IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 21 May 2014

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

2014 Conservation Outlook

Good with some concerns

The conservation outlook for the natural heritage values of Kinabalu Park remains robust, especially given the mostly rugged terrain (limitations on access), large elevation range and a professional park management regime. The outstanding biodiversity values appear secure but there is a need for formal monitoring to confirm this. Having become a globally iconic tourism destination, management of tourism impacts will need to become increasingly better informed and sophisticated to avoid unnecessary degradation of the park environment and maintain quality of visitor experience. Opportunities exist for further improvements and enhancement of interpretation and education services both within the park and offsite.

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

Low Threat

Kinabalu is a very high value protected area and overall management is professional and quite effective and it has become a globally iconic tourism attraction. There is however some current threats that appear quite vexing for management and which will require considerable resolve to arrest. Most field management issues are manageable but it is apparent that the combination of issues associated with the tourism use of the summit track (impacts on park values, antagonism of national stakeholders over fees/access and some

identified deficiencies in the guiding/interpretation service) is a concerning issue with no apparent resolution in sight and so could deteriorate into a more threatening scenario for the park/park management as a whole. Apparent lack of a monitoring program is a handicap and potential threat to the values of the park.

Overall PROTECTION and MANAGEMENT

Mostly Effective

The mostly very rugged terrain of Kinabalu Park automatically provides a high level of natural protection of much of the natural values of the park and so the need for on-site intervention is minimal. Because Kinabalu has become a global tourism icon, the increasing demand for visitor access, particularly for use of the summit walking track, there are developing issues of impacts arising, representing a significant challenge for management.

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 the park is floristically species-rich and a globally important Centre of Plant Endemism. The Park 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 60 species of ferns are indicative of the botanical richness of the park. The variety of Kinabalu’s habitats includes 6 vegetation zones from lowland rainforest through to alpine scrub at 4,095m. Faunal diversity is also high and the property is an important centre for endemism. The majority of Borneo’s mammals, birds, amphibians and invertebrates (many threatened and vulnerable) are known to occur in the park 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 (Kinabalu Serpent Eagle Spilornis kinabaluensis) http://avibase.bsc-eoc.org/checklist.jsp?region=MYsb01&list=howardmoore
The site is a globally important Centre of Plant Endemism (SoOUV, 2013) with

5 endemic species of Rhododendron of a total of 24 species in the park; 4 of the 9 insectivorous Nepenthes are endemic to Kinabalu, including the largest, Nepenthes rajah and14 endemic 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
Low Threat

All of the identified threats are manageable. However, there is evidence that park management are failing to effectively quantify and address the impacts of increased demands for visitor use of the summit track. Combined with the apparent growing antagonism of locals and national stakeholders over excessive fees and limitations on access are a warning of a future crisis if the matter of visitor access and likely impacts of visitor use are not dealt with expeditiously.

▶ Erosion and Siltation/ Deposition

Low Threat
Inside site

Increased impacts from increased use of summit track (facilities and run-off from the walking track). Lack of a systematic monitoring program makes quantification difficult if not impossible. (Goh and Mariney 2010)

▶ Crops

Low Threat
Inside site
Outside site

Traditional cropping in margins, including encroachment. Some occupation claims unresolved. (Periodic Reporting 2002)

▶ Invasive Non-Native/ Alien Species

Low Threat
Inside site

Reports of invasive plant species (Kinabalu Park Development Master Plan 1992). Dandelion is a persistent problem (Star online Media 2011)

Potential Threats

Low Threat

The most recognizable potential threat – could be considered a current threat – is the implications of recurrent intense droughts associated with El Nino. Droughts of this kind are arguably a natural phenomenon and so part of the natural ecological processes operating in the park. Drought increases the risk of fire but given the increasing population in neighboring lands means potentially higher risk of fires escaping into the park during drought conditions. The park management is already implementing some risk management procedures to reduce the risk of fire but this will require constant revision as adjacent landuse activities change and technological opportunities increase.

▶ Droughts

Low Threat
Inside site

Outside site

Naturally occurring El Nino droughts greatly increase risk of serious fire impacts on park values (biodiversity) As many agricultural neighbours use fire, there is a high risk of fire escape during drought times. Fires burning uphill in drought conditions are potentially very serious threat to the values of the park. (biodiversity) (Periodic Reporting 2002)

► Changes in traditional ways of life and knowledge systems

High Threat
Inside site
Outside site

Commercialization of tourism and increased demand for use of the summit track has created antagonism from local and national stakeholders because of excessive fees and competition for limited opportunities for use of summit trail. This antagonism threatens community support for the park and conceivably a threat to the values of the park if not correctly managed. (Goh and Mariney 2010)

Protection and management

Assessing Protection and Management

► 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)

► Relationships with local people

Mostly Effective

Relations between park management and local people appear to be quite good overall but there are some parts of the community that have issues that generate friction with park management including the persistent

encroachment of traditional agriculture into the park margins. There are also some reported issues regarding local people engaged in guiding. (Goh and Mariney 2010) Some local people have made formal claims of customary rights within the park. (WCMC data sheet 2011)

► Legal framework and enforcement

Mostly Effective

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. The Kinabalu Park Development Master Plan is a fairly general management guidance document and now somewhat out of date. No park management plan as such exists at this time though reference is made to the intent to prepare one. The enforceable elements of these documents appear to be reasonably enforced. (Nomination document 2000) There is an apparent need to update the existing Master Plan and undertake a comprehensive management planning process.

► Integration into regional and national planning systems

Data Deficient

No documentation was cited revealing any regional or national planning system linked to the management of the park. Park management appears reliant only on Park Enactment Act and Master Plan (Periodic Reporting 2002)

► Management system

Some Concern

Park management system 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 appears to be a clear need for a park specific management plan. A set of Regulations specific to the park and dated 1971 is referred to and in 2002 were proposed to be amended but the nature of any update is unknown. (Periodic Reporting 2002 and Development Master Plan 1992)

► Management effectiveness

Mostly Effective

Overall, management effectiveness appears reasonable but the absence of a monitoring program (e.g. no monitoring of ecological impacts of tourism use on summit track) (Goh and Mariney 2010) and lack of a comprehensive management plan (Periodic Reporting 2002) limits assessment of effectiveness.

► Implementation of Committee decisions and recommendations

Highly Effective

No Committee decisions or recommendations since listing in 2000.

► Sustainable finance

Mostly Effective

No ‘out of the ordinary’ finance issues have been identified. While Kinabalu continues to contribute to tourism in the Sabah economy, it seems assured of favorable State budget allocations. The park generates significant income from tourism services in the park though much of that now flows through private commercial businesses. (Periodic Reporting 2002)

► Staff training and development

Some 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 fact that a large proportion of training budget was allocated to headquarters staff.

► Sustainable use

Data Deficient

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► Education and interpretation programs

Mostly Effective

Education at the park entrance station appears quite effective. Absence of documentation does not allow assessment of whether education in the local community has been effective. Interpretation to visitors using the summit

walking track has been identified as being deficient. (Goh and Mariney 2010, Goh and Rosilawati 2014)

► Tourism and interpretation

Some Concern

Kinabalu park management has had a positive reputation and been reasonably effective in management of tourism and interpretation in the park. However, recent documentation is critical and draws attention to some significant problems now evident and demanding attention. (IUCN Consultation, 2013)
Park management is now faced with being responsible for a globally iconic tourist attraction. For much of the year, demand exceeds supply and as a result tourism is now creating social equity issues in the local and national community and is having impacts on the natural values of the park. There are also identified deficiencies in the interpretation service provided to visitors taking guided walks to the summit. (IUCN Consultation, 2013)
The social equity issues arising from fee levels/access for nationals has the potential to threaten and destabilize management if not addressed more effectively. (Goh and Mariney 2010)

► Monitoring

Some Concern

The apparent absence of a formal scientific monitoring program in the park has been raised previously. This deficiency is now a handicap for assessment of ecological change in the park, in particular the impacts of increasing visitor activity in the park, in particular the summit walking track (Goh and Mariney 2010).

► Research

Some Concern

Kinabalu has enjoyed a long period of biological survey and associated research but ecological and monitoring type survey has received much less attention.

Overall assessment of protection and management

Mostly Effective

The mostly very rugged terrain of Kinabalu Park automatically provides a high level of natural protection of much of the natural values of the park and so the need for on-site intervention is minimal. Because Kinabalu has become a global tourism icon, the increasing demand for visitor access, particularly for use of the summit walking track, there are developing issues of impacts arising, representing a significant challenge for management.

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

Mostly Effective

Based on limited documentation, the park management appears to have been reasonably effective in dealing with matters of neighbor encroachment.

▶ Best practice examples

Not withstanding some of the shortcomings in management of Kinabalu (e.g. lack of monitoring program) it never the less represents a best practice benchmark model for protected area management in South East Asian.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ High floral and faunal diversity

Good
Trend:Stable

Kinabalu has proved to be a globally outstanding centre of biodiversity, especially of plants. On-going surveys continue to elaborate on the already impressive species richness of the site. There is no definitive data about any

reduction in species richness.

▶ Threatened species and endemics

Good
Trend:Stable

Absence of a formal monitoring program – or at least lack of documentation of commencement of such a program – makes a definitive assessment of the conservation status and trends for threatened species difficult, indicative evidence suggests that at most a relatively few species of plants or animals are critically threatened. The on-going 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

Activities originating outside the park represent a potential threat to the maintenance of on-going ecological and biological processes operating in the park. It is these on-going ecological and biological processes that have contributed to evolution or speciation, hence the biodiversity richness of the park, Kinabalu having been referred to as a ‘species pump’. Agricultural incursions into the park and fire escape from neighboring land are potential threats of concern but are being addressed. Tourism activities have the potential to threaten on-going 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

Key conservation issues

▶ Management planning

Regional

Based on available but now dated documentation, management of the park is guided primarily by the Kinabalu Park Master Development Plan 1992 which is too broad for effective management. There is an identified need for a collaborative and consultative planning process leading to development of a park management plan. The process is potentially important for development of a better sense of ownership and understanding in the local community.

▶ Monitoring

Regional

There is an acknowledged need to establish and implement a scientifically based monitoring program.

▶ Sustainable tourism

Regional

Strengthen tour guiding and interpretation to visitors

▶ Environmental education

Regional

Expand environmental education to include the local community (e.g. schools)

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 'regional' (Sabah state) economies. Kinabalu is a globally recognized iconic tourism destination, both for those fit and able to climb to the summit and for the many content to view the distinctive mountain landscape from outside the park.

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

Kinabalu attracts more interest in conservation than any other park in South East Asia. There are many scientific surveys with flow on benefits to the local people, local and regional economy and through the many publications, the generation of knowledge of the park's natural heritage values shared globally.

► **Does management of the site provide jobs (e.g. for managers or rangers)?**

Kinabalu generates significant employment, directly through staff and indirectly through the tourism industry and associated tourism industries.

► **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**

Combination of tour guiding, visitor centres, published material and websites, Kinabalu is a significant contributor of education. Also great potential for elaboration of that service through schools oriented education.

Summary of benefits

Kinabalu is an outstanding contributor to biodiversity conservation. As well it makes a very significant contribution to the local and regional community in

terms of direct employment and indirect economic contributions through tourism. With sound management, these benefits are likely sustainable.

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	Management Planning	There is a clear need for Kinabalu management to conduct collaborative and consultative management planning process to update management guidance for the park.	
2	Tourism Impacts	There is an identified need to conduct scientific assessment of the environmental impacts of tourism in the park, in particular the impacts on the natural heritage values of the summit walking track and associated infrastructure.	
3	Monitoring	There is an acknowledged need to establish and implement a scientifically based monitoring program.	
4	Interpretation/Education	There are opportunities for improving the interpretation and education services provided by the park.	

REFERENCES

№	References
1	BirdLife International (2013) Important Bird Areas factsheet: Mount Kinabalu. Downloaded from http://www.birdlife.org on 13/05/2013
2	Coopers and Lybrand Management Consultants and Sun Chong and Wong. (1992) The Kinabalu Park Development Master Plan Towards Sustained Development, Coopers and Lybrand Management Consultants and Sun Chong and Wong.
3	Doolittle, Amity A. (2011) Property And Politics In Sabah, Malaysia: Native Struggles Over Land Rights .
4	Goh, Hong Ching (2007) Sustainable tourism and privatization in the case of Kinabalu Park, Borneo. Bonn.Academia.edu.
5	Goh, Hong Ching and Mariney, Mohd Yusuff (2010) Sustaining Tourism Development in Protected Areas. A Case of Kinabalu Park International Journal of Trade, Economics and Finance, Vol. 1, No. 2, August, 2010 2010-023X
6	Goh, Hong Ching and Rosilawati Zainol (2014). Conservation education in Kinabalu Park of Malaysia- An analysis of visitors' satisfaction. Journal of Tropical Forest Science, 26(2): 207-218.
7	IUCN (2000) IUCN Technical Evaluation, Kinabalu Park, Sabah, Malaysia
8	IUCN Confidential consultation, 2013.
9	IUCN Confidential consultation, 2013.
10	Nomination (2000) The Nomination of Kinabalu Park to the World Heritage List. Sabah Parks (Malaysia)
11	Off the Beaten Track website (2013) http://taiwandiscovery.wordpress.com/2012/04/28/mount-kinab…
12	Shukor, MD. Nor (2001) Elevational diversity patterns of small mammals on Mount Kinabalu, Sabah, Malaysia. Global Ecology & Biogeography (2001) 10, 41–62
13	Van Derent, A.(2013) Website of Antony van Derent Kinabalu http://antonyvanderent.nl/index.php?option=com_content&view…

№	References
14	WCMC Datasheet (2013) Kinabalu Park, Malaysia
15	WHCentre (2003) Periodic Reporting, Kinabalu Park, Malaysia
16	Wong, K.M. and Phillips, A (1996) Kinabalu, Summit of Borneo, Edited by K.M.Wong and A.Phillips, The Sabah Society, Sabah, Malaysia