IUCN Conservation Outlook Assessment 2017 **(archived)**
Finalised on 10 November 2017

Please note: this is an archived Conservation Outlook Assessment for Qinghai Hoh Xil. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Qinghai Hoh Xil

SITE INFORMATION

Country:
China
Inscribed in: 2017
Criteria:
(vii) (x)

Site description:

Qinghai Hoh Xil, located in the northeastern extremity of the Qinghai-Tibetan Plateau, is the largest and highest plateau in the world. This extensive area of alpine mountains and steppe systems is situated more than 4,500 m above sea level, where sub-zero average temperatures prevail all year-round. The site's geographical and climatic conditions have nurtured a unique biodiversity. More than one third of the plant species, and all the herbivorous mammals are endemic to the plateau. The property secures the complete migratory route of the Tibetan antelope, one of the endangered large mammals that are endemic to the plateau. © UNESCO

SUMMARY

2017 Conservation Outlook

Good with some concerns

The cumulative effects of the different threats require an efficient and targeted monitoring system and related management responses. Protection is in place, but needs to be better coordinated with adjacent protected areas and other relevant planning policies (transportation, energy) to be effective.

Current state and trend of VALUES

Low Concern
Trend: Data Deficient

The site was inscribed in 2017. Therefore no trend can be determined.

Overall THREATS

High Threat

The property is very large but some potential and current threats, such as climate change, the impact of the transport infrastructures on the movement of ungulates and birds, and activities linked to poorly managed agriculture, could impact the aesthetic, ecosystem and biodiversity values of the property.

Overall PROTECTION and MANAGEMENT

Some Concern

The protection and management system does not fully address the threats to the site’s values, resulting in a number of conservation issues. It should be broadened to the surrounding protected areas and focus on the important threats affecting the Outstanding Universal Value as well as on the monitoring of the effects of these threats.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► **Exceptional natural beauty**
Criterion:(vii)

The property is a place of extraordinary beauty at a scale that dwarfs the human dimension, and which embraces all the senses. The contrast of scale is a recurring theme in Hoh Xil as high plateau systems function unimpeded on a grand scale, wildlife is vividly juxtaposed against vast treeless backdrops and tiny cushion plants contrast against towering snow covered mountains. In the summer, the tiny cushion plants form a sea of vegetation, which when blooming creates waves of different colours. Around the hot springs at the foot of towering snow covered mountains, the smells of dust, ash and sulphur combine with the sharp cold wind from the glacier. Glacial melt waters create numerous braided rivers which are woven into huge wetland systems forming tens of thousands of lakes of all colours and shapes. The lake basins comprise flat, open terrain incorporating the best preserved planation surface on the Qinghai¬-Tibet Plateau as well as an unparalleled concentration of lakes. The lakes display a full spectrum of succession stages, forming an important catchment at the source of the Yangtze River and a spectacular landscape. The lake basins also provide the major calving grounds of the Tibetan antelope. In early summer each year, tens of thousands of female Tibetan antelopes migrate for hundreds of kilometres from wintering areas in Changtang in the west, the Altun Mountains in the north and Sanjiangyuan in the east to Hoh Xil’s lake basins to calve. The property secures the complete antelope migratory route between Sanjiangyuan and Hoh Xil, supporting the unimpeded migration of

Tibetan antelope, one of the endangered large mammal species endemic to the Plateau (IUCN, 2017).

► Exceptional level of endemism and significant habitat for in situ conservation

Criterion:(x)

High levels of endemism within the flora of the property are associated with high altitudes and cold climate and contribute to similarly high levels of endemism within the fauna. Alpine grasslands make up 45% of the total vegetation in the property dominated by the grass Stipa purpurea. Other vegetation types include alpine meadows and alpine talus. Over one-third of the higher plants found in the property are endemic to the Plateau and all of the herbivorous mammals that feed on these plants are also Plateau endemics. There are 74 species of vertebrates in Hoh Xil, including 19 mammals, 48 birds, six fish and one reptile (Phrynocephalus vlangalii). The property is home to Tibetan antelope, wild yak, Tibetan wild ass, Tibetan gazelle, wolf and brown bear, all of which are frequently seen. Large numbers of wild ungulates depend on the property including almost 40% of the world’s Tibetan antelope and up to 50% of the world’s wild yak. Hoh Xil conserves the habitats and natural processes of the complete life cycle of the Tibetan antelope, including the phenomenon of congregating females giving birth after a long migration. The calving grounds in Hoh Xil support up to 30,000 animals each year and include almost 80% of the identified birth congregation areas in the entire antelope range. During the winter, some 40,000 Tibetan antelopes remain in the property, accounting for 20-40% of the global population.

Other important biodiversity values

► Ecosystem and evolution

The property is representative of the biological and ecological evolution on the Pamir-Tian-Shan Highlands. It extends across the Eurasian forest floristic subregion and Asian desert floristic subregion. Its features of altitudinal vegetation distribution, significant differences between north and south slopes, and diversity of flora, all illustrate the biological and ecological

evolution of the Pamir-Tian-Shan Highlands. Due to its special location, topography and climate, the Kalajun-Kuerdening component became a refuge for relict species in the Paleogene period.
It is an example of an ongoing biological and ecological evolution process in a temperate arid zone.
Due to the pattern of two deserts flanking one mountain, the location deep in Asia's hinterland and the arid continental climate, which is unique among the world's mountain ecosystems, the landforms, ecosystems, habitats and landscapes have not undergone any major changes since the Pliocene epoch (5 Ma).

Assessment information

Threats

Current Threats

High Threat

The cumulative effects of threats like the railway and highway corridor, fencing and other agricultural activities linked to grazing on the ecosystem and aesthetic values are of concern. This situation needs effective management responses.

► Roads/ Railroads

Low Threat
Inside site, localised(<5%)
Outside site

The highway severely affects the migration route of the Tibetan antelope from the Sanjiangyuan National Nature Reserve to the calving grounds and back, as well as the displacing wildlife in general and disturbing the ecological network of the plateau. This affects both criteria (vii) and (x). The management response, however, seems effective, as the population of antelopes is rising. The guards of the Hoh Xil National Nature reserve block the traffic for 1.30 – 2 hours per day during the migration period to let the

animals cross the highway. The management currently operates on a non-written agreement between the road authorities (the road comes under the jurisdiction of Tibet even though it is located in Qinghai Province). The highway also affects other animal populations like the wild yak and other ungulates. No monitoring of mortality due to the highway is in place to assess this impact and no management response has been put in place.
The traffic on the highway is growing due to the major development occurring in the Tibet province. At the same time, the populations of antelopes and other animals are growing in the property due to better conservation measures. This could potentially create conflict in future if relevant management responses are not put in place.
During the process of inscription, IUCN sought information from the State Party about the status and future plans for the road. The State Party confirmed that there is no committed plan for road upgrading at the present time. It would be essential that, should the State Party take action to upgrade the road (including the options to reduce its impact on migration, such as underpasses), that such a project should be subject to a very thorough and careful assessment, involving leading expertise. In the meantime, two clearly essential requirements are to maintain the current and apparently effective management of the road, and to continuously monitor its effectiveness. It is also important to improve the level of monitoring of the impacts of the road on wildlife, including tracking details of roadkill, in order to also consider if impacts on species other than the Tibetan antelope require enhanced protection measures (IUCN, 2017).

► Roads/ Railroads

Very Low Threat
Inside site, localised(<5%)
Outside site

The railway was designed to respect, as much as possible, the migration corridors of the antelopes. The underpasses are very large and effective. However, its impact should be taken into account in the monitoring (IUCN, 2017).

► Livestock Farming / Grazing

High Threat

Inside site, extent of threat not known
Outside site

The division of land and fencing directed by the government for husbandry purposes as well as anti-desertification and wetland protection purposes are notable current threats, as fencing disrupts the migration route of Tibetan antelope and causes the displacement of wildlife in the property and buffer zone. Some actions have been taken by the reserves and NGOs to remove the fences, but many are still in place. Reported illegal settlement to the south of the property is also resulting in fencing. It will be imperative that the State Party takes care to ensure that fencing that would threaten the migration routes for animals breeding in the property is not permitted or promoted at any point, and acts to manage any existing fencing (IUCN, 2017).

► Livestock Farming / Grazing

Low Threat
Inside site, widespread(15-50%)

Intensive grazing and human–wildlife conflict is a current threat in part of the property, within
Sanjiangyuan Nature Reserve. Sheep and cattle compete with wildlife for food and heavy grazing can cause degradation of the grassland ecosystem. The government has an effective policy for reducing animal husbandry, offering incentives and compensation to the relevant households to cease grazing the land. The IUCN mission understood that grazing intensity has fallen substantially in the last years, and thus it is recommended that this present policy is continued. However, it is important to note, as discussed above, that a distinction should be made regarding the support for long-standing traditional grazing at intensities that can be supported by the natural ecosystem, in order to respect and protect legitimate traditional use and the rights associated with it (IUCN, 2017).

► Livestock Farming / Grazing

High Threat
Inside site, scattered(5-15%)
Outside site

The IUCN mission noted concern regarding poisoning campaigns for the eradication of pika (Ochotona spp.), which is a current threat of medium severity to the biodiversity. There is mounting evidence that pikas are a

keystone species that provide critical ecological services in the alpine meadow ecosystem. Thus, poisoning would potentially impact on the functioning of the ecosystem and the biodiversity of the property. No organised management response to pika is in place, although it is understood that the Hoh Xil Nature Reserve Administration has in the past refused to put in place eradication campaigns, and not accept financial subsidies, thus this issue has been primarily related to practice in Sanjiangyuan Nature Reserve. In response to a concern raised by IUCN, the State Party notes that no poisoning is planned in the area and the buffer zone (IUCN, 2017).

► Habitat Shifting/ Alteration

Low Threat
Inside site, throughout(>50%)
Outside site

The effects of climate change impact the property. The IUCN mission sought to clarify the situation, as it is currently understood, and the intended management responses. The recorded average temperature and average precipitation in the Hoh Xil reserve area rose significantly in the past decades. From 1961 to 2015, the annual average temperature change was 0.34℃ per decade, and the recorded average annual precipitation increased by c. 5 mm per decade. With this rapid change, glaciers, permafrost, rivers, lakes, wetlands and springs have responded accordingly, offering what is a dramatic example of terrestrial landscape change and a rare record of geomorphic processes. The primary productivity of the property appears to have increased, new rivers, lakes and marshlands have emerged, offering new habitats to ungulates and water
birds. The change of landscape also resulted in changes to the movement patterns of ungulates and
migratory birds. Practical management responses are difficult to put in place in relation to these trends, as the situation requires first to be understood, and the underlying knowledge and science base is still rapidly evolving. At the present time, it is firstly essential to put in place a strengthened and coordinated programme of monitoring of the effects of climate change, and to consider the options for management responses. Considering the large scale of the property, there is a significant opportunity to provide information about change, and lessons regarding response, that would be of international

interest (IUCN, 2017).

▶ Invasive Non-Native/ Alien Species

Very Low Threat
Inside site, extent of threat not known

The IUCN mission noted that the invasive species Stellera chamaejasme, which is a poisonous plant that invades areas of degraded vegetation, is a threat to ungulates. As this species is also problematic for livestock, its control relies on preventing overgrazing and grassland degradation, and requires further monitoring and study to improve management responses (IUCN, 2017).

Potential Threats

High Threat

The cumulative effects of increasing traffic, the rising effects of climate change on the landscape and ecosystems as well as possible tourism development are high potential threats on all the values.

▶ Habitat Shifting/ Alteration

High Threat
Inside site, throughout(>50%)
Outside site

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► Renewable Energy

Low Threat
Inside site, throughout(>50%)
Outside site

At present, there are three overhead transmission lines in the Hoh Xil area, including the Qinghai-Tibet DC transmission project (± 400 kV Chaila line) and the Qinghai-Tibet railway power supply project (110 kV NaWu line and 110 kV WuTuo line), of which the ± 400 kV Chaila direct current transmission line has a total length of 1,031.692 km and 2,361 transmission towers. The line runs mostly parallel (between 100-300m metres away) along both sides of the Qinghai-Tibet Highway , of which Section # 400 - # 960 has 561 transmission towers, and a total length of 243.161 km, going through the Hoh Xil Nature Reserve area.
Power supply lines are a potential threat to birds. The authorities in charge of the national grid have taken measures to assess threats and provide measures to discourage bird strikes, but there is a need for both monitoring and reporting on their effectiveness. It is also important to note that some bird species may settle in the property as the environment evolves, requiring different measures to be considered (IUCN, 2017).

► Tourism/ visitors/ recreation

Low Threat
Inside site, not applicable

Very few tourists currently visit the property, due to the combination of altitude and challenging conditions. The authorities are investing in new infrastructure, such as a viewpoint on the motorway and a new visitor centre at the Sonam Dhargye Station. A simple tourism strategy which proposes a limitation of the visitor numbers is defined in the management plan, but no

specific measures are defined to achieve this. Given the scale of the site and the limited current activity, tourism does not appear to be a particularly significant threat at the present time, however a more elaborated tourism strategy is clearly needed and should be developed as the management plan is reviewed. It would be important that tourism opportunities are linked more widely to the activities of local communities in the buffer zones of the property, and to wider tourism plans in Qinghai and its neighbours. World Heritage related strategies should be connected to the wider economic development of the local area in the most relevant way (IUCN, 2017).

Protection and management

Assessing Protection and Management

► Relationships with local people

Some Concern

As detailed in the nomination, there are a series of plans in place for the area, including the Qinghai Hoh Xil Property Management Plan (2015-2020), a specific management plan related to World Heritage. These were approved in 2015 based on recognition of a substantial wilderness zone across the large majority of the area, and an exhibition zone in the north-eastern part where activities related to management, and the provision of tourism related opportunities would be focused. The management plan appears to provide an adequate basis for the management of the property. There appears to be adequate capacity to implement the management plan with clear commitment from national and provincial levels, and amongst local government. At ground level, the management authorities of the two nature reserves that cover the property are responsible for implementation.
There are a number of means by which management could be strengthened, and deserve attention. A number of these matters were raised and responded to in the request for supplementary information made by IUCN to the State Party, including an extensive discussion on monitoring plans. There appears to be a need to strengthen and focus monitoring efforts and it would be beneficial to institute an ongoing means to track management effectiveness, using methods developed by IUCN through the World Commission on Protected Areas, and ensure systematic feedback into

improvements in property management. It would also be desirable to strengthen the participation of the local herding community within management activities, noting there is already some notable engagement. Whilst the good cooperation between the two reserves and the neighbouring reserves to the west is noted, this should be strengthened and institutionalised at a higher level (IUCN, 2017).

► Legal framework

Mostly Effective

The property, and its buffer zone lie within two protected areas (Hoh Xil and Sanjiangyuan Nature Reserves), which have the same national legal protection status. The two protected areas are national level nature reserves and are protected by the Regulation of the People’s Republic of China on Nature Reserves (adopted 1994). Accordingly, before nomination, the management authorities of both Nature Reserves have been set up with relevant structures and staffing. After the nomination, the Conservation Regulation of the Hoh Xil Natural Heritage Area in Qinghai Province was adopted by the Standing Committee of Qinghai Provincial People’s Congress, valid from October 2016. The Conservation Regulation regulates planning, protection, management and utilisation activities within the territory of the property and its buffer zone. According to this regulation an administrative authority for the property will be set up under the Department of Housing and Urban-Rural Development of Qinghai Province to assume protection and management responsibility for the property. As noted above, two other national level Nature Reserves, Chang Tang and Altun Mountain Nature Reserve, provide further buffering functions, although are not included as a formal World Heritage buffer zone. The Kunlun Mountains provide a natural barrier to the north of the property (IUCN, 2017).

► Enforcement

Highly Effective

Even though the property covers a large area, it is not very easy to access and patrols are staffed adequately. Law enforcement also seems to be effective (IUCN, 2017).

► Integration into regional and national planning systems

Some Concern

The overall management of the property incorporates coordination between the management of the various protected areas involved in the inscription. Better coordination between agricultural, tourism, transportation and nature conservation policy is required to achieve better integration in the provincial planning systems (IUCN, 2017).

► Management system

Mostly Effective

The management plan appears to provide an adequate basis for the management of the property. The plan will undergo an anticipated regular review (starting with the first update scheduled for completion in 2020) to allow improvements to be made over time, and to address a number of issues that are further discussed in the different sections of this evaluation report. There are a number of means by which management could be strengthened, and deserve attention. A number of these matters were raised and responded to in the request for supplementary information made by IUCN to the State Party, including an extensive discussion on monitoring plans. There appears to be a need to strengthen and focus monitoring efforts and it would be beneficial to institute an ongoing means to track management effectiveness, using methods developed by IUCN through the World Commission on Protected Areas, and ensure systematic feedback into improvements in property management. It would also be desirable to strengthen the participation of the local herding community within management activities, noting there is already some notable engagement. Whilst the good cooperation between the two reserves and the neighbouring reserves to the west is noted, this should be strengthened and institutionalised at a higher level (IUCN, 2017).

► Management effectiveness

Data Deficient

The property was inscribed in 2017 and it is too early to assess the management effectiveness of the whole system.

► Implementation of Committee decisions and recommendations

Data Deficient

The decision was made in 2017; it is too early to assess any implementation.

► Boundaries

Some Concern

Despite the large size of the property, there would be a case, in view of the high irreplaceability scores, to include more of Sanjiangyuan Nature Reserve in the property, as well as other neighbouring areas. These locations cover areas of significance to the migration of Tibetan antelope, or hold other complementary values of equal or greater significance than the current property (such as the Chang Tang Nature Reserve, which is reported to be even more significant for wild yak than the current property). There is a clear basis to consider the nomination as the first step towards a larger site. There are no buffer zone arrangements to the west and north of the property; it would be important to establish these. The designation of the buffer zones around the sections of the transport corridor within the property is also problematic. The nomination excludes the majority of the 4 km strip along the road corridor (with the exception of the areas managed as migratory corridors) from the property, and gives these areas buffer zone status. These buffer areas that are internal to the property are covered by the same legislation as the rest of the Nature Reserves.

► Sustainable finance

Mostly Effective

The national government, Qinghai provincial government and Yushu Prefecture government have regularly increased their investment in the property in recent years (IUCN, 2017).

► Staff training and development

Data Deficient

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▶ Sustainable use

Some Concern

The grazing activities in the site are reducing, but their sustainability should be improved (in relation to the fencing and pest control activities).

▶ Education and interpretation programs

Mostly Effective

Awareness and education programmes are foreseen in the Management plan, both for visitors and local people including in schools. The property has five visitor centres.

▶ Tourism and visitation management

Some Concern

There is a tourism management plan integrated within the management plan, however it would be better to have a more in-depth view on potential tourism development and its impacts on the Outstanding Universal Value. A more elaborated tourism strategy is clearly needed and should be developed as the management plan is reviewed (IUCN, 2017).

▶ Monitoring

Some Concern

Monitoring is integrated into the management plan. Monitoring should be managed by the State Party to focus on threats with a high potential to impact the Outstanding Universal Value. These threats include climate change, wildlife poaching and the inappropriate poisoning of the pika population.

▶ Research

Mostly Effective

A scientific research plan is included in the management plan and many research studies have been conducted and are ongoing in the property.

Overall assessment of protection and management

Some Concern

The protection and management system does not fully address the threats to the site's values, resulting in a number of conservation issues. It should be broadened to the surrounding protected areas and focus on the important threats affecting the Outstanding Universal Value as well as on the monitoring of the effects of these threats.

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

Some Concern

The cooperation with the adjacent protected areas as well as with the authorities responsible for the management of agriculture, power transmission and transportation should be developed.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ Exceptional natural beauty

Low Concern
Trend:Data Deficient

Inscription in 2017: the current state is the state at the inscription.

▶ Exceptional level of endemism and significant habitat for in situ conservation

Low Concern
Trend:Data Deficient

Inscription in 2017 it is not possible to define a trend

Summary of the Values

▶ **Assessment of the current state and trend of World Heritage values**

Low Concern

Trend: Data Deficient

The site was inscribed in 2017. Therefore no trend can be determined.

▶ **Assessment of the current state and trend of other important biodiversity values**

Low Concern

Trend: Data Deficient

The site was inscribed in 2017. Therefore no trend can be determined.

Additional information

Benefits

Understanding Benefits

▶ **Sacred natural sites or landscapes, Wilderness and iconic features**

The tangible attributes of the cultural value of the property consist of sacred mountains and sacred sites, the importance of which vary from national to local level. Every village has its sacred places and some of them are inside the property and the buffer zone. They represent important sites for prayer, and consist mainly of natural features like caves, hills or mountains. Other cultural values are related to the traditional husbandry methods and to the intangible values embedded in this exceptional landscape. For many among the local population, Hoh Xil represents the birth of their ancestors, for the Tibetan population this plain represents the legendary hunting ground of their ancestors (‘Meat Mountain’). Moreover, the birth of the Hoh Xil Nature reserve and the battle of the ‘heroes’ to save the Tibetan antelopes form the

roots of modern nature protection in China. Sonam Dhargye, a government officer from Beijing who died protecting the antelopes from poaching on 18 January 1994, is recognised as a national hero; books, a blockbuster film and many memorials to him are common in China.

► Access to drinking water

The property is situated at the source of three important rivers for Southeast Asia. Hoh Xil is the area with the highest density of lakes in China. It connects with the Sanjiangyuan Nature Reserve, which belongs to the convergent region of the endorheic lake area of the Changtang Plateau and the water system at the northern source of the Yangtze River (State Party of China, 2016).

► Direct employment, Tourism-related income

The protected areas provide a source of employment as guards and rangers for the local communities. The development of tourism can also be a source of revenue for local communities.

► Importance for research, Contribution to education, Collection of genetic material

The dynamics of the lake and river system in relation to climate change constitutes an important resource for research. The high level of endemism makes the property important for the collection of genetic material. The nature conservation success in the protection of ungulates is very important for education at national and regional level.

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