



**Environmental and Social Impact Assessment
and
Environmental and Social Management Plan**

June 2023

CEPF Grant -113910

Seychelles Islands Foundation

***Understanding IAS eradication as a
nature-based solution for island EbA***

Aldabra Atoll, Seychelles

Grant Summary

1. Grantee: Seychelles Islands Foundation, a public trust based in Seychelles and founded in 1979 to protect Aldabra Atoll.
2. Grant title: Understanding IAS eradication as a nature-based solution for island EbA
3. Grant number: 113910
4. Grant amount: USD299,000.00
5. Project dates: 01/12/2023–30/11/2026
6. Project Location: Seychelles

7. Summary of the project

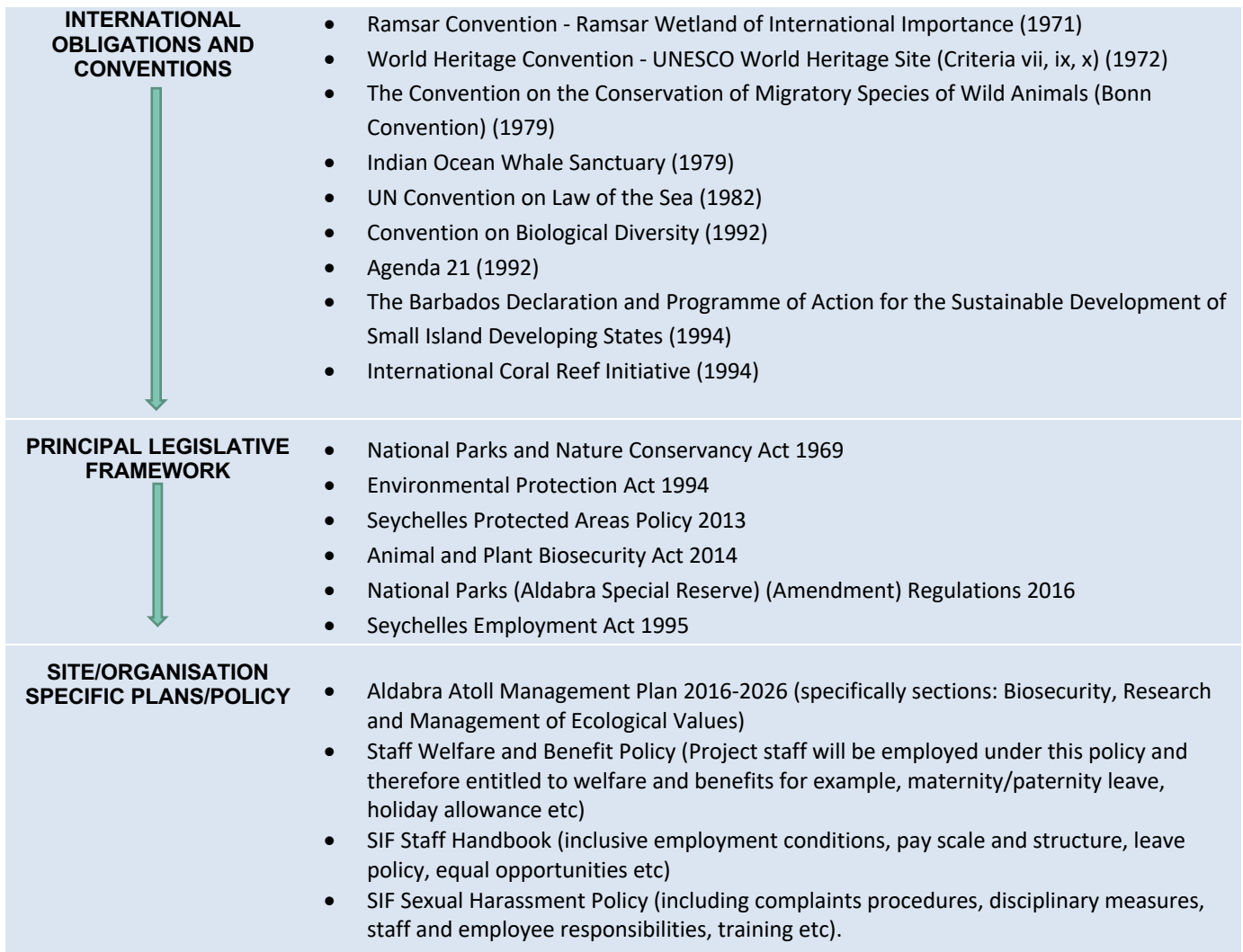
Invasive alien species (IAS), such as rats and cats, have significant negative impacts on island ecosystems. These impacts lead to population declines and high rates of extinction of native island species. The severe degradation of ecosystems by invasive mammals reduces the ability of these ecosystems to adapt to and recover from the impacts of climate change. Eradication of invasive mammals from islands is therefore a crucial nature-based solution to boost ecosystem-based adaptation to the impacts of climate change. However, the success of mammal eradication efforts depends on extensive site-specific monitoring to inform the eradication strategy and methods. Under this project we propose to gain the site-level knowledge required to prepare for a large-scale rat and cat eradication on Aldabra Atoll, Seychelles, which will be the second largest mammal eradication in the tropics.

Ensuring eradication success requires extensive research and monitoring of the island-specific factors required to inform the eradication methods and planning (Kiett et al, 2015). This includes rat and cat population surveys, as well as research into behavior and habitat use to understand how rats and cats are using the island and how they might be controlled. Trials of different bait formulations, rates and deployment methods help to determine the most effective approach for delivering bait to rats and cats on Aldabra, and help to minimize the impact on native species, like birds. Results will also inform the eradication costing plan, a requirement for eradication fundraising.

In summary, the eradication at Aldabra will be the second-largest eradication of rats on a tropical island and fourth-largest for cats. This will have immediate positive impact on Aldabra's ecosystem and species. However, the eradication is not possible without thorough site-level research to inform eradication planning. This project will enable this step and promote the eradication as a critical nature-based solution to boost ecosystem-based adaptation to climate change.

8. Date of preparation of this document: 19th June 2023

9. **Legal and regulatory framework**: This section will analyze the legal and institutional framework for the project, within which the environmental and social assessment is carried out, in compliance with Safeguard Policy 1 on Environmental and Social Assessment.

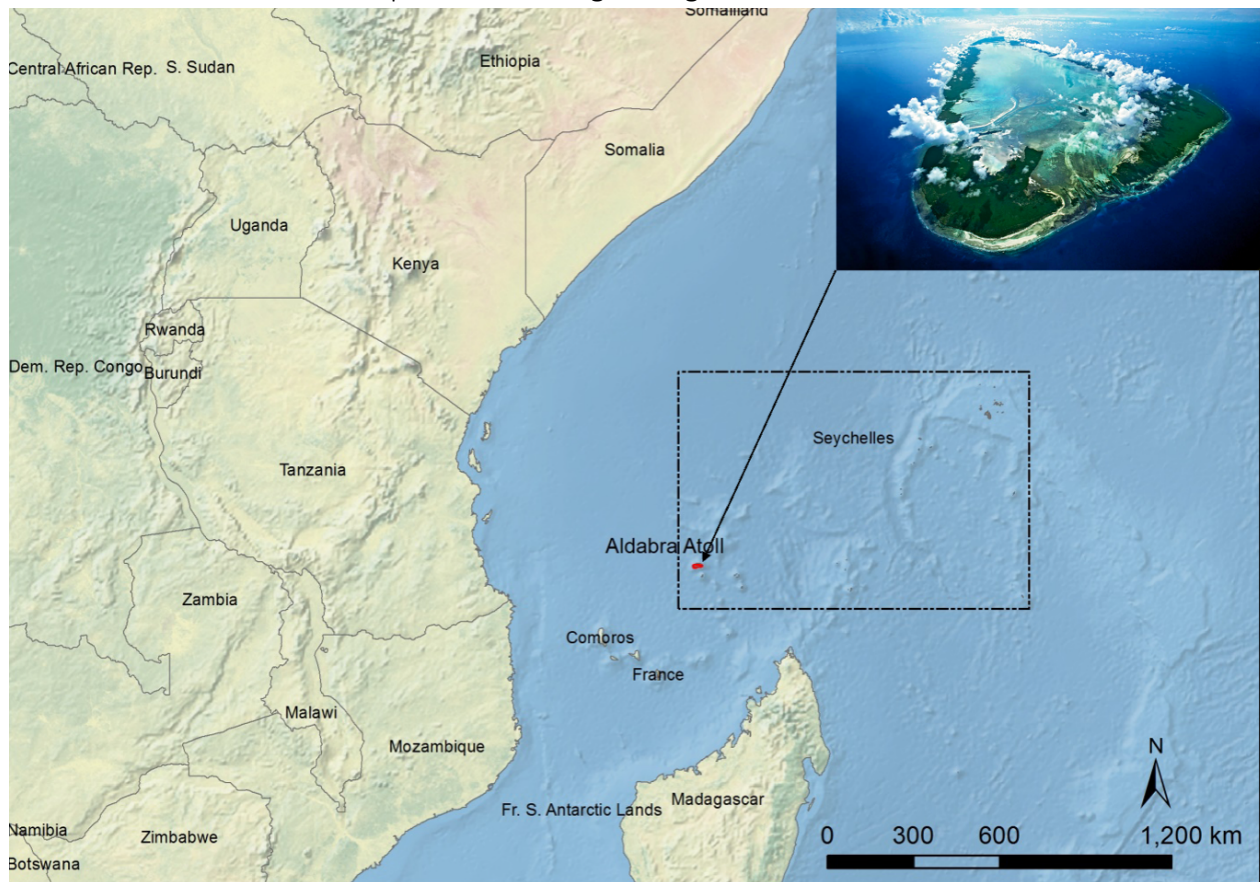


10. **Status of area to be impacted:** This section will describe the applicant’s understanding of the project site, including a concise description of the proposed project’s geographic, environmental, social, and temporal context. Where possible, it should include a map of sufficient detail, showing the project site and the area(s) that may be affected by the project’s direct and indirect impacts.

The Aldabra Atoll is part of the Seychelles Archipelago in the Western Indian Ocean, some 1150 km southwest of the main island, Mahé. As one of the largest raised coral atoll by land area in the world, it is widely recognized as one of the most remarkable oceanic islands on Earth. It comprises seven wetland types, including permanent shallow marine waters, coastal saline lagoon area, marine subtidal aquatic seagrass beds and mangrove swamps. The numerous habitat types allow for the support of many different species at different stages of their life cycles. This includes endangered and vulnerable species such as the green turtle *Chelonia mydas* and the Aldabra giant

tortoise *Aldabrachelys gigantea*; endemic species of flora (40 species) and fauna such as the Madagascar sacred ibis and populations of two species of endemic insectivorous bat. Land use on Aldabra is extremely low with the only uses being research, an education outreach programme, and minimal tourism as tourists are not allowed to stay overnight. The main threats facing the site are alien invasive species introduction and establishment, and the growing impacts of climate change.

The project area is remote and highly protected. There are no indigenous communities who live on or near the atoll, nor any extractive industries directly reliant upon the area. However, the large MPA is an important refuge for many commercially valuable species in the western Indian Ocean, and species that have become vulnerable to extinction elsewhere. Furthermore, Aldabra is culturally important for Seychelles, inspiring a sense of pride and acting as a beacon of conservation success. Project activities will take place across the whole atoll, specific locations will be chosen to maximise the experimental design and generate the most robust data.



Location of Aldabra Atoll

11. **Baseline data:** This section will assess the dimensions of the study area and describe relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences. It will also take into account current and proposed development activities within the project area that are not directly connected to the project. Data should

be relevant to decisions about project location, design, operation, or mitigation measures. The section will indicate the accuracy, reliability, and sources of the data.

There are no anticipated changes to the study area. However, SIF already collect extensive data on ecosystems components and can use this to track any changes that occur during project duration. New monitoring programmes will also be set up under this project, providing even greater scope for tracking changes. One example will be greater monitoring focus in the mangrove system, a difficult habitat to work in but essential for this project.

12. **Anticipated impacts and risks:** This section will describe the anticipated environmental and social impacts and risks, and explain how these have been determined. It should consider both positive and adverse impacts.

See table below.

13. **Mitigation measures:** This section will describe measures that will be taken to mitigate adverse impacts. For each anticipated adverse or risk identified in Section 12, it should describe, with technical detail, appropriate mitigation measure(s), including the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate. It should also estimate any potential environmental and social impacts of these measures. Differentiated measures should be identified so that adverse impacts do not fall disproportionately on disadvantaged or vulnerable groups or individuals.

See table below.

14. **Actions to ensure health and safety:** This section will describe actions that will be taken to ensure the health and safety of workers.

See table below.

15. **Monitoring and evaluation:** This section will outline the steps the applicant will take to monitor and evaluate the impact of the proposed project. It should identify the monitoring objectives and specify the type of monitoring, with linkages to the impacts assessed and the mitigation measures described. This is meant to provide (a) a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and (b) monitoring and reporting procedures to: (i) ensure early detection of conditions that necessitate particular mitigation measures; and (ii) furnish information on the progress and results of mitigation.

See table below.

16. **Timeline and resources:** For the mitigation and monitoring measures in Sections 14 and 15, this section will provide: (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (b) cost estimates and sources of funding for implementing the ESMP.

See table below.

Table covering sections 12–16

Proposed action	Environmental or social implications	Environmental or social impacts	Proposed mitigation measures	Monitoring and evaluation measures	Timeline and resources
Hiring project staff	New staff hired on 2 or 3 year contracts	Staff welfare, equality and inclusivity considerations	Issue all staff with contracts that adhere to current national and organization standards, inclusive of annual leave, maternity leave/pay and other safeguarding standards.	Staff contracts signed and kept on file. Staff mid-term and end of contract appraisals completed in timely manner.	Contracts to be completed prior to deployment. No additional resources requires as HR support provided by SIF.
Staff field-work on Aldabra atoll	The team will be based on Aldabra which is remote and fieldwork conditions are harsh.	Potential fieldwork ailments such as dehydration, sunburn, scratches and falls.	All staff will be receiving specific training and briefings before deployment into field conditions on Aldabra, inclusive reading of the existing fieldwork protocol, medical and incident protocol. Staff will carry first aid kits at all times and be provided with suitable field attire. New staff will always be accompanied with existing experienced staff until orientation is complete.	The SIF Aldabra medical and incident report records all such incidents and will be monitored throughout the project.	To ensure staff have appropriate field attire and equipment a peer reviewed equipment and safety list will be compiled. To be purchased in Q1 of project and deployed before or with project staff.

<p>Controlled toxic and non-toxic baiting of restricted areas on Aldabra.</p>	<p>Staff transporting and handling of bait.</p>	<p>Bait quality compromised due to storage/transport issues. Staff handling could result in ill-health.</p>	<p>Bait to be transported and stored in water-tight containers to prevent contamination to bait or leakage of bait. Staff to receive training on bait storage and handling and be issued with appropriate protective equipment, inclusive of appropriate gloves for handling bait during deployment.</p>	<p>Any incidents relating to bait reported in project reports and in SIF internal incident reporting.</p>	<p>PPE will be purchased to ensure staff have appropriate field attire and equipment. To be purchased in Q1 of project and deployed before or with project staff.</p>
<p>Controlled toxic baiting of restricted areas on Aldabra. (the majority of bait uptake trials will be done with non-toxic bait)</p>	<p>Use of brodifacoum, an anticoagulant poison, in small and controlled areas via bait stations, to assess and quantify the environmental impact of a large-scale broadcast baiting strategy on Aldabra.</p>	<p>Possible direct impact on non-target species such as crabs, landbirds, tortoises. Or secondary poisoning from consumption of target species.</p>	<p>The application on toxic-bait in the field will be restricted to small areas (<5m²) with the aim of observing and quantifying the localized outcome. The specific purpose is therefore to measure the impact rather than mitigate it, however the impact will be contained and have negligible impact on the wider ecosystem. In addition, all carcasses on species culled via bait</p>	<p>All activities and outcomes will be reported on in internal and project reports. These will ultimately inform the non-target management plan we will implement prior to an eradication attempt.</p>	<p>No additional costs or resources associated with this.</p>

			consumption will be collected and disposed of appropriately to reduce secondary poisoning effects. Furthermore, all fieldwork plans will go through peer review process to ensure expert agreement on best-practice for this part of the project work.		
Handling/interaction of staff with target and non-target species (for example trapping of rats/cats)	Staff will be handling dead and live specimens throughout the fieldwork.	Handling could result in injury or transfer of poison onto staff hands.	Staff will wear appropriate PPE at all times and be trained in handling specimens.	Any incidents will be reported in project reports and in SIF internal incident reporting.	PPE will be purchased before staff deployment and all staff will be trained prior to any handling (Q1 of project)

17. **Permission of the landowner:** Please obtain permission of the landowner to undertake actions on the site, and verify that you have the required permits to undertake this work.

N/A: The project will be conducted by the site managers who hold overall responsibility for the site and all activities carried out there.

18. **Participatory preparation:** This section aims to outline the range of meaningful consultations that you have had both with experts to optimize the potential for success, and with stakeholders, particularly local communities, who are potentially affected by the proposed project. It should include dates of consultations.

Experts who will provide ongoing input into this project design, especially fieldwork methodologies have been recruited in June 2023. Notably, Dr Karl Campbell, Dr Nik Cole, Prof. Nick Graham, Dr Grant Harper, Prof. James Russell, Dr Araceli Samaniego And Dr Sebastian Steibl. No board meetings have been held thus far.

20. **Disclosure:** CEPF requires that environmental and social plans are disclosed to affected local communities and stakeholders prior to project implementation. Please describe efforts to disclose this impact assessment and environmental management plan and provide dates.

Once the safeguarding plans have been reviewed and approved by CEPF we will ensure they are available via the SIF website for anyone to access.

Grievance Mechanism:

Stakeholders will be informed of the project aims and objectives and the way in which they can communicate a grievance about the project (using the CEPF stipulated text below) via a number of different communication channels, both in English and Creole. These will include; social media (Twitter/Instagram and Facebook), SIF monthly e-newsletter, website project page, presentations and workshops. Tourists visiting Aldabra will be notified about the project in their visit briefing and given the necessary options for reporting any grievance. The grievance channel will enable persons to directly contact SIF but also an external party such as The Ministry of Environment. This mechanism will be implemented within the first month of the project.

We will share all grievances — and a proposed response — with the Regional Implementation Team and the CEPF Grant Director within 15 days. If the claimant is not satisfied following the response, they may submit the grievance via the CI Ethics Hotline (toll-free telephone line: [+1-866-294-8674](tel:+1-866-294-8674) / secure web portal: <https://secure.ethicspoint.com/domain/media/en/gui/10680/index.html>).