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**CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE**

**CONVENTION CONCERNANT LA PROTECTION DU PATRIMOINE MONDIAL CULTUREL ET NATUREL**

**INTERGOVERNMENTAL COMMITTEE FOR THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE**

**COMITÉ INTERGOUVERNEMENTAL DE LA PROTECTION DU PATRIMOINE MONDIAL CULTUREL ET NATUREL**

**Extented forty-fifth session**
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**Item 7 of the Provisional Agenda**
**State of conservation of properties inscribed on the World Heritage List and/or on the List of World Heritage in Danger**

**Point 7 de l'Ordre du jour provisoire**
**État de conservation de biens inscrits sur la Liste du patrimoine mondial et/ou sur la Liste du patrimoine mondial en péril**

**MISSION REPORT / RAPPORT DE MISSION**

**Lake Malawi National Park (Malawi) (N 289)**
**Parc national du lac Malawi (Malawi) (N 289)**

**27 March – 2 April 2022**

# REPORT ON THE JOINT WORLD HERITAGE CENTRE/IUCN REACTIVE MONITORING MISSION TO LAKE MALAWI NATIONAL PARK (MALAWI) (N 289)

Photo ©IUCN/Davison Saruchera

27 March - 2 April 2022

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## Acknowledgements

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# Acronyms and Abbreviations

| | |
|---|---|
| AZE | Alliance for Zero Extinction |
| BVC | Beach Village Committee |
| EIB | European Investment Bank |
| ESIA | Environmental and Social Impact Assessment |
| GMP | General Management Plan |
| KFAED | Kuwait Fund for Arab Economic Development |
| IUCN | International Union for Conservation of Nature |
| KBA | Key Biodiversity Area |
| LMNP | Lake Malawi National Park (as defined on the World Heritage List) |
| MEPA | Malawi Environment Protection Authority |
| NEP | National Environmental Policy |
| NFPA | National Fisheries and Aquaculture Policy |
| NGO | Non-governmental organization |
| OUV | Outstanding Universal Value |
| SADC | Southern African Development Cooperation |
| ToR | Terms of References |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| VNRC | Village Natural Resources Committee |

## Executive summary and list of recommendations

In response to a request by the World Heritage Committee at its Extended 44th Session, Fuzhou (China)/online meeting, the State Party of Malawi invited a joint World Heritage Centre/IUCN Reactive Monitoring Mission to review the state of conservation of the Lake Malawi National Park World Heritage property. The purpose of the mission was "to assess its state of conservation in relation to the fisheries and tourism management, law enforcement, wildlife monitoring, oil exploration and to explore the possibility of including the new KBAs [Key Biodiversity Areas] as an extension to the property" (Decision 44 COM 7B.82). In addition, it was agreed at a meeting between the State Party, UNESCO World Heritage Centre and IUCN on 18 November 2021, that the mission would review the Mangochi water supply project proposal.

The mission took place from 27 March to 2 April 2022 and involved discussions with a wide range of stakeholders, including government, private sector, civil society organizations and community representatives, in and around the property and in the capital, Lilongwe. The team visited the site of the Mangochi water supply project, including the lakeshore water intake location, the water treatment plant under construction at the base of the Nkhudzi Hill component of the property, the access road, the proposed water tank location and the proposed pipe alignment within the property. They also visited the Cape Maclear peninsula, viewing the eastern side of the main terrestrial component of the property by boat, and visiting the park's research and education facilities at Golden Sands (undergoing rehabilitation) as well as Chembe fishing village.

The Outstanding Universal Value (OUV) of Lake Malawi National Park (LMNP) is derived from the extraordinary diversity and evolutionary processes of the cichlid fish which inhabit the shallow waters of the lake's rocky shoreline as well as the exceptional natural beauty of the landscape and the waterscape. This habitat and its associated fish populations are thought to be fairly well conserved although there is some anecdotal evidence and old survey data which suggests a decline in species richness and abundance of rock-dwelling mbuna cichlids in recent years.

The small size and serial configuration of the property (with its 16 separate components) means that it is especially vulnerable to the impacts of a wide range of human pressures, both within and beyond its boundaries. The terrestrial parts of the property contribute to the area's outstanding natural beauty and serve to protect its waters from siltation, runoff, and pollution. While the vegetation and biodiversity of the island components of the property remain intact, the main terrestrial component on the Cape Maclear peninsula is significantly degraded. This is due to intensive pressure for fuelwood and other natural resources from five 'enclave' fishing villages and other local communities around the park. Threats from outside the park boundaries have not been fully assessed but include, most notably, (1) intensive fishing activity throughout the lake, (2) siltation, pollution and eutrophication of lake waters, and (3) climate change.

### In respect of the specific issues raised by the World Heritage Committee, the mission concludes:

Fisheries: Fishing activities within the property is generally well controlled as a result of both enhanced law enforcement and community-based participation in fish conservation initiatives. Beyond the park

boundaries, commercial and artisanal fishing (a mainstay of the Malawian economy) have resulted in over-fishing and a significant change in the status of commercial fish catches [which are now skewed towards smaller plankton-feeding 'lake sardines' (usipa)]. This fundamental shift in the ecology of the lake as a whole could be affecting the OUV of this property, indicating that the current property boundaries alone are probably insufficient to ensure the full protection of its OUV.

Tourism management: Tourism has been severely impacted by the Covid-19 pandemic, with negative consequences for tourism-based employment and revenue in LMNP. Two small eco-friendly concessions operate within the park and two additional similar concessions are envisaged for other identified areas in future. The potential benefits of increased tourism and revenue for the park, implemented according to the plans and policies now in place, are likely to contribute significantly to further improvements in protection of the property's OUV.

Law enforcement: Law enforcement has been progressively strengthened in recent years, particularly in respect of safeguarding the aquatic habitats and islands. Continuing degradation of habitats on the mainland areas of the peninsula is a concern, due to intensive harvest of fuelwood, thatching grass, and other natural resources. There are no designated zones under total protection in this part of the park according to the 2019-2024 Management Plan. The smaller size of the park, and the scattered distribution of fishing village enclaves makes law enforcement and community participation especially challenging and important.

Oil exploration: There are currently no oil exploration plans or activities in Lake Malawi, since the two concessions that had been in operation were both relinquished. The State Party created a new Ministry of Mines in 2021, a national mineral policy consultation is underway, and the 1983 Petroleum Exploration and Production Act is under review. However, the mission remained uncertain with regard to the State Party's future intentions for oil exploration within the property and/or in the wider Lake ecosystem

Extension of the property: Scientists recognize 19 'ichthyogeographic regions' of the lake, each of which supports a unique assemblage of cichlid fish species. Only four of these regions are represented within the LMNP, while most remain unprotected. It would be a suitable long-term goal to provide for representative areas of each of these 'ichthyogeographic regions' to be fully protected within an extended world heritage property. A recent study identified 22 Key Biodiversity Areas (KBAs) within river, lake and wetland habitats of Lake Malawi and its wider catchment. These included six Alliance for Zero Extinction (AZE) sites within the lake itself, which support the last remaining populations of certain Endangered (EN) or Critically Endangered (CR) fish species. These areas (amongst others) may have potential for possible extension of this serial site.

Wildlife monitoring: A framework monitoring protocol for aquatic and socio-economic parameters was written in 2016, but this has not yet been developed into a comprehensive monitoring plan covering the full range of indicators required to inform management. The 2016 monitoring protocol (also referred to in previous documents as a fish monitoring protocol) should continue to be implemented, and if necessary enhanced, to assess changes in fish populations, water parameters and

other variables so that management can be adapted as necessary for better protection of the property's OUV. It should be extended to include terrestrial indicators to monitor the state of terrestrial vegetation and a few indicator species of mammals and birds. Some preliminary baseline data on fish diversity, population density and other parameters have so far been collected by diver-scientists along designated underwater transects. This should enable any future changes affecting this aspect of the park's OUV to be detected and allow for appropriate management interventions.

Mangochi water supply project: The project involves construction of an eight-meter-tall concrete water tank, access road and pipeline in a densely wooded section of the small Nkhudzi Hills component within the property, with associated infrastructure in adjacent areas outside the property boundary. At the time of the mission, the construction phase was at an advanced stage, including the clearance of vegetation and alignment of about half of the steep access road within the property. After inspection of the site and consultation with a wide range of stakeholders (including the civil society organizations that successfully campaigned for two court injunctions to suspend work on the project), the mission concluded that (i) there were significant shortcomings in the early design stages of the project, (ii) possible alternative sites outside the property were not sufficiently considered at the appropriate stage based on factors beyond financial measures, (iii) construction of infrastructure with potential adverse impact on the OUV of a World Heritage property sets a concerning precedent, nationally and internationally, and (iv) Malawi's strong networks of civil society organizations played an important, commendable and effective role in challenging weaknesses in project planning and implementation. The mission was informed that the two forced suspensions of work have already had significant time and cost implications. In March 2022, the European Investment Bank (EIB) also initiated a Complaints Mechanism process for the project. The mission regrets that earlier recommendations by the UNESCO World Heritage Centre/IUCN were not followed or fully responded to and, as a result, avoidable environmental damage to the property has been suffered.

List of recommendations

With regard to Implementation of Management Plan and Recommendations of the 2014 Reactive Monitoring Plan:

Recommendation 1: Consideration should be given to the possible establishment of some totally protected zones within the main block of the park on the peninsula, where current levels of resource use appear to be unsustainable.

Recommendation 2: Continue to encourage and support the local communities in the enclave villages (and around the periphery of the park) including with partners in the establishment of 'brush parks' and other initiatives to sustainably enhance fish breeding as well as promoting alternative livelihood options to reduce the dependence of these communities on the park for fuelwood, thatching grass and other natural resources.

Recommendation 3: Finalize demarcation of the property boundary and resolve the two existing cases of illegal agricultural encroachment within the property and any others that emerge.

Management of fishing practices:

Recommendation 4: Improve agriculture and other land use practices in the headwaters of the river catchments so as to minimize pollution of the lake including through siltation and inflow of agrochemical effluents.

Recommendation 5: Continue to maintain the utmost vigilance in ensuring that non-native species of fish (especially top-level predators such as the Nile Perch and Tiger Fish) are not introduced into the lake or its catchment areas.

Recommendation 6: Continue strengthening the capacity of the Park and other institutions, through both internal means and external support, including enhancing inter-agency synergies and collaboration in sustainably managing the property with a focus on its OUV.

Mangochi water supply project:

Recommendation 7: New infrastructure projects should be planned outside this very small property. In case a future infrastructure development proposal is unavoidable within the property or in its wider setting, that has the potential to impact its OUV, an ESIA in accordance with the 'Guidance and Toolkit for Impact Assessment in a World Heritage Context'[1] is essential to be carried out ensuring that

i) The ESIA must be completed before any decisions are taken or construction works commence;

ii) Stakeholder consultation must be integrated into the whole ESIA process, which includes different mechanisms of consultations and allows sufficient time for meaningful participation. This includes consultation with the UNESCO World Heritage Centre and IUCN;

iii) Alternative options are considered throughout the various stages of the ESIA process, which allows for the project details to be revised as necessary.

Recommendation 8: Restore as fully as possible the environmental damage that has already been caused to the property from the works associated with the construction of the Mangochi water storage tank.

Recommendation 9: Minimize any inevitable damage to the property from the Mangochi water supply project through full implementation of independently verified mitigating measures as set out in the project ESIA. Particular attention needs to be given to measures designed to (i) minimize run-off and possible siltation of waters along the shoreline, (ii) ensure that as many mature trees as possible are retained as close as possible to the water tank and other infrastructure so as to hide it from view and maintain the outstanding natural beauty of the

[1] Available at: https://www.iucn.org/resources/jointly-published/guidance-and-toolkit-impact-assessments-world-heritage-context

site, and (iii) mitigate indirect impacts to biodiversity caused by access to the forest due to the road.

Regulation of Tourism-related impacts:

Recommendation 10: Continue to promote sustainable tourism initiatives and ensure that new concessions proposed within or in the wider setting of the property are subject to the appropriate ESIA procedures and that draft ESIA reports are submitted to the UNESCO World Heritage Centre for review by IUCN prior to approval, in accordance with Paragraph 172 of the Operational Guidelines.

Improvement in Wildlife monitoring

Recommendation 11: Enhance and implement the framework provided by the 2016 monitoring protocol to enable the monitoring of the status of the property's OUV, and provide for an adaptive management approach. This should include indicators for the aquatic habitats (such as water quality and clarity, abundance of rock-algae, and the abundance and diversity of fish populations) as well as the terrestrial habitats (vegetation, mammals, birds etc) and socio-economic parameters.

Recommendation 12: Develop a lake-wide system for the routine monitoring of selected indicators of the 'ecological health' of the waters and biota inhabiting the lake.

Status of oil exploration

Recommendation 13: Recalling the World Heritage Committee's established position that oil, gas and mineral exploitation are incompatible with Heritage status, ensure that any of oil exploration or exploitation concessions attributed in Lake Malawi do not overlap with the World Heritage property and avoid areas with potential for extension of the property including Alliance for Zero Extinction (AZE) sites.

Recommendation 14: In case any plans to explore or mine for oil or other minerals within Lake Malawi or its immediate catchment are considered, the proposals are subject to an Environmental and Social Impact Assessment (ESIA) that is developed in accordance with the highest international standards and in line with the new *Guidance and Toolkit for Impact Assessment in a World Heritage Context,* and submitted in accordance with paragraph 172 of the Operational Guidelines to the UNESCO World Heritage Centre for review by IUCN before any decisions are taken or exploration activities are commenced.

Recommendation 15: Keep the UNESCO World Heritage Centre and IUCN updated regarding the outcome of the mining sector policy consultations and review currently underway of the 1983 Petroleum Exploration and Production Act.

### Extension of the property

> **Recommendation 16**: Initiate measures towards extending the current boundary of the property within Malawi by developing a feasibility study for potential areas that could be included in the extended property, including but not limited to the six Alliance for Zero Extinction (AZE) sites that overlap with the identified Key Biodiversity Areas. The State Party could request external funding support, including, but not limited to, an International Assistance request, to undertake the feasibility study and subsequently consider a boundary modification based on its findings.
>
> **Recommendation 17**: Take concrete steps to ensure the areas identified through the feasibility study are given protection status in the interim, and that consultations with all stakeholders including local communities are undertaken.

The mission further endorses the recommendations of the 2014 mission that the States Parties of Malawi, Mozambique and Tanzania should investigate the feasibility of increasing protection for additional areas of the shoreline and islands that have been identified as important localities for the protection of endemic fish and evolutionary processes throughout the lake (see also Decision **42 COM 7B.93**). Where possible, these areas might be designated as reserves or community-run 'special use zones' and might ultimately be incorporated into an extended trans-national serial property.

# 1. The property

Lake Malawi National Park covers 9,400 ha comprising a complex of aquatic and terrestrial zones, including small islands (Figure 1). It was inscribed onto the World Heritage List in 1984 for its: (criterion vii) exceptional natural beauty of its deep, clear blue waters decorated by green islands, granitic hills and sandy bays; (ix) outstanding example of biological evolution, where the adaptive radiation and speciation are vividly noticeable in the colorful tilapiine cichlids locally known as the mbuna that exist along the rock shores; and (x) outstanding diversity in freshwater fish. The statement of Outstanding Universal Value for this property is given in **Annex 1**.

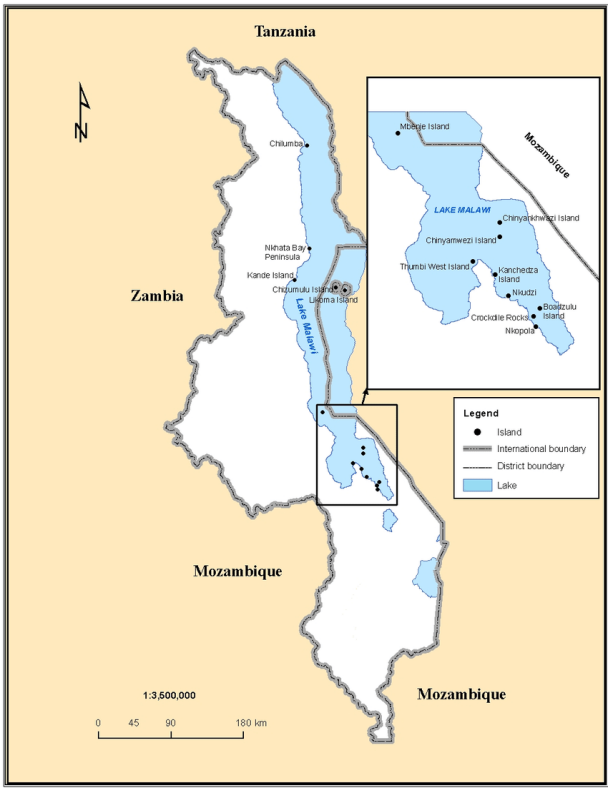


Figure 1: Location of Lake Malawi National Park (insert). Source: Adopted from Kayumba et al. (2012[2]).

Located at the southern end of the Lake Malawi's great expanse, the national park is of outstanding natural beauty with the rugged landscapes around it contrasting with the remarkably clear blue waters of the lake. The lake hosts a variety of exceptional habitats for fish - from rocky shorelines to sandy beaches, swamps, and lagoons. The aquatic component is relatively small, going only 100 meters into the lake from the shoreline, and the same distance from each of the 12 small islands. Lake Malawi hosts some 1000 species of fish and as such, it is considered a biogeographic region of its own, and the most species-rich lake in the world. About half of these fish species are estimated to occur within

[2] Kanyumba GL, Changadeya JW, Ambali JDL, Kamwanja JL & Kaunda KWE (2012) Stability of Mbuna species populations in Lake Malawi. *Journal of Environmental Science and Engineering* B1:543-555.

the property. Endemism is very high: of particular significance are the cichlid fish, of which all but 5 of over 350 species are endemic. The lake contains 30% of all known cichlid species in the world. The property also hosts scores of terrestrial fauna including mammals, birds and reptiles (for details on natural values of the site, see https://whc.unesco.org/en/list/289).

### Previous Committee Decisions on the State of Conservation

In 2013, concerns were raised over oil exploration happening in the wider Lake Malawi ecosystem. Through Decision **37 COM 7B.5** the World Heritage Committee warned about the incompatibility of oil exploration with World Heritage status and urged the State Party to implement a full ESIA in order to protect the property from potential impacts. The State Party was requested to invite a joint UNESCO/IUCN reactive monitoring mission to review the state of conservation of the property (more at: https://whc.unesco.org/en/decisions/5024).

Following a joint UNESCO/IUCN Reactive Monitoring mission in 2014, the World Heritage Committee through Decision **38 COM 7B.92** urged the State Party to cancel oil exploration permits that overlapped with the boundary of the property and requested a revision of the 2007-2011 management plan, and an implementation of all the recommendations of the 2014 mission (see details at https://whc.unesco.org/en/decisions/6078).

In 2018, the Committee reiterated its utmost concern over the risk of oil exploration so close to the property. Through Decision **42 COM 7B.93**, it also requested the State Party to consult with Mozambique and Tanzania on the feasibility of establishing a buffer zone and extension of the property to enhance its conditions of integrity (details at https://whc.unesco.org/en/decisions/7322)

In 2021, the Committee further expressed its concern over oil exploration and the industrial and illegal artisanal fishing methods around the lake. Through its Decision **44 COM 7B.82** (see **Annex 2**), it requested the State Party to invite another joint UNESCO/IUCN Reactive Monitoring Mission to assess the state of conservation of the property, in relation to the fisheries and tourism management, law enforcement, wildlife monitoring, and oil exploration and to explore the possibility of including the new KBAs through extension of the property (see Details at https://whc.unesco.org/en/decisions/7798/).

## 2. Summary of the national management system for the preservation and management of the World Heritage property

### 2.1 Protected area legislation/legislation related to the Property

The legal framework for biodiversity conservation in Malawi is mainly sector-based, with the majority of policies and legislations being consistent with the cross-cutting National Environmental Policy (NEP). Specific national policies and legislations relevant to conservation of the World Heritage property are as follows:

*The National Environmental Policy (NEP) (1996; amended in 2004)*

The NEP promotes sustainable socio-economic development through sound management of the environment. It is an overarching framework for all developed or revised sectoral environmental policies. However, due to inherent policy gaps, conflicts, and duplications it was revised in 2004 in order to take stock of previous lessons, the prevailing situation and emerging challenges. The revised NEP, which contains a section on the Conservation of Biological Diversity [Article 18(3)] is supported by the Environment Management Act No. 19 of 2017 that provides for general environmental protection. Sectoral policies (e.g. on land, water, fisheries, waste, and forestry) are largely consistent with the National Environmental Policy.

*National Parks and Wildlife Act (1992; amended in 2017)*

The Act provides for wildlife management, including the identification of species which should be designated for protection. It also has provisions to declare any area of land or water within Malawi as a national park or wildlife reserve (section 28). The law also governs the taking and management of wild game species both within and outside of protected areas. For instance, it is an offence for anyone to harass wildlife while inside protected areas.

*The National Wildlife Policy (2000; amended in 2002)*

The Policy seeks to ensure proper conservation and management of wildlife resources so as to provide for their sustainable utilization and equitable access, and a fair sharing of benefits by both the present and future generations of Malawi. To achieve this goal, the policy seeks to: (i) protect ecosystems and biological diversity (ii) raise public awareness of the importance of wildlife conservation (iii) provide an enabling legal framework to control poaching (iv) encourage wildlife-based enterprises and (v) develop cost-effective legal, administrative, and institutional resources for managing wildlife resources.

*The Forestry Act (1997; amended in 2017)*

The Act provides for participatory forestry, forest management, forestry research, forestry education, forestry industries, protection and rehabilitation of environmentally fragile areas and the promotion of international cooperation in forestry. It has provisions relating to co-management of forest areas with local communities. However, it was developed without ample stakeholder consultations and is poorly aligned with the National Parks and Wildlife Act (1992; amended in 2017].

*The National Fisheries and Aquaculture Policy (2001; amended in 2016)*

The National Fisheries and Aquaculture Policy (NFAP) was adopted in 2001 (and revised in 2016). It seeks to improve the efficiency of the national fisheries industry, namely, the production and supply of quality fisheries products to satisfy local and export markets demands, respectively. The policy aims at controlling fisheries activities to enhance the quality of life for fishing communities. This policy is one of the most relevant provisions for strengthening protection of the cichlid species both within and outside the World Heritage site.

*Fisheries Conservation and Management Act (1997)*

The Fisheries Conservation and Management Act, 1997 seeks to strengthen institutional capacity and promote stakeholder collaboration in the management of fisheries. In particular, it promotes community participation in the protection of fish. Furthermore, it promotes fisheries enterprises such as aquaculture, so as to relieve harvesting pressure on natural fisheries. It important to note that Malawi is not a signatory to some key international agreements that seek to strengthen international obligations in conservation of transboundary aquatic resources[3].

*Malawi National Biodiversity Strategy and Action Plan II (2015-2025)*

The National Biodiversity Strategy and Action Plan II guides the sustainable management of Malawian biodiversity. The Strategy outlines the status of the biological resources in the country and identifies the strategies (targets and actions) for their sustainable management. It further seeks to improve biodiversity management capabilities, mainstream biodiversity into sectoral and local development policy/plans, reduce direct pressures on the biodiversity and improve the state of biodiversity through the protection/conservation of ecosystems and species (particularly genetic diversity while enhancing the benefits from biodiversity and ecosystem services). This strategy aligns with the Malawi Growth and Development Strategy II, which prioritizes biodiversity management programs amongst other socio-economic indicators and environmental issues.

## 2.2 Protected Areas Management System

*Institutional Framework*

National Parks in Malawi are managed by the Department of National Parks and Wildlife (established in 2002) within the Ministry of Tourism, Wildlife and Culture. The Chief Park Warden of Lake Malawi National Park reports to the Director of the Department of National Parks and Wildlife. This overall institutional framework of the property has not changed since the inscription of the park onto the World Heritage List.

*Management Structure*

The Chief Park Warden is assisted by approximately five senior staff to manage the key administrative areas: wildlife management, tourism, research and monitoring, and community education and extension. The total workforce comprises of 63 staff, of which about 40 are Rangers, stationed at Cape Maclear, Monkey Bay and on the mainland near Salima.

[3]The State Party has not ratified, for instance, (i) The International Maritime Organization's Convention on Oil Pollution Preparedness Response and Co-operation or (ii) the Convention on the protection and use of trans-boundary watercourses and international lakes, which provides for international commitment and collaboration in the protection of aquatic resources

# 3. The Mission

At its extended 44th session (Fuzhou/online, July 2021), the World Heritage Committee requested the State Party of Malawi to invite a joint UNESCO/IUCN Reactive Monitoring Mission to the Lake Malawi National Park World Heritage property "to assess its state of conservation in relation to the fisheries and tourism management, law enforcement, wildlife monitoring, oil exploration and to explore the possibility of including the new KBAs (Key Biodiversity Areas) as an extension to the property" (Decision 44 COM 7B.82; Annex 2). In addition, it was agreed that the mission would review the Mangochi water supply project proposal.

The mission was tasked with evaluating progress at implementing both its management plan and the 2014 Reactive Monitoring mission recommendations. It was also expected to evaluate progress in monitoring the status of key (aquatic and terrestrial) attributes of the property, as well as the existing plans and policies for regulating fisheries harvesting, and how these were being enforced. It was also asked to review the existing environmental concerns and safeguards relating to the newly envisaged Mangochi water supply project as well as oil exploration, tourism activities and related infrastructure development. Finally, the mission was asked to evaluate the prospects for extension of the property to strengthen its integrity. For detailed description of the ToR, see Annex 5.

As detailed in the mission's ToR, the seven key issues under consideration were:

i) Progress with implementation of the park management plan and 2014 mission recommendations;
ii) Management of fishing to protect the property's OUV;
iii) Assessment of the potential impact of the Mangochi water supply project on the property;
iv) Assessment of the impact and regulation of tourism activities and infrastructure on the property's OUV;
v) The effectiveness of wildlife monitoring activities;
vi) The status of oil exploration plans in the lake;
vii) Progress and prospects for extension of the property.

# 4. Assessment of the state of conservation of the property

## 4.1 Implementation of Management Plan and recommendations of the 2014 Reactive Monitoring Mission

The geographically complex Lake Malawi National Park continues to be pressured by indiscriminate resources harvesting by the burgeoning local community populations - especially around the 'enclave' villages. This situation dictates the need for a comprehensive management plan, and the park management team has prepared a series of such plans since the 1980s. However, concern over delays in the finalization of these plans appears to have been a consistent theme in previous Committee decisions (see e.g. Decisions 3 8COM 7B.92, 40 COM 7B.81 and 42 COM 7B.93; see also Reactive Monitoring Mission of 2014). Through its most recent Decision 44 COM 7B.82, the Committee welcomed the finalization of 2019-2024 Management Plan, supported by the World Heritage Fund.

During the mission it was unclear as to whether this plan had been formally approved but appeared that it was being implemented. It includes a zonation plan with Nkhudzi Hill designated a 'Wilderness Area', but with no provision for zonation within the main terrestrial part of the park to allow, for instance, for some parts of the area to be closed for community resource use. The 2014 Reactive Monitoring mission also gave several recommendations aimed at addressing the threats to this property (see full report at: https://whc.unesco.org/en/documents/129870).

Actions taken by the State Party to finalize the management plan and implement the 2014 Reactive Monitoring mission recommendations include the following:

- Extensive implementation of prescriptions in the 2021-2024 Management Plan is ongoing.
- Postponement of plans for oil exploration, awaiting a finalization of the ongoing energy sector review.
- Demarcation of the boundary of the property. Floating buoys (for the aquatic part) and concretized pillars (terrestrial) have been physically built along >90% of the boundary line. Nonetheless, there are at least two spots of illegal agricultural encroachment within the park that remain unresolved.
- Intensification of law enforcement: Four (4) powerful motorized fiberglass patrol boats have been purchased and the park's workforce increased from 45 in 2014 to 63 currently.
- Strengthening of local community involvement in safeguarding OUV of the property. The local communities, through the ongoing UNESCO/Norway-funded project implemented by an NGO Ripple Africa, national authorities and other partners[4], are now actively involved in nurturing fish breeding habitats through the 'brush parks' initiative[5] and preliminary evaluations[6] indicate improved catches of more diverse fish. Through this initiative, Village Natural Resources Committees (VNRCs) and Beach Village Committees (BVCs) are supported to play a vital collaborative role in natural resource management. To date six (6) BVCs have managed to install 10 brush parks in their areas of jurisdiction.
- Formulation of a sustainable tourism strategy and promotion of low-impact tourism in terms of facilities, visitation and services (although it is uncertain if this will sustain the property financially over the longer term).
- Improved control of introduction of exotic fish into the lake through undertaking of much stricter regimen by the government over the recent years.
- There is uncertainty regarding current efforts at addressing other externally driven threats to the OUV such as siltation, pollution and eutrophication of the lake, and overfishing as well as climate change.

[4] More information at https://whc.unesco.org/en/activities/1070/

[5] The 'brush park' initiative is an ecologically benign experimentation where scientifically-led artificial substrates for promoting fish breeding habitats (using floated branches of particular native tree species) are created at multiple sites within their villages, with a likely 'spill-over' effect to the property. Early indications are that this has enhanced cichlid breeding i.e. there are generally larger, more numerous and more fish species per haul in 'brush parks' than in controls. This is by large a community-based initiative to improve cichlid fish breeding in their own fisheries waters.

[6] Fish (2017) The potential of Brush parks for enhancing fisheries production and management in Lakes Malawi and Malombe. A technical brief. USAID/FISH Project. Pact Publication, Lilongwe, Malawi p.2.

- Formulation of a draft aquatic resource monitoring plan with support of the World Heritage Fund and collection of some initial baseline data. Regrettably, however, the plan is unapproved, and its implementation is therefore not yet secured.

To a greater part, therefore, the State Party has addressed the recommendations of the 2014 mission, in particular those related to strengthening of the management capacity of the property - including through fostering community participation and law enforcement as well as promotion of sustainable tourism. These are efforts in the right direction that should be strengthened further. However, the lack of comprehensive wildlife monitoring program to date, precludes an objective inferencing of the status of OUV of the property. Externally driven threats continue to potentially impact the OUV of the property, which calls for appropriate management interventions.

Recommendation 1: Consideration should be given to the possible establishment of some totally protected zones within the main block of the park on the peninsula, where current levels of resource use appear to be unsustainable.

Recommendation 2: Continue to encourage and support the local communities in the enclave villages (and around the periphery of the park) including with partners in the establishment of 'brush parks' and other initiatives to sustainably enhance fish breeding as well as promoting alternative livelihood options to reduce the dependence of these communities on the park for fuelwood, thatching grass and other natural resources.

Recommendation 3: Finalize demarcation of the property boundary and resolve the two existing cases of illegal agricultural encroachment within the property and any others that emerge.

## 4.2 The impact of fishing on protection of the property's OUV

Artisanal and commercial fishing is one of the main economic pillars of Malawi. However, inadequate regulation and control of this industry outside the property have led to widespread overfishing. In a 2019 regular countrywide survey, for instance, it was found that 83% of the 70,229 gillnets were of undersized mesh sizes (smaller than permissible by law), >87% of which were deployed in Lake Malawi.[7] Overfishing has been blamed for the near collapse of a larger highly valued endemic 'Chambo' species e.g. Weyl et al. 2010[8] and Boostma & Jorgensen 2005[9] long estimated the smaller-sized fish to comprise up to 80% of the total fish catch. The widespread depletion of 'Chambo' and other larger slow-growing fish species in favor of the smaller 'usipa' *Engraulycypris* species was confirmed to the mission by the Malawi Fisheries Research officers at Monkey Bay. Indeed, casual observations by the mission in local markets (including the Chembe village fish market at Cape Mclear), other fish selling points, supermarkets and even in restaurants revealed a domination of smaller-sized fish. Kenneth McKaye, a seasoned Fisheries Professor who has worked within the property since the

[7]Government of Malawi (2020) 2019 *Annual Frame Survey Report on the Small-scale Fisheries*. Ministry of Agriculture, Irrigation and Water Development.
[8]Weyl OLF, Ribbink AJ &Tweddle D (2010) Lake Malawi Fishes, fisheries, biodiversity, health and habitat. *Aquatic Ecosystem Health & Management* 13(3):241-254. https://doi.org/10.1080/14634988.2010.504695.
[9]Bootsma HA & Jorgensen SE (2005) *Lake Malawi/Nyasa: Experiences and Lessons Learned*. Kusatsu, Japan. International Lake Environment Committee Foundation.

1970s also confirmed to the mission that fish sizes are indeed on a progressive sharp decline and was concerned that there was a lack of a long-term systematic monitoring programs to ascertain the fish population dynamics. The 2019 Malawi government report on water quality[10] has confirmed a deterioration of water quality in some parts of the lake due to excessive inflow of silt and chemical effluents from the catchment.[11]

Unfortunately, there is lack of recent empirical data or of official records from the Park (see section 4.5), respectively, to ascertain the impact of these fishing malpractices on the status of the OUV of the property. However, Kanyumba et al. 2012[12] investigated 'mbuna' diversity within Lake Malawi over a period of 22 years and found that species richness had dropped by 30% compared to the baseline levels of Ribbink et al. 1983,[13] but the decline was more pronounced outside than within the Park. These authors ascribed such a fish diversity drop to the profound overharvesting and accidental introduction of fish from other parts of the lake[14], leading to relocations and hybridizations.[15,16] Outside the property, however, the overall picture is that of decreasing biomass and diversity in fish catches.

A scoping report by the Ripple Africa, 'Fish Conservation Project' in 2020 indicated widespread fishing malpractices within and beyond the World Heritage property[17] attributed to insufficient conservation awareness and participation on the part of local communities, as well as to the weak institutional collaboration[18]. The mission was also informed on the past existence of a few aquaculture farms in the area for exportation of ornamental fish but these have since been relinquished. On the whole, fishing appears at present, to have been fairly well controlled within the property apparently due to both an increase in law enforcement capacity and enhanced community participation in fish conservation initiatives.

Actions taken by the State Party to regulate unsustainable fishing practices within the Lake:

- Closure of commercial fishing by the Fisheries Department within the 'Lake Malawi Southern Arm', which is one of the identified Key Biodiversity Areas (KBAs) under Fisheries Regulations (although it was unclear to which extent this has actually been implemented in practice).
- Empowering of the local fishing communities (by the Fisheries Department) to sustainably manage their own fish resources rather than allowing open access to all fishing grounds throughout the lake (which has been the basis of fisheries policy in the past).

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[10]Government of Malawi (2019) *Water quality monitoring of Lake Malawi National Park: A marine protected area and world heritage site*. Ministry of Agriculture and Food security

[11]McKaye K, Wilklund A, Shawa M, Konings A, Stauffer J, Madsen H, Theiss-Nyland K, Kite P & McKaye M (2008) *Lake Malawi National Park World Heritage Site*. HEED (NEDI). p. xxvii.

[12]Kanyumba GL, Changadeya JW, Ambali JDL, Kamwanja JL & Kaunda KWE (2012) *Ibid* 2.

[13]Ribbink AJ, Marsh AC, Ribbink AC & Sharp BJ (1983) A preliminary survey of cichlid fishes of the rocky habitats of Lake Malawi. *South African Journal of Zoology* 18: 155-309.

[14]Genner MJ, Botha A & Turner GF (2006) Translocation of rocky habitat cichlid fishes to Nkhata-Bay, Lake Malawi, *Journal of Fish Biology*69: 622-628.

[15]Streeman JT, Gmyrek SL, Kidd MR, Kidd C, Kidd RL, Robinson E, Hert E (2004) Hybridization and contemporary evolution in an introduced cichlid fish from Lake Malawi National Park. *Molecular Ecology* 13: 2471-2479.

[16] Stauffer Jr JR, Bowers NJ, Kocher TD, &McKaye KR (1996) Evidence of hybridization between *Cynotilapiaafra* and *Pseudotropheus zebra* (Teleostei: Cichlidae) following an intra-lacustrine translocation in Lake Malawi. *Copeia*: 203-208.

[17] https://whc.unesco.org/en/news/2413

[18] https://whc.unesco.org/en/activities/1070

- Establishment of 'Brush Parks' supported by the UNESCO/Government of Norway-funded project which is implemented by Ripple Africa, Government of Malawi and other partners. The project, which is undertaken collaboratively by the Fisheries Department and the Parks and Wildlife Department has also supported 20 community-based Beach Village Committees (BVCs) and 14 Village Natural Resources Committees (VNRCs) that support sustainable resource management, on the ground tree planting and monitoring of fishing regulations, amongst other activities, which has been traditionally under their mandate.
- The need for better cooperation between the Departments of Fisheries and Parks & Wildlife has been identified to enhance management of the property.

Almost all the stakeholders consulted during this mission (including the national park authority, fisheries department, tourism investors, hoteliers and the local communities) were fairly optimistic that fishing malpractices remain fairly controlled within than outside the premises of the property. However, the large-scale indiscriminate harvesting of aquatic resources in the wider Lake Malawi ecosystem coupled with unsustainable agricultural practices continue to present a potential threat to the ecological dynamics of the lake, hence to the OUV of the property.

Recommendation 4: Improve agriculture and other land use practices in the headwaters of the river catchments so as to minimize pollution of the lake including through siltation and inflow of agro-chemical effluents.

Recommendation 5: Continue to maintain the utmost vigilance in ensuring that non-native species of fish (especially top-level predators such as the Nile Perch and Tiger Fish) are not introduced into the lake or its catchment areas

Recommendation 6: Continue strengthening the capacity of the Park and other institutions, through both internal means and external support, including enhancing inter-agency synergies and collaboration in sustainably managing the property with a focus on its OUV.

## 4.3 Assessment of the potential impact of the Mangochi water supply project on the property

The mission thoroughly reviewed the evolution and justification of this project together with its potential impacts on the OUV of the property. It carried out extensive consultations, including with those opposed to the project[19]. The project is planned to initially provide purified water to about 93,000 people in Mangochi District, with possible expansion in future. It involves construction of an eight-meter-tall concrete water tank, access road and pipeline in a densely wooded section of the small Nkhudzi Hills component of the park, with associated intake, treatment, and distribution infrastructure outside the property. At the time of the mission the construction phase was at an advanced stage, including the clearance of vegetation and alignment of about half of the steep access road within the property. The office facilities were complete and running, while the construction of the water treatment facility at the base of Nkhudzi hill (outside the property) was estimated at >60% completion.

[19]See Annex 4 for a list of stakeholders consulted

Great excitement and support for this project was expressed by almost all the beneficiary groups consulted - including government authorities, tourism investors, hoteliers, NGOs and local communities. The majority of them stated that the project was long-overdue, and that it was critical for improving their livelihoods, community health and sanitary conditions as well as for providing business opportunities. However, the mission noted that the project was challenged on several occasions by concerned members of civil society in respect of environmental concerns and weak stakeholder involvement. A chronological summary of major events in the development of this project since 2018, edited from a report by the 'concerned citizens residents' on environmental concerns related its funding[20] is presented in **Annex 7**.

The mission was concerned by the following issues in the project development process to date:

- The Kuwait Fund for Arab Economic Development (KFAED) appears to have authorized funding of the project without the necessary due diligence in respect of the site's World Heritage status, as long ago as May 2018.
- The ESIA was initiated before a detailed project design had been undertaken. The 'design and build' contracting procedure led to complications in the preparation of the ESIA.
- Apparently, the construction site was also handed over to the contractor on 18 December 2020 prior to completion and approval of the ESIA.
- The Draft ESIA was not prepared in accordance with the *Operational Guidelines for the Implementation of the World Heritage Convention*, and not submitted to the World Heritage Centre for review in a timely manner. Similarly, the feasibility study report reportedly predating the ESIA was not availed to UNESCO for review.
- Project construction commenced without due regard to the ESIA review comments (July 2021) and subsequent recommendations (December 2021), respectively, by UNESCO, including on the possibility of relocating the project to an alternative site outside the property.

It should also be mentioned that at about the same time that this mission was being carried out, the European Investment Bank (EIB; a development partner for Water projects in Southern Malawi region) initiated on 14th March 2022 a 'Complaint Review Mechanism' related to this project.[21] Specific areas of complaint are: (i) lack of alternative assessment and biodiversity assessment (ii) Gaps in stakeholder engagement (iii) Construction planned inside a UNESCO World Heritage Site (iv) Non-compliance to UNESCO Convention and recommendations and (v) Environmental and Social Safety issues related to construction.

It becomes immediately apparent that the planning and the subsequent funding for this project almost five years prior to this mission (in 2018) did not accord due attention to both the technical options available and particularly the environmental concerns. For instance, considerations for alternative project location outside the premises of the World Heritage property, including the water tank

[20]The Kuwait Fund for Arab Economic Development (KFAED) loan to Malawi. Its impact on Lake Malawi National Park: A world heritage site as-well-as Its impact on Nkudzi Hill also located within the Park which is also a cultural Heritage site (Unpubl.). This (undated) report was written by 'concerned citizens and residents' on the Mangochi Potable water supply project (at Nkudzi Bay) funded by Kuwait/Kuwait Fund for Arab Development and examines mainly the environmental considerations related to funding and implementation of the project by KFAED.

[21] Details at https://www.eib.org/en/about/accountability/complaints/cases/srwb-water-supply-and-sanitation-programme-sg-e-2022-05

component, was based almost entirely on the cost component - as also reiterated during the presentation to the mission by the technical staff of the project.

The participation of key stakeholders - both internal and external (including UNESCO), was also at best sporadic particularly during the early stages of the project. Consequently, their ideas could not be comprehensively gathered and fully considered as the project evolved. The approval of project ESIA and commencement of project construction by the State Party without due regard to the concerns raised by UNESCO is also particularly regrettable. It is therefore clear that this project had a multiplicity of inherent inconsistencies against the requirements of the *Operational Guidelines*. Ideally, any major construction project within this World Heritage site without due diligence to environmental concerns sets a concerning precedence and should be avoided.

### Actions by the State Party in addressing the potential environmental impacts of the Mangochi Water Supply Project

- Mitigation measures to address the full spectrum of identified environmental impacts for this project, including lake siltation and disruption of the aesthetic values of the property have been detailed in the revised ESIA (hitherto not endorsed by UNESCO).
- The proposed location of the water tank was determined through a feasibility study but based mainly on cost criteria. Regrettably, the report of this feasibility study report (justifying this viewpoint) was not shared with UNESCO for review.
- Stakeholder involvement process has since been strengthened. A task team of concerned stakeholders has been formed to jointly monitor the implementation of impact mitigation measures for the project as provided in the ESIA.

With regard to aesthetic impacts (criterion vii) of the 8m high water tank, the mission established that at its proposed location, it is almost fully concealed within the topography of the hill and camouflaged in the surrounding dense and 18m+ high mature forest trees. Given the chain of project environmental safeguard inconsistencies associated with this project puts any contingency options at addressing them (such as re-designing or relinquishing the project altogether) at crossroads - especially because of the substantial investments already undertaken. During this mission, construction had already reached an advanced stage (e.g. about 60% for the water treatment facility and 100% for the office blocks, respectively). Thus, relocating the water tank, for instance (a component of the project that is planned within the property periphery) outside the property, appears already overtaken by events. Strengthening the ESIA as deemed necessary and strictly implementing the independently verified mitigation measures against the potential impacts of this project on the OUV of the property appears to be a reasonable option.

> Recommendation 7: New infrastructure projects should be planned outside this very small property. In case a future infrastructure development proposal is unavoidable within the property or in its wider setting, that has the potential to impact its OUV, an ESIA in accordance

with the 'Guidance and Toolkit for Impact Assessment in a World Heritage Context'[22] is essential to be carried out ensuring that

i) The ESIA must be completed before any decisions are taken or construction works commence;

ii) Stakeholder consultation must be integrated into the whole ESIA process, which includes different mechanisms of consultations and allows sufficient time for meaningful participation. This includes consultation with the UNESCO World Heritage Centre and IUCN;

iii) Alternative options are considered throughout the various stages of the ESIA process, which allows for the project details to be revised as necessary.

Recommendation 8: Restore as fully as possible the environmental damage that has already been caused to the property from the works associated with the construction of the Mangochi water storage tank.

Recommendation 9: Minimize any inevitable damage to the property from the Mangochi water supply project through full implementation of independently verified mitigating measures as set out in the project ESIA. Particular attention needs to be given to measures designed to (i) minimize run-off and possible siltation of waters along the shoreline, (ii) ensure that as many mature trees as possible are retained as close as possible to the water tank and other infrastructure so as to hide it from view and maintain the outstanding natural beauty of the site, and (iii) mitigate indirect impacts to biodiversity caused by access to the forest due to the road.

## 4.4 Impact of tourism activities and infrastructure on the property's OUV

The recent COVID-19 pandemic was the primary concern for all tourism stakeholders consulted. Visitation, revenue generation as well as employment have all gone down. For instance, foreign visitation dropped by >90% in 2019 at the Kayak concession within the Park forcing a staff lay-off of >70%. Similarly, foreigner visitation to the park dropped from 2,595 in 2019 to a mere 214 in 2021 with a corresponding revenue drop of 81%. In the longer term, however, tourism is likely to remain the financial mainstay for the property, and an economic multiplier for the surrounding local communities. These potential benefits of tourism should be nurtured and consolidated as they are likely to enhance the protection of the property's OUV.

On the other hand, tourism activities within the property have the potential, if not well regulated, to negatively impact on its OUV so that the very values meant for attracting tourism activities could be compromised. As recognized by the 2014 Reactive Monitoring Mission, and again during the Advisory Mission in 2018, the current mission observed that tourism within the property continues to be low-volume low-impact. The actual investment profile within the property has not changed much since the 2014 mission in terms of services, infrastructure, and facilities although the new draft GMP provides for an addition of a few more concession investments. However, adjacent to the park, the volume of

[22] Available at: https://www.iucn.org/resources/jointly-published/guidance-and-toolkit-impact-assessments-world-heritage-context

tourism activities is considerable and mounting. According to the hotel managers consulted, there are 75 tourist accommodation facilities along the Mangochi District lakeshore area alone. The mission was also informed that over the years, the Chembe enclave village in the Cape Maclear tourist hotspot has been hosting an increasing volume of visitors, which Bootsma (2018)[23] observed to be developing in a rather dis-orderly manner during an advisory mission.

### Actions by the State Party in regulating Tourism activities

- The 2019-2024 Management Plan and the 'Tourism Strategy for Lake Malawi National Park World Heritage Site Destination' (both in draft form) have been prepared and both strongly advocate for low-volume high-value tourism.
- The Management Plan provides for a clear zonation of tourist facility development and visitor use. There are only two eco-friendly concession sites at the moment, and two others have been earmarked for facility development, with a modest bed capacity not exceeding 24.

The impacts of COVID-19 apart, contribution of tourism in generating revenues for the preservation of OUV of the property and its multiplier effect on the local community economies adjacent the property and beyond are demonstrated. The State Party has over the years continued to consistently embrace a low-volume low-impact tourism policy within the property, which is consistent with the principles of sustainable tourism and should be further sustained. The current plans to promote additional environmentally conscious investment within the property, including in the form of concessions complements efforts at consolidating the much-needed financial base of the property. However, in the course of these investments, the State Party should exercise precaution with regard to the appropriate environmental safeguards in accordance with Paragraph 172 of the Operational Guidelines. Furthermore, tourism developments outside of the property is a growing concern and should also be subject to the same environmental safeguards and assessment of impacts on the OUV of the property prior to any decision making.

> **Recommendation 10:** Continue to promote sustainable tourism initiatives and ensure that new concessions proposed within or in the wider setting of the property are subject to the appropriate ESIA procedures and that draft ESIA reports are submitted to the UNESCO World Heritage Centre for review by IUCN prior to approval, in accordance with Paragraph 172 of the Operational Guidelines.

## 4.5 Effectiveness of wildlife monitoring activities

It is on the basis of analysis of the long-term population trends that an effective management of wildlife resources can be ascertained and sustained. However, monitoring of aquatic resources within the property continues to be affected by lack of know-how and resources. A monitoring protocol for aquatic and socio-economic attributes (also referred to as a fish monitoring protocol in past State of

[23]See also Bootsma HA (2018) *Advisory mission to assess the management of Lake Malawi National Park World Heritage Site*, 11th -18th March 2018. Final Report Submitted to the World Heritage Centre, Africa Unit. Mission conducted as part of International Assistance project 2895 (https://whc.unesco.org/en/intassistance/2895/).

Conservation report and State Party reports) exists since 2016[24] elaborating on monitoring methods, variables, and data management although its review in 2018, funded through the international assistance mechanism of the UNESCO World Heritage Fund, identified several areas for improvement[25]. However, this document has not been finalized (based on the review) and according to the State Party, there is inadequate capacity in terms of human, physical and financial resources to operationalize it. Thus, monitoring continues to be carried out on a fragmented basis by individual scientists and institutions focusing on specific topics of their choice - not necessarily on long-term population monitoring basis. Examples include transect studies on the Maleri islands under the SADC/GEF Lake Malawi Nyasa Biodiversity Project from 1996-1999 and the ongoing studies at Thumbi West Island established by researchers from the Chancellor University of Malawi. This lack of comprehensive and consistent long-term monitoring of aquatic resources is of particular concern since fish forms the key attributes of the OUV of the property.

With regard to terrestrial monitoring, although the surrounding hills within and outside of the property have been subject to indiscriminate wood harvesting pressure for years, again no comprehensive long-term monitoring has been undertaken. Accordingly, there are no recent data on the actual implications on the terrestrial resources so far. Some limited dead wood collection by communities is allowable under the strict supervision of Malawi National Park's authorities. However, during field visits at Chembe village, the mission witnessed clear signs of forest degradation indicating unsustainable harvesting of standing wood on adjacent hills within the terrestrial part of the property.

### Actions by the State Party to improve wildlife monitoring

- The permanent aquatic monitoring transects within Lake Malawi continue to be studied by individual scientists and institutions, although sporadically. This is a commendable step, given the current scarcity of resources facing the property for implementing the existing monitoring protocol.
- The Fisheries Department is also conducting water quality surveys and research on fishing practices annually where resources allow. This has allowed for sharing of important findings (potentially affecting the OUV of the property) with the park management authority.
- There are plans to strengthen the capacity of the property in undertaking long-term aquatic monitoring. This entails establishing and capacitating specific research and monitoring unit within the Park and improving collaboration and partnerships with national and international research institutions and independent researchers.

The ongoing aquatic resources monitoring efforts by individual scientists and the external and national institutions, particularly the fisheries department, have so far generated important insights on the diversity and population dynamics of fish within and outside the property. It is good news that fish monitoring protocols are in place, albeit in draft form. There is a need to approve and allocate adequate funding in order to systematically implement them over the longer term. Synergizing and

[24]Kanyerere GZ (2016) *Protocol for monitoring Lake Malawi National Park: A marine protected area and world heritage site*. Fisheries Department. Lilongwe.
[25]Boostma HA (2018) *ibid*

consolidation of these monitoring efforts should be prioritized in order to allow for an informed adaptive management of the OUV of the property.

> Recommendation 11: Enhance and implement the framework provided by the 2016 monitoring protocol to enable the monitoring of the status of the property's OUV, and to provide for an adaptive management approach. This should include indicators for the aquatic habitats (such as water quality and clarity, abundance of rock-algae, and the abundance and diversity of fish populations) as well as the terrestrial habitats (vegetation, mammals, birds etc.) and socio-economic parameters.

> Recommendation 12: Develop a lake-wide system for the routine monitoring of selected indicators of the 'ecological health' of the waters and biota inhabiting the lake.

## 4.6 Status of oil exploration activities in the lake

If not well managed, oil exploration and exploitation, especially in the fragile aquatic environments, can easily result in environmental catastrophe. Accidental oil spillage, for instance, can lead to massive fish kills and devastate aquatic biota.

### Current plans and actions by the State party with regard to oil exploration activities

- There is currently no oil exploration activity in Lake Malawi, since the two concessions owned by Hamra Oil Holdings (previously owned by Surestream Petroleum) that had been in operation in blocks 2 and 3 (Figure 4.6-1) were renounced during the Covid-19 pandemic period.
- Some seismic surveys were conducted previously in the northern part of the lake when the concession was owned by Surestream and data were submitted to the State Party. These data were not made available to the mission.
- No surveys were carried out by RAKGAS during the period of their exploration concession within the southern portion of the lake (including the World Heritage property) (see Fig.4.6-1 below), since block 4 was reportedly cancelled (see also State Party State of Conservation report, 2020 at: https://whc.unesco.org/en/soc/4134).
- The State Party created a new Ministry of Mines in 2021 and has recently established a state company to exploit mineral resources on behalf of the people of Malawi.
- A policy consultation is underway, and the 1983 Petroleum Exploration and Production Act is under review with the intention of putting in place robust new legislation with provisions for strong environmental protection measures.

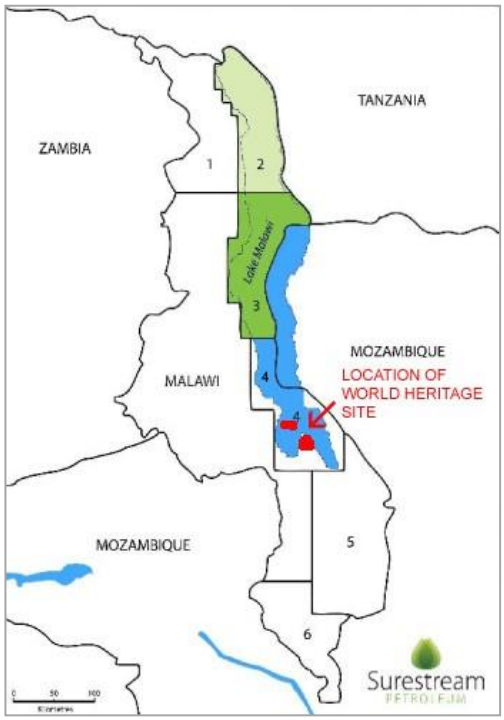


Figure 4.6-1. Location of oil and gas exploration concessions covering Lake Malawi and its surroundings. Blocks 2 and 3 are held by Hamra Oil Holdings (previously held by Surestream Petroleum). Block 4 previously held by RAKGAS was cancelled (Image: Adopted from the UNESCO/IUCN Reactive Monitoring Mission Report, 2014).

Plans to explore for oil in Lake Malawi by the State Party have been a subject of discussion by the Committee since at least 2013[26]. This mission could not fully ascertain the current status of oil exploration plans, however, the mission understood based on consultations with the new Ministry of Mines that previous oil exploration licenses have been cancelled and that there is a temporary suspension on issuing new licenses.

Recommendation 13: Recalling the World Heritage Committee's established position that oil, gas and mineral exploitation are incompatible with Heritage status, ensure that any of oil exploration or exploitation concessions attributed in Lake Malawi do not overlap with the World Heritage property and avoid areas with potential for extension of the property including Alliance for Zero Extinction (AZE)

Recommendation 14: In case any plans to explore or mine for oil or other minerals within Lake Malawi or its immediate catchment are considered, the proposals are subject to an Environmental and Social Impact Assessment (ESIA) that is developed in accordance with the highest international standards and in line with the new *Guidance and Toolkit for Impact Assessment in a World Heritage Context,* and submitted in accordance with paragraph 172 of

[26]See details in Section I

the Operational Guidelines to the UNESCO World Heritage Centre for review by IUCN before any decisions are taken or exploration activities are commenced.

Recommendation 15: Keep the UNESCO World Heritage Centre and IUCN updated regarding the outcome of the mining sector policy consultations and review currently underway of the 1983 Petroleum Exploration and Production Act.

## 4.7 Progress and prospects for extension of the property

Lake Malawi National Park is a serial site comprising 12 small islands and four mainland areas, together with the surrounding waters up to 100 meters from the shoreline. It covers just 0.02% of the lake's total area but is reckoned to support about half of the lake's fish diversity (which provides the primary justification for its OUV). Since the time of its inscription in 1984 protection of a larger area, more representative of the lake's biodiversity and underlying evolutionary processes, has been envisaged. However, currently, most of the lake habitats that lie outside the LMNP are subject to intense livelihood pressures. Furthermore, although the State Party is clearly supportive of extending the boundary of the property so as to enhance its integrity, there are no concrete steps in place towards this realization. This mission suggests a model action plan for extension of the property as presented in Annex 8.

### Action by the State Party to extend the property

- A recent study identified 22 Key Biodiversity Areas (KBAs) within river, lake and wetland habitats of Lake Malawi and its catchment[27]. These included six Alliance for Zero Extinction (AZE) sites within the lake itself, which support the last remaining populations of certain Endangered (EN) or Critically Endangered (CR) species. These present potential areas for possible extension of this property but they have not been explored further.
- Consultations with Tanzania and Mozambique on the potential for transboundary extension of the property have not commenced.

Scientists recognize 19 'ichthyogeographic regions' of the lake, each of which supports a unique assemblage of cichlid fish species. Only four of these regions are represented within the LMNP, while most remain unprotected. The mission considers it would be a suitable long-term goal to provide for representative areas of each of these 'ichthyogeographic regions' to be fully protected within an extended world heritage property.

It is evident that over the years, the State Party has sustained efforts towards the protection of the OUV of this property. It is of concern, however, that there are no matching efforts outside the property - so that the externally driven threats continue to potentially impact the OUV of the property including its conditions of integrity. One way to reverse this detrimental trend, is to ensure that a wider margin of these values, including those that may currently exist outside the current boundary of the property are equally protected.

[27]Sayer, C.A., Palmer-Newton, A.F. and Darwall, W.R.T. (2019). *Conservation priorities for freshwater biodiversity in the Lake Malawi/Nyasa/Niassa Catchment*. Cambridge, UK and Gland, Switzerland: IUCN. xii +214pp

Recommendation 16: Initiate measures towards extending the current boundary of the property within Malawi by developing a feasibility study for potential areas that could be included in the extended property, including but not limited to the six Alliance for Zero Extinction (AZE) sites that overlap with the identified Key Biodiversity Areas. The State Party could request external funding support, including, but not limited to, an International Assistance request, to undertake the feasibility study and subsequently consider a boundary modification based on its findings.

Recommendation 17: Take concrete steps to ensure the areas identified through the feasibility study are given protection status in the interim, and that consultations with all stakeholders including local communities are undertaken.

The mission further endorses the recommendations of the 2014 mission that the States Parties of Malawi, Mozambique and Tanzania should investigate the feasibility of increasing protection for additional areas of the shoreline and islands that have been identified as important localities for the protection of endemic fish and evolutionary processes throughout the lake (see also Decision 42 COM 7B.93). Where possible, these areas might be designated as reserves or community-run 'special use zones' and might ultimately be incorporated into an extended trans-national serial property.

# 5. Conclusions and recommendations

The small size and serial configuration of the property (with its 16 separate components) means that it is especially vulnerable to the impacts of a wide range of human pressures, both within and beyond its boundaries. The terrestrial parts of the property contribute to the area's outstanding natural beauty and serve to protect its waters from siltation, runoff and pollution. While the vegetation and biodiversity of the islands is intact, the main terrestrial component on the Cape Maclear peninsula is significantly degraded due to intensive pressure for firewood and other natural resources from five 'enclave' fishing villages and other local communities around the park. Threats from outside the park boundaries have not been fully assessed but include, most notably, (1) intensive fishing activity throughout the lake, (2) siltation, eutrophication and pollution of lake waters, and (3) climate change.

The mission makes the following 17 recommendations.

With regard to Implementation of Management Plan and Recommendations of the 2014 Reactive Monitoring Plan:

Recommendation 1: Consideration should be given to the possible establishment of some totally protected zones within the main block of the park on the peninsula, where current levels of resource use appear to be unsustainable.

Recommendation 2: Continue to encourage and support the local communities in the enclave villages (and around the periphery of the park) including with partners in the establishment of 'brush parks' and other initiatives to sustainably enhance fish breeding as well as promoting alternative livelihood options to reduce the dependence of these communities on the park for fuelwood, thatching grass and other natural resources.

Recommendation 3: Finalize demarcation of the property boundary and resolve the two existing cases of illegal agricultural encroachment within the property and any others that emerge.

Management of fishing practices:

Recommendation 4: Improve agriculture and other land use practices in the headwaters of the river catchments so as to minimize pollution of the lake including through siltation and inflow of agrochemical effluents.

Recommendation 5: Continue to maintain the utmost vigilance in ensuring that non-native species of fish (especially top-level predators such as the Nile Perch and Tiger Fish) are not introduced into the lake or its catchment areas.

Recommendation 6: Continue strengthening the capacity of the Park and other institutions, through both internal means and external support, including enhancing inter-agency synergies and collaboration in sustainably managing the property with a focus on its OUV.

Mangochi water supply project:

Recommendation 7: New infrastructure projects should be planned outside this very small property. In case a future infrastructure development proposal is unavoidable within the property or in its wider setting, that has the potential to impact its OUV, an ESIA in accordance with the 'Guidance and Toolkit for Impact Assessment in a World Heritage Context'[28] is essential to be carried out ensuring that

i) The ESIA must be completed before any decisions are taken or construction works commence;

ii) Stakeholder consultation must be integrated into the whole ESIA process, which includes different mechanisms of consultations and allows sufficient time for meaningful participation. This includes consultation with the UNESCO World Heritage Centre and IUCN;

iii) Alternative options are considered throughout the various stages of the ESIA process, which allows for the project details to be revised as necessary.

Recommendation 8: Restore as fully as possible the environmental damage that has already been caused to the property from the works associated with the construction of the Mangochi water storage tank.

Recommendation 9: Minimize any inevitable damage to the property from the Mangochi water supply project through full implementation of independently verified mitigating measures as set out in the project ESIA. Particular attention needs to be given to measures designed to (i) minimize run-off and possible siltation of waters along the shoreline, (ii) ensure that as many mature trees as possible are retained as close as possible to the water tank and other infrastructure so as to hide it from view and maintain the outstanding natural beauty of the site, and (iii) mitigate indirect impacts to biodiversity caused by access to the forest due to the road.

Regulation of Tourism-related impacts:

Recommendation 10: Continue to promote sustainable tourism initiatives and ensure that new concessions proposed within or in the wider setting of the property are subject to the appropriate ESIA procedures and that draft ESIA reports are submitted to the UNESCO World Heritage Centre for review by IUCN prior to approval, in accordance with Paragraph 172 of the Operational Guidelines.

[28] Available at: https://www.iucn.org/resources/jointly-published/guidance-and-toolkit-impact-assessments-world-heritage-context

### Improvement in Wildlife monitoring

Recommendation 11: Enhance and implement the framework provided by the 2016 monitoring protocol to enable the monitoring of the status of the property's OUV, and provide for an adaptive management approach. This should include indicators for the aquatic habitats (such as water quality and clarity, abundance of rock-algae, and the abundance and diversity of fish populations) as well as the terrestrial habitats (vegetation, mammals, birds etc) and socio-economic parameters.

Recommendation 12: Develop a lake-wide system for the routine monitoring of selected indicators of the 'ecological health' of the waters and biota inhabiting the lake.

### Status of oil exploration

Recommendation 13: Recalling the World Heritage Committee's established position that oil, gas and mineral exploitation are incompatible with Heritage status, ensure that any of oil exploration or exploitation concessions attributed in Lake Malawi do not overlap with the World Heritage property and avoid areas with potential for extension of the property including Alliance for Zero Extinction (AZE) sites.

Recommendation 14: In case any plans to explore or mine for oil or other minerals within Lake Malawi or its immediate catchment are considered, the proposals are subject to an Environmental and Social Impact Assessment (ESIA) that is developed in accordance with the highest international standards and in line with the new *Guidance and Toolkit for Impact Assessment in a World Heritage Context,* and submitted in accordance with paragraph 172 of the Operational Guidelines to the UNESCO World Heritage Centre for review by IUCN before any decisions are taken or exploration activities are commenced.

Recommendation 15: Keep the UNESCO World Heritage Centre and IUCN updated regarding the outcome of the mining sector policy consultations and review currently underway of the 1983 Petroleum Exploration and Production Act.

### Extension of the property

Recommendation 16: Initiate measures towards extending the current boundary of the property within Malawi by developing a feasibility study for potential areas that could be included in the extended property, including but not limited to the six Alliance for Zero Extinction (AZE) sites that overlap with the identified Key Biodiversity Areas. The State Party could request external funding support, including, but not limited to, an International Assistance request, to undertake the feasibility study and subsequently consider a boundary modification based on its findings.

Recommendation 17: Take concrete steps to ensure the areas identified through the feasibility study are given protection status in the interim, and that consultations with all stakeholders including local communities are undertaken.

The mission further endorses the recommendations of the 2014 mission that the States Parties of Malawi, Mozambique and Tanzania should investigate the feasibility of increasing protection for additional areas of the shoreline and islands that have been identified as important localities for the protection of endemic fish and evolutionary processes throughout the lake (see also Decision 42 COM 7B.93). Where possible, these areas might be designated as reserves or community-run 'special use zones' and might ultimately be incorporated into an extended trans-national serial property.

# List of annexes

## Annex 1: Statement of Outstanding Universal Value

Located at the southern end of the great expanse of Lake Malawi, the property is of global importance for biodiversity conservation due particularly to its fish diversity. Lying within the Western Rift Valley, Lake Malawi is one of the deepest lakes in the world. The property is an area of exceptional natural beauty with the rugged landscapes around it contrasting with the remarkably clear waters of the lake. The property is home to many hundreds of cichlid fish, nearly all of which are endemic to Lake Malawi, and are known locally as "mbuna". The mbuna fishes display a significant example of biological evolution. Due to the isolation of Lake Malawi from other water bodies, its fish have developed impressive adaptive radiation and speciation, and are an outstanding example of the ecological processes.

Criterion (vii): The property is an area of exceptional natural beauty with its islands and clear waters set against the background of the Great African Rift Valley escarpment. Habitat types vary from rocky shorelines to sandy beaches and from wooded hillsides to swamps and lagoons. Granitic hills rise steeply from lakeshore and there are a number of sandy bays.

Criterion (ix): The property is an outstanding example of biological evolution. Adaptive radiation and speciation are particularly noteworthy in the small brightly coloured rocky-shore tilapiine cichlids (rockfish), known locally as mbuna. All but five of over 350 species of mbuna are endemic to Lake Malawi and represented in the park. Lake Malawi's cichlids are considered of equal value to science as the finches of the Galapagos Islands remarked on by Charles Darwin or the honeycreepers of Hawaii.

Criterion (x): Lake Malawi is globally important for biodiversity conservation due to the outstanding diversity of its fresh water fishes. The property is considered to be a separate bio-geographical province with estimates of up to c.1000 species of fish, half occurring within the property: estimated as the largest number of fish species of any lake in the world. The lake contains 30% of all known cichlids species in the world. The property is also rich in other fauna including mammals, birds and reptiles.

Integrity

The property is sufficiently large (94.1 km2 of which 7km2 is aquatic zone) to adequately represent the water features and processes that are of importance for long-term conservation of the lake's rich biodiversity and exceptional natural beauty. The water area within the national park protects the most important elements of the lake's biodiversity. It also protects all major underwater vegetation types and important breeding sites for the cichlids. Many other fish species of Lake Malawi are however unprotected due to the limited size of the park in relation to the overall area of the lake. Thus, at the time of inscription the World Heritage Committee recommended that the area of the national park be extended. The property's long-term integrity largely depends on the overall conservation and management of the lake, which falls under the jurisdiction of three sovereign states i.e. Malawi, Tanzania and Mozambique.

## Annex 2: Committee Decision at the Extended 44th session (Fuzhou/Online, 2021)

Decision: 44 COM 7B.82

Lake Malawi National Park (Malawi) (N 289): The World Heritage Committee,

1. Having examined Document WHC/21/44.COM/7B,
2. Recalling Decisions 38 COM 7B.92 and 42 COM 7B.93 adopted at its 38th (Doha, 2014) and 42nd (Manama, 2018) sessions, respectively,
3. Welcomes the finalization of the Management Plan and development of a fish monitoring protocol as well as the enhanced patrol efforts in and around the property;
4. Notes with concern however, that the threats facing the property are continuing and requests the State Party to secure and allocate additional funds to ensure the full implementation of the Management Plan and provide detailed information on management activities;
5. Takes note of the information provided on the cancellation of oil exploration block 4 overlapping with the property, and also requests the State Party to confirm that no further oil exploration activities will be permitted in this block;
6. Expresses its utmost concern for the continuation of oil exploration activities in blocks 2 and 3 covering a large part of Lake Malawi, which pose a potentially severe risk to the lake ecosystem and the Outstanding Universal Value (OUV) of the property, and further requests the State Party to provide more details on the status of these exploration activities and to ensure that an Environmental Impact Assessment (EIA), developed in accordance with the highest international standards and in line with the IUCN World Heritage Advice Note on Environmental Assessment, is submitted to the World Heritage Centre for review by IUCN before exploratory drilling is permitted;
7. Requests furthermore the State Party to provide further details of the proposed new tourism facilities at Cape Maclear, and ensure an EIA is conducted in line with the IUCN World Heritage Advice Note on Environmental Assessment and submitted to the World Heritage Centre for review by IUCN before any decision is taken;
8. Regrets that no monitoring data has been submitted to determine the state of conservation of key species and reiterates its request to the State Party to provide up-to-date and scientifically verifiable monitoring data;
9. Also expresses its concern on the potential impacts by industrial and illegal artisanal fishing methods on fish stocks in the lake and on the OUV of the property and notes the importance of moving towards more sustainable fishing practices in the entire lake to ensure the long-term protection of the OUV;
10. Thanks the African Development Bank and the governments of the Netherlands and Norway for their financial support to the property;
11. Also reiterates its request to the State Party to examine, in consultation with the States Parties of Mozambique and the United Republic of Tanzania, the feasibility of establishing a buffer zone and extending the boundaries of the property to strengthen its integrity, which also takes into consideration the new Key Biodiversity Area (KBA) designations;

12. Requests moreover the State Party to invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to the property to assess its state of conservation in relation to the fisheries and tourism management, law enforcement, wildlife monitoring, oil exploration and to explore the possibility of including the new KBAs as an extension to the property.

## Annex 3: Mission Itinerary

**Monday 28th March** **Arrival, Orientation Meeting and Travel to Site**

| | |
|---|---|
| | Arrival of mission team (a.m.) |
| 1500 -1600 | Orientation meeting at Ministry headquarters, Lilongwe |
| 1700 -2000 | Travel by road to Mangochi District |

**Tuesday 29th March** **Meetings and Site Visit, Water Project and Nkhudzi Hills**

| | |
|---|---|
| 0900-1030 | Presentation and Discussion on the water project with Southern Region Water Board representatives |
| 1100-1300 | Tour of treatment plant under construction and site visit to Nkhudzi Hill, using partially-cleared access road to proposed tank location, returning to treatment plant/site office via proposed alignment of overground pipes |
| 1330-1430 | Meeting with village leaders at base of Nkhudzi Hills |
| 1530-1615 | Meeting with District Civil Society Organisations |
| 1700-1800 | Meeting with Mangochi District Commissioner and administration |

**Wednesday 30th March** **Meetings with park staff and local stakeholders, site visit**

| | |
|---|---|
| 0900-1000 | Meeting with tourist lodge ad cottage owners in the park periphery |
| 1000-1100 | Visit site of an existing water tank within LMNP for Monkey Bay town supply |
| 1130-1400 | Meeting with park staff at LMNP headquarters |
| 1430-1600 | Boat trip around the eastern shoreline of the park, from Monkey Bay to Chembe village, Cape Maclear, via Thumbi Island West |
| 1620-1735 | Meeting with Ripple Africa staff and Chembefishing village beach committee and community members |
| 1745-1830 | Visit to site of derelict Golden Sands Resort, park education centre, museum and entrance gate (facilities under renovation) |

**Thursday 31st March** **Meetings at Monkey Bay and Cape Maclear, return to Lilongwe**

| | |
|---|---|
| 1000-1200 | Meeting with staff at Fisheries Research Institute (Monkey Bay) |
| 1215-1430 | Visit terrestrial parts of the park on Cape Maclear peninsula, including Chembe fishing village |
| 1430-1500 | Meeting with Manager, Kayak Africa (park tourism concession holder) |
| 1530-1900 | Travel to Lilongwe by road |

**Friday 1st April** **Meetings in Lilongwe**

| | |
|---|---|
| 0800-0900 | Wrap-up meeting at Ministry headquarters, and press briefings |
| 0915-1100 | Meeting with advocacy NGO and legal representative |
| 1500-1530 | Meeting with Ministry of Mines representative |
| 1530-1630 | Wrap-up meeting with technical team |

**Saturday 2nd April** **Departure of international experts**

## Annex 4: List of People Met

| Name | Role &Organisation |
|---|---|
| | |
| Introductory meeting, Lilongwe (Monday 28th March 2022) | |
| Lovemore Mazibuko | Director, Department of Museums & Monuments |
| Mulekeni Ngulube * | Malawi National Commission for UNESCO |
| Mary Chilimampunga * | Deputy Director, Department of National Parks and Wildlife |
| Oris Malijani * | World Heritage National Focal Point, Department of Museums & Monuments |
| Biswick Mlaviwa * | Manager (EIA and Pollution Control), Malawi Environmental Protection Authority |
| David Mulera | Malawi National Commission for UNESCO |
| Potiphar Kaliba * | Deputy Director, Department of Museum & Monuments |
| Tawonga Mbale Luka | Acting Director General, Malawi Environmental Protection Authority |
| | |
| Site Office, Mangochi District Water Supply Project, Nkhudzi (Tuesday 29th March 2022) | |
| Rajab Janah* | Principal Wildlife Officer, Lake Malawi National Park |
| Caroline Chizalema | Environmental Advisor, Southern Region Water Board |
| Talandila Kasapila * | Park Manager, Lake Malawi National Park |
| EngJacquline Dias | Chief Engineer, Southern Region Water Board |
| Mc Philip Mwithokona * | Chief Park Warden, Lake Malawi National Park |
| Christopher J Magomelo | Malawi National Commission for UNESCO |
| Mussa Chingamba | On-site Engineer, Southern Region Water Board |
| | |
| Village Community Leaders (water project beneficiaries), Nkhudziarea (Tuesday 29th March 2022) | |
| Stanley Eliyeza | Village Head –Mwonyama area |
| Aleni Alnsel | V.H. -Aleni |
| Alick Mnami | V.H. - Lundu |
| Fransisco Jali | V.H Jonasi |
| Daniel Sonjo | V.H Daniel |
| Benjamin Fandika | V.H Kabichi |
| Grey Nyasulu | V.H Nyondo |
| Sosten Kholo | V.H Kabichi |
| Pastor Kazimu | V.H Mwanyama |
| LileFara | V.H Mwanyama |

| | |
|---|---|
| | |
| **Civil Society Organisations, Mangochi District (Tuesday 29th March 2022)** | |
| Joseph Makwakwa | Community Initiative for Self Reliance (CISER- CSO) Network Chair |
| Joseph Chamambala | District Civic Education Officer, National Initiative for Civic Education |
| Aggry Mfune | Executive Director, SEEED Malawi |
| Gasiano Nicholas | Gender Officer, Catholic Commission for Justice & Peace -CSO Governance Thematic Group |
| Funny Chilembo | Youth Net & Counselling (YONECO) |
| | |
| **Mangochi District Administration (Tuesday 29th March 2022)** | |
| Enford Kanyimbo | District Commissioner |
| Dominic Mwandria | Director of Admin |
| | |
| **Lodge Owners Association, Mangochi District (Nkhudzi area) (Wednesday 30th March 2022)** | |
| Chumwemwe Singo | Mogforts Lake Resort |
| Dafter Majiya | Ziboliboli Lodge |
| Davis Nambe | Chairman, Lodge Owners Association, Zimctha |
| Sam Salima | Nkhudzi |
| | |
| **Ripple Africa Community-based fish conservation project, Cape Maclear (Wed 30th March 2022)** | |
| Maxwell Banda | Coordinator, Ripple Africa fish conservation project |
| Amos | Ranger, DNPW, Cape Maclear (Chembe beach) |
| Oscar | Fisheries officer, Cape Maclear (Chembe beach) |
| | |
| **Fisheries Research Unit, Monkey Bay (Thursday 31st March 2022)** | |
| James Banda | Fisheries Research Officer, Fisheries Research Unit, Monkey Bay |
| Vincent Chiwanda | Researcher, Fisheries Research Unit, Monkey Bay |
| | |
| **Park Tourism Concessionaire, Cape Maclear (Thursday 31st March 2022)** | |
| Joseph Kamanje | Manager, Kayak Africa (Tourism Concession, LMNP) |
| | |
| **Wrap-up meeting, Lilongwe (Friday 1st April 2022)** | |
| Dr Michael Usi | Hon Minister, Ministry of Tourism, Culture and Wildlife |
| Chauncy Simwaka | Principal Secretary, Ministry of Tourism, Culture and Wildlife |
| Brighton Kumchedwa | Director, Department of National Parks and Wildlife |

| | |
|---|---|
| Lovemore Mazibuko | Director, Department of Museums & Monuments |
| Duncan Chambamba | Chief Executive Officer, Southern Region Water Board |
| Simon Mbvundula | Public Relations Officer, Ministry of Tourism, Culture and Wildlife |
| Mathews Malata | Association of Environmental Journalists in Malawi (AEJ) |
| Dominic Nyasulu | National Coordinator, National Youth Network on Climate Change |
| Herbert Mwalukomo | Executive Director, Centre for Environmental Policy and Advocacy (CEPA) |
| Paul Mzembe | KPMJ& Associates (legal advocate) |
| | |
| **Ministry of Mines, Lilongwe (Friday 1st April 2022)** | |
| Maxwell Kujara | Mining Inspector, Ministry of Mines |
| | |
| **Note:** Persons highlighted by a * were core national representatives who accompanied the mission throughout (park staff attended only meetings in/around the park, not Lilongwe) | |

## Annex 5: Terms of Reference

At the extended 44th session (Fuzhou/Online, July 2021), the World Heritage Committee requested the State Party of Malawi to invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to the Lake Malawi National Park World Heritage property "to assess its state of conservation in relation to the fisheries and tourism management, law enforcement, wildlife monitoring, oil exploration and to explore the possibility of including the new KBAs [Key Biodiversity Areas] as an extension to the property" (Decision 44 COM 7B.82).

In a meeting held between the State Party, World Heritage Centre, and IUCN on 18 November 2021, it was agreed that the mission would additionally review the Mangochi water supply project proposal.

The joint World Heritage Centre/IUCN Reactive Monitoring mission to the property is planned to be carried out from 27 March to 2 April 2022

The mission will review the state of conservation of the property by carrying out the following tasks:

1. Assess the progress made to implement the Management Plan of the property and the 2014 Reactive Monitoring mission recommendations;
2. Review the plans and policies that regulate commercial and artisanal fishing within the property and in its wider setting, and assess the enforcement capacity and effectiveness of these regulations to protect the property's Outstanding Universal Value (OUV);
3. Review the Feasibility Study and the revised Environmental and Social Impact Assessment (ESIA) report for the Mangochi water supply project, assess the potential impacts of this project on the property's OUV and provide technical inputs to the design and execution of this project to ensure protection of the property's OUV, including its integrity, management and conservation;
4. Review the extent of the tourism activities, including the tourism infrastructures present and proposed within the property and in its immediate surroundings, particularly around Cape Maclear, review the plans and policies that regulate tourism activities and developments, including the Sustainable Tourism Strategy, and assess the effectiveness of these regulations to support sustainable tourism and protect the property's OUV;
5. Review the plans and activities for wildlife monitoring within the aquatic and terrestrial components of the property, and provide recommendations to strengthen these plans and activities;
6. Review the current status and proposed plans for oil exploration in Lake Malawi, and assess the potential impacts of these plans on the OUV of the property;
7. Review the current property boundaries, provide technical recommendations on any boundary changes that could be considered by the State Party and advise on taking such recommendations forward, in consideration of the Committee's request to the State Party to examine, in consultation with the States Parties of Mozambique and the United Republic of Tanzania, the feasibility of establishing a buffer zone and extending the boundaries of the property to strengthen its integrity, which also takes into consideration the new Key Biodiversity Area (KBA) designations;

8. In line with paragraph 173 of the Operational Guidelines, assess any other relevant conservation issues that may have an impact on the OUV of the property, including the conditions of integrity and protection and management.

The State Party should facilitate necessary field visits to key locations in relation to the above objectives. The mission should hold consultation meetings with representatives of the State Party of Malawi, including the Ministry of Tourism, Culture and Wildlife, the Department of Museums and Monuments, the Department of Parks and Wildlife, the Ministry of Natural Resources, Energy and Mines, the Department of Fisheries and other relevant government bodies as deemed necessary. The mission should also hold consultations with a range of relevant stakeholders, including representatives of the local communities residing in the National Park, non-governmental organizations (including Ripple Africa regarding the Lake Malawi National Park fish conservation project, USAID and PACT Inc. about the REFRESH project, and others as necessary), representatives of the tourism sector (lodge owners, interest groups, etc.) and relevant national and international scientists and experts, including from the University of Malawi.

In order to ensure adequate preparation of the mission, the State Party should provide the following items to the World Heritage Centre as soon as possible:

a) Current version of the Management Plan of the property;

b) The Feasibility Study and the revised Environmental and Social Impact Assessment (ESIA) report for the Mangochi water supply project;

c) Information, including a map of locations of all existing and proposed tourism activities and infrastructures within the property and in its immediate vicinity, possible ESIAs for tourism infrastructure developments that were completed, are currently underway and those that are proposed;

d) Full details, including Environmental and Social Impact Assessments of the proposed oil exploration activities in Lake Malawi, including a map of the concession areas and details of the activities, operations and environmental safeguards envisaged;

e) The most recent monitoring data of key species, including an analysis of recent trends if available;

f) Detailed maps of the property, illustrating the WH property boundaries and its buffer zones;

g) Any other material related to the property's state of conservation, which would facilitate the mission's work.

Please note that additional information may be requested from the State Party and key stakeholders during the mission.

Based on the assessment of available information and discussions with the State Party and stakeholders, the mission will develop recommendations to the World Heritage Committee regarding the status of the property in line with the Committee Decisions and provide guidance on further recommended actions for the conservation of the property's OUV, including its conditions of integrity. It should be noted that recommendations will be provided in the mission report, and not during the course of the mission.

The mission will prepare a report on the findings and recommendations of this Reactive Monitoring mission as soon as possible after the completion of the mission, following the standard format, for review by the World Heritage Committee at its 46th session.

## Annex 6: Composition of mission team

The following individuals represented the World Heritage Centre and IUCN on the field mission to Lake Malawi National Park World Heritage property. The conclusions and the recommendations in the report were developed jointly between the mission representatives and the institutions. The final product represents the official position of the World Heritage Centre and IUCN based on available information from a range of sources. These do not necessarily reflect the views of each individual members of the mission team.

World Heritage Centre representative: James Wakibara

IUCN representatives: Davison Saruchera and Peter Howard

## Annex 7: Key fault action timelines in the course implementing the Mangochi Water Supply Project

| Date(s) | Issue | Remarks |
|---|---|---|
| May 11, 2018 | Southern Region's Water Board (SRWB) received through Government of Malawi receives from Kuwait Fund for Arab Economic Development (KFAED) a loan of 5,000,000 Kuwait Dinars (US$ 17.0m) for the project. Signed at the occasion of 'Africa 2018 Forum' in Dec 2018 | KFAED, founded in1961 is Kuwait's institution providing development assistance which is highly sensitive to environmental concerns. In the course of project development and prior to approvals, the fund demands full environmental considerations including comprehensive ESIA reports (https://climatechangenews.com/2011/html/kuwait-fund.hml). It is not clear if due diligence in this regard was observed during the signing and approval process as the ESIA report came out three years later (in July 2021) |
| Aug, 2018 | Consultancy for undertaking Environmental and Social Impact Assessment (ESIA) for the project advertised by SRWB | The ESIA refers to a feasibility study that reportedly predated the ESIA. UNESCO has not seen the feasibility study |
| July 2020 | Bids for detailed designs and construction advertised by SWRB | In any case detailed designs for the project should have preceded the ESIA as these are part of these are also subjected to impact assessments |
| Nov 3, 2020 | Successful bidder (Alghanim International General Trading and Contracting Company/PLEM Construction Joint Venture signed contract | Handed-over the site on 18, Dec 2020 with construction planned for Jan 2021-June 2022. Immediately SWRB sought approval from MEPA for project implementation prior for ESIA being completed and approved. |
| Feb 17, 2020 | Malawi Environmental Protection Agency (MEPA) requests ESIA from SWRB | The request came after the construction site has been handed-over |
| May 11, 2021 | MEPA issues an Environmental Protection Order to stop construction work until ESIA is reviewed; fined SRWB MWK 5m for commencing construction without ESIA approval | June 25, 2021 SRWB sought waiver of the Order to continue with works; Granted by EPA on June 27 to continue construction of staff houses and office block. Stopping and lifting of the Order was thus done at short time-intervals. |
| 19 July 2021 | Draft ESIA submitted to UNESCO | July 27, 2021 UNESCO recommends alternative locations for the project and noted Draft ESIA did not contain a specific chapter on impacts on OUV or Heritage Impact Assessment. Requested to be consulted further before a final decision is made on the project. But works under SRWB continued against the requirements of the WHC Operational |

| | | |
|---|---|---|
| | | Guidelines |
| Nov 9,2021 | MEPA issues another Closure Order against the Project on environmental concerns | Shortly followed by notice of approval with conditions on Dec 21, 2021 and lifting of Closure Order on Jan 6, 2022. SWRB begins surveys for implementing the project |
| Feb 22,2022 | | Physical works on the hill, prior to approval of revised ESIA by UNESCO |

## Annex 8: Towards an action plan for extension of the Lake Malawi National Park World Heritage property

### Introduction and Justification

Lake Malawi National Park is one of the world's smallest natural World Heritage properties, and covers just 0.02% of the lake's surface area. Within this small area, it is estimated that as many as half the lake's extraordinary diversity of cichlid fish can be found. This, however, also implies that the park is not as fully representative of the lake's outstanding biodiversity and evolutionary processes as it could be, and the World Heritage Committee has repeatedly recommended its extension, since it was first inscribed on the World Heritage List in 1984.

The evolutionary processes that have resulted in the extraordinary diversity of cichlid fish in Lake Malawi represent a unique example of adaptive radiation in which isolated populations of fish have developed in different ways to the particular environments in which they live. Scientists recognize 19 'ichthyogeographic regions' of the lake, each of which supports a unique assemblage of cichlid species (Figure 6.1). Four of these regions are represented within the LMNP, while most remain unprotected. It would be a suitable long-term goal to provide for representative areas of each of these 'ichthyogeographic regions' to be fully protected within an extended world heritage property.

Such an objective faces a number of challenges. Firstly, fishing provides lakeshore communities with a livelihood, and the lake has always been a 'traditional common' with freedom to fish anywhere. Fishing is a mainstay of the Malawian economy (and to a lesser extent the economies of neighbouring Tanzania and Mozambique). Secondly, there are political and administrative challenges in coordinating a unified approach to developing and managing a suitable network of protected sites across the lake. There is a long-standing boundary dispute between Malawi and Tanzania, while Mozambique has inherited a different administrative setup from the other two states, based on its different colonial legacy.

In recognition of these challenges, and the importance of extending the property to make it more fully representative of the lake's OUV, the mission recommends a phased approach, with the initial effort concentrated within Malawi's own jurisdiction. Thus, a medium-term goal for an initial phase of extension would be to incorporate representative areas from each of the 12 'ichthyogeographic regions' occurring in Malawi. Some of these areas are likely to coincide with six of the designated lacustrine Key Biodiversity Areas, namely Makanjira, Mbenji Island, Chizumulu Island and Taiwanese Reef, Tukombo-Sanga Strip, Chilumba and Young's Bay, and Lower Songwe River.

### *Implementation Requirements and Action Plan*

The mission recognizes the following requirements and recommends that the extension process follows a number of stages as detailed below:

***Stage 1***. Secure 'project' finance

*Stage2.* Identify a committed individual and/or organization to lead the initiative. The nature of the 'project' is such that it might best be undertaken by a non-governmental organization, but strong leadership (and political acumen) will be crucial to the success of the project

*Stage 3.* Carry out a desk study to identify potential 'target areas' based on known fish distributions/ichthyological regions, the existence of existing forest reserves and/or other protected areas along the shoreline, and review of satellite imagery (such as universally available from Google Earth).

*Stage 4.* Identify stakeholders at national and regional level and engage with them;

*Stage 5.* Carry out rapid field assessments of the potential sites identified from the desk study, and develop a short list. Short-listed sites should be as large as possible, but smaller sites in critical areas of the lake should be included in the short list where necessary, recognizing that viable populations of small fish such as mbuna can be sustained in relatively small areas.

*Stage 6.* Hold public consultations with members of fishing communities and other stakeholders in short-listed areas to identify issues and develop suitable protection strategies

*Stage 7.* Develop a range of strategies for protection and management of different sites according to local conditions, recognizing that total protection is unlikely to be possible in all cases

*Stage 8.* Prepare draft national legislation and/or local byelaws to provide for the recognition, boundary description, protection, and management of the various sites.

*Stage 9*. After further stakeholder consultation, pass legislation and/or byelaws and submit a boundary modification request to the World Heritage Centre in accordance with the Operational Guidelines.

*Stage 10.* Secure finance for protection and management of the extension areas and facilitate the development of tourism to provide alternative livelihoods for communities that have been affected by the introduction of new restrictions on fishing.

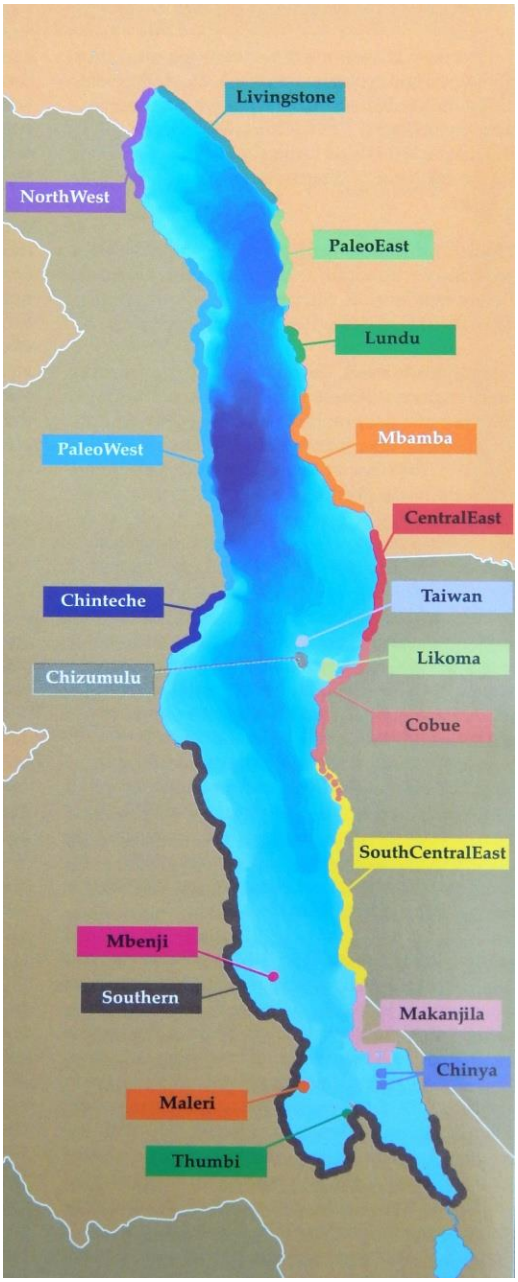


*Figure 6.1. Definition of distinct 'ichthyogeographic regions' around the shores and islands of the lake, based on distribution and diversity of mbuna cichlid fish (see pp. 332-353 in Snoeks, 2004 for detailed discussion)*[29].

[29] Adopted: *Snoeks, J. (ed) (2004). The cichlid diversity of Lake Malawi/Nyasa/Niassa: identification, distribution and taxonomy. El Paso: Cichlid Press (www.cichlidpress.com)*

## Annex 9: Photos from the Mission

The Mangochi Water Supply Scheme will erect a potable water storage tank on the visible, low-lying gap between the two small mountains. Photo ©IUCN/Davison Saruchera

A dirt road, inside the National Park, going up the mountain to the site of the water storage tank is being constructed. Photo ©IUCN/Davison Saruchera


Heavy machinery is still on site to finish the construction works, after which the road will be surfaced carefully in order to blend with the natural environment. Photo ©IUCN/Peter Howard

Mission team having a brief discussion with key stakeholders on site, where the storage tank will be built. Photo ©IUCN/Davison Saruchera


Entrance to the Mangochi Water Supply Scheme water purification construction site, located outside the national park. Photo ©IUCN/Peter Howard

Construction works at the water purification site are at an advanced stage. Photo ©IUCN/Peter Howard

Mission team in consultation with the local community in Nkhudzi. Photo ©Caroline Chizalema

National Park boundaries are often breached by community livelihood activities Photo ©IUCN/Davison Saruchera

Consulting with a Community Conservation Forum in Cape Maclear. Photo ©IUCN/Davison Saruchera

Fishing remains a major livelihood activity along the lake shores. Photo ©IUCN/Davison Saruchera

The mission team received a tremendous support from various departments of the government. Photo ©Vincent Chiwanda


The Mission Team. Photo ©Rajab Janah