IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 29 October 2014

Please note: this is an archived Conservation Outlook Assessment for Historic Sanctuary of Machu Picchu. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Historic Sanctuary of Machu Picchu

SITE INFORMATION

Country:
Peru
Inscribed in: 1983
Criteria:
(i) (iii) (vii) (ix)

Site description:
Machu Picchu stands 2,430 m above sea-level, in the middle of a tropical mountain forest, in an extraordinarily beautiful setting. It was probably the most amazing urban creation of the Inca Empire at its height; its giant walls, terraces and ramps seem as if they have been cut naturally in the continuous rock escarpments. The natural setting, on the eastern slopes of the Andes, encompasses the upper Amazon basin with its rich diversity of flora and fauna. © UNESCO

SUMMARY

2014 Conservation Outlook

Significant concern

Climate change is increasing the frequency and intensity of fires, landslides and flooding in the Sanctuary, and combines with expanding agricultural and tourism activities and pollution of the Urubamba River to not only threaten the values of the Property, but also visitor safety. Tourism growth, especially the uncontrolled expansion of Machu Picchu Village and increasing use of the Inca Trail System, impact the natural beauty of critical areas and diminish the area of natural habitat. Managing and mitigating these threats has proven difficult to achieve because of the fragmentation of management responsibilities among multiple institutions at national, regional, and local levels of government, and the general failure of coordination mechanisms. This combination of critical threats and ineffective governance combine to give a negative conservation outlook.

Current state and trend of VALUES

High Concern
Trend: Deteriorating

The Historic Sanctuary of Machu Picchu is threatened by an accumulation of factors (flooding, landslides, fires, deforestation, pollution, tourism infrastructure, and tourist numbers) that combine to negatively impact the World Heritage values of the site and visitor safety.

Overall THREATS

Very High Threat

Flooding, landslides, and fires exacerbated by climate change; on-going deforestation; uncontrolled growth of Machu Picchu Village; pollution of the Urubamba River, and continuing increases in the use of the Inca Trail System combine to produce a very high level of threat to the values of the SHMP and to visitor safety. As the number of tourists accessing Machu Picchu through Santa

Teresa continues to grow, the potential for uncontrolled growth of tourism infrastructure between these two villages along the Urubamba River also increases. Current and potential threats to the Site generate both direct and cumulative impacts that degrade the World Heritage values of the Property.

Overall PROTECTION and MANAGEMENT

Some Concern

Responsibilities for the protection and management of the Historic Sanctuary of Machu Pichu are fragmented among a number of national, regional, and local entities. The lack of effective means of coordination leads to a situation of confusion and conflicting interests that is reflected in inadequate management and protection of the Site’s Outstanding Universal Value.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► **Dramatic mountain landscape of exceptional scenic beauty**
Criterion:(vii)

The historic monuments and features in the Historic Sanctuary of Machu Picchu are embedded within a dramatic mountain landscape of exceptional scenic and geomorphological beauty thereby providing an outstanding example of a longstanding harmonious and aesthetically stunning relationship between human culture and nature (SoOUV, 2013).

► **A remarkable diverse array of habitats and species**
Criterion:(ix)

Covering part of the transition between the High Andes and the Amazon Basin the Historic Sanctuary of Machu Picchu shelters a remarkably diverse array of microclimates, habitats and species of flora and fauna with a high degree of endemism. The property is part of a larger area unanimously considered of global significance for biodiversity conservation (SoOUV, 2013).

Other important biodiversity values

► **Species of particular conservation concern**

Leopardus colocolo / Pampas Cat ; Leopardus pardalis / Ocelot; Lutra longicaudis / Neotropical Otter; Mazama chunyi / Peruvian Dwarf Brocket; Mustela frenata / Long-tailed Weasel; Penelope montagnii / Andean Guan;

Rupicola peruviana / Andean Cock-of-the-rock; Tremarctos ornatus / Spectacled Bear; Vultur gryphus / Andean Condor (World Heritage Centre Website)

Assessment information

Threats

Current Threats

Very High Threat

Flooding, landslides, and fires exacerbated by climate change; on-going deforestation; uncontrolled growth of Machu Picchu Village; pollution of the Urubamba River, and continuing increases in the use of the Inca Trail System combine to produce a very high level of threat to the values of the SHMP and to visitor safety.

▶ **Storms/Flooding, Temperature changes**

Very High Threat
Inside site
Outside site

The impacts of climate change, especially in terms of flooding, landslides and fires, have increased significantly in recent years. Fires have now affected about half of the area of the SHMP (35COM.MachuPicchuSOC; 35COM.MachuPicchu.SPreport; Galiano Sanchez, 2000).

▶ **Logging/ Wood Harvesting**

Very High Threat
Inside site
Outside site

Deforestation is an historical and on-going process caused by agricultural activities, fires, and the building of tourism infrastructure which, by the year 2010, had affected 52% of the SHMP (Draft Statement of OUV, 2010).

► Housing/ Urban Areas, Tourism/ Recreation Areas

Very High Threat
Inside site

The chaotic expansion of Machu Picchu Village has increased the loss of native vegetation, impacted the natural beauty of a critical area, and put visitors at risk from flooding and landslides (35COM.MachuPicchu.SOC; Mission Report, 2009).

► Tourism/ visitors/ recreation

Very High Threat
Inside site

Ever increasing use of the Inca Trail System contributes to increasing deforestation, soil compaction and erosion of adjacent areas, deposition of human wastes, construction of tourist facilities such as latrines, campsites, and communication towers. (35COM.MachuPicchu.SPreport; Galiano Sanchez, 2000).

► Water Pollution

High Threat
Inside site
Outside site

The River is polluted from solid and liquid wastes generated both outside and inside the SHMP. The export of solid wastes by train from Machu Picchu Village has helped reduce the problem, but is not totally effective. (35COM.MachuPiocchu.SPreport; Jefatura SHMP, 2007; Galiano Sanchez, 2000)

► Subsistence hunting

High Threat
Inside site

Subsistence and sport hunting have a negative impact on wildlife populations that are already under pressure from habitat changes caused by flooding, landslides, fires, and deforestation. (Master Plan, 2005; Galiano Sanchez, 2000).

Potential Threats

Very High Threat

As the number of tourists accessing Machu Picchu through Santa Teresa continues to grow, the potential for uncontrolled growth of tourism infrastructure between these two villages along the Urubamba River also increases. This will increase the risk of deforestation, fires, and landslides, and impact the natural beauty of the area and compromise visitor safety.

► Commercial/ Industrial Areas, Tourism/ Recreation Areas

Very High Threat
Outside site

Most of the lands along the railroad between Machu Picchu and the Hydroelectric Plant are privately owned and settled. As use of the Western Entrance increases, backpackers are walking along the side of the railroad tracks in order to reach Machu Picchu, thereby creating a market for food, drinks, camping areas, and hostels. This will lead to further deforestation, increase the risk of fires and landslides thus impacting the natural beauty and visitor safety (Mission Report, 2009).

Protection and management

Assessing Protection and Management

► Relationships with local people

Some Concern

Relationships with local people vary according to their interests. Considerable effort has been invested in environmental education and technical assistance and in some cases this has created good will. However, law enforcement with respect to the expansion of villages and agriculture, subsistence hunting, and grazing of livestock create distrust and animosity (35COM.Machu Picchu.SPreport: Mission Reports, 2007 and 2009; Galiano Sanchez, 2000).

▶ Legal framework and enforcement

Serious Concern

The legal framework for governance and management is highly fragmented and at times inconsistent. Multiple attempts to create a high level coordination mechanism have proven largely unsuccessful. (Mission Reports, 2007 and 2009).

▶ Integration into regional and national planning systems

Serious Concern

In theoretical terms, the HSMP (Historic Sanctuary of Machu Picchu) is integrated into regional and national planning systems. In practice, these planning systems have not proven effective in developing a consistent vision, agreed objectives, cooperation, and coherent management. (Mission Reports, 2007 and 2009)

▶ Management system

Some Concern

The current management system is uncoordinated and inefficient. Responsibilities are highly fragmented among a plethora of national, regional, and local authorities. Coordination mechanisms work only sporadically. (Mission Reports, 2007 and 2009)

▶ Management effectiveness

Serious Concern

Though recommended on numerous occasions, no evaluations of management effectiveness have been undertaken. Overall, the inability to respond to and/or implement Committee decisions in a timely fashion indicates considerable weakness in the management system (Mission Reports, 2007 and 2009)

▶ Implementation of Committee decisions and recommendations

Serious Concern

The history of implementation of Committee decisions and recommendations has not been good; every year the Committee has had to deal with the site

but management problems do not get resolved. (35COM.7B.38.MachuPicchu)

▶ Boundaries

Some Concern

The boundaries of the Site are well established and mapped, but there are concerns as to whether they should be expanded to include adjacent areas that also have significant natural and cultural values. (Draft Statement of OUV, 2010; Jefatura Santuario Historico MachuPicchu, 2005)

▶ Sustainable finance

Some Concern

Though the Site itself generates considerable income, much of it is used to cover the management costs of cultural sites that themselves do not generate much funding. A plan for sustainable finance of the HSMP has been developed (Mission Reports, 2007 and 2009)

▶ Staff training and development

Some Concern

There is no single system for the training and development of staff of the different institutions that play a role in management of the site. Rather each institution has their own system that is used on occasion for staff assigned to Machu Picchu. (Mission Reports, 2007 and 2009).

▶ Sustainable use

Serious Concern

The sustainability of tourism programs is compromised by the ever increasing number of visitors, inadequate and outdated infrastructure, and poor planning. A program is in place to encourage the sustainable use of areas being used for agriculture and grazing, but results have been slow in coming (Muñiz Ortega, 2005; Mission Reports, 2007 and 2009).

▶ Education and interpretation programs

Mostly Effective

Environmental education programs for stakeholders have been in place for many years. Results have been mixed. (Jefatura Santuario Historico

MachuPicchu, 2005)

▶ Tourism and interpretation

Serious Concern

Interpretation programs for visitors are poorly designed and executed; many guides lack the training to provide consistent and authoritative interpretation. Visitor centers have been implemented in Cusco and in Pisq'akucho (Plan Maestro, 2005; Jefatura Santuario Historico MachuPicchu, 2005)

▶ Monitoring

Some Concern

Monitoring of the natural environment, and of visitors, has been on-going for many years. Permanent plots have been established to monitor the populations of key species. The number of weather stations and landslide sensors has been increased to cope with the impacts of climate change. The numbers, activities, and attitudes of visitors are also regularly monitored. There is no system for assuring that monitoring data to inform decision making processes (Jefatura Santuario Historico MachuPicchu, 2005)

▶ Research

Some Concern

Research is carried out on an ad-hoc basis, usually by outside institutions. There is no system in place to assure that research results are tied effectively into decision making processes (Jefatura Santuario Historico MachuPicchu, 2005)

Overall assessment of protection and management

Some Concern

Responsibilities for the protection and management of the Historic Sanctuary of Machu Pichu are fragmented among a number of national, regional, and local entities. The lack of effective means of coordination leads to a situation of confusion and conflicting interests that is reflected in inadequate management

and protection of the Site’s Outstanding Universal Value.

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

Threats generated outside the site, especially with respect to tourism numbers and access, are not effectively dealt with and cause significant problems for management and protection.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **Dramatic mountain landscape of exceptional scenic beauty**
High Concern
Trend:Deteriorating

Climate change is exacerbating the frequency and severity of floods, landslides and fires. These impacts, together with on-going deforestation, pollution of the Urubamba River, and the increasing number of tourists and tourism infrastructure, threaten the natural beauty of the site (35COM.MachuPicchu.SOC; 35COM.MachuPicchu.SPreport; Missions Reports, 2007 and 2009; Galiano Sanchez, 2000).

▶ **A remarkable diverse array of habitats and species**
High Concern
Trend:Deteriorating

The same threats that degrade the natural beauty of the site (floods, landslides, fires, deforestation, pollution, tourism infrastructure and tourist numbers) also negatively impact on the habitats and associated species. (35COM.MachuPicchu.SOC; 35COM.MachuPicchu.SPreport; Missions Reports, 2007 and 2009; Galiano Sanchez, 2000).

Other important biodiversity values

▶ Species of particular conservation concern

Leopardus colocolo / Pampas Cat ; Leopardus pardalis / Ocelot; Lutra longicaudis / Neotropical Otter; Mazama chunyi / Peruvian Dwarf Brocket; Mustela frenata / Long-tailed Weasel; Penelope montagnii / Andean Guan; Rupicola peruviana / Andean Cock-of-the-rock; Tremarctos ornatus / Spectacled Bear; Vultur gryphus / Andean Condor (World Heritage Centre Website)

Summary of the Values

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

High Concern

Trend: Deteriorating

The Historic Sanctuary of Machu Picchu is threatened by an accumulation of factors (flooding, landslides, fires, deforestation, pollution, tourism infrastructure, and tourist numbers) that combine to negatively impact the World Heritage values of the site and visitor safety.

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

High Concern

Trend: Deteriorating

The species of particular conservation concern are also impacted negatively by the accumulation of factors (flooding, landslides, fires, deforestation, pollution, tourism infrastructure, and tourist numbers).

Additional information

Key conservation issues

▶ Illegal hunting

Local

Illegal subsistence and sport hunting have a negative impact on wildlife populations that are already under pressure from habitat changes caused by flooding, landslides, fires, and deforestation. (Master Plan, 2005; Galiano Sanchez, 2000).

▶ Pollution

Local

The Urubamba River is polluted from solid and liquid wastes generated both outside and inside the SHMP. The export of solid wastes by train from Machu Picchu Village has helped reduce the problem, but is not totally effective. (35COM.MachuPiocchu.SPreport; Jefatura SHMP, 2007; Galiano Sanchez, 2000)

▶ Tourism growth

Local

Tourism growth, especially the uncontrolled expansion of Machu Picchu Village and increasing use of the Inca Trail System, impact the natural beauty of critical areas, diminish the area of natural habitat, and put more visitors at risk from flooding, and landslides (Mission Reports, 2007 and 2009).

▶ Deforestation

Local

Deforestation is a historical and on-going process caused by agricultural activities, fires, and the building of tourism infrastructure which, by the year 2000, had affected 32% of the SHMP (Galiano Sanchez, 2000)

▶ Climate change

Global

The impacts of climate change, especially in terms of flooding, landslides and fires, have increased significantly in recent years. Fires have now affected about half of the area of the SHMP (35COM.MachuPicchuSOC; 35COM.MachuPicchu.SPreport; Galiano Sanchez, 2000).

Benefits

Understanding Benefits

► Is the protected area valued for its nature conservation?

Conservation of intact ecosystems with elements of the Amazon and the Andes and associated species of particular conservation concern; maintenance of ecosystem services (35COM.MachuPicchu.SPreport)

► Outdoor recreation and tourism

Machu Picchu is one of the iconic tourism sites of the world, which generates significant economic benefits locally, nationally, and internationally. (35COM.MachuPicchu.SPreport.)

► Traditional agriculture

280 families along the Urubamba and Aobamba Rivers subsist from agriculture and livestock; 17% are categorized as being below the Peruvian poverty level. (Muñiz Ortega, 2005)

Summary of benefits

As one of the iconic tourism sites of the world, tourism associated with Machu Picchu generates significant economic benefits locally, nationally, and internationally. Thus, tourism is by far the most significant benefit derived from the HSMP.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Data deficient		Data deficient

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	N.A.	Evaluation of management effectiveness.	
2	N.A.	Development of a specific fund within PROFONANPE for management of the natural values of Machu Picchu.	

REFERENCES