

## CEPF Final Project Completion Report

<b>Organization Legal Name:</b>	International Union for Conservation of Nature and Natural Resources (Global Species Programme; Freshwater Biodiversity Unit)
<b>Project Title:</b>	Mobilizing Freshwater Biodiversity Information for Better Representation within Protected Areas in Madagascar
<b>Grant Number:</b>	65744
<b>CEPF Region:</b>	Madagascar and Indian Ocean Islands
<b>Strategic Direction:</b>	2 Enable civil society to mainstream biodiversity and conservation into political and economic decision-making.
<b>Grant Amount:</b>	\$228,084.90
<b>Project Dates:</b>	July 01, 2015 - June 30, 2018
<b>Date of Report:</b>	October 26, 2018

### Implementation Partners

List each partner and explain how they were involved in the project

**The Implementing Partner Missouri Botanical Garden supported the IUCN Freshwater Biodiversity Unit in the following activities:**

- Helped to identify and invite species experts to participate in the Red List review workshop and KBA workshop.
- Completed 169 aquatic plants Red List assessments.
- Coordinated the Red List review workshop and KBA delineation workshop including the identification and booking of suitable venues, workshops logistics (including venue and accommodation, coordinate participant travel, airport collection, and workshop fieldtrip), and financial reporting.
- Identified relevant potential regional data depositories and ensured project data was incorporated to these databases as appropriate.
- Ensured that complete information on the freshwater KBAs identified through the project were delivered to and incorporated into the ongoing *Système des Aires Protégées de Madagascar (SAPM)*.
- Liaised with relevant regional policy makers to help ensure project outputs are communicated effectively.
- Led on Chapter 6 of the report on the status and distribution of aquatic plants in Madagascar.
- Organised the report launch event in Antananarivo and the dissemination mission meetings with

all relevant stakeholders including government departments, research institutions, private sector and conservation NGOs.

## Conservation Impacts

Summarize the overall impact of your project, describing how your project has contributed to the implementation of the CEPF ecosystem profile

Six hundred and fifty-three species of freshwater fishes, molluscs, dragonflies, crabs, crayfishes, shrimps, and aquatic plants were mapped and assessed for their risk of extinction using the IUCN Red List Categories and Criteria. This represents the most comprehensive assessment of freshwater biodiversity at the species level for the hotspot. The assessments are now publicly available on the IUCN Red List [www.iucnredlist.org](http://www.iucnredlist.org) and the aquatic plants can also be found within MBG's TROPICOS database. As part of the Red Listing process a network of over 30 national and international experts was established.

The biodiversity assessment required sourcing and collating the best information on all known, described species within the priority taxonomic groups. As the primary source for this information, the best regional and international experts for these taxa were first identified through consultation with the relevant IUCN Species Survival Commission (SSC) Specialist Groups and Missouri Botanical Garden staff in Madagascar. These experts collated the relevant information within the IUCN Species Information Service database and applied the IUCN Red List Categories and Criteria, to assess the species risk of extinction in the wild.

Species range distributions were also mapped. All information was then peer reviewed at a workshop held in Antananarivo in July 2016 organised by MBG where each species assessment was evaluated by at least two independent experts to ensure that the information presented for each Red List assessment was both complete and correct and that the Red List Category and Criteria assigned to each species were supported by the information provided.

Major threats to freshwater species across the hotspot have been identified as part of the assessment process. Forty-three percent of all species assessed are threatened with extinction. This level of threat is very high in comparison with the 2011 pan-African freshwater biodiversity assessment through which 21% of species were assessed as threatened.

Species information remains very limited for freshwater species in the hotspot such that 23% of the species were assessed as Data Deficient (DD), meaning there was insufficient knowledge to assess their extinction risk. Given the high levels of threat observed across the hotspot it is reasonable to expect that many of these DD species are also threatened. There is therefore an urgent need for new field research to better understand these species' distributions, taxonomy and population trends. Without this knowledge it will be difficult to ensure the future survival of these species.

The new information presented in the report on the status and distributions of freshwater species can be applied to:

- improve representation of freshwater species within protected area networks;
- guide management for freshwater species within existing protected areas;
- highlight sites in need of restoration for the freshwater species present; and
- inform Environmental Impact Assessments.

Through the second phase of the project 23 important river, lake and wetlands systems were identified, mapped and validated as freshwater KBAs in Madagascar. Ten of these sites also qualify

as Alliance for Zero Extinction (AZE) sites – sites that each hold close to the entire global populations of Critically Endangered or Endangered species.

These KBAs support 80 globally threatened freshwater species, 62 geographically restricted range freshwater species and 10 freshwater species that aggregate in these sites during one or more key stages of their life cycle. Approximately 62% of the total area of these sites (14,761 km<sup>2</sup>) was found to lie outside the boundaries of any existing protected area, representing 19 KBAs for 77 trigger species (species that meet the KBA criteria). These sites represent critical gaps in coverage of freshwater species within the current protected areas network.

Where freshwater KBAs do fall within the boundaries of existing protected areas, with the notable exception of water birds, the species of concern are rarely the focus of conservation and management actions. Targeted conservation actions for these neglected freshwater species must be incorporated within the management plans of these existing protected areas.

Thirty-four potential Site Champions have been also identified as individuals and organisations best placed to raise awareness and to help implement the required actions to safeguard these globally important KBAs.

The final project report and policy brief are now completed, published, translated into French and widely disseminated, with freshwater biodiversity assessments, Red List evaluations, confirmed KBA locations, conservation management recommendations and a blueprint for a protected areas network.

Finally, a successful dissemination of project results was achieved through a final mission to Madagascar to meet with government representatives, grant-makers, private sector and conservation NGOs in order to maximise their understanding and uptake of project outputs and and find data repositories in-country. The data was delivered to a wide range of stakeholders, and incorporated into the ongoing Système d'Aires Protégées de Madagascar (SAPM) and the Office National pour l'Environnement (ONE) which manages the national environmental information database for conducting environmental impact assessments.

The data published through this project represents now an information cornerstone to guide conservation policy and development planning to safeguard these unique and overlooked freshwater species of Madagascar and the Indian Ocena islands hotspot.

Planned Long-term Impacts - 3+ years (as stated in the approved proposal)

Impact Description	Impact Summary
1) The Biodiversity Assessment (Red Listing) will provide new species information to better inform decision making relating to the conservation and development of wetland ecosystems throughout Madagascar. As this information is delivered at the scale of sub-catchments it is directly applicable to informing decisions relating to on-the-ground conservation and site scale developments impacting wetlands.	The Biodiversity Assessment is publicly available and widely disseminated. The political will and subsequent action by governments of the hotspot is essential to ensure the long-term survival of freshwater species and dependent human livelihoods. Local stakeholder involvement and participatory approaches are also key to ensure the legitimacy and the long-term sustainability of any conservation actions.
2) At the international scale information on the status (IUCN Red List) and distribution of freshwater species will assist the Government of Madagascar to monitor progress towards meeting targets of the international conventions, such as CBD and Ramsar in particular. The baseline information on	The information presented in the report and policy brief will help Governments for the hotspot meet national commitments to the following Multilateral Agreements: - The Ramsar Convention on Wetlands, through: i) identification of potential new Ramsar sites; ii) a site gap analysis of the existing Ramsar site

<p>freshwater biodiversity (species level), will, for example, enable governments to better take action to meet CBD Aichi Targets 11 (17% inland waters protected) and 12 (by 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained).</p>	<p>network; and, iii) evaluation of existing Ramsar sites that qualify as KBAs and those that do not. - The Convention on Biological Diversity's Aichi Targets (in particular Targets 11 and 12), through: i) expansion of protected areas networks to better represent freshwater ecosystems; and ii) focusing conservation efforts on currently unprotected threatened freshwater species. - The UN Sustainable Development Goals, through providing improved metrics, such as the Red List Index and KBAs for measurement of Sustainable Development targets (6.6; 15.1 &amp; 15.5)</p>
<p>3) The identification of new sites for freshwater KBAs throughout Madagascar will assist the Government to expand the existing protected areas network and the Ramsar network of internationally important wetlands to be more representative of the broad range of freshwater taxonomic groups for which information is to be provided through this project – thus strengthening wetland conservation and wise use throughout the island. This new information on freshwater KBAs will also allow for more targeted management for the conservation and sustainable use of freshwater biodiversity resources in existing terrestrial KBAs and protected areas.</p>	<p>Through this project 23 important river, lake and wetlands systems were identified, mapped and validated as freshwater KBAs in Madagascar. Ten of these sites also qualify as Alliance for Zero Extinction (AZE) sites – sites that each hold close to the entire global populations of Critically Endangered or Endangered species. These KBAs support 80 globally threatened freshwater species, 62 geographically restricted range freshwater species and 10 freshwater species that aggregate in these sites during one or more key stages of their life cycle. Approximately 62% of the total area of these sites (14,761km<sup>2</sup>) was found to lie outside the boundaries of any existing protected area, representing 19 KBAs for 77 trigger species (species that meet the KBA criteria). These sites represent critical gaps in coverage of freshwater species within the current protected areas network.</p>
<p>4) Conservation action to conserve and manage freshwater biodiversity at the site scale in KBAs within the CEPF conservation corridors will be greatly enhanced through outputs of the KBA workshop which will include specific actions for biodiversity conservation within these sites and identified organisations to take ownership of these management actions (the "Site Champions").</p>	<p>Thirty-four potential Site Champions have been identified as individuals and organisations best placed to raise awareness and to help implement the required actions to safeguard these 23 globally important KBAs.</p>
<p>5) Identification of freshwater KBAs within CEPF Conservation Corridors will, as sub-catchment delineations, help towards coordinated management at the landscape scale of entire river catchments.</p>	<p>The 23 Freshwater Key Biodiversity Areas (KBAs) identified here represent a network of sites critical for the persistence of freshwater biodiversity in this hotspot. These sites serve to inform strategies for improved representation of freshwater biodiversity within the National Protected Areas System of Madagascar (SAPM) and other sites for conservation and sustainable use.</p>
<p>6) Consideration for the impacts of water resource planning and development to freshwater biodiversity throughout the region will better balance the use of water by people with the water requirements of healthy functioning wetland ecosystems.</p>	<p>It was recommended that the Energy Policy 2015–2030, developed by the Ministry of Water, Energy and Hydrocarbons (MEEH) might integrate the KBA and freshwater species Red List data into the "HYDRO ATLAS" to minimise the impacts of hydropower sites on</p>

	freshwater ecosystems.
7) Cross-sectoral application of the results to national development strategies and legislation (e.g., the National Biodiversity Strategy and Action Plan) and multilateral agreements such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES] will be facilitated. t of polices for natural resource management for human well-being, by integrating terrestrial, freshwater and marine approaches.	This new information on freshwater species and sites can be integrated within cross-sectorial policies for Madagascar, such as The Master Plan for Water Management established by the Ministry of Water, Energy and Hydrocarbons; The National Wetlands Strategy established by the Water and Forests Directorate of the Ministry of Environment, Ecology and Forests (MEEF) and the National Ramsar Committee (CONARAM); The National Wetland Management Guidance process initiated by the Wildfowl & Wetlands Trust) in collaboration with MEEF and the Tany Meva Foundation; The National Fisheries Policy developed by the Ministry of Fisheries Resources; The National Forestry Policy (POLFOR), developed by MEEF and the National Rice Policy developed by Presidential Ministry in charge of Agriculture and Livestock (MPAE) and the The Energy Policy 2015–2030, developed by the Ministry of Water, Energy and Hydrocarbons among others.
8) Finally, the project will strengthen capacity of Civil Society, IUCN, its members, and national conservation NGOs throughout Madagascar, in development	The list of freshwater KBAs and threatened species provided through this study will inform Performance Standards and Environmental Safeguard policies of donor institutions and the private sector to help avoid or minimise impacts of their operations in and around these critical sites for freshwater biodiversity in Madagascar. Efforts should be taken to ensure that this new information for freshwater biodiversity is fully utilised within these processes.

Planned Short-term Impacts - 1 to 3 years (as stated in the approved proposal)

Impact Description	Impact Summary
1) Professional development for conservation assessment, through the formation of a network of at least fifteen specialists who are trained in the process of conducting rigorous biodiversity assessments according to the internationally recognized methods of IUCN's species database and Red List of Threatened Species.	A network of over 30 national and international species experts was set up and trained on Red List conservation assessment, KBA identification and delineation and the use of IBAT after the workshops and the dissemination mission.
2) Expansion of the global network of practitioners who form the core of IUCN's Species Survival Commission and have the competence to review and update IUCN's species database and Red List (provided by the network of specialists noted in (1) above).	Through the Red List review workshop and the KBA delineation workshop the global network of practitioners who form the core of IUCN's Species Survival Commission and have the competence to review and update IUCN's species database and Red List was expanded, including over 30 new members.

<p>3) An improved set of resources for conservation planning and sustainable management, provided by the database of information on the distribution, conservation status, threats, and livelihood values for all known described species of freshwater fishes (185), molluscs (50), crabs (17), crayfishes (7), shrimps (26), dragonflies and damselflies (190), and species from selected families of freshwater plants (est. 150) in Madagascar - thus completing the first baseline data set on the status of freshwater biodiversity throughout the country.</p>	<p>Six hundred and fifty-three species of freshwater fishes, molluscs, dragonflies, crabs, crayfishes, shrimps, and aquatic plants were mapped and assessed for their risk of extinction using the IUCN Red List Categories and Criteria and all assessments are publicly available on the IUCN Red List website <a href="http://www.iucnredlist.org/">http://www.iucnredlist.org/</a></p>
<p>4) Quantified measures of the geographic distribution and severity of threats to freshwater species throughout Madagascar, through analysis and publication of the results of the project that are included in the database.</p>	<p>Quantified measures of the geographic distribution and severity of threats to freshwater species throughout Madagascar were published in the report for each taxonomic group.</p>
<p>5) Identification of freshwater species at greatest risk of extinction in Madagascar, through analysis and publication of the results of the project.</p>	<p>Freshwater species at greatest risk of extinction in Madagascar representing a forty-three percent of all species assessed were identified through the analysis and publication of project results.</p>
<p>6) The first national Red List Index (RLI) for freshwater fishes demonstrating the trend in species conservation status over the past 10 year period.</p>	<p>IUCN Red List Index of species survival for Madagascar endemic freshwater fish species based on genuine changes in the number of species in each IUCN Red List Category over time (2004–2016) was calculated and published in the report. The decreasing overall RLI for the endemic freshwater fishes presented indicates the expected rate of extinctions for these species across the hotspot is increasing.</p>
<p>7) Identification of all river/lake sub-catchments meeting the criteria for proposed Freshwater Key Biodiversity Areas as potential priority sites for biodiversity conservation in Madagascar.</p>	<p>Through this project 23 important river, lake and wetlands systems were identified, mapped and validated as freshwater KBAs in Madagascar. Ten of these site also qualify as Alliance for Zero Extinction (AZE) sites – sites that each hold close to the entire global populations of Critically Endangered or Endangered species.</p>
<p>8) Validation of KBA locations and boundaries throughout Madagascar by stakeholders during the KBA stakeholder validation workshop, as mapped through the initial desktop identification of sub-catchments qualifying as proposed Freshwater KBAs.</p>	<p>A KBA validation and delineation workshop was held in Antananarivo in January 2017 at the California Academy of Sciences Biodiversity Centre, in collaboration with the relevant stakeholders (species experts, conservation NGOs and government representatives) from Madagascar.</p>

<p>9) Provision, through the KBA stakeholder workshop, of a set of management recommendations to improve the conservation status of freshwater species within freshwater KBA sites within the CEPF conservation corridors throughout Madagascar.</p>	<p>KBA workshop participants were asked to complete the minimum documentation requirements for each associated KBA including: a site description, list of validated trigger species, description of threats and habitat types within the site, conservation actions in place and recommended, and details for potential Site Champions. This information is required to justify confirmation of a site as a KBA, and as guidance for management of the KBA within and outside the CEPF conservation corridors and to improve site-scale monitoring, national conservation planning and priority-setting, and global and regional analyses.</p>
<p>10) Online and freely available presentation of all information coming from the KBA stakeholder workshop within IBAT – the Integrated Biodiversity Assessment Tool and the World Biodiversity Database (WBDB). This will allow information on Freshwater KBAs to be presented alongside that currently available for Important Birds Areas, Alliance for Zero Extinction sites, and terrestrial KBAs as previously identified by Conservation International.</p>	<p>The upload of the KBA dataset into the World Database on Key Biodiversity Areas and IBAT has been postponed. This delay is beyond our control given that the new database is currently under development by Birdlife International on behalf of the KBA partnership.</p>
<p>11) Raised awareness of important sites of freshwater biodiversity both at the local scale (through wide involvement of local organisations in the KBA workshop) and at the national scale through targeted dissemination of the workshop outputs.</p>	<p>Raised awareness of important sites of freshwater biodiversity was achieved both at the local scale (through wide involvement of local organisations in the KBA workshop) and at the national level through the dissemination mission targeting strategic institutions and organisations including: government departments, grant-makers, private sector and conservation NGOs.</p>
<p>12) The KBA workshop will help to raise general awareness of the importance of wetland ecosystems as "natural infrastructures" delivering many vital services to people.</p>	<p>The KBA workshop helped to raise general awareness of the importance of wetland ecosystems as "natural infrastructures" delivering many vital services to people such as through fisheries and water purification, supporting local economies and livelihoods. A key message to raise general awareness was that without immediate action much of this unique freshwater biodiversity will be lost and the livelihoods of many people will be impacted.</p>
<p>13) A proposed blueprint for a National Protected Areas network representing freshwater biodiversity that informs future decisions related to protected area management for freshwater biodiversity and the services it provided across Madagascar.</p>	<p>A proposed blueprint for a National Protected Areas network representing freshwater biodiversity was published in our report under: Chapter 9 Freshwater Key Biodiversity Areas in Madagascar and Chapter 10 A critical sites network for freshwater biodiversity in Madagascar.</p>



Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives

**The project has been overall very successful in achieving short-term and long-term impacts. All the project activities were completed and delivered on time, with the exception of the dissemination mission which had to be postponed due to a plague outbreak in Madagascar in 2017.**

**One of the most successful outcomes was the establishment of a freshwater KBA sub-group to ensure the continuity of the KBA work and the dissemination of the project results across Madagascar. This group will continue to raise awareness and work towards a better integration and coordination of freshwater biodiversity across conservation initiatives and sectorial policies such as energy and agriculture to minimise impacts of freshwater ecosystems.**

Were there any unexpected impacts (positive or negative)?

**As a result of the Paris Agreement in 2015 the UK Government pledged to provide at least £5.8bn of International Climate Finance (ICF) between 2016 and 2020. The new project portfolio includes Madagascar as one of the priority countries for investment on climate change adaptation. Following this agenda, the UK British Ambassador to Madagascar has been actively involved in conservation initiatives in the country and had a series of meetings with the Cambridge Conservation Initiative partners working in Madagascar - including the IUCN Freshwater Biodiversity Unit. We used this opportunity to invite the Ambassador to the report launch event in Antananarivo, where he gave an opening speech at the plenary session together with the General Director of Forests - helping in this way to raise the profile of the meeting and awareness about the critical status and importance of freshwater biodiversity for people's livelihoods in the hotspot.**

## Project Components and Products/Deliverables

Describe the results from each product/deliverable:

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
3	The conservation status of Madagascar's freshwater biodiversity (IUCN Red List) is better understood and the information is made freely available for input to decision making processes.	3.2	A Red List Index for the majority of Madagascar's native freshwater fishes is made publicly available.	IUCN Red List Index of species survival for Madagascar endemic freshwater fish species based on genuine changes in the number of species in each IUCN Red List Category over time (2004–2016) was calculated and published in the report. The decreasing overall RLI for the endemic freshwater fishes presented indicates the expected rate of extinctions for these species across the hotspot is increasing.
5	Informing the general public, private sector, conservation community and Government about value and conservation status of freshwater species to stimulate conservation effort	5.2	A dataset of identified Site Champions is made available to support future conservation actions at all freshwater KBAs (for inclusion as an Annex to the Final Report - Activity 5.1)	A dataset of identified Site Champions to support future conservation actions at all freshwater KBAs is attached to this report.
5	Informing the general public, private sector, conservation community and Government about value and conservation status of freshwater species to	5.3	Policy Brief / Press Release published on the poor status of Madagascar's freshwater biodiversity with recommendations for greater	A Policy Brief and a press release were published and widely disseminated to all relevant stakeholders presenting main project findings, key messages and policy and management recommendations. * Press release: <a href="https://www.iucn.org/news/species/201803/almost-half-madagascar%E2%80%99s-freshwater-species-threatened-%E2%80%93-iucn-report">https://www.iucn.org/news/species/201803/almost-half-madagascar%E2%80%99s-freshwater-species-threatened-%E2%80%93-iucn-report</a> ; * Policy Brief: <a href="https://www.iucn.org/sites/dev/files/content/documents/madagascar_policy_brief-final.pdf">https://www.iucn.org/sites/dev/files/content/documents/madagascar_policy_brief-final.pdf</a>

	stimulate conservation effort		consideration for its value and conservation within future conservation, protected area and development planning.	
5	Informing the general public, private sector, conservation community and Government about value and conservation status of freshwater species to stimulate conservation effort	5.4	Final mission to Madagascar to meet with Government, NGO, and private sector representatives in order to maximise their understanding and uptake of project outputs.	<p>Laura Maiz-Tome from the IUCN Freshwater Biodiversity Unit visited Madagascar between 26 February to 2 March 2018 to disseminate the project results. The dissemination mission included a report launch event with a plenary session opened by the General Director of Forests and the British Ambassador to Madagascar. The main findings of the project were presented by IUCN, MBG and the regional experts, followed by a panel discussion with over 60 stakeholders and community partners who attended the event. Hardcopies of the report and policy briefs were distributed. Local newspapers and TV also covered the event.</p> <p>With the aim of maximizing the understanding and uptake of the project outputs and of finding data repositories in-country, Laura had a series of meetings with the project partner MBG, targeting strategic institutions and organisations including: government departments, grant-makers, private sector and conservation NGOs.</p> <p>Please see Annex 2 for back-to-office report with the agenda meetings, list of targeted organisation and institutions, and photos from the dissemination mission.</p>
1	Increasing Capacity to assess and monitor status of Freshwater biodiversity and application of IUCN Red List Categories and Criteria to Madagascar's freshwater taxa	1.1	A network of at least 15 national and international species experts is in place. Experts are familiar with application of the IUCN Red List Categories	A network of over 30 national and international species experts was set up for Madagascar after the Red List review workshop, the KBA workshop and the dissemination mission.

			and Criteria, freshwater species mapping protocols, and the IUCN Species Information Service database.	
2	Knowledge of Madagascar's freshwater biodiversity is increased and made available for input to environment and development decision making processes.	2.1	Repository of information on Madagascar's freshwater biodiversity available within IUCN's Species database (SIS). Data for aquatic plants available within MBG's TROPICOS database and delivered online through the Catalogue of the Vascular Plants	All 653 assessments have been published in the Red List of Threatened Species <a href="http://www.iucnredlist.org">www.iucnredlist.org</a> ; 169 endemic freshwater plants are also publicly available within MBG's TROPICOS database <a href="http://www.tropicos.org/Project/Madagascar">http://www.tropicos.org/Project/Madagascar</a>
3	The conservation status of Madagascar's freshwater biodiversity (IUCN Red List) is better understood and the information is made freely available for input to decision making processes.	3.1	Updated online version of IUCN's Red List of Threatened Species is available via the IUCN Red List web site (for freshwater fishes, molluscs, odonates, crabs, crayfish, shrimps and	Six hundred and fifty-three species of freshwater fishes, molluscs, dragonflies, crabs, crayfishes, shrimps, and aquatic plants were mapped and assessed for their risk of extinction using the IUCN Red List Categories and Criteria. This represents the most comprehensive assessment of freshwater biodiversity at the species level for the hotspot. Given the wide range of trophic levels and ecological roles encompassed within these taxonomic groups, it is proposed that information on their distributions and conservation status, when combined, will provide a useful indication for the overall status of the associated wetland ecosystems.

			selected plant groups)	
4	The foundations for an improved protected areas network effectively representing freshwater biodiversity throughout Madagascar are publicly available for informing future conservation and development planning.	4.1	All Confirmed freshwater KBAs for Madagascar are published in the Integrated Biodiversity Assessment Tool (IBAT) and the World Biodiversity Database (WBDB).	The upload of the KBA dataset into the World Database on Key Biodiversity Areas has been postponed. This delay is beyond our control given that the new database is currently under development by Birdlife International on behalf of the KBA partnership.
4	The foundations for an improved protected areas network effectively representing freshwater biodiversity throughout Madagascar are publicly available for informing future conservation and development planning.	4.2	Complete information on the freshwater KBAs identified is delivered to, and incorporated into, the ongoing Système d'Aires Protégées de Madagascar (SAPM) - (resp. MBG)	The complete information on the freshwater KBAs identified through the project have been incorporated into the Système d'Aires Protégées de Madagascar (SAPM) and the Office National pour l'Environnement (ONE). This was achieved through a series of meetings organised by the project implementing partner (MBG) and reinforced by the dissemination mission meetings.
5	Informing the general public, private sector, conservation community and Government about value and conservation status of freshwater species to	5.1	Final project report completed, published and disseminated, with freshwater biodiversity assessments, Red List evaluations,	The final project report has been completed, published, translated into French and disseminated. You can also find it available at: <a href="https://portals.iucn.org/library/sites/library/files/documents/RL-2018-001.pdf">https://portals.iucn.org/library/sites/library/files/documents/RL-2018-001.pdf</a>

	stimulate conservation effort		confirmed KBA locations, conservation management recommendations and a blueprint for a protected areas network	
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Please describe and submit any tools, products, or methodologies that resulted from this project or contributed to the results.

**Report:** Máiz-Tomé, L., Sayer, C. and Darwall, W. (eds) (2018). *The status and distribution of freshwater biodiversity in Madagascar and the Indian Ocean islands hotspot*. Gland, Switzerland: IUCN. viii+128. Available online: <https://portals.iucn.org/library/sites/library/files/documents/RL-2018-001.pdf>

**Policy Brief:** Threatened freshwater biodiversity in Madagascar and the Indian Ocean islands hotspot - Priorities for conservation action. Available

online: [https://www.iucn.org/sites/dev/files/content/documents/madagascar\\_policy\\_brief-final.pdf](https://www.iucn.org/sites/dev/files/content/documents/madagascar_policy_brief-final.pdf)

Red List assessments available at: <http://www.iucnredlist.org/>. All freshwater plant assessments also available at: Madagascar Catalogue, 2018. *Catalogue of the Vascular Plants of Madagascar*. Missouri Botanical Garden, St. Louis, U.S.A. & Antananarivo, Madagascar

<http://www.tropicos.org/projectwebportal.aspx?pagename=Aquatic&projectid=17>. Accessed: July, 2018].

**Journal Article:** Cumberlidge, N., Rasamy Razanabolana, J., Ranaivoson, C. H., Randrianasolo, H. H., Sayer, C., Máiz-Tomé, L., Van Damme, D. & Darwall, W. R. T. 2017. Updated extinction risk assessments of Madagascar's freshwater decapod crustaceans reveal fewer threatened species but more Data Deficient species. *Malagasy Nature*, 12: 32-41.

## Lessons Learned

Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building.

Consider lessons that would inform:

- Project Design Process (*aspects of the project design that contributed to its success/shortcomings*)
- Project Implementation (*aspects of the project execution that contributed to its success/shortcomings*)
- Describe any other lessons learned relevant to the conservation community

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- Species information remains very limited for many freshwater species in the hotspot – 23% of the species were assessed as Data Deficient (DD). There is therefore an urgent need for collaborative field research and monitoring. Given the high levels of threat across the hotspot it is reasonable to expect that further research and sampling might reveal many of these DD species to also be threatened. It might be useful in future therefore to conduct a more extensive baseline biodiversity assessment as part of the initial profiling exercise itself. In this way priority species can be identified for targeting CEPF resources from the start. We would recommend this also for the delineation of KBAs - again so CEPF resources can be directed to the most important sites from the start of the granting process.
  - The 23 Freshwater Key Biodiversity Areas identified represent a new data set to inform strategies for improved representation of freshwater biodiversity within the National Protected Areas Network and other site protection measures. Through this project we have however learned that it will be difficult to modify existing boundaries of PAs despite new information being provided, due to a lack of national resources to address these recommendations. It might therefore be useful to consider supporting the Government to respond to these recommendations.
  - The new KBA Database is currently under development by BirdLife International on behalf of the KBA partnership which has resulted in temporary data sharing limitations. It has therefore taken longer than expected to get the new KBAs published on the database and much of the information will remain archived until the new database is developed and able to publish the KBA site accounts in full.
  - The Guidelines for Using the Global Standard for the Identification of Key Biodiversity Areas are also currently under development by the KBA Technical Working Group. This document will provide a summary of the steps for identifying and delineating KBAs, together with a detailed explanation of how the KBA criteria and thresholds and delineation procedures can be applied in practice. Currently issues relating to overlapping boundaries of existing KBAs present some "challenges" still to be addressed for a small minority of sites. As a result we learned that a significant effort was required, above that originally planned, to get the proposed KBAs to a state where they can be confirmed as "validated" and ready for publication. This project has in effect greatly helped to develop the process for publication of new KBAs according to the new Global Standard.
  - Ultimately the process for identification of KBAs should be nationally driven such that all relevant parties can be directly involved, especially to facilitate any recommendations to change boundaries of existing Protected Areas or KBAs. Our project has served to initiate this process through provision of training in the application of the KBA standard, the baseline species data sets and first set of KBAs.

## **Sustainability / Replication**

Summarize the success or challenges in ensuring the project will be sustained or replicated, including any unplanned activities that are likely to result in increased sustainability or replicability.

**The ministries and other official bodies we visited for the dissemination exercise were very positive about the need for better information about the status of freshwater system and their organisms, and were very interested in our project and its findings, and impressed with the report. While there was a**

willingness to support the idea of further research and the integration of the results into existing initiatives, the problems of inadequate human and financial resources were generally seen as limiting factors.

A National Coordination Group KBA Freshwater has been established at an initial meeting on 9 March, 2018, that aims to ensure continuity of the process to identify, document and delineate KBAs at the national level. It is a KBA subgroup that will compile and update the list of relevant national stakeholders that can play a role in the KBA program. Three stakeholders were selected with leaders for each group:

- Universities and research centres: Tsilavina Ravelomanana (University of Antananarivo, MZBA) and Auguste Botovao (University of Majunga)
- NGO sector: Harison Andriambelo (WWT), Nadiah Manjato (MBG) and Dimby Razafinimpahana (WCS/Rebioma)
- Government departments: Natolotra Ho Aina (DSAP/MEEF), Ranaivoson Fameno Tahiana (MEEH)

Currently, 30 people are voluntarily registered as members representing 21 institutions.

## Safeguards

If not listed as a separate Project Component and described above, summarize the implementation of any required action related to social, environmental, or pest management safeguards

NA

## Additional Comments/Recommendations

Use this space to provide any further comments or recommendations in relation to your project or CEPF

This was the first time we had a dissemination mission at the end of a project, since this is not always a priority for the donors (due to budget constraints), but given the positive results achieved just in three days it should be encouraged as a key activity to maximise value in future projects. In this case it was Pierre Carret who recommended the Dissemination Mission be budgeted for.

## Additional Funding

Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of CEPF investment

**Total additional funding (US\$)**  
*\$8,000.00*

### **Type of funding**

*Please provide a breakdown of additional funding (counterpart funding and in-kind) by source, categorizing each contribution into one of the following categories:*

- A Project Co-Financing (other donors or your organization contribute to the direct costs of this project)*
- B Grantee and Partner Leveraging (other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF funded project)*
- C Regional/Portfolio Leveraging (other donors make large investments in a region because of CEPF investment or successes related to this project)*

**Additional financial support has been received from the Chevron support to the IUCN Red List and the France-IUCN partnership framework. This support of approximately USD 8,000 covered around 25 days of staff time for Laura Maiz-Tome in the later stages of the project.**

### **Information Sharing and CEPF Policy**

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, [www.cepf.net](http://www.cepf.net), and publicized in our newsletter and other communications.

1. Please include your full contact details (Name, Organization, Mailing address, Telephone number, E-mail address) below

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