IUCN Conservation Outlook Assessment 2017 **(archived)**
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Please note: this is an archived Conservation Outlook Assessment for Shirakami-Sanchi. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Shirakami-Sanchi

SITE INFORMATION

Country:
Japan
Inscribed in: 1993
Criteria:
(ix)

Site description:

Situated in the mountains of northern Honshu, this trackless site includes the last virgin remains of the cool-temperate forest of Siebold's beech trees that once covered the hills and mountain slopes of northern Japan. The black bear, the serow and 87 species of birds can be found in this forest. © UNESCO

SUMMARY

2017 Conservation Outlook

Good

The World Heritage values of the site continue to be well protected through strong legislation and an effective management regime. Apart from the still unknown impacts of climate change, there are few significant threats evident and so the conservation outlook continues to be good. There are nevertheless some identified issues that need to be addressed, such as more effective engagement with local communities, particularly the matagi as traditional forest users, so as not to lose these cultural links with the site. Other priorities include monitoring and acting upon the threat of sika deer and of climate change impact on the property's ecosystem dynamics. Opportunities should also be explored for further enhancing the integrity of the site and for its potential extension.

Current state and trend of VALUES

Low Concern
Trend: Stable

It is apparent that the undisturbed and pristine condition of the virgin beech forests in the property are being well maintained. Ecologically, the beech forests include the full range of diversity including some larger mammals (bear and serow) and a threatened species of bird (black woodpecker). Whilst their presence in the property has been maintained, there is concern that their long-term viability is dependent on the contribution made by suitable habitat in surrounding forests, and therefore it is crucial that on-going forestry operations and other uses in those forests do not, in future, threaten the ecological integrity of the property.

Overall THREATS

Very Low Threat

Shirakami-Sanchi is remarkably free of current threats and potential threats

remain either low or there is insufficient data available in English to make a fully informed assessment. The forest environment of the site appears stable and not the subject of any immediate threats. The topographic constraints of the site and support of the wider community auger well for the current stable condition being maintained. Potential threats from climate change and the potential incursion of the hyper-abundant sika deer into the property are of concern and require ongoing monitoring and agile management responses.

Overall PROTECTION and MANAGEMENT

Mostly Effective

Overall, the protection and management regime has to date effectively protected the ecological and wilderness condition of the site. Nevertheless, there are some issues that deserve attention and there are some opportunities for improving the integrity of the site and fine-tuning management.
The site’s relationship with traditional forest users, the matagi remains a concern. A 2015 paper notes that natural resource extraction has been deemphasized; so, too, in the case of Shirakami Sanchi, have hunting, river fishing, and gathering of mountain vegetables – traditional activities of Matagi as well as non-Matagi users of the forest. As a consequence, traditional forest users have been marginalized (Mason, 2015).
The extent of the property also deserves to be reviewed for possible extension and the management system deserves to be streamlined.

FULL ASSESSMENT

Description of values

Values

World Heritage values

- **Remnant old growth temperate forests in an undisturbed wild state**
  Criterion:(ix)

  The property comprises a trackless and undisturbed area of predominantly old-growth temperate forest, the largest remaining virgin beech forest in East Asia. Shirakami-Sanchi is dominated by beech accompanied by diverse vegetation that survived the last ice age by shifting its distribution towards the south, resulting in a virtually undisturbed, pristine climax forest. The undisturbed condition of the area is wild and rare in eastern Asia with few other protected areas in Japan containing a large unmodified beech forest like that found in the property. The extent of its pristine forest which has not suffered development impacts sets the property apart in densely populated, long-inhabited Japan and across Asia (SoOUV, 2013).

- **The last relic of cool-temperate beech forests of Northern Japan with associated species**
  Criterion:(ix)

  The property is the last and best remnant of the once more extensive cool-temperate beech forests that covered the hills and mountain slopes of northern Japan 8-10,000 years ago. Reflecting the distinct heavy-snow environment of the inland areas along the Sea of Japan, a rare climatic condition in the world, Shirakami-Sanchi has forests of monodominant Siebold’s Beech (Fagus crenata), a species endemic to Japan. The forest also sustains intact ecosystems for characteristic species such as black

woodpecker (Dryocopus martius), Japanese serow (Capricornis crispus), Japanese black bear (Ursus thibetanus japonicas), Japanese macaque (Macaca fuscata) and dwarf bamboo (Sasa kurilensis) (SoOUV, 2013).

Other important biodiversity values

► Scenic forested mountain landscape

Walking tracks provide opportunities for viewing extensive forested mountains in wilderness condition. The scenic attributes of dense intact forest are enhanced in winter with a usually very abundant snow cover on the main mountain range. Several impressive waterfalls add to the scenic beauty of the property.

Assessment information

Threats

Current Threats

Very Low Threat

concerns have been previously raised regarding logging in adjacent forests to the property, however there is little evidence that this is continuing to threaten the property's values. Some impacts from tourism have been noted and are being monitored. That said, the property in general remains relatively threat free.

► Logging/ Wood Harvesting

Very Low Threat
Outside site

There are some reports of forestry operations in adjacent forests having a visual impact on the Shirakami landscape (Law 2011). Concerns about logging in adjunct forests in the mid-1990s were raised through state of

conservation reporting, however, management responses appear to have addressed this threat (WHC Decision 21COM, 1997). The property has been designated a Forest Ecosystem Reserve with logging restricted throughout the entire property (MoE, 2013).

▶ Tourism/ visitors/ recreation

Low Threat
Inside site, scattered(5-15%)

There are unclear reports as to the extent to which tourism has increased since the property's inscription on the World Heritage List. For example, some references note tourism as having increased significantly since the property's inscription (Hara and Iwamoto, 2014), whilst others note the number of tourists to the site remains low and has even been decreasing since 2005-2006 (IUCN consultation, 2017) (however, impacts have been noted). The Ministry of the Environment has begun to monitor the effects of increasing tourism on biodiversity at the site (Mason, 2015). The updated management plan notes annual visitation of 50,000 people to the property and surrounding areas. The plan aims to promote ecotourism opportunities in the region (MoE, 2013).

Potential Threats

Low Threat

Climate change is regarded as one of the most important potential threats as it may impact on temperature and snow fall patterns resulting in ecological change. There is a threat of the Japanese native sika deer entering the property and increasing in population as the species is overabundant in many parts of Japan. The future ecological integrity of the site could also be threatened by changes in landuse of adjacent forest lands.

▶ Flight Paths

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

Previously a problem but the Japanese parliament banned flights. Reversal of policy could reinstate this threat to the wilderness qualities of the property.

(Law 2011)

► Hyper-Abundant Species

Low Threat
Outside site

Sika deer (Cervus nippon) is native to Japan but has become an overabundant species in many areas due to, among other factors, the disappearance of natural predators such as wolves. There has been an expansion of the distribution of sika deer in surrounding areas of the WH site. To date there has been no viable deer population established within the site, but the potential to cause serious damage to existing vegetation is high. Monitoring is ongoing. (IUCN Stakeholder Consultation, 2017)
Media reports indicate the Aomori and Akita prefectural governments are preparing to cull deer from the region in an effort to stop the population surging and impacting on the WH property (News on Japan, 2017)

► Earthquakes/ Tsunamis

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

All of Japan is vulnerable to frequent earthquakes. Shirakami is in a region less prone to earthquakes but it remains vulnerable. In a steep mountain landscape with high rainfall, landslides are the most likely impact of any earthquake. (Google Earth records) Earthquakes are of course part of the natural processes operating in this landscape.

► Habitat Shifting/ Alteration, Temperature extremes

Data Deficient
Inside site, throughout(>50%)
Outside site

The very high rainfall and snowfall that dominates the climate of Shirakami Sanchi is driven by the warm current up the west coast of this section of Honshu. Any change in the temperature or behaviour of the current could have significant threats to the existing ecology of the property. Some models forecast that beech distribution will shift to higher elevations (Yoshida quoted in Law 2011). Concerns about climate change impact on Beech forest dynamics are noted in the updated management plan and a commitment is

given to better monitor this (MoE, 2013).

Protection and management

Assessing Protection and Management

▶ Relationships with local people

Some Concern

Reports suggested an effective relationship with local people existed throughout the establishment of the property. However, local people are now reported to be dissatisfied with the benefits from the site (IUCN Evaluation, 1993; Law, 2011; IUCN stakeholder consultation 2013). The matagi people traditionally used Shirakami-Sanchi to hunt Japanese black bear and cut timber supplementing other livelihood activities such as farming. Some of the uses remain (MoE, 2013), but the matagi, as traditional forest users, have been marginalized with their practices fast becoming 'museum-like'. The regional branches of the Forestry Agency and Ministry of the Environment no longer acknowledge the presence of the matagi. The matagi participated in developing the original management plan for the site and had significant input at that time but over the succeeding two decades they have been denied access to the area's resources (Mason, 2015). Following inscription as a WH site the Forestry Agency abruptly implemented and enforced a policy of no access to the core beech forest area which led to confusion among local people and caused serious arguments over the legitimacy of the decision (Hara and Iwamoto, 2014).
2015 research concluded that Shirakami-Sanchi was a successful case of ecological preservation and an expanded governmental commitment to citizen engagement in protected-area planning, but that this had been accompanied by a marginalization of the small number of remaining traditional users of the forest’s resources (Mason, 2015).

▶ Legal framework

Highly Effective

The legal framework appears adequate (IUCN 1993).
The Nature Conservation Law provides for administrative oversight by the

Ministry of the Environment, which manages Nature Conservation Areas and National Parks. In the case of Shirakami-Sanchi, the strongest legal protection is provided by the Forest Ecosystem Reserve, where management and protection is led by the Forestry Agency. Forest Ecosystem Reserves have their legal foundation in the Act on the Administration and Management of National Forest (1951) and National Forest Administration and Management Bylaw (1999). The Preservation Zone of Forest Ecosystem Reserves are strictly protected, equivalent to IUCN protected area management category Ib.

► Enforcement

Mostly Effective

There are at least three rangers and two assistant rangers working for the management authority under the Ministry of Environment. In addition, several foresters are stationed nearby. Both the Ministry of Environment and the Forestry Agency conduct law enforcement activities as well as monitoring.

► Integration into regional and national planning systems

Mostly Effective

The property’s management plan was updated in 2013 and emphasizes the appropriate and efficient management of the WH property in cooperation with local municipalities (Ajigasawa-machi, Fukaura-machi and Nishimeya-mura in Aomori Prefecture, and Noshiro City, Fujisato-machi and Happo-cho in Akita Prefecture) (MoE, 2013). A Shirakami-sanchi World Heritage Area Liaison Committee has been established as a forum for liaison and cooperation (MoE, 2013). The 2013 management plan notes a range of measures from the surrounding municipalities aimed at harmonized development and use, however, details are lacking (MoE, 2013).

► Management system

Mostly Effective

Like all protected areas in Japan a complex array of agencies is responsible for management of the property (Ministry of the Environment, the Forestry Agency, the Agency for Cultural Affairs and several prefectural and municipal authorities). Despite this complexity the system works well with strong links, communication and cooperation. The entire property of Shirakami-Sanchi is

part of the national forests owned and managed by the National Government (SoOUV, 2013).
The updated management plan states that it is “in line with present day realities”. While the plan is simple and lacking operational detail, it is clearly focused on strict protection of the property’s OUV and there is claimed to be more emphasis on adaptive management (MoE, 2013). However, details on how adaptive management will be implemented are limited.

► Management effectiveness

Highly Effective

Management appears to be highly effective in maintenance of ecological and wilderness conditions of core area (various references in Law, 2011; IUCN stakeholder consultation, 2017).

► Implementation of Committee decisions and recommendations

Highly Effective

The one decision of the Committee post listing, being an invitation to host a mission, was implemented. (WHC Decision 21COM, 1997)

► Boundaries

Some Concern

Boundaries are acceptable for the most part but there are definite opportunities for improvement and for extension of the property (Law, 2011; IUCN stakeholder consultation, 2013). The boundaries of the property were clarified in 2012 (WHC 36 COM Decision, 2012). There is a buffer zone (MoE, 2013) but this is unusually included inside the inscribed area. The relative small size of the property could in time be a threat to the ecological integrity of the site, especially larger mammals such as bear, as well as far-ranging birds such as golden eagle and black woodpecker, depending particularly upon land use of surrounding forests (Law, 2011).

► Sustainable finance

Data Deficient

Finance appears limited but adequate (IUCN stakeholder consultation, 2013).

► Staff training and development

Data Deficient

Appears adequate (IUCN consultation, 2013; Law, 2011).

► Sustainable use

Mostly Effective

Use of the property appears to be sustainable. According to the management plan some traditional uses continue in the property (MoE, 2013).
The desire for economic development surrounding and within the site has resulted in local officials promoting small-scale industries, such as the production of maitake mushrooms; attempting to lure residents to the surrounding area by offering housing subsidies; and supporting the development of tourism, (Mason, 2015).

► Education and interpretation programs

Mostly Effective

Offsite education and interpretation is very good (Law, 2011). Multiple visitors' centres have been constructed close to the World Heritage Area. Local governments promote forest products and other goods labelled "Shirakami"; a local train line is named Shirakami, and there is a Shirakami special-issue coin. The wider Shirakami region is being promoted throughout Japan to increase public recognition however relatively little is done to promote the region's living cultural heritage and the role of the Matagi (Mason, 2015). However, Matagi and local people continue their traditional activities outside the World Heritage site, and some of the Matagi groups have started to work as eco-tour guides, including transferring their traditional knowledge as Matagi hunters (IUCN consultation, 2017). Some specific education and awareness building priorities are identified in the 2013 management plan (MoE, 2013).

► Tourism and visitation management

Mostly Effective

On site tourism is limited both by management controls and the limited opportunities available in the mainly trackless and undisturbed property

(Law, 2011; IUCN stakeholder consultation, 2013). Tourism access is restricted to warmer months when the heavy snow cover abates. The core areas of the property remain well protected with most tourism/recreation activity taking place in the internal buffer zone (Mason, 2015). The possible introduction of a standardized certification system for tour guides in the region may improve the overall quality of Eco tour guides (Hara and Iwamoto, 2014). The 2013 management plan emphasizes promotion of sustainable ecotourism for the property and region (MoE, 2013).

► Monitoring

Data Deficient

There are reports of active monitoring exercises within the property but no information is available in documentation about whether that monitoring is systematic and linked to adaptive management.

► Research

Mostly Effective

The Shirakami-Sanchi World Heritage Area Scientific Council, comprised of experienced scientists, was set up in 2010 and the Scientific Council is promoting the adaptive conservation management of the property and ensuring that management decisions are made within the context of the latest scientific knowledge available (SoOUV, 2013).

Overall assessment of protection and management

Mostly Effective

Overall, the protection and management regime has to date effectively protected the ecological and wilderness condition of the site. Nevertheless, there are some issues that deserve attention and there are some opportunities for improving the integrity of the site and fine-tuning management.
The site’s relationship with traditional forest users, the matagi remains a concern. A 2015 paper notes that natural resource extraction has been deemphasized; so, too, in the case of Shirakami Sanchi, have hunting, river fishing, and gathering of mountain vegetables – traditional activities of Matagi as well as non-Matagi users of the forest. As a consequence, traditional forest users have been marginalized (Mason, 2015).

The extent of the property also deserves to be reviewed for possible extension and the management system deserves to be streamlined.

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

The one case of a perceived threat from outside the property - clear felling in adjacent forest - appears to have been resolved. Although some of the adjacent lands remain under the ownership of the Forestry agency, this is the case of all National Forests (including Forest Ecosystem Reserves) in Japan, and does not imply that these forests are intended for production purposes. There remain no serious internal threats to the integrity of the property but there are clear opportunities to improve the long-term ecological integrity, especially ecological integrity for larger animals and black woodpecker.

▶ **Best practice examples**

Notwithstanding the small size of the property and the highly developed context of Japan, it does demonstrate an exceptional commitment to wilderness-style protection that has been effective in protection of the pristine condition of the site over the 20 years since inscription.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **Remnant old growth temperate forests in an undisturbed wild state**
Good
Trend:Stable

The property comprises a sizable area of predominantly old-growth temperate forest, the largest remaining virgin beech forest in East Asia. All reports indicate that the undisturbed, wild state of the property's condition has been maintained (Law, 2011; IUCN stakeholder consultation, 2013).

► The last relic of cool-temperate beech forests of Northern Japan with associated species

Low Concern
Trend:Stable

The broader ecosystem values of the property remain intact (IUCN Stakeholder Consultation, 2017). The property is the habitat of rare bird species such as the black woodpecker, and large mammals such as the Japanese serow and Japanese black bear, which require a diverse forest environment including old-growth forest. There is some concern, given the small size of the property, that it does not provide adequate protection for these species (Law, 2011).

Summary of the Values

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

Low Concern

Trend: Stable

It is apparent that the undisturbed and pristine condition of the virgin beech forests in the property are being well maintained. Ecologically, the beech forests include the full range of diversity including some larger mammals (bear and serow) and a threatened species of bird (black woodpecker). Whilst their presence in the property has been maintained, there is concern that their long-term viability is dependent on the contribution made by suitable habitat in surrounding forests, and therefore it is crucial that on-going forestry operations and other uses in those forests do not, in future, threaten the ecological integrity of the property.

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

Data Deficient

Trend: Data Deficient

Additional information

Benefits

Understanding Benefits

► Sacred natural sites or landscapes

The undisturbed, wild state of the property is valued by locals and nationals and was the basis for initial protection of the area.

"Invasive species" in this case refers to the hyper-abundant, but native, sika deer.

► Outdoor recreation and tourism

There is a low level of tourism to the property, limited to walking of the few designated trails. Better tourism development programmes would enhance benefits both for local and global communities.

► Contribution to education

The visitor centres provide an outstanding education service to visitors and through websites and publications, to the wider community.

► Soil stabilisation

Much of the property is very steep and the forest cover provides a valuable soil stablisation service.

► Water provision (importance for water quantity and quality)

The pristine forest conditions serve a valuable service in maintenance of water quality

Summary of benefits

The property’s undisturbed and pristine state are valued by both local and national stakeholders. Traditional use of the property by Matagi people has in the past been seen as a significant benefit and more could be done to enhance those benefits in a sustainable and culturally sensitive manner.

Projects

Compilation of active conservation projects

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

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	N.A.	Study of the habitat conservation needs for the Black Woodpecker and the role that could be played by an extended Shirakami-Sanchi property. Documentation points to the desirability of adding additional black woodpecker habitat to the property.	
2	Scoping study of the prospects for extension of the property to include additional forests of conservation importance.	Review of the threats has identified forest changes taking place in adjoining forests and some stakeholders consulted point to the desirability and opportunity for extensions, particularly to include habitat of the black woodpecker. There is also a case to be examined for inclusion of existing track-head facilities and other lands to provide additional tourism and recreation opportunities associated with but outside the wilderness zone of the property.	

№	Site need title	Brief description of potential site needs	Support needed for following years
3	Climate change vulnerability assessment	Climate change could impact on the temperature and precipitation patterns (the heavy snow falls which distinguish this region) and so the ecological values of the property. An assessment modeling the vulnerability of the site’s OUV to climate change would be beneficial to plan adaptive management responses, to complement the study already undertaken by Matsui et al. (2007).	

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