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Identification of coastal and marine KBAs in Mozambique

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Identification of coastal and marine KBAs in Mozambique

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ACRONYMS

ANAC - National Administration of Conservation Areas

BIOFUND - Foundation for the Conservation of Mozambique's Biodiversity

CBD - Convention on Biological Diversity

DINAB - National Directorate for the Environment

GNC - National Coordination Group

IIAM- Institute of Agricultural Research of Mozambique

InOM - National Oceanographic Institute of Mozambique

IUCN - International Union for Conservation of Nature

KBA - Key Biodiversity Areas

m - Meters

MoU - Memorandum of Understanding

MTA - Ministry of Land and Environment

SIBMOZ - Mozambique Biodiversity Information System

SPEED - Supporting the Policy Enabling Environment for Development

UEM- Eduardo Mondlane University

UniLúrio - University of Lúrio

WCS - Wildlife Conservation Society

WDKBA - World Database of Key Biodiversity Areas

WWF - World Wildlife Fund

I INTRODUCTION

Worldwide, biodiversity is declining at a dramatic rate (Díaz et al., 2019; Powers and Jetz, 2019; Schipper et al., 2020; Williams et al., 2020). More than 10,000 representative populations of mammals, birds, reptiles, amphibians and fish have declined by more than 68% since 1970 to 2016 (WWF, 2020). The main factors are habitat destruction, conversion, degradation and fragmentation (Gibbons et al., 1996, 2000; Newbold et al., 2015; PBES, 2019), in addition to overfishing and poaching (Bond and Keeley, 2005; Osborne et al., 2018). To reverse this situation, signatory countries to the United Nations Convention on Biological Diversity (CBD) are committed to conserving at least 30% of land and sea by 2030 as stipulated in Target 3 of the Kunming-Montreal Global Biodiversity Framework (Kunming-Montreal GBBF). To date, conservation efforts relating to habitat loss in terrestrial and marine ecosystems have focused mainly on conservation areas with formal protection, while other areas are largely neglected (Naeem et al., 1994; Pennington et al., 2018; Archer et al., 2021).

There are currently a number of initiatives that define guidelines to help ensure that conservation tools are available and used in favor of biodiversity conservation, with an emphasis on Key Biodiversity Areas (KBAs), which are places that contribute significantly to the persistence of biodiversity at a global level, both in terrestrial and aquatic environments. In this context, the Kunming-Montreal GQF advocates, through Target 1, that the expansion of conservation areas at sea and on land should be based on areas of importance for biodiversity. Therefore, the identification of KBAs is a crucial process for the effective expansion of conservation areas and for the establishment of Other Effective Area-Based Conservation Measures (OECMs). This approach allows intergovernmental organizations to target funding and concentrate conservation activities where intervention is most needed. KBAs are identified on the basis of internationally accepted scientific criteria and are indicators for the targets of Sustainable Development Goals 14 and 15 (UNDP, 2015). SDG 14 promotes the conservation and balanced use of oceans, seas and marine resources for sustainable development, while SDG 15 aims to halt biodiversity loss by emphasizing activities to protect, restore and sustainably use terrestrial ecosystems (UNDP, 2015).

Specifically, for Mozambique, recognizing the importance of these initiatives in improving conservation activities, the United States Agency for International Development (USAID), through the SPEED+ Project "Supporting the Policy Enabling Environment for Development", funded the project "Red List of threatened species, ecosystems, identification and mapping of Key Areas for Biodiversity in Mozambique", which took place from 2019 to 2021. The project was conducted by WCS-Mozambique, working closely with the Ministry of Land and Environment (MTA), through the National Directorate for the Environment (DINAB), in which they identified and delimited 29 KBAs covering a total area of around 140,000.00 km^2 (of which 86% and 14% terrestrial and marine,

respectively). These areas are now available on the World Database of Key Biodiversity Areas (WDKBA). The KBAs identified in Mozambique were formally recognized by the MTA in Decree No. 51/2021 of 19 July where they are considered protection areas for birdlife and their habitats, and in the National Territorial Development Plan (PNDT) they define that KBAs are defined as an integral part of the national ecological structure and should therefore be considered areas to be avoided by development projects that compromise their conservation objectives. The Forestry Law considers forests integrated into KBAs to be for conservation purposes. The KBAs are available on Mozambique's Biodiversity Information System (SIBMOZ-https://sibmoz.gov.mz/) and on the World Database of KBAs (https://wdkba.keybiodiversityareas.org/login).

In addition to the 29 KBAs identified and mapped, 15 additional areas were found to have the potential to achieve KBA status. However, the information available on the biodiversity elements (species) under analysis for these areas was not sufficient to meet the thresholds of the 2016 IUCN global standards. Part of the 15 areas are in coastal or marine zones. These areas are considered to be of the highest priority for conservation, as they are under human pressure and the effects of climate change, and there may be other sites along the coastline with the potential to trigger KBAs, for which information is not yet available. Therefore, the Wildlife Conservation Society (WCS) in partnership with the Ministry of Land and Environment (MTA) represented by the National Directorate for the Environment (DINAB) through the Mainstreaming Key Biodiversity Areas (KBAs), piloting Blue Carbon, and Strengthening Coral Reef Fisheries in Mozambique project funded by SPEED, focused on studying some of these areas in order to develop new proposals for KBAs located in Mozambique's coastal and marine zone. This report describes the main stages in the process of identifying and outlining new KBA proposals, the main results achieved, next steps, conclusions and recommendations.

2 OBJECTIVES

This report describes the activities carried out during the implementation of the identification and mapping of coastal and marine KBAs as part of the project entitled "Integration of key biodiversity areas, blue carbon pilot study and strengthening of coral reef fisheries in Mozambique". This component of the project had the following objectives:

1. Inventory, through field activities and a literature review, primary biological data on flora and fauna species with the potential to meet the thresholds of the KBA criteria, in areas previously identified as potential coastal and marine KBAs in the provinces of Maputo, Nampula and Cabo Delgado.
2. Map potential KBAs and develop proposals, applying the 2016 IUCN global standards based on data from field surveys and Mozambique's Important Plant Areas (IPAs).

3 REPORT STRUCTURE

This report is divided into four sections, which are described below:

1. Description of the process of gathering field data in areas with the potential to trigger a KBA;
2. Description of the process of identifying and outlining 5 new proposed KBAs based on information from the literature review and fieldwork and recent data from the project to identify Important Plant Areas (IPAs) in Mozambique implemented by the Instituto de Investigação Agrária de Moçambique (IIAM), in partnership with Eduardo Mondlane University and the *Royal Botanic Gardens Kew*;
3. Proposal of the technical sheets for the five areas for which the IUCN Global Standard 2016 criteria were applied and which will be included in the global database of KBAs once approved.

4 ACTIVITIES CARRIED OUT

4.1 Compilation of the primary list of priority species and inventory of data in areas with the potential to trigger KBAs in coastal and marine zones.

Selecting areas for inventories

The first phase, 2019 - 2021, of the process of mapping and delineating KBAs in Mozambique identified 15 areas that did not trigger KBA status due to insufficient data. Taking into account the timeframe and resources available for the project, three areas were selected that showed good potential and were located in areas where it was possible to organize the teams and logistics needed to carry out inventories of the flora and/or fauna that could potentially trigger KBAs. The areas were then presented to the National Coordination Group for KBAs and Red Lists for consideration and validation. The approved areas include Pemba Bay in Cabo-Delgado Province, Memba-Mossuril in Nampula and the region north of Maputo (Macaneta) in Maputo Province.

Inventorying data in the field

At the end of 2022, consultancies were launched for data collection in the 3 selected areas, in which UniLúrio was selected to carry out the work in Pemba Bay and to carry out most of the sampling in Memba-Mossuril in coordination with WCS. The Maputo Natural History Museum was selected to carry out the fieldwork in Maputo Norte. At least one WCS staff member was involved in the activities, supporting part of the fieldwork. The fieldwork aimed to collect additional data on species, both fauna and flora, with the potential to trigger KBAs at each site. These activities were important because they helped to fill data gaps, particularly in the Pemba and Memba-Mossuril areas.

Maputo North

During the project to identify and map KBAs in 2021, it was found that this area was home to some species of birds (such as *Necrosyrtes monachus* and *Cinnyris neergaardi*) and flora (such as *Psydrax fragrantissima*, *Raphia australis* and *Euphorbia baylissii*), which could potentially activate this area as a KBA (Figure 1).

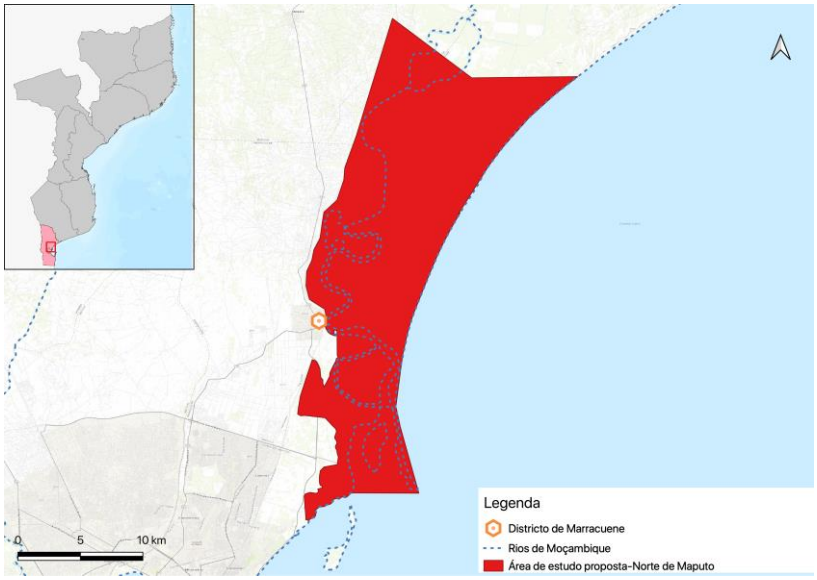

Figure 1. Maputo North, potential KBA identified in 2019

Sampling was carried out between January and July 2023 to collect quantitative data on potential bird species and KBA-activating plants (Figure 2). Birds were identified based on the establishment of listening points and direct observation. Plants were quantified by establishing plots and all associated plants were identified in order to determine the dominant plant species in each habitat.

Figure 2. Data collection for plant species (Source: WCS, 2023)

The data obtained from the field survey showed evidence of the occurrence of some species with the potential to trigger KBA, but the data was not sufficient to apply the criteria. In the universe of birds with the potential to trigger KBA, only three individuals of the species *Cinnyris neergaardi* were recorded (Figure 3). The hooded vulture (*Necrosyrtes monachus*), another species with the potential to trigger a KBA, was not observed in the study area. As far as plants are concerned, no species with the potential to trigger a KBA was identified, but around 136 species of plants that occur on the site were

identified. This may be evidence that, although undoubtedly important at a local and even national level, the area may not currently have the necessary elements to be considered a KBA, i.e. an important area for the persistence of biodiversity at a global level.

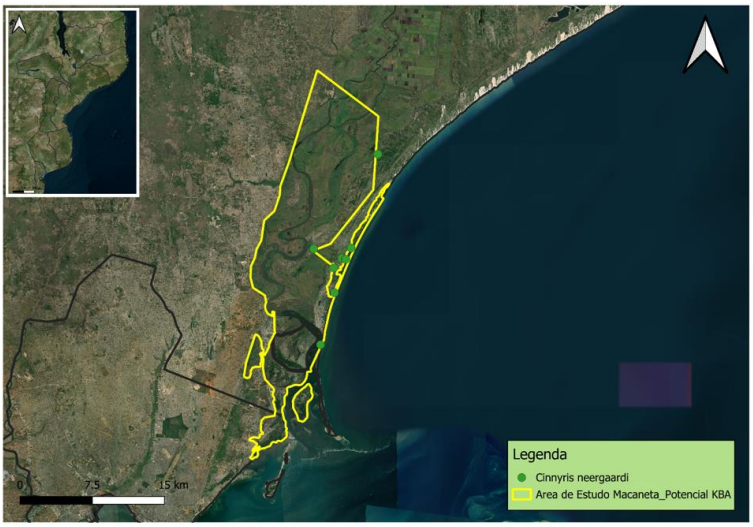

Figure 3. Distribution of the bird species Cinnyris neergaardi with potential to trigger KBA

Pemba Bay

Like Maputo Norte, Pemba Bay was found to be home to some flora species (such as *Vachelia latispina, Justicia niassensis, Vitex mossambicensis and Zanthoxylum delagoense*) that could potentially activate this area as a KBA.

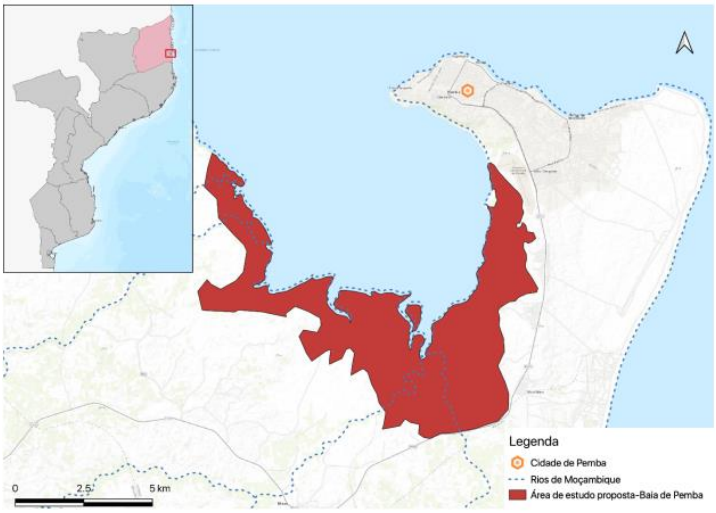

Figure 4. Pemba Bay, potential KBA identified in 2019

Sampling at this site was carried out during the rainy season, in January, and during the dry season, in May 2023. Plots were defined in the study area with reference to the occurrence of potential KBA-

activating species. The species were identified and quantitatively surveyed, as well as the threats based on the observation of human activities (Figure 5).

Figure 5. Fieldwork in Pemba Bay

A total of 462 individuals were recorded, corresponding to six potential KBA-activating species (Figure 6). *Vachelia latispina* and *Vitex mossambicensis had* the highest frequency of occurrence, with values corresponding to 66% and 31%, respectively. Two potentially KBA-activating species (*Justicia niassensis* and *Zanthoxylum delagoense*) were not recorded in the field work. Agricultural practices, artisanal mining activities, the construction of salt pans, aquaculture tanks, excavation for the installation of gas pipelines and fuel pumps/reservoirs were the main threats identified in Pemba Bay; however, it should be noted that the general threat to the area is habitat loss.

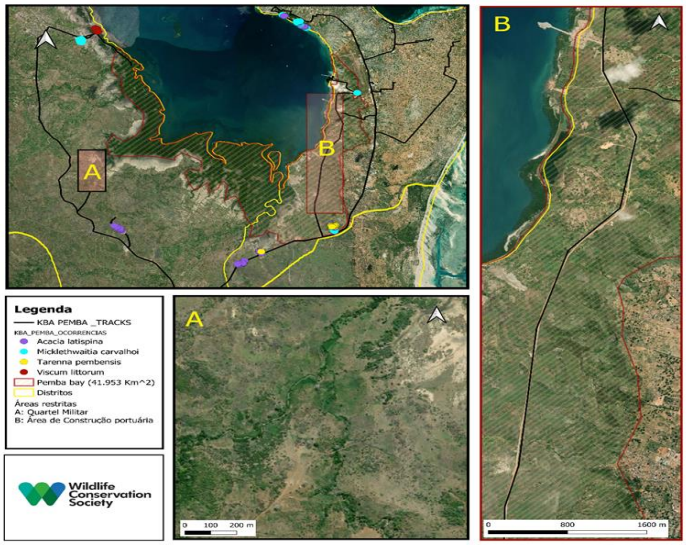

Figure 6. Distribution of potential KBA triggering species

Nacala - Mossuril

This site is located in the northeastern section of Nampula province (Figure 7) and comprises a system of submerged caves in a mixture of freshwater and seawater, rarely explored and undocumented. The

fieldwork was planned with the aim of identifying existing species and possible new species for science, both terrestrial and underwater, which could trigger a potential KBA.

Figure 7. Aerial image showing the coastal forest zone and the blue holes

The assessment of terrestrial biodiversity (Figure 8) included field visits by three teams, one for flora, one for fauna (both led by specialists from UniLúrio) and a team dedicated to bat ecology (led by a bat specialist from the University of Eswatini). During the fieldwork, the occurrence of plant and animal species was assessed using different survey methods (transects, Sherman traps and camera traps for cryptic species). Specimens were collected for identification when this was not possible on site. The vegetation was also assessed for its state/condition of conservation.

Figure 8. Herpetofauna field data collection in Janga

For the aquatic component (Figure 9), the team carried out biodiversity assessments in the open part of the open submerged caves (and not in the confined areas of the caves, for safety reasons). Photographs

were taken of all the aquatic life and specimens were collected for genetic analysis, including environmental DNA.

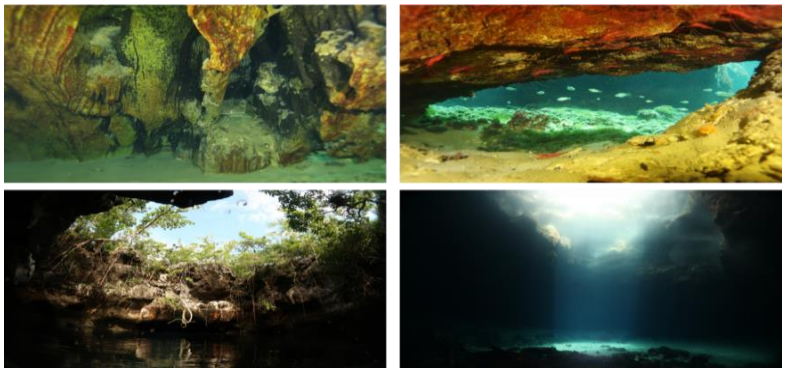

Figure 9. Blue Holes on display for the first time

This site supports natural vegetation consisting of stunted coastal forest with open patches. The bat survey revealed a surprising number of species living in the coastal coral caves associated with the unsubmerged or partially submerged caves in the Janga region, east of Nacala. A total of 10 bat species were identified during this study. The aquatic flora and fauna of the caves consists of a variety of seaweeds (at least 10 species), sponges (4 species), soft corals (around 3 species), anemones (1 species), shrimps (2 species), crabs (2 species), polychaetes (number of species to be determined when identification is complete), gastropods (number of species to be determined when identification is complete) and fish (at least 6 species). There is a mixture of salty and brackish water, as there is a halocline evident in the caves. The area is heavily populated by subsistence farmers who grow a variety of crops, including manioc, corn, beans, melons and bananas. To the east of the machambas, there is a strip of fossilized coral that extends in a north-south direction, in which it is not possible to practice agriculture.

Inventorying bibliographic data

The Tropical Important Plant Areas (TIPAs) initiative was recently carried out in Mozambique, through a partnership between the Instituto de Investigação Agrária de Moçambique (IIAM) and Eduardo Mondlane University and the *Royal Botanic Gardens Kew*. Within this framework, 57 Important *Plant* Areas (IPAs) were identified, which are key sites for *in situ* plant conservation (Darbyshire et al. 2023). In addition, the team identified that two new scientific articles had been published by Carpenter et al. (2022) and Tibiriçá et al. (2017) for the Závora area, which indicated the suspicion that the area might have higher than normal ecological value. We therefore decided to check whether this area and the coastal TIPAs were also KBAs (Figure 10).

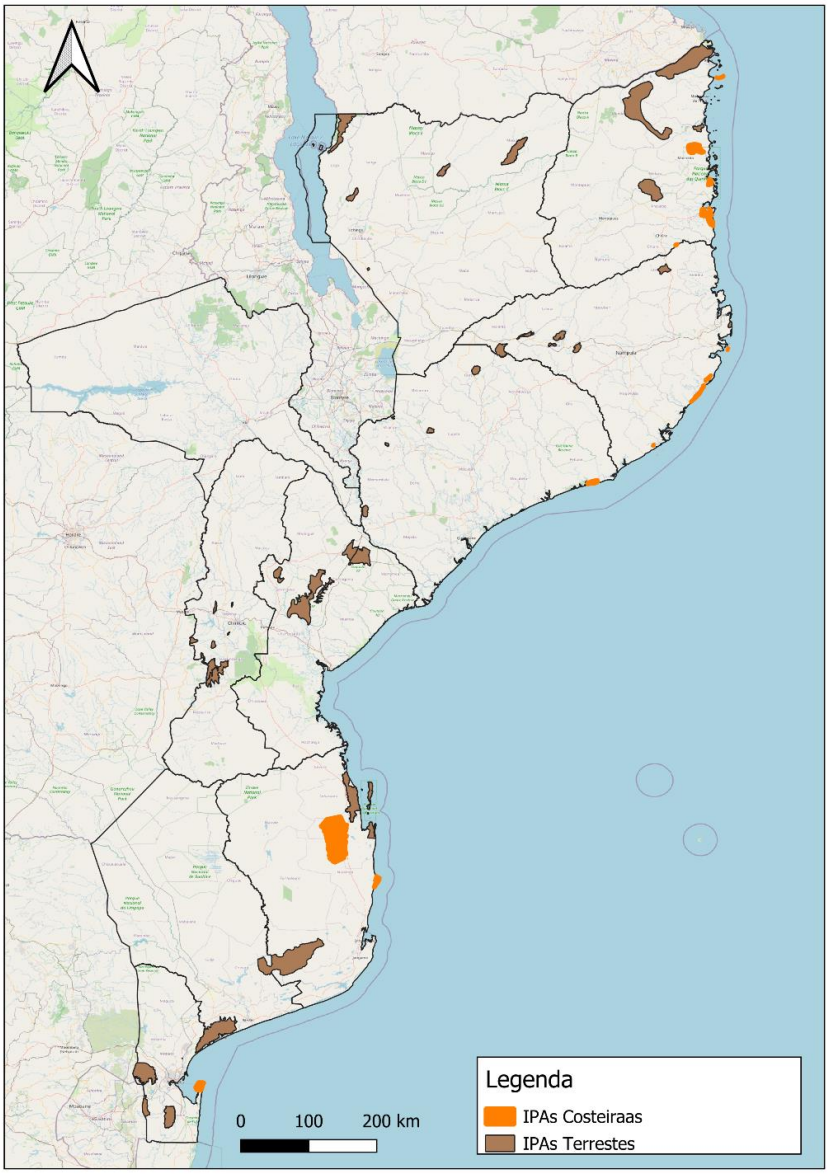

Figure 10. Land and coastal IPAs identified in Mozambique

List of species eligible for KBA methodology analysis

The first steps consisted of selecting species with the potential to activate KBA for which fieldwork was carried out in three areas, namely Pemba, Nacala-Mossuril and Maputo Norte. In addition, we selected other species of fauna and flora for which there was data in some coastal areas based on the work to identify Important Plant Areas (IPAs) under the *Tropical Important Plant Areas* (TIPAs) initiative and the work of Carpenter et al. (2022) and Tibiriçá et al. (2017), with the potential to activate more KBAs(Table 1).

The first steps in applying the Key Biodiversity Areas methodology consisted of drawing up a list of flora and fauna species with the potential to trigger KBA status. The preliminary list of these species includes threatened species (Critically Endangered - CR, Endangered - EN and Vulnerable - VU)

compiled on the basis of information from the IUCN Red List, as well as species with a restricted distribution whose environment of occurrence is marine or coastal. From this process, a list of 71 priority species was established, of which 68 are flora and 3 fauna.

Table 1. List of species eligible for KBAs methodology analysis

Area	Data provenance	Taxon	Species	State of conservation
Pemba Bay	Field surveys	Plants	*Viscum littorum*	NT
		Plants	*Micklethwaitia carvalhoi*	VU
		Plants	*Acacia latispina*	VU
		Plants	*Tarenna Pembensis*	EN
		Plants	*Vitex mossambicensis*	VU
		Plants	*Eriolaena rulkensii*	EN
	TYPES	Plants	*Afrocanthium vollesenii*	VU
		Plants	*Vitex carvalhi*	VU
		Plants	*Pavetta mocambicensis*	EN
Muàgámula	TYPES	Plants	*Duosperma dichotomum*	VU
		Plants	*Maerua andradae*	LC
		Plants	*Terminalia barbosae*	VU
		Plants	*Acacia latispina*	VU
		Plants	*Acacia latistipulata*	VU
		Plants	*Acacia quiterajoensis*	LC
		Plants	*Millettia makondensis*	VU
		Plants	*Premna schliebenii*	VU
		Plants	*Grewia filipes*	EN
		Plants	*Thespesia mossambicensi*	LC
		Plants	*Heinsia mozambicensis*	NA
		Plants	*Oxyanthus strigosus*	EN
		Plants	*Tarenna pembensis*	EN
Lupanga Peninsula	TYPES	Plants	*Barleria rhynchocarpa*	VU
		Plants	*Nectaropetalum carvalhoi*	VU
		Plants	*Ochna angustata*	NT
		Plants	*Pavetta mocambicensis*	EN
		Plants	*Viscum littorum*	LC
Janga	Field surveys	Plants	*Micklethwaitia carvalhoi*	VU
		Plants	*Eriolaena rulkensii*	EN
		Plants	*Tarenna Pembensis*	EN
		Plants	*Euphorbia angularis*	VU
		Plants	*Croton kilwae*	EN
		Plants	*Vitex carvalhi*	VU
		Plants	*Hugonia grandiflora*	EN
		Plants	*Afrocanthium vollesenii*	VU
		Plants	*Vitex mossambicensis*	VU
		Plants	*Aloe mossurilensis*	CR
		Plants	*Hexalobus mossambicensis*	VU
		Plants	*Viscum littorum*	NT

Lúrio Waterfalls	TYPES	Plants	*Aloe argentifolia*	VU
Goa and Sena Islands	TYPES	Plants	*Barleria laceratiflora*	EN
		Plants	*Barleria setosa*	EN
		Plants	*Euphorbia angularis*	VU
Mogincual		Plants	*Icuria dunensis*	EN
		Plants	*Scorodophloeus torrei*	EN
Quinga		Plants	*Blepharis dunensi*	EN
		Plants	*Icuria dunensis*	EN
		Plants	*Warneckea sessilicarpa*	CR
Mulimone Forest		Plants	*Scorodophloeus torrei*	EN
		Plants	*Icuria dunensis*	EN
		Plants	*Brachystegia oblonga*	CR
Moebase	TYPES	Plants	*Triceratella drummondii*	CR
		Plants	*Icuria dunensis*	EN
		Plants	*Warneckea sessilicarpa*	CR
Mapinhane	TYPES	Plants	*Ozoroa gomesiana*	VU
		Plants	*Dolichandrone alba*	LC
		Plants	*Croton inhambanensis*	VU
		Plants	*Bauhinia burrowsii*	EN
		Plants	*Chamaecrista paralias*	LC
		Plants	*Xylia mendoncae*	VU
		Plants	*Englerina schlechteri*	LC
		Plants	*Dracaena subspicata*	NA
		Plants	*Elaeodendron fruticosum*	VU
		Plants	*Euphorbia baylissii*	VU
		Plants	*Chamaecrista paralias*	LC
		Plants	*Psydrax moggii*	LC
		Plants	*Spermacoce kirkii*	NA
		Plants	*Triainolepis sancta*	LC
		Plants	*Zanthoxylum delagoense*	LC
		Plants	*Solanum litoraneum*	EN
Zavóra	TYPES	Plants	*Elaeodendron fruticosum*	VU
		Plants	*Euphorbia baylissii*	VU
		Plants	*Allophylus mossambicensis*	VU
	Scientific articles	Ray blanket	*Mobula alfredi*	VU
		Nudibranch	*Aldisa fragaria*	NA
		Nudibranch	*Aldisa zavorensis*	NA
Chidenguele	TYPES	Plants	*Ecbolium hastatum*	EN
		Plants	*Raphia australis*	VU
		Plants	*Elaeodendron fruticosum*	VU
Maputo North	Field surveys	Birds	*Necrosyrtes monachus*	CR
		Birds	*Cinnyris neergaardi*	NT
		Plants	*Psydrax fragrantissima*	NT
		Plants	*Raphia australis*	VU
Inhaca Island	TYPES	Plants	*Ecbolium hastatum*	VU
		Plants	*Dracaena subspicata*	NA
		Plants	*Helichrysum moggii*	LC

		Plants	*Dioscorea sylvatica*	VU
		Plants	*Adenopodia schlechteri*	VU
		Plants	*Tritonia moggii*	LC
		Plants	*Psydrax moggii*	LC
		Plants	*Zanthoxylum delagoense*	LC
		Plants	*Solanum litoraneum*	EN

Data compilation

Subsequent to compiling the list, data on the global distribution of the priority species was collected from various sources, including the IUCN Red List database for threatened species, as well as through literature, herbarium and museum databases and the contribution of individual specialists working in Mozambique. The IUCN Red List data was in the form of a distribution map and GPS geographical coordinates for some species. The information included the population size of the target species; information on the ecology of the species, including the extent of suitable habitat and the altitude at which it can occur; the number of localities where the species occurs worldwide; and information on threats to the species. After this process, it was found that only five areas, namely Baía de pemba, Janga (Memba-Mossuril) Pomene, Závora and Chidenguele had species with data available to apply the KBA criteria.

In addition to the five areas with data available to apply the criteria, at least 10 other areas were also identified with the potential to be activated as KBAs in the future, provided that more information is collected to meet the thresholds of the KBA criteria (Table 2).

Table 2. Coastal areas with the potential to trigger a KBA

Province	Potential KBA	Number of species
Cabo Delgado	Muàgámula River	13
	Lupanga Peninsula	5
	Lúrio Waterfalls	1
Nampula	Goa and Sena Islands	3
	Mogincual	2
	Quinga	3
	Mulimone Forest	3
Zambezia	Moebase	3
Inhambane	Mapinhane	7
Maputo	Inhaca Island	9

4.2. Application of the KBAs Criteria

Application of the 2016 IUCN Global Standard for the identification of KBAs

Based on the five areas with species data available for the application of the criteria, we proceeded to apply the criteria based on the 2016 IUCN Global Standard. The 2016 IUCN Global Standard for KBAs includes five high-level criteria ranging from A to E, as well as 11 sub-criteria and quantitative

thresholds. The five high-level criteria comprise: (A) threatened biodiversity; (B) geographically restricted biodiversity; (C) ecological integrity; (D) biological processes; and (E) irreplaceability through quantitative analysis (IUCN, 2016). Its application is based on four assessment parameters, namely: (1) the number of mature individuals, (2) the extent of suitable habitat, (3) the geographical distribution area of the species and (4) the number of localities. These parameters are used to determine whether each site where the species has already been recorded meets the quantitative thresholds of the KBA criteria. In the case of this project, the available data was adequate to apply the KBAs criteria based on two parameters: (1) the species' geographical range and (2) the number of localities. In terms of sub-criteria, these datasets were suitable for applying criterion A1 - threatened species, B1 - geographically restricted species and D1 - demographic aggregation (IUCN, 2016) (Table 3. Criteria applied Table 3). Based on these criteria, five proposals for KBAs were developed and submitted to the NCG for review and validation at national level.

Table 3. Criteria applied

A. Threatened biodiversity	
A1a	≥0.5% of the global population size and ≥5 reproductive units (UR) of a species CR/EN
A1b	≥1.0% of the global population size and ≥10 UR of a VU species
A1c	≥0.1% of the global population and ≥5 UR of a species listed as CR/EN due to past/present decline only [= Red List criteria A1, A2, A4 only]
A1d	≥0.2% of global population size and ≥10 UR of a species listed as VU due to past/present decline only [= Red List criteria A1, A2, A4 only]
A1e	In fact, the entire population of a CR/EN species
B. Geographically restricted individual species	
B1. Geographically restricted individual species	≥10% of the global population size l and ≥10 UR of any species
D. Biological processes	
D1b	The site is among the world's top 10 aggregations for the species

After applying the criteria, the five areas were activated by 24 species (**Error! Reference source not found.**), most of which are naturally plants and some of which were activated in more than one area. Criteria B1 (applied to species with a restricted distribution) and A1b (applied to threatened species) were responsible for the activation of all KBAs, which indicates that most of the activating species are threatened and endemic or almost endemic to Mozambique.

The KBAs proposed in this project cover a total area of around 450,838 km2, of which around 80% correspond to 4 coastal KBAs and 20% to marine KBAs. Of these KBAs, 20% (n=1) are currently under some kind of formal protection (Pomene National Reserve) and 80% (n=4) have no formal protection at all. In most of the KBAs, agricultural practices, tourism development and urbanization were the main

threats identified; however, it should be noted that the general threat is the loss of suitable habitat for the species (Table 4).

Table 4. Main threats and protection categories of the 5 proposals

Potential KBA	Main threats	Current protection category	Pre-existing designations
Pemba Bay	Agriculture, tourism, urbanization, mining	None	IPA
Janga	Agriculture, Mining	None	None
Pomene	Agriculture, climate events	National Reserve	IPA
Zavora	Agriculture, overfishing	None	IPA
Chidenguele	Agriculture, Tourism	None	IPA

Table 5. List of species that activated the Five potential coastal KBAs in Mozambique

KBA	Taxon	Species	State of conservation	Triggered criteria
Pemba Bay	Plants	*Viscum littorum*	NT	A1a; A1b; A1c and B1
		Micklethwaitia carvalhoi	VU	
		Vachelia latispina	VU	
		Tarenna Pembensis	EN	
		Vitex mossambicensis	VU	
		Eriolaena rulkensii	EN	
		Afrocanthium vollesenii	VU	
		Vitex carvalhi	VU	
		Pavetta mocambicensis	EN	
Janga	Plants	*Eriolaena rulkensii*	EN	A1a A1b; A1c; A1e and B1
		Euphorbia angularis	VU	
		Croton kilwae	EN	
		Afrocanthium vollesenii	VU	
		Vitex mossambicensis	VU	
		Aloe mossurilensis	CR	
Zavora	Plants	*Elaeodendron fruticosum*	VU	A1b; A1d and B1
		Euphorbia baylissii	VU	
		Allophylus mossambicensis	VU	
	Ray	*Mobula alfredi*	VU	
	Nudibranchs	*Aldisa fragaria*	NA	
		Aldisa zavorensis	NA	
Pomene	Plants	*Elaeodendron fruticosum*	VU	A1a, A1b and B1
		Euphorbia baylissii	VU	
		Chamaecrista paralias	LC	
		Triainolepis sancta	LC	
Chidenguele	Plants	*Ecbolium hastatum*	EN	A1a, A1b, A1c and B1
		Raphia australis	VU	
		Elaeodendron fruticosum	VU	

4.3 Submission of Proposals to NCG Focal Points

The KBA proposals drawn up as part of this project (

Figure 11) were submitted to the KBAs focal point of the National Coordination Group for review before being presented to the regional focal point. The regional focal point will also review the proposals and provide comments. Then, as a final step, the proposals will be submitted to the KBAs secretariat for final consideration and publication in the KBAs World Database. These results are relevant because they will further expand the current network of biodiversity offset receptor areas, in accordance with Decree No. 55/2022 of May 19. In addition, these results will serve as a basis for expanding the current network of conservation areas as they are of high importance for biodiversity and are crucial for guiding the drafting of development and land-use plans (terrestrial and marine) from the local to the national level. Furthermore, it will allow the identification of Other Area-Based Conservation Measures (OECMs) contributing to targets 1 and 3 of the Kunming-Montreal Global Biodiversity Framework.

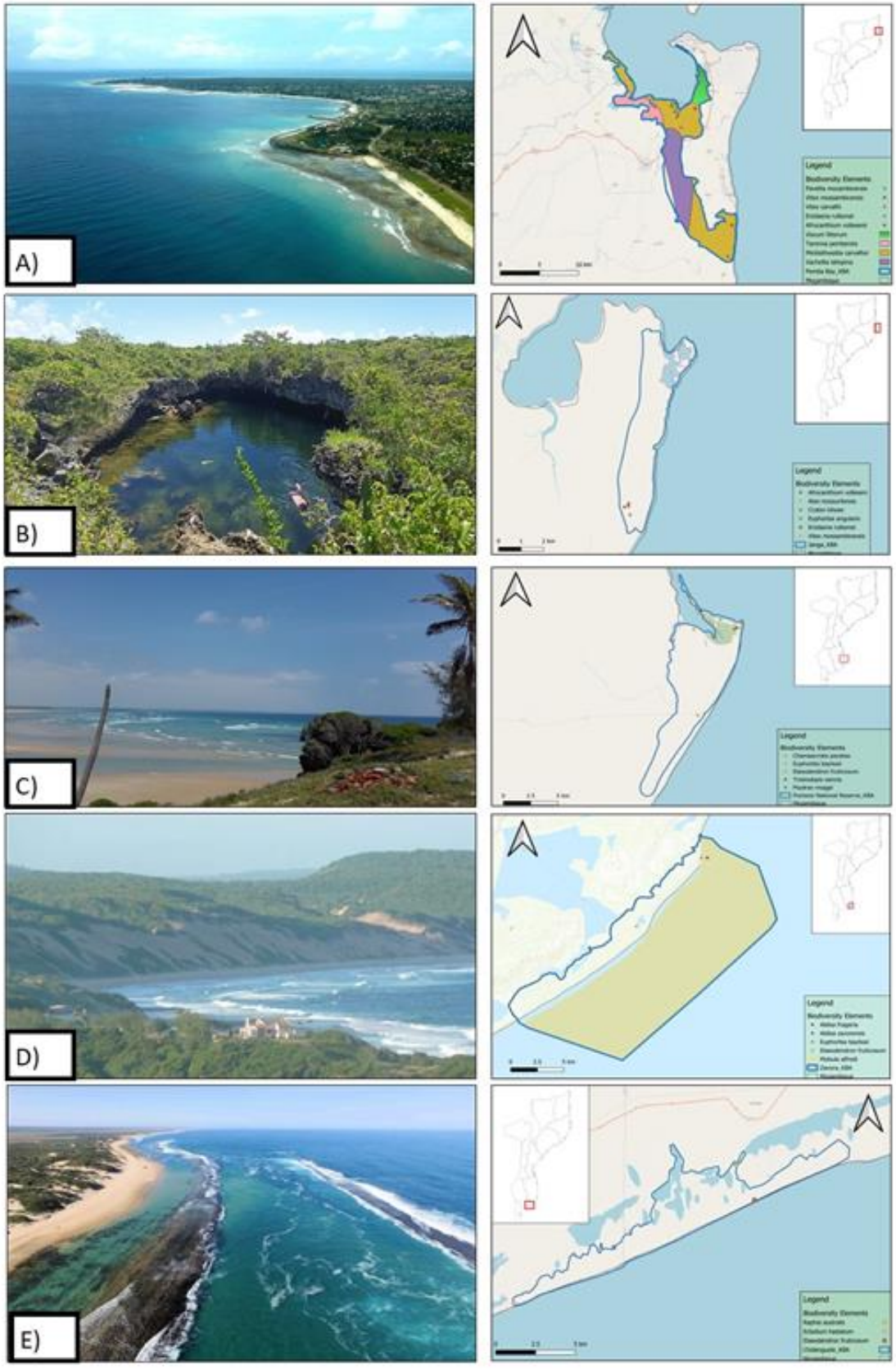

Figure 11. Five potential coastal and Mozambique KBAs: A) Pemba Bay; B) Janga; C) Pomene National Reserve; D) Zavora; and E) Chidenguele.

5 CONCLUSIONS AND NEXT STEPS

The identification of these new potential coastal and marine KBAs marks a significant milestone in Mozambique's biodiversity conservation efforts. These newly identified sites will complement the existing list of 30 KBAs approved by the Government in 2021, contributing to spatial conservation planning geared towards areas of high biodiversity value. It is imperative that the role of KBAs and their context within the country continue to be widely disseminated among stakeholders to improve the application of national policies and legislation that already recognize KBAs as crucial sites for biodiversity conservation. The success of KBAs in Mozambique is attributed to the widespread involvement of the government, academia, civil society and the private sector through the National Coordination Group for KBAs and the Red List, in addition to ongoing awareness-raising and capacity-building actions among stakeholders.

As mentioned, the five KBA proposals are currently undergoing a final review by the KBAs GNC and Red List. They will then be submitted to the regional KBA focal point for further evaluation before final consideration and publication in the World KBA Database by the KBA Secretariat. The focal points and the KBA Secretariat of the GNC (currently hosted by WCS) will ensure their publication and subsequent inclusion in the national biodiversity platform (SIBMOZ).

As the next steps and continuation of the KBAs program, it is essential that as soon as these areas are approved by the KBAs Secretariat:

- Update the national Atlas of KBAs and information on KBAs in SIBMOZ
- The list of KBAs be updated as indicated in Decree 51/2921 of July 19 and in the online maps associated with the National Land Development Plan and the Maritime Spatial Planning Plan.
- They should be widely disseminated, along with the 30 already identified, to all stakeholders, with an emphasis on the environmental sector (including land use planning), forestry, mining, tourism and infrastructure.
- To this end, a communication plan should be drawn up focusing on national, provincial and district authorities, the private sector and civil society.
- For example, a network of KBA ambassadors should be created, led by civil society in partnership with prominent Mozambican public figures such as artists and sportspeople who can raise awareness of the importance of KBAs among the general population, including political decision-makers and major economic groups.
- A monitoring plan for the KBAs should be drawn up with the GNC and a citizen science network created to collect data on the key species in the KBAs to feed into this plan on a voluntary basis.

- A training plan should be drawn up for the authorities of the Provinces and all the Districts that contain KBAs in their territory. The training should consider a specific component on the inclusion of KBAs in Provincial Land Development Plans and District Land Use Plans.
- The GNC should make a presentation on the KBAs to the parliamentary environment group, in order to make politicians aware of this issue and its importance for the international environmental/biodiversity commitments Mozambique has made.
- Integrate KBAs into spatial planning initiatives for their conservation by integrating them into the identification of area-based Other Effective ctive Conservation Measures (OECMs).

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