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Wildlife Conservation Society

RED LIST OF THREATENED SPECIES AND ECOSYSTEMS, IDENTIFICATION AND MAPPING OF KEY BIODIVERSITY AREAS (KBAs) IN MOZAMBIQUE

FINAL REPORT (VOL. I)





KBA KEY BIODIVERSITY AREA

RED LIST

Supporting the Policy Environment for Economic Development (SPEED+)

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Quoting specific data from experts:

Name	Data Set Description	Specific credits
Collen Beeg	Point data, threats and information on lion, leopards, wilddogs in Niassa National Reserve, Mozambique	Niassa Carnivore Project
Holly Rosier	Lion sightings from 2017 to 2019 including collar data. Plus information on other vulnerable species within Coutada 9	Rio Save Safaris Lda Coutada 9
CTV	Information on Coral Reef, Sea Turtle, Mangrove forest monitoring in Mozambique	Centro Terra Viva
Endagered Wildlife Trust	Data on Raptors, vultures, flamingos in Mozambique	Endagered Wildlife Trust
Kristoffer Everatt	Excel file of species presence points, accompanying map, published journal on lion abundance an threats, leopard abundances and cheetah occupancy, non-published reports on lions, cheetah, wild dogs, leopards	Kristoffer Everatt
Piotr Naskrecki	Population and distribution data on lions, Elephants, Wild dogs, hippos, Vultures and several other threatened and endemic species.	Gorongosa Restoration Project
Alan Gardiner	Population data on Elephants, Hippopotamus, Lions and Leopards in the Marromeu Complex region.	Alan Gardiner
Valerio Macadza	Reports on current distribution, status and management of Hippopotamus amphibius in Mozambique	Faculdade de Agronomia e Engenharia Florestal
Armindo Araman	Annual census reports, and distribution of fauna species in Mozambique	National Administration of Conservation Areas
Célia Macamo	Information on the occurrence, distribution and conservation status of mangroves in Mąmbique, including at the species level	Eduardo Mondlane University,
Erica Tovela	Data from fish collections. Georeferenced data of works carried out in the Natural History Museum.	Museu de Hstoria Natural
Isabel Silva	Marine Data collected by the University of Lúrio	Isabel Marques da Silva, University of Lúrio
Natasha Ribeiro	Dendrometric data from Niassa Special Reserve (2004, 2009, 2015, 2019). Dendrometric data from Limpopo National Park Dendrometric data from Gile National park Burning regime of Niassa special Reserve, Limpopo National Park and Gile National Park	Faculty of Agronomy and Forestry Engineering
Paula Santana Afonso	Occurrence data of artisanal fisheries species	IIP, Artisanal Fishing Data - SNAPA

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CONTENTS

EXECUTIVE SUMMARY

This report describes the activities, main results, challenges, conclusions, recommendations and next steps that resulted from the implementation of the project "Red list of threatened species, ecosystems, identification and mapping of Key Biodiversity Areas (KBAs) in Mozambique", which started in February 2019 in a joint partnership between WCS-Mozambique, the National Directorate of Environment (DINAB), under the Ministry of Land and Environment (MTA), using funding from SPEED+, a USAID programme. This report may thus be used as a guide by other countries that wish to develop projects with similar objectives.

The Red List of Threatened Species and Ecosystems are IUCN initiatives that constitute a critical indicator of the state of biodiversity, allowing authorities to direct conservation efforts towards priority species and ecosystems. Key Biodiversity Areas or simply KBAs are sites contributing significantly to the global persistence of biodiversity. They are identified based on internationally accepted scientific criteria, allowing them to support i) spatial planning and conservation priority setting, ii) strategic expansion of networks of protected areas, iii) inform environmental safeguard policies for the private sector, iv) provide opportunities for local communities, and v) are indicators of Convention on Biological Diversity (CBD) Aichi Targets 11 and 12, as well as Sustainable Development Goals (SDGs) 14 and 15.

The objectives of the Project were to: (i) establish the National Coordination Group (NCG) for the Key Biodiversity Areas, the Red List of threatened Species and Ecosystems and promote its use in spatial planning and decision-making, (ii) conduct global Red List assessments for endemic and near-endemic species of amphibians, reptiles, freshwater fish, butterflies and ecosystems, (iii) identify and map KBAs according to the 2016 IUCN's Global Standards and (iv) build national capacity to identify, prevent and mitigate impacts on priority biodiversity (threatened species and ecosystems and KBAs).

The implementation of the project involved the creation of a coordination team and 8 technical working groups divided by taxonomic group (plants, insects, amphibians and reptiles, freshwater fish, birds, mammals, marine biodiversity in general, and terrestrial ecosystems).

The project had the involvement and contribution of more than 100 national, regional and international experts, and more than 20 national institutions (government, academia, research institutes, conservation partners, civil society and the private sector). Three larger workshops were held, involving around 130 people, which aimed to train Mozambican specialists on the Red List criteria, identification of KBAs and delineation of their boundaries. Dozens of face-to-face and remote meetings were also held to share information, including specific meetings to establish the National Coordination Group, and to validate the proposed KBAs.

As a result, the project established a National Coordination Group that guides the KBA and Red List processes. It is currently composed of about 20 institutions, many of them from the Government, and is chaired by DINAB. The project identified and mapped 29 KBAs for Mozambique, of which 25 are terrestrial and 4 are marine, occupying a total area of 139,947.05 km^2. A total of 67 species of freshwater fish amphibians, reptiles and butterflies were assessed according to IUCN Red List criteria. It was found that 47% are at risk of extinction unless initiatives and activities are implemented to reverse this trend.

In addition, the technical working group on ecosystems carried out a preliminary mapping of the historical ecosystems of Mozambique, and a first Red List of terrestrial ecosystems assessment.

The project also resulted in the translation into Portuguese of the *Guidelines on Business and KBAs*, which identify good environmental practices that development projects should follow when implemented in or around KBAs. It constitutes an important tool for both the private sector and Government, especially for application in the spatial planning and environmental impact assessment process.

Finally, the project trained young early career Mozambican biologists in the process of organizing data and conducting Red List and KBA assessments and enabled the integration of one of the Mozambican experts into the IUCN Regional Species Survival Commission.

The 29 KBAs that were identified and mapped from this project are crucial to guide the preparation of development and land use plans (terrestrial and marine), from local to national levels. Their inclusion as a decision-making support tool contributes to minimizing the impact of infrastructures and development projects and to support the strategic expansion of the national network of conservation areas, strengthening the conservation policy framework. On the other hand, the update of the Red List for the 67 faunal species is crucial to support the monitoring and improvement of the conservation status of endemic or near-endemic species in Mozambique. The information produced thus contributes to the achievement of CBD objective 12 that encourages countries to ensure the protection of all endemic, rare and threatened species. It also contributes to the effective implementation of the National Biodiversity Strategy and Action Plan (NBSAP) required by the Convention on Biological Diversity (CBD), constituting a valuable tool for Mozambique to align with the new Global Biodiversity Framework post-2020.

BACKGROUND

Mozambique is a developing country with a wide diversity of ecosystems and rich in natural resources. However, all of this potential is threatened by environmental degradation caused by deforestation, wildlife poaching and overfishing, as reflected in the latest report from the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES). To ensure the future well-being of Mozambican citizens, where most depend directly on ecosystem services for their survival, it is necessary to find ways to retain and conserve the country's biological richness and diversity.

Various initiatives set out guidance to help ensure that the tools to inform the policies and actions of governments, international agencies, the public sector, private sector and non-governmental organizations in favour of biodiversity conservation are available. One such initiative aids the identification of species most under threat of extinction, so that authorities can target conservation efforts to where they are most needed. Led by the International Union for the Conservation of Nature (IUCN),the global Red List of Threatened Species has become recognized as the global conservation standard, drawing attention to the most critically threatened species around the world (WCS 2016). In Mozambique, the National Red List Working Group, led by the National Institute for Agricultural Research (IIAM), began a few years ago to mobilize primary biodiversity data for endemic, near endemic and restricted range species of conservation interest, focusing their efforts on flora species.

Another initiative is the Key Biodiversity Areas (KBAs), which are sites that contribute significantly to the global persistence of biodiversity. Global standards for the KBAs identification were set in 2016 through the KBA Partnership, which is currently comprised of 13 of the world's leading nature conservation organizations, including the Wildlife Conservation Society (WCS). As a member of this partnership, WCS has the responsibility to support the identification, mapping, conservation and promotion of KBAs, raising funds to develop projects in the regions in which it operates, having already led a project in Uganda and carrying out similar initiatives in other countries, such as Canada.

Specifically, for Mozambique, recognizing the importance of these initiatives on improvement of conservation activities, the United States Agency for International Development (USAID), through the SPEED+ Project "Supporting the Policy Environment for Economic Development", funded the present project "*Red List of Threatened Species, Identification and Mapping of Key Biodiversity Areas (KBAs) in Mozambique*", which started in February 2019. This project was conducted by WCS-Mozambique, working closely with the National Directorate for Environment (DINAB), which is under the Ministry of Land, Environment, and Rural Development (MITADER), in cooperation with the members of the Mozambican red list working group. Among other responsibilities, DINAB is responsible for coordinating and overseeing the implementation of the National Biodiversity Strategy and Action Plan (NBSAP).

The current project had the **following objectives**:

1. Establish the National Coordination Group (NCG) for the Key Biodiversity Areas, the Red List of threatened Species and Ecosystems and promote its use in spatial planning and decision-making;
2. Conduct global Red List assessments for endemic and near-endemic species of amphibians, reptiles, freshwater fish, butterflies and ecosystems
3. Identify and map KBAs according to the 2016 IUCN's Global Standards;
4. Build national capacity to identify, prevent and mitigate impacts on priority biodiversity (threatened species and ecosystems and KBAs)

This is the first of four volumes that detail the project's information. The current volume describes the activities, main results, challenges, conclusions, recommendations and proposed next steps that resulted from the implementation of the project. It is organized by objectives, and within each, per activity. For each activity the work undertaken, and the main results achieved since the project started are summarized. Several annexes with relevant complementary information are also included.

The full package of reports of the project "*Red List of Threatened Species, Ecosystems, identification and mapping of Key Biodiversity Areas (KBAs) in Mozambique*" is comprised of the volumes below, each of which can be consulted independently:

- VOL. I – Final Report: Red List of Threatened Species, Ecosystems, identification and mapping of Key Biodiversity Areas (KBAs) in Mozambique
- VOL. II –Key Biodiversity Areas (KBAs) identified in Mozambique: Factsheets
- VOL. III – Brief analysis and recommendations on the type of potential management and protection for the Key Biodiversity Areas (KBAs) identified in Mozambique (only available in Portuguese)
- VOL. IV – Legal framework of the Red Lists of threatened species and ecosystems and the Key Biodiversity Areas in Mozambique (only available in Portuguese)

There are also the following complementary projects:

- Project Inception report (only available in English)
- Report of the initial KBA training and workshop (only available in English).
- Report of the initial Red List of threatened species assessment for amphibians, reptiles, freshwater fish and Lepidoptera (only available in English).
- Report on Ecosystem Mapping and Scoping of Red List Assessment for Mozambique as triggers for KBA identification (only available in English).
- Brief interim report: Red List of Threatened Species, Ecosystems, identification and mapping of Key Biodiversity Areas (KBAs) in Mozambique Project (only available in English).
- Project's Booklet/brochure (available in Portuguese and English)
- Project's Policy Brief (available in Portuguese and English)
- Portuguese translation of the *Guidelines on Business and KBAs: Managing Risk to Biodiversity*
- Project final powerpoint presentation (available in Portuguese and English)

OBJECTIVE 1: ESTABLISH THE NATIONAL COORDINATION GROUP FOR THE KEY BIODIVERSITY AREAS, THE RED LIST OF THREATENED SPECIES AND ECOSYSTEMS AND PROMOTE ITS USE IN SPATIAL PLANNING AND DECISION-MAKING

ACTIVITY 1.1: KICK-OFF MEETING, INCEPTION REPORT WITH DETAILED WORK PLAN AND VALIDATION MEETING

KICK-OFF MEETINGS WITH THE MAIN PARTNERS

Before the official project Kick-off meeting, two Pre-kick-of meeting were held in mid-February, with the main project partners, namely SPEED + and DINAB, in order to make an update on the status of the project kick start and to define the accurate dates for the project's official kick-off meeting with the relevant stakeholders.

The Project official kick-off meeting with SPEED+, DINAB and USAID was held on 19th March of 2019, at SPEED+' office (*Figure 1*). The project approach was presented, and a draft of the inception report was discussed. The final workplan was agreed upon, including the schedule of the main events. This information was then included in the inception report (topic below) and the updated workplan was shared with all project partners.

Figure 1 - The Project official kick-off meeting with USAID, SPEED+, and DINAB on 19th March, 2019

As established in the proposal, it was agreed that the coordination team would be comprised of the Project Manager (Hugo Costa), the Technical Coordinator (Hermenegildo Matimele) who were supported by the Project Assistant (Eleutério Duarte). Domitila Raimondo and Krystal Tolley from the South African National Biodiversity Institute (SANBI) as well as Luca Malatesta from SECOSUD II would also provide support to the coordination team. A team of Data Management Assistants (DMAs) was created and allocated to the taxonomic working groups, being responsible for collecting and processing the available data. This team was composed of staff hired by this project and also by the SECOSUD II project, which provided direct support to the project by contributing with four Data Management Assistants. Although these were not involved full time in the project, they would

contribute to data collection and processing, participation in the weekly coordination meetings and all workshops.

FINAL INCEPTION REPORT

The Inception report included the project description, project objectives, methodology, main outputs and the project team, including the preliminary list of specialists for each taxonomic working group. It began to be prepared in February 2019 and after several updates were made, the final version was submitted in early April 2019.

CONTACTS, AND MEETINGS WITH THE PROJECT'S MAIN STAKEHOLDERS

During the project's kick start, several contacts were established with the most relevant stakeholders, with whom the workplan and letters explaining the project approach were shared. About 42 institutions were contacted (list available in *Annex 1*).

From the end of February to the end of April 2019 several specific meetings were held with relevant institutions, such as institute for Agricultural Research of Mozambique (IIAM), National Directorate for Land Use Planning and Resettlement (DINOTER), Natural History Museum (MHN), International Union for Conservation of Nature (IUCN), National Institute for Fisheries Research (IIP), Eduardo Mondlane University (UEM), National Fund for Sustainable Development (FNDS), National Administration of Protected Areas (ANAC), Ministry of Agriculture and Food Security (MASA), World Wide Fund for Nature Conservation (WWF), Centro Terra Viva (CTV), as well as the MOZBIO, LAUREL and CORDIO projects, among others (see the meetings list in *Annex 2*) The objectives of these meetings were to explain in detail the different phases of the project and agree on the details, for collaboration on the project.

ESTABLISHMENT OF MEMORANDUMS OF UNDERSTANDING AND CONTRACTS

To improve the collaboration and commitment of the different institutions in the project, proposals of MoUs were developed and disseminated with different institutions. MoUs were established with 4 institutions and data sharing agreements with 13 entities (see Table 1*)*. Contracts were also established with the technical staff hired as temporary workers or subcontractors, who were also covered by a Data Sharing Agreement. This was the case of the Project Coordinator, the Project Assistant, four Data Management Assistants (Herpetofauna, Insects, Freshwater fish and Plants), several international specialists who provided technical support on the Red List Assessments, and the KBA Secretariat, which provided training, technical support and review of the KBA assessments. Some institutions have chosen not to sign MoUs or data sharing agreements.

Table 1- Agreements established with different institutions and people under project

Agreement Type	Institutions
MoUs	National Institute for Fisheries Research (IIP)
	Centro Terra Viva (CTV)
	Gorongosa Restoration Project (GRP)
	Faculty of Natural Sciences of University of Lúrio
Data Sharing Agreement	Niassa Carnivore Project / TRT Conservation Foundation (NPC)
	Rio Save Safaris Lda. - Coutada 9
	Centro Terra Viva (CTV)
	Kristoffer Everatt
	Endangered Wildlife Trust- EWT
	Valério Macandza

Agreement Type	Institutions
	Armindo Araman
	Alice Massingue
	Erica Tovela
	Paula Santana Afonso
	Isabel Silva
	Natasha Ribeiro
	Célia Macamo

BUSINESS BREAKFAST TO SHARE THE PROJECT

On the International Day for Biological Diversity, 22nd of March, a "Business Breakfast" was held at Radisson Blue Hotel to share the project with the key stakeholders, namely the project objectives, technical approach, current status and expected results (Figure 2). This event was attended by 41 people from different institutions from Government, academia, donors, NGOs, consultants, developers and others. The event and the project were announced in the news by "Jornal Notícias".

Disclosure materials, a summary and a brochure were also prepared, distributed at the event, and shared by email with the stakeholders.

Figure 2 - Business breakfast to share the project, held on 22nd of March the International Day for Biological Diversity,

ACTIVITY 1.2 BRIEF ANALYSIS OF THE LEGAL FRAMEWORK APPLICABLE TO THE RED LIST AND KBAS IN MOZAMBIQUE

PREPARATION OF A PRELIMINARY LEGAL ANALYSIS OF THE PROJECT TO SHARE WITH THE LEGAL ADVISOR

In mid-March 2019, a draft of the brief analysis on how KBAs and RL adjust with the national legal and policy framework was prepared to send to the project's legal advisor Gildo Espada (conservation law specialist).

MEETING WITH LEGAL ADVISOR TO DEFINE THE SCOPE OF WORKS AND OUTPUT

In early April a meeting with the legal advisor Gildo Espada was held, to agree on details regarding the scope of legal works, which included (i) preparation of a brief analysis on how the project results can be linked to national policies and legal framework, providing important tools for decision-making (Topic above) and (ii) preparation of brief analysis on the potential of the identified KBAs to be proclaimed as Protected Areas according to the categories included in the Conservation Law 5/2017.

The preliminary legal analysis prepared by the project team was then shared with the legal advisor, who revised it and complemented with additional relevant information. This analysis showed that the initiatives of the Red List and KBAs are aligned with several Mozambican legal framework, such as: i) Conservation policy, and strategy for its implementation; ii) Policy and strategy of the Sea (POLMAR); iii) NBSAP (2015-2035), iv) Law of protection, conservation and sustainable use of Biological Diversity, and its regulation; v) Regulation on the Environmental Impact Assessment; vi) Regulation of the Territorial Planning Law, vii) Regulation Establishing the Legal Regime for the use of the national maritime space (RJUEM) and other law instruments. In addition, both initiatives (Red List and KBAs) are aligned with Mozambique's international commitments, as a Party of several international conventions aimed at the protection and conversation of biological diversity. The detailed information resulting from this analysis is available in the VOL. IV "Legal framework of the Red Lists of threatened species and ecosystems and the Key Biodiversity Areas in Mozambique" only available in Portuguese.

CONTRIBUTION TO MOZAMBIQUE'S NATIONAL TERRITORIAL DEVELOPMENT PLAN (PNDT) AND TO THE MARINE SPATIAL PLAN (POEM)

The National Territorial Development Plan (PNDT) was developed between 2018 and 2019 and aims to "*establish priorities for planning urban and population expansion, agriculture and biodiversity conservation, as well as the materialization of the main network of transport and communications infrastructures, energy, waterworks including water supply and sanitation*". Several meetings were thus held with the National Directorate for Territorial Planning and Resettlement (DINOTER) and with the technical team responsible for the Plan, in order to ensure the recognition of the KBAs in the PNDT. The result was that the final document taken to public consultation included the KBAs as important areas for biodiversity and areas to avoid with regard to development projects. Although to date it has not been possible to include the new KBAs (according to IUCN Global Standard 2016) in the PNDT maps, the document, which is more like a policy guideline, clearly states that KBAs have to be recognised by any Provincial, District or Special Plan as avoidance areas with regard to development strategies, plans, programs or projects that may compromise species and ecosystems in these areas. It also states that updated maps of KBAs should always be consulted in any of these spatial planning exercises.

The Government is currently preparing the National Marine Spatial Plan (POEM), which is not expected to be finalised until mid-2021. The project team engaged with the Government and the consultants' team to incorporate the Marine and Coastal KBAs as avoidance areas for development projects/activities that may compromise the key biodiversity of these areas. The KBAs have already been included in the POEM characterisation report as areas of high biodiversity value.

CONTRIBUTION TO THE PROPOSAL OF REGULATION ON AVIFAUNA MANAGEMENT, PROTECTION AND SUSTAINABLE USE, AND TO THE PROPOSAL LIST OF PROTECTED BIRD SPECIES

The project team revised and commented on several versions of the draft regulation on avifauna management, protection and sustainable use, and the proposed list of protected bird species, suggesting several improvements to the document. Some of the main contributions were the inclusion of Key Biodiversity Areas (KBAs) as protection areas for birds and their habitats, where development activities should be avoided, and the inclusion of requirements on habitat management activities targeted at birds.

CONTRIBUTION TO THE NEW REGULATION ON BIODIVERSITY OFFSETS

In coordination with the project Conservation, Impact Mitigation and Biodiversity Offsets (COMBO), KBAs were included as areas to be avoided in terms of development projects and as preferred offset receiving areas in the guidelines to the adequate application of the mitigation hierarchy according to the Decree 54/2015 of December (Environmental Impact Assessment regulation), as well as with the new biodiversity offsets regulation that, at the moment, is in the phase of initial public consultation. It is expected that this regulation will be approved during 2021.

CONTRIBUTION TO THE PROPOSAL LIST OF MARINE PROTECTED SPECIES

The project team also contributed to the list of marine protected species for Mozambique, which was included in the Marine Fisheries Regulation (REPMAR) published at the end oof 2020. The species were proposed mainly based on their current threat category (CR, EN, VU) and other characteristics, such as migratory behavior.

ACTIVITY 1.3 ESTABLISH THE NATIONAL COORDINATION GROUP FOR KBAS AND RED LISTS

INITIAL MEETING WITH THE POTENTIAL NCG HOST ENTITY - DINAB

An initial meeting with DINAB (host entity) was held on the 22nd February of 2019, which allowed to explain the main objectives of NCG, and the expected role of DINAB as the its potential hosting entity. It was agreed between DINAB and the project team that a proposal of specific ToRs for the former as NCG host entity should be developed. These were reviewed by DINAB on March 2019.

PREPARATION OF THE PRELIMINARY LIST OF POTENTIAL MEMBERS

During the meetings held in early 2019 with the main partners to explain the project approach, the concept of the NCG was introduced, its objectives and how it would work. These meetings also resulted in the identification of the potential members and institutions for Mozambique's NCG. The preliminary list of potential members was shared and agreed with DINAB on March 2019.

DEVELOPMENT OF THE DRAFT OF THE NCG'S TOR

In mid-May 2019, a draft of the NCG ToR for Mozambique was developed, based on international experience, the standard ToRs provided by the KBA Community, and the ToRs that had recently been developed by Canada and South Africa.

MEETINGS TO DISCUSS AND APPROVE THE NCG'S TOR

On the 28th of May 2019, the first meeting was held to tentatively create the NCG (Figure 3). It was attended by 20 potential members, representing 15 institutions. International guests from Birdlife International, Dr Andrew Plumptre (Head of KBA Secretariat) from the United Kingdom, and Simmy Bezeng from BirdLife South Africa also attended the meeting. At this meeting the head of the KBA Secretariat presented the KBA Partnership, focusing on the objectives and functionality of the National Coordinating Group (NCG). The preliminary Mozambique NCG ToRs started to be discussed jointly. After the meeting, the draft of the NCG ToR was shared with all potential members to receive additional comments.

Figure 3 - The NCG first meeting at DINAB office on 28th May 2019

After all additional comments were incorporated, two further NCG meetings were held, to continue discussing and jointly reviewing the Mozambique NCG's ToRs by several of the potential members. This exercise allowed to adjust the ToR to Mozambique's context and needs. The second meeting was held on the 18th of July 2019 at SPEED+ office and was attended by 22 potential members. The third meeting was held on the 6th of August 2019 at WCS's office and was attended by 15 potential members (Figure 4). After these meetings, all the new comments were taken into consideration and the NCG ToRs were finalized.

Figure 4 - On the Left: The Second NCG meeting on 18th July 2019; On the Right: The third NCG meeting on the 6th August 2019

At the end of August, the latest version of the Mozambican NCG ToRs, which resulted from the first three meetings, was submitted to DINAB for official approval. The ToRs of NCG were then approved on the 5th of September at DINAB's office, during its board meeting which involved the heads of all DINAB departments (Figure 5). The final ToRs were subsequently shared with all potential members.

Figure 5 - DINAB board meeting to approve the Mozambican NCG ToRs,

SHARING OF THE APPROVED TOR WITH ALL POTENTIAL MEMBERS FOR FINAL APPROVAL, AND FOR SUBMISSION OF APPLICATIONS TO THE NCG ELEGIBLE POSITIONS (NCG MANAGEMENT COMITTEE)

Upon the formal approval of the NCG's ToR, these were shared with all potential NCG members for final approval and formal adhesion to the NCG. DINAB also invited the potential NCG members to submit their application for one of the six eligible management positions under the NCG according to the ToR, which are: President, Vice-president, Secretariat, Specialist for KBA, Specialist for Red Lists of Species and Ecosystems, and Focal point for Database Management.

From September to December 2019, several members confirmed their adhesion to the NCG on behalf of their institutions, signing Annex I from the NCG ToRs. To date, about 24 people from 19 institutions have formally joined the NCG (Annex 3).

Due to the lack of applications for some eligible positions, as described in the NCG's ToR, DINAB decided to invite specific members / institutions to apply for the six positions described above. The institutions responded positively to the request.

MEETING TO OFFICIALLY LAUNCH THE NCG IN MOZAMBIQUE, AND ESTABLISH ITS MANAGEMENT COMMITTEE

On the 13th of December of 2019 the fourth meeting was held and the National Coordination Group for the KBAs and Red Lists in Mozambique was officially launched (Figure 6). The management committee was also agreed upon (President: DINAB; Vice President: IIP; Secretariat: WCS, KBA specialist: WWF with support from UEM, Red List Specialist: IIAM with support from ANAC, Focal point in data management: FNDS with support from BIOFUND). In this meeting, the next steps of the NCG were also agreed upon.

Figure 6 - Meeting to reach agreement on the NCG management committee and officially launch the Mozambican NCG

FIRST KBA PROPOSAL FOR MOZAMBIQUE, REVIEWED BY THE MOZAMBICAN NCG

The second and third meetings to discuss the NCG's ToR also allowed the group in formation to review the first KBA proposal for Mozambique under the IUCN guidelines. The proposal was submitted by the project "*Biodiversity information for the Lake Malawi / Nyassa / Niassa catchment Eastern Africa: data for decision makers*", led by IUCN, WWF and IIP, which had the main objective to map the most important sites for the global persistence of freshwater biodiversity (Key Biodiversity Areas, KBAs) in Lake Nyassa. In total, three KBAs were proposed within Lake Niassa on the Mozambican side of the border. The group decided to delegate the review of this proposal to the freshwater fish working group under the current project, as it was comprised of national and regional aquatic biodiversity experts. These reviewed the proposal and made their comments. The final outcome was the acceptance of the proposal to create one small KBA ("*Nkwichi Bay*") in the Mozambican side of Lake Nyassa.

ESTABLISHMENT OF SPECIFIC TORS FOR THE TECHNICAL POSITIONS OF THE NCG MANAGEMENT COMMITTEE

In early February 2020 specific ToRs were developed for the members of the NCG technical positions, namely the focal point for the KBAs, the focal point for the Red List of threatened species and ecosystems and the focal point for the data management, as their specific responsibilities had not been described in detail on the NCG general ToRs (Figure 7).

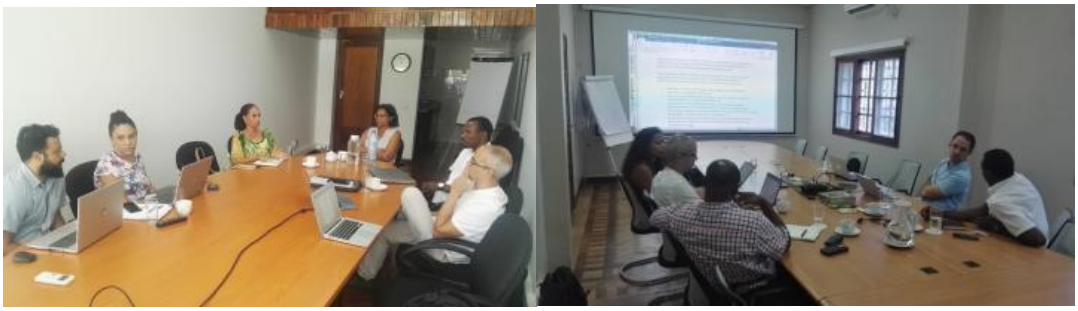

Figure 7 - Meetings to developed specific ToR for the technical positions of the NCG management committee,

DEVELOPMENT OF THE 2020 WORK PLAN PROPOSAL FOR THE NATIONAL COORDINATION GROUP

From February to March 2020, a proposal for the annual work plan of the National Coordination Group was prepared in collaboration with the members of the NCG Management committee, focusing on 5 main components, namely: (i) establishment of specific guidelines for the technical positions of the NCG management committee; (ii) capacity building of the NCG and relevant institutions, in matters of assessments for KBAs and Red List of threatened species and ecosystems, and on the application of these data during decision-making process, (iii) NCG meetings and review of KBA proposals resulting from this project, (iv) dissemination of KBAs results and red list, and (v) fundraising to support the NCG activities.

OBJECTIVE 2: GLOBAL RED LIST ASSESSMENTS UNDERTAKEN OF REPTILES, AMPHIBIANS, FRESHWATER FISH AND LEPIDOPTERA AND KBAS IDENTIFIED AND MAPPED FOR MOZAMBIQUE

ACTIVITY 2.1 HOLD INITIAL WORKSHOP TO EXPLAIN KBA STANDARDS AND CRITERIA FOR THEIR IDENTIFICATION, ALIGN IT WITH THE TAXONOMIC WORKING GROUPS UNDER THE RED LIST WORKING GROUP AND UNDERTAKE JOINT ASSESSMENTS FOR THE RED LIST AND KBAS

SETTLEMENT OF THE FINAL STRUCTURE OF EACH WORKING GROUP AND ESTABLISHMENT OF THE PRELIMINARY LIST OF SPECIALISTS BY WORKING GROUP

The first step was to define the organization model of the taxonomic working groups, which was comprised of:

- **Main Specialists**: experts with recognized knowledge on the specific taxonomic group and with recognized experience in conducting studies in Mozambique,
- **Data management assistant**: the focal point of the group, responsible for compiling and organizing all the information of biodiversity elements in the specific format to support the assessments.
- **Supporting specialists**: usually foreign specialists who had already conducted studies within the country, and held relevant biodiversity data for Mozambique.

Through meetings held with several relevant institutions and specialists, between February and end of April 2019, many specialists from different taxonomic groups were suggested to be invited to be members of the working groups according to their specialty. This resulted in a preliminary list of specialists by working group.

DEVELOPMENT OF TOR FOR THE WORKING GROUPS

In the beginning of April, three specific ToR were developed: i) KBAs; ii) Red List of species; and Red List of ecosystems. Subsequently, the ToR and the invitation letters were shared with all potential specialists who were invited to become members of the groups. The working groups were set based on the feedback received from these specialists (see- Annex 4)

The data management assistants per group were selected based on their experience in data digitization and their previous experience with the respective taxonomic group. In total 8 working groups were established, namely:

- **Herpetofauna (amphibians and reptiles)**
- **Freshwater Fish**
- **Insects/Butterflies**
- **Birds**
- **Mammals**
- **Marine Biodiversity**
- **Plants**
- **Ecosystem**

It should be noticed that for the first three groups (Herpetofauna, Freshwater Fish and Insecta/Butterflies), besides the KBA assessments, conservation status was assessed according to IUCN Red List criteria and categories. This was planned from the project's outset because the threat status of several endemic or near endemic species had not been assessed before and was intended to do so as a way of contributing to the subsequent identification of potential KBAs. The activities performed by the KBA working groups had the following objectives:

- Skills built on data mobilization and application of criteria and thresholds of the Global Standards for identification of KBAs;
- Key Biodiversity Areas in Mozambique identified and mapped;
- Proposals of KBAs submitted by the National Coordination Group to the KBA Regional Focal Point for review and then submitted to the Secretariat for approval and inclusion in the World Database of KBAs

BRIEF MEETING ON THE DATA ORGANIZATION MODEL

After the KBAs working groups were set, in order to build skill on data mobilization and application of KBA criteria according to the new Global Standard, a first online refresh/training meeting was held on the 12th of March 2019. This meeting was conducted by Dr. Andrew Plumptre (the head of the KBA Secretariat) and targeted the data management assistants of each taxonomic working group, including SECOSUD II staff who provided complementary support during the data mobilization and assessments (Figure 8).

Figure 8 - The first online training meeting on data mobilization and application of KBA criteria according to the new Global Standard

ESTABLISHMENT OF A KBA TRIGGER SPECIES LIST

The establishment of the final list of KBA trigger species for the different taxonomic groups was a continuous process. In early March 2019, Dr. Andrew Plumptre provided a preliminary list of potential KBA trigger species for Mozambique, for resident, breeding and non-breeding populations. He also provided some of the species' global data including, shapefiles. All threatened species (CR, EN, VU) were initially filtered from the IUCN Red List database, as well as those with restricted distribution, occurring in Mozambique, including marine species within the Exclusive Economic Zone (EEZ). Subsequently, several contacts were established with the experts from different taxonomic groups to check the preliminary list of KBA trigger species for Mozambique. However, only after the KBA workshop (May 2019) it was possible to receive more feedback from the national experts, and only

then the final list of KBA triggers was finally validated. During this phase the experts revised the scientific names and removed species that were preselected to the list but do not occur in Mozambique. They also added species that although were not on the list, actually occur in Mozambique had the potential to trigger KBA status.

PREPARATION OF THE WORKSHOP: DATA GATHERING

From middle March to May 2019, the data management assistants gathered relevant information for the first KBA assessment exercise. This activity was mainly undertaken by the Mammals, Birds, Plants and Marine Biodiversity working groups, which had the species already globally assessed by IUCN and, consequently, their threat status was already known.

On the other hand, for the Herpetofauna, Freshwater Fish, and Butterflies working groups it was necessary to assess the threat status for a considerable number of species, previous to the KBA Assessment. Therefore, in addition to mobilizing and organizing the required data for undertaking the KBA assessments, the DMAs also had to mobilize data for the Red List assessments.

To conduct a KBA assessment, information at the global and local level is needed to understand whether species meet the thresholds for each criterion assessed. Therefore, initially the DMAs had to compile relevant information at the global scale, for each trigger species. Most of the information collected at this stage corresponded to the species' population size, extent of suitable habitat (ESH), range, localities and threats. Most of the global data was gathered from IUCN's webpage and, in some cases, from published articles and books.

MEETINGS TO PLAN THE APPROACH FOR THE WORKSHOPS

In mid-May 2019, prior to the KBAs workshop, a preparatory planning meeting between the coordination team and Dr. Andrew Plumptre was held, which also allowed determining what additional resources and data gathering would be needed to run the KBA assessments.

Two days before the workshop, another technical preparatory meeting between Dr. Andrew Plumptre and the coordination team, including the Data management assistants from each working group, was held. This meeting allowed the DMAs and the coordination team to receive a pre-training on the KBA assessments (Figure 9).

Figure 9 - Pre-training on the KBA assessments conducted by Dr. Andrew Plumptre

TRAINING WORKSHOP ON THE APPLICATION OF THE GLOBAL STANDARD FOR THE IDENTIFICATION OF KBAS

From 29 to 31 May 2019 the training workshop on the application of the Global Standard for the Identification of KBAs was held at Polana Serena Hotel, Maputo. The training workshop was provided by Dr Andrew Plumptre, using a participatory methodology, theoretical presentations and practical exercises. From this training, around 40 people from different project-partner institutions were trained, including the DMAs and the coordination team.

The practical exercises included the first preliminary KBA assessments for Mozambique (Figure 10). As a result of these assessments, 3 potential KBAs were flagged for the Herpetofauna group, 2 potential KBAs for insects, birds, mammals, ecosystem and marine biodiversity and 1 potential KBA for freshwater fish and plants.

Figure 10 - The training and workshop on the application of the Global Standard for the Identification of KBAs

PARTICIPATION IN A REGIONAL WORKSHOP IN SOUTH AFRICA

A week after the Workshop, the Project Manager (Hugo Costa) and the Technical Coordinator (Hermenegildo Matimele) participated at the *Biodiversity Priorities Mapping* workshop and the *Biodiversity Planning Forum* at the Drakensberg, South Africa, where both presented the work being developed in Mozambique. This participation resulted from an invitation from the South African National Biodiversity Institute (SANBI) and the World Centre for Monitoring and Control (WCMC) from the United Nations Environmental Program (Figure 11). Besides sharing the Mozambican project, the meeting allowed both the Project Manager and the Technical Coordinator to learn from the South African experience and establish relevant contacts to support the continuation of the process in Mozambique.

Figure 11 - Biodiversity Planning Forum, where the project manager and the project coordinator presented the work on KBAs and Red list that was being conducted in Mozambique

MONITORING MEETINGS

During the period of data mobilization, the coordination team together with the experts from the different taxonomic groups, followed-up the whole process, through weekly meetings, which were held with the DMAs of each taxonomic group (Figure 12). At the meetings, the status of the data compilation was assessed, doubts were clarified, recommendations were made and the strategy for the following activities was defined.

Figure 12 - Weekly meetings between coordination team and the DMAs of each taxonomic group

ACTIVITY 2.2 SUPPORT THE ASSESSMENT OF SPECIES DISTRIBUTION WITHIN EACH TAXON OCCURRING IN MOZAMBIQUE BY TAXONOMIC WORKING GROUPS AND IN WHICH SITES THESE OCCUR ACROSS THE COUNTRY

ALLOCATION OF THE DATA MANAGEMENT ASSISTANTS TO THE INSTITUTIONS HOLDING BIODIVERSITY DATA

During the period from mid-March to June 2019, some of the data management assistants (DMAs) were allocated part of their time to the Mozambican institutions holding collections of taxonomic groups of their interest to gather additional information. The herpetofauna DMA was mostly allocated

to the Natural History Museum, while the DMAs for Freshwater Fish, and for Insects/Butterflies, besides the Natural History Museum, were also allocated part of their time to the Fisheries Research Institute (IIP) and the Entomotheque from MASA, respectively.

COMPILATION OF EXISTING BIODIVERSITY DATA FOR RED LISTING ASSESSMENTS WITH THE SUPPORT FROM THE EXPERTS

From mid-March to June 2019 the data management assistants (DMAs) put together all the available relevant data for the species to be assessed. Given that the goal was to undertake a global Red List assessment, the required information had to be gathered at global scale. During this period, information was compiled about the target species' population size throughout the world; information about species ecology including the extent of suitable habitat, altitude and depth to which these can occur; number of localities of species' occurrence worldwide; and information on threats to the species as well as habitat requirements.

The most intensive phase of information gathering for the KBA assessment took place after the KBA training and workshop held in May 2019, as only after that there was the adequate knowledge on how to apply the Global standards and guidelines, which led the experts to have a greater involvement in the project.

After gathering global information for the KBA trigger species for Mozambique, several contacts were established with relevant experts and institutions to collect information at the local level and possible sources of information about the number of individuals, distribution data, habitat quality and potential threats to specific sites in Mozambique, with potential to trigger a KBA. Annex 5 shows the list off all specialists contacted and their contribution to the assessments.

Some of the data was gathered from published information, mainly from the Global Biodiversity Information Facility (GBIF), which holds information from the Natural History Museum of Mozambique, the Entomotheque of the Ministry of Agriculture and Food Security (MASA) and the Mozambican Fisheries Research Institute (IIP), among other sources. Information from international Museums holding collections from Mozambique such as South Africa, Kenya, Zimbabwe, Portugal, and the United Kingdom was also used. After downloaded, this information was assessed, then checked for accuracy and cleaned.

Additional data was provided directly by national and regional specialists who, in turn, contributed with articles and books which contained relevant information for the Red Listing Assessments.

In mid-September, in partnership with ANAC (National Administration for Conservation Areas), letters were prepared and sent to several Protected Areas managers, asking for information on number of individuals, distribution, and potential threats of some KBA trigger species that could potentially occur inside those protected areas.

According to the technical guidelines of the KBAs, data older than 10 years are considered old and possibly not representative of the current situation at each site. (note: due to the scarcity of information, a safety margin was considered, and data with a maximum of 13 years since its publication until 2019 were accepted. In some cases, especially in the group of plants, older data were considered, provided that experts were able to confirm the existence/presence of the species at the site under analysis.

COORDINATION MEETINGS WITH THE DATA MANAGEMENT ASSISTANTS AND WITH THE MAIN SPECIALISTS

The coordination team met with the DMAs on a weekly basis during the compilation of the existing biodiversity data, to monitor and assess the status of the process. Specific meetings were also held between the coordination team and the specialists from the different working groups. Those for which it was most difficult to engage with were the birds and mammals' specialists, so there was the need to try to promote more meetings with these specialists to discuss the group approach, and to identify the potential information source for each trigger species (Figure 13).

Figure 13 - Meeting between coordination team and Terrestrial Mammals specialists

ACTIVITY 2.3. RED LIST ASSESSMENT OF ENDEMIC AND NEAR ENDEMIC SPECIES OF MOZAMBIQUE

The activities performed by the Red List working groups had the following objectives:

- Skills built on data mobilization and application of the IUCN Red List criteria and categories on assessing species conservation status;
- Conservation status of species from four faunal groups assessed;
- Proposals for Red Listing status submitted to IUCN for approval and inclusion in the global Red List of Threatened Species;
- Information produced to inform the process of identifying KBAs in Mozambique;

MEETING ON THE DATA ORGANIZATION MODEL

Similar to the KBA assessment, in order to build skills on data mobilization and application of the IUCN Red List criteria and on the categories to assess species' conservation status, a capacity building meeting was held on 12 March 2019. This was conducted by Hermenegildo Matimele, and was targeted to the data management assistants of each taxonomic working group, not only those who were specifically hired by the project but also those that were provided by SECOSUD II (Figure 14).

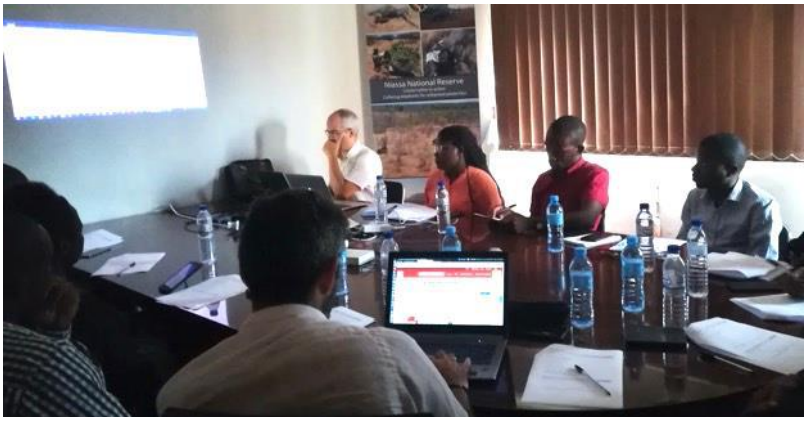

Figure 14- Refresh/training meeting on data mobilization and application of the IUCN Red List criteria and on the categories to assess species' conservation status

ESTABLISHMENT OF PRIORITY SPECIES TO BE ASSESSED

After all the data gathered was analysed by the DMAs and by the coordination team, the list of priority species to be assessed across the four taxonomic groups (amphibians, reptiles, freshwater fish and butterflies) was established and validated by the main specialists of each working group. The list was established with focus to endemic, near-endemic, rare, range restricted, and recently described species.

IDENTIFICATION OF REPTILES, AMPHIBIANS AND FRESHWATER FISH

In April 2019, two South African regional experts were invited by the project and by SECOSUD II (which funded this activity) to travel to Mozambique to support the Maputo Natural History Museum staff on the identification of specimens of some of the collections hold by the Museum. Werner Conradie, a Herpetofauna specialist from Port Elizabeth Museum, was at the Museum from 1 to 5 April 2019 and examined about 400 specimens. Roger Bills, a freshwater fish specialist from South African Institute for Aquatic Biodiversity (SAIAB), was at the Museum between 22 and 26 April 2019, and examined a total of 169 sets of specimens. While in Maputo, these specialists contributed to the identification of specimens that had not been previously identified, others that had been previously misidentified and in organizing the existing collections.

INTENSIVE TRAINING OF ONE OF THE HERPETOFAUNA DATA MANAGEMENT ASSISTANTS ON THE RED LISTING ASSESSMENTS

From April 22nd to May the 3rd of 2019, one DMA (Celso Sardinha) allocated to the Herpetofauna group, travelled to Cape Town, South Africa, to receive specific training on the Red Listing assessments provided by the specialist Krystal Tolley, from SANBI. During this period, data hold by SANBI resulting from several expeditions in Mozambique was also organized so that it could be included in the Red List assessment that the project would undertake. After the intensive training Celso Sardinha shared the knowledge he acquired in Cape Town with the remaining DMAs. This was important to improve their skills on data mobilization and application of the IUCN Red List criteria.

RED LIST ASSESSMENT TRAINING AND WORKSHOP TO UNDERTAKE JOINT ASSESSMENTS OF HERPETOFAUNA, FRESHWATER FISH AND BUTTERFLIES

After gathering the necessary information to run the assessments, between 18 and 21 June 2019, WCS and SPEED+ hosted a training and workshop in Maputo at AFECC Gloria Hotel (Figure 15). Because

assessing species' conservation status under the IUCN Red List requires correct application of the criteria and categories, some supporting materials were shared with the participants in advance to allow for an adequate preparation to the event. On the first day of the workshop, Lize von Staden from SANBI, provided a systematic and intensive training on assessing species' conservation status based on IUCN red list assessment for 38 attendees, including the DMAs and the coordination team. Lize Von Staden is accredited by IUCN to provide this type of training in the region. The assessments of species from four taxonomic groups (Amphibians, Reptiles, Freshwater Fish, and Butterflies) were conducted over the following 3 days.

As a result of the assessments during these 3 days, from the 67 species assessed, 35 (52 %), were considered threatened with extinction (this corresponds to the categories Critically Endangered - CR, Endangered - EN and Vulnerable - VU). The majority was assigned the status of Endangered (26%), followed by Vulnerable (14%) and Critically Endangered (10%) (more details are provided on the specific Red List Training and workshop report). These results were used to inform the process of identifying KBAs. However, initially, for these recently assessed species, only criterion B (restricted distribution) was applied, since criterion A (threatened biodiversity) could only be applied after IUCN published the update of the threat status of the species that were assessed at this workshop.

Figure 15 - Training and Workshop to undertake joint assessments of Herpetofauna, Freshwater Fish and Butterflies

GIS TRAINING SESSION ON CALCULATING THE EXTENT OF OCCURRENCE AND AREA OF OCCUPANCY

A few days after the red listing workshop, on the 25th of June 2019, a brief GIS training session was held, by Luca Malatesta from the SECOSUD II Project, targeted to all DMAs. The objective of this training was to build the necessary skills on the DMAs to calculate the EOO (Extent of Occurrence) and the AOO (Area of Occupancy), which are important metrics to run the red list assessments of threatened species. These concepts had not been fully understood by the DMAs during the Red Listing

workshop, therefore the coordination team together with SECOSUD II decided to provide this additional training.

REVIEW AND SUBMISSION OF THE ASSESSMENT RESULTS TO IUCN

In the months after the red listing workshop, each taxonomic working group had to review all the text filled out during the workshop on the online Species Information Service (SIS), which is the platform made available by IUCN to run the assessments. This was required to ensure the consistency and accuracy of the information before submitting it to IUCN for an independent peer-review.

The Herpetofauna working group was the first to complete the review, having submitted to IUCN the results of the assessments of 38 species (33 Reptiles and 5 Amphibians) in middle July 2019 before IUCN's submission window closed, in order to have the assessments published in the year of submission (2019). Therefore, in December 2019, IUCN published the updated global red list status for some of these species. IUCN peer-review resulted in some changes with some of species being attributed a different category from the one assessed at the workshop (see the *Table 2*). From the 38 herpetofauna species submitted, 28 were formally assigned a threat category by IUCN, which allowed the project team to apply KBA criterion A (threatened biodiversity) to these species. A total of 10 reptile species submitted to IUCN are still pending to be published because they are new species to science and need to be described by the specialists before a status is attributed. This work had already started by the specialists.

The results of the assessments made by the remaining taxonomic working groups, namely freshwater fish (16) and butterflies (13), were submitted to IUCN in March 2020. These are expected to be published in 2021. The table below (*Table 2*) summarizes the numbers of all assessed species that were submitted and published by IUCN.

Table 2 - Summary of numbers of species submitted and published by IUCN.

Summary	Amphibians	Reptiles	Butterflies	Freshwater fish	Total
Number of Submitted species	5	33	13	16	67
Number of Published Species that kept their category during the Review	4	19	-	-	23
Number of Published Species that changed their category during the Review	1	4	-	-	5
Number of Published Species	5	23	-	-	28
Number of Species pending on the publishing	0	10	13	16	39

MOZAMBICAN SPECIALIST RECOGNIZED AS POTENTIAL MEMBER OF THE IUCN SPECIES SURVIVAL COMMISSION SPECIALIST GROUP FOR HERPETOFAUNA

One of the Mozambican specialists collaborating on the project (Harith Farooq) who supported the red list assessment for the Herpetofauna taxonomic group before, during and after the workshop, was invited by IUCN to participate at the Regional workshop on the IUCN Global Reptile Assessment, which was held in South Africa in October 2019. Therefore, he became a potential member of the IUCN Species Survival Commission Specialist Group for Herpetofauna.

ACTIVITY 2.4: SCOPING OF POTENTIAL RED LIST OF ECOSYSTEMS FOR MOZAMBIQUE AS TRIGGERS FOR KBA IDENTIFICATION

SELECTION OF A BASELINE HISTORICAL ECOSYSTEM MAP TO BE USED TO THIS ACTIVITY

Mozambique has no historical ecosystem map at a fine enough scale for use in conservation planning purposes. Although several local or regional vegetation maps or classifications have been produced over the years, only the Wild & Barbosa (1967) and Pedro & Barbosa (1955) vegetation maps provided a national coverage. Unfortunately, they are known to have some limitations and inaccuracies, as well as the scale of mapping is too broad for use for conservation planning or Red List of Ecosystem (RLE) assessments, which is understandable given the technology available in the 1950s and 60s.

The availability of supporting datasets, such as the recently published Trees of Mozambique (Burrows et al. 2018), georeferenced herbarium specimens, and the national forest inventory, supported the possibility of revising the Wild & Barbosa vegetation map published 53 years ago. The urgency for developing a national Red List of Threatened Ecosystems was the ultimate catalyst for revising the vegetation map for Mozambique. Ultimately, this could feed into the identification of Key Biodiversity Areas and its delineation process.

TECHNICAL MEETINGS TO DISCUSS THE DEVELOPMENT OF A HISTORICAL ECOSYSTEM MAP FOR MOZAMBIQUE

On 25 April 2019, the first ecosystem working group technical meeting was held with Mozambican specialists from different institutions (FNDS, IIAM, UEM-FAEF, SECOSUD II and BIOFUND), with the support from WCS's spatial planning team (Hedley Grantham and Kendall Jones) and the international specialist Jonathan Timberlake (Figure 16). The meeting had the objective of discussing the proposed approach, which included: i) confirm that the Flora Zambeziaca map should be the one to use as a baseline; ii) that this map would need to be updated to have the level of detail which is necessary to apply the Red List of Ecosystems assessment; iii) that this improved map should be recognized as the historical ecosystem map of Mozambique; iv) that this would be the map to be used in the KBA assessment.

DEVELOPMENT OF AN IMPROVED HISTORICAL ECOSYSTEM MAP FOR MOZAMBIQUE

Following the meeting described above, contacts were established with Mervyn Lötter, a regional vegetation specialist and also an internationally recognised conservation planner and author of the guide *Trees & Shrubs of Mozambique*, who offered to support the development of the historical ecosystem map, together with the support of other ecosystem specialists with very relevant work done in Mozambique. Mervyn proposed a specific methodology and started developing the map as per the steps below (detailed information for each step can be found at the specific RLE report):

- Collating georeferenced species information
- Create a fine-scaled national coverage of Ecological Land Units (ELUs)
- Assigning environmental variables to each Ecological Land Unit
- Developed a training dataset of typical vegetation types based on expert knowledge and existing classifications
- Classify all ELUs into proposed vegetation types using Random Forest

Figure 16- The first ecosystem working group technical meeting

TECHNICAL WORKSHOP FOR THE RECLASSIFICATION OF FLORA ZAMBEZIACA MAP (WILD & BARBOSA, 1967)

In early October 2019, the coordination team and three of the specialists working on the ecosystem map (Mervyn Lotter, John Burrows and Jonathan Timberlake) undertook a short workshop held at Buffelskloof, Mupumalanga, South Africa. The workshop was held in South Africa because the experts were not available to travel to Mozambique. Hugo Costa (the project manager) and Muri Soares (FNDS specialist member of the Ecosystem Working Group) attended the workshop. At this 2-day event (9 to 10 October), Mervyn Lotter presented the technical work he had developed to improve the Flora Zambeziaca map and received feedback from these specialists (Figure 17). The discussions resulted in a preliminary improved ecosystem map for Mozambique. During the following weeks, Mervyn shared a WebGIS with the remaining ecosystem working group members to collect their comments and inputs to improve the map. Some comments were provided, and Mervyn Lotter continued to work on the improvement of the Flora Zambeziaca map.

Figure 17 – Technical Workshop for the Reclassification of Flora Zambeziaca map

REFINING PROPOSED CLASSIFICATION AND INCORPORATING SMALLER VEGETATION TYPES

Starting from the south, the proposed classification was carefully checked and ELUs were occasionally split and reclassified to improve mapping accuracy. A considerable amount of digitising was done in the mountainous areas and other areas to improve the accuracy of ecosystem units with sharp boundaries. Classification concepts were also revised, and occasional changes were made.

SECOND TECHNICAL MEETING OF THE ECOSYSTEM WORKING GROUP

A second technical meeting with the Ecosystem specialists was held in 11 of November 2019 at WCS office to discuss the preliminary ecosystem map for southern Mozambique and how its loss would be calculated in order to apply criteria A and B of the red list of ecosystems assessment. The meeting was attended by 14 people from different institutions such as UEM, FNDS, BIOFUND, IIAM, including WCS spatial planning experts (Figure 18).

Following this meeting Mervyn Lötter made additional adjustments and shared an improved version of the map (through a WebGIS) with the ecosystem working group. The objective was that specialists could revise the map and provide comments and suggestions for its improvement and validation. However, mostly due to the outbreak of the COVID-19 pandemic it was not possible to get the adequate feedback from the specialists, which prevented additional improvement actions.

Figure 18 - The second ecosystem working group technical meeting

PRELIMINARY IMPROVED HISTORICAL ECOSYSTEM MAP

Till project closure, most of southern Mozambique was mapped (see Figure 19). It is important to note that the final product was not finalized under the scope of this project[1].

An important component of any vegetation map is the vegetation description, so work has begun on documenting the species composition and ecosystem descriptions for each unit. Once finalised, the ecosystem classes would be aligned with the global IUCN Red List of Ecosystem typology to fit into their global hierarchical ecosystem structure.

[1] SPEED+ funded the continuation of this work through a complementary project, and a version 1.0 of the historical ecosystem map was finalized in February 2021 (Lotter et al. 2021).

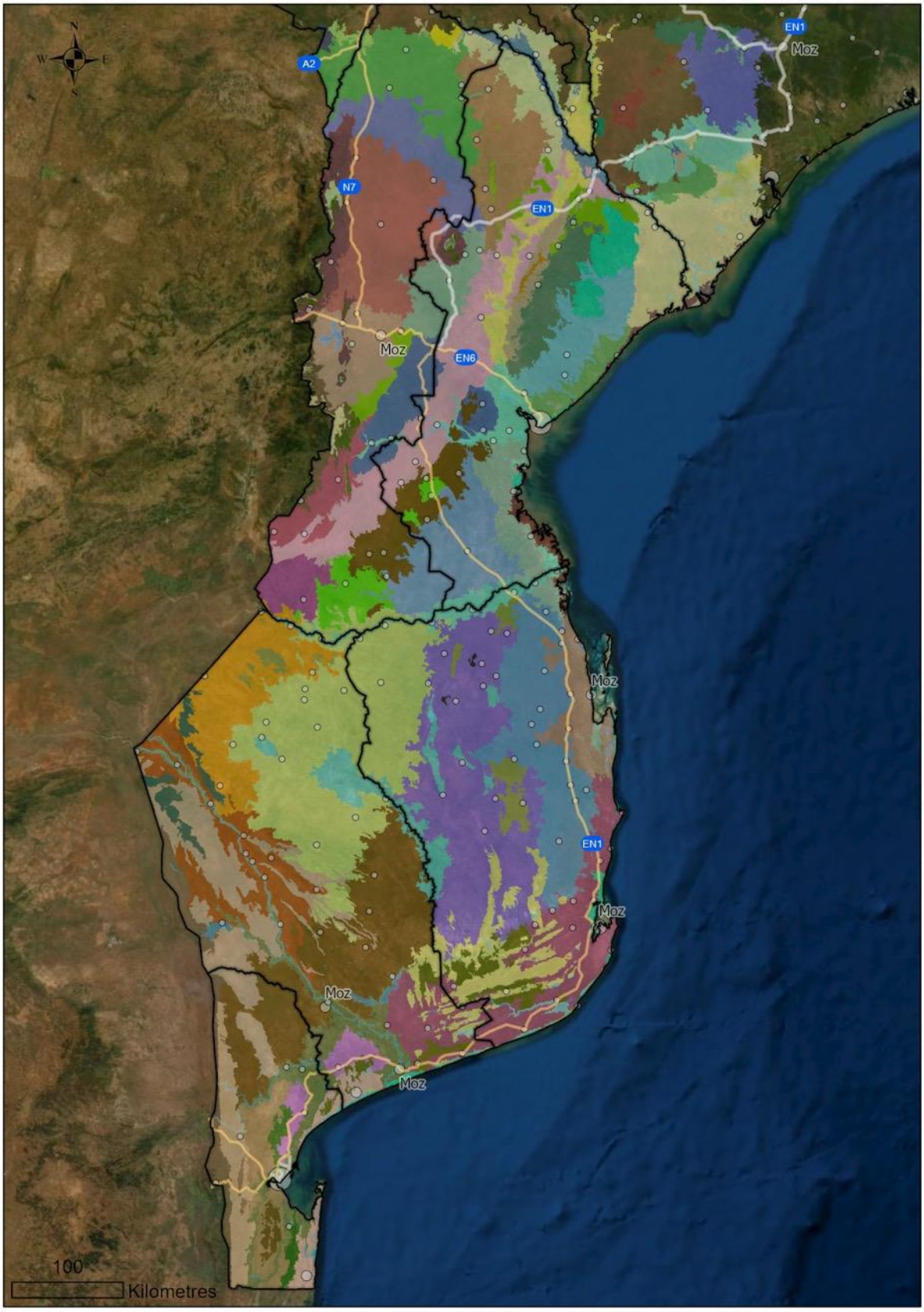

Figure 19 - Draft vegetation map for southern Mozambique. This was still an early draft so legend for vegetation units were not included.

PRELIMINARY RED LIST OF ECOSYSTEMS ASSESSMENT

As foreseen, the updated comprehensive Mozambican historical ecosystem map proved to be a difficult task, not only at the technical level, but also because it would require national validation before it could be used as areference. Therefore, it was not possible to conduct a complete Red List of Ecosystems assessment during the project period.

Several ecosystems maps are available for Mozambique, varying in the publishing date, scale, classification and reliability. For that reason, several national, regional and international vegetation experts and botanists were consulted. It was consensual that the Flora Zambeziaca map (Wild & Barbosa, 1967) was the most accurate and reliable historical ecosystem map for the country. Besides Mozambique, this map also covers Botswana, Malawi, Zambia and Zimbabwe, potentially allowing for ecosystem mapping and red listing of ecosystems at a regional to global scale.

A preliminary Red List of Ecosystems assessment using the 1967 Flora Zambeziaca map (Wild & Barbosa, 1967) was conducted. mapping 52 ecosystems within Mozambique (Figure 20),

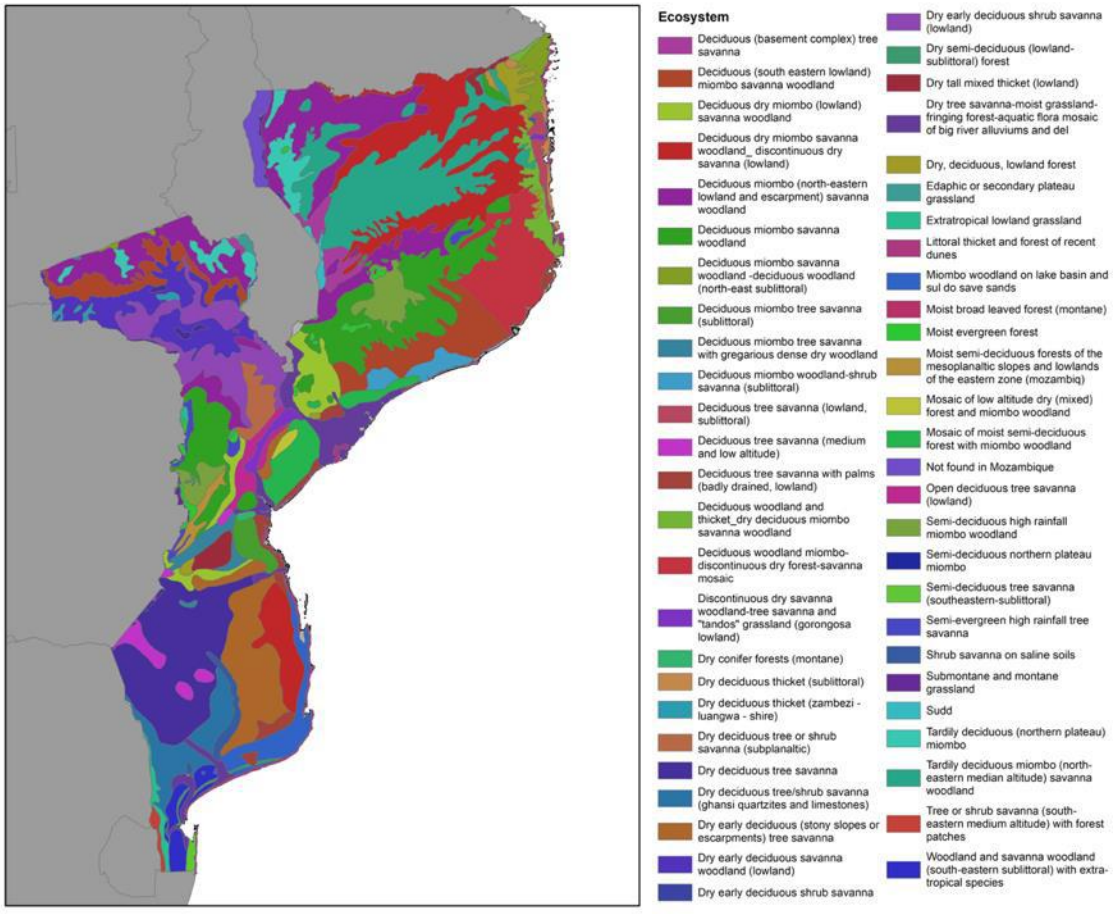

Figure 20 - Ecosystems of Mozambique, from the 1967 Flora Zambeziaca map (Wild & Barbosa, 1967)

To demonstrate the need for an improved Mozambique-specific ecosystem map, two preliminary RLE assessments were conducted – one considering the full distribution of any ecosystem with some part of its distribution found within Mozambique, and one only considering ecosystems within Mozambique's borders (e.g. clipped to the national boundary).

The above ecosystems were assessed using the IUCN Red List of Ecosystems (RLE) approach, which is a consistent global framework for understanding the risk of ecosystem collapse (Bland et al. 2017). The basis of the RLE approach is eight Categories, and five Criteria that are used to assign ecosystems to a Category. The eight categories of ecosystem risk are: Collapsed (CO), Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), and Not Evaluated (NE). Our preliminary analysis for Mozambique only considered Criterion A and B, as these are the most easily quantified using remote-sensed data on land cover. To assess rates of ecosystem loss land cover data from the European Space Agency (ESA) was used (Figure 21). To assess criterion A the 2015 geographic distribution of each ecosystem was calculated by excluding areas classified as agriculture or urban in the ESA land cover data. To assess criterion B the rate of ecosystem loss between 1992-2015 was calculated, and then used equations defined in Criterion B of the RLE guidance to estimate distribution change over the last 50 years. More details can be found in the full RLE report.

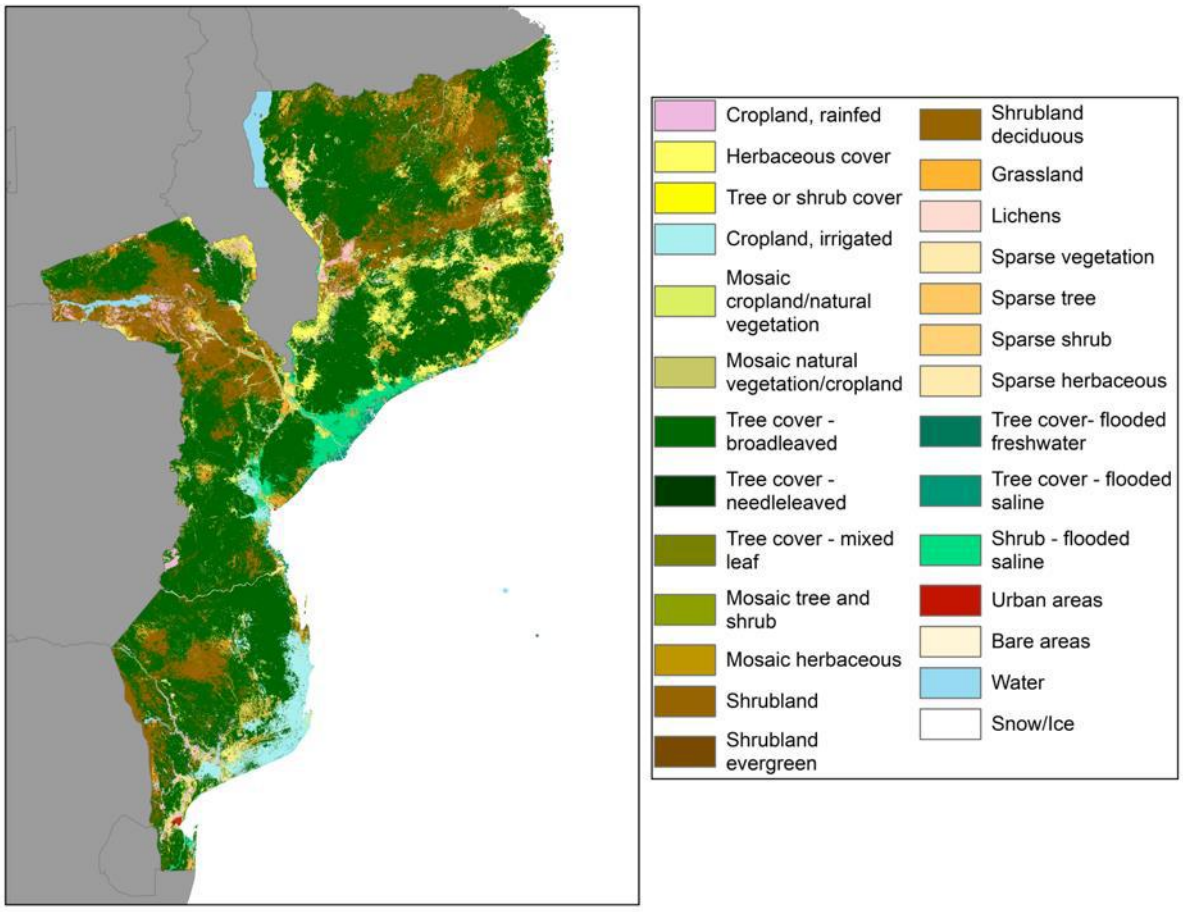

Figure 21 - European Space Agency (ESA) land cover data for 2015

While the project was being planned it was identified that other related projects were also being undertaken in the region, which were also trying to assess the red listing status of ecosystems. Therefore, coordination was established with these other projects namely:

- IUCN, which was implementing a project on climate resilience in three Districts of Mozambique (Moma, Dondo and Inhassoro), where they would apply the red listing criteria to Coral reefs, seagrass, mangroves and coastal forest;

- CORDIO East Africa (Kenya), which was developing the 2019/20 IUCN Red List of Ecosystems of Coral Reefs of the Western Indian Ocean (WIO);
- Allen Coral Atlas (https://allencoralatlas.org), which is a collaborative effort to build the world's first high-resolution coral atlas, and that was also mapping other coastal ecosystems such as seagrass and muddy flats among others;
- WWF, which in 2016, had also developed a mangrove distribution map for Mozambique, which was analysed by the project team;
- It should also be noted that the ecosystem classes that were used in South Africa and other neighbouring countries were considered so that when the final RLE assessment is finalized, it will take in consideration the ecological continuity and representativeness of the ecosystems in the region.

Of the 52 ecosystems explored with this assessment, with at least some of their distribution found in Mozambique, two are classified as critically endangered (3.8% of the 52 ecosystems found in Mozambique), and six as endangered (11.5%; Figure 22A). A further eight ecosystems are considered vulnerable (15.4%), with the remaining 36 ecosystems considered least concern (69.3%; Figure 22A).

When restricting the analysis to Mozambique only, the results change considerably (Figure 22B). Ten ecosystems are classified as critically endangered (19.2%), and 12 are classed as endangered (23.1%). A further ten ecosystems are vulnerable (19.2%), with the remaining 20 ecosystems considered least concern (38.5%).

Almost all of the ecosystems classified as critically endangered, endangered or vulnerable were identified under Criterion B (Restricted Geographic Distribution) of the RLE criteria. As such, restricting our analysis to Mozambique's borders results in a much larger number of threatened ecosystems, because the overall distribution of many ecosystems becomes much smaller.

Because the Flora Zambeziaca data maps ecosystems are at a coarse regional scale, conducting a national-scale RLE assessment for Mozambique using this data may results in likely overestimations of ecosystem threat status, especially for ecosystems with the majority of their distributions occurring outside Mozambique. For example, if an ecosystem has a large portion of its distribution outside Mozambique, and our RLE analysis can consider only the portion of the distribution found within Mozambique, the overall distribution size may appear very small in our analysis (thus leading to a higher RLE status). As such, an updated Mozambique-specific ecosystem map will allow for a more accurate national RLE assessment, as well as being a valuable standalone product. For some ecosystems (e.g. Miombo) which have distributions extending across multiple countries, RLE assessment may be better conducted at the regional level, but this can be assessed once the revised ecosystem map and RLE results are available for Mozambique.

This assessment allowed us to make considerable progress in the development of a historical ecosystem map for Mozambique at scale which is detailed enough to use for conservation planning purposes, including Ecosystem Red List Assessments and KBA identification and delineation. However, as initially expected, it was not possible to finalize the products. The process that was undertaken is, by nature, very time consuming, requiring an effort and period of time which goes beyond the timeline and resources of the current project. It also requires the active input of local specialists, through a participative process, which was partially compromised by COVID-19 Pandemic.

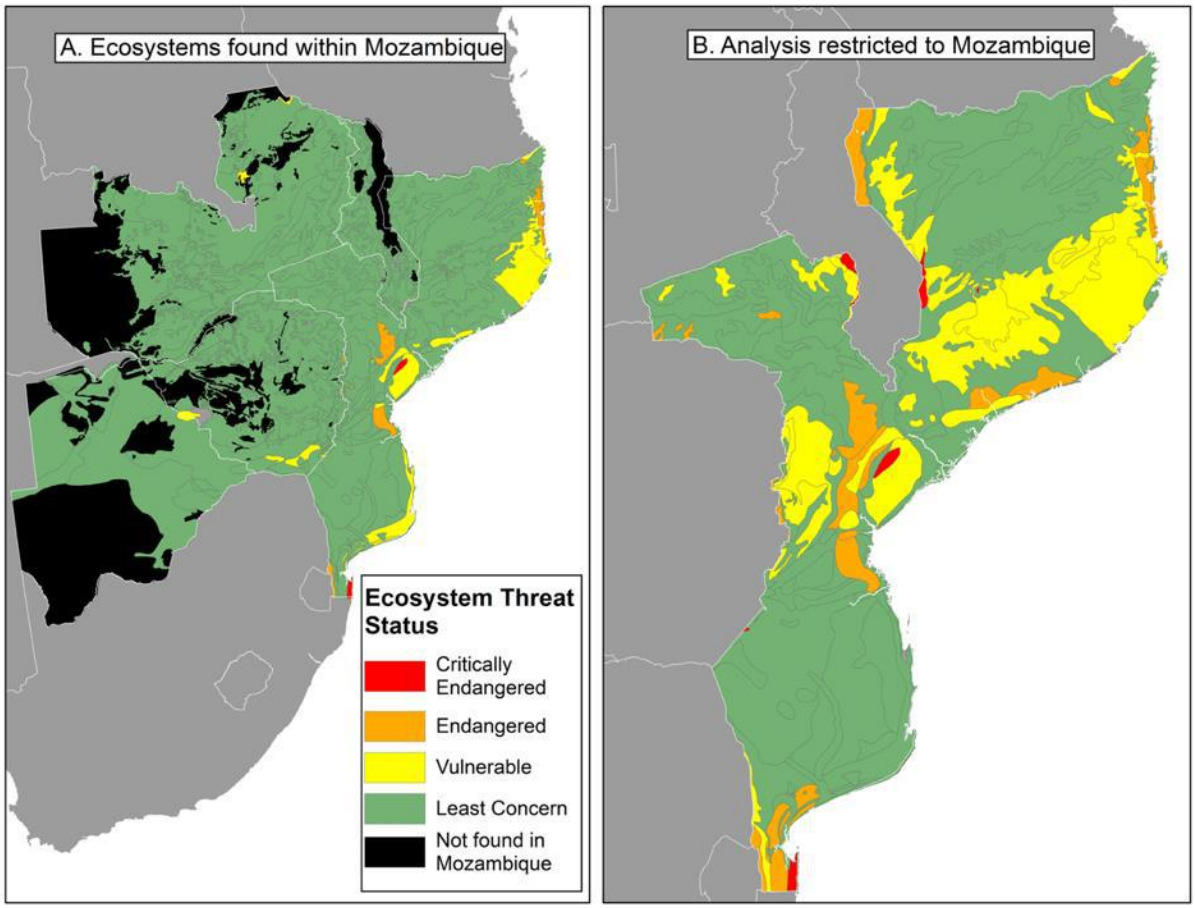

Figure 22 - Ecosystem red list status for A. All ecosystems with some portion of their distribution found within Mozambique, and B. Ecosystems clipped to the Mozambican border.

ACTIVITY 2.5: ASSESSMENT OF KBAS FOR MOZAMBIQUE

SELECTION OF SPECIES AND SITES TO RUN THE CRITERIA BASED ON THE INFORMATION GATHERED UNDER THE PREVIOUS ACTIVITIES AND APPLICATION OF KBA CRITERIA AND THRESHOLDS BY EACH GROUP OF TAXONOMIC EXPERTS INDEPENDENTLY

Having built the KBA trigger species list (described in Activity 2.1), the DMAs were instructed to mobilize as much as possible species information about distribution, population size, threats and ecology. The information was gathered through the several contacts established (described in Activity 2.2). Once all relevant data were gathered, the next step was to carry out a preliminary assessment to find out which criteria would be suitable for each species given the available information across different parameters, including number of mature individuals, area of occupancy, extent of suitable habitat, range, and number of localities. The criteria were applied independently by each taxonomic working group. Once the thresholds associated with the KBA criteria for species had been calculated, all areas that met at least one of the criteria were selected for the preliminary mapping process.

Although there was emphasis on species based on the KBA trial, an attempt to using site approach was also experimented. This consisted in selecting areas known to be of high biodiversity value, such as the mountain forests, and dry coastal forests. However, these sites would also trigger KBA status under the species based KBA identification approach.

PRELIMINARY KBA DELINEATION PROCESS AND PREPARATION OF KBA AND NOMINATION FORMS

Once the preliminary set of potential Key Biodiversity Areas was identified, the provisional delineation process was undertaken by the DMAs for each taxonomic group (Figure 23). This exercise followed the instructions described on the KBA Guidelines. The general approach was to try to encompass a sizeable area that would be sufficient to meet the species ecological requirements. Alternatively, the iteration attempted to follow the extent of suitable habitat for the species.

The KBA nomination forms were also completed separately for each area per taxonomic group. This implied, in a first step, dividing the country into three regions including northern, central and southern Mozambique. Secondly, DMAs working closely with the technical coordinator, selected one region at a time to be the focus for a set of priority species. Thereafter, nomination forms were filled in by DMAs, primarily on a species-by-species basis. Then, the forms were sent to the technical coordinator who verified it and provided comments and suggestions. In addition to the weekly meetings held with the coordination team and the DMAs (every Tuesday), described in activity 2.1 (Figure 12), the technical coordinator also met whenever necessary with each of the DMAs to further discuss the comments and suggestions provided in the nomination forms. Milestones were then defined for the following week.

As it was recognised from the outset that experience in applying the criteria set out in the new Guidelines for the Identification of KBAs was limited, the project endeavoured to ensure capacity development among the technical stakeholders, including the DMAs, the project assistant, the technical coordinator and the project manager. For this reason, in cases where understanding in the application of a criterion was beyond the capabilities of the technical coordinator, Dr Andrew Plumptre (Head of the KBA secretariat) was therefore contacted to provide appropriate guidance. Thus, the learning curve of the team continued to rise, i.e. the more the team applied the criteria for identifying KBAs, the higher the performance was. With this approach, the capacities of the DMAs were established and skills were strengthened to a level where they could support each other, particularly with interpreting the criteria for KBAs, the mapping process and completing the proposal and nomination forms on a species-by-species basis.

Figure 23 - Data Management Assistants from Insects, plants, herpetofauna and freshwater fish working on the KBA assessments

TECHNICAL MEETINGS OF THE COORDINATION TEAM WITH THE SPECIALISTS OF EACH WORKING GROUP TO PRESENT AND DISCUSS THE PROVISIONAL RESULTS: PREPARATION FOR THE KBA DELINEATION WORKSHOP

From October to November 2019, technical meetings were held with specialists from each taxonomic working group (Table 3 and Figure 24).. At each meeting the experts were presented with the preliminary maps of the KBAs andits trigger species. The objective was to refine or improve the results achieved before the KBA delineation workshop was held. The information provided by the experts allowed to complement the available information and to improve the work done so far

Table 3 - Technical meetings held to refine or improve the results achieved by each taxonomic working group

Technical Meetings	Date
Plants Working Group	16-October-19
Marine Biodiversity Working Group	17-October-19
Herpetofauna Working Group	18-October-19
Insects Working Group	25-October-19
Mammals Working Group	1-November-19
Freshwater Fish Working Group	8-November-19
Birds Working Group	15-November-19

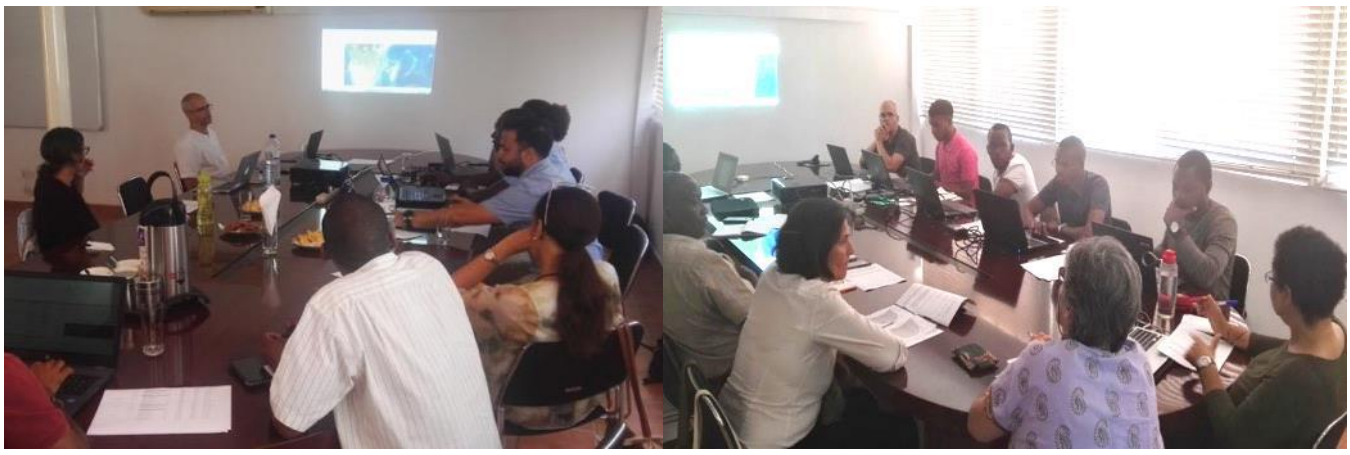

Figure 24 – Examples of some of the technical meetings held to refine or improve the results achieved with Marine Biodiversity specialists on the left and Plant' specialists on the right

WEEKLY MEETINGS TO UNDERTAKE THE KBA ASSESSMENTS

During the period of application of KBA criteria, the delineation process and KBA nomination form completion, the coordination team followed the process through weekly meetings with the DMAs of each working group. These meetings allowed the coordination team to oversee and assess the work done each week, including providing feedback, clarifying any doubts and defining strategies for the following weeks. The head of KBA Secretariat (Dr. Andrew Plumptre) also supported the project team in this process.

MEETING WITH USAID AND DINAB TO PRESENT THE PRELIMINARY RESULTS

On the 4th of September 2019, a meeting with USAID and DINAB was held at the DINAB office to present the preliminary project results, main challenges, and next steps. These institutions had the opportunity to clarify any doubts on the progress of the work (Figure 25).

Figure 25 - Meeting held with USAID and DINAB to present the preliminary project results, main challenges, and next steps

ACTIVITY 2.6: WORKSHOP WITH RELEVANT STAKEHOLDERS TO ASSESS AND REFINE RESULTS

This activity was an important milestone of the project, as it corresponded to the process of validating and delineating the KBAs identified till then, and brought together a significant number of national and regional experts involved in the process.. The details of this workshop and results achieved are presented below.

MEETINGS TO PLAN THE APPROACH FOR THE WORKSHOP

On 22 of October 2019, a meeting with WCS spatial planning experts (Hedley Grantham and Kendall Jones) was held in Maputo to prepare the best approach for the KBA delineation Workshop, which was scheduled for the 14th and 15th November. Another preparatory meeting was held one day before the workshop, on the 13th. of November and included the coordination team and the workshop's working group leaders (Figure 26).

At this meeting, four working groups were established for the workshop, three for each of the regions of the country (northern, central and southern) and one group for the marine realm.

Each working group was basically composed by a GIS expert (the group leader), a group secretary (responsible for recording all the work done by the group) and a support team composed by different experts with recognized knowledge on the specific taxonomic group, the Data Management Assistant and guests from different sectors of activity (e.g. governmental institutions or private sector).

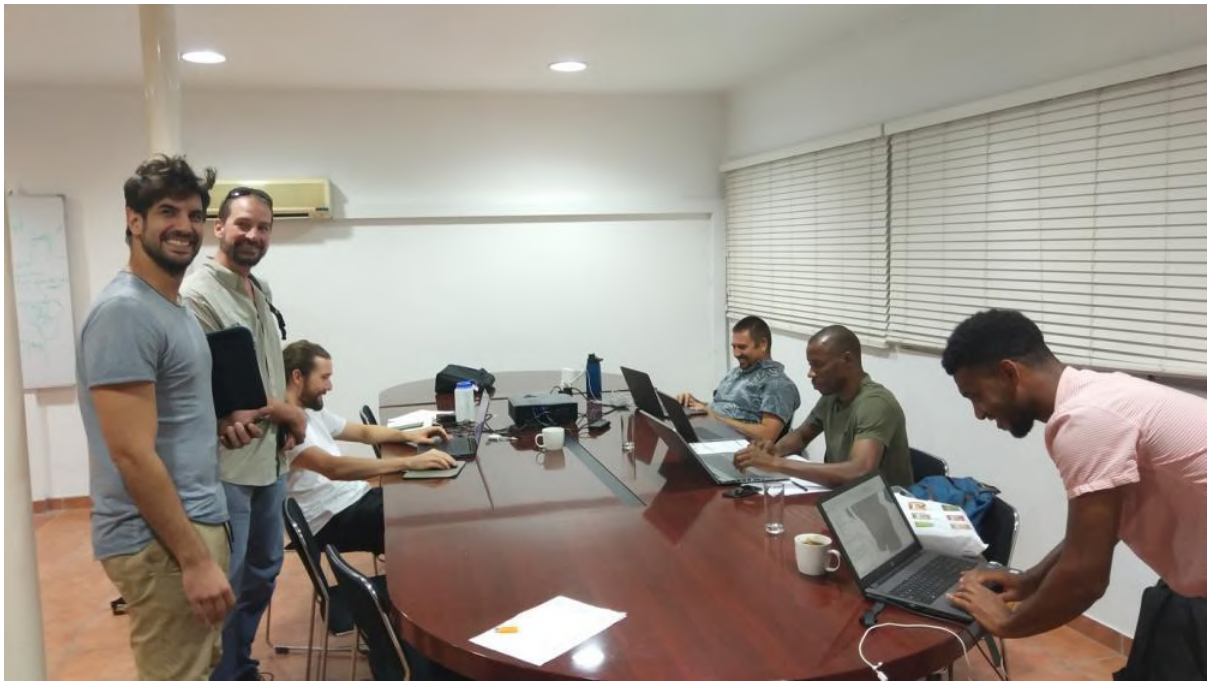

Figure 26 - Workshop preparation meeting between project coordination team and the workshop's working group leaders

KBA DELINEATION WORKSHOP

In order to assess, refine results and delineate the boundaries of potential KBAs previously identified by each working group, WCS and SPEED+ hosted a 2-day technical workshop in Maputo at Radisson Blu Hotel (see the workshop agenda in the Annex 6). This Workshop was supported by WCS's Spatial Planning unit, several other taxonomic specialists, and guests from different institutions, particularly from Government institutions and the private sector.

Workshop Attendees

In total, the workshop was attended by 61 people from 33 institutions (see the list of participants in Annex 7) representing the different sectors involved in the project, including Government institutions, academia, donors, NGOs, consultants and private developers (see the Table 4). NGOs contributed with 32% of the total participants because of the number of project team members, whereas academia and research institutions represented 28% of the total number of institutions present at the workshop (Figure 27 and Figure 28).

Table 4 - List of institutions and number of participants from different sectors in the training

Sector	Number of institutions	Name of institutions	Number of participants
Government	6	DINAB (National Directorate of Environment)	1
		DINAF (National Directorate of Forests)	1
		MIMAIP (Ministry of the Sea, Inland Waters and Fisheries)	1
		INP (National Petroleum Institute)	1
		FNDS (National Fund for Sustainable Development)	3
		FUNAE (National Energy Fund)	1
Academy & Institutions of Research	9	UEM – Faculty of Sciences- Department of biological sciences	1
		UEM - Faculty of Agronomy and Forest Engineer	1

Sector	Number of institutions	Name of institutions	Number of participants
		University of Lúrio	1
		Natural History Museum	1
		National Fisheries Research Institute (IIP)	2
		Mozambican Institute for Agriculture Research (IIAM)	4
		University of Gothenburg	1
		University of Kent	1
		SANBI	1
NGO'S	4	WCS	14
		BIOFUND	1
		CTV	2
		WWF	2
Projects	2	SECOSUD II	4
		SPEED+	3
Private sector-developer	2	ENI	2
		TOTAL	1
Private sector-consulter	5	Verde Azul	2
		Golder	1
		Private consulter	1
		Enviro-Insight	1
		Imbe CS	1
Media	5	Rádio voz	1
		Jornal Domingo	1
		GABINFO	1
		Jornal Vertical	1
		Media Mais	1
Total	19		61

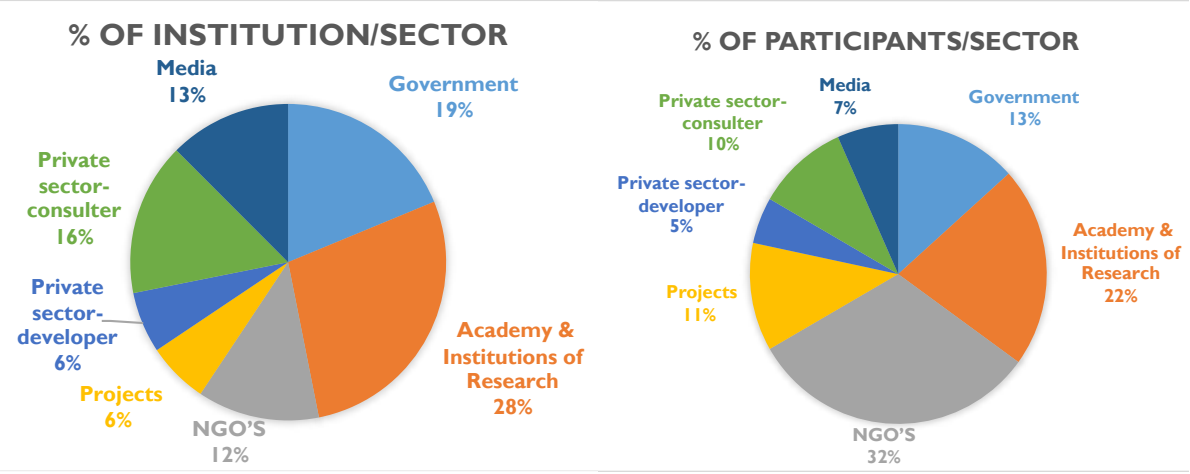

Figure 27- Percentage of institutions and participants by sector that attended the workshop.

Figure 28 - Some of Workshop Participants, represented by different institutions

Workshop at the media

The Workshop and the project provisional results were highlighted in several media channels, see below:

- Age of Awareness
- Media Mais TV (Between minutes 16:39 and 21:57)
- Web Mais 1
- Carta MZ

Workshop proceedings

The first day of the workshop started with the official opening session conducted by James Bampton, the WCS Mozambique Country Director (Figure 29), followed by a brief update presentation on the project "Red List of Threatened Species, Ecosystems, identification and mapping of Key Biodiversity Areas (KBAs) in Mozambique" conducted by Hugo Costa, the Project Manager.

Afterwards, Hermenegildo Matimele, the technical coordinator of the project, lead a presentation on the methodology that was applied and on the preliminary KBAs identified by each taxonomic group considered in this project.

Subsequently, Kendall Jones, WCS spatial planning specialist, conducted a presentation of the methodology to be applied during the Workshop, (Figure 29), explaining the different steps that would be followed during the two days:

a) Compile potential KBA sites from scoping phase
b) Delineate boundaries to make KBAs ecologically & practically relevant
    i. Check existing conservation area boundaries
    ii. Remove non-natural habitat
    iii. Align with biophysical and administrative features (e.g. roads, rivers, political boundaries) to be "manageable"
c) Re-assess sites to ensure they still meet thresholds

d) Confirm presence of features at site

*Figure 29 - **On the left**: The official opening session conducted by James Bampton, the WCS Mozambique Country Director; **On the Right**- Kendall Jones from WCS's Spatial Planning unit conducting a Presentation on the Methodology to be applied in the Workshop*

After the presentations and training session, the previously established working groups (northern, central, southern and marine) started to work on the delineation separately (Figure 30). In general, the work consisted in overlapping all KBAs previously identified by each taxonomic in order to map an area which would satisfy all the biodiversity elements that triggered each specific site as a KBA. Some baseline maps were used to support the analysis, namely: existing Conservation Areas, current Land Cover, catchments, roads, elevation, rivers, including the preliminary maps from the National Territorial Development Plan (PNDT). At the end of the workshop the preliminary results achieved by each working group were presented and discussed jointly (Figure 31).

Figure 30 - Workshop working group during the assessment of KBA delineation: A- Northern region group, B- Central Region Group, C- South Region Group, and D- Marine Biodiversity working group.

Figure 31 - Presentation and discussion of results achieved by each working group and definition of next steps.

Workshop Results

The workshop resulted in the delineation of 41 potential KBAs in Mozambique (see table Table 5 *and* Figure 32), including 2 freshwater and 6 marine. As outlined earlier in this report, in addition to these areas delineated in the workshop, another KBA had already been identified in Lake Nyasa through the project *"Biodiversity information for the Lake Malawi / Nyassa / Niassa catchment Eastern Africa: data for decision makers*", conducted by IUCN, WWF and IIP. As explained above (activity 1.3) this KBA was revised by the freshwater fish working group by agreement between the members of the Mozambican NCG (under establishment at that time). The proposal for nominating this site as a KBA was submitted to the KBA secretariat by IUCN, and the report which describes the whole process of KBAs identification, is available on https://portals.iucn.org/library/node/48602.

Table 5 - Preliminary KBAs, delineated by each workshop working group

Working Group	Proposed KBA´s	Type of triggering elements
Northern	Njesi Plateau	Birds, Herpetofauna,
	Niassa National Reserve	Mammals, Birds, Herpetofauna, Freshwater fish
	Palma	Plants, Herpetofauna
	Mount Inago	Herpetofauna, insects
	M´palue (Ribaue)	Plants, Herpetofauna
	Pemba	Plants
	Quiterajo	Plants
	Eráti	Plants
	Taratibu	Herpetofauna
Central	Mount Chiperone	Herpetofauna
	Mount Mabu	Mammals, Birds, Herpetofauna, Insects, Plants
	Gorongosa National Park	Mammals, Birds, Herpetofauna, Insects, Plants
	Primeiras and Segundas Archipelago	Plants
	Morrumbala	Freshwater fish

Working Group	Proposed KBA´s	Type of triggering elements
	Chimanimani National Reserve	Mammals, Freshwater fish, Herpetofauna, Insects, Plants
	Buzi River	Freshwater fish
	Zambeze Delta	Mammals, Birds, Insects, Plants
	Tchuma-Tchato	Mammals, Freshwater fish
	Mount Namuli	Mammals, Birds, Herpetofauna, Insects, Plants
	Machipanda	Mammals
Southern	Bazaruto National Park	Herpetofauna, Plants
	São Sebastião cape	Birds, Herpetofauna, Plants
	Xai-Xai and Limpopo Floodplain (Lake Uembje)	Freshwater fish, plants
	Licuáti	Plants, Insects
	Maputo North	Plants
	Maputo Special Reserve	Freshwater fish, Insects, Plants
	Matutuíne	Plants
	Xai-xai	Insects
	Inhaca	Plants
	Inharime	Plants
	Inhassoro	Plants
	Lebombo	Herpetofauna
	Vilankulos inland	Plants
	Vilankulos costal	Plants
	Mandlakazi	Plants
	Pomene	Plants
Marine	Vamizi	Fish
	Sofala Bank	Marine Turtle
	Great Bazaruto	Mammals, Marine Turtle
	Tofo	Shark, Ray
	Maputo Bay	Fish
	Ponta do Ouro Marine Partial Reserve	Fish, Mammals

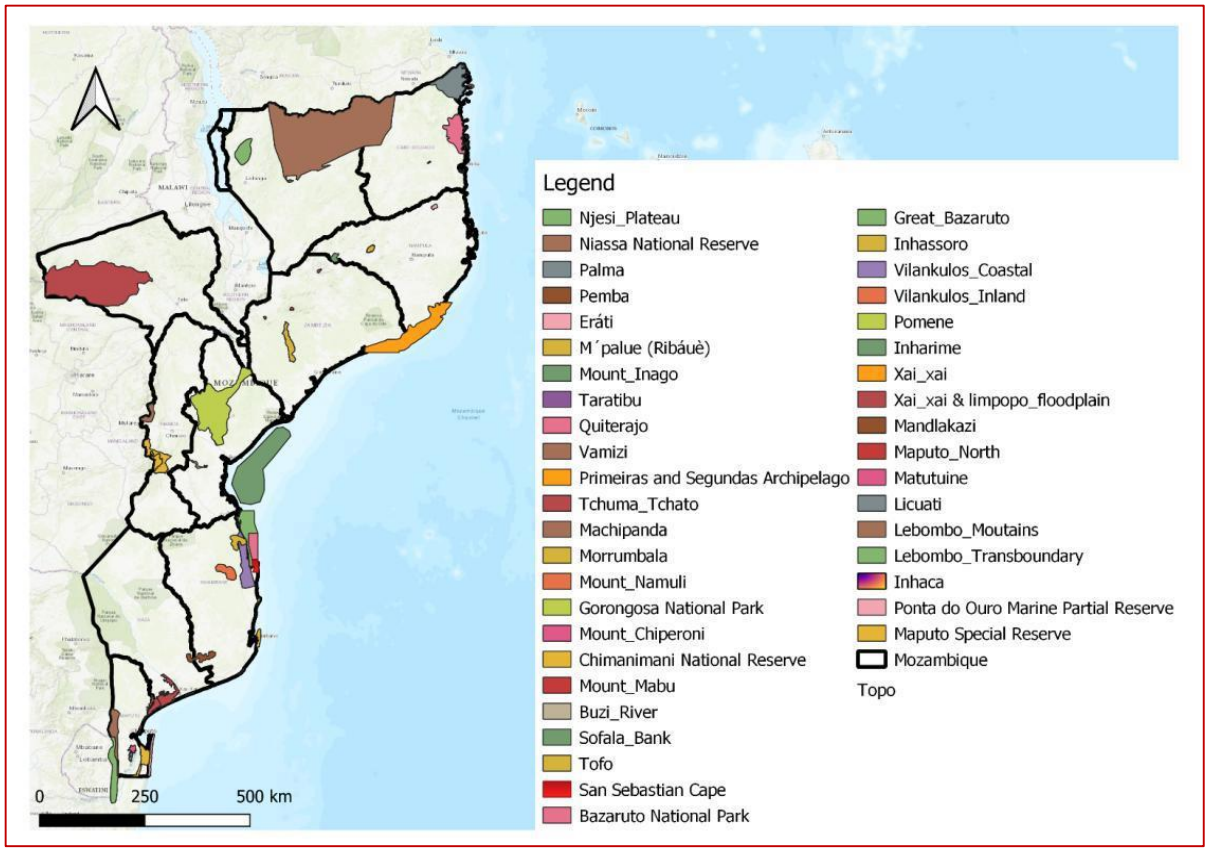

Figure 32 - Map with all potential KBAs delineated in the workshop (these KBAs maps, were preliminary, and many of them changed after refinement and consultations with other specialists).

Following the KBAs delineation workshop (held in November 2019), further effort was made to preparing the final proposals. The 41 potential KBAs which had been delineated at the workshop were then subject to further review, which lasted a period of six months. This included the gathering of additional information to improve site description and rationale, reviewing the trigger species, criteria's application and refining the boundaries of each area. This process also involved several consultations with experts, protected areas management entities (for some areas), including the focal points of the KBAs' National Coordination Group, the regional KBAs focal point and the KBA Secretariat (described in the following chapter). From this process, boundaries of some areas were readjusted, including merging some adjacent proposed areas into a single proposal. During this period, additional information was also collected, which allowed the identification of new areas, not previously delineated in the workshop.

Moreover, effort was put on ensuring that the information on species' presence at a site was accurate. This entailed verifying when every species was last recorded in the field and/or if there was a conflicting taxonomy issue. Resulting from this exercise, 26 species (25 plants and 1 amphibian) were excluded, for example: (i) species which the last record was older or equal to 30 years without additional information on its presence; (ii) species known from one specimen and whose presence has never been recorded again. An example of this process was the exclusion of an area where the only trigger species was *Guibourtia sousae*, a plant species known from a single collection made 84 years ago (collected in 1936). In general, all excluded species had their most recent record ranging from 84 to 30 years ago. Information on when the species was last collected was often confronted with the state of the known habitat. In several instances the species' known habitat had already been completely lost or severely transformed.

With this in mind, it was therefore suggested that further studies would be needed to confirm the occurrence of the trigger species. Table 6 presents a list of potential KBAs that were kept on hold for a next phase, requiring additional information to allow for a more trustworthy assessment. Following an exhaustive species information validation exercise, this activity resulted in the full development of 31[2] final KBA proposals.

Table 6 - List of potential KBAs that were kept on hold for a next phase, requiring additional information to allow for a more trustworthy assessment

No.	Name	Province
1	Baía de Pemba	Cabo Delgado
2	Memba	Nampula
3	Morrumbala	Zambézia
4	Parte norte do monte Namuli	Zambézia
5	Buzi	Sofala
6	Banco de Sofala	Sofala
7	Coutada 5	Sofala
8	Inharrime	Inhambane
9	Panda-Mandlakazi	Inhambane
10	Reserva Nacional de Pomene	Inhambane
11	Parque Nacional de Limpopo	Gaza
12	Ilha de Inhaca	Maputo
13	Montes Libombos	Maputo
14	Norte de Maputo	Maputo
15	Baía de Maputo	Maputo

MEETING WITH SPEED+ AND DINAB AND USAID TO PRESENT THE PRELIMINARY RESULTS

On the 17th of March 2020, another specific meeting with USAID and SPEED+ was held in order to present the preliminary project results, and to discuss the priorities, recommendations and next steps (Figure 33).

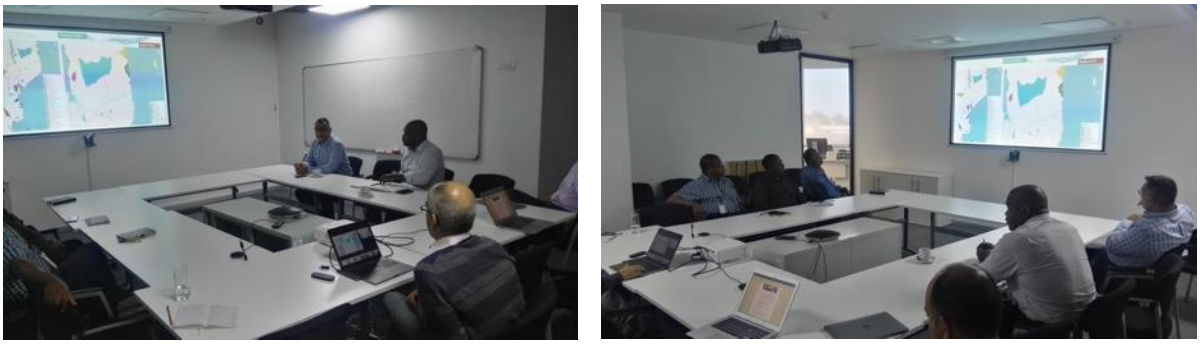

Figure 33 –Meeting held with SPEED+, USAID and DINAB to present the preliminary project results, and to discuss the priorities, recommendations and next steps

[2] The KBA proposal of Pomene National Reserve was not approved by the NCG KBA focal points and although the KBA proposal for Sofala Bank was submitted to the KBA global Secretariat it was not approved. Therefore, these two areas are now part of the list of potential KBAs.

REVIEW OF THE KBA FINAL PROPOSALS BY THE NCG'S KBA FOCAL POINT AND CONSULTATION WITH THE KBA SECRETARIAT AND THE REGIONAL FOCAL POINT

The KBA reviews were first carried out by the NCG KBAs focal points namely Eduardo Videira from WWF and Natasha Ribeiro from UEM. This activity was also supported by Alima Taju, from WWF.

In order to inform the reviewing process, at the end of March 2020, a specific checklist was produced in line with the guidelines of the KBAs global standards and served as a guide in this review process and as a dynamic mechanism to provide feedback. From March to June 2020, all the potential KBA proposals were divided into four batches which were submitted to the NCG KBA focal points. The reviewing process consisted in checking whether the global standards for identification of KBAs had been applied correctly. This included, for example, checking for every species what assessment parameter (including number of mature individuals, area of occupancy, extent of suitable habitat, range, number of localities) had been used. This verification would allow the reviewing team to analyse whether there were better parameters on which a species should have been assessed. Moreover, the reviewing team confronted assessment information provided on the proposals against the information provided on the main sources of information such as the IUCN's Red List to check the species' range, and number of localities (not locations) where available. In addition, the reviewing team strictly checked the boundary delineation process and provided informative comments which let to several changes.

Once feedback was provided on the first batch of proposed KBA was in early May 2020, on the following task was to address and accommodate comments and recommendation from the NCG's KBA focal points. Immediately after, the proposals were shared with the KBA Secretariat (Andrew Plumptre) and the regional focal point (Daniel Marnewick) for preliminary review and guidance. This process resulted in additional comments and recommendations that led to the technical improvement of the proposals.

CONSULTATION WITH ORIGINAL PROPOSERS OF AREAS PREVIOUSLY IDENTIFIED AS IMPORTANT FOR BIODIVERSITY IN MOZAMBIQUE (EXISTING KBAS, IBAS AND AZES)

During the assessment some proposed KBAs intercepted boundaries of pre-existing KBAs identified under previous initiatives, which included KBAs (identified through other criteria prior to the development of the 2016 IUCN's Global Standard), IBAs (Important Birds and Biodiversity Areas) and AZE sites (Alliance for Zero Extinction).

According to the new KBA Guidelines, KBAs must not overlap. If a new proposed site intersects with an existing KBA, a consensus-building consultation with the previous proposers of the existing KBA is required before changing the boundaries. As part of this process, in late May, contacts were established with Birdlife International (proposer of the Mozambique existing AZE, IBAs, and KBAs) in order to reach a consensus on the new proposed boundaries. As a result of the contacts established, which included one virtual meeting, no objections were raised, and it was therefore considered appropriate to proceed with the proposals. All KBAs that intercept the Mozambique existing KBAs, are listed and mapped in the next chapters, Figure 38 and Table 8.

KBAS PROPOSAL VALIDATION PROCESS

After all proposals were reviewed by the NCG KBA Focal Points, a validation meeting was held on the 15th of June 2020 with the National Coordination Group, where the 31 KBA proposals were presented. The main objective of this meeting was to share the results achieved by then and build

consensus prior to submitting them to the KBA secretariat. This entailed providing relevant information for every proposal and explaining how the KBA working group had applied the criteria and what biodiversity elements were assessed. As a result of this meeting, minor changes were suggested including, for example, to double check some additional species which occur in a couple of areas to see whether or not they trigger a KBA. During this rechecking process, one area was removed which the last record of the trigger species turned out to be quite old (Pomene National Reserve). A final batch of 30 proposals for KBAs to be submitted to the Secretariat was thus established.

After the proposals were properly double checked and all the comments coming from the NCG validation meeting were addressed, in order to follow up on the process, another meeting was held on 17 June 2020 with the NCG Chair (DINAB), the NCG KBAs focal point and the donor to discuss the next steps. At this meeting, the formal submission of the KBA proposals was approved by the GNC Chair. Additionally, it was recommended to develop preliminary guidelines providing suggestions on what sort of measures should be taken into consideration for every single area proposed as KBA. That is actually one of the products developed under the current project, the *Brief analysis and recommendations on the type of potential management and protection for key areas for biodiversity (KBAs) identified in Mozambique*. A synthesis of this information can be consulted in Annex 8 and the complete report can be found in VOL. III.

SUBMISSION OF FINAL PROPOSALS TO THE REGIONAL FOCAL POINT AND THE GLOBAL KBA SECRETARIAT

On 30 June 2020, the NCG KBA focal points officially submitted to the Regional KBA Focal Point the final set of 30 KBA proposals identified in Mozambique for proper review. On 5 August 2020, the KBA Regional Focal Point formally provided the NCG KBA Focal Point with the review of the 30 proposed KBAs, and all the comments and suggestions were addressed in the following weeks by the project technical group in coordination with the NCG KBA Focal Point. After the comments and suggestions were addressed, on 25 August, the NCG KBA Focal Point formally submitted the final set of 30 proposals to the global KBA secretariat for review and subsequent integration into the online World Database of KBAs (WDKBA).

A NCG meeting (face-to-face and online) was held on 4 September 2020, attended by 24 participants from 11 institutions (

Figure 34). The meeting had the overall objective of presenting the steps and updates carried out, to validate and publish the proposed KBAs for Mozambique. The final proposals were therefore presented by the NCG KBA focal point, as well as the summary of the feedback provided by the KBA regional focal point, including the submission process to the KBA global Secretariat and the next steps.

The status of the KBA project was also presented, focusing on the final products (reports, brochures, presentations), including existing opportunities and complementary projects for further activities.

Figure 34- Meeting to update the NCG on the steps taken to validate and publish the KBAs

ENGAGEMENT WITH THE KBA GLOBAL SECRETARIAT TO REVIEW THE FINAL KBA PROPOSALS AND ENSURE THEIR INTEGRATION INTO THE ONLINE WORLD DATABASE OF KBAS

After the official submission of the 30 final KBA proposals to the KBA Global Secretariat on 25 August 2020, a long review process took place. On 22 September 2020 the KBA Global Secretariat formally provided the NGC KBA focal point with its overall assessment. This was positive and several actions were also suggested to improve certain aspects of the proposals. In the following weeks the project technical team, in coordination with the NCG KBAs focal point, worked towards addressing all the comments and suggestions provided, which also included additional consultations with specific experts to provide additional information that would support the proposals. A virtual meeting with the KBA global secretariat was also promoted on 16 October 2020 for further clarifications. After addressing most of the recommendations of the KBA global secretariat, 27 KBA proposals were re-submitted on 12 November and two more in December, fora final set of 29 proposals, one fewer than initially submitted (n=30). Due to the impossibility of getting the specific information requested, it was considered sensible to leave the marine KBA proposal from Sofala Bank for a later stage, as its re-submission depends on additional information that will have to be collected in the field. In January 2021 the 29 proposals were officially accepted by the KBA global secretariat, with publication in the World Database of Key Biodiversity Areas (WDKBA) scheduled for March 2021.

In the scope of the official publication of KBAs, contacts were also established with the KBA global secretariat to agree on how the information would be made available on the official platform (WDKBA) and what would be the destination to give to the published areas that were identified under previous initiatives, i.e. KBAs (identified through old criteria, before IUCN's global standard was published in 2016), IBAs (Important Bird and Biodiversity Areas), AZE sites (Alliance for Zero Extinction) and other areas. The project technical team, in coordination with the NCG KBAs focal points, prepared a brief document with the analysis and recommendations, and it was agreed that: i) existing areas that did not qualify as KBAs based on the new global standard (IUCN, 2016), but are likely to be triggered as soon as more information is available, should be maintained in the WDKBAs, but tagged differently. These should be clearly identified as KBAs not yet reassessed according to the

new global standard; ii) it was further agreed that all areas that are not likely to trigger a KBA based on the new global standard (even if it is possible to collect more information) would be removed from the WDKBAs. In this way, the WDKBAs will be properly updated with the information resulting from the current project and cleaned of any old KBAs that are not likely to be triggered by the current Global Standard.

FINAL LIST AND MAPS OF KBAs IDENTIFIED IN MOZAMBIQUE

All the work undertaken during the KBA assessment in Mozambique, including meetings and engagement with the KBA partnership structures (described in the previous chapters), resulted on the identification and mapping of 29 KBAs validated for Mozambique (see Figure 35). These KBAs cover a total area of about **139,947.05** km^2, from which about 96% correspond to **25** terrestrial KBAs and 4% correspond to **4** marine KBAs (see Figure 36). Detailed information for each of these sites, including the triggering species, the triggered criteria and the main threats at the site, are presented in the technical factsheets, available in the KBA sites specific report (the KBA factsheets report – VOL. II).

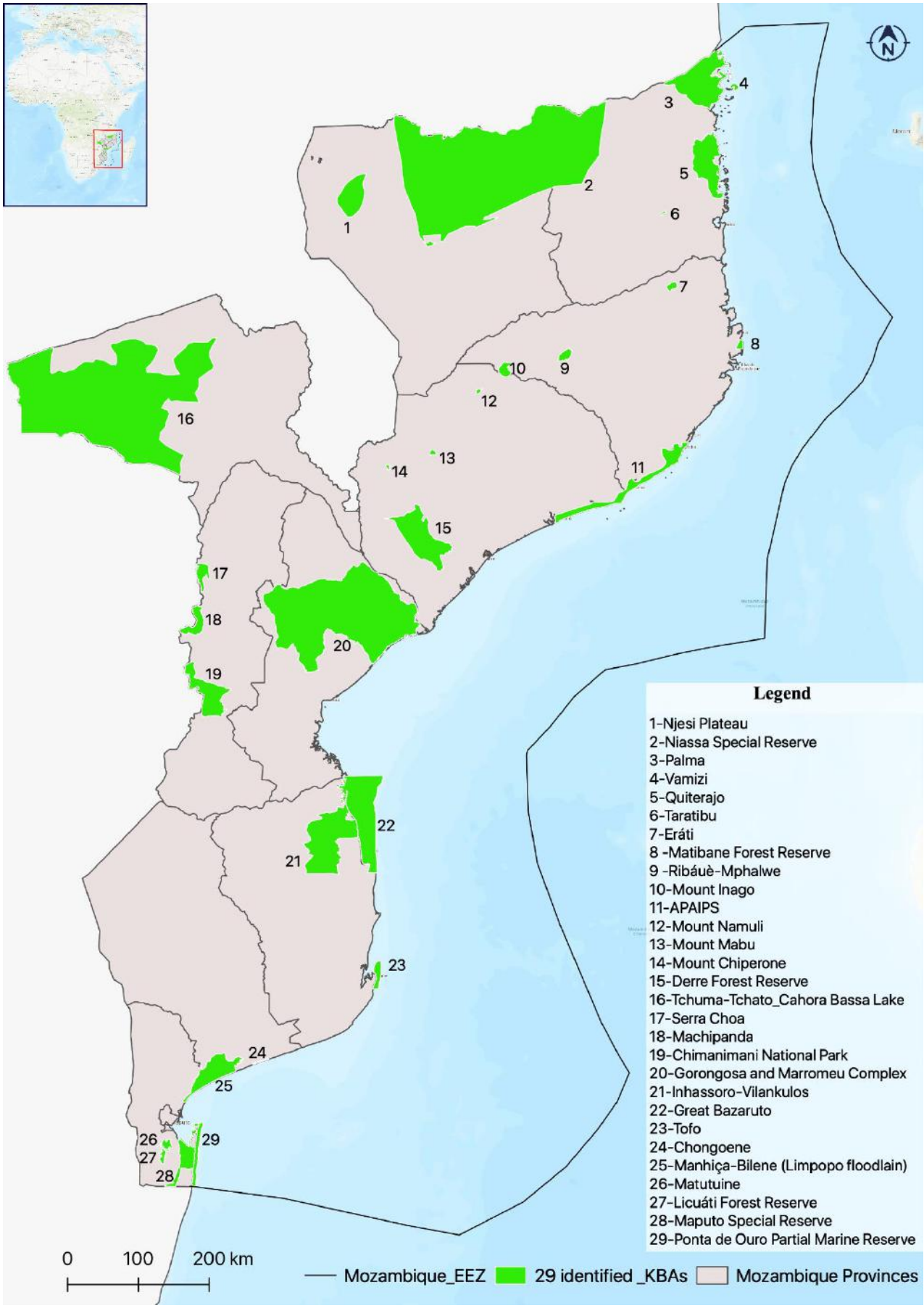

Figure 35- General map of the 29 KBAs identified for Mozambique during the course of this project.

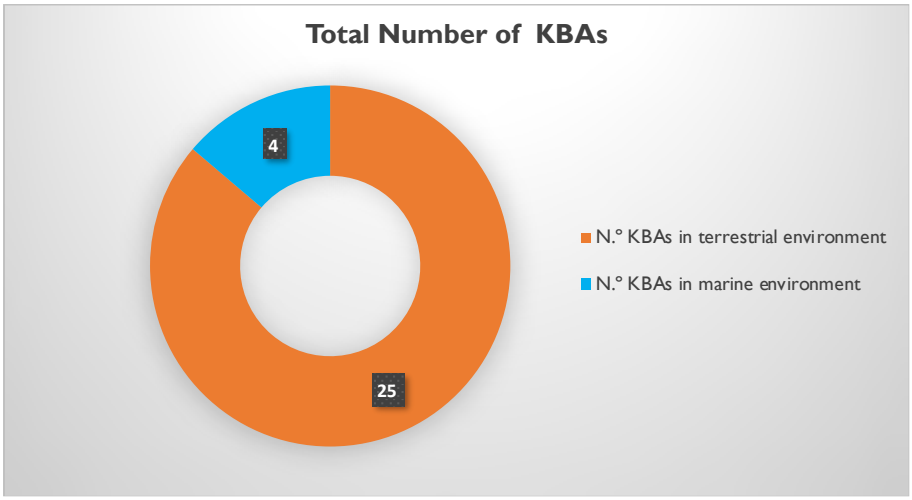

Figure 36 -Number of KBAs identified in the terrestrial and marine environment

In an overview, the KBAs cover 10% of the entire national territory, with terrestrial, and freshwater KBAs covering 17% of Continental territory and marine covering 1% of the Exclusive Economic Zone (see Figure 37).

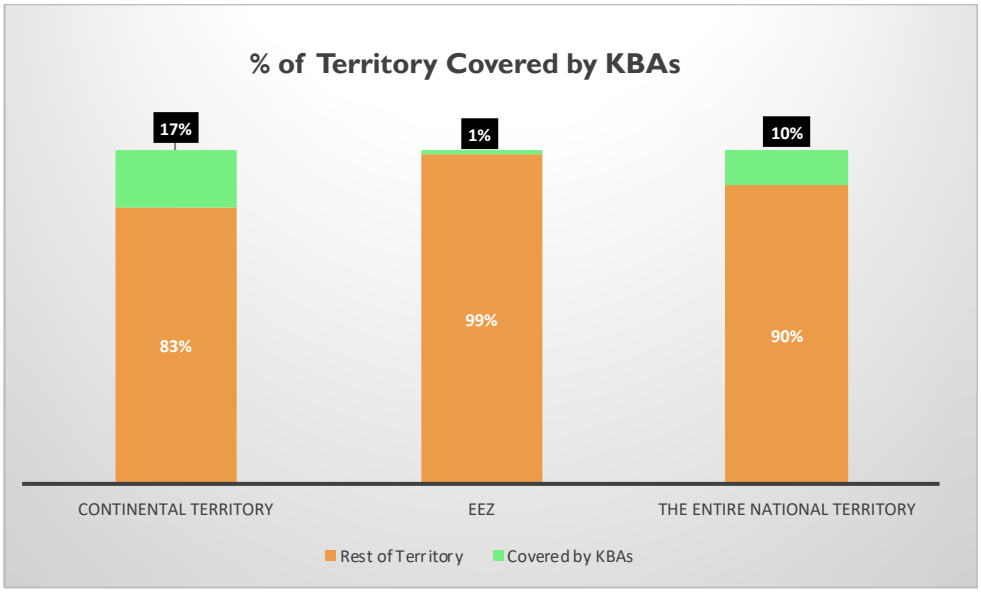

Figure 37- Percentage of territory covered by KBAs identified in Mozambique

OVERVIEW OF THE KBAS CRITERIA THAT WERE APPLIED

According to the KBA Technical Guidelines, sites identified as potential KBAs should ideally be assessed against all criteria. However, not all criteria were applicable on this assessment. Only selected criteria for species were considered, namely those for which data were available. Criteria A2, B4 and C were not used as these refer to ecosystem types. Although it was initially envisioned that some of these could be applied, as explained above, it was not possible to have a validated ecosystem map for Mozambique nor a RLE assessment in time for them to be considered in this project. Other criteria, such as B3, D1a, D3 and E, were not applied due to the lack of information.

All the criteria employed on this assessment are summarized in Table 7. Meeting any of the criteria (or sub-criteria) is enough for a site to be considered as a KBA. The criteria triggered by each area are shown on the table in Annex 8.

In general, population data was not available for the majority of the species, therefore in many cases, especially for plants, herpetofauna, freshwater fish and insects the assessments were carried out using distribution parameters (eg. range, or localities).

Table 7 - Selected Key Biodiversity Area (KBA) criteria used during the assessment

A. Threatened biodiversity	
A1 Threatened species	
A1a	≥0.5% of global population size and ≥5 reproductive units (RU) of a CR/EN species
A1b	≥1.0% of global population size and ≥10 RU of a VU species
A1c	≥0.1% of global population size and ≥5 RU of a species listed as CR/EN due only to past/current decline [= Red List A1, A2, A4 only]
A1d	≥0.2% of global population size and ≥10 RU of a species listed as VU due only to past/current decline [= Red List A1, A2, A4 only]
A1e	Effectively the entire population size of a CR/EN species
B. Geographically restricted biodiversity	
B1. Individual geographically restricted species	≥10% of global population size and ≥10 RU of any species
B2. Co-occurring geographically restricted species	≥1% of global population size of each of a number of restricted range species in a taxonomic group: ≥2 species or 0.02% of the total number of species in the taxonomic group, whichever is larger
D. Biological processes	
D1. Demographic aggregations	
D1b	Site is among largest 10 aggregations of the species

OVERLAP OF KBAS WITH AREAS PREVIOUSLY IDENTIFIED AS IMPORTANT FOR BIODIVERSITY IN MOZAMBIQUE (EXISTING KBAS, IBAS AND AZES)

A total of 12 (41%) of the 29 final KBAs identified and mapped for Mozambique (41%) overlap with 14 areas that had already an international recognition as important sites for biodiversity, or that were identified under previous initiatives, namely: the KBAs (identified through old criteria), IBAs (important Birds and Biodiversity Areas) and AZEs sites (Alliance for Zero Extinction) - see Table 8 and Figure 38. It should be noted that two of the new KBAs include two areas each that had been considered KBAs under the old criteria.

Table 8 – List of KBAs that overlap with sites previously identified as important areas for biodiversity by other initiatives (KBAs based on the old criteria, IBAs and AZEs).

#	Current KBAs	Mozambique Existing KBAs, IBAs and AZEs (Names and ID Codes)	Previous designation
1	Njesi plateau	Njesi plateau (6699)	IBA, KBA, AZE
2	Mount Inago	Mount Inago (47163)	KBA, AZE
3	Tchuma-Tchato (Cahora Bassa Lake)	Headwaters of the Cahora Bassa Dam (6697)	IBA

#	Current KBAs	Mozambique Existing KBAs, IBAs and AZEs (Names and ID Codes)	Previous designation
4	APAIPS	Moebase Region (6695)	IBA
5	Mount Namuli	Mount Namuli (6693)	IBA, KBA, AZE
6	Mount Mabu	Mount Mabu (24261)	IBA, KBA
7	Mount Chiperone	Mount Chiperone (6694)	IBA, KBA,
8	Chimanimani National Park	Chimanimani Mountains (Mozambique) (6690)	IBA, KBA, AZE
9	Gorongosa and Marromeu Complex	Zambezi River Delta (6691); Gorongosa Mountain and National Park (6692)	IBA
10	Great Bazaruto	Bazaruto Archipelago (6688)	IBA
11	Manhiça- Bilene (Limpopo floodplain)	Manhiça (45560) ; Xai-xai and Limpopo floodplain (45562)	KBA
12	Maputo Special Reserve	Maputo Special Reserve (6685)	IBA

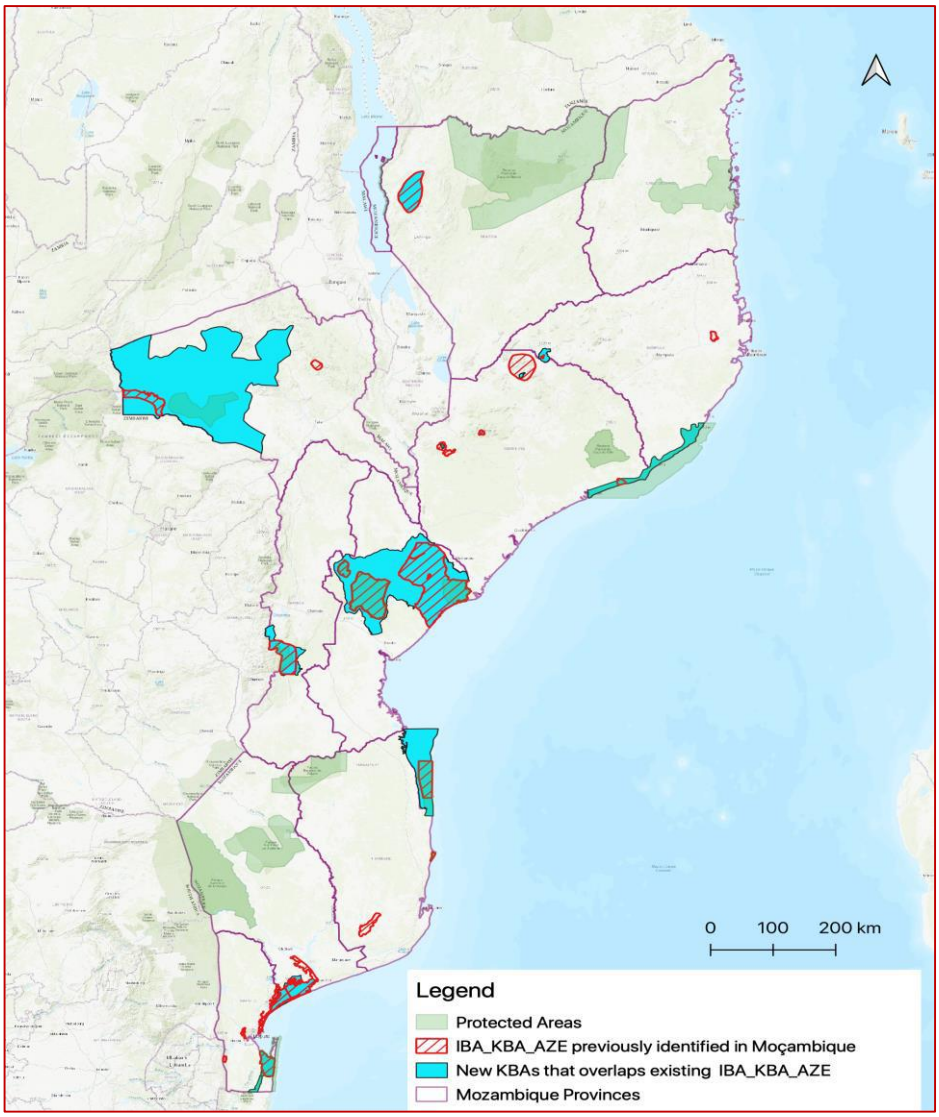

Figure 38- 12 KBAs identified by the project which overlap previous IBAs, KBAs and AZEs identified in Mozambique

OVERLAP WITH EXISTING CONSERVATION AREAS AND SITES DESIGNATED BY INTERNATIONAL CONVENTIONS

From the 29 KBAs, identified in this project, about 62% (n=18) are currently under some formal protection (see the map in Figure 39), of which 41% are fully protected (n=12) and 21% partially protected (n=6). On the other hand, around 38% (n=11) have no formal protection whatsoever.

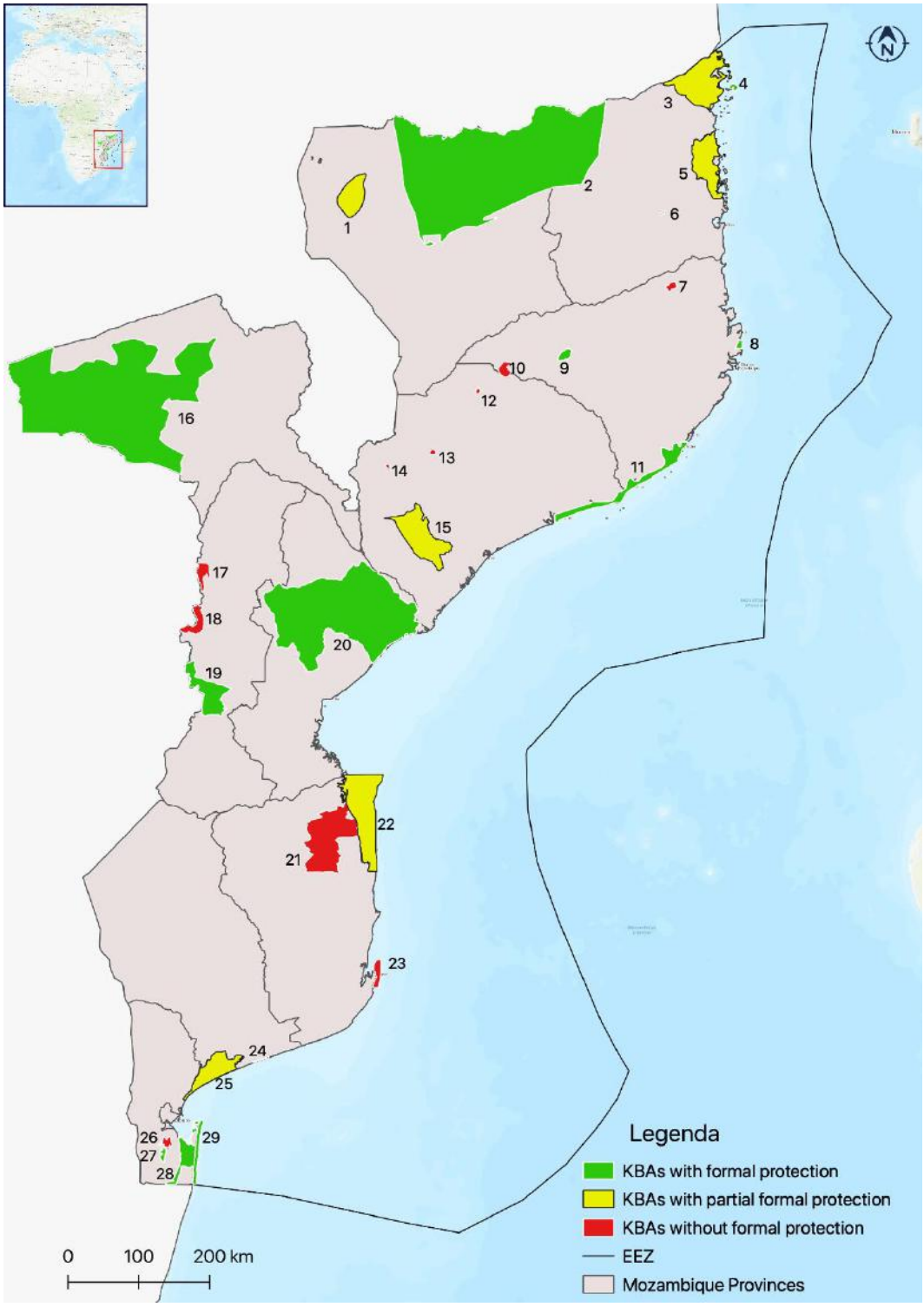

Figure 39- Map of the KBAs identified under this project that are protected, partially protected and without formal protection status according to their overlapping with *Mozambican* Conservation Areas (including forest reserves)

Around 85% of the total area covered by the KBAs is under some form of formal protection status, including 20% (n=6) that overlaps with forest reserves[3], corresponding to a total area of 2,430.06 km^2 and 17% (n=5) of sites designated by international conventions, such as Ramsar sites and World Heritage Sites (Biosphere Reserve), corresponding to a total area of 5,436.45 km^2. On the other hand, 15% of the total area of KBAs identified during this project is not under any form of formal protection (Figure 40).

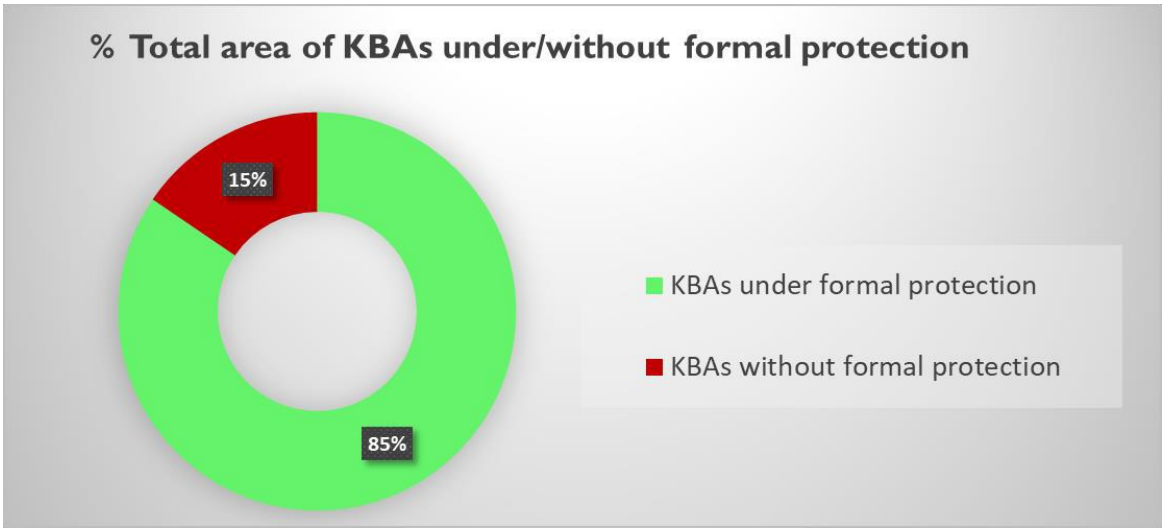

Figure 40- Percentage of area of KBAs which falls within the National Network of Conservation Areas (including forest reserves)

BRIEF ANALYSIS AND RECOMMENDATIONS ON THE POTENTIAL TYPE OF MANAGEMENT AND PROTECTION FOR KBAS IDENTIFIED IN MOZAMBIQUE IN THE CURRENT PROJECT

The identification of KBAs is based on a purely scientific process and, therefore, is not related to their legal status, type of governance or management, and does not imply that the area must necessarily become a protected area. Such management decisions should be based on conservation priority-setting exercises. However, it is necessary that it has some type of management, in order to guarantee the persistence of the elements of biodiversity for which the area was considered important. Proper management of the KBA is considered critical to improving the persistence of biodiversity. Depending on its conservation status and on the populations of the triggering species, increasing their protection level could be necessary. Based on this, a specific report was developed that makes a preliminary analysis of possible management and protection measures for each identified KBA, in accordance with the Mozambican legislation on Protection, Conservation and Sustainable Use of Biological Diversity (Law 5/2017) and its regulation (Decree 89/2017). The summary of this analysis with the recommended type of management and protection for each area is available in Annex 8. Detailed information, including justifications and specific recommendations, is available in VOL. II **"***Brief analysis and recommendations on the type of potential management and protection for the key biodiversity areas* (KBAs) identified in Mozambique", available in Portuguese.

[3] Forest Reserves are not recognized in the new Law on Protection, Conservation and Sustainable Use of Biological Diversity (Law 5/2017) and its regulation as part of the National Network of Protected Area (Decree 89/2017).

OBJECTIVE 3: NATIONAL CAPACITY BUILT TO IDENTIFY, AVOID AND MITIGATE IMPACTS ON PRIORITY BIODIVERSITY (NATIONAL KBAS AND RED LIST) IN MOZAMBIQUE

Creating the national capacity to identify and map KBAs as well as conducting Red List assessments in order to identify, avoid and mitigate impacts on priority biodiversity was one of the most important objectives of this project. Therefore, a strong effort was put on establishing a fully operational team, comprised of young Mozambicans, running under an organizational model which facilitated capacity building and transfer of knowledge. Additionally, several training sessions were undertaken, some at the beginning of the project and others during its implementation. Capacity building to national research institutions was also a priority. Finally, the project also provided tools that will allow Mozambicans to have access to all the information developed under this report and that is related to the KBA and Red Listing assessments. The organization model and implemented activities to achieve this objective are presented below.

PROJECT TEAM, ROLES AND RESPONSIBILITIES

This project involved several institutions and people. Therefore, strong coordination and communication was necessary to achieve the best results possible. The coordination structure which shows the members of the team that were responsible for the management and technical coordination of the project is presented in the organogram further below (Figure 41). The role and responsibilities of each of member are described below.

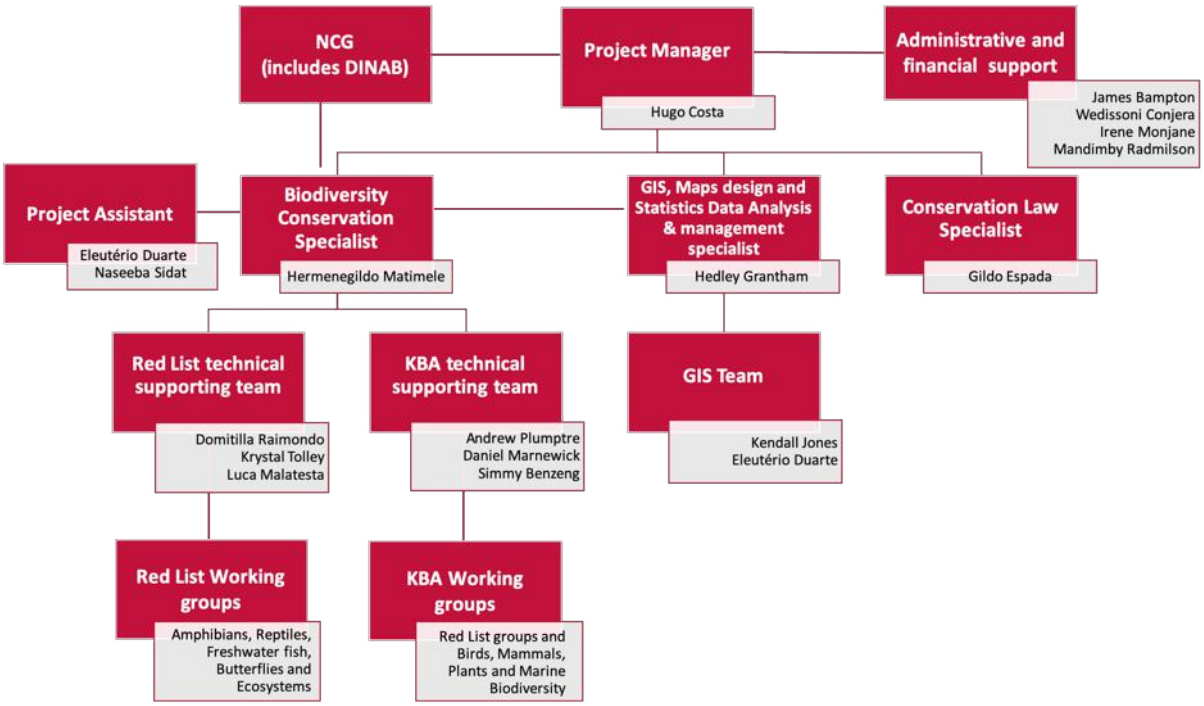

Figure 41- Organogram of the management and technical coordination team

PROJECT MANAGEMENT

The overall management of the project was undertaken by Hugo Costa from WCS Mozambique, who was responsible for coordinating and liaising frequently with SPEED+. He was also responsible for establishing regular contacts with the Government and key partners, including the KBA Secretariat and complementary projects from other institutions. Hugo Costa led the creation of the NCG, established contacts with the main project partners, supported and oversaw the daily work, training sessions and workshops, oversaw preparation of all reports related to the products developed throughout the project and approved those documents prior to their submission.

Hugo Costa was supported by WCS's Mozambique office (Wedissoni Conjera, Irene Monjane and Erica Bernardo) across various fields, including administrative, logistics, financial and legal assistance. In addition, there was also support from the regional office (Mandimby Radmilson) and the global Headquarters in New York, particularly on management of contracts, payments, financial assistance and quality control. James Bampton, the Country Program Director, was in permanent contact with Hugo Costa overseeing the quality of the project.

TECHNICAL COORDINATION

The technical coordination of the project for both red list of threatened species and KBAs was led by Hermenegildo Matimele (Biodiversity Conservation Specialist from IIAM). Hemernegildo worked directly with the project manager, Hugo Costa, and was responsible for ensuring that the IUCN red list criteria and the global standard for identification of KBAs were applied correctly. Therefore, he worked closely with technical partners including the KBA secretariat and Regional Focal point of KBAs, alongside with IUCN for the establishment of the set of species to be evaluated. Moreover, Hermenegildo provided training and weekly support to the Data Management Assistants of each taxonomic working group on data compilation and cleaning prior to red list assessments and KBA identification. Thereafter, he ensured that red list assessments and KBA proposals were reviewed prior to their submission to IUCN and to the NCG, also leading the necessary review. Subsequently, he supported the preparation of the main reports and related communicating material.

PROJECT ASSISTANTS

Hermenegildo and Hugo were mainly assisted by Eleutério Duarte, Mozambican biologist from WCS Mozambique. Eleutério was responsible for conducting the day-to-day work, establishing regular contacts with main partners and organizing meetings (including trainings and workshops). During the meetings, Eleutério was responsible for producing meeting minutes, ensuring that decisions from the meetings were implemented. Therefore, Eleutério's responsibilities included documenting activities being implemented by the taxonomic working groups, coordinate the logistics, prepare the main reports of the project and associated documents. In addition, Eleutério played an important role on providing technical support to the KBA and Red List assessments, including conducting much of the GIS work that was necessary to develop the KBA proposals. He supported the technical coordinator in preparing the final KBAs proposals and revising them. Given the overwhelming workload, particularly towards the end of the project, Eleutério was assisted by Naseeba Sidat a Mozambican biologist from WCS Mozambique. Naseeba's assistance focused on organizing workshops including booking flights and accommodation, and documenting relevant activities being implemented during workshops. Moreover, Naseeba provided significant contribution on preparing reports and producing KBA maps together with presentation materials, mainly in power point format.

DATA MANAGEMENT ASSISTANTS

The Data Management Assistants (DMAs) were responsible for compiling, organizing and assessing all biodiversity elements' data in the specific format to support the Red List and KBA assessments. In total, 10 young Mozambican professionals carried out this task in different working groups as summarized on Table 9.

Table 9 – Role of each Data Management Assistant

Name	Institution	Working taxonomic group
Acácio Chechene	Independent Biologist	Herpetofauna
Celso Sardinha	SECOSUD II	Herpetofauna
Joelma Souane	Independent Biologist	Insecta
Domingos Sandramo	SECOSUD II	Insecta
Raquel Raiva	Independent Biologist	freshwater fish
Vanessa Muianga	Natural History Museum	freshwater fish
Gerson Tomo	SECOSUD II	Mammals and Birds
Joaquim Campira	SECOSUD II	Mammals and Birds
Armando Sambo	Independent Biologist	Plants
Jorge Sitoe	WCS Mozambique	Marine biodiversity

REGIONAL SPECIALISTS WHO SUPPORTED THE KBA AND RED LIST ASSESSMENTS

Domitilla Raimondo, who works for SANBI and is also the Deputy Chair of the IUCN Species Survival Commission (SSC) and Chair of the IUCN's National Working Group Alliance, supported the Red List assessment planning, monitoring and workshops and linked key specialists from the IUCN SSC with Mozambican experts. Domitilla attended technical discussions led by Hugo Costa and Hermenegildo Matimele on a weekly basis at the beginning of the project providing a step-by-step guidance. In addition, Domitilla attended all workshops held in Maputo providing technical assistance, particularly on red listing assessments but, also on KBAs.

Krystal Tolley also provided relevant support. She is the head of the Molecular Ecology group at SANBI, the Red List Focal Point for the IUCN Chameleon Specialist Group, and leads the IUCN Southern African Regional Reptile Specialist Group. K. Tolley, together with Domitilla, worked closely with the technical team, providing support mainly on preparing and conducting the Red List assessment, including overseeing species selection, leading assessments before and during the workshops. K. Tolley dedicated over a week to work closely with Celso Sardinha, building capacity about red listing, which entailed mobilizing species data, and developing preliminary maps prior to the workshop.

Luca Malatesta served as coordinator of the SECOSUDII project, which implemented Mozambique's Biodiversity Network project BIONOMO. Luca supported the Red Listing through training data management assistants on using QGIS to produce species range maps and calculate assessment parameters such as Extent of Occurrence (EOO) and Area of Occupancy (AOO). SECOSUD II staff were allocated to support the red listing and KBA assessments with emphasis on data preparation. Luca Malatesta also helped on the first steps towards producing an ecosystem map for Mozambique.

Andrew Plumptre, the head of the KBA Secretariat, provided training on the application of the Global Standards for Identification of KBAs. Andrew followed closely the whole process of identifying KBAs in Mozambique, starting from mobilizing species data set from the IUCN Red List, with occurrence in Mozambique. In addition, Andrew played an important role on establishing the NCG. He also oversaw and provided technical guidance throughout the process. Finally, he represented the KBA Secretariat

guaranteeing the process of validation of the proposed KBAs and its publication in the World Database of KBAs.

Daniel Marnewick, Key Biodiversity Areas Community Chair (KBA Regional Focal Point) and Africa Representative and Manager of South Africa's Important Bird and Biodiversity Areas (IBA) Program, was responsible for reviewing all the KBA proposals, before they were submitted to the KBA Secretariat. Through this process, Daniel Marnewick provided useful insights on ensuring that information was documented and filled in correctly on the KBA proposals' forms. He was supported on this task by Simmy Bezeng from BirdLife South Africa.

Harith Farooq, a Mozambican specialist, from the University of Lúrio, and a PhD by the University of Gothenburg, provided technical guidance and support to the KBA delineation process and to the Herpetofauna working group. He engaged actively during the workshops for both red listing and KBA delineation. During the project, he was invited to participate at the regional IUCN's workshop on reptile's global assessment, and is a potential member of the IUCN Species Survival Commission Specialist Group for herpetofauna. He

Luke Verburgt from Enviro-Insight, contributed on preparing and conducting the red list assessments for the Herpetofauna group. In addition, Luke attended the KBA delineation workshop where he provided useful insights particularly to delineate boundaries of KBAs in northern Mozambique.

Werner Conradie, from Port Elizabeth Museum, provided useful taxonomic assistance, first through identifying to species level specimens of Herpetofauna kept in the Maputo Natural History Museum. In addition, Werner worked closely with K. Tolley on selecting species for red listing and then gathered all relevant information associated with species prior to red listing. Werner also attended the red listing workshop in Maputo helping assessing species but also building capacity on young Mozambican biologists.

Roger Bills from South African Institute for Aquatic Biodiversity (SAIAB), like Werner, spent a week at the Maputo Natural History Museum identifying freshwater fish specimens. During this process, Roger Bills provided training to Mozambican biologists working in the Freshwater Fish group, based at the Maputo Natural History Museum. Roger Bills also provided assistance on preparing species' data prior to the red listing process. During the red listing assessment, R. Bills provided useful insights on species taxonomy, distribution and threats, making sure species had relevant information on which to base assessment decisions.

Albert Chakona, from South African Institute for Aquatic Biodiversity (SAIAB), worked tirelessly on all steps of the red listing process. A. Chakona assisted overcoming species taxonomic issues and ensured that information on distribution and threats were provided as accurately as possible. Following the Red List assessment workshop, A. Chakona was responsible for addressing the reviewers' comments and suggestions, organising the information before submitting the assessments to IUCN.

Lize von Staden provided essential support to the Red List assessments. She works for SANBI and is the IUCN Red List authority for the Southern Africa region. In addition to these roles, Lize is an official trainer of the IUCN Red List criteria and categories. On this project, Lize provided training on the application of the IUCN Red List criteria and categories. In addition, Lize led the workshop aiming to assess conservation status for fauna species including Butterflies, Freshwater Fish, Reptiles and Amphibians.

Silvia Kirkman, a member of LEPSOC (Lepidopterists' of Africa), was responsible for reviewing and tiding up information on the IUCN Red List assessment for Lepidoptera species prior to their submission to the IUCN for publication.

Alan Gardiner, Professor at the Wildlife College in South Africa, led on species selection, oversaw data preparation, and the red listing process for the Lepidoptera species. A. Gardiner was the main expert for this group having provided most of the data and information about species taxonomy, and threats to species habitat. This information was necessary to ensure correct species assessment against the IUCN criteria and categories.

GIS AND DATA MANAGEMENT TEAM

The GIS, maps and statistic analysis and data management specialist was Hedley Grantham, who is the Head of the spatial planning team of WCS's Global Conservation Program and a member of the KBA Technical Working group. Hedley was responsible for supporting the team on preparing and managing data and on the KBA delineation process. At the delineation workshop he led one of the working groups, providing assistance on the boundary delineation process. In addition, Hedley was deeply involved on producing the improved historical ecosystem map for Mozambique and the Red Listing of Ecosystems. Hedley was directly supported by Kendall Jones, also a staff member of WCS's spatial planning team. Kendall also led one of the working groups at the workshop and developed the species and sites maps. Kendall also provided assistance on the development of the improved historical ecosystem map, ensuring preparation of the baseline information. Moreover, Kendall also conducted the Red Listing of ecosystems, and then developed the KBA factsheets and several of the associated maps.

LEGAL ADVISORY TEAM

Gildo Espada, a Mozambican lawyer with 16 years of experience in Environmental Law, was the Conservation Law specialist. He provided legal advisory to the project and conducted a brief analysis on how the project results can be linked to the national policies and legal framework, providing important tools for decision-making. Gildo Espada worked closely with Hugo Costa, Hermenegildo Matimele and Eleutério Duarte to produce a document that ccould assist the integration of KBAs across various national policies to galvanize informed decision making (VOL. IV).

TRAINING AND CAPACITY BUILDING PROVIDED TO THE MOZAMBICAN NATIONALS AND INSTITUTIONS

The project team working in Mozambique was practically fully comprised by Mozambicans, most of them young professionals starting their careers in conservation. About 9 training activities were carried out. A list of training and capacity building activities provided to the project team, Government institutions and research institutions, including number of people trained, is presented in Table 10.

Table 10 – List of training and capacity building activities provided to the project team government institutions, research institutions and to other Mozambican partners

Date	Training	Provided by	People trained	# of people trained	Capacity-building
12-Apr-19	KBA Assessment induction	Andrew Plumptre (Head of KBA Secretariat)	Project team (Data Management assistants)	13	Ability on compilation, and preparation of data in specific format to run KBAs assessments increased

Date	Training	Provided by	People trained	# of people trained	Capacity-building
12-Apr-19	Red List Assessment Refresh	Hermenegildo Matimele	Project team (Data Management assistants)	13	Ability on compilation, and preparation of data in specific format to run Red List assessments increased
22-Apr to 3-May-19	Intensive red list training in Cape Town- South Africa	Krystal Tolley	Data Management assistant who transferred knowledge to other DMAs	1 (12)	Skills on data mobilization and application of the IUCN Red List criteria increased
27-May-19	KBA Pre-Training	Andrew Plumptre	Project team (Data Management assistants)	13	Project team, prepared to support the KBAs' training and workshop
29-31-May-19	KBA Training and Workshop	Andrew Plumptre	Project team, Government institutions, research institutions, NGOs, Private Sector and other partners	44	Increased the knowledge on KBA Global Standards and criteria for their identification, delineation and proposal submission process,
17-21-Jun-19	Red List Assessment Workshops	Lize Von Staden	Project team, Government institutions, research institutions, NGOs, Private Sector and other partners	33	Increased the knowledge about the Red List criteria application, and species assessment.
25-Jun-19	Short GIS Training	Luca Malatesta	Project team (Data Management assistants)	12	Increased skill on calculation of EOO and AOO for species Red List assessment
19-Jul	Webinar on the "Guidelines for using A Global Standard for the Identification of KBA"	Charlotte Boyd	Project team (Data Management assistants)	12	Increased the knowledge on application of Global Standard for the KBA identification.
14-15-Nov-19	KBA Delineation Workshop, with relevant stakeholders	Kendall Jones, Hedley Grantham	Project team, Government institutions, research institutions, NGOs, Private Sector and other partners (see in the Annex 7)	55	increased the ability on assessing, refine results, and delineate KBA boundaries.

DATA SHARING

CREATION OF A WEBSITE FOR THE KBAS AND RED LISTING NATIONAL COORDINATION GROUP

A meeting with the NCG management committee was held on the 13 of April 2019, to discuss the creation of NCG website and decide where it could be hosted, including defining other strategies for the dissemination of results, given the COVID-19 situation. It was agreed that this website should be created as soon as possible and that it should be connected to the *Clearing House Mechanism* website hosted in the Ministry of Land and Environment, at the National Directorate of Environment. Further meetings were undertaken to develop the Terms of Reference for the website development, including preliminary design suggestions, the contents that should be made available to the general public and any private content. It was agreed that the website should be developed on the short term.

GUIDELINES ON BUSINESS IN AND AROUND KBAS

In 2018, the KBA partnership launched the "Guidelines on Business and KBAs: Managing Risk to Biodiversity". These were developed to be of use to business and certification scheme operators, financial institutions, civil society organizations, and public authorities in numerous situations. They can be applied by businesses of all types, sizes and in all sectors, and by existing and new businesses having direct, indirect, and cumulative impacts on a KBA. They are applicable to the businesses' entire area of influence, as well as throughout the life cycle of the operation, from pre-feasibility to closure (and, where relevant, site rehabilitation). The Guidelines can also be integrated into responsible sourcing policies for goods and services, the production of which could have direct, indirect, and cumulative impacts on KBAs.

Due to the importance of this document to guide sustainable development, it was decided to translate it to Portuguese and make it available at IUCN's and KBA Partnership's webpage. It is expected that this document is used by the private sector and the Government as guiding principles when developing projects in and around KBAs. This should be seen as complementary to the national legislation, as it provides international good practice guidelines. The translated document is part of the package of products developed under this project.

CONCLUSIONS AND RECOMMENDATIONS

To carry out this project hundreds of contacts were established between 2019 and 2020 (face-to-face, telephone and email) in order to compile the existing data on biodiversity in Mozambique. A high number of specific meetings were held, as well as 3 workshops dedicated to the Red List of species and the identification of KBAs. More than 100 national, regional and international experts were involved in this nationwide project.

The project resulted in the creation of the National Coordination Group for the KBAs and Red Lists in Mozambique, comprised of about 20 institutions, many of them from the Government. This group was key to the success of this project and is now organised and empowered to continue the mapping and monitoring process of KBAs in Mozambique.

Twenty-nine KBAs were identified and mapped for Mozambique, duly validated by the KBA Secretariat, of which 25 are terrestrial and 4 are marine. The country thus now has 31 KBAs, as two more were identified by another project[4] and validated by the KBA Secretariat. Through a strong engagement with the Government, achieved through the GNC, it was possible to integrate the KBAs in the ongoing National Spatial Plans, both for the terrestrial and marine realms.

A total of 67 endemic or near-endemic species of herpetofauna, butterflies and freshwater fish were globally assessed according to IUCN Red List criteria, where 47% are susceptible to extinction unless initiatives and activities are implemented to reverse this trend. All assessments were submitted to IUCN for validation and publication. In addition, a preliminary mapping of historical ecosystems for Mozambique and a first exercise for the development of a Red List of terrestrial ecosystems was undertaken and subsequently finalised through a complementary project.

The project achieved its planned objectives, and the results can be summarised in the following points:

- Inter-institutional coordination through the National Coordination Group created to promote the identification, long-term monitoring and conservation of species and Key Biodiversity Areas;
- Threatened species and 29 KBAs identified and available to inform Government land planning programmes and private sector plans and projects;
- Data on important areas for biodiversity and species compiled and updated ready for use by the Government to inform decision making and reporting to the secretariats of International Conventions ratified by Mozambique;
- List of threatened species established for some groups, which can be used to inform the development of a list of protected species for Mozambique;
- One (1) Mozambican fauna specialist integrated on the IUCN Regional Species Survival Commission (Harith Farooq);
- Twelve (12) Young Mozambican biologists trained in the process of organizing data and conducting Red List and KBA assessments.

With the results achieved, it is expected that the information produced with this project will contribute to the effective implementation of the National Biodiversity Strategy and Action Plan (NBSAP) required by the Convention on Biological Diversity (CBD), and support Mozambique in its

[4] KBAs identified through the "Conservation priorities for freshwater biodiversity in the Lake Malawi/Nyasa/Niassa Catchment" project led by IUCN, in partnership with WWF and IIP (Sayer et al. 2019).

engagement with the future CBD CoP, where the post-2020 Global Biodiversity Framework will be adopted.

KBAS AND RED LISTING NATIONAL COORDINATION GROUP

The establishment of the National Coordination Group for the KBAs and the Red List in Mozambique was undertaken with the vision of being inclusive with respect to stakeholders working on biodiversity and environment. A strong effort was put on participation and communication to make sure that the National Coordination Group had solid foundations and that it was recognized as an important framework to the country. The NCG was established being formally comprised of 21 national institutions, including 8 from the Government, 5 universities/research institutions, 4 Civil Society Organizations and 4 representatives from the private sector. It was agreed that the group would have a management committee and that the National Directorate of Environment (DINAB), within the Ministry of Land and Environment, would be the Chair of the group. It was also agreed that the National Fisheries Research Institute would be the Vice-chair. This approach ensures that the Government of Mozambique engages actively with all steps related to KBA identification in the country. Doing so, Mozambican government will be equipped with relevant information to guide decisions in real time, ensuring sustainable development while allowing that known areas of biodiversity importance are not lost.

The coordination committee is also comprised of a Secretariat (WCS) and several focal points. The focal points for the KBA technical topics are WWF Mozambique and Eduardo Mondlane University, which nominated experts who represent these institutions on the NCG, namely Eduardo Videira (WWF) and Natasha Ribeiro (UEM). These focal points played an important role on reviewing all KBA proposals resulting from this project. Supported by Alima Taju (WWF), the NCG KBA focal points provided useful insights that led to improve the results of the KBA proposals initially developed. There are also focal points for data management, which are the National Sustainable Development Fund, represented by Muri Soares, and BIOFUND, represented by Deinse Nicolau.

The group is now fully operational, having carried out the validation of proposed KBAs and subsequent submission to the regional KBA focal point. After validation by the KBA Secretariat, the NCG recognized the approved KBAs and presented them to the Technical Council of the Ministry of Land and Environment as a decision support tool to be used in the country's policies, namely for integration in national spatial planning. Finally, it should be noted that the NCG developed a work plan and its members have sought to raise funds to implement the planned activities.

RED LISTING OF THREATENED SPECIES

Mozambique has been involved in Red List assessments for almost two decades, particularly in flora. In 2009, researchers from IIAM and Eduardo Mondlane University were integrated in the IUCN regional plant specialists group under the species survival commission. In 2017, during the holding of the first training on Red Lists among experts from different taxonomic groups of fauna and flora, a working group for Red List assessments in the country was created under the leadership of IIAM. The current project strengthened the work initiated by IIAM by training more than 20 Mozambicans in Red List assessments. Global assessments of 67 species of endemic or near-endemic fauna (herpetofauna, butterflies and freshwater fish) were carried out, with almost half of these species found to be threatened. The project established the link between national and regional experts, enabling future collaborations. Another relevant aspect is that the established NCG also plays an important role on Red Listing of species and ecosystems, making them known to the general public and the country's authorities, promoting the dissemination of this tool at the national level, and

allowing the formal recognition of the previous Red List working group by the Government of Mozambique. The NCG appointed IIAM, through Camila de Sousa, and ANAC, through Armindo Araman, to be the two institutions responsible for the Red List of species and ecosystems initiatives in Mozambique.

IMPROVED HISTORICAL ECOSYSTEM MAP AND RED LISTING OF ECOSYSTEMS

During the lifetime of the project, the team sought to create an improved map of terrestrial ecosystems that represents their original extent in Mozambique, allowing for the assessment of the their loss to date and determination of their current conservation status through the Red Listing of Ecosystems (RLE). This information allows its incorporation in a series of other planning tools, such as systematic conservation planning, evaluation of gaps in conservation areas, strategies for expansion of conservation areas, biodiversity offset plans, among others. An ecosystem map at a fine and precise scale is a key element for national planning.

Since it has not been possible, in the lifetime of the project, to produce a nationwide map that accurately represents the original extent of the ecosystems with a description of the associated species and a RLE assessment, the project team initiated a fundraising process to finalize these products and get them validated by experts and national institutions. At the end of 2020 funds were raised through the same donor as the present project (SPEED+/USAID) and this complementary project began. In February 2021 version 1.0 of the historical map and the Red List of Ecosystems were finalised and by the end of 2021 a number of workshops are expected to be held to improve and publish these products

Regarding another ongoing project (led by CORDIO East Africa) on mapping and assessing the coral reefs of the South West Indian Ocean region, considering the differences in mapping scales between terrestrial and marine realms, separate approaches were maintained. Both this and the new SPEED+/USAID-funded project can inform a future exercise to identify KBAs triggered by coral reefs.

A further step that would be very useful not only for Mozambique, but for the whole of southern Africa would be to develop a process with neighbouring countries to gain a more regional perspective of ecosystems and their threat status. This would allow countries in the region to be better prepared to act individually or together towards the new post-2020 global biodiversity framework under the Convention for Biological Diversity.

KEY BIODIVERSITY AREAS

The application of the new Global Standard of KBAs in Mozambique, within the scope of the project "Red List of Threatened Species, Ecosystems, Identification and Mapping of Key Biodiversity Areas (KBAs) in Mozambique", is an important contribution to the improvement of the biodiversity conservation policy framework, providing spatially explicit information and identifying areas that effectively contribute to the global and national persistence of biodiversity due to its characteristics. These 29 mapped areas (together with two others that were identified in Lake Niassa by Sayer et al. 2019) can thus be used to guide spatial planning and mitigate the impacts of investment projects made by the public and private sectors, as well as to support the strategic expansion of the national network of conservation areas, contributing to the achievement of goals 11A and 11B of the National Strategy and Action Plan for the Conservation of Biological Diversity in Mozambique (2015-2035) and for objective 11 of Aichi Targets (Convention on Biological Diversity). On the other hand, systematic information on species will contribute to achieving CBD objective 12, which encourages countries to guarantee protection of all endemic, rare and endangered species. It also contributes to the

achievement of Goals 14 and 15 of the Sustainable Development Goals. It should also be noted that at least 16 areas have been identified that, if better studied, could be activated as KBAs.

Although KBAs are not necessarily equivalent to conservation priorities, they are critical to inform systematic conservation planning and the definition of priorities, thus constituting an important tool to inform the establishment and expansion of conservation areas (Smith et al., 2018). According to the Global Standard, KBAs are designed to be manageable units, responding to local ecological, physical and socio-economic contexts. These factors are important for the management of any conservation area, which makes KBA design information a valuable resource for global conservation prioritization analyses. Not all KBAs have to be conservation areas and not all conservation areas have to be KBAs, however, it is natural that there is overlap between the two. KBAs derive from an identification process based on standardized technical-scientific criteria, while conservation areas are a conservation tool with legal recognition, governance and management agreements that may have been established due to several reasons, such as ecological representability, presence of bio-cultural landscapes, connectivity, ecosystem services, national and regional conservation priorities. Therefore, Conservation Areas will only be identified as KBAs if they also have elements of biodiversity that meet the respective criteria and thresholds. In Mozambique, about 45% of the Protected Areas were identified as KBAs, corresponding to 49% of the total area protected in the country (excluding the Game farms, and including forest reserves).

It is normal for countries to have Conservation Areas that do not qualify as KBAs, and this does not mean that these sites are not important for conservation. In other words, there are areas that, due to their characteristics, are important at national level, but that do not match the criteria that allow them to be triggered as areas of global importance. It was found that 11 of the 29 KBAs identified are outside Conservation Areas, corresponding to a total of 22,095.11 km^2.

For some regions and countries such as Mozambique, the existing data limitations mean that it will take a little longer to compile the information with the necessary detail to verify if all conservation areas meet the quantitative thresholds associated with the KBA criteria. When the criteria to identify KBAs of regional importance are defined, there will certainly be a significant number of sites in Mozambique that will qualify as such.

The 29 KBAs identified for the country through the present project are duly mapped and characterised (see Factsheets - VOL. II), and complementary to the present report, an online Atlas of Mozambique's KBAs and a Story Map were developed. The KBAs were also integrated into the World Database of KBAs (www.keybiodiversityareas.org), removing areas that had been identified as KBAs according to old criteria but in fact do not qualify as such. Finally, a Government of Mozambique biodiversity portal is in early development, which will integrate information on KBAs and Red Lists.

The KBAs identified for Mozambique are thus ready to be used in decision making. Through the project's strong engagement with the Government, with support from the NCG, throughout the project it was possible to initiate approaches to establish a formal link between KBAs and the existing policy and legal framework in the country, namely:

- Establishing a link with the National Directorate of Land and Territorial Development (DNDT) so that the National Territorial Development Plan (PNDT) would include KBAs as being areas that were part of the national ecological structure, corresponding to sites that should be avoided by development projects that compromise the key elements of biodiversity that triggered those KBAs. The PNDT was concluded, approved by the Council of Ministers and awaiting approval by the Assembly of the Republic.

- Establishing a link with the Ministry of the Sea, Inland Waters and Fisheries (MIMAIP) so that KBAs, like the PNDT, can be integrated into the Marine Spatial Plan (POEM) as areas in which projects that compromise the key elements of biodiversity that triggered KBAs should be avoided. The team that is developing the POEM is integrating KBAs in the plan.
- Integrating KBAs in the new regulation on biodiversity offsets that is associated with the EIA regulation, defining them as areas to be avoided by development projects and as receiving areas for biodiversity offsets, namely for cases where these are used to establish new conservation areas.
- Integrating KBAs in the new regulation for the protection of avifauna and their habitats, as areas dedicated to their protection.
- Potential development of a specific regulation for KBAs.

CHALLENGES / CONSTRAINTS

The project was innovative by being one of the first in the world to to be carried out at a national scale and include multiple taxonomic groups, institutions, and specialists. Given these aspects and the scarcity of up-to-date quantitative data for the country, the information gathering process was quite intense and took more time than expected. Because the approach of the project was to make sure that the Government institutions would be deeply involved and that would play a leading role on the KBA and Red Listing processes in the future, this created an additional challenge. Full understanding of the process and consensus was not easy to achieve among all institutions, but at the end of the project most of the stakeholders were aligned and satisfied with the results of the project. The establishment of the National Coordination Group allowed a particularly good understanding of the whole process that was developed under the project and established the foundations for the continuation of the KBA and Red Listing work.

Some of the major constraints faced by the project were:

- Restrictions related to the beginning of the COVID-19 pandemic: this implied less availability by Government staff and partners and determined the cancellation of the final workshop and live meetings. Efforts were put on planning, on providing WiFi dongles to Government staff and schedule webinars and online meetings, which allowed to finalize the work underway.

- Lack of specific information about some species and areas with the potential to trigger KBAs. This implied that some potential triggering sites had to be set aside – these could be assessed on the future when more information is available.

- Constraints in engaging with some experts and government entities. While most of the people contacted responded and contributed with information, some key experts did not or provided little feedback. Despite these limitations it was possible to carry out all the work using the information that was already available or that was made available by the other experts.

- Slowness in obtaining feedback from some experts and institutions. This was particularly important in the case of government entities, but it was possible to overcome this constraint with much persistence.

- Amount of time needed to develop the final improved historical ecosystem map for Mozambique and reduced feedback by the national ecosystem specialists. As anticipated from the beginning, this was a very demanding activity, constituting a project in itself. As such, it was not possible to finish

these products within the present project. However, through the support of SPEED+/USAID it was possible to initiate a complementary project that allowed the development of a historical map of ecosystems and respective assessment of threat status.

- The delays incurred meant that the final phase of the project was characterised by a work overload. It was possible to allocate more internal resources to the project to ensure that it could be delivered on time, and a short extension of the official project period was required, which proved extremely valuable in completing the planned deliverables.

RECOMMENDATIONS

Considering all of the above, this project has boosted knowledge on biodiversity in Mozambique and its threat status, with emphasis on priority areas and species for conservation. Urgent actions are thus required to ensure that the work undertaken continues and reaches its full potential. It is therefore recommended that the following priority activities be implemented in the short and medium term:

Coordination

- Formalize, at the Ministerial level, the National Coordination Group of KBAs and Red List to be the official forum to deal with the topics described in their ToR, contributing to support the implementation of the conventions and National Strategy and Action Plan on Biological Diversity (short-term).

Policy and Legal mechanisms

- Integrate the map of the 29 KBAs into spatial development plans (national, provincial and district) and marine spatial planning (short term).
- Develop national legislation to recognize KBAs as areas of high biodiversity value that have to be managed in order to safeguard the elements of biodiversity that have triggered them (short term).
- Introduce guidelines in the EIAs to consider KBAs as areas of high importance for biodiversity that must be safeguarded / avoided (short/medium term).
- Use KBAs as preferred areas for receiving biodiversity offsets (short term).
- Use KBAs in initiatives to expand Protected Areas or establish new ones (short/medium term).
- Integrate KBAs in revising the Biological Diversity Conservation Strategy and Action Plan (medium term).

Technical support

- Continue to update the historical ecosystem map and improve the Red Listing of Ecosystems assessment (short term).
- Continuation of work on identification of more KBAs, obtaining updated information for areas in terrestrial and marine realms (short/medium term).
- Conduct fieldwork to improve data availability and identify potential additional KBAs (old information or not available which prevents consistent decisions), highlighting 16 areas that are potential KBAs, with a particular focus on the following regions (short/medium term):
    - The whole range of Lebombo mountains
    - South-Western area of Mozambique (N4 up to Save river)
    - Machipanda (Manica)
    - Tchuma Tchato (specifically carnivores- Lions, Wild dog)

    - Other mountains in the central area of the country
    - Niassa Province
    - Marine areas with emphasis on Sofala Bank
- Continue to assess the global conservation status of species (fauna and flora) and ecosystems (short/medium term) and, in the medium/long term, contribute to regional assessments and carry out national assessments.
- Run a systematic conservation planning exercise on the terrestrial and marine areas to support decision making on the national protected area network expansion and/or other conservation initiatives medium/long term.

Data management and information sharing

- Finalize the website for the KBAs and Red Listing National Coordination Group, integrating it into the new biodiversity portal for Mozambique (short term).
- Make KBAs and Red Lists information available online (WDKBA, IBAT, IUCN page, etc) and integrate it in the reports to CBD (short term).
- Use the KBAs as the reference areas for the initiation of a national biodiversity monitoring program, which allows for regular reassessment of their status(medium/long term).

Capacity building

- Conduct training sessions (through workshops or webinars) targeted to the NCG members and other relevant institutions on the process of conducting Red List assessments for species and ecosystem at national, regional and global level – some local specialists and institutions are still not aware of the differences between these complementary types of assessments, and it is necessary to provide this clarification (short term).

- Conduct a training session to the NCG's host entity (DINAB) especially to the Heads of departments and technicians, on how to access, analyse and use the data (KBA and RL) to report to the international conventions, monitor the implementation of the National Strategy and Action Plan for the Conservation of Biological Diversity, define the goals for CBD's 2030 strategy and on using it on decision-making process, like the Environmental Impact Assessments (short term).

Dissemination of project results

- Wide dissemination of the project results and documents at a national level, with media support, reaching all types of stakeholders, such as the Government, private sector, civil society, donors, conservation partners and Universities. The latter as well as research centres can play a very important role in collecting additional information to improve knowledge about the current KBAs and identify new areas, either through research projects or through undergraduate, masters and PhD thesis (short term).
- Share the project's Policy Brief with the Technical Board and Advisory Board of the Ministry of Land and Environment for implementation of the proposed actions.

Fundraising

- Use the products that resulted from the current project to raise funds to implement most of the activities above, particularly those related to capacity building, data management and information sharing, and technical products as is the case of the historical ecosystem map for Mozambique and Red List of Ecosystems.

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ANNEXES

ANNEX 1 – LIST OF INSTITUTIONS CONTACTED DURING THE PROJECT'S KICK START

SECTOR	NUMBER OF INTITUTIONS	INSTITUTIONS
Government	10	**DINAB** (National Directorate for Environment)
		DINOTER (National Directorate for Territorial Planning and Resettlement)
		DINAF (National Directorate for Forestry)
		DNGM (National Directorate of Geology and Mining)
		DPC (Planning and Cooperation Directorate)
		DIPOL (National Directorate for Sea and Maritime Policies)
		FNDS (National Sustainable Development Fund)
		ANAC - National Administration for Protected Areas
		INAMI (National Mining Institute)
		INP (National Petroleum Institute)
Academy and Research Institutes	12	**UEM** – Faculty of Sciences- Department of biological sciences
		UEM - Faculty of Agronomy and Forest Engineer
		UEM- MHN (Natural History Museum-Maputo)
		Faculty of Natural Science of the University of Lúrio
		North-West University, South Africa
		University of Swaziland
		South African Wildlife College
		IIP-Fisheries Research Institute
		IIAM -Mozambican Institute for Agriculture Research
		Entomotheque of the Ministry of Agriculture and Food Security
		SANBI (South African National Biodiversity Institute)
		SAIAB (South African Institute for Aquatic Biodiversity)
NGO'S	5	**WWF- World Wildlife Foundation – Mozambique Country Office**
		IUCN - Mozambique Country Office
		BIOFUND- Foundation for the Conservation of Biodiversity
		CTV "Centro Terra Viva"
		BirdLife International
Private Sector	5	**IMPACTO**
		GOLDER
		CONSULTEC
		AMAIA
Projects	5	**SECOSUD II**
		Gorongosa Restoration Project
		MOZBIO
		LAUREL
		CONNECT
Multilateral and bilateral agencies	1	**BANCO MUNDIAL**
International Organizations	6	**Lepsoc- Lepidoptera Society of Africa**
		International Union for Conservation of Nature (IUCN) - Species Survival Commission (IUCN SSC)

SECTOR	NUMBER OF INTITUTIONS	INSTITUTIONS
		IUCN Amphibian region group
		IUCN freshwater fish group
		KBA Secretariat
		KBA Community – regional delegation
Total	44	

ANNEX 2 – SUMMARY OF MAIN MEETINGS HELD DURING THE PROJECT

#	MEETING	OBJECTIVE	DATE
1	Pre-kick-off meeting with SPEED+	Update on current status of the project and define dates for the kick-off meeting	15-Feb-19
2	Initial meeting with DINAB	Update on current status of the project, explain main objectives of NCG and schedule working meeting	22-Feb-19
3	Kick-off meeting with DINAB	Explain in detail the different phases of the project and main role of DINAB	7-Mar-19
4	Meeting with IIAM	Explain in detail the different phases of the project and agree details with IIAM	7-Mar-19
5	Meeting with DINOTER	Explain in detail the different phases of the project and main role of DINOTER	7-Mar-19
6	Meeting with MHN	Explain in detail the different phases of the project and agree details with MHN	8-Mar-19
7	Meeting with IUCN	Explain in detail the different phases of the project and agree details with IUCN	12-Mar-19
8	Meeting with IIP	Explain in detail the different phases of the project and agree details	13-Mar-19
9	Meeting with one of the consultants of the PNDT	Explain in detail the different phases of the project and to include the KBAs in the current phase of the document	13-Mar-19
10	Project's official kick-off meeting	Meeting with SPEED+, USAID and main partners	19-Mar-19
12	Meeting with DCB	Explain in detail the different phases of the project and agree details	21-Mar-19
13	Meeting with FNDS	Explain in detail the different phases of the project and agree details	21-Mar-19
14	Meeting with ICCF and SPEED+	To discuss how we can involve the parliamentary groups on the project	27-Mar-19
15	Meeting with FFI: Rob Harris	Explain in detail the different phases of the project and to ask for support on our assessments in Chimanimani	28-Mar-19
16	Meeting with ANAC, MOZBIO	Explain in detail the different phases of the project and agree details	28-Mar-19
17	Meeting with legal advisor	Meeting with SPEED+ and legal advisor who will support the brief analysis of the legal framework applicable to the Red List and KBAs in Mozambique	1 Apr-19
18	Meeting with KBA Coordination team and UniLúrio	Explain in detail the different phases of the project and agree details	1-Apr-19
19	Meetings for confirmation of species identification	Herpetofauna specialist to come to Maputo to confirm species identification at the Natural History Museum	1-5-Apr-19
20	Meeting with DCB (other specialists)	Explain in detail the different phases of the project and agree details	3-Apr-19
21	Meeting with MASA	Explain in detail the different phases of the project and to agree on data use and allocation of a data management assistant in the institution	9-Apr-19

#	MEETING	OBJECTIVE	DATE
22	Meeting with the LAUREL project	Explain in detail the different phases of the project and agree the use of data for the Red Listing of Ecosystems	11-April-19
23	Meeting with WWF	Explain in detail the different phases of the project and agree details	11-Apr-19
24	KBA Assessment induction	Meeting (on-line and live) on how to prepare data for KBA Assessments targeted to the data digitizers of each group and supporting team	12 Apr-19
25	Red List Assessment h induction	Meeting (on-line and live) on how to prepare data for RL Assessments targeted to the data digitizers of each group and supporting team	12 Apr-19
26	Meetings for confirmation of species identification	Freshwater fish specialist to come to Maputo to confirm species identification at the Natural History Museum	22-26-Apr-19
27	Meeting with CORDIO (Kenya)	To discuss synergies with their project on regional red listing of coral reefs	23- Apr-19
28	First meeting of the Red List of Ecosystems working group	To discuss the approach and first products	Apr-19
29	Intensive training of one of the herpetofauna data management assistants, in Cape Town- South Africa	To receive adequate training on the Red Listing assessments to share with other data management assistants	22-Apr to 3-May-19
30	Meeting with CTV	Explain in detail the different phases of the project and agree details	30-Apr-19
31	Technical Meeting, with main specialists from Herpetofauna, Freshwater fish and Lepidopter)	To discuss the Red Listing approach	03 and 14-May-19
32	Birds Technical Meeting (Gary Alport)	To discuss the Birds group approach	15-May-19
33	Meeting with Andrew Pumpltre (Head of KBA Secretariat)	To discuss and prepare the KBA training and Workshop	16-May-19
34	Business breakfast	To disclose the project with relevant stakeholders	22-May-19
35	Preparation meeting to the KBA Training and Workshop	Prepare the supporting team which will participate in the KBA and Training and Workshop	27-May-19
36	NCG first meeting	First official meeting of the NCG to approve list of members and ToR	28-May-19
37	KBA Training and Workshop	Explain KBA Global Standards and criteria for their identification, delineation and proposal.	29-31-May-19
38	Biodiversity Priorities Mapping workshop and the Biodiversity Planning Forum (South Africa)	Present the work on KBA and Red list being done in Mozambique	Jun-19
39	Red List Assessment Workshops	Make the first Red List Assessments	17-21-Jun-19
40	Short GIS Training	To train the Data Management Assistants on calculate EOO and AOO	25-Jun-19

#	MEETING	OBJECTIVE	DATE
41	Webinar on the "Guidelines for using A Global Standard for the Identification of KBA"	Training the Data Management assistant on application of Global Standard for the KBA identification.	Jul-19
42	Second NCG meeting	To review NCG ToR,	18-Jul-19
43	Meeting with Gorongosa National Park	To present the project and create a partnership	19-Jul-19
44	Coordination meeting with WCS team from Canada	To exchange experiences regarding the activities carried out in Mozambique and Canada in the context of identifying and mapping KBAs, including the creation of the GNC.	24-Jul-19
45	Meeting with the main specialists of the Mammals working group	To discuss the Mammals group approach, and identify the potential information source for each trigger species.	29-Ju1-19
46	Meeting with DINAF	To present the KBAs project and habitat degradation issues in potential KBAs that occur in Nampula (one of these is a Forest Reserve)	1-Aug-19
47	Meeting with IIAM specialists	To discuss MoU and planning next meeting for ecosystem and plants groups	1-Aug-19
48	Third NCG meeting	To finalize the review and approve the NCG ToRs,	06-Aug-19
49	Public Consultation on Avifauna Regulation	To contribute on the improvement of the proposal of the Decree for the protection of Avifauna, mainly in terms of the inclusion of Key Biodiversity Areas (KBAs) as protection areas for birds and their habitats,	14-Aug-19
50	Meeting with DINAB	To check the ToR of National Coordination Group for KBA and Red List, and approve the final list of institutions	14-Aug-19
51	Public consultation on the PNDT (Territorial Development Plan)	To give a contribute to improve the proposal of Territorial Development Plan, mainly in terms of important areas for biodiversity	29-Aug-19
52	Meeting with the main specialists of the Marine Biodiversity working group	To present key achievements, key challenges, solutions and next steps.	30-Aug-19
53	Meeting with USAID	To present preliminary project results, main challenges, and opportunities	4-Sep-19
54	Meeting with DINAB at collective of direction.	To approve officially the NCG ToRs	5-Sep-19
55	Meeting with Birdlife team	To provide additional information for five potential KBAs in Mozambique (Chimanimani, Mts. Inago, Ribáuè, Chiperone, and Njesi Plateau)	6-Sep-19
56	Meeting with WCS spatial planning experts (Hedley and Kendall)	To show some preliminary KBAs Maps and prepare for delineation Workshop at 14-15 November.	10-Sep-19
57	South African KBA Committee Review conference	To learn with the background of South African KBA identification process, and overview of African progress.	17-Sep-19
58	Meeting with RARE	To present the KBA project and create partnerships focusing on the marine mapping component.	17-Sep-19
59	Meeting with marine biodiversity specialist from CTV	To explain the KBA process and improve their involvement in the marine biodiversity working group	20-Sep-19

#	MEETING	OBJECTIVE	DATE
60	Webinar on KBA and new Integrated Biodiversity Assessment Tool (IBAT) functionalities	To receive training on the KBA and IBAT Functionalities	24-Sep-19
61	Ecosystem Workshop at Buffelskloof, Mupumalanga, South Africa with 3 ecosystem specialists	To develop the ecosystem map for Mozambique, which will be used to do the first Ecosystem red listing assessment in Mozambique	9-10-Oct-19
62	Technical Meeting with Specialists from Plants taxonomic group	To update on the work done, and to refine / improve the results achieved, clarify on any main issues before the KBA Delineation workshop	16-Oct-19
63	Technical Meeting with Specialists from Marine biodiversity group	To update on the work done, and to refine / improve the results achieved, clarify on any main issues before the KBA Delineation workshop	17-Oct-19
64	Technical Meeting with Specialists from Herpetofauna taxonomic group	To update on the work done, and to refine / improve the results achieved, clarify on any main issues before the KBA Delineation workshop	18-Oct-19
65	Meeting with WCS spatial planning experts (Hedley and Kendall)	To planning the KBA delineation Workshop at 14-15 November	22-Oct-19
66	Technical Meeting with Specialists from Insects (Lepidoptera) taxonomic group	To update on the work done, and to refine / improve the results achieved, clarify on any main issues before the KBA Delineation workshop	25-Oct-19
67	Technical Meeting with Specialists from Mammals taxonomic group	To update on the work done, and to refine / improve the results achieved, clarify on any main issues before the KBA Delineation workshop	1-Nov-19
68	Technical Meeting with Specialists from Freshwater fish taxonomic group	To update on the work done, and to refine / improve the results achieved, clarify on any main issues before the KBA Delineation workshop	8-Nov-19
69	Second Technical meeting of Ecosystem working Group	To discuss about the Ecosystem and degradation maps.	11-Nov-19
70	Preparation meeting	Meeting between the project coordination team and the group leaders to prepare the workshop	13-Nov-19
71	KBA Delineation Workshop, with relevant stakeholders	To assess and refine results, and delineate boundaries to make KBAs ecologically and practically relevant	14-15-Nov-19
72	Technical Meeting with Specialist from Birds taxonomic group	To refine / improve the results achieved, to present key challenges, solutions and next steps.	15-Nov-19
73	Meeting with Birdlife team (KBA Focal Point- Daniel Marnewick),	To update on progress with the work done in Mozambique, and to discuss how the BirdLife global secretariat can help especially for those KBA triggered By Birds species.	16-Jan-20
74	Meeting with Birds specialist (Emidio Sumabane)	To explain the project approach, and to gather additional Birds data	17-Jan-20
75	Workshop on Red List of Ecosystems of the Western Indian Ocean Coral Reefs held by CORDIO in Mombasa, Kenya	To learn the methodology applied by CORDIO for Red Listing of Coral Reefs; to Present the work on KBA and Red list being done in Mozambique, especially for marine environment, and to discuss the integration of the results of the coral reef assessment into the national processes.	21-22-Jan-20

#	MEETING	OBJECTIVE	DATE
76	Meeting with specialists from UEM, FNDS, BIOFUND and WWF	To discuss the Mozambique mangrove map from WWF, which will be used to improve the project's ecosystem map.	28-Jan-20
77	Meeting with NCG vice-president, Paula Santana Afonso	To update the status of the project; to define strategies for the next phases and to try to find solutions about the MoU with the Natural History Museum	31- Jan-20
78	Meeting with the KBAs focal points (WWF, UEM) from the NCG management committee	To define in detail its responsibilities, (develop specific ToRs) and the plans of Activities for 2020	06- Feb-20
79	Meeting with the Data management focal points (FNDS, BIOFUND) from the NCG management committee	To define in detail its responsibilities, (develop specific ToRs) and the plans of Activities for 2020	06- Feb-20
80	Meeting with the focal points for Red list of species and ecosystem (IIAM, ANAC) from the NCG management committee	To define in detail its responsibilities, (develop specific ToRs) and the plans of Activities for 2020	04- Feb-20
81	Training on systematic conservation planning focused on the application CLUZ (Conservation Land-Use Zoning software)	To receive a short training on systematic conservation planning, used mainly to delineate protected area network	12- Feb-20
82	Training Session on Biodiversity Metrics to quantify losses due to impacts and gains resulting from biodiversity offsets	To receive a short training on biodiversity offsets	18- Feb-20
83	Meeting with Ministry of Land and Environment	To suggest the formal recognition of the NCG at Ministerial level as it will allow a lot to support the national strategy for biodiversity conservation, information management and national alignment with the Post-2020 goals,	20-Feb-20
84	Public Consultation on Avifauna Regulation at Ponta de Ouro	To contribute on the improvement of the proposal of the Decree for the protection of Avifauna, where the KBAs are already included as protection areas for birds and their habitats.	21-Feb-20
85	Meeting with IMMAs (Important Marine Mammals Areas) team	To discuss the best cooperation between IMMA and KBA initiative in Mozambique to provide to the Government the soundest and clearest advice and recommendations and promote the effective protection and management of the most important sites	26-Feb-20
86	Meeting with CONNECT (an initiative whose main objective is to integrate information on biodiversity at the center of government decision-making)	To update them on the project and to discuss the integration of the project outputs (KBA and Red List)	26-Feb-20
87	Meeting with (Maria Julieta) from IUCN, held on 28th	To update them on the project and strengthen coordination with IUCN	28-Feb-20
88	IUCN Plant Conservation Committee- Webinar	To discuss the emerging crisis, we are facing across the globe of mass tree planting for carbon sequestration in response to the Bonn Challenge which is often done using exotics and not indigenous species, which threatened plant diversity and also distracts from retention of intact natural habitats.	28-Feb-20
89	Meeting with Birdlife team from São Tomé and Príncipe	To exchange of experience with the team from São Tomé and Príncipe that intends to conduct the process of KBAs identification in their country.	6-Mar-20

#	MEETING	OBJECTIVE	DATE
90	Meeting between NCG management committee (president, vice president and secretariat) and Natural history museum direction staff	To present the preliminary results achieved to date and to reinforce the interest to have the Natural History Museum at NCG, so that it can provide its valuable scientific contribution in these matters of national interest	13-Mar-20
91	Meeting with USAID	To present all the potential KBAs identified so far and discussing the main challenges, opportunities, priorities and next steps.	17- Mar-20
92	Meeting with NCG KBA Focal point (WWF, UEM)	To develop the checklist to guide during the KBA review process and discuss the review of the first batch of KBAs proposals.	27- Mar-20
93	Meeting with USAID	To discuss progress on the current sub-contract for KBAs (due May/June); and demand from GRM/supply from USAID to continue this program past May/June	2-Apr-20
94	Meeting with NCG management committee	To discuss the creation of NCG website and decide where it can be hosted, including defining other strategies for the dissemination of results, given the current situation of COVID-19	13-Apr-20
95	Meeting with MITA, USAID and SPEED+	To coordinate the creation of Website, to hold the main outputs from the project, namely KBAs Maps, the red list of threatened species from species which occur in Mozambique, and also to promote the National coordination group	30-Apr-20
96	Meeting with MITA, SPEED+ and INTELICA	To assess the possibility to create web page of KBAs and RL from the existing government website (chm.mitader.gov.mz) focusing on the time and resources needed for this work	4-May-20
97	Meeting with the head of KBA secretariat and the KBA regional focal point,	To discuss their comments and recommendations on the KBA's first proposals, and to agree on the best approach and next steps	22-May-20
98	Meeting with SPEED+ and MTA,	To discuss the elaboration of ToRs for developing / updating the Website	26-May-20
99	Work Session on the Brief analysis on the potential of the identified KBAs to be proclaimed as Protected Areas	To discuss and suggest options for managing KBAs so that they can maintain the biodiversity values that led to their identification, including their eventual designation as a conservation area, according to the categories determined in Conservation Law 5/2017 (Protection, Conservation Law and Sustainable Use of Biological Diversity).	29-30-May-20
100	Marine Spatial Planning workshop with NGOs,	To give a contribute to improve the proposal of Territorial Development Plan, mainly in terms of important areas for biodiversity	1-Jun-20
101	NCG KBA validation meeting	To present the results on the KBA Assessment in Mozambique to the NCG members.	15-Jun-20
102	Meeting with DINAB	To make a brief on the relevance of KBAs and how it is aligned with the country's legal framework, also to discuss the next steps, for the formal submission of the Mozambique KBAs proposals	17-Jun-20
103	Meeting with the KBA Global Secretariat	To discuss about the overall evaluation and comments provided by the KBA global secretariat regarding the submitted set of KBA proposals and to provide further clarifications	16-Oct-20

ANNEX 3 – LIST OF MOZAMBICAN NCG OFFICIAL MEMBERS (*POTENTIAL MEMBERS WHO AT THAT TIME HAD NOT SIGNED THEIR RESPECTIVE ANNEX I FOR FORMAL NCG MEMBERSHIP).

#	Representative	Institution	Contact
1	Alexandre Bartolomeu	DINAB	apmbart24@gmail.com
2	Ana Paula Francisco	DINAB	melinhapaula@yahoo.com.br
3	Rosalina Niquisse	DINAB	rniquice@yahoo.com.br
4	Guilhermina Amurane	DINAB	gamurane@gmail.com,
5	Armindo Chauque	DINOTER	armindoshauque@gmail.com
6	Carmén Luisa Baptista	DINAF	carmenluisagbaptista@gmail.com
7	Alsácia Atanásio Nhacumbe	MCTESTP-CNBB	alatanasio@gmail.com
8	Moniz Munguambe	DIPOL	mmunguambe2@mimaip.gov.mz
9	Denise Nicolau	BIOFUND	dnicolau@biofund.org.mz
10	Manuel Menomussanga	IUCN	manuel.Menomussanga@iucn.org
11	Eduardo Videira	WWF	evideira@wwf.org.mz
12	Kemal Vaz	VerdeAzul	kvaz@verdeazul.co.mz
13	Luciana Santos	MPACTO	lsantos@impacto.co.mz
14	Silvio Cianciullo	SECOSUD II	stefrasca@gmail.com
15	Henrique Massango	FNDS	henrique.massango@fnds.gov.mz
16	Natasha Ribeiro	FAEF UEM	joluci2000@yahoo.com
17	Camila de Sousa	IIAM	sousa.camila9@gmail.com
18	Teresa Alves*	IIAM	tealves@gmail.com
19	Paula Santana Afonso	IIP	psafonso@hotmail.com
20	Armindo Araman	ANAC	aaraman@anac.gov.mz
21	Isabel Silva	UniLurio	fish.isabel@gmail.com
22	Olimpio Chirindza	ADNAP	olimpiochirindja@gmail.com
23	Hadija Mussagy	ADNAP	hadija.mussagy@gmail.com
24	Hugo Costa	WCS	hcosta@wcs.org
25	Cornélio Ntumi*	DCB UEM	cpntumi@gmail.com
26	Bernardo Muatinte*	DCB UEM	muatinteb@yahoo.com
27	Cristina Louro*	CTV	cristinammlouro@gmx.com
28	Carlos Bento*	MHN	bentomcarlos@gmail.com
29	Almeida Guissamulo*	MHN	almeida.guissamulo@hotmail.com
30	Madyo Couto*	MOZBIO	madyo.couto@gmail.com

ANNEX 4 – LIST OF MEMBERS OF EACH TAXONOMIC WORKING GROUP FOR THE RED LIST AND KBA ASSESSMENTS

Group	Name	Institution
Amphibians and Reptiles		
Main members	Harith Farooq	University of Aveiro and University of Gothenburg
	Werner Conradie	Port Elizabeth Museum
	Kristall Tolley	SANBI / IUCN
	Luke Verbergt	Based in South Africa
	Graham Alexander	Based in South Africa
Data management assistant	Acacio Chechene	independet Biologist
	Celso Sardinha	SECOSUD II
Supporting members	Avelino Miguel	University of Zambezia
	Jody Taft	Based in South Africa
	Josh Weeber	Based in South Africa
	Darren Pietersen	Based in South Africa
Freshwater fish		
Main members	Roger Bills	South African Institute for Aquatic Biodiversity
	Albert Chakona	South African Institute for Aquatic Biodiversity
	Erica Tovela	Natural History Museum - Maputo
Data management assistant	Raquel Raiva	Independent biologist / IIP
	Vanessa Muianga	Natural History Museum - Maputo
Supporting members	Ivan Nerantzoulis	Faculty of Sciences of the University Eduardo Mondlane
	Catherine Sayer	International Union for Conservation Nature
	Graça Jaime	Faculty of Natural Sciences of the University of Lúrio
Insects		
Main members	Alan Gardiner	South African Wildlife College (SAWC) / Lepidopterists Society of Africa
	Silvia Krikman	Lepidopterists Society of Africa
Data manager assistant	Joelma Souane	Independent biologist / Enthomoteque
	Domingos Sandramo	SECOSUD II
Supporting members	Steve Collins	African Butterfly Research Institute
	Piotr Naskrecki	Gorongosa National Park
	Julian Bayliss	University of Cambridge
Ecosystems		
Main members	Camila de Sousa	Mozambican Institute for Agriculture Research (IIAM)
	Teresa Alves	Mozambican Institute for Agriculture Research (IIAM)
	Natasha Ribeiro	Faculty of Agronomy and Forest Engineer of UEM
	Célia Macamo	Faculty of Sciences of the University Eduardo Mondlane
	Jonathan Timberlake	Independent consultant
	Mervyn Lotter	Mpumalanga Tourism and Parks Agency
	Aristides Muhate	National Sustainable Development Fund
	Roberto Zolho	National Sustainable Development Fund
	Denise Nicolau	BIOFUND
	Paula Santana Afonso	National Institute for Fisheries Research (IIP)
Data manager (Focal Point)	Kendall Jones	Wildlife Conservation Society
Supporting members	Muri Soares	FNDS
	Henrique Massango	National Sustainable Development Fund
	Luca Malatesta	SECOSUD II
	Hedley Grantham	Wildlife Conservation Society
Birds		
Main members	Gary Alport	BirdLife International
Data management assistant	Gerson Tomo	SECOSUD II
	Eleutério Durte	WCS Mozambique
Supporting members	Sam Jones	Royal Holloway, University of London
	Emidio Sumbane	Gorongosa National Park
	Andre Botha	Endangered Wildlife Trust (EWT)

Group	Name	Institution
	Gabriel Jamie	University of Cambridge
	Martin Taylor	BirdLife South Africa
Mammals		
Main members	Valério Macandza	Faculty of Agronomy and Forest Engineer of the University Eduardo Mondlane
	Cornélio Ntumi	Faculty of Sciences of the University Eduardo Mondlane
	Ara Monadjem	University of eSwatini
	Armindo Araman	ANAC
Data management assistant	Gerson Tomo	SECOSUD II
	Eleutério Durte	WCS Mozambique
	Joaquim Campira	SECOSUD II
Supporting members	Coleen Begg	Niiassa Carnivore Project
	Marcelino Foloma	WWF-MCO
	Kris Everatt	Nelson Mandela University-Greater Limpopo Carnivore Programme
	Marc Stalmans	Gorongosa National Park
	Piotr Naskrecki	Gorongosa National Park
	Franziska Steinbruch	Wildlife Conservation Society
	Holly Rosier	Rio Save Safaris Lda - Coutada 9
	Carlos Perreira	ANAC
Plants		
Main members	Camila de Sousa	Mozambican Institute for Agriculture Research (IIAM)
	Teresa Alves	Mozambican Institute for Agriculture Research (IIAM)
	Regina Cruz	National Sustainable Development Fund
	Henrique Massango	National Sustainable Development Fund
	Alice Manjate	Faculty of Sciences of the University Eduardo Mondlane
Data management assistant	Armando Sambo	Independent biologist / IIAM
Supporting members	Jonathan Timberlake	Independent consultant
	John Burrows	Buffelskloof Nature Reserve
	Castigo Datidzua	IIAM
	Clayton Langa	IIAM
	Iain Darbyshire	Royal Botanic Gardens Kew
Marine Biodiversity		
Main members	Paula Santana Afonso	National Fisheries Research Institute (IIP)
	Isabel Silva	Faculty of Natural Sciences of the University of Lúrio
	Marcos Pereira	Centro Terra Viva (CTV)
	Eduardo Videira	WWF-MCO
	Alima Tajú	WWF-MCO
	Raquel Fernandes	Centro Terra Viva (CTV)
	Carlos Litulo	Centro Terra Viva (CTV)
	Rhett Bennett	Wildlife Conservation Society
Data management assistant	Jorge Sitoe	WCS Mozambique
Supporting members	Francisco Zivane	IIP
	Ruth Leeney	African Parks
	Almeida Guissamulo	Natural History Museum - Maputo
	Christine Dudgeon	University of Queensland
	Simon Pierce	Marine Megafauna Foundation
	Stela Fernando	IIP
	Anna Flam	Marine Megafauna Foundation

ANNEX 5 – LIST OF SPECIALISTS CONTACTED AND THEIR CONTRIBUTION TO THE ASSESSMENTS (I-Provided information; II-participated in at least one technical meeting; III-participated in at least one workshop; IV-Provided additional information sources including Contacts; V- Provided technical support)

#	Name	Group of Expertise	Response to the invitation	Contribution
1	Adamo Valy	Mammals	Did not provide feedback	Did not contribute
2	Adriano Macia	Marine Biodiversity	Positive	IV
3	Alan Gardiner	Insects and Mammals	Positive	I, II, III, IV, V
4	Albert Chakona	Freshwater Fish	Positive	I, II, III, IV, V
5	Alice Manjate	Plants	Positive	I, II, III
6	Alima Taju	Marine Biodiversity	Positive	I, II, III, IV, V
7	Almeida Guissamulo	Marine Biodiversity	Positive	I, III, IV
8	Ana Gledis da Conceição	Mammals	Positive	IV
9	Andre Botha	Birds	Positive	IV
10	Andrea Marshall	Marine Biodiversity	Positive	IV
11	Anna Flam	Marine Biodiversity	Positive	I, IV
12	Ara Monadjem	Mammals	Positive	I, III, IV
13	Aristides Muhate	Ecosystem	Positive	Delegated its contribution to other members of FNDS
14	Armindo Araman	Mammals	Positive	I, II
15	Audrey Ndaba	Insects	Did not provide feedback	Did not contribute
16	Avelino Miguel	Herpetofauna	Positive	III
17	Bernardo Muatinte	Insects	Positive	III
18	Callan Cohen	Birds	Did not provide feedback	Did not contribute
19	Camila de Sousa	Plants and Ecosystem	Positive	I, II, III, IV, V
20	Carlos Bento	Birds and Mammals	Did not provide feedback	Did not contribute
21	Carlos Litulo	Marine Biodiversity	Positive	III
22	Carlos Perreira	Mammals	Positive	I, II, III
23	Catherine Sayer	Freshwater Fish	Positive	I
24	Célia Macamo	Ecosystem	Positive	II
25	Christine Dudgeon	Marine Biodiversity	Positive	I, IV
26	Claire Spottiswoode	Birds	Positive	IV
27	Clayton Langa	Plants	Positive	I, II, III, V
28	Coleen Begg	Mammals	Positive	I, IV
29	Cornélio Ntumi	Mammals	Positive	I, II, III, IV
30	Darren Pietersen	Herpetofauna and Mammals	Positive	I, IV
31	Denise Nicolau	Ecosystem	Positive	III, V
32	Eduardo Videira	Marine Biodiversity	Positive	I, II, III, IV, V
33	Emidio Sumbane	Birds	Positive	I, II, IV
34	Erica Tovela	Freshwater Fish	Positive	I, II, III, IV, V
35	Erwan Sola	Marine Biodiversity	Positive	I, V
36	Etienne Marais	Birds	Did not provide feedback	Did not contribute

#	Name	Group of Expertise	Response to the invitation	Contribution
37	Francisco Zivane	Marine Biodiversity	Positive	II, III
38	Franziska Steinbruch	Mammals	Positive	I
39	Gabriel Jamie	Birds	Positive	Provided his contribution through Samuel Jones
40	Gary Alport	Birds	Positive	I, II, III, IV, V
41	Graça Jaime	Freshwater Fish	Positive	III
42	Graham Alexander	Herpetofauna	Positive	I, II, III, V
43	Gregory Davies	Birds	Did not provide feedback	Did not contribute
44	Gyula Lazlo	Insects	Positive	Did not contribute
45	Hanneline Smit-Robinson	Birds	Did not provide feedback	Did not contribute
46	Harith Farooq	Herpetofauna	Positive	I, II, III, IV, V
47	Hedley Grantham	Ecosystem	Positive	II, III, V
48	Henrique Massango	Ecosystem and Plants	Positive	II, III
49	Holly Rosier	Mammals	Positive	I
50	Iain Darbyshire	Ecosystem and Plants	Positive	I
51	Isabel Silva	Marine Biodiversity	Positive	I, II, III, IV, V
52	Ivan Carter	Mammals	Positive	I, IV
53	Ivan Nerantzoulis	Freshwater Fish	Positive	II, III, IV
54	Jamila das Neves	Marine Biodiversity	Positive	I, III
55	Jessica Williams	Marine Biodiversity	Positive	I
56	Jo Osborne	Herpetofauna	Did not provide feedback	Did not contribute
57	Jody Taft	Herpetofauna	Positive	V
58	John Burrows	Ecosystem and Plants	Positive	I, V
59	John Measey	Herpetofauna	Positive	V
60	Jonathan Timberlake	Ecosystem and Plants	Positive	I, II, III, IV, V
61	Jos Snoeks	Insects, freshwater fish	Did not provide feedback	Did not contribute
62	Josh Weeber	Herpetofauna	Positive	V
63	Julian Bayliss	Insects	Positive	I, IV
64	Kendall Jones	Ecosystem	Positive	II, III, V
65	Kris Everatt	Mammals	Positive	I, IV
66	Kristall Tolley	Herpetofauna	Positive	I, II, III, IV, V
67	Luca Malatesta	Ecosystem, Insects	Positive	I, II, III, IV, V
68	Luis Ceríaco	Herpetofauna	Positive	Did not contribute
69	Luke Verbergt	Herpetofauna	Positive	I, II, III, IV, V
70	Marc Stalmans	Mammals	Positive	I
71	Marcelino Foloma	Mammals	Positive	II
72	Marcos Pereira	Marine Biodiversity	Positive	I, II, III, IV, V
73	Marios Aristophanous	Insects	Did not provide feedback	Did not contribute
74	Martin Taylor	Birds	Positive	II, IV
75	Mervyn Lotter	Birds	Positive	II, V
76	Michael Schelyer	Marine Biodiversity	Did not provide feedback	Did not contribute
77	Muri Soares	Ecosystem	Positive	II, III, IV,V

#	Name	Group of Expertise	Response to the invitation	Contribution
78	Naseeba Sidat	Marine Biodiversity	Positive	II, III, V
79	Natasha Ribeiro	Ecosystem	Positive	II, III
80	Paula Santana Afonso	Marine biodiversity and Ecosystem	Positive	I, II, III, IV, V
81	Piotr Naskrecki	Insect, and Mammals	Positive	I, II
82	Raquel Fernandes	Marine Biodiversity	Positive	I, II, III, IV, V
83	Regina Cruz	Plants	Positive	II, III, V
84	Rhett Bennett	Marine Biodiversity	Positive	I, III, IV, V
85	Roberto Zolho	Ecosystem	Positive	II, III
86	Roger Bills	Freshwater Fish	Positive	I, II, III, IV, V
87	Ruth Leeney	Marine Biodiversity	Positive	I
88	Saba Rokni	Plants	Did not provide feedback	Did not contribute
89	Salomão Bandeira	Ecosystem, plants	Positive	IV
90	Samuel Jones	Birds	Positive	I, IV
91	Saiorse Pottie	Marine Biodiversity	Positive	I
92	Sheila Broadley	Herpetofauna	Did not provide feedback	Did not contribute
93	Silvia Krikman	Insects	Positive	I, II, V
94	Simon Pierce	Marine Biodiversity	Positive	IV
95	Stela Fernando	Marine Biodiversity	Positive	I
96	Steve Collins	Insects	Positive	I, V
97	Teresa Alves	Plants and Ecosystem	Positive	I, II, III, IV
98	Valério Macandza	Mammals	Positive	I, II, IV
99	Vanessa Muianga	Freshwater Fish	Positive	I, II, III, V
100	Vincent Parker	Birds	Positive	IV
101	Werner Conradie	Herpetofauna	Positive	I, II, III, IV, V
102	Will Miles	Insects	Did not provide feedback	Did not contribute
103	Yara Tibiriça	Marine Biodiversity	Positive	I

ANNEX 6 –KBA DELINEATION WORKSHOP AGENDA

Time	Content	Leader/ Moderator
	First Day (14th November)	
8.00	Arrival of the participants	
8.30-8.40	Welcome Speech	SPEED+
8.40 – 8.50	Workshop Opening	Govt representative
8.50 – 9.20	Brief update on the project "Red list of threatened species, identification and mapping of Key Biodiversity Areas (KBAs) in Mozambique"	Hugo Costa
9.20 – 9.40	Brief Presentation on the methodology and preliminary KBAs from different taxonomic groups considered in the project.	Hermenegildo Matimele
9.40 – 10:00	Coffee break	All Participants
10:00 – 10.30	Presentation of the Methodology to be applied in the KBA Delineation Workshop	Kendall Jones and Hedley Grantham
10.30 – 10.40	Formation of working groups by region (North, Center and South)	WCS Team
10.40 – 13.00	Start of technical work (KBAs Delineation) by group	All Participants
13.00 – 14.00	Lunch	All Participants
14.00 – 15.00	Continuation of KBA delineation exercise by group	All Participants
15.40- 15.50	Closing of Session	
	Second Day (15th November)	
8.30 – 9.00	Review of the previous workshop day's activities and setting the goals for the second Workshop day	Hugo Costa and Hermenegildo Matimele
9.00 – 11.00	Continuation of KBA delineation exercise by group	All Participants
11.00- 11.20	Coffee break	All Participants
11.20 – 13.00	Continuation of KBA delineation exercise by group	All Participants
13.00 – 14.00	Lunch	All Participants
14.00 – 15.00	Continuation of KBA delineation exercise by group	All Participants
15.00-16.00	Presentation of results achieved by each working group	Groups representatives
16.00-16.10	Definition of next steps	Hugo Costa and Hermenegildo Matimele
16.10-16.20	Final Thoughts and Closing of Workshop	Hugo Costa

ANNEX 7 – LIST OF KBA DELINEATION WORKSHOP PARTICIPANTS

No.	Name	Country	Institution	Sector
1	Acácio Chechene	Mozambique	WCS	ONG
2	Afonso Madope	Mozambique	SPEED+	Funding Agency
3	Ajosia Muipela	Mozambique	ENI	Private sector-developer
4	Albertina Leanne	Mozambique	MIMAIP	Government
5	Alice Ernesto	Mozambique	DINAF	Government
6	Alima Taju	Mozambique	WWF	ONG
7	Ana Paula Francisco	Mozambique	DINAB	Government
8	Armando Sambo	Mozambique	WCS	ONG
9	Arminda Mangue	Mozambique	Rádio voz	Media
10	Benjamim Wilson	Mozambique	Jornal Domingo	Media
11	Bernabé Langa	Mozambique	Verde Azul	Private sector-consultant
12	Bob Smith	UK	University of Kent	Academia
13	Camila de Sousa	Mozambique	IIAM	Research Institution
14	Celso Sardinha	Mozambique	SECOSUD-II	Project
15	Clayton Langa	Mozambique	IIAM	Research Institution
16	Denise Nicolau	Mozambique	BIOFUND	ONG
17	Domingos Sandramo	Mozambique	SECOSUD-II	Project
18	Domitilla Raimondo	South Africa	SANBI	Research Institution
19	Edna Mujovo	Mozambique	SECOSUD-II	Project
20	Eduardo Videira	Mozambique	WWF	ONG
21	Eleutério Duarte	Mozambique	WCS	ONG
22	Felício Quelume	Mozambique	Verde Azul	Private sector-consultant
23	Francisco Cabo	Mozambique	WCS	ONG
24	Francisco Zivane	Mozambique	IIP	Research Institution
25	Gerson Tomo	Mozambique	SECOSUD-II	Project
26	Guilhermina Honwane	Mozambique	INP	Government
27	Harith Morgadinho	Sweden	University of Gothenburg	Academia
28	Hedley Grantham	Australia	WCS	ONG
29	Hermenegildo Matimele	UK	WCS	ONG
30	Hugo Costa	Mozambique	WCS	ONG
31	Imogen Crawford	Mozambique	TOTAL	Private sector-developer
32	Inês Chelene	Mozambique	IIAM	Research Institution
33	Isabel Silva	Mozambique	Univeristy of Lurio	Academia
34	Ivan Nerantzoulis	Mozambique	UEM	Academia
35	Jamila das Neves	Mozambique	Golder	Private sector-consultant
36	Joelma Souane	Mozambique	WCS	ONG
37	Jonathan Timberlake	UK	Private consulter	Private sector-consultant
38	Jorge Sitoe	Mozambique	WCS	ONG
39	Kendall Jones	UK	WCS	ONG
40	Luke Verburgt	South Africa	Enviro-Insight	Private sector-consultant
41	Marcos Pereira	Mozambique	CTV	ONG

No.	Name	Country	Institution	Sector
42	Muri Soares	Mozambique	FNDS	Government
43	Naseeba Sidat	Mozambique	WCS	ONG
44	Natasha Ribeiro	Mozambique	UEM	Academia
45	Neidy Carvalho	Mozambique	Imbe CS	Private sector-consultant
46	Paula Santana Afonso	Mozambique	IIP	Research Institution
47	Penalva Pene	Mozambique	FUNAE	Government
48	Pilotos Pires	Mozambique	GABINFO	Media
49	Raquel Fernandes	Mozambique	CTV	ONG
50	Raquel Raiva	Mozambique	WCS	ONG
51	Regina Cruz	Mozambique	FNDS	Government
52	Rhett Bennett	South Africa	WCS	ONG
53	Roberto Zolho	Mozambique	FNDS	Government
54	Sousa Licuambe	Mozambique	SPEED+	Funding Agency
55	Suzettte Lang	Mozambique	ENI	Private sector-developer
56	Tereza Alves	Mozambique	IIAM	Research Institution
57	Vanessa Muianga	Mozambique	MHN	Research Institution
58	Vera Julien	Mozambique	SPEED+	Funding Agency
59	Victória Cossa	Mozambique	WCS	ONG
60	Zacarias de Couto	Mozambique	Jornal Vertical	Media

ANNEX 8 – PRELIMINARY ANALYSIS OF POSSIBLE MANAGEMENT AND PROTECTION MEASURES FOR EACH IDENTIFIED KBA, IN ACCORDANCE WITH THE MOZAMBICAN LEGISLATION ON PROTECTION, CONSERVATION AND SUSTAINABLE USE OF BIOLOGICAL DIVERSITY.

Legend: Conservation actions needed I- Site/area protection II- Resource & habitat protection III- Site/area management, IV- Invasive/problematic species control, V -Habitat & natural process restoration, VI -Species management, VII- Species recovery, VIII- Awareness & communications, IX- Ex-situ conservation

#	KBA´s Name	KBA Area (Km2)	# trigger elements	KBA Criterias	Biodiversity Group	% of area under formal protection	Current type of Conservation Category	Type of effective protection on the ground (very high, high, medium, low, NA)	Other Designations	Main threats	Conservation actions needed	Protection option proposal (1)	Protection option proposal (2)
1	Njesi Plateau	1996	2	A1a; A1e, B1	Birds and Reptiles	Partial Protected (21%)	Community Conservation area	NA	IBA, KBA, AZE	Hunting pressure (high density of snares), uncontrolled fires	I, II, VIII, IX	Integral Natural Reserve	Sanctuary
2	Niassa Special Reserve	42708	7	A1a; A1b; A1c; B1	Mammals, Reptile and Freshwater fish	Protected (100%)	Special Reserve, Buffer Zone	High		Slash and burn shifting agriculture, alluvial mining of gold and rubies, bush meat snaring, and poisoning for bush meat	V, VI, VII, VIII	Improved management actions	
3	Palma	4556	17	A1a, A1b, A1e, B1,B2	Plants, Reptiles and Freshwater fish	Partial Protected (10%)	Game farms	NA		Human development areas associated to megaprojects, Oil & Gas and armed conflict	I, II, VI, VIII	Environmental Protected Area	Integral Natural Reserve
4	Vamizi	87	1	D1b	Marine Fish	Protected (100%)	Community Sanctuary	Medium		Overfishing, illegal fishing, use of harmful gear (including mosquito nets), activities related to Oil & Gas and climate change.	I, II, VI, VIII	Community Conservation Area	Environmental Protected Area
5	Quiterajo	3064	15	A1a, A1b, A1e, B1, B2	Plants	Partial Protected (91%)	National Park and Game farms	Low	R. da Biosfera	Agriculture expansion, logging and armed conflict	I, II, VI, VIII, IX	Improved management actions	
6	Taratibu	25	2	A1a; A1e, B1	Amphibians and Plants	Protected (100%)	Concession, National Park, Buffer Zone	Low	Reserva da Biosfera	Logging, slash and burn shifting agriculture; poaching	VI, VII, VIII	Sanctuary	Improved management actions
7	Eráti	148	1	A1a, B1	Plants	Unprotected (0%)	None	NA		Agriculture expansion	III, VI, VIII	Need for futher studies	
8	Matibane Forest Reserve	109	1	A1a, B1	Plants	Protected (100%)	Forest Reserve	Low		Agriculture expansion, Charcoal production and logging	II, V, VI, VIII	Sanctuary	
9	Ribáuè-Mphalwe	265	15	A1a; A1b; A1e; B1; B2	Plants, Amphibians and Reptiles,	Protected (100%)	Forest Reserve	Low		Agriculture expansion, and human encroachment	III, V, VI, VII, VIII, IX	Sanctuary	Special Reserve
10	Mount Inago	326	7	A1a, A1e, B1, B2	Reptiles, Amphibians and Insects	Unprotected (0%)	None	NA	KBA, AZE	Deforestation for small scale agriculture, ongoing slash and burn of forest and no regulation, logging and unsustainable hunting	I, II, III, VI, VII, IX	Sanctuary	Community Conservation Area

#	KBA´s Name	KBA Area (Km2)	# trigger elements	KBA Criterias	Biodiversity Group	% of area under formal protection	Current type of Conservation Category	Type of effective protection on the ground (very high, high, medium, low, NA)	Other Designations	Main threats	Conservation actions needed	Protection option proposal (1)	Protection option proposal (2)
11	APAIPS	2507	1	A1a, B1	Plants	Protected (100%)	Environmental Protection Area	Low	IBA	Agriculture expansion, coastal mining	II, V, VI, VIII	Need for futher studies	Improved management actions
12	Mount Namuli	53	30	A1a; A1b; A1e; B1; B2	Plants, Mammals, Birds, Amphibians, Reptile and Insects,	Unprotected (0%)	None	NA	IBA, KBA, AZE	Agriculture expansion (mainly potato cultivation), widespread and frequent wildfires, logging, and the impacts of domestic livestock	I, II, III, V, VI, VIII, IX	Integral Natural Reserve	
13	**Mount Mabu**	61	17	A1a, A1b, B1; B2	Plants, Birds, Amphibians, Reptiles and insects	Unprotected (0%)	None	NA	IBA, KBA	Uncontrolled fires; hunting for bush meat (small mammals)	I, II, III, VI, VIII, IX	Integral Natural Reserve	Integral Natural Reserve
14	**Mount Chiperone**	36	4	A1b, B1, B2	Reptiles and Birds	Unprotected (0%)	None	NA	IBA, KBA	Slash and burn shifting agriculture, agriculture expansion, logging, hunting and fishing	I, II, III, V, VIII	Sanctuary	
15	**Derre Forest Reserve**	3984	2	A1b, B1	Freshwater fish and Plants	Partial Protected (40%)	Forest Reserve	Low		Agriculture expansion, settlements; slash and burn shifting agriculture and illegal logging	II, III, V, VI, VIII	Special Reserve	
16	**Tchuma-Tchato**	38175	2	A1a, A1b, A1c, A1d,	Mammals and Freshwater fish	Protected (100%)	CBNRM, National Park	Low	IBA	Agricultural expansion, poaching (including use of snares and poison)	II, VI, VII, VIII	Improved management actions	
17	**Serra Choa**	516	1	A1b	Birds	Unprotected (0%)	None	NA		Largely disturbed by human settlements, crop agriculture, Macadamia nut orchards, cattle grazing and frequent intensive burning	III, VIII	Need for futher studies	
18	**Machipanda**	756	2	A1b	Birds, and Mammals	Unprotected (0%)	None	NA		Bauxite mine, agricultural expansion	III, VIII	Need for futher studies	
19	**Chimanimani National Park**	2371	41	A1a; A1b; A1e; B1	Plants, Mammals, Insects, Amphibians and Reptiles,	Protected (100%)	National Park, Buffer Zone, Forest Reserve	Medium	IBA, KBA, AZE	Gold mining, invasive species, uncontrolled fires	IV, V, VI, VIII, IX	Improved management actions	
20	**Gorongosa and Marromeu Complex**	23088	21	A1a, A1b, A1c, A1d, A1e, B1	Mammals, Birds, Reptilles, Insects, Plants and Freshwater fish	Protected (100%)	National Park, potential Buffer zone, hunting concessions ,National Reserve, Forest Reserve	High	IBA, KBA, Ramsar	Unsustainable wildlife hunting, slash and burn shifting agriculture, logging, prospecting, drilling for oil, natural gas, and other resources	VI, VII, VII, IX	Environmental Protected Area	
21	**Inhassoro-Vilankulos**	5357	5	A1a; A1b; B1	Plants	Unprotected (0%)	None	NA		Human settlement, housing development for tourism, Agriculture expansion, slash and burn shifting agriculture.	I, II, III, VIII	Need for futher studies	Community Conservation Area

#	KBA´s Name	KBA Area (Km2)	# trigger elements	KBA Criterias	Biodiversity Group	% of area under formal protection	Current type of Conservation Category	Type of effective protection on the ground (very high, high, medium, low, NA)	Other Designations	Main threats	Conservation actions needed	Protection option proposal (1)	Protection option proposal (2)
22	**Great Bazaruto**	5236	7	A1a, A1b, A1c, A1d, B1	Marine Mammals, , Terrestrial Reptiles, Plants and Birds	Partial Protected (21%)	National Park , Sanctuary	High		Overexploitation by artisanal fisheries, ii) slash and burn shifting agriculture	II, III, V, VIII	Environmental Protected Area	Improved management actions
23	**Tofo**	342	4	D1b	Shark and Rays	Unprotected (0%)	None	NA		Over-fishing, illegal fishing, heavy sands mining, excessive tourist activity without properly controlled management .	I, II, III, V, VIII	Community Conservation Area	
24	**Chongoene**	33	1	A1a, B1	Insects	Unprotected (0%)	None	NA		Human settlements, housing development for tourism Agriculture and fires	III, VIII	Need for futher studies	
25	**Manhiça-Bilene (Limpopo floodplain)**	2070	3	A1a, A1b, A1e, B1	Freshwater fish and plants	Partial Protected (2%)	Game farms	NA	KBA	Industrial Agriculture, wood-cutting for charcoal production, slash and burn shifting agriculture	I, II, V, VIII, IX	Environmental Protected Area	
26	**Matutuíne**	195	2	A1b, B1	Plants	Unprotected (0%)	None	NA		Human settlement for housing and small business infrastructure	III, V, VII	Community Conservation Area	
27	**Licuáti Forest Reserve**	141	6	A1a, A1b, B1	Plants	Protected (100%)	Forest Reserve	Low		Wood-cutting for charcoal production, agriculture expansion	I, II, III, V, VII, VIII	Special Reserve	Improved management actions
28	**Maputo Special Reserve**	1040	4	A1a; A1b; B1	Freshwater fish, Insects and Plants	Protected (100%)	Special Reserve, Environmental Protected Area	High	IBA, Ramsar	Deforestation (firewood, charcoal and precious timber harvesting), Harvesting of plants for food and medicinal purposes	IV, VI, VIII	Improved management actions	
29	**Ponta do Ouro Marine Partial Reserve**	698	3	A1b; A1c; D1b	Marine Fish, and Mammals	Protected (100%)	Marine Partial Reserve, Environmental Protected Area	Medium		Overfishing, illegal fishing, tourist activity and expansion uncontrolled coastal urban	VI, VIII	Improved management actions	

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