



## Darwin Initiative Main: Annual Report

To be completed with reference to the “Project Reporting Information Note”:  
(<https://www.darwininitiative.org.uk/resources-for-projects/information-notes-learning-notes-briefing-papers-and-reviews/> ).

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes)

**Submission Deadline: 30<sup>th</sup> April 2023**

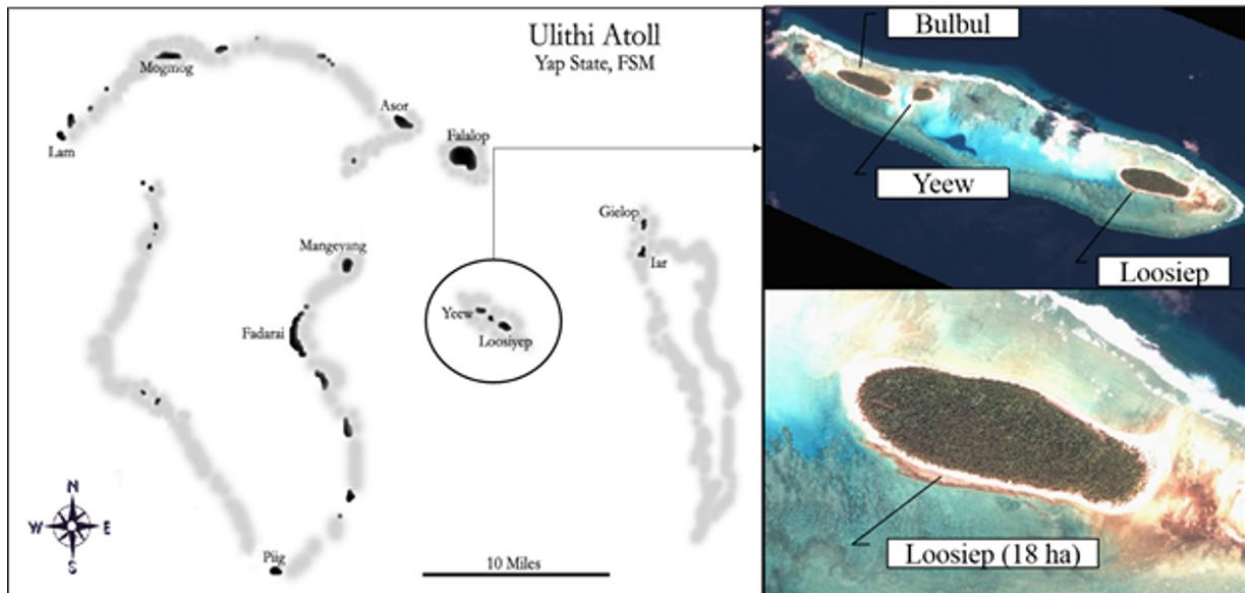
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### Darwin Initiative Project Information

Project reference	25-007
Project title	Protecting Yap’s Biodiversity and Livelihoods through Invasive Alien Species Removal
Country/ies	Federated States of Micronesia
Lead Partner	Island Conservation
Project partner(s)	Ulithi Falalop Community Action Program; One People One Reef
Darwin Initiative grant value	£350,000.00
Start/end dates of project	July 1, 2018- March 31, 2024
Reporting period (e.g. Apr 2022 – Mar 2023) and number (e.g. Annual Report 1, 2, 3)	April 2022 – March 2023, Annual Report 5
Project Leader name	Tommy Hall
Project website/blog/social media	<a href="http://www.islandconservation.org">www.islandconservation.org</a> <a href="http://www.onepeopleonereef.org">www.onepeopleonereef.org</a>
Report author(s) and date	Tommy Hall (IC), Madeleine Pott (IC), Nicole Crane (OPOR), Iliana Hayes (OPOR), John Rulmal JR (UFCAP), April 26, 2023

### 1. Project summary

Ulithi is a remote atoll in the Caroline Islands of the western Pacific Ocean consisting of 40 islets. Ulithi supports some of the greatest biological diversity within the Federated States of Micronesia (FSM), and is home to regionally important native seabird species, the endemic giant Micronesian gecko and a newly discovered endemic blind snake. Known as the “Turtle Islands,” Ulithi provides nesting habitat for the greatest number of Green Sea Turtles (EN) in Micronesia. Three introduced and invasive species, the black rat, feral pigs and the mangrove monitor lizard, are present on Loosiep, one of the Turtle Islands. There they are impeding horticulture, diminishing critical natural resources, and having a significant impact on the island’s biodiversity. Damage from pigs and monitor lizards is illustrated by the excavation and predation of green turtle nests, the lack of roosting and nesting seabirds on Loosiep and the absence of coconut crabs which are abundant on surrounding islands. Rats are equally destructive, preying on marine turtle hatchlings, seabirds and crops.



**Figure 1.** Map of Ulithi Atoll and Loosiep Island.

Because of the atoll's extreme isolation, Ulithi's 1,000 residents rely heavily on the natural resources available to them such as food grown in gardens and the sustainable harvest of turtle and bird eggs. Rats, pigs, and monitor lizards have depleted these resources on Loosiep. Monitor lizards frighten the community due to their large size and fearsome appearance. Consequently, gardening on Loosiep has been abandoned. Freshly grown foods are no longer readily available, and the community is faced with a serious dietary-related disease epidemic. These impacts have reduced the community's resilience at an especially vulnerable time in the face of increasingly severe storms and rising sea levels due to climate change. The COVID-19 pandemic has exacerbated this as the community has been forced to become more self-reliant as a result of supply chain disruptions that have impeded the transport of food to the islands.

Ulithi's subsistence economy is closely integrated with nature and the community has a strong interest in relying on its natural resources, particularly in the wake of COVID-19. To uphold these traditional values, the integrity of the atoll's living ecosystem must be maintained. Eradication of harmful invasive vertebrates will allow recovery of native species populations and enable the community to preserve its cultural values. The goal of this project is to remove invasive rats, pigs, and monitor lizards and facilitate a transition back to a traditional subsistence lifestyle for the inhabitants of Ulithi. Once the turtle islands are free from these invasive vertebrates, the community will re-establish traditional gardening practices on the island while also being stewards for the recovery of the ecosystem on the island, the sea turtle population, and the surrounding reefs.

## 2. Project stakeholders/ partners

There are two lead partners that support Island Conservation on this project: Ulithi Falalop Community Action Program (UFCAP) and One People One Reef (OPOR). UFCAP represents leadership and the community of Ulithi and is the primary partner on the project. UFCAP's role in the project is to engage community leaders, advise on planning and logistics and facilitate community involvement in all phases of the project. OPOR's role in the project is to lead the socio-economic monitoring and community engagement and outreach. OPOR is working closely alongside UFCAP to facilitate strong community relations and involvement of local scientists.

Due to the COVID-19 pandemic, all field work or in-person work was delayed in 2020 and, unfortunately, has been delayed again until 2023. This has directly impacted each partner's ability to progress their objectives for this and many other projects currently ongoing on Ulithi. The remoteness of Ulithi and lack of telephone or internet access became a real challenge at

times. Despite the delays and the continued challenges in communication and engagement, the project partnership has remained strong in its fifth year. We have kept in regular contact and sought to collaboratively maintain project momentum. However, all partners have had to make significant changes to project spending in order to conserve funds for the time when travel opens back up and we can resume operations at full capacity.

Despite the ongoing setback posed by of the pandemic, we were able to maintain momentum with the partnership. We are now planning to begin the removal of invasive species from Loosiep in mid-2023. This past year saw us collaborating with our core partners in the following ways:

- We maintained strong communications with our lead point of contact for UFCAP, John Rulmal, who remained in Guam for the majority of 2022. Reliable connectivity in Guam allowed us to maintain a constant flow of information between partners and the outer island community.
- OPOR held regular virtual meetings with the leaders, community, and youth of Ulithi who happened to be in Yap or elsewhere with internet access. This project remains of particular interest to stakeholders, with frequent discussions around impacts from invasive species, biosecurity, and biodiversity.
- OPOR also held a youth, in-person program in Hawaii in Summer 2022. They were able to bring some youth from Ulithi to Hawaii, as well as engage the large Ulithian diaspora on Kona. This was important to maintaining dialog, planning, and encouraging youth engagement as many of these individuals will be traveling to Ulithi in mid-2023 and will potentially be involved in the eradication, monitoring, and agricultural work scheduled to occur in 2023.
- OPOR also completed their first site visit to Ulithi since the start of the COVID-19 pandemic. This was a critical step in re-initiating conversations around biosecurity, motivating the community to plan for future gardening opportunities on Loosiep, and recruiting personnel to participate in project activities scheduled for mid-2023.

### **3. Project progress**

#### **3.1 Progress in carrying out project Activities**

We are currently on track to launch pending eradication activities in 2023 and initiate gardening on Loosiep this year.

#### **Output 1: Invasive vertebrates (rodents and monitor lizards) removed from Loosiep, with biosecurity in place to prevent reinvasion.**

Project partners agreed to move forward with removing rats and monitor lizards from Loosiep in 2023. The UFCAP lead signalled that the partnership was ready to proceed with eradications this year and consulted local leadership to ensure that this coincides with their needs and priorities. The community agreed that it was ready for eradications to take place in 2023. With that understanding in place, we proceeded with ordering and shipping the rodent bait to Yap and are organizing for onward shipment to Ulithi. We have also made arrangements to purchase and transport fuel to Ulithi that will be needed for the eradication, as well as beginning final purchasing for the project. OPOR, in their March 2023 site visit also relaunched conversations about the project, the eradication methods that will be used and the need for biodiversity.

#### **Output 2: Native biodiversity recovery on Loosiep Island.**

No further work was completed under this output between 2022 and 2023.

#### **Output 3: Increased availability of natural resources and better crop production results in improved food security and quality for the Ulithi community, increasing resilience to climate change.**

As part of OPOR's visit to Ulithi in March 2023, they re-affirmed with the community that there is a desire to see rats removed so that Loosiep can once again serve as a "gardening

island.” OPOR started conversations about creating a shared goal for restoring agriculture on Loosiep, once the rodents and monitor lizards have been removed. OPOR recommended that local leaders consider what they would like to plant, who will lead the planting, and what resources they will need to do so in order to start planting later this year.

**Output 4. The local community, Yap State, and National (Federated States of Micronesia) capability to plan and implement invasive species eradication and biosecurity projects is advanced.**

Activity under this output has been limited in the 2022-2023 timeframe. With an anticipated eradication timeframe of June 2023, we expect to be engaging with local government representatives and community leaders more consistently from April 2023 onwards.

**Output 5. Period of employment is provided for local community representatives.**

Activity under this output has been limited in the 2022-2023 timeframe. With an anticipated eradication timeframe of June 2023, we expect to be recruit staff starting in May 2023.

### **3.2 Progress towards project Outputs**

**Output 1: Invasive vertebrates (rodents, pigs, and monitor lizards) removed from Loosiep, with biosecurity in place to prevent reinvasion.**

Due to project delays, progress has been minimal since 2020. Pigs have been eliminated and systematic surveys in 2023 will definitively confirm this. We expect to complete the rat eradication on Loosiep in mid-2023 and eradication of the monitor lizards will begin soon after. Due to the cryptic nature of juvenile monitors, we anticipate that it will be challenging to eliminate the entire population, but we expect this species’ population to reach near undetectable levels by the end of the award.

**Output 2. Native biodiversity recovery on Loosiep Island.**

With the removal of pigs, nest depredation of endangered sea turtles will be significantly reduced. While we have not been in a position to document this change since the removal of pigs, monitoring in 2023 should confirm this.

**Output 3. Increased availability of natural resources and better crop production results in improved food security and quality for the Ulithi community, increasing resilience to climate change.**

We have put all conditions in place this last year so that the eradications can take place and gardening on Loosiep can resume later in 2023.

**Output 4. The local community, Yap State, and National (Federated States of Micronesia) capability to plan and implement invasive species eradication and biosecurity projects is advanced.**

Because of delays, progress under this output has been limited. That said, as part of OPOR’s recent visit to Ulithi, they met with community leaders from all four inhabited islands and re-launched outreach efforts to raise awareness in the importance of biosecurity, the impact of invasive species, and potential solutions. Additionally, OPOR briefed the Yap State Governor, Yap Community Action Program, and the Yap State Legislature about their work and the importance of biosecurity for sustaining invasive species management investments.

**Output 5. Period of employment is provided for local community representatives.**

Because of delays, progress under this output has been limited. We anticipate recommencing employment of local personnel in May 2023.

### 3.3 Progress towards the project Outcome

**Outcome: Removal of harmful invasive species will result in native and endemic species recovery and improved conditions for horticulture, resulting in increased food security for the community.**

We still anticipate largely achieving our outcome by the end of funding, though achievement is contingent on successfully completing the rodent eradication and significantly reducing the monitor lizard population. Our indicators and associated means of verification are still relevant metrics for gauging success in fulfilling our objectives.

Progress against indicators is as follows:

#### **Indicator 0.1 No invasive vertebrates remain on Loosiep by the end of the project.**

Rodent and pig eradication will be confirmed by 2024. Low levels of monitor lizards are expected at the end of the project due to current limitations in detecting juvenile monitors. All species were present at detectable levels prior to project start.

#### **Indicator 0.2 Net increase in the number and diversity of seabirds present on Loosiep by the end of the project.**

While we do not expect to see changes in seabirds by 2024 (due to a shortened post-eradication window), we do expect to see changes in sea turtle nest depredation and crab populations by 2024. No seabirds are currently present on Loosiep; crabs are present in low numbers and sea turtle nest depredation is high (80-100%).

#### **Indicator 0.3 Net increase in the amount of food crops grown and harvested on Loosiep by project end date.**

Once the eradication of rodents is complete and monitor lizard populations are reduced, we will be on track to see a resumption of gardening and net increase in food production. Currently, no crops are grown and harvested on Loosiep.

#### **Indicator 0.4 Local and national capacity to plan, implement and monitor invasive species eradication and biosecurity programmes is raised for 10 people by the project end date as measured by a pre-and post-skills assessment.**

Once the eradication of rodents and pigs is declared successful, we will have met this indicator. Prior to project start, there was no capacity in Ulithi to undertake invasive species eradications.

### 3.4 Monitoring of assumptions

We regularly review our assumptions and still find them valid. Below are our assumptions and relevant comments and mitigating actions.

- No extreme or unusual weather conditions inhibit progress.
  - We are currently planning to implement during the period of the year that has the calmest weather conditions.
- Enabling conditions to complete the project are in place for the duration of the project (e.g., access to Ulithi atoll, operable boats, local field team available, permission and mandate from local community remains in place).
  - We are actively working to ensure that there is a new boat available for project work later this year and expect it to be on-island in May 2023.
- Normal travel to Yap State and Ulithi will resume in 2023.
  - It has resumed and partners and staff have not encountered difficulties in accessing the island.
- Project staff and community are able to manage and mitigate the risks of COVID-19.
  - All our staff are vaccinated and required to wear masks when traveling and submit COVID-19 safety plans prior to all work travel. We have been successfully managing COVID-19 risks on other island projects since 2020.
- Local support for the project remains strong, despite a multi-year delay in project implementation.

- Conversations with the local community indicate there is still strong support.
- Rats on Loosiep are susceptible to the same bait and baiting methods that are used on similar tropical islands in the Pacific Ocean.
  - There is no new evidence to invalidate this assumption.
- The tools and methods available for the monitor lizard eradication will be effective in detecting and removing the last individual.
  - This is an untested assumption because this is a novel eradication, and no one has completed a full-fledged eradication of this species. We have revised our expectations on the monitor lizard eradication; we currently expect to eradicate the adult population and continue monitoring for remaining juveniles.
- Existing programs to monitor coral reef and green sea turtle nesting on Loosiep will continue for the foreseeable future.
  - This continues to be our assumption.
- No unusual or severe weather events inhibit ability to complete project or grow crops.
  - This continues to be our assumption.
- Trained persons remain engaged and motivated to pursue further work in conservation projects when opportunities are available.
  - We hope that this project will motivate trained persons to continue in this line of work to benefit their communities. We take the community's interest in eradicating rodents on other islands to be a sign that this training will continue to be useful to the people of Ulithi.
- The Council of Chiefs agrees with the proposed methods for the project. Based on the scoping trip completed in March 2017, and a letter of support received for the project, preliminary support is in place from local community leaders.
  - We have an updated letter of support which restates their commitment.
- FSM Government has the capacity to task someone to participate in part of the project's implementation.
  - Current interactions with the government suggest that they will have the capacity to provide staff to participate.

### **3.5 Impact: achievement of positive impact on biodiversity and poverty reduction**

**Impact: Recovery of native and endemic biodiversity and improved food security increases the community's resilience to climate change and inspires further action to restore and protect FSM's unique biodiversity.**

Due to the COVID-19 pandemic, our project has not yet been able to achieve significant positive progress to increase the wellbeing of the community or have a positive impact on biodiversity, as of late 2022. However, the removal of feral pigs in 2020 will have contributed towards some ecosystem recovery. We expect many natural resources, such as sea turtle hatchlings, to already be on the road to recovery with the removal of this nest predator.

Our wellbeing surveys uncovered critical insights into the importance of gardening for this community that were then presented to the community for their input and validation. The community relies on imported rice as an 'easy' and 'fast' food in place of locally grown taro and breadfruit. The community recognizes that while rice is less healthy than other locally produced starches, gardening also requires a lot of time that women (especially) who have formal jobs, cannot always dedicate to tending their agriculture (see #6 below). This discovery has led to a lot of conversations about what the future of gardening looks like for the community and how it should be re-established on Loosiep to benefit the communities of Ulithi to enhance their wellbeing and food security.

## **4. Project support to the Conventions, Treaties or Agreements**

COVID-19 has forced us to delay all major project activities. We are in the implementation stage of this project and our aim to achieve biodiversity convention goals

remains in progress as described below. We have been in touch with the FSM focal point for the GEF project and are hoping to collaborate as appropriate. They are interested in the implementation of the rat eradication. We had planned to invite them to participate in 2021 and subsequently, in 2022. However, due to continued delays, we now plan to invite them when we resume work in 2023. Once work on this project restarts, we will actively seek interactions with local and UK convention focal points. We have not had any interaction with host country convention focal points, via host country or UK partners in the last 12 months.

Of the targets adopted in late 2022 by the Kunming-Montreal Global Biodiversity Framework, we see four main targets that will benefit from our work in Ulithi:

**TARGET 6:** *Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 percent, by 2030, eradicating or controlling invasive alien species especially in priority sites, such as islands.*

This project will eliminate invasive species on islands and help manage alien species invasion pathways.

**TARGET 11:** *Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as regulation of air, water, and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and ecosystem-based approaches for the benefit of all people and nature.*

A strong agroforestry culture and intact ecosystems will enhance the community's resilience to climate change and natural hazards.

**TARGET 20:** *Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South- South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the framework.*

Island residents will enhance their capacity to prevent the spread of invasive species and manage some of the most damaging species present across their islands.

**TARGET 22:** *Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.*

We are working hard to ensure that women, their needs, and the critical role they play in gardening and food production is brought to the forefront in conversations around planning to reinstate gardening on Loosiep.

FSM prepared a National Biodiversity Strategy and Action Plan (NBSAP) in March 2002 to fulfil its obligations to the Convention. A Yap State Biodiversity Strategy and Action Plan (YBSAP) was also developed. Both plans identify invasive species as a major threat and constraint to biodiversity conservation in the FSM. The YBSAP also identifies invasive species as a threat to Yap's natural communities, economy and way of life and specifically identifies rat control and public awareness as priorities. Within the NBSAP, a Strategy and Action Plan was derived. This project advances the following overarching goals identified within this Action Plan:

Theme 4. Agrobiodiversity: The conservation and sustainable use of Agrobiodiversity contributes to the nation's development and the future food security of the FSM.

Theme 6. Biosecurity: Border control, quarantine and eradication programs are effectively protecting the FSM's native biodiversity from impacts of alien invasive species.

Theme 9. Traditional resource owners and communities are fully involved in the protection, conservation, preservation, and sustainable use of the nation's biodiversity.

This project will enable FSM to advance these goals by removing three invasive species from an area within FSM. It will raise local awareness of the threat of invasive species and the importance of biosecurity, and it will develop capacity that can be used elsewhere within FSM to advance implementation of its NBSAP.

## 5. Project support to poverty reduction

**Note:** We have altered the concept of 'poverty alleviation' to 'promoting wellbeing.' It has become clear to us as we progress in this work that the people of the outer islands and Ulithi, in particular, do not consider themselves 'poor,' and that concept has connotations that are not conducive to helping people with (Western) perceived poverty and gender equity issues. However, they do articulate what it means to them to feel secure, including food, environmental, and social security. Thus, we have modified the concept of 'poverty alleviation' to 'promoting wellbeing' as articulated by the community.

We expect the communities of Ulithi to benefit from increased food and environmental security and improved wellbeing. The re-establishment of healthy gardening islands with abundant natural resources will allow the community to resume critical gardening (agriculture) and natural resource harvesting activities. One People One Reef led the completion and analysis of pre- and post-intervention surveys and validated the results with the community prior to disseminating survey results, per their agreement with the community.

OPOR's analysis revealed interesting community perspectives on a variety of topics including key foods eaten, the importance of gardening versus fishing, the amount of imported versus locally grown or acquired food, people's views on conservation and management of their resources, and gender roles, among other topics.

Surveys directly revealed:

- There is a high dependence on locally sourced food on Ulithi, both gardening (referred to as 'food') and sea resources (referred to as 'fish').
- Some islands also rely more highly on imported foods such as rice and canned meats and fish. There is a general recognition that imported foods are less healthy.
- People are aware that marine resources are declining, and there is a very high commitment to management and involvement directly in management.
- People are in agreement that traditional systems of management are the most effective, and they are very positive about the support they receive with collaboration with the science teams from OPOR.
- In general, people feel that unity and working together are key to their survival, and a high percentage of respondents cited unity and cooperation among their highest markers of happiness and content. There was also a level of frustration with those who do not operate with unity and community at their core.
- There is a general concern that youth are becoming more disconnected from tradition, and a recognition that engaging them is critical.
- The people of Ulithi do not consider themselves poor, rather they consider themselves rich in tradition and cultural cohesion and committed to traditional management and cultural integrity. They invite and are thankful for support to help understand resource declines and potential solutions and are committed to maintaining leadership over their resource management and ensuring that solutions are locally driven.



Upon validating these results with the community, we identified the following additional particularities:

- The survey results indicated that while both men and women garden, the women are responsible for tending, and for knowing when to plant and harvest. The men can help when needed—primarily for the heavier work such as clearing, harvesting heavy crops etc.—but this work is done under the direction of the women. Similarly, while both men and women fish, the women fish from shore (reef), while men from boats.
- Questions around ‘income’ were largely misinterpreted. The people of Ulithi do very little (in some cases no) ‘selling for income.’ But they do a fair amount of ‘selling’ internally (within the Atoll) to raise funds for their schools, feed guest students who come from other islands, and sometimes to send a community member off-island for medical care. The concept of individual ‘income’ is weak; the vast majority of this activity was done in a ‘community’ context. Because the women head these fundraisers, tend to crops, fish, and are responsible for the distribution of resources, this was critical information to gather from their perspective.

While some components of the survey (e.g., fisheries-related questions) are outside of the scope of this project and its funding, it is being supported by project co-funding and important as part of our broader engagement with the community and our commitment to supporting them in the many facets of community wellbeing. Thanks to other funding, we are also moving forward with a project to integrate knowledge systems to better understand drivers of decline of reef systems and resources, which is directly tied to ‘poverty’ (wellbeing).

## **6. Gender equality and social inclusion**

Due to project delays, there were relatively few activities where we could promote gender equality. That said, OPOR’s visit in March 2023 did provide an opportunity to work in-person with both genders.

As part of their visits, OPOR was very intentional when speaking with community members to speak with mixed groups, men only, and women only. This ensures that we receive the most accurate information. We discovered, for instance, that men and women will say different things in mixed company as compared to uni-gender groups. In this way, we are working to address gender equality. We are also careful to ask the women and girls about activities that are male-dominated, and how they feel about the role differentiation, and if they want to be involved in those activities, and vice versa. Interestingly, we see very few men interested in the ‘women’s’ jobs, but some young girls express interest in fishing (especially spearfishing - a predominantly young men’s activity).

In terms of gardening, we did notice some interesting equity/workload issues. The vast majority of the women stated that they rely on rice to feed their families because they are busy and don’t have time to garden more traditional foods. They serve as teachers, support staff at schools, those who cook for and feed guest students from other islands who attend high school on Ulithi, etc. Gardening is a full-time job between weeding, dealing with rats and insects, planting, and harvesting. The more of them who have jobs or other responsibilities, the fewer women are available to garden, which leaves the gardens untended. Once the gardens become ‘fallow’ or untended, bringing them back is a big task. In addition, they say that fewer men are willing to help do the heavy work of clearing and maintaining the gardens as the young men are in school during the day, go out fishing, or do not have as much interest.

The dependence on imported food (rice) and the loss of knowledge for how to tend and prepare local foods has the women worried. In response, some elementary schools have incorporated ‘culture days’ into the curriculum where they require the children to learn about gardening and food preparation. The most important gender equality impact from this work will be open dialog

about these issues. The project itself (and the wellbeing survey) has triggered broader conversations about community wellbeing and sustainability.

Please quantify the proportion of women on the Project Board <sup>1</sup> .	33%
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women <sup>2</sup> .	50%

## 7. Monitoring and evaluation

The logical framework continues to be our primary tool for evaluating real project progress and serves as a regular topic of conversation with our partners. Due to the isolation of the Ulithi community during the global pandemic, it has been challenging to include them in M&E conversations, but the log frame is serving as a valuable tool for restarting conversations about how to complete the project.

For IC, OPOR, and UFCAP, the log frame, especially the activity list, serves as a checklist of deliverables. It is important to note that the benefits of eradication projects are longer-term than the scope of this grant and project. Assuming the project remains sustainable in the long-term, the impact will continue to amplify over the years. The methods and the baseline data developed for this project allow for the evaluation of long-term impacts at any point in the future. The measurable indicators established at the onset of the project are still relevant.

## 8. Lessons learnt

Close coordination between partners and with the community of Ulithi has been critical for ensuring that the partnership is positioned to undertake work that has been delayed by a full three years.

Through the process of validating the results of the wellbeing survey, we learned a critical lesson about formulating questions for a community that does not conform to a more Western, capitalism-focused societal structure. We would recommend that any survey with a preconceived idea, such as the concept of 'poverty,' and the questions themselves be carefully vetted in a cultural context. We thought we had done a good job of having the community lead with many of the questions, but we realized that some questions were nevertheless misinterpreted. This can have an important and consequential impact on the interpretation of data, which can translate into a misunderstanding at best or an inappropriate allocation of resources at worst. A good example of this is the concept and use of 'income' as discussed previously. We are building this learning into future interviews and focus groups to be sure that we correctly interpret responses; we will also be removing some questions entirely.

## 9. Actions taken in response to previous reviews (if applicable)

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<sup>1</sup> A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

<sup>2</sup> Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

No actionable recommendations were made last year, though the reviewer cautioned that project outputs could be jeopardized by the continued inability to complete on-the-ground work. Our current planning and timelines for 2023-2024 leave us confident that we will be able to undertake the eradication work this year and finally make progress towards our goals.

## **10. Risk Management**

No new risks have emerged since last year. We continue to be cognizant of the impacts that our project will have on community resources, such as limited boats and a limited pool of skilled boat drivers. We are working closely with community leaders to ensure that project activities can be accommodated by the community. There is still a certain amount of risk in the monitor lizard eradication. This species has never been eradicated anywhere before and juveniles of this species are arboreal and incredibly cryptic. This means that eradicating adults is feasible, but removal of juveniles will take longer. Because of the greatly reduced timeframe for eradicating this species under the Darwin Initiative (3 years of delays), it is unlikely that we will completely eradicate this species by early 2024. We are confident that the adult population will be at or near zero (undetected through standard monitoring) by the end of this grant and have funding to continue monitoring the population for an additional six months beyond the Darwin Initiative award.

## **11. Other comments on progress not covered elsewhere**

Due to the limited activities that could be completed in partnership this past year, there is no other progress to report.

## **12. Sustainability and legacy**

There continues to be a strong interest from the communities of Ulithi to see this project be successful and expand these actions to other islands within Ulithi Atoll. The community outreach component of this project led to an increase in interest to eradicate rats both from the inhabited islands and other uninhabited garden islands. Specifically, there is a desire to increase productivity of traditional agricultural practices. Due to the COVID-19 crisis, the supply chain to Ulithi (and Yap) has been significantly impacted, further increasing the community's desire to improve agriculture and natural resource management and reduce their reliance on the 'outside world.' Once this project is successfully completed, the partnership hopes to develop a programmatic rat eradication strategy for Ulithi Atoll which will largely be a community-led effort, utilizing and fostering expansion of the capacity developed from this project.

Biosecurity is a critical component for the sustainability of any eradication project; thus, we have been working closely with the community to understand the basic tenets of biosecurity and to master biosecurity practices. Invasive species eradications are a one-time investment in definitively removing damaging animals, but effective biosecurity and widespread understanding of the impacts of invasive species must be in place to protect that investment. The community is highly motivated to keep Loosiep free of pigs, rats, and monitors because of its potential for agroforestry.

## **13. Darwin Initiative identity**

The Darwin Initiative continues to be a critical partner on this project. Island Conservation has created a website that highlights Loosiep Island and Ulithi Atoll. The Darwin Logo is proudly displayed as the first supporter of the project. The site can be found here: [Ulithi Atoll, Loosiep](#)

[Island](#). At the bottom of the page are several blog posts related to the project. Unfortunately, there has not been much to report on other than the delay due to COVID-19.

#### 14. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	Yes
Have any concerns been investigated in the past 12 months	No
Does your project have a Safeguarding focal point?	No
Has the focal point attended any formal training in the last 12 months?	No
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 100% [6] Planned: 100% [6]
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses.	No
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify.	No

#### 15. Project expenditure

**Table 1: Project expenditure during the reporting period (1 April 2022 – 31 March 2023)**

Project spend (indicative) since last Annual Report	2022/23 Grant (£)	2022/23 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				See staff costs below.
Consultancy costs				
Overhead Costs				See overhead costs below.
Travel and subsistence				See travel and subsistence below.
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)				See Others below.
<b>TOTAL</b>	51,291	13,241		

Our project ramp up period straddles the end of one fiscal year and the beginning of the other. Thus, some expenses that we expected to fall in our fifth year (2022-23) will be incurred in our sixth year (2023-24) instead. In addition, after discussions with partners, we decided to move project activities into late April 2023, rather than starting in February-March 2023. Because these variances do not affect how we will make claims against our award (we still hold significant funds issued to us by Darwin from before the pandemic occurred) and this being our final year of the award, we have not alerted Darwin to the variance.

Staff costs. Planning activities and project re-initiation was originally expected to take place in March 2023, but will now occur in April 2023. Consequently, we did not invest the level of staff time expected in 2022-2023.

Overhead costs. Overhead is calculated as a function of total expenses for the period. A significant reduction in direct expenses led to significant reduction in overhead.

Travel and subsistence. Travel expenses expected during the 2022-23 year did not materialize until after the end of the fiscal year.

Others (consumables). The rodent bait order is a substantial cost which the vendor failed to bill us for until after March 31, 2023, even though it was incurred in February 2023.

**Table 2: Project mobilising of matched funding during the reporting period (1 April 2022 – 31 March 2023)**

	Matched funding secured to date	Total matched funding expected by end of project
Matched funding leveraged by the partners to deliver the project.		
Total additional finance mobilised by new activities building on evidence, best practices and project (£)		

**16. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes**

We do not yet have any outstanding achievements to share.

## Annex 1: Report of progress and achievements against logframe for Financial Year 2022-2023

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
<p><b>Impact</b></p> <p>Recovery of native and endemic biodiversity and improved food security increases the community's resilience to climate change and inspires further action to restore and protect FSM's unique biodiversity.</p>		<p>No significant progress in the previous year due to ongoing delays. Main achievements include: purchasing the rodent bait for a 2023 implementation and holding our first in-person meetings with the communities of Ulithi since 2019.</p>	
<p><b>Outcome</b></p> <p>Removal of harmful invasive species will result in native and endemic species recovery and improved conditions for horticulture, resulting in increased food security for the community.</p>	<p>0.1 No invasive vertebrates remain on Loosiep by the end of the project.</p> <p>0.2 Net increase in the number and diversity of seabirds present on Loosiep by the end of the project. Pre-eradication baseline measures collected to allow measurement of expected long-term population change (e.g., 5-10 years). See Output 2.1 for specific measures by taxa.</p> <p>0.3 Net increase in the amount of food crops grown and harvested on Loosiep by project end date. No food is currently grown on Loosiep. Gardening on the island resumes with 75% of the community having access to food grown on Loosiep by the end of the project. See Output 3 for additional specific measures.</p> <p>04. Local and national capacity to plan, implement and monitor invasive species eradication and biosecurity programmes is raised for 10 people by the project end date as measured by a pre-and post-skills assessment. See Output 4 for additional specific measures.</p>	<p>With no further reports of pigs on the island, we are confident that the eradication was a success. No further activities toward invasive vertebrate removals were completed in 2022, but logistical planning for a 2023 eradication was initiated and is underway.</p>	<p>The implementation of the rat and monitor lizard eradication projects is expected to go ahead in 2023. The gardens are planned to start after the rat removal in 2023. We will undertake further monitoring of seabirds, crabs, and turtle nest depredation. We will definitively confirm the removal of pigs. Confirmation that the rodent eradication was successful will occur in early 2024.</p>

<p><b>Output 1.</b> Invasive vertebrates (rodents and monitor lizards) removed from Loosiep, with biosecurity in place to prevent reinvasion.</p>	<p>1.1 No rats remain on Loosiep island by end of year 5.</p> <p>1.2 No monitor lizards remain on Loosiep island by project end date.</p> <p>1.3 Biosecurity protocols are in place prior to project implementation and followed by local island users.</p>	<p>The rat eradication will be implemented in 2023. If the project is successful, the turtle islands will be declared rat free in March 2024.</p> <p>1.1 The monitor lizard eradication will resume in 2023. Evaluation of removal methods helped determined that the complete removal of monitor lizards from Loosiep will take 3-5 years. However, the population will likely be reduced to near undetectable levels after only the first year (by 2024), resulting in significant benefit to the ecosystem and allowing the community to resume gardening.</p> <p>1.2 Biosecurity protocols are in place for all travel to the turtle islands. Community awareness of risks of incursions and the impacts of invasive species has increased significantly. Biosecurity recommendations have been given to UFCAP and the Council of 10.</p>	
<p>Activity 1.1 Complete operational, monitoring and biosecurity planning for rat and monitor lizard eradication.</p>	<p>Operational planning was completed in 2019 and has since been reviewed for improvements.</p>	<p>We will implement the rodent eradication plan in 2023. We will implement the monitor lizard eradication and adaptively manage that implementation based on field observations and experiences.</p>	
<p>Activity 1.2. Work with project partners to complete planning for community education and outreach program.</p>	<p>Completed.</p>	<p>Plans have been completed.</p>	
<p>Activity 1.3 Conduct community outreach on all communities of Ulithi to educate people about components of the project including: methods, impacts and benefits from the project, opportunities for involvement, and updates on project status. Outreach is designed for traditional leaders, schools and individual households. Note: Community engagement will be continued through the duration of the project life cycle.</p>	<p>In-person outreach was re-initiated in 2023; this was our first visit to the islands since the pandemic started.</p>	<p>Community outreach will continue through the end of the project. We expect to be in a position to celebrate our shared successes in late 2023 and early 2024.</p>	
<p>Activity 1.4 Conduct surveys to measure community interest and understanding of project.</p>	<p>Surveys were conducted in 2019 and 2020.</p>	<p>Follow up surveys and working groups are planned at the end of year six to measure against baseline and evaluate interest in next steps.</p>	
<p>Activity 1.5 Complete field trials and methods development for rat and monitor lizard eradication project.</p>	<p>Completed prior to 2020.</p>	<p>No further trials are required for the rat eradication. The monitor lizard eradication is considered a trial eradication, therefore additional methods and strategies will be evaluated.</p>	
<p>Activity 1.6 Implement biosecurity program.</p>	<p>A biosecurity plan was developed for travel to the turtle islands, biosecurity</p>	<p>We will finalize and disseminate the inter-island biosecurity plan, taking it</p>	

		workshops and trainings were completed with the field team and UFCAP in 2019. The plan was validated in early 2023 and was improved based on community feedback. Biosecurity workshops and trainings were started early 2023.	beyond Loosiep and Falalop to other islands within Ulithi. This will continue into 2023.
Activity 1.7 Implement eradication operation for rats.		Project was delayed again in 2022 due to ongoing travel restrictions and at the request of the community.	Rat eradication scheduled for 2023.
Activity 1.8 Implement eradication operation for monitor lizards.		No progress or achievements since 2019 due to delays.	Full scale implementation of monitor lizard eradication is now planned to begin in 2023.
Activity 1.9 Implement eradication operation for pigs and confirm success.		Pigs have not been detected on Loosiep island by local partners.	The team will systematically monitor the island to increase confidence that pigs no longer remain on Loosiep.
Activity 1.9 Confirm success of rat eradication.		Not applicable as other milestones have yet to be met.	None, pending completion of activities.
Activity 1.10 Complete monitoring to confirm success of monitor lizard eradication.		Not applicable as other milestones have yet to be met.	None, pending completion of activities.
Activity 1.11 Complete operational reporting.		Not applicable as other milestones have yet to be met.	None, pending completion of activities.
<b>Output 2.</b> Native biodiversity recovery on Loosiep Island.	<p>2.1 By 2023, sea turtle nest predation by invasive vertebrates is eliminated (reduced from: 80-100% of nests predated currently, to zero predated by project end).</p> <p>2.2 Monitor lizard and rat predation on seabirds is eliminated, allowing recruitment of seabirds within the next 5-10 years. Baseline measures of seabird diversity and abundance (e.g., red footed booby, black and brown noddy) are collected pre-eradication, methods can then be repeated at 5-10 years post eradication to measure recovery.</p> <p>2.3 A baseline pre-eradication habitat assessment for the blind snake is</p>	<p>2.1 With the completion of the pig eradication in 2020, turtle nest predation will decrease from 2020 onwards. With the removal of rats and the start of monitor lizard eradication in 2023, nest predation will decrease further.</p> <p>2.2 Baseline measures of abundance were collected in 2020. These formal surveys provide further evidence that no seabirds nest on Loosiep.</p> <p>2.3 The pre-eradication assessment of blind snake provided evidence that, out of all the turtle islands, Loosiep provides the largest and most robust habitat for the blind snake. However, the presence of invasive species is keeping the population down to near undetectable levels.</p> <p>2.4 Local staff were trained in completing monitoring protocols, working with an Island Conservation biologist and a local biologist. In addition to the initial baseline, the local team successfully conducted another survey on two islands, and there are plans in place for further surveys in 2025.</p>	



	<p>completed and can be repeated 5 years post-eradication.</p> <p>2.4 Local staff trained in monitoring protocols in year 1; Baseline surveys completed pre-eradication; post eradication survey completed 1 year after implementation.</p>		
Activity 2.1 Develop monitoring plans for marine turtles, seabirds, reptiles and terrestrial fauna.		Completed in 2019.	Continue to adapt and update plans as needed.
Activity 2.2 Complete baseline monitoring working with project partners and local field team; collate existing data.		Baseline monitoring data was collected in 2019 & 2020. No progress or achievements since that time due to delays.	Some baseline monitoring will be repeated in 2023, complementing existing data.
Activity 2.3 Undertake operational monitoring of eradication and detection methods.		Eradication monitoring of pigs is ongoing. Eradication monitoring of rats and monitor lizards is delayed until 2023.	Definitively confirm pig eradication on Loosiep. Undertake eradication monitoring for rats and monitor lizards in 2023, once eradication has been started.
Activity 2.4 Complete post eradication monitoring for marine turtles, seabirds, reptiles and terrestrial fauna.		Not applicable as other milestones have yet to be met.	None, pending completion of activities. Expected in 2024.
Activity 2.5 Complete eradication and biodiversity monitoring reports.		Not applicable as other milestones have yet to be met.	None, pending completion of activities. Expected in early 2024.
<p><b>Output 3.</b> Increased availability of natural resources and better crop production results in improved food security and quality for the Ulithi community, increasing resilience to climate change.</p>	<p>3.1 Horticulture is resumed on Loosiep, with 5 gardens planted by end of 2023.</p> <p>3.2 The subsistence economy is strengthened by increased trade and sharing of resources between islands by end of 2024.</p> <p>3.3 75% of the community (750 individuals) have access to improved food variety and quantity, with an increase in the carbohydrate and nutrient-rich plant-based foods necessary for a healthy diet by end of 2024.</p> <p>3.4. Women are empowered to resume food production on Loosiep, with restoration of the island's food</p>	<p>3.1 A plan to resume gardening was developed for 2020. However, due to the delay in removing rats and monitors, the garden plots will not be established until 2023.</p> <p>3.2 The increased activity on Loosiep has increased interest in utilizing it as a food island. Meetings with the community and chiefs have led to requests for rat eradication projects from several other islands to benefit gardens.</p> <p>3.3 There is still no gardening on Loosiep, however the community recently harvested mountain apples from the island to supplement their food supplies. By the end of 2023, gardens will be in full operation and providing food to the community.</p> <p>3.4 Meetings with women have demonstrated that they are very excited by the opportunity to lead agricultural production on Loosiep and other islands in the atoll. Ultimately, they would like rats removed from their inhabited islands, greatly increasing productivity.</p>	

	resources under the direction of women during 2023-2024.	
Activity 3.1 Develop monitoring plan that outlines the protocols, instruments, and methods for measuring changes in natural resources available, agricultural productivity, and poverty alleviation as a result of removing invasive vertebrates from Loosiep.		Completed in 2019.  Improve pre-eradication baseline protocols and implement in 2023.
Activity 3.2 Undertake baseline monitoring and collate all existing data on current food consumption, natural resource and agricultural productivity. This will include a Household Consumption survey completed by a subset of households in the beginning of grant term (August 2018).		Completed. Food garden calendar was completed in 2019. The analysis of the wellbeing survey was completed and the results were validated with the community and contextualized upon with their feedback.  Finalize the report with information gained during validation process.  On Loosiep, the island will be surveyed for existing fruit trees that could potentially be incorporated into gardening plans.
Activity 3.3 Develop plan to facilitate creation of new gardens on Loosiep Island.		Completed in 2020.  Engage with community to identify resources needed, leaders, priority foods and then begin planting.
Activity 3.4 New gardens are established on Loosiep Island.		To be established in 2023, after knockdown of monitor lizards and rats.  Work with partners and community to ensure logistics and resources are available.
Activity 3.5 In 2024, after the confirmation of a successful rodent eradication, knockdown of monitor lizards, and one year after food gardens are established, complete outcome monitoring of consumption of land-based food sources and establish enabling conditions for follow up monitoring and reporting.		No formal monitoring of land-based food sources was completed during this past year.  Plans are in place to implement the food garden calendar survey again, after gardens are established at the end of 2023.
<b>Output 4.</b> Community capacity developed: The local community, Yap State, and National (Federated States of Micronesia) capability to plan and implement invasive species eradication and biosecurity projects is advanced.	<p>4.1 At least 10 people from Ulithi are hired and trained in invasive species detection and removal methods in year one and apply their skills to the eradication on Loosiep during the eradication.</p> <p>4.2 The Council of Chiefs and landowners on Ulithi are involved in the planning, implementation and monitoring stages of the eradication throughout the duration of the project.</p> <p>4.3 At least 2 people from the Yap State government and 1 person from the FSM government participate in the eradication.</p>	<p>4.1 Local community members were previously trained. No further training occurred.</p> <p>4.2 The council of Chiefs was brought into the planning process at the onset of the project and continues to have the final say in all major project activities. A formal letter of support of the eradication and methods was provided by the Council of Ten; this letter was re-issued in 2022. The Council of Ten has maintained the final authority over all project activities in the past year, including the decisions to delay the eradication project for a third year.</p> <p>4.3 Yap state is aware of the project delay and maintains interest in being involved when the project resumes in 2023.</p> <p>4.4 Women participated in island visits to harvest food and lead youth meetings. OPOR continues to engage specifically with women and youth. Including women of Ulithi is a priority as project work resumes.</p> <p>4.5 Community workshops took place in early 2023 and others are planned for mid-2023 as project work resumes on Ulithi.</p>

	<p>4.4. In year two, women participate in the operational teams. Girls participate in the youth groups, with a 50% male: female participation ratio.</p> <p>4.5 Community workshop is completed to highlight biosecurity risks and provide training on effective biosecurity that includes quarantine, surveillance and response.</p>		
Activity 4.1 Conduct workshop to engage key stakeholders in project planning, community outreach and monitoring.		Completed.	Continue to hold workshops, community meetings and focus groups to engage the community.
Activity 4.2 Build local project teams, incorporating the local women, girls, and youth.		Completed.	Maintain capacity with current project team. Focus on expanding opportunities to women (if they want) and youth.
Activity 4.3 Run training programme(s) for local project teams to conduct: biological surveys, community outreach, eradication operations and monitoring surveys.		Trainings were conducted in 2019; no trainings could be completed since that time due to project delays.	We expect some turnover in the local team and will repeat trainings as needed.
Activity 4.4 Support field teams (combination of remote and on island) for duration of operation.		No field activities were planned or conducted in 2022.	Remotely support field teams in their preparation for the eradication in 2023; provide in-person training and guidance at eradication start.
Activity 4.5 Engage key stakeholders in baseline and outcome monitoring.		Ongoing, through our UFCAP partner.	Resume engagement as project planning evolves in 2023; plan for in-person meetings.
Activity 4.6 Maintain communication with the local community and help source funds for future work.		We continued to meet virtually as least once a month to assess project delays and make plans for restarting in 2023.	Maintain lines of communication open and actively seek funds for this project and future work in Ulithi as project successes become evident.
<b>Output 5.</b> Period of employment is provided for local community representatives.	5.1 At least 10 local temporary employees are engaged as part of project implementation.	The community has been employed at multiple levels. Plans are in place for continued employment on the eradication project.	
5.1 Recruit and employ 10 local temporary employees for project implementation.		Over 32 local staff persons were engaged in field activities in 2019 and 2020. In 2022, there were no field activities planned or conducted.	Recruit new and previous participants to the eradication team.

## Annex 2: Project’s full current logframe as presented in the application form (unless changes have been agreed).

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Impact</b> (Max 30 words): Recovery of native and endemic biodiversity and improved food security increases the community’s resilience to climate change and inspires further action to restore and protect FSM’s unique biodiversity.</p>			
<p><b>Outcome:</b> (Max 30 words) Removal of harmful invasive species will result in native and endemic species recovery and improved conditions for horticulture, resulting in increased food security for the community.</p>	<p>0.1 No invasive vertebrates remain on Loosiep by the end of the project.</p> <p>0.2 Net increase in the number and diversity of seabirds present on Loosiep by the end of the project. Pre-eradication baseline measures collected to allow measurement of expected long-term population change (e.g. 5-10 years). See Output 2.1 for specific measures by taxa.</p> <p>0.3 Net increase in the amount of food crops grown and harvested on Loosiep by project end date. No food is currently grown on Loosiep. Gardening on the island resumes with 75% of the community having access to food grown on Loosiep by the end of the project. See Output 3 for additional specific measures.</p> <p>04. Local and national capacity to plan, implement and monitor invasive species eradication and biosecurity programmes is raised for 10 people by the project end date as measured by a pre-and post-skills assessment. See Output 4 for additional specific measures.</p>	<p>0.1 Project confirmation and biosecurity monitoring reports.</p> <p>0.2 Biological monitoring data and report.</p> <p>0.3 Agricultural harvest reports.</p> <p>0.4 Report summarising results of skills assessment.</p>	<p>No extreme or unusual weather conditions inhibit progress.</p> <p>Enabling conditions to complete the project are in place for the duration of the project (e.g. access to Ulithi atoll, operable boats, local field team available, permission and mandate from local community remains in place).</p> <p>Normal travel to Yap State and Ulithi will resume in 2023.</p> <p>Project staff and community are able to manage and mitigate the risks of COVID-19.</p> <p>Local support for the project remains strong, despite a multi-year delay in project implementation.</p>

<p><b>Outputs:</b></p> <p><b>1.</b> Invasive vertebrates (rodents and monitor lizards) removed from Loosiep, with biosecurity in place to prevent reinvasion.</p>	<p>1.1 No rats remain on Loosiep island by end of year 2.</p> <p>1.2 No monitor lizards remain on Loosiep island by project end date.</p> <p>1.3 Biosecurity protocols are in place prior to project implementation and followed by local island users.</p>	<p>1.1 and 1.2 Detection methods confirm absence of rats and monitor lizards and this information is summarized in a confirmation monitoring report.</p> <p>1.3 Biosecurity plan completed. Biosecurity officer appointed by the community.</p>	<p>Rats on Loosiep are susceptible to the same bait and baiting methods that are used on similar tropical islands in the Pacific Ocean.</p> <p>The tools and methods available for the monitor lizard eradication will be effective in detecting and removing the last individual.</p>
<p><b>2.</b> Native biodiversity recovery on Loosiep Island.</p>	<p>2.1 By end of 2023, sea turtle nest predation by invasive vertebrates is eliminated (reduced from: 80-100% of nests predated currently to zero predated by project end).</p> <p>2.2 Monitor lizard and rat predation on seabirds is eliminated, allowing recruitment of seabirds within the next 5-10 years. Baseline measures of seabird diversity and abundance (e.g. red footed booby, black and brown noddy) are collected pre-eradication, methods can then be repeated at 5-10 years post eradication to measure recovery.</p> <p>2.3 A baseline pre-eradication habitat assessment for the blind snake is completed and can be repeated 5 years post-eradication.</p> <p>2.4 Local staff trained in monitoring protocols in year 1; Baseline surveys completed pre-eradication, post eradication survey completed 1 year after implementation.</p>	<p>2.1-2.4 Biological monitoring plan completed</p> <p>2.1-2.4 Reports produced from monitoring surveys and data analysis.</p>	<p>Existing programs to monitor coral reef and green sea turtle nesting on Loosiep will continue for the foreseeable future.</p>
<p><b>3.</b> Increased availability of natural resources and better crop production results in improved food</p>	<p>3.1 Horticulture is resumed on Loosiep, with 5 gardens planted by end of 2023.</p>	<p>3.1 Survey documenting # new gardens planted. Crop yield</p>	<p>No unusual or severe weather events inhibit ability to complete project or grow crops.</p>

<p>security and quality for the Ulithi community, increasing resilience to climate change.</p>	<p>3.2 The subsistence economy is strengthened by increased trade and sharing of resources between islands by end of 2024<sup>3</sup>.</p> <p>3.3. 75% of the community (750 individuals) have access to improved food variety and quantity, with an increase in the carbohydrate and nutrient-rich plant-based foods necessary for a healthy diet by end of 2024.</p> <p>3.4. Women are empowered to resume food production on Loosiep, with restoration of the island's food resources under the direction of women during 2023 -2024.</p>	<p>measured and logged as crops are harvested.</p> <p>3.2 Focus groups and written surveys completed in year 1 (baseline) and at the completion of the project (after harvest) to quantify the amount of Loosiep-sourced food that is traded and shared among the inhabited islands.</p> <p>3.3. Household food consumption surveys to collect data on food consumed. Surveys will be conducted in August 2018 to collect pre-eradication data and each year after to measure change. Additional funding will be required for monitoring at the completion of the project. Significant long-term changes are expected after crops become established.</p> <p>3.4 Record of community meetings and focus group surveys with women.</p>	
<p><b>4. Community capacity developed:</b> The local community, Yap State, and National (Federated States of Micronesia) capability to plan and implement invasive species eradication and biosecurity projects is advanced.</p>	<p>4.1 At least 10 people from Ulithi are hired and trained in invasive species detection and removal methods in year one and apply their skills to the eradication on Loosiep during the eradication..</p> <p>4.2 The Council of Chiefs and landowners on Ulithi are involved in the planning, implementation and monitoring stages of the eradication</p>	<p>4.1 Pre and post training assessments conducted by IC field manager(s) to measure participants' change in knowledge as a result of training workshops and participation in the project. The assessment will be standardized, and results will be documented. To measure employment: Records will be</p>	<p>Trained persons remain engaged and motivated to pursue further work in conservation projects when opportunities are available.</p> <p>The Council of Chiefs agrees with the proposed methods for the project. Based on the scoping trip completed in March 2017, and a</p>

<sup>3</sup> The traditional role for nearest inhabited islands of Falalop (80 households) and Asor (12 households) is to provide and trade crops in exchange for seafood from the neighbouring islands Mogmog and Federai. Increasing supply of land-based food will strengthen socio-economic status for the Falalop and Asor communities by increasing ability to trade. This will in turn, increase variety of food available on all islands.

	<p>throughout the duration of the project.</p> <p>4.3 At least 2 people from the Yap State government and 1 person from the FSM government participate in the eradication.</p> <p>4.4. During the rodent eradication, women participate in the operational teams. Girls participate in the youth groups, with a 50% male:female participation ratio.</p> <p>4.5 Community workshop is completed to highlight biosecurity risks and provide training on effective biosecurity that includes quarantine, surveillance and response.</p>	<p>maintained detailing name, level of employment, and compensation.</p> <p>4.2 The Chiefs approve the eradication plan and sign a letter of endorsement prior to the commencement of the eradication.</p> <p>4.3 Records kept of individuals participating in community and stakeholder meetings; meeting minutes collected.</p> <p>4.4. Records of individuals participating in project, disaggregated by age and gender.</p> <p>4.5. Workshop attendance certificates.</p>	<p>letter of support received for the project, preliminary support is in place from local community leaders.</p> <p>FSM Government has the capacity to task someone to participate in part of the project's implementation.</p>
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**Activities** (each activity is numbered according to the Output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

**Output 1: Invasive vertebrates (rodents and monitor lizards) removed from Loosiep, with biosecurity in place to prevent reinvasion. Activities:**

**Activities**

- 1.1 Complete operational, monitoring and biosecurity planning for rat and monitor lizard eradication.
- 1.2 Work with project partners to complete planning for community education and outreach program.
- 1.3 Conduct community outreach on all communities of Ulithi to educate people about components of the project including: methods, impacts and benefits from the project, opportunities for involvement, and updates on project status. Outreach is designed for traditional leaders, schools and individual households. Note: Community engagement will be continued through the duration of the project life cycle.
- 1.4 Conduct surveys to measure community interest and understanding of project.
- 1.5 Complete field trials and methods development for rat and monitor lizard eradication project.
- 1.6 Implement biosecurity program.
- 1.7 Implement eradication operation for rats.
- 1.8 Implement eradication operation for monitor lizards.
- 1.9 Confirm success of rat eradication.
- 1.10 Complete monitoring to confirm success of monitor lizard eradication.
- 1.11 Complete operational reporting.

**Output 2. Native biodiversity recovery on Loosiep Island**

### **Activities**

- 2.1 Develop monitoring plans for marine turtles, seabirds, reptiles and terrestrial fauna.
- 2.2 Complete baseline monitoring working with project partners and local field team; collate existing data.
- 2.3 Undertake operational monitoring of eradication and detection methods.
- 2.4 Complete post eradication monitoring for marine turtles, seabirds, reptiles and terrestrial fauna.
- 2.5 Complete eradication and biodiversity monitoring reports.

### **Output 3. Increased availability of natural resources and better crop production results in improved food security and quality for the Ulithi community, increasing resilience to climate change.**

#### **Activities**

- 3.1 Develop monitoring plan that outlines the protocols, instruments, and methods for measuring changes in natural resources available, agricultural productivity, and poverty alleviation as a result of removing invasive vertebrates from Loosiep.
- 3.2 Undertake baseline monitoring and collate all existing data on current food consumption, natural resource and agricultural productivity. This will include a Household Consumption survey completed by a subset of households in the beginning of grant term (August 2018).
- 3.3 Develop plan to facilitate creation of new gardens on Loosiep Island.
- 3.4 New gardens are established on Loosiep Island.
- 3.5 In 2024, after the confirmation of a successful rodent eradication, knockdown of monitor lizards, and one year after food gardens are established, complete outcome monitoring of consumption of land-based food sources and establish enabling conditions for follow up monitoring and reporting.

### **Output 4. Community capacity developed: The local community, Yap State, and National (Federated States of Micronesia) capability to plan and implement invasive species eradication projects is advanced.**

#### **Activities**

- 4.1 Conduct workshop to engage key stakeholders in project planning, community outreach and monitoring.
- 4.2 Build local project teams, incorporating the local women, girls, and youth.
- 4.3 Run training programme(s) for local project teams to conduct: biological surveys, community outreach, eradication operations and monitoring surveys.
- 4.4 Support field teams (combination of remote and on island) for duration of operation.
- 4.5 Engage key stakeholders in baseline and outcome monitoring.
- 4.6 Maintain communication with the local community and help source funds for future work.

### **Output 5. Period of employment is provided for local community representatives.**

- 5.1 Recruit and employ 10 local temporary employees for project implementation.



## Annex 3: Standard Indicators

Darwin Initiative standard indicators have evolved since this project was initiated. We have done our best to identify the most relevant standards for reporting. For those newly adopted standards that were not previously being tracked by the project, we have left information blank but will continue to track progress in the future.

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	Year 5 Total	Total to date	Total planned during the project
DI-A01	At least 10 people from Ulithi are hired and trained in invasive species detection and removal methods in year one and apply their skills to the eradication on Loosiep during the eradication.	Number of people from Ulithi communities who have completed training on invasive species eradications and/or turtle database management.	People	Females obtaining database training	0	0	0	0	0	1	1
				Females obtaining eradication training	1	5	0	0	0	5	2-5
				Males obtaining database training	0	1	0	0	0	1	1
				Males obtaining eradication training	10	20	0	0	0	27	10-15
DI-A03	UFCAP has improved eradication and biosecurity capability and capacity as a result of project.	Number of local organisations with improved eradication and biosecurity capability and capacity as a result of project.	Number of organisations	Local organisation	-	-	-	-	0	0	1
DI-A06	Field shelter on Loosiep and supplies used for project including (radios, trapping supplies, tools and general field equipment) will benefit the community	Number of people with access to infrastructure and tools on Loosiep for undertaking gardening activities.	People	Ulithians	-	-	-	-	0	0	150
DI-A07	At least 2 people from the Yap State government and 1	Number of government institutions/departments in Yap State and/or	Government institutions	Yap (state-level) government department	-	-	-	-	3	3	4

	person from the FSM government participate in the eradication.	FSM with enhanced awareness and understanding of biodiversity and associated poverty issues.		National government departments	-	-	-	-	1	1	1
DI-B02	Eradication operational plan	Invasive species management plans available and reviewed by external advisors.	Number	Invasive species management plan: for rodents	0	1	0	0	0	1	1
				Invasive species management plan: for monitor lizards	0	1	0	0	0	1	1
DI-B04	Horticulture is resumed on Loosiep, with 5 gardens planted by end of 2023.	Number of gardening plans to promote sustainable livelihoods and wellbeing from gardening on Loosiep.	Number	Gardening plan	-	-	-	-	0	0	1
DI-C01	Biosecurity protocols are in place prior to project implementation and followed by local island users.	Number of biosecurity best practice guides and knowledge products published and endorsed.	Number	Biosecurity protocols	-	-	-	-	1	1	1
DI-C14	The Council of Chiefs and landowners on Ulithi are involved in the planning, implementation and monitoring stages of the eradication throughout the duration of the project.	Number of Council of Chiefs and other island leaders attending briefing events.	Number	Local leaders	-	-	-	-	14	14	14
DI-D01	No invasive vertebrates remain on Loosiep by the end of the project.	Hectares of habitat managed for invasive species and agroforestry.	Hectares	Community-owned, non-protected area	0	0	0	0	0	0	18
DI-D02	75% of the community (750 individuals) have access to improved food variety and quantity, with an increase in the carbohydrate and nutrient-rich plant-based	Number of Ulithians whose disaster/climate resilience has been improved through enhanced food security and wellbeing.	People	Food security	0	0	0	0	0	0	750

	foods necessary for a healthy diet by end of 2024.										
DI-C19	Finalize one paper on Invasive Monitor Lizards Acetaminophen Toxicity Trial.	Number of technical publications produced	Number	Unpublished report	0	0	0	0	0	0	1

## Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the <b>correct template</b> (checking fund, type of report (i.e. Annual or Final), and year) and <b>deleted the blue guidance text</b> before submission?	Yes
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:BCF-Reports@niras.com">BCF-Reports@niras.com</a> putting the project number in the Subject line.	Yes
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:BCF-Reports@niras.com">BCF-Reports@niras.com</a> about the best way to deliver the report, putting the project number in the Subject line.	No
<b>Have you included means of verification?</b> You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	N/A
<b>Do you have hard copies of material you need to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	N/A
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 16)?	N/A
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	