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

Kinabalu Park

SITE INFORMATION

Country:
Malaysia
Inscribed in: 2000
Criteria:
(ix) (x)

Site description:
Kinabalu Park, in the State of Sabah on the northern end of the island of Borneo, is dominated by Mount Kinabalu (4,095 m), the highest mountain between the Himalayas and New Guinea. It has a very wide range of habitats, from rich tropical lowland and hill rainforest to tropical mountain forest, sub-alpine forest and scrub on the higher elevations. It has been designated as a Centre of Plant Diversity for Southeast Asia and is exceptionally rich in species with examples of flora from the Himalayas, China, Australia, Malaysia, as well as pan-tropical flora.
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SUMMARY

2017 Conservation Outlook

Good with some concerns

The conservation outlook for the natural heritage values of Kinabalu Park remains robust, and while the outstanding biodiversity values appear to be secure there is a need for formal monitoring to confirm this. Community support for maintaining the integrity of the biodiversity values require further investment in community education activities, and increasing visitation being experienced by the property indicates that management of tourism impacts will need to become more effective to avoid degradation of the park environment. To enhance the quality of visitor experience further improvements of site interpretation must be considered.

Current state and trend of VALUES

Low Concern
Trend: Stable

Based on the currently available data, the values for which Kinabalu is recognized are comparatively well protected and the overall trend is one of stability.

Overall THREATS

High Threat

Kinabalu is a very high value protected area which has become a globally iconic tourism attraction. However, there are significant issues associated with increasing visitation. The lack of a monitoring program is a handicap to quantitative evaluation of impacts from visitation to the values of the property. The dandelion infestation has spread throughout the property despite efforts to contain it.

Overall PROTECTION and MANAGEMENT

Some Concern

The rugged terrain automatically provides a high level of natural protection of the property so the need for on-site intervention is minimal. However, as a global tourism icon with an increasing demand for visitor access, the issue of impact on natural heritage values poses a significant challenge to effective management of the property.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **High floral and faunal diversity**
Criterion:(x)

Research on the biota of Mount Kinabalu has been extensive and has established that it is floristically species-rich and a globally important Centre of Plant Endemism. It contains an estimated 5,000-6,000 vascular plant species including representatives from more than half the families of all flowering plants. The presence of 1,000 orchid species, 78 species of Ficus, and more than 600 species of ferns are indicative of the property's botanical richness. The variety of habitats includes 6 vegetation zones from lowland rainforest through to alpine scrub at 4,095m. Faunal diversity is also high and the majority of Borneo’s mammals, birds, amphibians and invertebrates (many threatened and vulnerable) are present, including 90 species of lowland mammal, 22 mammal species in the montane zone and 326 bird species (SoOUV, 2013).

▶ **Threatened species and endemics**
Criterion:(x)

Numerous bird species that are globally vulnerable or near threatened are found in the property, as well as 1 endangered and 1 critically endangered species (Kinabalu Serpent Eagle Spilornis kinabaluensis).
The site is a globally important Centre of Plant Endemism (SoOUV, 2013) with 5 of the 24 species of Rhododendrons which occur within the property being endemic; as are 4 of the 9 insectivorous Nepenthes, including the largest,

Nepenthes rajah, and 14 of the 78 species of Ficus.

▶ **An exceptional array of naturally functioning ecosystems**
Criterion:(ix)

Kinabalu Park has an exceptional array of naturally functioning ecosystems. A number of processes actively provide ideal conditions for the diverse biota, high endemism and rapid evolutionary rates. Several factors combine to influence these processes; (1) the great altitudinal and climatic gradient from tropical forest to alpine conditions; (2) steeply dissected topography causing effective geographical isolation over short distances; (3) the diverse geology with many localised edaphic conditions, particularly the ultramafic substrates; (4) the frequent climate oscillations influenced by El Niño events; and (5) geological history of the Malay archipelago and proximity to the much older Crocker Range (SoOUV, 2013).

Assessment information

Threats

Current Threats
High Threat

The occupation of parts of the property by local people practicing traditional farming is increasing and while the introduction of ‘Community Use Zones’ is acknowledged by some to be a reasonable solution to a community conflict issue, it is also acknowledged as a short term solution which does not realistically address the problem of natural population growth and subsequent expansion of cropping land. In addition, the dandelion infestation has spread throughout the property despite efforts to contain it, and is displacing local plant species.
Other threats are manageable, although the property's management is failing to effectively quantify and address the impacts of increasing visitation.

► Crops

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

The encroachment by traditional cropping practices and unresolved land claims noted in the 2002 Periodic Report have been addressed by the introduction of ‘Community Use Zones’.
While this is said to be a useful short term strategy to resolve the conflict between management and the local community a long term resolution which prevents further encroachment is required.
Of greater concern is a revelation that people farming within the property agree with the importance of conserving the forest but don’t see any problem with cutting down the trees (Mojiol, 2016). The increase in population within the property and their impact on forest clearance requires a rigorous monitoring and reporting protocol.

► Invasive Non-Native/ Alien Species

High Threat
Inside site, throughout(>50%)

Dandelions are a persistent alien plant first reported as being present within the property in 1998/99. Despite ongoing efforts to contain it, the infestation has spread throughout the property displacing local plant species and impacting on biodiversity values (Latip and Rais, 2016).

► Erosion and Siltation/ Deposition

Low Threat
Inside site, localised(<5%)

Prior to the June 2015 earthquake which caused significant damage to the track leading to summit of Mount Kinabalu there were concerns expressed about the increasing use of and impacts on that track. As a consequence of the earthquake the track has been rerouted, nevertheless, concerns remain about the lack of monitoring to assess visitor impacts, and the lack of a scientifically determined daily visitor carrying capacity (Goh and Mariney, 2010; Latip and Rais, 2016).

► Crops

Low Threat
Outside site

At the time of inscription of the property it was noted that it was at risk of becoming an ‘island in a sea of agricultural land use’. In 2011 the Sabah Environment Protection Association was highly critical the illegal landclearing near the property (Kaung M. 2011) and a recent study (Allan J.R. 2017) indicates that loss of forest cover in the surrounding area is ongoing.
It would be appropriate for the State Party to consider the establishment of a formal buffer zone with clearly specified land use restrictions.

Potential Threats

Low Threat

The most recognizable potential threat is the implications of recurrent intense droughts associated with El Niño. Droughts of this kind are arguably a natural phenomenon and so part of the natural ecological processes of the property. Drought increases the risk of fire and this, combined with an increasing population in neighboring lands, has created a higher risk of fires escaping during drought conditions. While the property's manager is already implementing some risk management procedures to reduce the risk of fire this issue will require constant revision as adjacent land-use activities change and technological opportunities increase.

► Droughts

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

Naturally occurring El Nino droughts greatly increase risk of serious fire impacts on biodiversity values of the property. As many neighbours use fire for agricultural management, there is a high risk of fire escape into the property during drought times (Periodic Reporting, 2002).

► Changes in traditional ways of life and knowledge systems

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

Outside site

The 2014 Conservation Outlook Assessment for Kinabalu Park noted a perceived threat resulting from stakeholder antagonism towards the privatisation of tourism and increasing demand for use of the summit track as well as increasing costs to access the property, as reported by Goh and Mariney (2010). However, despite a near doubling of climbing fees since 2010, the perceived threat has not materialised.

Protection and management

Assessing Protection and Management

► Relationships with local people

Some Concern

Relations between management and local people appear to be quite good although the persistent encroachment of traditional agriculture into the park margins (Goh and Mariney, 2010), theft of orchids by locals and poaching of game (Latip and Rais, 2016) suggest that there is much to be done to improve cooperation between the property's management and the local community, some of whom have made formal claims of customary rights within the park (UNEP-WCMC data sheet, 2011).

► Legal framework

Serious Concern

The Parks Enactment Act 1984 and Parks (Amendment) Act 1996, together with a set of Regulations (Periodic Reporting 2002) is appropriate legislation at the State level, while the use of the outdated (1992) Kinabalu Park Development Master Plan to guide management of the property is inadequate.
The IUCN Technical Evaluation (2000) notes the existence of an outdated (1993) management plan and several reports since have raised the need to update the master plan and to prepare a comprehensive plan for management of the property.
Despite this there is no evidence to suggest that any steps are being taken

to address the issue.

► Enforcement

Some Concern

Enforcement of regulations to protect the property is a function of the Sabah Parks Management & Operation Division - Protection & Enforcement Section but there is insufficient data available to make an assessment of its effectiveness. The perception by staff that there are ongoing problems of encroachment, theft of orchids and poaching of wildlife by the local communities indicates cause for some concern.

► Integration into regional and national planning systems

Some Concern

While no documentation was cited revealing links to any national planning system the property is an integral part of the 2007 'Heart of Borneo' agreement between Brunei Darussalam, Indonesia, and Malaysia. Its aim is to protect a 220,000 km2 forested region which also includes the Lanjak Entimau Wildlife Sanctuary, the Batang Ai, Gunung Mulu (another World Heritage property) and Crocker Range National Parks in Malaysia, the Kayan Mentarang, Bukit Baka Bukit Raya and Danau Sentarum National Parks in Indonesia, and the Ulu Temburong National Park in Brunei (Heart of Borneo, 2017). Apart from this, management of the property appears to be primarily reliant on the Park Enactment Act and Master Plan (Periodic Reporting, 2002).

► Management system

Some Concern

Management is dependent on an outdated strategic document that lacks clear objectives and prescription at the park management level, especially in regard to natural heritage values. There is a clear need for a property specific management plan. A 1971 dated set of Regulations specific to the property is referred to, which in 2002 were proposed to be amended but the nature of any update is unknown (Periodic Reporting, 2002; Development Master Plan, 1992).

► Management effectiveness

Some Concern

While management effectiveness appears to be reasonable, the lack of a comprehensive management plan (Periodic Reporting 2002) coupled with the absence of systematic monitoring (Goh and Mariney 2010) limit the assessment of management effectiveness. At the same time, the absence of these critical management tools does indicate that there is much room to improve management effectiveness.

► Implementation of Committee decisions and recommendations

Data Deficient

No Committee decisions or recommendations since listing in 2000.

► Boundaries

Mostly Effective

Although boundaries have been surveyed and marked in often difficult terrain, the boundaries on the western and northern side of the park are subject to varying degrees of on-going threat from agricultural encroachment. (Periodic Reporting 2002)

► Sustainable finance

Some Concern

Tourism services and facilities were privatised in 1998 in order to improve the quality of the visitors experience AND free management to concentrate on conservation management. However in 2005 47% of the annual budget allocation was still spent on tourism development to the detriment of expenditure on research, education, staff training and monitoring of environmental impacts from tourism. Goh and Mariney (2010) and as Latip and Rais (2016) report that there is still a serious shortfall in staff training, education, community conservation awareness and protection of the environment, there is cause for some concern regarding finance although it may not so much be a matter of quantum as a matter of how available funds are allocated.

► Staff training and development

Serious Concern

As at the time of the Periodic Reporting (2002) there was an acknowledged need for staff training. Goh and Mariney (2010) were critical of low priority given to training and development of park staff and criticized the fact that a large proportion of training budget was allocated to headquarters staff rather than site based staff.
In the 2016 study by Latip and Rais various staff expressed concern about their low level of understanding about the attributes, values and significance of the property.
Given that the issue was acknowledged in 2002, commented upon in 2010 and raised again in 2016 it would seem that the propertys management body is either unaware of or ignoring the threats (to both conservation and visitor satisfaction) posed by inadequately trained staff.

► Sustainable use

Data Deficient

Insufficient data available.

► Education and interpretation programs

Some Concern

Education at the park entrance station appears to be quite effective. Absence of documentation does not allow any quantitative assessment of whether education in the local community has been effective although the perception among some of those occupying the Community Use Zone that removal of trees has no impact on conservation of the forest (Mojiol, 2016) suggests that more work is required in this area. Interpretation to visitors has been identified as being deficient (Goh and Mariney, 2010; Goh and Rosilawati, 2014; Latip and Rais, 2016). Considering the importance of visitor satisfaction to the ongoing success of tourism in the property a higher level of site interpretation is required.

► Tourism and visitation management

Some Concern

Despite a study (Goh and Mariney 2010) predicting a threat to management of the property from a community dissociated from it by the high cost of entering/climbing, those costs have been increased and increased again (and

to curb the demand for access the government has announced it will increase fees for ALL parks in Sabah again in 2018 (New Straits Times, July 25th,2017) with no evidence of such prediction coming to fruition. There was also an increasing expectation among the visitors for better educational experience which would require attention by the park authority (Goh 2015). Demand continues to exceed supply and while the daily total of climbing permits been reduced following the 2015 earthquake that reduction has been a safety issue rather than an environment protection strategy.
Latip and Rais (2016) report that litter accumulation along walking trails is an ongoing/increasing problem and staff training in visitor management and site interpretation is deficient.

► Monitoring

Serious Concern

The absence of a systematic monitoring program in the property is a handicap for assessment of ecological change in the park, in particular the impacts of increasing visitation, pest plant invasion and ongoing community encroachment activities (Goh and Mariney, 2010; Latip and Rais, 2016).

► Research

Some Concern

The property has long been the subject of biological survey and associated research but systematic monitoring of ecology and human impact has received little, if any, attention.

Overall assessment of protection and management

Some Concern

The rugged terrain automatically provides a high level of natural protection of the property so the need for on-site intervention is minimal. However, as a global tourism icon with an increasing demand for visitor access, the issue of impact on natural heritage values poses a significant challenge to effective management of the property.

► Assessment of the effectiveness of protection and management in

addressing threats outside the site

Some Concern

Based on limited documentation, management of the property appears to have had limited success in dealing with matters of agricultural encroachment. Although a Community Use Zone has been established, a long term solution has yet to be implemented.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► High floral and faunal diversity

Good
Trend:Deteriorating

Kinabalu has proved to be a globally outstanding centre of biodiversity, especially of plants. Ongoing surveys continue to expand the impressive species richness of the site. There is no definitive data about any reduction in species richness, although comments about the spread of invasive plant species and reports of ongoing theft of orchids are of some concern.

► Threatened species and endemics

Good
Trend:Stable

While the absence of a formal monitoring program makes a definitive assessment of the conservation status and trends for threatened species difficult, the indicative evidence suggests that at most relatively few species of plants or animals are critically threatened. The ongoing international interest in the biodiversity of the site provides an early warning system for a deteriorating conservation status of threatened species.

► An exceptional array of naturally functioning ecosystems

Low Concern
Trend:Stable

Agricultural incursions into the park and fire escape from neighbouring land are potential threats to the ongoing ecological and biological processes of the property. Concern is not particularly high and the issues are being addressed. The increasing tourism activities also have the potential to threaten ongoing natural processes.

Summary of the Values

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

Low Concern

Trend: Stable

Based on the currently available data, the values for which Kinabalu is recognized are comparatively well protected and the overall trend is one of stability.

Additional information

Benefits

Understanding Benefits

▶ **Outdoor recreation and tourism**

Servicing nature-based tourism within the site is a major source of employment and economic benefit flowing to the local and state economies. Kinabalu is a globally recognized iconic tourism destination, both for those fit and able to climb to the summit, those who opt to explore the many tracks through the lower slopes, and for the many content to view the distinctive mountain landscape from a distance.

▶ **Importance for research**

Kinabalu has for many years attracted biological surveys and research, much

of which has generated published papers and books, contributing greatly to global knowledge.

► Contribution to education

The property contributes to education through a combination of tour guiding, visitor centres, published material and websites.

Summary of benefits

Kinabalu is an outstanding contributor to biodiversity conservation while making a significant contribution to the local and state community in terms of direct employment and indirect economic contributions through tourism.

Projects

Compilation of active conservation projects

№	Organization / individuals	Project duration	Brief description of Active Projects
1	Sabah Parks		No particular project but Sabah Parks maintains a staff and program of research which from time to time includes field research in Kinabalu.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	Interpretation/Education	There are opportunities for improving the interpretation and education services provided by the park.	
2	Monitoring	There is an acknowledged need to establish and implement a scientifically based monitoring program.	
3	Tourism Impacts	There is an identified need to implement a monitoring programme to facilitate an objective assessment of the impacts of tourism on the natural heritage values of the property.	

№	Site need title	Brief description of potential site needs	Support needed for following years
4	Management Planning	There is a clear need to conduct a consultative management planning process to update the management guidance for the property.	

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