IUCN Conservation Outlook Assessment 2014 **(archived)**
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Please note: this is an archived Conservation Outlook Assessment for Manú National Park. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Manú National Park

SITE INFORMATION

Country:
Peru
Inscribed in: 1987
Criteria:
(ix) (x)

Site description:

This huge 1.5 million-ha park has successive tiers of vegetation rising from 150 to 4,200 m above sea-level. The tropical forest in the lower tiers is home to an unrivalled variety of animal and plant species. Some 850 species of birds have been identified and rare species such as the giant otter and the giant armadillo also find refuge there. Jaguars are often sighted in the park. © UNESCO

SUMMARY

2014 Conservation Outlook

Significant concern

The Conservation Outlook for the site’s ecological, biological and cultural values raises significant concerns in spite of a still excellent state of conservation across vast tracts of the Property. In the future, however, reliable and sufficient human and financial resources will be required to address threats from growing human activity in and around the site. At least equally important, there is need to balance regional economic development with social, cultural and environmental objectives. The numerous parks and other areas still functionally connected across vast territories and across boundaries with neighbouring countries need to be better understood and maintained. This may well constitute one of the only available instruments to increase resilience and to reduce vulnerability to anticipated climate change.

Current state and trend of VALUES

Low Concern
Trend: Deteriorating

While the current state of World Heritage Values is very good, future threats from major changes in the broader region, expected climate change and the increasing human footprint in and around the Property combine to give a high level of concern. The social, cultural and environmental consequences of ongoing development schemes, including oil and gas, road infrastructure and logging need to be better understood and considered in regional and sector planning. Connectivity with other protected areas in the region should be considered in such planning.

Overall THREATS

High Threat

Serious medium- and long-term concerns regarding developments in the broader

region, anticipated climate change and the impacts of growing human pressure within and around the site despite a still very good state of conservation, resulting in an overall assessment of “high threat”.

Overall PROTECTION and MANAGEMENT

Some Concern

Though human and financial resources for management have increased in recent years, reliable long-term funding is needed to adequately address the threats within and around the Property. Management will have to consider developments outside of the physical boundaries of the property, including but not limited to the buffer zone. Protection of indigenous communities in "voluntary isolation" must be secured while engaging with other communities in and around the site.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► Large scale altitudinal gradient and mosaic of highly diverse ecosystems and habitats

Criterion:(ix)

This roadless 1.7 million hectare site at the meeting point of the Tropical Andes and the Amazon Basin spans an enormous range of elevations, micro-climates and other ecological conditions, thereby creating a wealth of ecosystems, habitats and niches. The most widespread vegetation types found are tropical lowland rainforest, different types of tropical montane rainforest and cloud forest (Draft SoOUV, 2012). Manu National Park is difficult to access to this day due to its unusual geographical isolation, a key factor also in its economic isolation. The remoteness and Manu's contiguity with other vast areas of global conservation importance contribute to the maintenance of ongoing ecological and evolutionary processes at a large scale. In addition to the extraordinary diversity of life, the property is also renowned for its high level of endemism and an unusually high abundance and biomass of fauna across many taxonomic groups. Large top predators occur in natural population densities indicating an exceptionally good state of conservation.

► Biological diversity and rare and endangered species

Criterion:(x)

The biological diversity of Manu National Park is among the highest recorded anywhere on Earth. Some 1024 bird species found in Manu represent

approximately 10% of the global bird species diversity. The roughly 220 mammal species include the charismatic Jaguar, Puma and several other felids, 13 primate species, as well as globally endangered species such as the Giant Otter. Manu is home to 155 species of amphibians and 132 species of reptiles, 2.2% and 1.5% respectively of the known diversity for these groups (Catenazzi et al., 2013) Numbers of invertebrates range in the hundreds of thousands with 1,300 recorded butterfly species alone (WDPA Data Sheet, 2011). The region boasts 15,000 species of plants (Rosin, 2012).Scientific expeditions in and around the property routinely lead to the discovery of new species across many taxonomic groups, including vertebrate and tree species.

Assessment information

Threats

Current Threats

Low Threat

Both anticipated climate change and the slowly growing indigenous communities within the Park are currently low level threats.

▶ **Tourism/ visitors/ recreation**

Very Low Threat
Inside site

The overall impact is minor, as visitation is localized and the number of visitors is relatively small (between 2,000 and 3.000 visitors per year). Many tourism packages under the label "Manu" refer to areas outside of the national park which are easier to access from Cusco, the principal access.

▶ **Crops**

Low Threat

Inside site
Outside site

Small agricultural settlements localized in the Property and on its edges in higher elevations and in the buffer zone to the South. Small-scale commercial and subsistence agriculture encroaching from the buffer zone to the south of the property and localized slash and burn agriculture expanding around indigenous communities Tayacome and Yomybato.
Subsistence farming around native Matsigenka communities along the Manu river. Considering that actual population of the native Masigenka include only around 500 people, slush and burn agriculture needs and will need for decades only a small area of the Manu land, and therefore biodiversity and agriculture in the Manu are not in conflict. (Yu et al. 2013)

► Mining/ Quarrying, Logging/ Wood Harvesting, Roads/ Railroads

Low Threat
Inside site
Outside site

The conservation of Manu National Park is supported by the fact that it is today embedded in a much larger landscape of highest conservation importance. Even though vast areas are today recognized as different categories of protected areas and indigenous communal areas (including the contiguous Alto Purus National Park which is even larger than Manu), illegal logging and mining are known to occur. Major roads connecting Brazil to the Pacific through the Andes are expected to change the regional economy and increase development pressure and resource extraction. A new access road is planned along the southern boundary. If eventually connected to Puerto Maldonado, this is likely to change the dynamics of the buffer zone which today can only be accessed via a precarious dirt road across the Andes.

► Subsistence hunting

Low Threat
Inside site

Poaching along the northwest border and subsistence hunting is common in and around the native communities. The Matsigenka protein base includes hunting and fishing. Matsigenka prefer monkey meat above other meats. However, these two species are important as see dispersers (Terborgh et al., 2008). The current offtake by the Matsigenka appears to be sustainable,

apparently due to source-sink dynamics. Source-sink dynamics imply that even with continued human population growth within a settlement, offtake for each hunted species will eventually reach an asymptote. Subsistence hunting is presently compatible (Ohl-Schacherer et al., 2007) and will continue to be (Levi et al., 2009-2011b) with biodiversity conservation in Manu given reduced hunting areas and extensive “source” areas for these species (Reporte Manu 2013). See also Ohl-Schacherer et al. 2007.

► Livestock Farming / Grazing

Low Threat
Inside site
Outside site

Overgrazing of the Puna grasslands and related use of fire; increasing number of livestock around villages. While livestock grazing and associated use of fire is an ancient land use in the Andes, there is concern that levels may exceed sustainable use thereby damaging soils, productivity and conservation values.

► Temperature changes

Low Threat
Inside site
Outside site

Climate change is already affecting the Park and severe weather events are increasing in frequency and impacts. (WWF website, 2012)

► Mining/ Quarrying

Low Threat
Outside site

Deforestation for gold mining is encroaching on the buffer zones around the park (Sanders, 2014; Swenson et al., 2011)

Potential Threats

High Threat

Anticipated climate change is a serious potential threat while the growth of both legal and illegal activities outside the site are increasing the potential of

encroachment into the Property in the not-so-distant future. Beyond the Property, the changes in road infrastructure of the Peruvian Amazon are expected to induce major economic, social and environmental changes in the broader region.

▶ Oil/ Gas exploration/development

High Threat
Outside site

Oil and gas exploration south of the Property. The controversial Camisea Gas Field, one of Peru's largest energy projects, is located in a remote area in the immediate vicinity of the Property. Possible expansion bears the risk of impacts on the Property. It is assumed that indigenous groups in voluntary isolation have moved into Manu National Park (Yu et al. 2013) in response to disturbance by gas extraction.

▶ Temperature changes

High Threat
Inside site
Outside site

While climate change is already believed to affect the Park, its future effects are predicted to be even more severe. Some observers anticipate important die-off of lowland forest, expecting such forests to give way to drier ecosystems. Impacts on freshwater systems and other consequences are expected.

▶ Crops

Low Threat
Inside site
Outside site

Increasing human populations around the property, illegal logging and reported coca plantations, improved road access to the Southern buffer zone, and hydrocarbon exploration in the buffer zone are driving the agricultural frontier towards the Property. Though not an immediate threat, these trends are opening the door for future threats.

Protection and management

Assessing Protection and Management

► Relationships with local people

Some Concern

A Management Committee for the Park has been resuscitated after years of neglect, and includes major stakeholder groups. Relationships with local people are generally weak, however, because of limited staff and budgets, and the dispersion of indigenous and squatter settlements. The situation is improving, but due to the lack of resources and staff the progress is slow (Manu SPreport, 2011; Parkwatch Profile, 2009; IUCN Consultation, 2013). The location of the Head Office in Cusco means that senior staff is not permanently present in the Property or its buffer zone.

► Legal framework and enforcement

Some Concern

The Park was given full legal protection through Supreme Decree in 1973 and enlarged in 2002. Management of the Park is assigned to the National Protected Areas Service. However, law enforcement is weak because of limited staff numbers, lack of adequate equipment and transport, and poor training of Park Guards (WDPA Data Sheet, 2011; Parkwatch Profile, 2009)

► Integration into regional and national planning systems

Serious Concern

This is of major concern as other government sectors do not take the area into account (IUCN Consultation, 2013).

► Management system

Some Concern

A management plan, updated in 2010, is implemented through three programs: Environmental Management, Public Use and Operations. The Park has been divided into four zones, the largest by far

being the Restricted Zone mostly of undisturbed forest and indigenous peoples accessible only to authorised researchers, official visitors and scientific tourist groups. There are two recreational Zones, 200 ha in Ajanaco-Tres Cruces, and in the 257,000 ha along the lowest 70 km of the Manu River which contains a Cultural Zone where fishing, hunting and logging are permitted. In the high altitude Puna grasslands there is a Recuperation Zone where grassland burning and cattle raising are being brought under control. Service zones comprise small areas around control posts and the Biological Station, in some cases outside the boundary. Specific plans for grazing in the highlands, and for public use are also in place. Annual Operations Plans guide the day to day management activities (WDPA Data Sheet, 2011; Parkwatch Profile, 2009). The key challenge is that threats are mostly stemming from areas outside the national park and Property where SERNANP has a limited or unclear mandate. Better coordination and cooperation with other sectors is needed.

► Management effectiveness

Some Concern

Effective management is hindered by limited budgets, limited personnel, the lack of training for personnel, the high rate of turnover of personnel, short-term thinking of management, and lack of coordination with authorities responsible for other sectors in the surroundings of the park. (Parkwatch Profile, 2009); however, in the last 3 years the situation has been improving (IUCN Consultation, 2013).

► Implementation of Committee decisions and recommendations

Some Concern

Efforts have been made to implement World Heritage Committee decisions, but this is hampered by limited human and financial and resources (Manu SPreport, 2011; Parkwatch Profile, 2009) in addition to the limited mandate of SERNANP outside of the Property where most concerns have their roots and manifestations. The World Heritage status of Manu appears to have limited visibility and of secondary importance in the operational management.

► Boundaries

Mostly Effective

The boundaries of the Park were set by Supreme Decree in 1973, and enlarged in 2002. The World Heritage property was enlarged in 2009 to coincide with the expanded boundaries of the national park. The boundaries are generally not demarcated on the ground. The 2010 IUCN/World Heritage Centre reactive monitoring mission recommended that the Park's boundaries be expanded to include the adjacent Megantoni Nature Reserve. The World Heritage Committee adopted this suggestion in its decision 35COM 7B.34 (35COM.Manu.SOC; Parkwatch Profile, 2009)

► Sustainable finance

Some Concern

The Park has 3 main sources of funding: the governmental budget, tourism fees, and project funding from PROFONANPE, the national protected areas fund, Frankfurt Zoological Society and other NGOs. Though the government budget for the Park has increased by 42% in recent years, funding levels are still relatively low given the extent of the Park (Manu SPreport, 2011; Parkwatch Profile, 2009). A 5 year project with funding from BMUB (German Government) started in December 2012 and is administered jointly by SERNANP and FZS.

► Staff training and development

Some Concern

There is a national training strategy and plan for protected area staff training. This is being implemented, but long-term funding needs to be secured. The high staff turnover is a major problem as trained staff leave (IUCN Consultation, 2013).

► Sustainable use

Some Concern

The degree and impacts of natural resource use and tourism are limited, but not well-studied (Parkswatch Profile, 2009).

► Education and interpretation programs

Mostly Effective

An environmental education network for the Manu Biosphere Reserve is made up of NGOs, municipalities, regional governments, environmental; authorities, and education institutions. Working with the network, the Park developed an Environmental Education program which orients the work of the network members. The network works with schools in the region, and also does training for government officials and Park personnel. (Parkswatch Profile, 2009) However, funding remains a major issue (IUCN Consultation, 2013).

► Tourism and interpretation

Mostly Effective

Most interpretation for visitors is carried out by guides contracted by tour operators. Visitor information centers are located at Salvacion and El Limonal. The Salvacion centre is mainly used by local people for environmental education.
(Parkwatch Profile, 2009; IUCN Consultation, 2013).

► Monitoring

Mostly Effective

CREES Research Station is doing monitoring of mammals, birds and forests within the Biosphere Reserve. (WDPA Data Sheet, 2011). Frankfurt Zoological Society has been monitoring Giant Otters annually since 1990 and also undertakes landuse monitoring studies approximately every 5 years.

► Research

Mostly Effective

While there is no research plan for the Park, the renowned Coca Cashu Biological Station has had a presence in the Park for more than four decades. (WDPA Data Sheet, 2011; Parkwatch Profile, 2009).

Overall assessment of protection and management

Some Concern

Though human and financial resources for management have increased in recent years, reliable long-term funding is needed to adequately address the threats within and around the Property. Management will have to consider developments outside of the physical boundaries of the property, including but not limited to the buffer zone. Protection of indigenous communities in "voluntary isolation" must be secured while engaging with other communities in and around the site.

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

Serious Concern

Given the limited human and financial resources, the Park is obliged to concentrate on addressing threats inside the site. Consequently, the much more pertinent threats outside the site cannot receive the required attention. However, beyond capacities this is also a function of the limits of SERNANP's mandate, suggesting a need for stronger involvement of other sectors and actors.

▶ Best practice examples

The history of Manu National Park is a remarkable success story starting in the late 1960s, at a time when tropical rainforest conservation was not on the international agenda and resources seemed endless in the Amazon. A small number of Peruvian conservationists had the vision, capacity and political clout to have Manu established as the largest tropical rainforest protected area at the time. Despite ups and downs in management and funding and mounting concerns about the future, Manu National Park continues to be in a good state of conservation four decades after its creation.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ Large scale altitudinal gradient and mosaic of highly diverse ecosystems and habitats

Low Concern
Trend:Deteriorating

Given the extreme isolation of the site, and the small number of indigenous residents within the Park, human impacts on the site are still very low. However, population is growing in and near the site and the overall pressure is also rising as significant changes in the broader landscape occur, including large-scale gas extraction, gold mining, logging and infrastructure projects. The removal of cattle and control of burning in some highland grassland areas should allow recovery of a natural ecotone to the montane forest (IUCN Consultation, 2013).

▶ Biological diversity and rare and endangered species

Low Concern
Trend:Stable

The above expected future impacts would have severe consequences on species across taxa. At this stage, impacts are still very limited.

Summary of the Values

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

Low Concern

Trend: Deteriorating

While the current state of World Heritage Values is very good, future threats from major changes in the broader region, expected climate change and the increasing human footprint in and around the Property combine to give a high level of concern. The social, cultural and environmental consequences of ongoing development schemes, including oil and gas, road infrastructure and logging need to be better understood and considered in regional and sector

planning. Connectivity with other protected areas in the region should be considered in such planning.

Additional information

Key conservation issues

▶ **Encroachment within the property and advancing agricultural frontier outside the property**

Local

Growing indigenous communities within the Property and changing lifestyles. Growing settlements in the buffer zone and on the edges of the Property.

▶ **Regional development schemes**

Regional

Road construction and resource extraction changing the economy of the Peruvian Amazon with complex social, cultural and environmental consequences

Benefits

Understanding Benefits

▶ **Is the protected area valued for its nature conservation?**

As one of the places with the highest recorded terrestrial species diversity and home to some of the last non-contacted indigenous peoples in the World, Manu National Park is an iconic place of global significance for its natural and cultural heritage values.

▶ **History and tradition**

While Manu National Park is not formally recognized under cultural World Heritage criteria, the long and ongoing history of indigenous occupation is

noteworthy. Important Incan and Pre-Incan ruins and petroglyphs are distributed within and around what today constitutes the property. According to the local legend of Paititi, the "Lost City of the Incas" is located within the property. Various indigenous peoples are living in Manu National Park. Some of them are sedentary and in regular contact with the “modern world”, while others maintain a semi-nomadic lifestyle as hunter-gatherers in so-called "voluntary isolation" or “initial contact”, respectively (2010 IUCN-World Heritage Centre mission report, PRO-MANU, 2003)

► Importance for research

Cocha Cashu Biological Station located within the property has been one of the foremost references for scientific research in tropical ecology for decades. The scientific work conducted in the property has been significantly enhancing the understanding of (neo-)tropical forest ecosystems.

► Outdoor recreation and tourism

Tourism is currently at a low level, but may have considerable growth potential.

Summary of benefits

The conservation of nature and of indigenous cultures is globally significant.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	SERNANP, Regional Authorities		Vilcabamba-Amboro Conservation Corridor; Strengthening the Management of Protected Areas Influenced by the Southern Inter-Oceanic Highway; Endowment Fund for the Operation of the 5 involved protected areas.
2	San Diego Zoo		Enhanced management of the Cocha Cashu Biological Station

№	Organization/ individuals	Project duration	Brief description of Active Projects
3	MINAM (Implemented by UNDP and financed by GEF)		Transforming Management of Protected Area/Landscape Complexes to Strengthen Ecosystem Resilience
4	DRIS, BMZ, EU, Welt Hunger Hilfe, GFA, Hivos, Cesvi		Programa Manu-Amarakaeri (2011-2015)
5	Frankfurt Zoological Society		Project: ProBosque Manu. 5 year project financed by BMUB working to reduce land-use change in and around Manu, focussed on improving practices with local communities in and around the park.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	Support to SERNANP in park management	The park management would benefit from strategic advice and external support in terms of logistics and infrastructure, capacity development, management planning (e.g., adaptation to climate change), monitoring and law enforcement.	
2	Development of innovative financing strategies	The full range of revenue options from Funds, including PROFONANPE, as well as from tourism, extractive industries and PES-Schemes, including REDD deserves to be explored.	

REFERENCES