *Anser cygnoid* (EN), Common Pochard *Aythya ferina* (VU), Siberian Crane *Leucogeranus leucogeranus* (CR), White-naped Crane *Grus vipio* (VU), Hooded Crane *G. monacha* (VU) and Relict Gull *Larus relictus* (VU).

3.3. Other notable biodiversity

In addition to the waterbirds, the Ögii Lake and its surrounding landscape supports populations of the globally threatened Pallas's Fish-eagle *Haliaeetus leucoryphus* (EN) and Great Bustard *Otis tarda* (EN), and Mongolian Marmot *Marmota sibirica* (EN). Up to 15 fish species are known from the site, including species of conservation concern such as the Siberian Taimen *Hucho taimen* (VU) and Mongolian Grayling *Thymallus brevirostris*; both species are also popular for anglers visiting Ögii Lake.

4. Ecosystem services

4.1. Ecosystem services provided by Ögii Lake

The Ögii Lake landscape encompasses diverse wetland habitats and provides a variety of ecosystem services (Figure 2), including provisioning, regulating, and cultural services that are vital to communities within the site (Table 2). The results from the RFI workshop[1] highlight the top ecosystem services provided by the site, emphasizing their essential and non-substitutable nature (Table 2). These provisioning service (fresh water), regulating services (local climate regulation), and cultural services (recreation and ecotourism; aesthetic experience; and social relations) are considered essential or non-substitutable, benefitting the communities within and adjacent to the site. All services, except the local climate regulating services, also benefit the communities distant from the site.

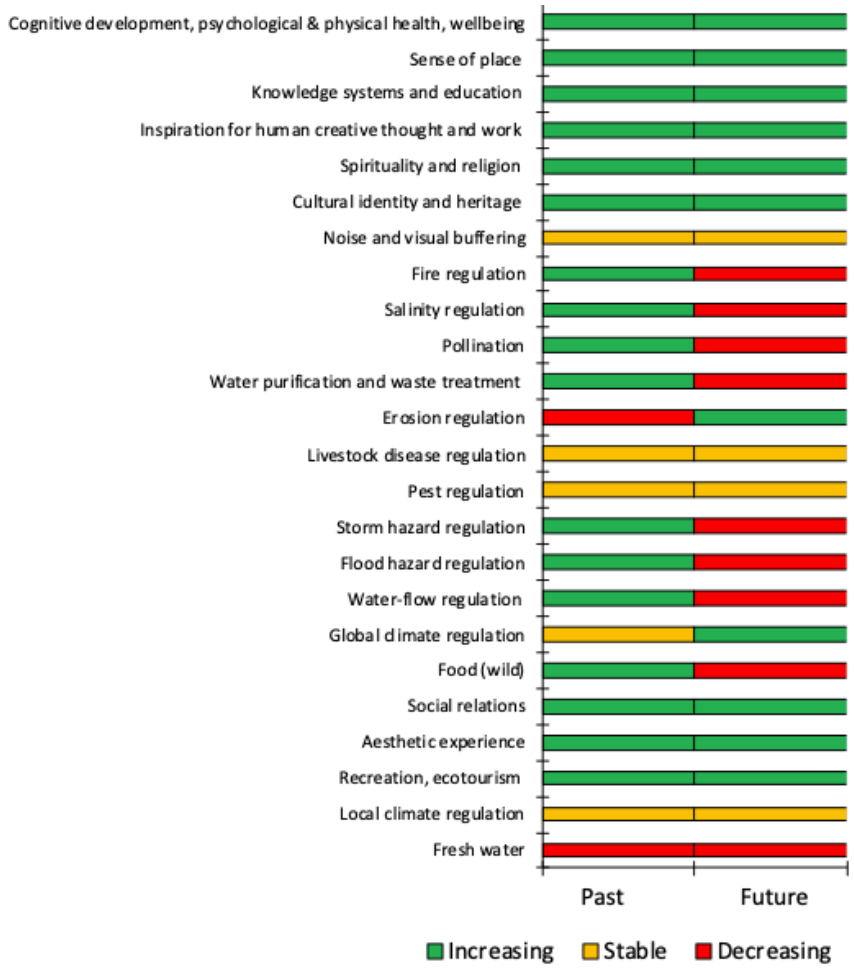

Figure 2. List of ecosystem services provided by Ögii Lake, as identified through stakeholder consultation at the Regional Flyway Initiative workshop.

[1] Asian Development Bank. (2024, November 28-29). *Mongolia: Wetland Ecosystem Services Workshop* [Workshop]. Mongolia https://events.development.asia/learning-events/mongolia-wetland-ecosystem-services-workshop

Table 2. List of top ecosystem services provided by Ögii Lake.

Ecosystem services	Essential or non-substitutable	Benefits to communities			Change	
		Within the site	Adjacent to the site	Distant to the site	Past	Future
Provisioning services						
Fresh water	Yes	✓	✓	✓	Decrease	Decrease
Regulating services						
Local climate regulation	Yes	✓	✓		No change	No change
Cultural services						
Recreation, ecotourism	Yes	✓	✓	✓	Increase	Increase
Aesthetic experience	Yes	✓	✓	✓	Increase	Increase
Social relations	Yes	✓	✓	✓	Increase	Increase

4.2. Global climate regulating services

While there is no definitive national average specifically for peatlands, Mongolian peatlands are estimated to store between 100 and 150 tonnes C ha^{-1}, although the value is likely variable depending on peat depth, degradation status, and landscape type (Government of Mongolia, 2018). Therefore, carbon stored in the peatlands of Ögii Lake (253 ha) is estimated to range from 25,300 to 37,950 tonnes C.

4.3. Flood mitigation services

The stakeholders at the RFI workshop[2] did not identify flood mitigating services as important benefits provided by Ögii Lakes. Therefore, these ecosystem services were not assessed.

[2] Asian Development Bank. (2024, November 28-29). *Mongolia: Wetland Ecosystem Services Workshop* [Workshop]. Mongolia https://events.development.asia/learning-events/mongolia-wetland-ecosystem-services-workshop

5. Drivers of change and their potential impacts on Ögii Lake

5.1. Current drivers of change and their level of impact

Stakeholders at the RFI workshop[3] identified 36 possible drivers of change impacting Ögii Lake, and their corresponding levels of impact on the wetland site (see Table 3). High-impact drivers include livestock farming and grazing. Intensive grazing pressure from local herders have caused degradation in some parts of the site and has alleviated desertification and increased occurrence of drought conditions. The popularity and accessibility of Ögii Lake have also increased tourism impact, and recreation use of the site is considered as a high-impact driver of change. Solid waste pollution is considered by stakeholders to be of concern as 'high impact' and in large part arises from poor waste management practices, alongside the expansion of mass tourism infrastructure such as ger camps and powerlines in and around the site. Medium-impact drivers include habitat loss, erosion, and changes in water management regimes. There is also increased risk from steppe fires because of land degradation and overgrazing.

Table 3. Drivers of change and their potential impact on the integrity of Ögii Lake based on consultations with stakeholders.

Driver of change	Impact
Desertification	High
Drought conditions	
Droughts	
Fishing, killing and harvesting of aquatic resources	
Garbage and solid waste	
Habitat shifting and alteration	
Livestock farming and grazing	
Loss of cultural links, traditional knowledge and/or management practices	
Recreational activities and tourism	
Roads and railroads	
Storm and flooding	
Temperature extremes	
Tourism and recreation infrastructure	
Utility and service lines	
Dams, hydrological modification and water management/use	Medium
Destruction of cultural heritage buildings, gardens, sites, etc.	
Erosion and siltation/deposition	
Habitat clearing	
Vandalism, destructive activities or threats to staff and visitors	
Activities of site managers	Low
Air-borne pollutants	
Dams within or upstream of the wetland site, which alter the hydrological regime	
Excess energy	
Hunting, killing and collecting of terrestrial animals	
Increased fragmentation within the wetland site	
Invasive animal species	
Invasive plant species	
Isolation from other natural habitats	
Loss of hydrological connectivity	
Loss of keystone species	
Natural deterioration of important cultural wetland site values	
Other 'edge effects' that degrade the wetland site values	
Pathogens	
Research, education and other work-related activities	
Restoration for conservation	
Water extraction/diversion within the wetland site or catchment	

[3] Asian Development Bank. (2024, November 28-29). *Mongolia: Wetland Ecosystem Services Workshop* [Workshop]. Mongolia https://events.development.asia/learning-events/mongolia-wetland-ecosystem-services-workshop

5.2. Potential alternative state of Ögii Lake under current drivers of change

Stakeholders at the RFI workshop[4] defined the most plausible future alternative state (scenario) for the site up to 2035 and converted this scenario into a net change in the cover of different types of wetland habitats within this site (current habitat cover vs. future alternative cover; see Figure 3). This future scenario assumes that the current drivers of change affecting the site and the existing management practices will remain unchanged.

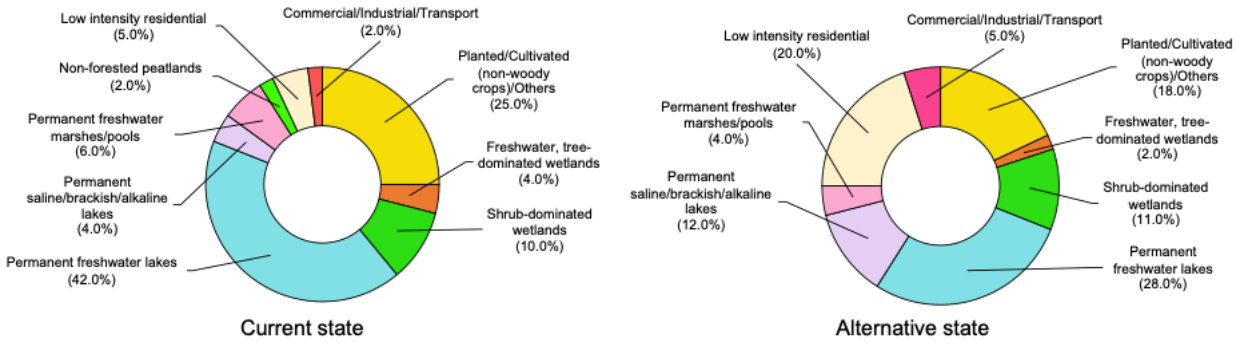

Figure 3. The proportional change in the extent of different habitat types between the current and alternative states of Ögii Lake.

5.3. Expected changes in the ecosystem services of Ögii Lake

Stakeholders at the RFI workshop[5] assessed future trends in the ecosystem services provided by Ögii Lake. Based on their local knowledge, they documented whether these services are expected to increase, decrease, or remain unchanged by 2035, assuming the current drivers of change affecting the site and the current interventions remain unchanged. Figure 2 and Table 2 shows that the provisioning of fresh water has decreased in the past and is expected to continue decreasing in the future, while the cultural services – recreation/ecotourism, aesthetic experience, and social relations – have increased in the past and are expected to continue increasing in the future. Local climate regulating services have remained unchanged in the past and will remain stable in the future.

[4] Asian Development Bank. (2024, November 28-29). *Mongolia: Wetland Ecosystem Services Workshop* [Workshop]. Mongolia https://events.development.asia/learning-events/mongolia-wetland-ecosystem-services-workshop

[5] Asian Development Bank. (2024, November 28-29). *Mongolia: Wetland Ecosystem Services Workshop* [Workshop]. Mongolia https://events.development.asia/learning-events/mongolia-wetland-ecosystem-services-workshop

6. Capacity gaps and needs for the management of Ögii Lake

Nine stakeholder groups were identified as important to the management of Ögii Lake Nature Reserve. Of immediate importance are stakeholders directly involved in the management of the site, including the aimag and local governments. Current capacities in site management, human resources, and mobilizing financing (e.g. project development) to support site management processes are limited and are opportunities for RFI to address.

Table 4. Stakeholder capacity needs in Ögii Lake Nature Reserve.

Stakeholder group	Current role in wetland management (Positive or Negative)	Possible future role in wetland management	Current capacity for sustainable wetland management	Capacity development needed to improve wetland management	Form of capacity development (e.g. training, organizational strengthening)
MECC	+ good	Policymaking	Medium	International/national best practices on technical management	Specialized technical training
Orkhon River Basin Authority (RBA)	+ good	Implementation of projects	Good	Improve human resources	Training programmes on human resources, financing and site management
Arkhangai Aimag Government	- limited	Policymaking	Poor	Mobilizing finance for site management; improve site management	
Ögiinuur Soum Government	medium	Management, implementation	Medium		
Private sector (including tourism operators)	medium	Support and participation in management processes	Poor	Strengthen cooperation with other site-stakeholders	-
Universities and research institutes	good	Support and participation; promoting cooperation	Good	Financing	-
Local communities	limited	Beneficiaries/support site management processes	Medium	Improve livestock management, fishery management	Training programmes and workshops on grazing management and animal husbandry

Stakeholder group	Current role in wetland management (Positive or Negative)	Possible future role in wetland management	Current capacity for sustainable wetland management	Capacity development needed to improve wetland management	Form of capacity development (e.g. training, organizational strengthening)
Tourists	limited	Support and participation	Poor	Improved awareness of the conservation importance of site	-
International projects and programmes	good	Implement projects and programs	Good	Generating finance and providing resources to build local capacity	-

7. Opportunities for RFI interventions

7.1. Recommended Interventions

Ögii Lake in north-east Mongolia is presently managed by the MECC and the provincial government, with support from WSCC. As a result of its relative proximity to major towns and Ulaanbaatar, the tourism infrastructure in and around the lake is well developed and there are tourist (ger) camps catering to local and international tourists, receiving several thousand tourists annually. There have been recent efforts by the Government to improve management and protection of the site, with MNT 400 million (approximately 111,000 USD) invested over 2019-2020 period alone. Ögii Lake is also one of few wetland sites in Mongolia with fairly-well developed infrastructure for wetland interpretation through the Ögii Lake wetland center. WSCC has regularly implement research projects on wetland ecology and bird migration and has carried out extensively bird ringing work here. However, increased tourism access and grazing pressure has led to an increase in grassland degradation, while water pollution levels have gradually expanded. A priority for improved management of Ögii is the implementation of its site management plan, to ensure that the ecologically most sensitive parts of this wetland is well protected (including the management of lakeshore vegetation), while adjacent areas of rangeland is better managed for grazing activities.

Table 5. List of proposed interventions for Ögii Lake Nature Reserve and possible project indicators.

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Component 1. Strengthening site management and protection of Ögii Lake and its surrounding steppe landscape					
Undertake a scoping study of existing interventions and threats to Ögii Lake and surrounding grasslands including targeted assessment on long-term threats (from climate change, overgrazing, tourism expansion and fisheries).	Assessment and scoping guidance to provide basis for proposed RFI interventions. Threats faced by the lake ecosystem better understood, and potential interventions identified.	Assessment report with key threats identified and recommendations for improved management published and disseminated to key stakeholders. Number of stakeholder meetings conducted in the scoping study. Number of stakeholder groups engaged in the scoping study, ensuring a participatory assessment of existing interventions and threats.	50,000	2 years	MECC Arkhangai aimag government Ögiinuur soum Orkhon-Chuluut Rivers Administration WSCC Mongolia ADB

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Strengthen site management of Ögii Lake including updating and expansion of a comprehensive management plan	Ögii Lake is better managed through the development of the site management and zonation plans, installation of boundary markers for zones, and implementation of measures to address and mitigate fire risk during the dry season.	Site management plan with measures to mitigate fire risk during the dry season and zonation of sensitive areas where grazing activities is excluded and highly regulated, over short to medium-term for Ögii Lake expanded, in consultation with key stakeholders, including local herding communities inside the site through participatory mapping. Number of stakeholder consultation meetings organized with local government and herding households to strengthen engagement local stakeholders for participatory mapping for zonation, understand local livelihood needs. Management plan for Ögii Lake expanded through participatory processes. Establishment and installation of boundary markers.	100,000	1 years	MECC Arkhangai aimag government Ögiinuur soum Orkhon-Chuluut Rivers Administration WSCC

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Component 2. Expand grassland restoration in the landscapes surrounding (and within) Ögii Lake, including degraded lakeshore vegetation (linked to component 1)					
Undertake a comprehensive assessment of grazing pressure and land degradation in Ögii Lake and surrounding area of grassland	Ögii Lake is better managed through roadmap and action plan development for roadmap and action plan for grassland restoration activities guided by remote sensing and participatory mapping of overgrazed areas.	Map on the status of grassland and wetland across site updated. Roadmap and action plan for grassland restoration activities and grazing management drafted, guided by remote sensing, participatory mapping of overgrazed areas, and grassland/ vegetation degradation maps of Ögii Lake. Number of stakeholder groups engaged, targeting the local government and herding households (about 200 households) Number of meetings and workshops organized to strengthen engagement local stakeholders for participatory mapping for zonation, understand local livelihood needs, and engage national stakeholders.	50,000	1 year	Arkhangai aimag government Ögiinuur soum Orkhon-Chuluut Rivers Administration WSCC Research institutions and consultancies

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Restore the degraded and overgrazed areas of grassland and forest steppe (see also component 4 on grazing management, and sustainable herding practices)	Degraded areas of steppe grassland damaged resulting from overgrazing restored. Degraded areas of steppe-taiga damaged resulting from overgrazing restored.	Nurseries for steppe and woodland restoration established. At least two pilot plots for steppe-taiga restoration established. At least 1,000 ha of grassland and 20 ha of woodland restored over a five-year period.	200,000	5 years	
Component 3. Wildlife research and monitoring, with a focus on (staging) migratory waterbirds					
Strengthen the wildlife protection and enforcement at Ögii Lake	Improved wildlife protection and enforcement through co-management framework, increased patrol and enforcement efforts for landscape, wildlife protection and encroachment activities, and increased capacity of local rangers	Co-management framework with local communities developed. Number of households (target of at least 50% households in site) engaged and actively participating in co-management activities. Training program and modules on patrol and enforcement and using SMART approaches developed. Number of training activities conducted Number of local rangers trained on patrolling and enforcement.	200,000	5 years	MECC Ögiinuur soum Orkhon-Chuluut Rivers Administration WSCC and international conservation organizations

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Strengthen the biodiversity and wetland monitoring, with a focus on waterbird species, focal species such as White-naped Crane, Swan Goose, and waterfowl.	Better monitoring of biodiversity and wetland ecosystems in the landscape through a locally engaged biodiversity monitoring program and increased awareness of migratory waterbird conservation amongst local households	Monitoring mechanism for the site established Number of monitoring activities conducted using the established biodiversity and wetland monitoring scheme. A locally led conservation group organized Number of awareness-raising activities (including workshops) on importance of nature protection, with a focus on charismatic bird species, implemented. Number of stakeholder groups engaged in the awareness-raising activities.	100,000	5 years	

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Expand research on biodiversity and ecology to strengthen evidence base for management plan development (see components 1, 2)	Ögii Lake is better managed through improved understanding of landscape and regional connectivity with migratory species movements ecology, improved understanding of wetland plant community ecology (to guide management of lakeshore vegetation), improved understanding of abundance and conservation status of key fish species in Ögii Lake and strengthened local capacities (including reserve administration for wetland ecology research. Long-term data on changes in landscape and wetland quality, and species abundance to guide site management cycle.	Number of training programmes (including workshops) on grassland and wetland ecology, with a focus on charismatic bird and wildlife species. Number of training activities implemented Number of local researchers and stakeholder groups trained Number of published research reflecting improved knowledge of landscape and regional connectivity of migratory bird populations. Number of research infrastructure maintained, including construction of specialized research facilities	500,000	3 years	Ögiinuur soum Orkhon-Chuluut Rivers Administration MECC Research institutions (incl. academy of sciences, universities) WSCC and international conservation organizations

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Component 4. Improving sustainable tourism practices at Ögii Lake, including waste disposal					
Improve existing infrastructure for specialized nature-based tourism including, hides, shelters and wetland interpretation center.	Impact of habitat degradation caused by tourism activities in the landscape reduced through specialized and planned nature-based tourism, strengthened capacity, and microfinancing.	Provincial-level tourism plans and strategies updated for Arkhangai, in coordination with MCST, MECC, aimag government and tourism operators. Number of training activities to strengthen local capacity for sustainable specialized tourism Number of stakeholders engaged in tourism-related activities. Number of infrastructures established and maintained (i.e., existing Ögii wetland center, birdwatching hides and shelters at up to three localities along lakeshore) Number of stakeholder groups engaged in the upgrading of tourism infrastructure and local planning Number of people benefiting from the upgraded tourism infrastructure	500,000	2 years	MCST MECC Arkhangai aimag government Ögiinuur soum Orkhon-Chuluut Rivers Administration

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Strengthen the capacity of local communities and businesses for nature-based tourism.	Impact of habitat degradation caused by tourism activities in the landscape reduced through increased local capacity of local communities and businesses for nature-based tourism.	Nature-based tourism strategy and business plans and packages on specialized wildlife/nature tourism developed. Number of piloted business plans with tourism operators (including international bird and wildlife tour companies) Training program on nature-based tourism developed Number of stakeholders trained on tourist management (target of at least 50 households) Number of people benefiting from the upgraded tourism infrastructure Microfinance schemes to provide loans to small tourism businesses to improve sustainability and reduce impact created. Number of small tourism businesses benefiting from the established microfinancing scheme.	300,000	5 years	Orkhon-Chuluut Rivers Administration WSCC and international conservation organizations Conservation organizations Tourism operators in Ulaanbaatar, Tsetserleg and Kharkhorin

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Component 4. Improving waste management practices to address solid waste and water pollution at Ögii Lake, targeting local communities and (mass) tourism operators					
Improve waste disposal practices from tourism operators, encourage sustainable tourism practices, including fishing tour operators, and local households. Improve waste disposal practices from local fisheries.	Impact of habitat degradation caused by waste pollution through increased capacity for tourism operators on waste management best practices focusing on water and solid waste pollution (including fishing rubbish), and establishment of new facilities established to hold and manage waste from tourism activities and local communities.	Training programme and curriculum developed with local stakeholders, targeting at least 50 tourism operators. Number of waste management training workshop conducted, in line with the drafted training programmes. Number of tour operators and local households trained on waste management. Number of waste management infrastructure constructed for proper disposal of plastic waste, including removal of waste to Ögiinuur town and disposal of wastewater from tourist camps. Number of tourism operators and local households participating in proper waste management mechanisms. Volume of waste properly managed	500,000	3 years	MECC Arkhangai aimag government Ögiinuur soum Conservation organizations Tourism operators in Ulaanbaatar, Tsetserleg and Kharkhorin

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
Component 5. Strengthening community-based management in Ögii Lake and adjacent areas to address overgrazing (see Component 2)					
Strengthen the local capacity in sustainable rangeland management	Improved conditions at Ögii Lake against baselines (decline in organic waste pollution) Improved condition of grassland (pasture) in Ögii Lake (in zoned areas) and adjacent landscapes against baselines.	Number of stakeholder consultation meetings organized, targeting at least 50 households, to engage local people on rangeland management, sustainable grazing practices. Training programmes focusing on community-based rangeland management, including livestock grazing regimes (e.g. rotational grazing) established. Training programme(s) on grazing management established with local governments and MOFALI. At least XX trained with sustainable rangeland management and herding practices. Number of stakeholders trained on community-based rangeland management and grazing management. Number of trained stakeholders adopting sustainable	500,000	5 years	MOFALI Ögiinuur soum Orkhon-Chuluut rivers Administration WSCC International development agencies IUCN Conservation organizations Agricultural banks

Intervention	Outcome	Indicators	Cost (USD)	Timeframe	Potential Stakeholders
		rangeland management.			
Scale up of sustainable rangeland use/grazing activities. Strengthen the resilience of herding households.	Improved condition of grassland in degraded areas around Khurkh Khuiten (in zoned areas) and adjacent landscapes against baselines through microfinance mechanism (for local loans and grants), incentives (and compliance mechanisms) for best practices in grazing and rangeland management, and benchmarking visits.		200,000	5 years	MOFALI Arkhangai aimag government Ögiinuur soum Ögii Lake Nature Reserve management board Conservation organizations International development agencies IUCN
Total investment for five years			11,750,000		

7.2. Potential Financing

The estimated project cost is USD 11,750,000 over a 5-year period. This project supports the development of plans for site management, zonation, and tourism, creation of a co-management framework, training programs on patrol and enforcement, biodiversity monitoring, nature-based tourism, community-based rangeland management, grazing and livestock management, and solid waste management, establishment of infrastructure for tourism and waste management, restoration of degraded grassland and forest steppe, and creation of microfinance mechanisms.

7.3. Proposed Institutional Arrangements

The proposed project is expected to be implemented over a period of up to five (5) years, with the main project components focusing on improving management of the Ögii Lake, strengthening local capacities

in wetland management practices, enhancing rangeland and grazing management practices (led by MECC and the soum government) for local grazing households, and waste and pollution management, targeting the tourism industry.

Conservation organizations such as the Wildlife Science and Conservation Center Mongolia, which currently supports the management of Ögii Lake with MECC can be expected to play a major supporting and technical role in the project.

7.4. Project Beneficiaries

This proposed project is expected to undertake activities to promote gender inclusion and participation in livelihood activities, through capacity building activities for local households.

7.5. Anticipated Implementation Risks

Environment: Nature-based tourism has been identified as a key project concept theme. The proposed interventions include establishing tourism infrastructure to improve the tourism experience at Ögii Lake. Building these infrastructures, however, would generate noise that may disturb wildlife, including breeding waterbirds such as White-naped Crane and Swan Goose. Moreover, increasing tourism activities bring other human-induced impact, such as waste pollution. Planning with the stakeholders is critical before any infrastructure development and tourism management.

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Annex 1. Supplementary information on flood mitigation services

Table A5. Key habitat types in Ögii Lake based on stakeholder-based assessment at the Regional Flyway Initiative workshop in November 2024.

Habitat type	Current state		Alternative state (2035)	
	Area (ha)	Cover (%)	Area (ha)	Cover (%)
Planted/Cultivated (non-woody crops)/Others	3162.4	25.0	2276.9	18.0
Freshwater, tree-dominated wetlands	506.0	4.0	253.0	2.0
Shrub-dominated wetlands	1264.9	10.0	1391.4	11.0
Permanent freshwater lakes	5312.7	42.0	3541.8	28.0
Permanent saline/brackish/alkaline lakes	506.0	4.0	1517.9	12.0
Permanent freshwater marshes/pools	759.0	6.0	506.0	4.0
Non-forested peatlands	253.0	2.0	0.0	0.0
Low intensity residential	632.5	5.0	2529.9	20.0
Commercial/Industrial/Transport	253.0	2.0	632.5	5.0
Total	12649.4	100.0	12649.4	100.00