

STATE OF CONSERVATION OF LAKE MALAWI WORLD HERITAGE SITE

NAME: Lake Malawi National Park, STATE PARTY: Malawi, ID No: N289

EXECUTIVE SUMMARY

State of conservation report for Lake Malawi National Park World Heritage Site outlines the progress that has been undertaken by the Site since 2016 in response to the IUCN /UNESCO joint Mission report following to the visit undertaken in April, 2014.

Malawi in response to a request by the World Heritage Committee at its 37th Session, the state Party invited a monitoring mission to review the site of conservation of the Lake Malawi National Park World Heritage property, in particular the potential impacts of oil exploration on its Outstanding Universal Values (OUV).The joint UNESCO/IUCN Mission took place from 31st March to 4th April, 2014.

From what was observed by the monitoring team from 31st March to 4th April, 2014 there are a number of issues that have been addressed by the State Party as outlined below on summary of State of Conservation of Lake Malawi National Park World Heritage Site.

The Outstanding Universal Values of the site are being maintained though there might some challenges as pointed out in the summary of the state of conservation.

WORLD HERITAGE VALUES OF LAKE MALAWI NATIONAL PARK

Values	Description	WH Criterion
Outstanding natural beauty of lake in Rift Valley	The lake is characterized by its crystal clear waters, and the diversity of habitats amongst its many rocky islands and shores. It is situated in the Great Rift Valley and set against the wooded hillsides of steep escarpments on either side. Much of the shoreline is composed of massive rounded granite boulders, partially submerged and washed by wave action. Between the steeper rocky sections are sun-drenched sandy bays, with inflowing rivers and streams creating the occasional reed-filled lagoon and lake-edge swamps. The position of these landscape elements creates scenes of outstanding natural beauty (Statement of Outstanding Universal Values, 2010).	(vii)
Key example of evolutionary processes	The lake provides an extraordinary example of evolutionary processes, the phenomenal adaptive radiation of cichlid fishes (known locally as mbuna) along its rocky shores resulting in an array of species and varieties unmatched anywhere else in the world. The speciation of cichlid fishes in Lake Malawi is considered to be of equal or greater importance for the study of evolutionary processes as the Galapagos Island finches or honeycreepers of Hawaii (IUCN Evaluation, 1980, SoOUV, 2010)	(ix)
Extraordinary diversity of fish species	The lake is thought to have the largest number of fish species of any lake in the world, with estimates varying between about 1,000 (SoOUV, 2010) and 3,000 species (UNEP-WCMC, 2012), of which as many as 800 belong to the family Cichlidae. Lake Malawi is home to 15% of the world's freshwater fish species (Chafota et al., 2005)	(x)
Extremely high levels of species endemism	Endemism is extremely high, with more than 98% of cichlid fish known only from Lake Malawi (SoOUV, 2010).	(x)
Terrestrial biodiversity	The terrestrial part of property comprises wooded hillsides that protect part of the catchment of the lake, the biodiversity of these terrestrial habitats includes a few notable species. Mammals include hippo (particularly in the Monkey Bay area) duiker, baboon, vervet monkey, bush pig, warthog and occasional elephant (reported as coming down to the lake between Mwenya and Nkhudzi hills). Leopard, kudu, bushbuck and impala have been reduced or extirpated from the area. The park is rich in birdlife including fish eagle along the shoreline. The	

	islands, especially Mumbo and Boadzulu, are important nesting areas for white-throated cormorant which number several thousand. Reptiles include crocodiles and abundant monitor lizards on Boadzulu Island.(SoOUV, 2010)
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Topics of the State of Conservation Report (as format)	Summaries of State Party's Report on the State of Conservation of Lake Malawi National Park World Heritage Property, MALAWI
<p>1) Response from the State Party to the World Heritage Committee's Decision, paragraph by paragraph</p> <p>Decision: 38 COM 7B.92</p>	<p>The World Heritage committee decisions or recommendations, Decision: 38 COM 7B. 92</p> <p>With reference to the extract of the Decisions adopted by the World Heritage Committee at its 38th session (Doha, 2014.)</p> <p>MALAWI'S (STATE PARTY) RESPONSES TO WORLD HERITAGE COMMITTEE'S DECISION</p> <p>(1) Response to paragraph 7(a) Demarcation of 100m aquatic zone has been done starting with Northern Islands where Nankoma Island has been marked with aquatic floating buoys. Marking exercise will continue with other islands. Terrestrial marking of Park boundary has completed. Marking was completed in Msaka, Nkhuzi, Namaso, Namakoma areas with Mvunguti area to be completed.</p> <p>(2) Response to paragraph 7(b) Marine and terrestrial patrols has been enhanced to ensure enforcement of fishing restrictions and destruction of other natural resource to protect the OUV. Eviction of illegal fishermen settlers at Chinyamwezi/Chinyankhwazi islands done and all fishermen were removed.</p> <p>(3) Response to paragraph 7 (c) Effective Monitoring protocol has been designed and University of Malawi</p>

	<p>(Chancellor College) and Fisheries Research Unit involved in fish monitoring to provide a basis for assessment changes in fish diversity and populations, other fauna, water quality and management parameters that could be used in adapting management intervention for better protection of the property’s OUV.</p> <p>(4) Response to paragraph 7(d) The Park is working closely with local communities where DNPW is allocating 25% of revenue collected from LMNP and local communities are participating in resource protection through monitoring of resource collection by communities in the enclave village. Local community have been benefiting from revenue collected from the Park for their community benefits. Over 25,000 U\$ has been allocated to the local communities.</p> <p>(5) Response to paragraph 7(e)In the framework of the World Heritage and Sustainable Tourism Programme (WHSTP), the UNESCO World Heritage Centre (WHC) has developed a capacity building tool for site managers (“How To” Guides) to help them manage tourism at their sites more sustainably. These 'How To' guides are focused on best practice approaches to sustainable economic development through tourism, offering direction and guidance to managers of World Heritage tourism destinations and other stakeholders to help identify the most suitable solutions for circumstances in their local environments and aid in developing general know-how for the management of each destination.</p> <p>Problem of pollution is being addressed by working with Tourism operators and site of tourism attraction are being explored.</p> <p>(6) Response to Paragraph 8 The review and updating of the management plan process started being undertaken by a Task force which was set up by the Department. The assessment of the draft revised plan to align it with the IUCN Resource Manual guideline was conducted.</p> <p>Consultation meetings with different stakeholders have been conducted and a Consultant engaged by UNESCO met the task force to review the Management Plan for final Copy.</p>
<p>2) Other current conservation issues identified by the State</p>	<p>Sustainable management of the increasing human population in villages enclave in the property. Property has no buffer zone and markers are yet to be put in place on all the aquatic boundary of the property.</p> <p>Limited equipment for systematic monitoring of species diversity, levels of endemism and evolutionary processes</p>

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<p>3) In conformity with paragraph 172 of the Operational Guidelines below are descriptions of potential major restorations, alterations and/or new construction(s) within the protected area and its buffer zone and/or corridors that might be envisaged</p>	
A)Major restorations	N/A
B) Alterations and/or new construction(s)	<ol style="list-style-type: none"> 1) Expansion of enclave settlements. In the 1970s the population in the enclave villages was at 4,615, in early 1990s it rose to 10,000. In 2002 it was estimated at 18, 000 (Ambali, <i>et al</i>; 2002. It is now believed to have grown to over 25, 000. 2) Inappropriate tourism development: Although all the existing tourism facilities in and around the park appear to be low-impact establishments, there is a real risk of inappropriate developments that could impact the natural beauty and other attributes of the area. Examples include the ecotourism facilities on Hotels, Lodges and cottages along the lakeshores outside the park. 3) Overhead Power Grid Line. The clearing of vegetation along the overhead power gridline passing through the park. 4) Water supply Tank. A water tank constructed on hills at Monkey Bay side of the property 5) Illegal use of terrestrial resources by local communities: Various kinds of resources are used illegally from the terrestrial areas of the park. Poaching is an ongoing threat, as is the grazing of livestock, tree cutting for building poles, timber and firewood, extraction of sand, gravel and rock for building 6) Commercial fish farming. Although outside the park, trawler fishing may be a threat to the park ecosystem. 7) Aquarium trade in fish. Although most of the (considerable) worldwide demand for Lake Malawi's colourful rock-dwelling 'mbuna' cichlids is met through captive breeding programmes in other countries, there is still a significant trade in wild-caught fish from Malawi. The effects of this trade have not been investigated, but it is thought that it may lead to (1) local over-fishing of particular (high-value) species and (2) re-introduction of fish to parts of lake where they do not naturally occur (most of the mbuna have evolved in particular parts of the lake isolated from other areas of potentially-suitable habitat by habitat barriers such as lagoons or stretches of sand). 8) Tourist and domestic waste. Tourist and domestic wastes, including pollution both on land and water. This is

- a particular problem around some of the village enclaves within the property, but also affects all lakeshore communities.
- 9) Land degradation, erosion and siltation. Satellite imagery of the lake catchment areas reveals dramatic declines of vegetation cover and increased incidence of bare (eroded) soil. A picture taken by Mission team during their inspection on the mouth of Linthipe river implying increased rates of surface run-off and soil erosion. This is leading to increased rates of siltation, decreased water clarity and alterations in water nutrient balance. The long-term ecological consequences of such changes are not fully understood, but it is likely to have an adverse effect on the rock-dwelling mbuna cichlids many of which graze algae from submerged rocks. Sedimentary deposits on these rocks and decreased penetration of light are likely to interfere with these fish feeding grounds.
 - 10) Over-fishing. There are five fishing village enclaves within Lake Malawi National Park (Chembe, Masaka, Mvunguti, Zambo and Chidzale), and over-fishing is reported to be a serious problem, with many species suffering dramatic declines in numbers (Chafota et al., 2006). However, it is reported that the populations and distribution of mbuna cichlids in the National Park have not changed based on fisheries data collected since the 1970s).

OVERALL CONSERVATION OUTLOOK

Lake Malawi retains its outstanding attributes as one of the world's great freshwater lakes, and its natural beauty remains undiminished. The evolutionary processes that have resulted in the development of an extraordinary diversity of colorful rock-dwelling cichlid fish are likely to be intact since the rocky lakeshore habitats are stable and potential threats (e.g. introduced predators, or large-scale pollution) have not been realized. The limited available evidence (from fisheries surveys) suggests that species diversity and levels of endemism are being maintained, but more systematic monitoring of these key attributes is required.

The World Heritage property covers just 0.02% of the lake's area and is vulnerable to threats originating beyond its boundaries, including over-fishing and the degradation of aquatic habitats resulting from soil erosion in the lake's catchment areas.

Budgets are insufficient to provide the level of management input required. There are no buffer zones for communities to have a utility area for their needs of thatch grass and firewood instead they rely on the Park.

The policy, legislative and planning framework for Lake Malawi National Park is strong, and the key values of the property – its scenic qualities and the evolutionary processes that have led to the development of its extraordinarily rich, endemic fish fauna - remain largely intact. These values are however threatened by a number of insidious factors related to the pressures of a rapidly growing human population causing deforestation and soil erosion in the lake's catchment areas, and ever-more intensive exploitation of fisheries. LMNP is very small (94km², of which only 7 km² covers aquatic habitats), accounting for just 0.02% of the lake's surface area. This makes it especially vulnerable to potentially devastating threats from outside its borders, including the threat of commercial fishing.