



## Darwin Initiative Main: Annual Report

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

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

**Submission Deadline: 30<sup>th</sup> April 2024**

Submit to: [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com) including your project ref in the subject line

### Darwin Initiative Project Information

Project reference	<b>DIR28S2\1070</b>
Project title	“Community conservation of critically endangered Hawksbill turtles in Nicaragua”.
Country/ies	Nicaragua; Pearl Lagoon South Caribbean Coast Autonomous Region (RACCS)
Lead Partner	Wildlife Conservation Society
Project partner(s)	Bluefields Indian and Caribbean University (BICU) KABU Tours
Darwin Initiative grant value	<b>£396,930.00</b>
Start/end dates of project	<b>01/06/2022</b> and expire on <b>30/11/2024</b>
Reporting period (e.g. Apr 2023 – Mar 2024) and number (e.g. Annual Report 1, 2, 3)	April 1 <sup>st</sup> 2023 to March 31 <sup>st</sup> , 2024 – OY2 Annual Report
Project Leader name	Karen Joseph [REDACTED]
Project website/blog/social media	
Report author(s) and date	[REDACTED]

### 1. Project summary

This project aims to protect Hawksbill marine turtles (*Eretmochelys imbricata*) in the Pearl Cays, an archipelago located on Nicaragua’s Caribbean coast which was declared a wildlife refuge in 2010. Hawksbill turtles are classified as critically endangered in the IUCN Red list, and the Pearl Cays constitute a key Hawksbill turtle rookery, believed to be the largest remaining nesting population in the west-central Caribbean. Hawksbill turtles in this area face several threats, including over-exploitation of adult females and eggs on nesting beaches, degradation of nesting and marine habitats, poaching of juveniles and adults in foraging areas, and incidental mortality related to marine fisheries.

The project builds on a successful initiative led by the Wildlife Conservation Society (WCS), working alongside authorities and local communities, that resulted in a 93% protection rate of nests at Pearl Cay Wildlife Refuge (PCWR) each year since 2000. These achievements, however, were set back by protests and violence resulting from the political crisis in 2018, and by a following decrease in tourism, a sector that provided the main income for many coastal communities. These events were further exacerbated by the COVID-19 pandemic and two

hurricanes, resulting in shrinking food markets and reduced incomes for the vulnerable coastal communities in PCWR, who saw Hawksbill turtles as a source of protein and income.

The current BCF initiative was developed by WCS with four fishing communities in PCWR to reverse the negative effects of the socioeconomic factors and the pandemic on Hawksbill populations, and to improve the livelihoods of the communities living in this region. By reducing the food insecurity of these communities through the provision of staple food seeds and cash crops, and by supporting a community-based tourism enterprise, the project aims to promote community-led conservation of Hawksbill turtles.

## **2. Project stakeholders/ partners**

Since 2000, we've partnered with the regional government to strengthen turtle conservation efforts. WCS spearheads this initiative, from funding to delivering guidance and equipment for nesting monitoring and tagging. We also coordinate technical aid for alternative livelihoods, such as providing seeds and hiring specialists for execution. Moreover, WCS handles communication with pertinent government bodies to secure permits and manage necessary processes for community engagement.

The PCWR, representing the 12 communities of the Pearl Lagoon basin, is governed by the Territorial board, comprising communal leaders from each community. This board holds authority over whether any project can proceed within the basin. We secured conservation agreements not only from the four communities receiving technical support for alternative livelihoods but also from the Territorial government of GTI-LP territory. A Territorial assembly convened at the territorial office, with participation from WCS coordinators and technical consultants. Additionally, the turtle team comprises members from five of the twelve communities: Pearl Lagoon, Hallover, Kahkabila, La Fé, and Browns Bank.

Our enduring partnership with BICU has facilitated support for KABU tours, a community-based enterprise organizing tours to PCWR. Throughout the project, BICU acted as technical advisors and financial sponsors for KABU tours. This entrepreneurship is now registered under OCEAN TOURS, a transition required due to the challenges in obtaining updated financial and legal status in accordance with Nicaraguan laws. Operations commenced in March 2024, coinciding with the Easter season.

## **3. Project progress**

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

The 2023 season has overcome all obstacles despite the implementation of new actions such as combining sea turtle nesting monitoring with livelihoods improvement activities. We mostly worked directly with farmers who are also fishers.

Understanding and learning the needs of the local communities who depend on the cays is vital for the proper management of the MPA. Reaching a conservation agreement was challenging, as it required general assemblies, community meetings and other process to meet the community needs. Protecting and increasing the number of nests and hatchlings, was a fundamental conservation step to the long-term survival of this critically endangered species. Finally conservation agreement were signed by leaders and community members accepting to follow and support this process.

So far, we manage to carry out our data collection on nests at the Pearl Cays Wildlife Refuge (PCWR), as result our teams manage to record 894 new nests, 12.63% increase (112 nest) than the 2022 season with only 1.78% poached nest (16 nests), concluding with a 98.22% of protection. Team has completed 1,168 cays surveys, on average of 6 to 7 Cays visited per day. All 9 nesting beaches have been protected and systematically patrolled; 117 nests washed away and destroyed due to natural causes, equivalent to 13.09%. During the excavation, our team counted 97,453 eggs from remained nests, 62,133 eggs hatched (63.76%), Percentage based

on 50% empty eggshell of 755 remained nests excavated. 8 community members were hired to patrol the turtle monitoring from may until December 2023.

Our educational activities included pupils from primary, secondary schools and University students (marine Biology) participating in workshops focused on conservations activities, turtle monitoring and other related topics. Our fieldwork training was done in PCWR, where techniques on turtle monitoring, mangrove reforestation, environmental education, and conservation activities were taught. See Attachment 1a, 1b and 1c, field work with students (mangrove reforestation, costal clean up, turtle monitoring)

Eight (8) WCS patrollers, marine coordinator and marine technical assistant have been trained to use SMART program. This tool will help us collect data, record measurements, and analyze data and to improve the effectiveness of our conservation efforts, and by providing timely analysis if the information gathered. See Attachment 2a, 2b, and 2c Training team on SMART.

Livelihood activity: 4 communities improve their livelihoods. In 2022, one agriculture extensionist was hired for one-year consultancies, who provided advise on obtaining certified improved seeds (beans, rice, plantain corms), but also selection, purchase, and distribution of chickens of the Hy-Line Brown, given to 91-families, 100% women household, leader of family in the 4 different communities of the Pearl Lagoon basin in 2023. Hens are currently producing eggs, and new hatchlings have been integrated to farmers through cross breeding. Farmers are collecting plantain crops. Seeds and animal were fully accepted by community members and exceeded our expectations. See Attachment 3a, 3b and 3c chicken and plantain crops.

A second base line survey were conducted in this 2023 season. See Attachment 4.

### 3.2 Progress towards project Outputs

All 9 nesting beaches located in the PCWR have been systematically patrolled. We found nest on 7 patrolled cays. See table below

Name of Cays	No. Nest 2022	No Nest 2023
Wc (Wild Cane)	253	308
Wa (Water)	209	250.
Cr (Crawl)	109	126
Ba (Baboon)	94	90
Gr (Grape)	49	43
Li (Lime)	46	48
Co (Collumbila)	22	29
Bottom Wood	0	0
Bottom Tawira	0	0
<b>Total</b>	<b>782</b>	<b>894</b>

Graph 1. Nest per cay 2022 versus 2023

We protected 894 turtle clutches and recorded an increase of 12.52% in compared to 2022 season. Achieved 98.22% of protection, 16 nests equivalent to 1.78% nests were poached. We counted a total of 97,453 eggs laid in the nests recorded.

We counted 62,133 sea turtles' eggs shells, and therefore expected that they successfully reached the ocean (63.76%), hatchling success – number and hatchling success is based on 50% empty eggshell count during excavation process.

61.16% increase of hatchling (24,129) more, compared to 2022 season. 6 hawksbill turtles were tagged with metal flipper tag.

### Education and outreach:

Presentations on Hawksbill biology and conservation have been given to primary and secondary school over the last pass years with conservation-related field activities as part of it. We keep establishing trust to strengthen coordination and communication to ensure that actions promoted by WCS are taken into consideration, that it can serve to build a module and to be incorporated into the curriculum of the MINED educational program in Pearl Lagoon. For now, we would continue in the fight to demonstrate that education is the key to development and that the deliverable of this action would benefit future generation of students.

24 Marine Biology students received technical training on turtle monitoring.

10 primary and secondary students, plus 8 additional university students had a one night and two days experience on the field accompanied by 3 female teachers and 1 male teacher.

1700 pupils attended workshops at schools, learning about turtle conservation activities and environmental education:

	<b>Females</b>	<b>Males</b>	<b>Total</b>	<b>Goal</b>	<b>% Completion</b>
Pupils (primary and secondary)	723	977	1700	1,500	113%
University Students and others	178	76	254	200	127%
	901	1053	<b>1954</b>		

91 house leaders, 100% women improved their livelihood activities by receiving and raising chickens and a rooster from the Hy-Line Brown breed. Using eggs as a source of protein for their families, selling eggs to increase their income and producing new chickens.

### 3.3 Progress towards the project Outcome

- a. During season 2023, we recorded 894 new turtle clutches on the PCMR, and achieved 98.22 % of protection, only 1.78% of nest were poached by fishers
- b. All indicators were adequate for measuring our outcome. We expect an increase in this coming 2024 season. According to our annual outcome we reach 100%.
- c. 100% female (91 woman) house leaders improved their livelihood activities by receiving and raising chickens and rooster from the Hi-Lyne breed. See Attachment 4a and 4b. list of beneficiaries.

### 3.4 Monitoring of assumptions

No changes in assumptions

**0.1.1 Fishing community members continue supporting the project.** This assumption keeps its validity. Communities have welcomed the project and have provided the necessary support. Local government has also accepted this project since it includes an important component for poverty alleviation.

**0.1.2 Local authorities in Nicaragua continue supporting the project.** Although we have faced delays on government permits to execute projects activities on the field, we overcame such delays, continued and concluded our monitoring activity for the 2023 season. We have received the support of the Territorial government in turn, who have helped us to overcome Central Government challenges to issue permits. We can therefore state that this assumption remains valid.

**O.1.3 Patrolling system is correctly implemented, and community patrollers are able to detect, retain, and tag/release nesting females in a systematic and accurate way.**

The patrol system is ongoing and being effectively implemented.

**O.2.1 Students and key stakeholders attend workshops, talks and participates in field trips.**

Students have participated in field trips, talks and workshops. This activity remains valid.

**O.2.2 Covid situation enables project to carry out in-person meetings and gatherings**

COVID restrictions have been lifted therefore we have been able to carry out the meetings, workshops and other gathering activities in person.

**O.3.1 Benefited families provide accurate information to interviewers during field data collection.**

We are still gathering information and analyzing results, and we believe this assumption remains valid.

**O.3.2 Survey data is correctly processed and reflects accurately People's answers.**

A 2<sup>nd</sup> base line document was done successfully by the consultant and delivered to WCS in December 2023. This assumption remains valid.

**1.1 Climatic variability does not seriously affect nesting grounds and patrols are able to deploy within the cays during the entire nesting season.**

Patrols have been able to carry out their duties protecting nesting beaches and sea turtles which involved relocating 92 nests. Climatic conditions have diffculted sea transportation only during short periods of times (during bad weather) causing some delays but not in a critical way.

**1.2 National Authorities continue supporting the patrols and act when poachers are identified by community patrollers.**

Despite complicated sociopolitical situation in Nicaragua, authorities at a local level continue supporting our project and have signed an agreement with WCS for the execution of activities under this initiative.

**1.3 Data is correctly and systematically recorded by community patrollers.**

Every year before the monitoring season, candidates receive theoretical-practical training in Pearl lagoon. During this process 8 members were selected out of 15 candidates who came from the different communities of the Pearl Lagoon basin. Follow by 5 days training in the field, to ensure all instruments are applied correctly. We consider this assumption remains valid.

**2.1 Students are open to learning and changing their behavior and attitudes towards hawksbill marine turtles.**

This assumption remains valid. 2<sup>nd</sup> base line studies report that the project is successfully accepted, people are becoming more conscious about the importance of protecting their resources.

**2.2 COVID conditions in the country allow WCS to carry out gatherings and meetings with key stakeholders.**

We have been able to carry out gatherings and meetings with key stakeholders.

**3.1 Families accept to release hawksbill turtles bycatch and to stop hunting and selling hawksbill carapaces in exchange for agricultural or small patio animal husbandry inputs. Families attend extensionists training and apply his/her indications.**

This assumption is fully accepted, by farming fishers have reduced the sea turtle catching, no hawksbill turtle has been reported as killed, out 894 nests only 16 were poached. Beneficiaries of seeds and small patio animal husbandry inputs have expressed their gratitude and happiness for the crops and harvested product they have had, some stored seeds from harvested product and replanted beans, they have had a second crops that get harvested in March 2024. Plantain corms have grown and produced plantain after 9 months and now sell in local market.

**3.2 Locally improved seeds, adapted for climatic conditions of Pearl Lagoon Basin are available to purchase when needed.** This assumption was correct. We found locally improved seeds adapted for the area.

**3.3 Community members are willing to participate in the project and be hired.** We found enthusiastic people and leaders among the communities, eager and participating in the turtle monitoring program, 8 patrollers were hired, so we consider this assumption is valid.

**3.4 The sociopolitical and pandemic situation allows visitation to Pearl Cays to continue throughout the year.** This assumption remains valid.

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

Pearl Cays is an archipelago located on Nicaragua's Caribbean coast. Declared a wildlife refuge in 2010, it is a pivotal hawksbill turtle rookery, believed to be the largest remaining nesting population in the west-central Caribbean (Lagueux et al, 2003; Campbell et al, 2012). Hawksbill are classified as critically endangered by IUCN due to over-exploitation of adult females and eggs on nesting beaches. Before WCS began its conservation efforts in the Pearl Cays in 2000, 88% of hawksbill eggs and meat were harvested by impoverished community fishers as a source of income or protein. With support from WCS, community education increased, and community patrollers were protecting more than 93% of hawksbill annual nesting areas, with a peak of 1,015 protected nests in 2019. For this 2023 only 1.78% of nests were poached. Meat consumption and carapace collection have been greatly reduced, due to increased surveillance, education, and awareness campaigns focused on local fishers in coastal communities and key population centres in the region. Communities' leaders are working in coordination with WCS to conserve and protect their resource on PCWR.

The acquisition and distributions Hi-Lyne Brown chickens to a group of 91-person, 100% women from 4 communities, this has impacted the communities and the project positively, they have shown a highly concern of reduced the pressure and dependence of turtle as they only source of protein, but also use eggs for house consumption and increasing the number of chickens by promoting hatchling, they have improve their income by the selling of eggs at a small scale level (see Attachment 5 a and 5 b and c photos of chickens).

Providing chickens to woman as a sustainable livelihood activity implemented by WCS with Darwin funds, have significantly improved their economy and well-being of many families, these women have express gratitude for the support received from the project. It provides the necessary resources to build on WCS's proven success and significantly expanded protection of hawksbill turtles and have guarantee women participation in the whole process.

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

The project directly supports CBD's Aichi targets 1, 12, 14, 18 and 19, and activities this year have also contributed towards SDG 2: Zero Hunger; SDG 5: Gender equality (although to a lesser extent than planned); and SDG 14: Life below water. Hawksbill turtles are also protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). While the consumption of turtles and their parts is banned in Nicaragua by national law, an exception is made for Indigenous communities of the Caribbean Coast which are entitled to hunt green turtle on the basis of quotas assigned per indigenous territory. The project is also helping enforce Nicaraguan national legislation, specifically Law No.489 on fishing and aquaculture, which has specific directives for the protection of marine turtles. These laws protect the country's biodiversity from pressures that are common to other central American countries.

## **5. Project support for multidimensional poverty reduction**

The project is being implemented in one of the poorest countries of Central America, and in an area where the population is extremely vulnerable to climatic events and food insecurity. The main reason behind the poaching of adult turtles and eggs is poverty; the Covid-19 pandemic and two hurricanes significantly affected the main food markets in PCWR, resulting in reduced incomes for the coastal communities, who turned to hunting Hawksbill turtles as a source of protein and income. To persuade the local population to protect the turtles instead of using them

as a source of food amidst a situation of extreme poverty and hunger, an alternative source of food was needed to be provided.

This approach has proved to work in other contexts when aiming to reduce pressure on biological resources (e.g. fisheries resources), and the provision of alternative, sustainable food sources is likely to constitute one of the main contributions to the local communities, independently of its role in removing the pressure on Hawksbill turtles. 29-010 AR1R. The signed conservation agreements represented a symbol of WCS’s commitment to support the communities, and the fact that 329 families (1,645 people) received seeds (beans and rice) and plantain, and harvested their first crops in the first running year of the project will very likely provide the trust and thrust to continue with their involvement in the turtle conservation activities. Additional to the 329 families (1645 people) in 2022, the project has benefited directly 91-families, 100% woman, leaders-household (approximately 450 persons) in this 2023, by improved the raising of Hy-Line Brown chickens breed for egg production. The implementation of the livelihood project had served as source of protein and income for local families who depend directly on the catching of turtle for consumption. The project had provided direct benefits as employment and income to 8 people who were hired to do daily turtle monitoring on the Pearl Cay in 2023 season, which provided indirect benefits to 50 household by the purchase of items and increasing their family income.

Plantain corms given to the 329 families have shown success by production of plantain and harvesting the plantain crops. Plantain have been selling in the communities by beneficiaries in an average price of C\$ 6.00-10.00 cordobas (£0.13-0.22) per plantain. Also, the beans seeds given to beneficiaries had successful crops in 2023, which permit to store and replanted by the end of 2023 and harvested in 2024. Each sack (100 lbs) of beans has been sold approximately for C\$3,000-4000 cordobas equivalent to £ 65- £86 British pound each sack.. WCS bought the plantain and beans from these beneficiaries to feed the field monitoring team during the 2023 season and already bought beans for the 2024 season. These results have shown that the project have been successful in improving the economy of the local community.

The daily monitoring and result of the 2023 season had proven the increase of number of nests and hatchling at least with 112 nest more than 2022 season.

Our main achievements for this year were: effectively protecting 98.22% of endangered hawksbill turtle nests; the livelihood project allowed us to provide beans, rice, plantain corms to plant, chickens and rooster for meat and eggs to more than 400 families (approximately 2100 people) for the first time in the whole life of WCS program in the Pearl Lagoon Territory. WCS, the Territorial Council of the 10 Indigenous and Afro-descendant Communities of the Pearl Lagoon, and the local government have established direct coordination, understanding, and support. All parties have agreed to collaborate closely to enhance capacity building for improved management and decision-making regarding the Pearl Cays Wildlife Refuge and its resources as a Marine Protected Area. We are currently exchanging another draft for signature, outlining a new agreement that commits the parties to jointly work towards the protection and conservation of natural resources.

**1. Gender Equality and Social Inclusion (GESI)**

Please quantify the proportion of women on the Project Board <sup>1</sup> .	132 women received seeds to plant (rice, beans and plantain corms) and 91 beneficiaries 100% women received yard animals such as laying hens and rooster form the Hy-line Brown) distributed between 4 different communities (Awas, Raitipura, Pearl lagoon and Haulover)
Please quantify the proportion of project partners that are led by women, or which	The target project was 260 families (60% women and 40% men), we have 420

<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.

have a senior leadership team consisting of at least 50% women <sup>2</sup> .	<p>families attended, 160 families more than projected.</p> <p>Based on our projection, we have reached 53.10% women.</p> <p>For our patrol team 38% are women (3 out 8).</p> <p>Team leadership for patrolling represent 50% women.</p>
---	--

<b>GESI Scale</b>	<b>Description</b>	<b>Put X where you think your project is on the scale</b>
<b>Not yet sensitive</b>	The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach	
<b>Sensitive</b>	The GESI context has been considered and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups, and the project will not contribute to or create further inequalities.	X
<b>Empowering</b>	The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups	X
<b>Transformative</b>	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	

## 6. Monitoring and evaluation

Activities of the project were executed according to our log frame. Some delay occurred because of legal aspect but this was solved successfully by our representatives. Activities such as patrolling nesting beaches during nest season and carry out sustainable livelihoods activities were executed, giving as very good results as the protection of 98.21% of all nests found withing the surveyed cays and benefiting an estimated of 2100 persons in different communities, respecting gender equality 50% of our team leader were female.

In the case of turtle nests, every patrol executed during nesting season have a logbook where they record nests found with coordinates and measures taken to protect them and relocate nets, if it's necessary. We also do daily nest check to make sure the nest has not been damaged either by poaching, destroyed by animals including other female turtles or washed away. All this data goes first into logbooks and then into a database, following a scientifically robust protocol established at the project inception more than a decade ago. Each nest was also excavated and recorded in hard data format then introduced into a data base for analysis.

<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.



**Excavations confirm the number of nests, it tells us how many eggs are found on each nest and how many hatchlings were release or dead during each nest’s hatching and indicates why it unhatched. In addition, WCS marine team received SMART program to record nests, this should be implemented for the 2024 season.**

**In the case of sustainable livelihoods, we have the reports from the consultant with lists of beneficiaries, photography’s and the result of the second base line documents that record the perceptions toward changes. Also, a final write up report that give follow up of seed productions and plantain crops, follow up until harvest. Attachment 6. Report**

**We have not made any changes to our M&E plans so far. WCS oversees M&E activities and will share results of the project and indicators in the form of meetings and presentations, with community partners: community leaders and with Kabu Tour representatives.**

Kabu Tour are successfully and legally inscribe now as OCEAN TOURS, they started their tour activities during the easter week. Coordination has been done so far, during our monitoring activities they have taken their tourist to learn about the hawksbill conservation project and express they gratitude as Ocean Tours towards Darwin and WCS that supported them in the long process. Currently they are working on promoting their tours and writing up their different packages to be offered to the public, Ocean Tour and WCS are working on the plan. See Attachment 7. WCS and Ocean Tour on field.

## **7. Lessons learnt**

The turtle conservation program has annually reported an increase of turtle nesting and the reduction of poaching since 1999 for the first time in the duration of the project. We directly engage with fishermen, women, youth, and children to encourage conservation efforts through learning by doing.

By introducing a livelihood activity together with turtle conservation as a guide or complement to reduce the poaching, catching and killing of hawksbill turtles. We've learned that directly engaging with individuals through education, communication, and coordination, and providing them with tools and knowledge, can bring about significant changes in their community. The project has shown the improvement in increase local economy by the selling and harvested product such as plantain, chicken eggs and beans. Food security for more than 400 families have improved by providing seeds, chickens and rooster. That also have allowed these beneficiaries to improve their ability to cross breed the species to produce more hatchling from chickens but also to consume chicken eggs, reducing the consumption of turtle as a only source of protein and commercialize eggs to better their income. Join effort is also necessary in areas that are difficult to manage, boarding the University and the Ministry of Education have make it easier for us to reach out to more than our expected outcome. Teaching children can be our best way to ensure the future of the resources and change perception towards conservation. We confirm that our hawksbill conservation project can be directly combined with community livelihood activities hand to hand and constantly, by that way the project can provide and capture greater coverage and attention from authorities and inhabitants for the conservation of such limited resource, thus supporting the process of increasing of population at risk.

Previous consultation was carried out with community leaders, a community baseline was conducted by consultant at the beginning of the project and finally result of second base line study were conducted to measure the changes and people perception towards the acceptance of the livelihood project under WCS and its turtle conservation program. to

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

## 10. Risk Management

### 9. Sustainability and legacy

WCS have been working on the conservation project since 2000 and have shown positive results though the 23 years of doing patrolling and demonstrate the increasing of nests annually. All patrollers have been contracted from the different community of the basin and highly show capacity to continue to recruiting members from the zone. Conservations agreement have been signed to support this process, such agreements have never been before. On the other had resources are becoming highly limited, and Climate Changes are considered strong components affecting the sustainability of this action that is beyond the control of WCS. The creation of alternative sources of food have taken the pressure away from marine resources and undoubtedly helped reduce these vulnerabilities, this element of the project represents an important legacy element.

The short and long-term benefits of the turtle education activity at school could significantly change population perception of protecting turtle by keeping them alive. The combination of those presentation combine with conservation field activity have been essential and unique.

### 10. Darwin Initiative identity

All reports and presentation made at schools or to authorities have used the Darwin initiative logo, also explanation that Darwin is our principal donors for our project. Coordination's with other authorities such as the Ministry of education (MINED) and the University of BICU, had allow us to extend the project education outreach that over pass our expectation. Darwin initiatives permit us to improve livelihood activities and conduct the turtle monitoring, this initiative had led the interest of other projects who works around conservation activities to come on board and protect the cays by combining mangrove reforestation, coastal clean-up and the turtle monitoring activity as one on field.

Project have had good acceptance from local communities specially the direct beneficiaries, and authorities. More people are involved in the different activities of the program and express gratitude towards the works that is been done and would like it to be extended in other communities with similar conditions.

### 11. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	Yes
Have any concerns been reported in the past 12 months	No
Does your project have a Safeguarding focal point?	Yes/No [ <i>If yes, please provide their name and email</i> ] No
Has the focal point attended any formal training in the last 12 months?	N/A
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: % [and number] Planned: % [and number]
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses.	

Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify.

N/A

Please describe any community sensitisation that has taken place over the past 12 months; include topics covered and number of participants.

N/A

Have there been any concerns around Health, Safety and Security of your project over the past year? If yes, please outline how this was resolved.

N/A

## 12. Project expenditure

**Table 1: Project expenditure during the reporting period (1 April 2023 – 31 March 2024)**

Project spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
<b>TOTAL</b>				<b>£147,910</b>

A year 2 budget adjustment from GBP 160,445 to GBP 147,910 was requested from the Darwin initiative. This change was requested from the Darwin initiative. **Table 2: Project mobilised or matched funding during the reporting period (1 April 2023 – 31 March 2024)**

	Secured to date	Expected by end of project	Sources
Matched funding leveraged by the partners to deliver the project (£)			

Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£)			
--	--	--	--

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

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

I agree for the Biodiversity Challenge Funds to edit and use the following for various promotional purposes (please leave this line in to indicate your agreement to use any material you provide here).

File Type (Image / Video / Graphic)	File Name or File Location	Caption including description, country and credit	Social media accounts and websites to be tagged (leave blank if none)	Consent of subjects received (delete as necessary)
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No

## Annex 1: Report of progress and achievements against log frame for Financial Year 2023-2024

Project summary	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
<p><b>Impact</b></p> <p>Hawksbill populations in the Pearl Cays are protected by communities with strengthened capacities and sustainable livelihoods aligned with wildlife conservation priorities</p>	<p>Hawksbill populations in PCWR have been protected and 2023 nesting season have been successfully monitored and protected: For this 2023 season, 894 new turtle clutches were recorded on the PCWR, achieved 98.21 % of protection, only 1.79% of nest were poached by fishers. 2,170 persons improved their livelihoods due to project's investments.</p>	
<p><b>Outcome</b> Hawksbill turtle population size increased and historical nesting grounds conserved through community conservation, education and investments in economic alternatives to turtle exploitation, in the Pearl Cays Wildlife Refuge (PCWR).</p>		
<p>Outcome indicator 0.1</p> <p>O.1 By 2024, hawksbill turtle nesting populations in the Pearl Cays show stability (numbers of nesting females are no less than 2021 records and number of poached eggs don't increase from 2021 records) and an increase of at least 10% of new nesting females and 10% in returning females in comparison to the 2022 baseline.</p>	<p>98.21 % of 2023 laid eggs clutches were protected.</p> <p>Only 16 nests were poached</p>	<p>Purchase of field materials and equipment, hiring and training of community patrollers, execution of field activities according to plans to protect incoming hawksbill nesting season.</p> <p>Materials to design and paint blankets alluding to the of celebration of environmental day. Where a march would be held in coordination with the ministry of education and other municipal authorities. Each school would receive a package and present the blanket design for the march.</p>
<p>Outcome indicator 0.2,</p> <p>O.2 By 2024, more than 85% of targeted students and key stakeholders express their appreciation of marine turtles as a valuable and unique asset for their communities to be proud of</p>	<p>1700 students from primary and high schools attended educational workshops, 254 university students received field training and workshop on hawksbill marine turtle conservation.</p>	<p>We have passed our goal and will continue the education activities for this 2024 season.</p>

<p>and they demonstrate a strong understanding of hawksbill turtle protection and conservation activities and their importance for the wellbeing of local communities.</p> <p>0.3 By 2024, 80% of targeted families are reporting an increase in food availability from engaging in sustainable livelihoods activities compared to the 2022 baseline.</p>	<p>All families are reporting and have increase their food availability by harvesting crops and raising chickens that are also producing eggs and new hatchling.</p>	
<p><b>Output 1 :</b> Hawksbill turtle populations in PCWR increase and show stability (# of nesting female are equal or greater than numbers recorded in 2021 season).</p>		
<p>Output indicator 1.1</p> <p>1.1 By 2024, 9 nesting beaches are protected (verified by number of nests recorded compared to number of nests poached and destroyed by natural means) within the PCWR</p>	<p>894 new turtle clutches were protected and recorded (112 nets more than 2022), achieved 98.22 % of protection, only 16 nests equivalent to 1.78% were poached.</p>	
<p>Output indicator 1.2,</p> <p>2.1 y Y3, at least 92% of hawksbill turtle nests compared to Y1 data are protected by community patrollers in the PCWR</p> <p>3.1 1.3 By Y3 of the project average emerging success per nest (based on estimated successfully hatched eggs per nest, per year) is maintained compared to Y1 data</p>	<p>Team has completed 1,168 cays surveys, on average of 6 to 7 cays visited per day. We achieved 98.22% of protection. All 9 nesting beached have been protected and systematically patrolled.</p> <p>97,453 eggs were counted from remained nests, 62,133 eggs successfully hatched with 63.76% of hatchling released to the ocean. This represents 61.16% (24,129 hatchling more) increase of hatchling compared with the 2022 season. (Percentage based on 50% empty eggshell of 755 remained nests excavated), For 2023 season.</p>	<p>For 2024 season WCS would rehire 8 patrollers to achieve outputs indicator propose at the beginning of the project.</p>
<p><b>Output 2.</b> Students and key stakeholders in PCWR have increased knowledge of hawksbill turtle protection and conservation though</p>		

<p>Output indicator 2.1. By 2024 1,500 (50% female) pupils in primary and secondary schools in 8 communities and 200 (50% female) university students are reached with conservation outreach and environmental education activities</p>	<p>1700 pupils from high school received talks on hawksbill conservation (57.5% male and 42.5% female) and 254 university students (70% female and 30% male) made a field trip to the Pearl Cays to learn about hawksbill monitoring techniques during 2023 nesting season.</p>	<p>Activity to continue for the 2024 season</p>
<p>Output indicator 2.2 By 2024 90 (40 % female) Indigenous leaders, 30 (50% female) Government Officers and 60 enforcement officers (military) have increased technical capacity. and awareness on marine turtle protection</p>	<p>8 leaders from the territorial government of the Afro-descendant and Indigenous of the 10 communities of the Pearl Lagoon basin have participated in workshop presentation of Darwin initiative.</p> <p>We been working alongside the Regional, Territorial and Local government since 2000. WCS have obtained support from the different government to work on field by providing space to access cays and work with community's members. But due to political issues Government officer (military or police) are not permitted to attend workshops that comes from NGOs, to avoid conflicts and miss understanding.</p>	
<p><b>Output 3</b> Alternative livelihood initiatives are implemented in exchange for hawksbill protection commitments from local communities around the PCWR increasing availability of protein sources for each family successfully working on animal husbandry by 20% and increasing food availability of each family working in agriculture by 25%.</p>		
<p>3.1 By 2024, conservation agreements are signed in 4 target communities around the PCWR benefiting 260 families.</p> <p>3.2 By end of project, 260 families (60% female head of household) are benefitting from agricultural or domestic animal husbandry.</p> <p>3.3 By the end of 2022, 8 patrollers ( two women, accounting for 25% female) community members are trained on data collection methods and are patrolling and surveying cays daily at PCWR during nesting season (March to November), benefitting an estimated 40 people (5 members per community member family)</p>	<p>This goal has been achieved and reported in 2022 annual report.</p> <p>In total 420 person leaders of families (53.10% female head of household) received benefits from agriculture and domestic animal husbandry.</p> <p>For this 2023, 8 patrollers, 3 women (38% female), community members are trained on data collection methods and are patrolling and surveyed daily at the PCWR during nesting season. Team leaders represent as 50% female. 40 people received indirect benefits.</p>	

<p>3.4 By 2023, Kabu Tours (a partner under a co-finance portion of this initiative) is operational and employing 20 community members (4 of which are women, accounting to 20 % female), benefitting an estimated 100 people (5 members per community member family)</p> <p>3.5 By 2024, Kabu Tours is generating a net annual income of 15,000</p>	<p>Kabu Tour, now Ocean Tours have changed their legal status to initiate its operation on the pearl cays as tours guides.</p> <p>Ocean Tour have opened their operation in March 2024 during the Easter season. Their obtained operational permits in February from Communal, Municipal and Territorial government.</p>	<p>Expectation is for them to start generating their net annual goal proposed in the project.</p>
<p><b>3.1.1 Hiring of an agricultural extensionist to carry out sustainable livelihood activities with 4 communities.</b></p>	<p>An agricultural extensionist have been hired since 2022. Focusing and analysing data, providing supervision to communities and executing remaining activities by giving technical assistance to beneficiaries of the project.</p>	<p>Agricultural extensionist contract end in November 2023.</p>
<p>3.1.1.1 Field trip to socialize and discuss sustainable livelihood activities with local communities and reach an agreement on the parameters to benefit families: female head of households, fishers working in the PCWR, others to be determined in conjunction with local leaders.</p>	<p>Filed trips have been executed by agricultural extensionist. Agreement was sign.</p>	
<p>3.1.1.2 Acquisition of certified seeds of staple food and submission of them according to agreed quantities per family.</p>	<p>This have been executed</p>	
<p>3.1.1.3 Technical advice and follow up visits to producers to supervise crop progress and ensure success</p>		
<p>3.1.1.4 Acquisition of hens and distribution, according to workplan, and conduct practical training workshops on hens husbandry techniques, follow up.</p>	<p>This was successfully complied</p>	



3.1.1.5 Design and carrying out a socioeconomic survey among local communities (baseline) and carry out a second survey at the end of the project	This was complied	
3.1.1.4 Data analysis of socioeconomic survey	This was complied	
3.1.1.5 Improve livelihoods for 8 people hired as community patrollers, benefiting indirectly 40 people based on an average household size of 5 people.	This was complied	8 new patrollers would be hired for this 2024 season
3.1.1.6 Reactivation of Kabu Tours community Enterprise, as a co-finance activity, leading to employment opportunities and opportunities to raise awareness on marine turtle conservation through tourism.	Kabu Tour, now Ocean Tours, initiate its activity in March 2024.	Expectation is high for members of Ocean Tours are hoping to increase their annual income

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

Project summary	SMART Indicators	Means of verification	Important Assumptions
<b>Impact: Hawksbill populations in the Pearl Cays are protected by communities with strengthened capacities and sustainable livelihoods aligned with wildlife conservation priorities</b>			
<b>Outcome:</b> <b>Outcome:</b> Hawksbill turtle population size increased and historical nesting grounds conserved through community conservation, education and investments in economic alternatives to turtle exploitation, in the Pearl Cays Wildlife Refuge (PCWR).	O.1 By 2024, hawksbill turtle nesting populations in the Pearl Cays show stability (numbers of nesting females are no less than 2021 records and number of poached eggs don't increase from 2021 records) and an increase of at least 10% of new nesting females and 10% in returning females in comparison to the 2022 baseline.	O.1 Nest records from daily monitoring, annual report with pictures, computer database to record and calculate: number of new nesting and returning females, total number of nests and clutches, hatching success (% of neonates to exit their eggshells) and emerging success (% of neonates to exit the nest) for each clutch	O.1.1 Fishing community members continue supporting the project. O.1.2 Local authorities in Nicaragua continue supporting the project. O.1.3 Patrolling system is correctly implemented, and community patrollers are able to detect, retain, and tag/release nesting females in a systematic and accurate

	<p>O.2 By 2024, more than 85% of targeted students and key stakeholders express their appreciation of marine turtles as a valuable and unique asset for their communities to be proud of and they demonstrate a strong understanding of hawksbill turtle protection and conservation activities and their importance for the wellbeing of local communities.</p> <p>O.3 By 2024, 80% of targeted families are reporting an increase in food availability from engaging in sustainable livelihoods activities compared to the 2022 baseline</p>	<p>O.2 Post workshop survey. Baseline: 90 % of students and key stakeholders express their appreciation of marine turtle as valuable and unique assets and demonstrate a good understanding of hawksbill protection activities. Students are excited to learn more and be part of this process.</p> <p>O.3 Socioeconomic Survey. 2<sup>nd</sup> base line</p>	<p>way.</p> <p>O.2.1 Students and key stakeholders attend workshops, talks and participates in field trips.</p> <p>O.2.2 all meetings have been carry out in-person meetings and gatherings.</p> <p>O.3.1 benefited families provide accurate information to interviewers during field data collection.</p> <p>O.3.2 Survey data is correctly processed and reflects accurately People’s answers</p> <p>O.3.3 beneficiaries have reported increase income and resource availability.</p>
<p><b>Output 1</b></p> <p>A Hawksbill turtle population in PCWR increase and show stability (# of nesting female are equal or greater than numbers recorded in 2021 season).</p>	<p>1.1 By 2024, 9 nesting beaches are protected (verified by number of nests recorded compared to number of nests poached and destroyed by natural means) within the PCWR</p> <p>1.2 By Y3, at least 92% of hawksbill turtle nests compared to Y1 data are protected by community patrollers in the PCWR</p> <p>1.3 By Y3 of the project average emerging success per nest (based on estimated successfully hatched eggs</p>	<p>1.1 Patrol logbook, annual report, computer database</p> <p>1.2 Nests check book, annual report, computer database</p> <p>1.3 3 Nest check logbook, computer database</p>	<p>1.1 Climatic variability does not seriously affect nesting grounds and patrols are able to deploy within the cays during the entire nesting season.</p> <p>1.2 National Authorities continue supporting the patrols and act when poachers are identified by community patrollers.</p> <p>1.3 Data is correctly and systematically recorded by community patrollers.</p>

	per nest, per year) is maintained compared to Y1 data.		1.4 SMAR Conservation Software would be implemented in 2024. To be carry along with books use on field.
<b>Output 2</b> Students and key stakeholders in PCWR have increased knowledge of hawksbill turtle protection and conservation though	2.1 By 2024 1,500 (50% female) pupils in primary and secondary schools in 8 communities and 200 (50% female) university students are reached with conservation outreach and environmental education activities  2.2 By 2024 90 (40 % female) Indigenous leaders, 30 (50% female) Government Officers and 60 enforcement officers (military) have increased technical capacity and awareness on marine turtle protection	2.1 Field trips and workshop terms of reference, attendance sheets (disaggregated by sex), reports on educational workshops and field trips.  2.2 Workshop terms of reference, attendance sheets (disaggregated by sex), reports on workshops	2.1 Students are open to learning and changing their behaviours and attitudes towards hawksbill marine turtles.  2.2 COVID conditions in the country allows WCS to carry out gathering and meetings with key stakeholders
<b>Output 3</b> Alternative livelihood initiatives are implemented in exchange for hawksbill protection commitments from local communities around the PCWR increasing availability of protein sources for each family successfully working on animal husbandry by 20% and increasing food availability of each family working in agriculture by 25%.	3.1 By 2024, conservation agreements are signed in 4 target communities around the PCWR benefiting 260 families	3.1. Signed conservation agreements.  3.2 signed lists of benefited families per community.	3.1 Families accept to release hawksbill turtles' bycatch and to stop hunting and selling of hawksbill carapaces in exchange for agricultural or small patio animal husbandry inputs. Families attend extensionists training and apply his/her indications
	3.2 By end of project, 260 families (60% female head of household) are benefitting from agricultural or domestic animal husbandry project inputs	3.2 Signed improved seeds, rice, beans, plantain suckers or animals' distribution lists (disaggregated by head of household), pictures and annual report	3.2 Locally improved seeds, adapted for climatic conditions of Pearl Lagoon Basin are available to purchase when needed.
	3.3 By the end of 2022, 8 patrollers ( two women, accounting for 25%	3.3 Signed agreements, monthly signed payroll stubs.	3.3 Community members are willing to participate in the project and be

	female) community members are trained on data collection methods and are patrolling and surveying cays daily at PCWR during nesting season (March to November), benefitting an estimated 40 people (5 members per community member family)		hired.
	.4 By 2023 , Kabu Tours ( a partner under a co-finance portion of this initiative) is operational and employing 20 community members ( 4 of which are women, accounting to 20 % female) , benefitting an estimated 100 people (5 members per community member family)	3.4. Signed agreements, Kabu tours – Ocean Tour reports with pictures evidencing activities execution.  3.5 Kabu Tours annual bank statements. Baseline: Kabu tours income generation is currently zero.	3.4 The sociopolitical and pandemic situation allows visitation to Pearl Cays to continue throughout the year.  3.5 Kabu Tour Now Ocean Tours begging it tiur activities since March 2024.

# Annex 3: Standard Indicators

**Table 1 Project Standard Indicators**

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	Total to date	Total planned during the project
DI-B10	# of people benefitting from agricultural projects or patio animal husbandry improvements (hens) at the end of the project	Number of individuals / households reporting an adoption of livelihood improvement practices as a result of project activities.	persons	1,115 women 985 men	1645 people	455		2,100	1,300
DI-B07	# of individuals directly employed annually by the project	Number of people participating in community-based management groups and/or Payment for Ecosystem Service schemes.	Persons	5 men, 3 women	8 people	8		8	8
DIA01	# of pupils and university students participating in workshop and training activities conducted per year, including field trips	Number of people from key national and local stakeholders completing structured and relevant training2.	persons	1053 men 901 women	122 students	1,954 students		2,076	1,700
DI-D16	# of people directly and indirectly benefitting at the end of the project through Kabu Tours community enterprise reactivation and through the provision of additional goods and services as a result of increased tourism in the area.	Number of households reporting improved livelihoods.	persons		Kabu tour now Ocean Tour have renewed its activity in March 2024. They have been chartered for 4 tour trips. All items have been bought in the community of Kahkabila		4 trips		

DI-A12	Net annual income generated by Kabu Tours at the end of the 2d year of the project.	Annual turnover of established sustainable livelihood enterprises in the project's final year.	Thousands of USD	N/A	N/A				
--------	---	--	------------------	-----	-----	--	--	--	--

**Table 2 Publications**

<b>Title</b>	<b>Type</b> (e.g. journals, best practice manual, blog post, online videos, podcasts, CDs)	<b>Detail</b> (authors, year)	<b>Gender of Lead Author</b>	<b>Nationality of Lead Author</b>	<b>Publishers</b> (name, city)	<b>Available from</b> (e.g. weblink or publisher if not available online)

**Annex 4: Onwards – supplementary material (optional but encouraged as evidence of project achievement)**



## 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?	X
<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.	X
<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.	
<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.	X
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see Section 16)?	
Have you involved your partners in preparation of the report and named the main contributors	
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	