

## Darwin Initiative Main & Extra: Final Report

To be completed with reference to the “Project Reporting Information Note”:  
[\(https://www.darwininitiative.org.uk/resources/information-notes/\)](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: no later than 3 months after agreed end date.**

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### Darwin Initiative Project Information

Scheme (Main or Extra)	Darwin Main
Project reference	29-009 / DIR28S2\1073
Project title	Empowering Cabo Verde communities towards responsible practices in artisanal fisheries
Country(ies)	Cabo Verde
Lead Organisation	BirdLife International
Project partner(s)	Biosfera Projecto Vitó (PV) Associação Projeto Biodiversidade (APB) University of Oxford (UO) Portuguese Society for the Study of Birds (SPEA)
Darwin Initiative grant value	£ 579,426.00
Start/end dates of project	01 June 2022 to 31 March 2025
Project Leader name	Tabea Zwimpfer
Project website/blog/social media	N/A
Report author(s) and date	Tabea Zwimpfer, Iderlindo Santos, Ahmed Diame June 2025

## 1 Project Summary

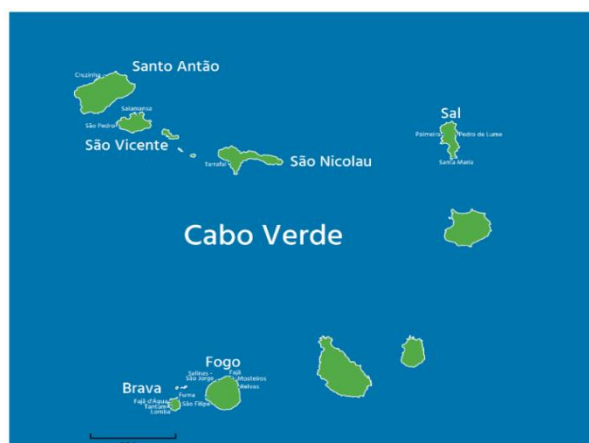


Image 1: Country map and map of six project target

Cabo Verde (CV) is of high global importance for breeding endemic threatened seabirds (Cape Verde shearwater NT) and hosts the third largest population globally of Loggerhead turtles (EN for the Northeast Atlantic population). There are around 5,000 artisanal fishers operating in CV. Bycatch occurs at high rates and has severe impacts on marine biodiversity. A 2020 study (G. Montrond, unpublished thesis) found that 77% of artisanal fishers captured seabirds (mainly Cape Verde shearwater), 55% caught turtles and 86% sharks. For fishers, bycatch has negative impacts - it reduces fishing efficiency, releasing non-target species takes time, and it can cause bait loss and damage fishing gear. Bycatch mortality decreases biodiversity by contributing to localised extinctions of endemic seabird species. Mortality of breeding age adults reduces the breeding stock of these species, and lower recruitment rates and deferred breeding

means populations recover more slowly. Reducing the direct mortality of threatened species in fisheries is a primary tool for conservation of long-lived seabird and turtle species. The

Canary Current Large Marine Ecosystem (CCLME) is one of the most productive worldwide and a primary source of protein and livelihoods for millions of Africans. However, the overexploitation of marine resources by industrial and artisanal fisheries is jeopardizing their sustainability. The future of artisanal fishing communities depends on healthy, sustainable fisheries and the protection of fish breeding areas. Plastic debris pollution from land-based sources is also a major problem in Cabo Verde.

To address these threats, the project pioneered a national community stewardship model through the Guardians of the Sea (GOS) programme, engaging over 185 fishers across six islands in active marine biodiversity monitoring and

bycatch mitigation. Practical trials, such as the deployment of 'scarybird' devices, demonstrated a 55% reduction in seabird bycatch by the trials implemented. Furthermore, the project strengthened Cabo Verde's leadership in regional marine conservation efforts, contributing to platforms like the CCLME and the Coalition for Fisheries Transparency. Innovative initiatives such as the installation of solar-powered ice production systems enhanced post-harvest conservation and improved sustainable livelihoods among artisanal fishing communities.

## 2 Project Partnerships

The Darwin project brought together six core partners who played complementary roles in its implementation: BirdLife International (Lead Partner), Biosfera, Associação Projeto Biodiversidade (APB), Projecto Vitó (PV), University of Oxford (UO), and the Portuguese Society for the Study of Birds (SPEA). These organizations worked in close collaboration throughout the three years of the project, combining technical, scientific, and community-based expertise to implement and monitor activities across the project targeted islands.

Regular coordination was ensured through in-person workshops, technical missions, and steering committee meetings. These meetings were crucial to review progress, identify challenges, propose solutions, foster synergies, and adjust strategic priorities.

Beyond the six main partners, the project maintained strong engagement with national institutions from the outset. Government entities including the Direção Nacional do Ambiente (DNA), Direção Nacional de Pesca e Aquacultura (DNPA), Instituto do Mar (IMar), Inspeção Geral das Pescas (IGP), and the Instituto para Gestão da Qualidade e Propriedade Intelectual (IGQPI) were integral to the project's governance. Focal points from each of these institutions actively participated in the Steering Committee and working groups, ensuring alignment with national policies and facilitating technical input.

Local authorities (municipal councils) and fishing communities were key stakeholders throughout implementation. Their involvement - particularly through the Guardians of the Sea (GOS) program, awareness campaigns, and capacity-building efforts - reinforced the project's community-driven approach and enabled local ownership of marine conservation practices.

A key mechanism supporting project quality and strategic direction was the establishment of the Scientific Expert Committee (SEC), composed of 14 experts in the fields of marine ecology, fisheries, social marketing, and conservation sciences. Formed in June 2023, the SEC provided technical guidance and validation of methodologies, including for bycatch mitigation trials, the labelling process, and population monitoring protocols. It met biannually to advise on scientific approaches, contribute to the development of safe-handling guides, and support the alignment of field implementation with international best practices.

## 3 Project Achievements

All evidence documents can be accessed here: [Link](#)

### 3.1 Outputs

**Output 1. Increased conservation capacity built amongst 3 civil society organizations and 170 Guardians of the Sea (GOS) members; including behaviour change, sustainable fisheries labelling, and voluntary stewardship.**

#### 1. Baseline condition:

At the start of the project, the participating civil society organizations (CSOs) had limited experience with behaviour change methodologies, sustainable fisheries labelling, and structured community-based monitoring. No formalised GOS program was in place in the main target islands (Sal, São Vicente, and Fogo), and self-reporting of bycatch was either absent or informal. Community involvement in marine conservation was very limited (i.e. only 40 fishers were engaged in the GOS programme on Sal Island) with sporadic initiatives, no institutional coordination or standard protocols. Conservation actions related to bycatch of marine megafauna was limited amongst CSOs.

#### 2. Changes recorded by project end:

By the end of the project, meaningful achievements have been made in building conservation capacities among CSOs and artisanal fishers, reflected in stronger technical skills, improved social science approaches, and increased stewardship across the target islands. The project was able to create a strong network working towards making artisanal fisheries more sustainable based on robust science and community involvement in Cabo Verde.

All three national NGOs (APB, Biosfera, and PV) and GOS representatives were introduced to social science methodologies and contributed to the co-development of the project's Theory of Change and audience research among others using the COM-B model (a behaviour change framework that explains that Behaviour (B) occurs as a result of an individual's Capability (C), Opportunity (O), and Motivation (M)). The partners were actively engaged guided by the behaviour change expert and field coordinator, in social science research activities such as audience research, co-designing, implementing and monitoring of interventions. In addition, the Behaviour change field coordinator benefitted from more in-depth training and became more familiar with social science methodologies, enabling her to contribute meaningfully to data analysis and the facilitation of co-design workshops with fishers and project partners among others through online support and in-person training at the University of Oxford. This contributed to increased understanding and capacities regarding behaviour change research and interventions especially in the context of sustainable fisheries and bycatch.

The GOS programme exceeded expectations, expanding from one to six islands and engaging over 185 trained fishers, compared to 40 at the beginning of the project. GOS members are now active leaders in their communities, applying new knowledge in species identification, safe handling and release best practices of bycaught seabirds and

sea turtles, GPS use, waste reduction, first aid, and other sustainable fishing techniques. Their contributions led to systematic data reporting and enhanced community-level monitoring and marine conservation stewardship.

Bycatch data collection is now systematised and scaled across islands using harmonised self-reporting forms. This shift from anecdotal to structured data collection reflects a strengthened monitoring framework and local ownership of conservation efforts while taking into consideration and adapting to local capacities and contexts through innovative approaches such as the use of voice recording and images to reduce the time invested by fishers and adapting to their capacities.

In terms of the labelling component, all involved NGOs now acquired technical expertise in applying sustainable criteria, conducting restaurant audit, supporting traceability and engaging relevant stakeholders. They are equipped to guide restaurants through the full labelling process, monitor compliance with the Code of Conduct, and support local supply chains in meeting sustainability standards.

Fisher and fishmonger associations also experienced institutional growth thanks to the project. Governance structures were reviewed and strengthened, and inclusive leadership was encouraged through initiatives such as *Amdjer d'Mar* (female Guardians of the Sea) in Sal Island, increasing women's visibility and participation. These governance improvements laid the foundation for better service to members and long-term sustainability of local fisheries management. Over the final year, fishmongers in Sal actively engaged in governance training, leadership capacity-building, and the co-creation of an Action Plan. These steps, facilitated by project partners, strengthened their organisational capacity and unity, culminating in the successful formalisation of Sal Island Fishmongers Association (APS). This demonstrates the project's catalytic role in promoting institutional empowerment and ensuring the sustainability of its interventions after the end of the project.

### **3. Problems encountered and how they were resolved:**

The project faced several challenges, notably initial difficulties from fishers to complete bycatch self-reporting forms, which was overcome through regular field support by technicians and trainings, the use of innovative and context specific tools such as audio and photo documentation, and simplified processes.

The project duration limited the implementation and monitoring of behaviour change interventions which need extensive time to show clear results. Efforts such as the training of local staff in behaviour change methodologies at the University of Oxford, ensures long-term capacity building for future interventions and the engagement of all NGOs in behaviour change activities at their respective sites allowed for broader data collection useful for further initiatives and research. Lastly, institutional coordination presented delays, particularly in the labelling component, which was managed through a phased, adaptive engagement strategy with key authorities and stakeholders.

### **4. Sources of evidence:**

Theory of Change documents; COM-B behavioural analysis.

GOS training records, photos, self-reporting forms, MoUs and protocols.

Restaurant Code of Conduct and audit documentation.

Communications strategy, TAOLA+ records, outreach materials.

Bycatch database and incident reports from NGOs

## **Output 2. A pilot participatory local labelling scheme for sustainable fisheries is implemented by fisheries value chain stakeholders (fishers, fishmongers, restaurants, and consumers) in six islands (Sal, São Vicente, Santo Antão, São Nicolau, Fogo, and Brava).**

### **1. Baseline condition:**

At the beginning of the project, no local or national system for sustainable fisheries labelling existed in Cabo Verde. Stakeholders in the fisheries value chain – including fishers, fishmongers, and restaurants – were not involved in any structured scheme promoting sustainability or responsible seafood consumption. Communication strategies for behavioural change had not been developed, and no codes of conduct or formal engagement mechanisms were in place. There was limited understanding of social, economic and institutional barriers to adopting new and sustainable fishing and consumption practices, and institutional coordination was at an early stage.

**2. Changes recorded by project end:** By the end of the project, a total of 103 fishers, 23 fishmongers, and 43 restaurants across four islands of Cabo Verde were actively engaged in the pilot labelling scheme and related awareness-raising activities. As a result, 5 restaurants were awarded a sustainable fisheries label on São Vicente, with an additional 7 on Fogo and 1 on Brava currently being audited. The concept of sustainability has emerged within Cabo Verde's artisanal fishing sector and what began as a technical idea became part of daily conversations among fishers, fishmongers, and restaurant owners across several islands. Through collective effort, a solid foundation for more responsible practices is now visible on the ground. Specifically, a Code of Conduct is now available in the country to guide any sustainable fisheries labelling process in artisanal sector.

Through extensive consultations carried out at the different sites, the project has created a framework where all stakeholders in the fisheries value chain – including fishers, fishmongers, and restaurants were able to express their concerns and expectations regarding the labelling process and discussions with government institutions allowed for the alignment exchange with national processes and guidelines.

The labelling process catalysed a shift from awareness to action across multiple levels. Among fishers and fishmongers, voluntary adoption of better practices – even prior to formal enrolment, demonstrates growing ownership of sustainability principles, resulting in the engagement of 103 fishers and 23 fishmongers, motivated by the perceived potential for added market value. Many fishers believe that the label will attract greater interest from restaurants, hotels, and tourists who increasingly seek responsibly sourced seafood, offering them a competitive advantage. Regarding restaurants, 10 have been audited, and 5 have received the sustainable label, with an additional 8 preparing to align their procedures as they are currently being audited. Practices including respecting minimum catch sizes, observing closed seasons, and paying attention to fish handling and origin is being now implemented both by fishers and restaurants. 50 fishers and 10 fish mongers are already providing sustainable caught fish to the 5 restaurants which

have received the label. 23 fishers and 5 fish mongers are ready to provide sustainably caught fish to the 8 restaurants in Fogo and Brava which are currently being audited.

In addition, restaurants, audits and consumer feedback are reinforcing market value for responsibly sourced fish. The sustainable label for restaurants has been promoted through various channels to increase the awareness with consumers such as tourists leading to increased demand and profitability for restaurants and fishers in the long terms. For example, banners were placed at the international airport of Praia to socialize the sustainable fishing label with consumers. The behaviour change research allowed the identification of key barriers preventing being part of the labelling scheme. Such barriers include strong economic pressures which dominate fishers' daily decisions, leading them to prioritize immediate livelihood needs over practices perceived as reducing fishing efficiency or increasing costs in the short-term. At the institutional level, the dialogue established with IGQPI, IMar, DNPA, and other governmental entities helped build a shared understanding of how local labelling can contribute to national priorities for sustainable fisheries. Although the scheme has not been formalised by law, it is now seen by key institutions as a credible and locally grounded approach – with potential to be integrated into national label processes or fishery management plans in the future.

### **3. Problems encountered and how they were resolved:**

Challenges emerged around the concept and communication of the labelling scheme. Earlier references in the project document to "certification" led to challenges, as the term refers to complex, formal, and often costly procedures requiring extensive stock assessments, traceability systems, and third-party audits, which were beyond the scope and resources of the project. This led to resistance, particularly from fishers and local restaurants, who perceived it as bureaucratic and impractical in the artisanal context of Cabo Verde currently. To address this, the project shifted to the more contextually appropriate term "labelling," focusing on a participatory, voluntary approach based on a locally agreed Code of Conduct. This approach was more accessible, better understood by the fishing communities, and accepted as a feasible pathway to promote responsible fishing practices while recognising and rewarding local efforts. The diversity of actors involved - from fishers and fishmongers to restaurant owners and government institutions - required distinct engagement approaches and continuous dialogue. Initial plans to develop both a fisheries product and restaurant labelling scheme had to be reconsidered due to the high complexity and cost of implementing a fisheries product label.

The combination of institutional gaps and livelihood constraints contributes to some inaction or resistance observed, despite fishers already possessing substantial knowledge of some conservation practices. These barriers were alleviated through relevant trainings and equipment provided through the GOS programme as well as more in-depth discussions and exploration of innovative and context specific processes and approaches to ensure immediate livelihood needs are considered as much as possible such as through exploring the integration of benefit sharing mechanisms into fisheries associations and exploring the use of public or fisheries-related funds, tax exemptions, or targeted donations to offset price increases for sustainably sourced fish and ensure broader inclusion and sustainability of the labelling scheme. Outreach activities to reach relevant value chain stakeholders, faced logistical constraints but were successfully adapted through targeted training and use of local media channels. Furthermore, the practical implementation and sustainability of the labelling, brings about complex processes and implications such as regarding collection and distribution of benefits or taxation for restaurants selling sustainable fish at a higher price which have to be considered case by case taking into account the local context and needs. Relevant solutions being further explored even after this project include the integration of fisheries associations to manage some of these aspects.

### **4. Sources of evidence:**

Baseline behavioural survey (356 respondents) and COM-B Analysis  
Code of conduct and "From the Sea to the Plate" guide  
Restaurant engagement records and audit reports  
Partner training documents and outreach materials.  
Coordination and technical meeting minutes  
Photos of sustainable restaurant label advertisement

**Output 3. Bycatch mitigation measures, including safe release, protecting seabirds and sea turtles and that do not adversely affect other vulnerable species (sharks, rays) are deployed by 600 artisanal fishers around 6 islands and show a 25% reduction of estimated total bycatch of seabirds (compared to Y1 baseline) by Y3 Q3, and 50% of fishers safely release captured seabirds and turtles by Y3 Q3.**

#### **1. Baseline condition:**

At project inception, no systematic bycatch mitigation or safe-handling strategies were in place for artisanal fisheries in Cabo Verde. Self-reporting of bycatch was not common practice, and artisanal fishers lacked knowledge, tools, and training on mitigation measures. Existing data on the extent and nature of bycatch was sparse and limited to preliminary and sporadic surveys. Only Sal Island had initiated self-reporting through the GOS programme. A revised baseline set at the year 1 of the project through interviews across the 6 islands (Fogo, Brava, Sal, Sao Vicente, Santo Antao, and Sao Nicolau) showed that 16% of fishers reported catching seabird while the data from the self-report forms indicated that 0% of fishers declared releasing safely sea turtles and 47% seabirds.

#### **2. Changes recorded by project end:**

By the end of the project, coordinated bycatch mitigation strategies and safe-handling and release practices were in place across six islands. Substantial progress had been made in reducing bycatch risks and building mitigation capacity among artisanal fishers across target sites.

The EOP survey conducted in 3 main localities of the project (Sao Vicente, Fogo, and Brava) showed that 11% of interviewed fishers declared bycatch of seabirds while during the revised baseline survey, the percentage of fishers who declared bycatch of seabirds in these same localities was 7.3%. This shows an increase of 50.6% of fishers reporting bycatch of seabirds. This result aligns with the bycatch data collected through the self-report form which also

show an increase of the reported bycatch during the project period. These results can be explained by 3 main elements. Firstly, by the end of the project, fishermen were more confident to speak openly about the bycatch compared to the beginning of the project due to continuous engagements and building of trust. Secondly, the efforts made by partners to recruit more GOS likely encouraged greater participation and consistency in self-reporting, contributing to the observed increase in reporting bycatch. Lastly, the continuous capacity building of GOS on data collection methodology contributed to this as they became more familiar with the reporting forms and methods.

In parallel, safe handling and release techniques for seabirds and sea turtles were widely promoted, reaching over 185 fishers across all target islands compared to zero at the start of the project. At the end of the project, 100% of sea turtles bycaught were safely released while for the seabirds an increase of 7% was noted (from 47% during baseline to 54% at the end of the project). As a seabird bycatch mitigation measure, 66 scarybirds<sup>1</sup> have been introduced in the different project sites leading to the use of this device by around 200 fishers. The results of the scarybird trial across the islands showed a 55% reduction on the bycatch rate when comparing control-trip without scarybird (0.29 birds/trip) with experimental trips – trips with scarybird (0.16 birds/trips). Moreover, the number of fishing trips with bycatch occurrence was significantly higher during control trip (19%) than in experimental trips (9%). Also, a comparison of the dive rate<sup>2</sup> of Cape Verde Shearwater was significantly lower during experimental (0.69 ± 1.76 dives/trip) than during control trips (1.46 ± 2.72 dives/trip). Finally, the number of fishing trips with dive occurrence of those species lumped together (Red-billed Tropicbird, Boyd's Shearwater, Brown Booby and White-faced Storm-petrel) was significantly higher during control trip (20%) than in experimental trips (9%).

Fishers (GOS) across all project target sites are now actively documenting bycatch using harmonised self-reporting forms and a shared database developed in collaboration in partner NGOs. Currently, GOS members are embedded in the national conservation network and collaborate with local NGO partners at each site, which provides a strong foundation. However, ensuring the sustainability of this system beyond the project will require ongoing institutional backing and integration into national monitoring frameworks, beyond the current NGO-led structure.

The Scientific Expert Committee (SEC) played a key role in ensuring scientific rigour throughout these processes regarding bycatch mitigation validating methodologies, supporting trial designs, and endorsing key technical tools such as the safe-handling manual.

Behavioural insight work conducted through the national baseline study using the COM-B model enabled the co-design of an outreach strategy that contributed to observable changes in fishers' attitudes and practices within the project timeframe. These included increased awareness of sustainable fishing principles, more frequent use of measuring rulers and safer handling of bycaught species, as reported during community exchanges and monitoring visits. While long-term change requires sustained engagement, these early results demonstrate that the strategy is already influencing day-to-day behaviours. The social behaviour research also identifies the key barriers for the adoption of the mitigation measures. This study identified lack of awareness on sustainable fishing practices, lack of adequate and continuous support, including capacity building, from authorities, and the economic drivers as the main barriers that contribute to the inaction of fishers. Additionally, by integrating bycatch prevention into the revised audit framework of the sustainable restaurant labelling scheme, the project elevated mitigation actions from voluntary practice to a recognised criterion for sustainability. This contributed to five restaurants earning the sustainable label, reflecting a cultural shift toward more responsible seafood sourcing. However, continued efforts are needed to further define and solidify these processes, taking into account the local context, stakeholder interests, and institutional arrangements to ensure an efficient and well-managed approach to responsible seafood production that benefits local fisher.

### **3. Problems encountered and how they were resolved:**

Inconsistent data collection across islands was mitigated by harmonising forms and deploying trained technicians to ensure quality of data collected on bycatch. Species identification challenges were addressed through illustrated guides and photo validation. Reluctance by some fishers to complete self-reporting forms and implement the scarybird trials due to the additional time and efforts this task requires during fishing activities, and their low level of education led to the use of audio recorder tools and the recruitment of observers that facilitate the process.

### **4. Sources of evidence:**

Bycatch self-reporting forms and databases  
Baseline survey analysis and mitigation trial results (SPEA)  
Safe handling manuals  
Social and behaviour change report  
Policy meeting records and stakeholder engagement summaries  
Audit reports and labelling compliance documents  
SEC meeting minutes and technical reviews  
At-sea threats consultancy preliminary report

**Output 4. Knowledge on nature and extent of interactions between seabirds and sea turtles in artisanal fisheries is improved and informs bycatch mitigation policies and solutions being used by artisanal fishers in Cabo Verde and in the wider West Africa region by EoP.**

#### **1. Baseline condition:**

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<sup>1</sup> A predator bird shaped kite which mimics the flights of a bird of prey, scaring pest birds away

<sup>2</sup> A dive rate was estimated as the ratio between the number of dives towards the hooks and the number of fishing trips

At the start of the project, knowledge on the spatial and temporal dynamics of interactions between artisanal fisheries and vulnerable marine species such as seabirds and sea turtles in Cabo Verde was scattered and largely anecdotal. Population monitoring was being conducted by some NGOs, but there was no standardized protocol or integrated regional analysis. The GOS program was operational only on Sal Island, and the Scientific Expert Committee (SEC) had not yet been established. Awareness among fishers and policymakers about these interactions and associated risks was low, and limited materials or platforms existed to communicate mitigation strategies at the regional level.

## **2. Changes recorded by project end:**

By the end of the project, the available data collected provided a comprehensive evaluation of artisanal fisheries bycatch patterns, species-specific vulnerabilities, and the preliminary effectiveness of mitigation strategies in Cabo Verde. Thanks to the efforts made by the project, particularly in data collection, we have a better understanding of the nature and extent of interactions between artisanal fishing and seabirds and sea turtles in Cabo Verde. We have been able to establish the bycatch rates for these species and identify the species most affected, the areas and the periods at high risk of accidental capture. Among birds, the Cape Verde shearwater remains the most affected species by the fishing activities, followed by the red-billed tropicbird and the brown booby. It also appears that the periods with the highest risk of accidental capture for these species correspond to the breeding season (June to August) and the time when juveniles leave the nests (October to November). The seabird bycatch hotspots remain Sal and Fogo areas. As far as marine turtles are concerned, the loggerhead turtle is the species most affected by bycatch.

These results are consistent with those observed in the region and provide clear guidance on the policy actions and technical measures to be implemented to mitigate the bycatch of seabirds and sea turtles in artisanal fisheries in Cabo Verde and beyond, in West Africa.

The SEC was officially established in June 2023 and included 14 scientific experts who contributed to reviewing training materials, advising on mitigation strategies, and evaluating scientific outputs. It held biannual meetings and played a key role in strengthening the project's technical rigour.

Outreach efforts significantly expanded public awareness of sustainable fishing and species protection. Multimedia campaigns were carried out using billboards, posters, measurement rulers, and radio and TV programmes - most notably the "Mundo Sustentável" series - reaching thousands of community members across six islands.

The project's results informed advocacy processes at national and regional levels. Key learnings were presented at various national and regional events, including the CCLME Symposium in Guinea-Bissau, International Congress for Conservation Biology (ICCB 2023) in Kigali, a Coalition for Fisheries Transparency workshop in Ghana, the 11th edition of the Regional Coastal and Marine Forum of the PRCM in Guinea-Bissau and the Regional Sustainable Ocean Initiative workshop of the CBD in Senegal. In Cabo Verde, the project contributed to national-level discussions on marine megafauna bycatch mitigation in both artisanal and industrial fisheries by sharing evidence and recommendations with government entities. These contributions are feeding into national biodiversity reporting and ongoing marine policy dialogues such as the recently renewed Fisheries' Agreement between the EU and Cabo Verde which contains specific provisions on seabird and sea turtle bycatch mitigation measures.

## **3. Problems encountered and how they were resolved:**

Delays in formalising the SEC were resolved by mid-2023, allowing it to contribute effectively by Y2 Q1. Variability in outreach capacity across islands was mitigated by developing context-specific materials and leveraging local partnerships. Though linking population recovery trends directly to bycatch reduction remains complex, consistent monitoring and GOS engagement strengthened the evidence base. More time and data are needed to be able to influence the fisheries policies with strong datasets.

## **4. Sources of evidence:**

SEC terms of reference, membership list

Monitoring data from 2020 - 2024 for seabirds and sea turtles

GOS training records and reporting tools

Outreach (radio scripts, billboards, Ruler for measuring fish size, posters, Mundo Sustentável broadcast records)

Social marketing summary report

Records of policy dialogues and Steering Committee meetings

Presentations at CCLME Symposium (Guinea-Bissau), ICCB 2023 (Kigali), and Ghana regional workshop for Coalition for Fisheries Transparency

**Output 5. At least 70% (n=370) of pilot participatory sustainable fisheries labelling scheme participants (260 people, ~35% women) directly benefit from a 10% increase in income (compared to baseline) by joining the scheme and co-create livelihood benefits, shared amongst the communities for approx. 1,200 people with increasing equitability across genders.**

## **1. Baseline condition:**

At the project's outset, fisher and fishmonger associations lacked robust governance structures and operational capacity. Social protection coverage was limited among fishers. Average income levels ranged from 15,000 to 30,000 CVE/month (~GBP 114-228/month), with no consistent systems to monitor post-harvest losses or income gains. Safety equipment for artisanal fisheries was almost non-existent, and practices related to fish handling, hygiene, and cold storage were inconsistent. Engagement with fiscal and insurance systems was minimal, particularly in informal settings like artisanal fisheries.

## **2. Changes recorded by project end:**

By the end of project, there is a marked improvement in the institutional, technical, and economic conditions for fishers and fishmongers participating in the sustainable fisheries labelling scheme.

Fishers and fishmongers from 11 associations – totalling 1,116 individuals (873 men and 243 women), including members of management bodies, had directly or indirectly benefited from strengthened organisational governance

and practical capabilities, enabling them to manage resources, improve livelihoods, and reduce loss along the value chain. Structured capacity-building and field-based mentorship helped transition several informal associations into more empowered community actors, as evidenced by their formal registration such as “*Amdjer do Mar*” initiative in Sal Island.

The solar-powered ice production systems installed in Palmeira and Santa Maria (Sal Island) significantly improved fish preservation and market conditions. These systems reduced the cost of ice from 30 CVE/kg (150 CVE per 5 kg) to 20 CVE/kg - a 33% price reduction - resulting in estimated monthly savings of up to 4,000 CVE per fisher. More than 90 participants were trained in fish hygiene and quality management. Fishers report negligible post-harvest losses, with effective use of cooling boxes or traditional drying techniques. In total, across the different project target sites, 33 cooling boxes were distributed, and safety equipment (GPS, life jackets, radios) was provided to 185 GOS members.

Income benefits are beginning to emerge among the 126 individuals engaged in the labelling scheme (103 men and 23 women). Although the full impact on income is not yet quantifiable due to the gradual rollout of the labelling system, early data show that enhanced cold storage and better governance have increased product quality and market potential. In Sal Island, the women-led “*Amdjer d’Mar*” initiative has gained visibility, contributing to stronger gender inclusion and leadership.

Through the project, the groundwork to bridge gaps in tax literacy and social protection, has been laid. Collaborations with INPS (national institute of social security) and DNPA allowed more fishers and fishmongers to begin formalising their work and accessing services such as insurance. These processes are expected to continue beyond the project through national and local partnerships, including Biosfera’s new initiative with the São Vicente fishmongers’ association. This new effort, supported by Spanish Cooperation and implemented in partnership with a Spanish NGO, aims to deepen the labelling scheme among fishmongers, strengthen the Guardians of the Sea programme, and expand awareness and capacity-building activities at the community level.

### 3. Problems encountered and how they were resolved:

The limited access to the cold storage and ice production infrastructure combined with low familiarity with fiscal and social protection system initially slowed the improved fish handling practices and formal sector engagement. These challenges were mitigated through decentralised equipment distribution, renewable energy investments, and tailored training for women and men. While income measurement remains challenging, the groundwork for sustainable benefits has been laid.

### 4. Sources of evidence:

SWOT analysis, Governance Guiding Plan, and partner training materials  
 Inception workshop notes and baseline income survey data  
 Safety equipment procurement and distribution records  
 GOS visit and training reports (e.g., offboard engine maintenance, maritime safety)  
 HACCP study, Good Practices Manual, and training workshop documentation  
 Cooling chest distribution and solar panel pilot project document  
 Minutes of meetings with INPS and DNPA regarding social protection  
 Photographic and testimonial evidence of improvements

## 3.2 Outcome

<p>Outcome:</p> <p>Fishing communities in 6 Cabo Verde islands engage in sustainable, locally defined labelling practices providing livelihood benefits to 1,200 people, reducing seabird bycatch by 25% and turtle unsafe release by 50%.</p>	
<p>Indicator 0.1 By End of Project (EoP), three civil society organizations and 170 Guardians of the Sea (GOS) members have increased capacity for delivering conservation action and visibility as role models.</p>	<p>Baseline condition: 1 NGO trained and 40 GOS engaged at 1 island (Sal)</p> <p>By the end of project, all three NGO partners (Biosfera, APV and APB) had been trained to engage and support fishers to be part of the GOS program. More than 185 fishers were engaged on the program across even more than the previous target sites, including Sal, São Vicente, Fogo, Brava, Santo Antão, Boa Vista and Maio Island, receiving structured training in species monitoring, safe handling, and sustainable fishing practices. This expansion significantly exceeded the initial target and strengthened community-led stewardship in marine conservation.</p> <p>Evidence: See Output 1 – GOS training reports, participant lists, and photographic documentation.</p>
<p>Indicator 0.2 A local, pilot participatory labelling scheme is replicated in six islands of Cabo Verde engaging at least 240 fishers (M) and 130 fish mongers (F) and 50 restaurants and results inform wider uptake by EoP.</p>	<p>By project end, the restaurant focused labelling scheme was implemented in São Vicente, Brava and Fogo, supported by a validated code of conduct. On São Vicente audits were conducted in 10 restaurants, 5 of which received the sustainable fisheries label. On the islands of Fogo and Brava, 18 restaurants (14 in Fogo and 4 in Brava) participated in initial engagement meetings, leading to a formal registration of 7 restaurants in Fogo and 1 in Brava for auditing and potential award of the sustainable fisheries label. While the formal legal certification process, initially proposed, did not advance due to regulatory and logistical constraints, implementing partners successfully adapted the strategy based on the local context and needs. 73 fishers (M) and 15</p>

	<p>fishmongers (F) are engaged in the labelling scheme in São Vicente, Fogo and Brava. In Sal, around 30 fishers, 8 fishmongers, and 15 restaurants were engaged in awareness campaigns on sustainable fishing practices, despite deciding not to proceed with the labelling due to legal and economic barriers. Although full replication across six islands was not achieved, interest in expansion was expressed in certain islands where the initiative will be taken forward even after the project end.</p> <p>Evidence: Code of conduct, audit reports, lists of engaged restaurants and interested stakeholders, partner implementation reports.</p>
Indicator 0.3 By EoP, at least 50% decrease in catch of under-sized, blue-dotted seabass and lobster, caught by GOS and fishers who joined the labelling (n= 240) compared to year 1 baselines.	<p>Baseline data collected showed that, out of 509 captured, blue-dotted seabass individuals, only 21 (approximately 4%) were below the legal minimum size of 27 cm. While final quantitative data to confirm a 50% reduction is still being consolidated, the proportion of undersized catch was already relatively low. The feedback from GOS members indicates a good understanding and adherence to minimum size regulations, reinforced through training sessions, awareness materials, and peer-to-peer influence within fishing communities. In islands like Fogo, the data collected with GOS showed that approximately 70% of members respected the legal size for blue-dotted seabass, with similar practices reported informally by partners in São Vicente and Sal. GOS highlighted that compliance was not only driven by regulation, but also by market preference for larger specimens, and an increasing recognition of the ecological and economic benefits of sustainable harvesting.</p> <p>Throughout the project, awareness campaigns and training workshops across multiple islands were held with targeted GOS members and fishing communities on the importance of respecting the minimum landing sizes and seasonal closures. Feedback from communities and NGOs suggests a shift in attitudes and practices toward more sustainable harvesting, particularly among GOS members.</p> <p>Evidence: Awareness campaign materials, workshop reports, partner feedback, national fisheries guidelines dissemination.</p>
Indicator 0.4 By EoP, at least 50% of fishers (GOS and fishers who joined the labelling (n=240)) report a decrease in waste discard against year 1 baselines.	<p>By project end, significant improvements were observed in waste management practices among the 185 fishers engaged in the GOS programme. Sensitization campaigns and behaviour change activities on marine pollution and proper gear disposal were conducted across all participating islands. Observations by partners and reports from GOS members indicate that nearly all participating fishers now dispose of their waste properly, with many voluntarily collecting marine litter during fishing trips and while stationed on islets. While quantitative reductions in waste discard could not be measured, qualitative feedback strongly suggests a decrease in waste dumping both at sea and at landing sites. For example, at least 33 fishers received cooling boxes, reducing reliance on single-use plastic bottles previously used to cool the catch and often discarded into the environment. A complementary activity trained community members to repurpose discarded fishing nets into products such as souvenir bags - increasing the collection and recycling of old gear while supporting alternative livelihoods.</p> <p>Evidence: Training reports including report on waste recycling workshop, HACCP study, photos and videos submitted by GOS, good practice manual.</p>
Indicator 0.5 By EoP, at least ~30% of fishers engaged around the 6 islands are actively performing behaviour changes to minimize unsustainable fishing practices.	<p>By the end of the project, significant progress was made in shifting fisher behaviour. Across all six islands, the total of 185 GOS and other participating fishers reported improvements in practices, including compliance with closed seasons, safer handling of non-target species, and better waste management. This represents 34% of the total fishers engaged (n=538) in the project and includes adoption of other behaviours such as 200 fishers applying the scarybird as a bycatch mitigation device and change of bait from squid to fish. In Sal, a survey concluded that 60% of the fishers involved in the trials indicated that they would want to continue to use the scarybird. All GOS involved in the self-reporting are performing safe release techniques to bycaught seabirds and sea turtles. In addition, a targeted process-tracing evaluation confirmed changes aligned with the project's Theory of Change. Interviews from a cross-island exchange validated increased use of mitigation measures supported by direct empirical evidence, strong endorsement of the GOS model, and enhanced trust in supporting NGOs.</p>



	Evidence: Self-reporting forms, behaviour change campaign reports
Indicator 0.6 By Y3 Q3, estimated total bycatch of seabirds is reduced by 25% and adherence to the guidelines for release of captured seabirds and turtles is at least 50%.	<p>A revised baseline set at the year 1 of the project through interviews across the 6 islands (Fogo, Brava, Sal, Sao Vicente, Santo Antao, and Sao Nicolau) showed that 16% of fishers reported catching seabirds. The EOP survey conducted in 3 main localities of the project (Sao Vicente, Fogo, and Brava) showed that 11% of interviewed fishers declared bycatch of seabirds while during the revised baseline survey, the percentage of fishers who declared bycatch of seabirds in these same localities was 7.3%. This shows an increase of 50.6% of fishers reporting bycatch of seabirds. This result aligns with the bycatch data collected through the self-report form which also show an increase of the reported bycatch during the project period. These results can be led by 3 main elements: (1) by the end of the project, fishermen were more confident to share to speak openly about the bycatch compared at the beginning of the project; (2) the efforts made by partners to recruit more GOS likely encouraged greater participation and consistency in self-reporting, contributing to the observed increase in reporting bycatch; and (3) the continuous capacity building of GOS on data collection methodology contributed to this as they became more familiar with the forms.</p> <p>In parallel, safe handling and release techniques for seabirds and sea turtles were widely promoted, reaching over 185 fishers across all islands compared to zero (0) at the start of the project. This has led to an increase of safely released bycatch of seabirds and sea turtles by GOS members in the project time.</p> <p>In addition, the project has introduced 66 scarybirds in Cabo Verde. The results of the trials of this device have showed a reduction of 55% of the dive rate, which estimate the ratio between the number of dives towards the hooks and the number of fishing trips, leading to a reduction of the bycatch risk.</p> <p>All these combined efforts show that the conditions are set for the Cabo Verde artisanal fisheries to have less impact on the seabird and sea turtle population going forward.</p> <p>Evidence: Self-reporting forms; training records; scarybird trial analysis; mitigation session reports from Steering Committee Meeting 2024.</p>
Indicator 0.7 At least 70% of fishers and fish mongers engaged in the labelling program (n=370, including 240 fishers (M) and 130 fish mongers (F)) report an increase in income (compared to baseline) resulting from reduced fish waste through improved cold-storage facilities at sea and on land, increased fishing efficiency, higher market price for sustainably fished product.	<p>Baseline condition: Average salary: 150-350 GBP per month</p> <p>Although the full income impact from the labelling programme could not be fully measured by project end, significant structural improvements were made. A total of 538 fishermen and fishmongers (including fewer than 100 women) benefitted from hygiene trainings and equipment to improve fish conservation and ice production. Fish waste is at 0 with fishers reporting that all fish is either being sold fresh or dried.</p> <p>33 fishers received cooling boxes, improving fish conservation and marketability. Solar-powered ice production systems installed in Palmeira and Santa Maria (Sal Island) significantly improved fish preservation and market conditions. These systems reduced the cost of ice from 30 CVE/kg (150 CVE per 5 kg) to 20 CVE/kg - a 33% price reduction - resulting in estimated monthly savings of up to 4,000 CVE per fisher. Fishers also reported increased product quality, better hygiene, and greater potential for sales, particularly in São Vicente and Sal.</p> <p>Evidence: Partner implementation reports, solar panel pilot project documentation, cooling box distribution records, testimonials.</p>
Indicator 0.8 By EoP, at least ~20% decrease in post-harvest loss of catch for 600 fishers and fish mongers within the 14 associations taking part in the project due to improved sanitary measures for the handling, cooling, and processing of fish along the value chain.	<p>While post-harvest loss has not been a major concern reported by fishers, who consistently indicated that all catch is either sold, preserved, or consumed - the project focused on improving product quality and maintaining freshness through better cold storage and access of ice. Over 90 participants were trained in hygienic handling and fish preservation practices based on HACCP principles. Across the target sites, 33 fishers received cooling boxes, and solar-powered ice production units were installed in the fishers' associations in Palmeira and Santa Maria, in Sal Island, benefiting over 365 individuals (200+ in Palmeira and 165 in Santa Maria). These systems improve trust in cold chain, reduced operational cost (20 CVE/kg vs. market price that is</p>

	<p>minimum 30 CVE/kg) and enhanced the overall resilience of fish value chain. In São Vicente Island, about 4 tonnes of ice were distributed to GOS members as an incentive, further supporting fish freshness and reducing any risk of spoilage. These combined actions reflect a meaningful contribution to quality assurance and income security for artisanal fishers.</p> <p>Evidence: HACCP report, training attendance sheets, cooling box distribution and use photos, solar infrastructure documentation.</p>
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### 3.3 Monitoring of assumptions

Throughout the project, continuous and appropriate monitoring of the assumptions was done to track any changes. Changes are reported on in the project's annual reports.

In this project, all assumptions hold true, and more details are provided in Annex 5, except for the following:

Assumption 5.0: The assumption is that there are 5 people per household in Cabo Verde and that resources are shared within a household.

Comments: This assumption has been revised as follows: "There are 3.3 people per household in Cabo Verde and that resources are shared within a household."

The expected pathway to change holds true.

### 3.4 Impact

The project contributed to the recovery of marine biodiversity - particularly seabirds, sea turtles, and other vulnerable marine species - through improved artisanal fisheries management and community engagement in Cabo Verde. This included empowering local communities to adopt sustainable fishing practices and reduce pressures on marine ecosystems, while also enhancing livelihoods and socio-economic well-being.

#### Contribution to biodiversity conservation:

The project directly supported the conservation of marine biodiversity by reducing threats such as bycatch and unsustainable fishing practices. Through awareness campaigns, research-action, tailored behaviour changes actions, training on safe handling and release methods, and implementation of mitigation measures like the scarybird device, the project contributed to understanding the extent and nature of the bycatch of seabird and sea turtles in the country, and the identification of the effective mitigation measures. Monitoring data collected through self-reporting forms and partner assessments allowed for more accurate tracking of species occurrence and threats (see Output 4.2), enabling adaptive management. The GOS program further reinforced long-term conservation by engaging fishers as local stewards and data collectors to protect and monitor the marine ecosystem.

#### Contribution to human development and poverty reduction:

As outlined in section 4.2, the project contributed to poverty reduction by strengthening local fishery associations, improving access to safety and cold storage equipment, and enhancing the market value of sustainably source seafood through labelling schemes. More than 50 restaurants expressed interest in sustainable seafood labelling, with 28 actively engaged and 5 already having received the label with an additional 8 currently being audited. In Sal Island, the installation of solar-powered ice production reduced costs by over 33%, directly benefiting more than 350 fishers and fishmongers (see Output 5.4) and resulting in estimated monthly savings of up to 4,000 CVE per fisher. Women's participation was promoted throughout the value chain, particularly in fish processing and market innovation activities. These efforts contributed not only to gender inclusion but also to improved income diversification. Moreover, the programme helped formalise women's roles in the fishing value chain by expanding their engagement through initiatives aligned with the Guardians of the Sea model.

Through its integrated approach combining conservation, capacity building, and local economic empowerment, the project has made a lasting contribution to both biodiversity protection and human development in Cabo Verde.

## 4 Contribution to Darwin Initiative Programme Objectives

### 4.1 Project support to the Conventions, Treaties or Agreements

The project has contributed directly to national and international policy frameworks through conservation, sustainable fisheries management, and bycatch mitigation activities.

At the national level, it supported the implementation of Cabo Verde's National Action Plan for the Conservation of Seabirds, developed with the National Directorate for the Environment (DNA), and contributed directly to Cabo Verde's revised national biodiversity targets aligned with the Global Biodiversity Framework (GBF), namely: Target 3 (Conserve Terrestrial, Coastal and Marine Areas), Target 6 (Reduce the Introduction of Invasive Alien Species and Minimize Their Impact), Target 7 (Reduce Pollution to Levels That Are Not Harmful to Biodiversity), Target 8 (Minimize

the Impacts of Climate Change on Biodiversity and Build Resilience, and Target 13 (Increase the Sharing of Benefits From Genetic Resources and Traditional Knowledge).

The project also aligns with Cabo Verde’s NDC adaptation goal #4, promoting regenerative fishing and coastal resilience.

At the international level, it supports the Convention on Biological Diversity (CBD): Objective 1: Conservation of biodiversity through marine species protection; Objective 2: Sustainable use via the fisheries labelling and mitigation strategies; GBF Targets: Target 4 (halt species extinction), Target 5 (sustainable harvesting), and Target 10 (biodiversity in fisheries).

Under the Convention on Migratory Species (CMS), the project’s work with sea turtle specie *Caretta caretta* and migratory seabirds is aligned with the CMS mandate for the conservation of migratory marine species and their habitats.

The project’s data and tools (e.g., bycatch monitoring protocols, GOS programme) have also supported the preparation of Cabo Verde’s national biodiversity reports for 2022 and 2023 and contributed to regional processes such as the Canary Current Large Marine Ecosystem, the Coalition for Fisheries Transparency, and PRCM platforms.

Finally, the project supports SDG 12 (sustainable consumption) and SDG 14 (ocean conservation), notably Target 14.4 on sustainable fish stock management.

4.2 Project support for multidimensional poverty reduction

The project contributed to poverty reduction by improving the livelihoods, wellbeing, and resilience of artisanal fishing communities across six islands of Cabo Verde. These communities are highly dependent on marine resources and face both economic vulnerability and limited access to social protection systems.

Through the local sustainable fisheries labelling scheme, the project enabled fishers and fishmongers to improve fish quality, access better markets, and gain recognition for sustainable practices. A total of 103 fishers and 23 fishmongers voluntarily engaged in the process, many even before formal enrolment, reflecting a growing sense of ownership over sustainability principles and a shared expectation of added market value. These fishers and fishmongers benefited from improved income opportunities, supported by the provision of cooling boxes and solar-powered ice production systems, which helped reduce post-harvest loss and operational costs - such as a 33% reduction in ice prices in Sal Island. The development of a labelling scheme based on ongoing engagements with fishers, fishmongers and restaurants will continue after the project at least on Sao Vicente, Fogo and Brava to continue to improve the value chain of sustainable fish production.

The GOS programme empowered 185 volunteer fishers, providing them with training, equipment, and leadership roles within their communities, thereby enhancing their skills, agency, and local visibility. GOS members gained knowledge on bycatch reduction, marine biodiversity, and fisheries legislation, strengthening their role in community governance and environmental stewardship. The GOS programme continues on all islands beyond the project, ensuring long-term impact on the livelihoods of fishers and increased ocean stewardship for improved marine ecosystem services.

Workshops on social benefits (e.g., taxes, insurance, and financial inclusion) increased awareness of social protection mechanisms. The project also fostered community organization by strengthening 11 fisheries and fishmonger associations through organizational and capacity development trainings regarding governance tools, safety equipment, and strategic planning.

The behavioural change strategy, combined with peer learning and awareness campaigns, contributed to long-term shifts in practices - such as safer fish handling, bycatch mitigation, and reduced waste disposal at sea - linking environmental sustainability with economic and social benefits.

Overall, the project demonstrated how conservation actions can directly contribute to human development, aligning biodiversity outcomes with enhanced income, food security, community agency, and equitable access to resources.

4.3 Gender Equality and Social Inclusion (GESI)

Please quantify the proportion of women on the Project Board <sup>3</sup> .	Around 45%
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>4</sup> .	60%

<sup>3</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>4</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.

GESI Scale	Description	Put X where you think your project is on the scale
Empowering	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

The project took the GESI context into account from its early design and progressively adopted an empowering approach. Women and marginalised groups were meaningfully included across the value chain. Proactive engagement and practical trainings were held to strengthen for example association governance and food safety and hygiene, and relevant equipment were provided to improve their livelihoods and sustainable practices in fishing communities.

At the governance level, approximately 45% of the project board were women, and around 60% of partner organisations had women in leadership roles or with 50% or more representation in their senior management teams. This fostered a culture of inclusiveness that filtered through implementation.

Building on initiatives such as the 'Empowerment Project' previously launched in Sal, the Darwin project scaled up the inclusion of women across all intervention islands. This included direct participation in fishers' associations, capacity-building in safe fish handling, hygiene, and financial literacy, and leadership roles through platforms like the *Amdjer d'Mar* initiative in Sal. Women also benefited from equipment distribution (e.g. solar-powered ice machines) and shared infrastructure that directly enhanced their livelihoods.

To ensure meaningful participation, women were invited to several training and community events. Gender-disaggregated data was collected to track engagement. The project engaged approximately 150 women in training and capacity-building activities across the islands of Sal, São Vicente, Fogo, and Brava. These included workshops on sustainable fish marketing, product diversification, hygiene and handling, financial education, business incubation, and fisheries certification. The project also supported the continued formalisation of women's associations and provided administrative support for access to social protection schemes, including tax and insurance enrolment.

Key lessons include the need to tailor support to local contexts and build long-term structures for inclusion. The combination of grassroots engagement and institutional coordination created pathways for sustained change. While challenges remain in ensuring long-term policy integration, the foundations for equitable participation have been established and are being continued through locally driven initiatives post-project.

## 4.4 Transfer of knowledge

The project actively facilitated knowledge transfer to practitioners and policymakers at local, national, and international levels. At the national level, knowledge exchange and uptake were supported through the Scientific Expert Committee (SEC), the Steering Committee, and monthly coordination meetings. Project partners also shared technical insights with institutions like IGQPI, DNA, DNPA and IMar, contributing to national discussions on sustainable fisheries labelling and bycatch mitigation. With both the DNA and DNPA represented on the project's Steering Committee, they actively participated in meetings and contributed to the working groups. In addition, representatives from key national institutions were engaged in training sessions and capacity-building activities—such as safe handling and release trainings. This inclusive approach fostered stronger collaboration across institutions and facilitated the uptake of knowledge and practices, laying the foundation for long-term improvements in artisanal fishing communities in Cabo Verde.

At the community level, over 185 GOS participated in hands-on training sessions covering safe handling and release of bycaught species, data collection, and responsible fishing practices. These efforts were complemented by community outreach through TV and radio programmes, fish market posters, and awareness campaigns, extending the reach of this knowledge to broader fishing communities and the general public. The GOS programme is designed to foster knowledge sharing, co-learning, and the uptake of sustainable practices, promoting shared stewardship of the ocean. As the network of fishers continues to grow, it will enable ongoing exchange, learning, and long-term behavioural change. Specifically, a knowledge exchange and behaviour change campaign was organized with 11 GOS from various islands who visited schools, radio and fishing communities in Sal Island. These interactions enable the sharing of lesson learnt and practical experiences and helped to build long-term relationships that reinforce collaboration and mutual support across the network.

As part of the project's efforts to strengthen regional collaboration, a regional exchange visit was held from 16 - 20 September 2024 in Sal Island, Cabo Verde, bringing together over 15 participants, including representatives from 5 Cabo Verdean NGOs (APB, Projeto Vitó, Lantuna, Bios CV, and Biosfera), 4 BirdLife partner organisations (Senegal, Guinea-Bissau, Morocco, and Mauritania), and government agencies from Senegal and Guinea-Bissau. The exchange focused on building capacity in seabird conservation, advocacy, and community engagement. Participants shared experiences, discussed challenges and successes, and visited local conservation sites, contributing to the establishment of a regional network of practitioners committed to strengthening seabird protection across West and North Africa.

The formal certification of 63 GOS across Fogo and Brava Islands represents not only capacity building but also a critical step in knowledge transfer. Delivered through partnerships with Employment and Vocational Training Centre (CEFP), NGO Biflores, and Sea School (EMAR - Escola do Mar, from São Vicente), the trainings bridged informal practical know-how with formal technical knowledge. The diplomas, officially recognised by national vocational Darwin Initiative Main & Extra Final Report Template 2025

institutions, serve as both a validation of acquired knowledge and a mechanism to reinforce the practical application of sustainable fishing and conservation principles. By formally acknowledging GOS members' competencies, these certifications encourage peer learning, community replication, and greater uptake of conservation practices in everyday fishing activities.

Relevant content was shared through print outs, social media and radio such as on safe-handling best practices guides (250), species identification guides for fishers, and existing bycatch mitigation techniques.

Internationally, the project shared results and tools during regional and global events such as the 11th edition of the Regional Coastal and Marine Forum (Guinea-Bissau), CCLME Symposium (Guinea-Bissau), the Coalition for Fisheries Transparency (Ghana), ICCB 2023 (Kigali), and Regional Sustainable Ocean Initiative workshop of the CBD (Senegal) promoting cross-country learning and recognition of relevant efforts such as the GOS model as a citizen science innovation. Various publications including BLI newsletters and an article on Safeguarding marine resources through the Darwin Initiative call for articles were developed and published.

This approach ensured that scientific knowledge, field evidence, and community innovations were effectively communicated to influence policy, inform practice, and foster regional collaboration.

## 4.5 Capacity building

Over the course of the project, significant capacity was built among local NGOs, fishing associations, and community members. Staff from partners such as Biosfera, APB, and Projeto Vitó gained national and regional visibility, participating in technical consultations and presenting experiences at regional events. Staff of Biosfera was invited to meetings such as the Council of Africa Partnership of BirdLife International in Senegal with African partners present to share experiences and knowledge. The two main project staff at Biosfera (1 male and 1 female) were promoted in the last year of the project.

The project empowered 185 GOS, who assumed leadership roles in promoting and monitoring sustainable fishing practices and performing behaviour change techniques across six islands. Additionally, fishers from other islands, over 30, not directly involved in the project aligned themselves with the GOS programme, contributing to the expansion and reinforcement of the national GOS network initiated by Fundação Maio Biodiversidade on Maio Island. Women played a key role in the project, particularly in fish handling and sales, and increasingly assumed leadership roles within local associations, notably in Sal Island.

In Fogo, 40 GOS received officially recognised certificates after completing a 60-hour training programme delivered in partnership with the CEPF. In Brava, 23 GOS members were trained through a collaboration with the NGO Biflores and EMAR. The curriculum covered key modules including first aid, fisheries legislation, fish conservation, financial literacy, and free diving. These trainings significantly enhanced the technical capacity of artisanal fishers, contributing to their long-term professional development. The national recognition of the certificates strengthens their employability and standing within community-based marine resource management, opening opportunities for their integration into future institutional and conservation initiatives.

Through training, technical exchange, and the establishment of the Scientific Expert Committee, the project has left a strong legacy of local expertise and ownership in marine conservation.

## 5 Monitoring and evaluation

Monitoring and evaluation (M&E) of the project are led by the project manager, who oversees the implementation of activities and tracks progress against the indicators and Means of Verification outlined in the project's logframe. Each project partner developed annual work plans to ensure alignment with the overall implementation strategy and facilitate systematic monitoring. These work plans, along with progress data compiled by the project manager, are shared and discussed during Steering Committee meetings, the most recent of which was held in March 2024 in Mindelo. The Steering Committee is composed of one representative from the leadership of each of the six implementing partner organisations. It provides strategic oversight and facilitates collaborative decision-making.

A coordination unit, established at the start of the project and led by the project manager, met monthly online. The project manager also prepared and disseminated monthly updates on implementation progress, emerging challenges, and next steps. These updates were shared internally within BirdLife International and among all local partners to ensure transparency and responsiveness.

Scientific and technical oversight was ensured by the Scientific Expert Committee (SEC), composed of 14 national and international experts with diverse backgrounds in marine conservation and related fields. The SEC convenes virtually twice a year (with preparatory and follow-up meetings held in June, September, and November 2023 and June and December 2024, respectively). Relevant members were also consulted ad hoc to review technical documents or provide strategic input related to specific activities or outputs.

To strengthen accountability and facilitate thematic progress tracking, each output-level activity had a designated lead organisation responsible for coordinating implementation, monitoring milestones, and reporting on results. Four thematic working groups have been established to lead and support delivery across core project areas: Data Collection and Management – Lead: SPEA; Labelling – Lead: Biosfera; Community Engagement and Guardians of the Sea – Lead: APB; Social and Behaviour Change – Lead: University of Oxford.

Each working group convened regularly (approximately six times per year), with one in-depth, in-person session conducted during the annual and last Steering Committee meeting held in Mindelo. These meetings allowed for peer learning, detailed reviews of progress, and strategic adjustments where necessary.

Additionally, the project implemented a robust reporting mechanism comprising quarterly reports. These provided structured updates on the implementation status of each activity, assessed progress against key indicators, and highlighted challenges and mitigation measures. This results-based approach ensured the project remained adaptive and accountable throughout its implementation.

## 6 Lessons learnt

The GOS programme - designed to empower artisanal fishers - proved highly effective in strengthening leadership, building technical knowledge, and promoting community ownership of sustainable fishing practices. This approach helped create visible community champions, leading to stronger local engagement and fostering a more resilient conservation culture. Collaboration with national training institutions further added value, allowing GOS participants to gain official certification. These qualifications not only enhance their future employment prospects but also elevate the status of local conservation roles.

Effective collaboration between local institutions - particularly between civil society and governmental actors—was key to advancing marine conservation goals. These partnerships facilitated shared learning, resource mobilization, and faster progress on community-based interventions. The experience underscores the importance of investing in national capacity to ensure long-term sustainability and ownership of conservation actions.

Efforts to influence fishing practices through behaviour change and labelling initiatives revealed the importance of adaptive and context-sensitive approaches. The project showed that rigid models can face resistance or low uptake. Successful uptake was more likely when interventions were designed to evolve alongside community readiness and priorities. Practical and visible incentives – such as cooling equipment, access to skills training, and informal recognition – were crucial for sustaining participation, particularly among fishers and fishmongers.

The complexity of formal labelling processes posed challenges in the field. This experience highlighted the need for simplified, user-friendly systems that are well aligned with local realities and institutional capacity. Early co-design with community and institutional partners would help avoid bottlenecks and improve overall uptake. Data collection through traditional self-reporting posed challenges, especially around sensitive issues like bycatch. The introduction of alternative tools – such as voice recordings and photo documentation—improved fisher engagement and led to better-quality data. These methods should be considered as standard complementary approaches for participatory M&E in similar projects.

The project demonstrated that shifts in practices and attitudes around bycatch take time and require sustained support. To be effective, any behaviour changes process needs to be sustained over time with continuous support. While important results are being obtained from the research, it is crucial to have in mind that a lot more time is needed to reach the desired behaviour. Results from a process tracing approach to assess the consistency between GOS' testimonies and the expected results outlined in the Theory of Change of the program showed strong confirmation of changes in perception, increased use of mitigation measures, and enhanced trust in partner organizations, while revealing gaps in conflict resolution and institutional support.

Regarding bycatch reduction, significant progress was made during the project. Fishermen became familiar with the self-report forms, leading to a better estimation of the bycatch in the artisanal fisheries as well as general monitoring of marine megafauna. Also, notable progress was noted in building trust with fishermen and capacities of NGO technicians and involved fishers, particularly in the area of safe release and handling best practices for bycatch. However, the three-year duration of the project did not allow us to have a robust dataset that could provide us with an evolution of the bycatch. In the future, it would be important, in the context of projects of this type, to consider the time factor. Implementing such projects requires a significant amount of time for data collection, identification, testing, and adoption of the identified mitigation techniques, including trust building between partners, especially fishers and monitoring and evaluation of impact.

Finally, another key lesson was that limited enforcement capacity undermined the sustainability of certain conservation actions, pointing to the critical need for more robust partnerships with enforcement bodies and targeted capacity-building efforts.

## 7 Actions taken in response to Annual Report reviews

All feedback and recommendations received from the reviewers of previous Annual Reports were carefully reviewed and addressed. Specific concerns related to timelines, alignment with the original logframe, and the clarification of the labelling strategy were discussed internally and with all implementing partners, including through coordination team meetings and working groups. The Scientific Expert Committee (SEC) provided technical guidance throughout, particularly on data quality and methodological adjustments.

Key feedback from the Year 2 Annual Report was addressed as follows:

**Bycatch reduction of seabirds:** The baseline previously provided for this indicator (Indicator 0.6) was revised as suggested, as the baseline combined fishers reporting catching seabirds and sea turtles. The revised baseline only refers to fishers reporting catching seabird specifically. Furthermore, the data analysis was conducted to conform with the rate of fishers reporting bycatch rather than bycatch rate to ensure that results can be compared and changes can be demonstrated.

**Post-harvest loss and infrastructure ownership:** The baseline survey on post-harvest loss, although delayed, was completed and used to guide improvements. Training in safe handling and release, hygiene, and cold storage was delivered to over 90 participants, and 33 fishers received cooling boxes. Solar-powered ice machines were piloted in

Sal (Palmeira and Santa Maria), reducing ice costs by 33%. These interventions were implemented by partners with co-funding from local stakeholders. Ownership of the infrastructure remains with local associations, and maintenance plans are in place in partnership with the municipalities and association boards. Business sustainability models are being developed under follow-up initiatives led by project partners to help fishmongers transform traditional practices into viable enterprises through training in product diversification, marketing, and value-added use of fishery products.

**Impact of cooling infrastructure:** Fishers report nearly zero spoilage as all fish is either sold fresh or dried for extended market use.

**Audit scheme and restaurant labelling:** The audit scheme to verify restaurant compliance with the Code of Conduct ("From the Sea to the Plate") was finalised and piloted with 28 restaurants. 5 of them were awarded the sustainable label following a structured audit and an additional 8 are currently being audited. This scheme is now integrated into the revised restaurant labelling strategy and will be expanded through a follow-up project.

The project team developed and implemented an action plan in Year 3 to address these issues, strengthen monitoring - especially for slower-progress indicators, and ensure clearer reporting across all partners. These updates are reflected in this final report.

All feedback was discussed collaboratively with partners during coordination meetings and Steering Committee sessions, ensuring a shared understanding and response.

## 8 Risk Management

No significant risks arose in the last 12 months. Throughout the project, the risk framework template was considered.

## 9 Scalability and Durability

The project gained strong national and regional visibility through consistent engagement with authorities, media, and participation in international platforms. Key outcomes like the strengthening and expansion of the GOS programme and the restaurant-based labelling scheme are expected to endure, having been locally embedded and scaled with support from NGOs and new funding.

The solar-powered ice systems in Sal continue to reduce costs and improving fish quality - demonstrating sustainable impact on livelihoods and conservation.

Project staff and core tools or approaches (such as training materials, monitoring protocols, and community engagement approaches) continue under new initiatives, such as a Spanish Cooperation-funded follow-up in Sao Vicente, ensuring continuity, which is building on Darwin's legacy to expand the GOS programme and strengthen fishmongers' associations in the specially through improved governance, enhanced awareness of social protection and fiscal registration, and the promotion of value-added fish processing techniques introduced during Darwin project.

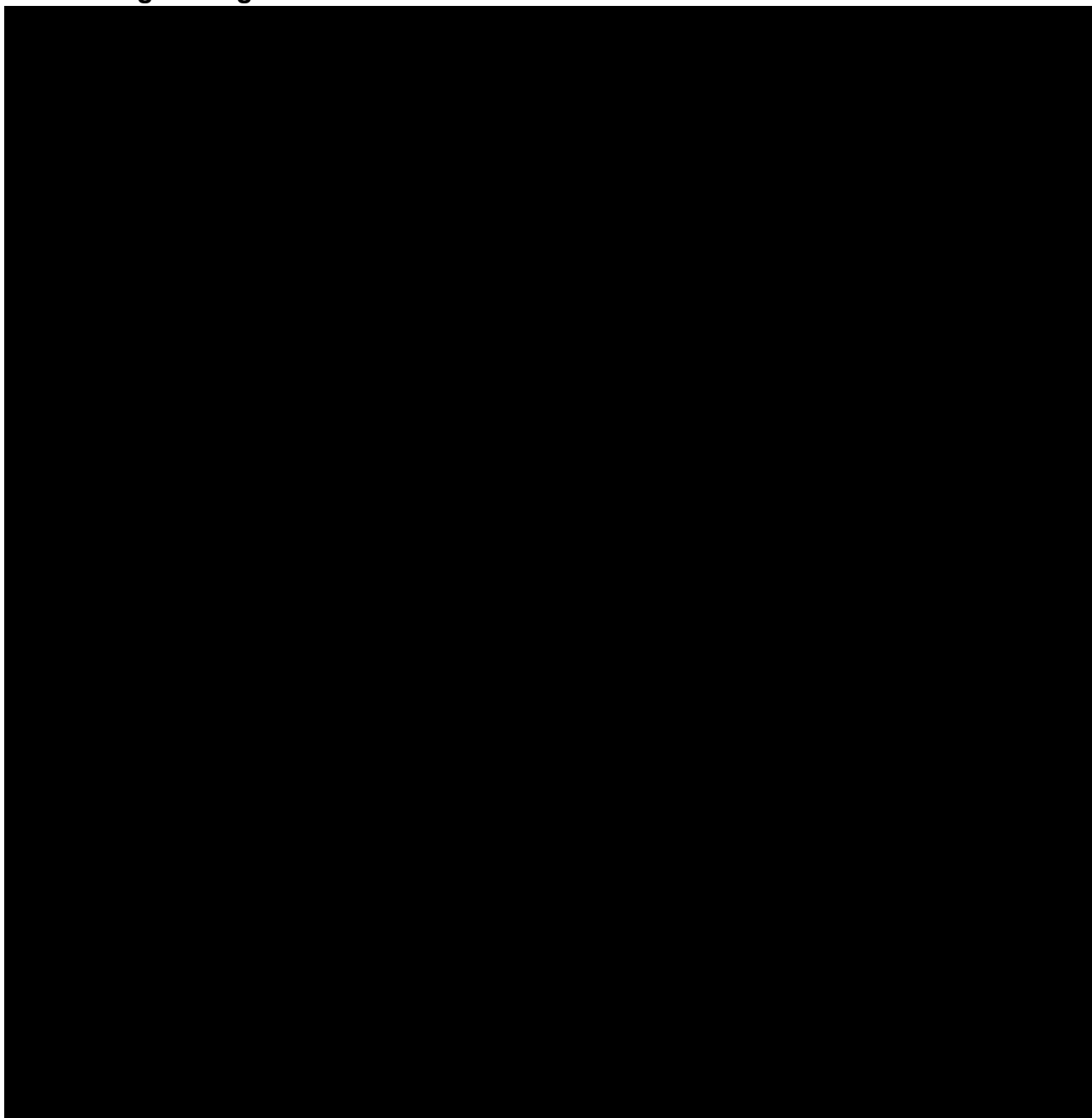
The project also helped shape national policy discussions, contributing to co-management strategies, such as the potential establishment of Sustainable Fisheries Management Area (SFMA) which is being discussed at the Ministry of the Sea to be officially approved, fisheries observer programme design/implementation and support, and regional initiatives on bycatch reduction. While the SFMA is still under discussion/negotiation rather than formally approved, the recent EU - Cabo Verde fisheries protocol (2024 - 2029) strengthens fisheries governance, surveillance, and community involvement - all key foundations for the future formalisation of the SFMA.

## 10 Darwin Initiative identity

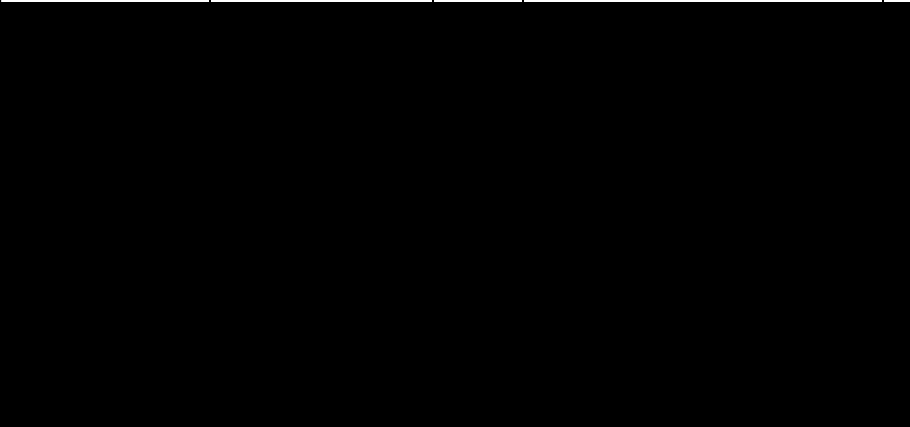
The Darwin Initiative was consistently recognised and promoted throughout the project. The logo was featured on all communication materials - including reports, presentations, training banners, training manuals and species identification guides, outreach posters, t-shirts and all awareness materials distributed at local and regional events. The UK Government's support was publicly acknowledged in official sessions such as the project launch, Steering Committee meetings, international events and bilateral meetings such as with the EU delegation in Cabo Verde, GEF Small Grants Programme in Cabo Verde and the national conservation network TAOLA+. Various videos were produced highlighting the impact of the project in Cabo Verde. Also, various project activities were shared through the partners social medias tagging the BCF.

An article was also submitted to the Darwin Initiative on [Safeguarding marine resources](#). Further information on the Darwin Initiative project was also shared through [newsletters](#) and social media posts. The project maintained a distinct identity and increased national recognition of the Darwin Initiative, especially among fishing communities, NGOs, and government institutions involved in marine conservation.

## 11 Safeguarding



## 12 Finance and administration

Project spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual Darwin Initiative 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>	164,271	164,271	0%	

Staff employed (Name and position)	Cost (£)
Tabea Zwimpfer – Project Lead BirdLife International	
Iderlindo Santos – Project Manager BirdLife International	
Ahmed Diame – Bycatch Technical Support Manager BirdLife International	
Suzan Temba – Finance Officer BirdLife International	
Lucia Way-Bricault – Fundraising & Development Officer BirdLife International	
Anice Lopes & Janice Pinheiro – Project Coordinator APB	
Valeria Cardoso & Tracy Apolinary – Intern APB	
Alcides Semedo – Community Facilitator APB	
Diogo Verissimo – Technical Advisor Social Marketing – University of Oxford	
Ana Almeida – Technical Advisor artisanal bycatch - SPEA	
Keider Neves - Coordinator BIOSFERA	
Jessica Matos - Project assistant BIOSFERA	
Ivan Graca - Project technician BIOSFERA	
Odair Lopes - Community engagement BIOSFERA	
Zelinda Soares - Financial manager BIOSFERA	
Ianick Fernandes - Follow-up technician PROJECT VITO	
Deusa Araujo - Field Assistant PROJECT VITO	
<b>TOTAL</b>	

Capital items – description	Capital items – cost (£)
Fishing Target Species Identification Panel	
Installation of photovoltaic plant	
GPS Purchase - 100 pcs	
Vinyl Signs Poduction	
Purchase of fishing materials Monitoring marine megafauna	
Tyres for ST-92-UQ vehicle and retainer for SV-12-DA vehicle	
Tables and chairs – 25%	
Refrigerator purchase	
<b>TOTAL</b>	

Other items – description	Other items – cost (£)
<p>Purchase of work materials (office supplies)</p> <p>Purchase of work materials (glue)</p> <p>Purchase of work materials (glue tape)</p> <p>Purchase of work materials</p> <p>Acquisition of working materials (brush)</p> <p>Remaining payment of 40% of production of T-shirt for the Guardians of the Sea Programme Brava Brava</p> <p>Acquisition of work materials (adhesive tape)</p> <p>Payment of T-shirt for Guardians of the Sea</p> <p>Purchase of work (pvc pipe, casquinha board, clamp)</p> <p>Printing data sheets for guardians of the sea</p> <p>T-shirt printing, fishermen's association activity</p> <p>Printing forms, collecting data</p> <p>Printing banners and leaflets, training fishmongers</p> <p>Certificate printing, fishmonger training</p> <p>Certificate printing, fishmonger training</p> <p>Copies of data sheets</p> <p>Printing photovoltaic panels</p> <p>Printing mupi - billboards</p> <p>Seabird poster printing</p> <p>Data sheet printing</p> <p>Banners and multimedia room consumables for workshops and conferences</p> <p>Purchase of work materials (Velcro folder)</p> <p>Purchase of work materials (latex gloves)</p> <p>Production of fish measure canvas support</p> <p>Purchase of work materials (notebooks and pens)</p> <p>Acquisition of working materials (nails) - Fixing a banner of the same size as fish</p> <p>Purchase of working materials (secil cement) - Fixing the fish banner of the same size</p> <p>Purchase of cement - Fixing minimum size fish banner</p> <p>Purchase of cement - Attachment of minimum size fish banner</p> <p>Payment for banner at the port of disembarkation</p> <p>Payment of 60% for the production of environmental education materials</p> <p>Payment of remaining 40% for production of environmental education materials</p> <p>Purchase of Office Supplies (Desk . ADM)</p> <p>Purchase of office supplies (ink cartridge for Brother printer, ream of paper and black and white copies)</p> <p>Purchase of a solar panel converter for the introduction of Ilheu de cima gannets</p> <p>Purchase of working materials (duracel battery)</p> <p>Purchase of working materials (screws, dowels, drills, nails)</p> <p>Purchase of working materials (nails)</p>	

Acquisition of cement for fixing minimum size fish banner	
Acquisition of cement for fixing minimum size fish banner	
Audit fee	
<b>TOTAL</b>	

## 12.1 Additional funds or in-kind contributions secured

Matched funding leveraged by the partners to deliver the project	Total (£)
BirdLife International	
Partners: APB overheads	
<b>TOTAL</b>	

Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project	Total (£)
BirdLife International	
<b>TOTAL</b>	

## 12.2 Value for Money

The project delivered good value for money by achieving its intended outputs through cost-effective, community-driven interventions. The integration of solar-powered ice production systems significantly reduced operational costs for fishers (over 33% reduction in ice price in Sal Island), leading to measurable savings and improved fish quality. Distribution of cooling boxes, training based on HACCP principles, and safety equipment improved fish handling and reduced losses, while strengthening resilience across the value chain.

Capacity-building activities reached over 370 fishers and fishmongers, including 35% women, with emphasis on local empowerment and the co-development of sustainable practices. Investments in co-design processes, behaviour change interventions and locally led stewardship models such as the GOS programme fostered long-term ownership and impact, maximising both economic and environmental returns. Follow-up initiatives funded by Spanish Cooperation further extend the project's legacy, ensuring continued efficiency and effectiveness of invested resources.

## Annex 1 Report of progress and achievements against logframe for the life of the project

Project summary	Progress and achievements
<p><b>Impact</b></p> <p>Marine biodiversity (seabirds, sea turtles, sharks, fish) is recovering around six islands in Cabo Verde and communities benefiting due to increased stewardship and improved fisheries management by artisanal fishing communities.</p>	<p>The project contributed to improved stewardship by engaging over 185 fishers in the Guardians of the Sea (GOS) programme across five islands. These GOS members were trained in safe handling and release of bycaught seabirds and sea turtles, contributing to a growing culture of voluntary conservation within fishing communities. Awareness campaigns and improved gear practices (e.g. testing of bird-scaring devices leading to a 55% reduction in seabird bycatch) fostered a more sustainable use of marine biodiversity. Communities also benefited from strengthened fishers' associations, improved access to ice for fish storage (via solar-powered systems in Palmeira and Santa Maria), and increased environmental awareness. Preliminary monitoring data suggest positive population trends for key species such as sea turtles and seabirds in certain islands (e.g. Fogo, Ilhéu de Cima), although full impact will be measurable beyond the project lifetime.</p>
<p><b>Outcome</b></p> <p>Fishing communities in 6 Cabo Verde islands engage in sustainable, locally defined labelling practices providing livelihood benefits to 1,200 people, reducing seabird bycatch by 25% and turtle unsafe release by 50%.</p>	<p>By the end of project, 185+ fishers were engaged through the GOS programme, with continued interest from others. The labelling scheme was piloted and refined into a practical code of conduct for restaurants, resulting in the auditing of 10 establishments of which 5 received the label 5, on São Vicente with an additional 8 restaurants currently being officially audited in Fogo and Brava. Awareness campaigns on responsible fishing practices and minimum species sizes reached fishing communities across all target islands. Behavioural changes were documented through social science analysis confirming stronger commitment to conservation among GOS. The end of project interviews applied in Fogo, Brava, and Sal islands showed an increase of 50.6% of fishermen declaring bycatch of seabird compared to the baseline data which was revised in year 1. This result aligns with the self-report forms which also show an increase of bycatch of seabirds compared to the year 1 baseline. This could be explained by the fact that at the end of the project, fishers gained trust and were more open to interact with the project partners. This trust building applies also to self-report forms whereby the end of the project, more fishers decided to join the initiative increasing the number of GOS collecting data at sea. At the end of the project, 100% of bycaught sea turtles were safely released alive. Bycatch mitigation trials using the "scarybird" device demonstrated a 55% reduction in seabird bycatch while decreasing the dive rate of the most affected species. Data collected from self-reporting forms and follow-up monitoring show increased adherence to safe release methods. While full quantification of outcomes is ongoing, evidence in Section 3.2 and related annexes confirms substantial progress toward all core indicators.</p>
<p>Outcome indicator 0.1 By End of Project (EoP), three civil society organizations and 170 Guardians of the Sea (GOS) members have increased capacity for delivering conservation action and visibility as role models.</p>	<p>Three local NGOs (Biosfera, APB, and Projeto Vitó) were fully trained and actively implemented conservation activities on their islands. 185 fishers were recruited into the GOS programme across 5 islands, where they received ongoing training in safe handling and safe release, species monitoring, conservation legislation, and mitigation techniques. GOS members became trusted figures within their communities, promoting sustainable fishing and marine stewardship. GOS visibility and leadership was strengthened through national and international presentations, and their role was further institutionalized via the TAOLA+ network and national MoUs.</p>

Outcome indicator 0.2 A local, pilot participatory labelling scheme is replicated in six islands of Cabo Verde engaging at least 240 fishers (M) and 130 fish mongers (F) and 50 restaurants and results inform wider uptake by EoP.	A code of conduct for a sustainable restaurant label was developed with 5 restaurants being formally labelled in São Vicente and an additional 8 awaiting official auditing in Fogo and Brava. In addition to the exchanges with a total of 43 restaurants, awareness campaigns reached fishers and fishmongers across all six islands with 103 fishers and 23 fishmongers actively engaged in the process. Although full certification was constrained by regulatory barriers, the adaptive process allowed for more in-depth engagement taking into account local contexts and needs to further refine the most effective schemes. These results are informing future replication efforts through follow-on projects, including one funded by the Spanish Cooperation.
Outcome indicator 0.3 By EoP, at least 50% decrease in catch of under-sized, blue-dotted seabass and lobster, caught by GOS and fishers who joined the labelling (n= 240) compared to year 1 baselines.	While full quantification was not possible due to limited data, Biosfera's baseline data from 2020 showed ~2.8 kg of under-sized blue-dotted seabass caught per fisher per trip. Throughout the project, target workshops, field monitoring, and awareness campaigns emphasized the importance of size limits and closed seasons. Fisher testimonies and behaviour change analysis indicate growing compliance. Although reduction estimates are not statistically confirmed, early evidence and fisher (GOS) perceptions point to a downward trend in undersized catch rates.
Outcome indicator 0.4 By EoP, at least 50% of fishers (GOS and fishers who joined the labelling (n=240)) report a decrease in waste discard against year 1 baselines.	All 185 GOS fishers received training on marine waste and pollution. Observations by partners and reports from GoS members indicate that nearly all participating fishers now dispose of their waste properly, with many voluntarily collecting marine litter during fishing trips and while stationed on islets. While quantitative reductions in waste discard could not be measured, qualitative feedback strongly suggests a decrease in waste dumping both at sea and at landing sites. Social media evidence and behaviour change assessments show increased awareness. Ice box distribution (33 boxes provided), improved storage via solar systems in Palmeira and Santa Maria reducing the use of single-use plastic bottles to cool catch, and campaigns on good practices contributed to better handling and waste reduction throughout the value chain. A complementary activity trained community members to repurpose discarded fishing nets into products such as souvenir bags — increasing the collection and recycling of old gear while supporting alternative livelihoods.
Outcome indicator 0.5 By EoP, at least ~30% of fishers engaged around the 6 islands are actively performing behaviour changes to minimize unsustainable fishing practices.	185 GOS and other participating fishers reported improvements in practices, including compliance with closed seasons, safer handling of non-target species, and better waste management. This represents 34% of the total fishers engaged (n= 538) in the project and includes adoption of other behaviours such as 200 fishers applying the scarybird as a bycatch mitigation device and change of bait from squid to fish. In Sal, a survey concluded that 60% of the fishers involved in the trials indicated that they would want to continue to use the scarybird. All GOS involved in the self-reporting are performing safe release techniques to bycaught seabirds and sea turtles.
Outcome indicator 0.6 By Y3 Q3, estimated total bycatch of seabirds is reduced by 25% and adherence to the guidelines for release of captured seabirds and turtles is at least 50%.	The EOP survey conducted in 3 main localities of the project (Sao Vicente, Fogo, and Brava) showed that 11% of interviewed fishers declared bycatch of seabirds while during the revised baseline survey, the percentage of fishers who declared bycatch of seabirds in these same localities was 7.3%. This shows an increase of 50.6% of fishers reporting bycatch of seabirds. This result aligns with the bycatch data collected through the self-report form which also show an increase of the reported bycatch during the project period. In parallel, safe handling and release techniques for seabirds and sea turtles were widely promoted, reaching over 185 fishers across all islands compared to zero (0) at the start of the project. This has led to an

	<p>increase of safely released bycatch of seabirds and sea turtles by GOS members in the project time.</p> <p>In addition, the project has introduced 66 scarybirds in Cabo Verde. The results of the trials of this device have showed a reduction of 55% of the dive rate, which estimate the ratio between the number of dives towards the hooks and the number of fishing trips, leading to a reduction of the bycatch risk.</p>
<p>Outcome indicator 0.7 At least 70% of fishers and fish mongers engaged in the labelling program (n=370, including 240 fishers (M) and 130 fish mongers (F)) report an increase in income (compared to baseline) resulting from reduced fish waste through improved cold-storage facilities at sea and on land, increased fishing efficiency, higher market price for sustainably fished product.</p>	<p>Although systematic income tracking was not conducted, several factors suggest improved economic outcomes for fishers and fishmongers involved in the labelling process. A total of 33 fishers received individual cooling boxes, enhancing fish quality and shelf life, while also reducing the risk of spoilage. Testimonies from participants indicate perceived improvements in hygiene standards and increased product value. In Sal Island, two solar-powered ice production units were installed in Santa Maria and Palmeira, benefiting over 365 fishers and fishmongers by improving access to ice and reducing costs from 30 CVE/kg to 20 CVE/kg - a 33% reduction. These combined improvements in cold chain infrastructure and value chain practices contributed to enhanced income opportunities. Although income increases are not yet systematically quantified, 33 fishers received cooling boxes and benefited from improved fish quality and shelf life. Fisher testimonies indicate better market value and hygiene conditions. In Sal, two solar-powered ice production systems are now operating in Santa Maria and Palmeira, benefiting over 365 people and significantly lowering ice costs (20 CVE/kg vs. 30 CVE/kg).</p>
<p>Outcome indicator 0.8 By EoP, at least ~20% decrease in post-harvest loss of catch for 600 fishers and fish mongers within the 14 associations taking part in the project due to improved sanitary measures for the handling, cooling, and processing of fish along the value chain.</p>	<p>While post-harvest loss was not reported as a major concern by fishers - who consistently indicated that all catch is either sold, preserved, or consumed - the project placed emphasis on improving product quality and freshness. This was achieved through enhanced cold storage capacity and greater access to affordable ice. More than 90 participants were trained in hygienic handling and fish preservation based on HACCP principles. In total, 33 fishers received cooling boxes to improve fish storage.</p> <p>Additionally, two solar-powered ice production units were installed in the fishing associations of Palmeira and Santa Maria on Sal Island, benefiting over 365 individuals (200+ in Palmeira and 165 in Santa Maria). These systems have improved trust in the cold chain, significantly reduced operational costs by providing ice at 20 CVE/kg compared to a minimum market price of 30 CVE/kg and reinforced the resilience of the fish value chain.</p> <p>In São Vicente, approximately 4 tonnes of ice were distributed to GOS members as an incentive to further support product freshness and avoid spoilage. These combined actions represent a meaningful contribution to food quality, safety, and income security for artisanal fishers and fishmongers.</p>
<p><b>Output 1.</b> Increased conservation capacity built amongst 3 civil society organizations and 170 Guardians of the Sea (GOS) members; including behaviour change, sustainable fisheries labelling, and voluntary stewardship.</p>	
<p>Output indicator 1.1 SOCIAL SCIENCE METHODS: Three NGOs conduct qualitative and quantitative social science research by Y1 Q1 in order to design messages, identify and prioritize target audiences, trusted influencers, channels of communication, and drivers of change by Y2 Q1.</p>	<p>Although implementation was delayed due to recruitment challenges, the baseline social science research was successfully carried out under the leadership of the University of Oxford, in close collaboration with the national field coordinator and three national NGOs (APB, Biosfera, and Projeto Vitó). Using the COM-B framework, the study generated valuable insights into fishers' behaviours, motivations, and perceived barriers across six islands. The</p>

	research identified key drivers of change, trusted influencers, and preferred communication channels, and supported the prioritisation of target audiences. These findings directly informed the design of context-sensitive outreach strategies and co-developed behaviour change messaging.
Output indicator 1.2 LABELLING: Two NGOS are trained by Biosfera to replicate a local sustainable fishery labelling scheme by Y1 Q1.	The local sustainable fishery labelling scheme was successfully transferred to two national NGOs - APB and Projecto Vitó - through targeted training sessions led by Biosfera during the project's inception phase. The training covered technical criteria, community engagement, and awareness-raising strategies tailored to local contexts. Both NGOs initiated local implementation, supporting restaurant engagement and awareness-raising. In total, 10 restaurants were audited and 5 awarded the sustainable fisheries label. Additional interest was recorded in Fogo and Brava, with 8 restaurants formally enrolling. The scheme gained traction among fishers and fishmongers, reflecting its growing relevance and perceived value in supporting sustainable market access.
Output indicator 1.3 GUARDIANS OF THE SEA (GOS): Two NGOS are trained by APB to replicate the GOS model promoting voluntary stewardship and target species and vulnerable non-target species monitoring (seabirds, sea turtles, sharks, rays) amongst fishers, and the GOS brand has agreed governance and communications strategy by Y1 Q1.	The GOS model was successfully replicated by two national NGOs - Projecto Vito (PV) and Biosfera - through training led by APB and formalised via shared MoUs and protocols. A common visual identity and communication strategy were developed to strengthen brand visibility and unify messaging across islands. These tools are actively used by the GOS network to promote voluntary stewardship and enhance monitoring of both target and vulnerable non-target marine species, including seabirds, sea turtles, sharks, and rays.
Output indicator 1.4 RECRUITMENT OF GOS: At least 170 new volunteer fishers join the GOS programme project sites and are trained to monitor key species and monitor fishing practices by Y2 Q1.	The GOS programme grew significantly over the course of the project, expanding from an initial 40 fishers to over 185 trained members across seven islands, including in two islands that were not direct partners such as Boa Vista and Maio. Participants were equipped with practical skills in species identification, bycatch monitoring, safe handling, and sustainable fishing practices. The target of recruiting 170 fishers was surpassed, with the inclusion of new members from additional islands such as Maio and Boa Vista, strengthening the national GOS network and its contribution to community-based conservation.
Output 2. A pilot participatory local labelling scheme for sustainable fisheries is implemented by fisheries value chain stakeholders (fishers, fishmongers, restaurants, and consumers) in six islands (Sal, São Vicente, Santo Antão, São Nicolau, Fogo, and Brava).	
Output indicator 2.1 Barriers to implement social change, such as customary fishing practices, or material barriers, are identified by Y1 Q2 in workshops and through a participatory process involving stakeholders, barriers to change and potential behavioural change interventions to overcome them are agreed through co-design. Y1 Q4.	A behavioural baseline study using the COM-B framework was conducted in collaboration with the University of Oxford and national partners. This participatory research identified key behavioural barriers such as limited access to mitigation tools, lack of incentives, economic constraints, and the influence of peer norms. Co-design workshops with fishers, NGOs, and institutions helped validate these findings and define priority actions, including the use of bird scaring devices, promotion of safe handling techniques, tailored awareness campaigns, and the integration of mitigation measures into ongoing training and outreach. These jointly defined actions provided a solid basis for implementing behaviourally informed conservation efforts tailored to the local context and suitable for future scale-up.
Output indicator 2.2. Local labelling guidelines and criteria (potentially minimum catch size, seasonality, bycatch mitigation, no discarded fishing gear) reviewed, consulted, and agreed by NGOS and fishing value chain stakeholders, as well as local authorities by Y1 Q4.	Labelling guidelines were reviewed and validated by project partners during the inception workshop at the beginning of the project. A two-pronged approach was initially considered (restaurant-focused and fisheries product labelling with IGQPI), but ultimately only the restaurant labelling pathway advanced. A code of conduct was developed and piloted, resulting in 10 restaurants audited and 5 restaurants receiving the sustainable fisheries label.

	in Sao Vicente and 8 restaurants in Fogo (7) and Brava (1) prepared to be audited and award the sustainable seal.
<p>Output indicator 2.3 By Y1 Q4, at least 50 restaurants on 6 islands agree to participate in the labelling scheme.</p> <p>Baseline 2021: 6 restaurants in São Vicente.</p>	Despite delays in implementation, interest in the scheme grew over time. 103 fishers, 23 fishmongers and 43 restaurants were involved in the process on Sao Vicente, Fogo and Brava. Restaurant audits were conducted, and five establishments were awarded the label. Continued advocacy beyond the project end aims to scale engagement beyond current numbers and the continued auditing efforts are underway currently with an additional 8 restaurants in Fogo (7) and Brava (1).
Output indicator 2.4 At least 240 Fishers and 130 fish mongers are engaged in the labelling program by Y2 Q3 and trained in the current legislation on fisheries and existing MPAs and their management plans.	Engagement activities were implemented with fishers and fishmongers across several project target islands, promoting awareness and participation in the labelling scheme. A total of 103 fishers and 23 fishmongers engaged in the labelling program, with others participating in targeted training sessions. In addition to those engaged, all GOS members and 65 fishmongers took part in capacity-building activities focused on business idea generation good practices, current fisheries legislation and the role of Marine Protected Areas (MPAs), including the key elements of their management plans. These efforts helped build a foundation for greater compliance and stewardship among key actors in the artisanal fisheries value chain.
Output indicator 2.5 Local labelling results are shared with appropriate government agencies and advocacy conducted to transition to formal compliance mechanisms by EoP	The project maintained active engagement with IGQPI, DNPA, and the Ministry of Sea through meetings and coordination platforms. Although the formal labelling (fisheries product) path was not implemented, informal labelling practices gained traction, and progress was shared with government institutions for potential collaboration in the future.
<p><b>Output 3.</b> Bycatch mitigation measures, including safe release, protecting seabirds and sea turtles and that do not adversely affect other vulnerable species (sharks, rays) are deployed by 600 artisanal fishers around 6 islands and show a 25% reduction of estimated total bycatch of seabirds (compared to Y1 baseline), and 50% of fishers safely release captured seabirds and turtles by Y3 Q3.</p>	
<p>Output indicator 3.1 BYCATCH ESTIMATION: The nature, extent, and intention behind current bycatch is characterized for different species/taxa within specific project sites by Y1 Q2 and at EoP to compare with baseline estimates (% of fishers catching birds, turtles and sharks). 2019 Baseline for handline bycatch: seabirds (77%), sea turtles (55%), sharks (86%). For gillnets, turtles (77%), sharks (86%) and no seabirds. More detailed catch statistics are established through weekly surveys and estimated total catch of target and vulnerable species is estimated from GOS 6-monthly.</p>	Bycatch monitoring systems were implemented across six islands through harmonised self-reporting forms and GOS-led data collection. A total of 198 bycatch incidents were reported between September 2023 and February 2024. The final project survey conducted in 3 main localities of the project (Sao Vicente, Fogo, and Brava) showed that 11% of interviewed fishers declared bycatch of seabirds while during the revised baseline survey, the percentage of fishers who declared bycatch of seabirds in these same localities was 7.3%. This shows an increase of 50.6% of fishers reporting bycatch of seabirds. This result aligns with the bycatch data collected through the self-report form which also show an increase of the reported bycatch during the project period. An increase of trust of fishers towards the initiative as well as continued training, awareness raising and more diligent reporting as the GOS programme is growing are potential explanations for this increase.
<p>Output indicator 3.2 MITIGATION: Tailored bycatch mitigation options targeted at reducing seabird and turtle bycatch (bird-scaring devices, line weighting, hook types, offal management, bait thawing, net lights (LEDs)) are explored and assessed by Y1 Q4 and rolled out by Y2 Q4.</p>	Based on recommendations from previous studies and expert input, key mitigation strategies were selected, including bird-scaring devices ("scarybirds"), line weighting, and night setting. The "Scarybird" device was tested in experimental trips involving over 30 fishers across 6 boats (plus shared use across others) between August and November 2024. Over 50 trips were completed with data collected on control and experimental days. Results indicated a 55% reduction in seabird bycatch during experimental trips. Positive feedback from both fishers and technicians confirmed the potential of the method. Around 60% of consulted



	fishers expressed willingness to adopt and even purchase the devices, indicating solid groundwork for voluntary uptake.
Output indicator 3.3 SAFE HANDLING: At least 1,200 fishers trained to safely handle and release seabirds, sea turtles, when entangled/hooked by Y1 Q3 to increase chances of survival for released animals and at least 50% report using the safe release methods by EOP.	Safe handling and release techniques for seabirds and sea turtles were widely promoted, reaching over 185 fishers across all islands compared to zero (0) at the start of the project. This has led to an increase of safely released bycatch of seabirds and sea turtles by GOS members in the project time.
Output indicator 3.4 BEHAVIOUR CHANGE: A social marketing campaign shifting social norms and influencing behavioral patterns is implemented and, by EoP, an increasing number of fishers actively performing behaviours aimed at minimizing bycatch by 30% (n=1,200) compared to baseline and control.	Significant progress was made in shifting fishers behaviour. Across all six islands, the total of 185 GOS and other participating fishers reported improvements in practices, including compliance with closed seasons, safer handling of non-target species, and better waste management. This represents 34% of the total fishers engaged (n= 538) in the project and includes adoption of other behaviours such as 200 fishers applying the scarybird as a bycatch mitigation device and change of bait from squid to fish. In Sal, a survey concluded that 60% of the fishers involved in the trials indicated that they would want to continue to use the scarybird, and they're even willing to buy it on their own. All GOS involved in the self-reporting are performing safe release techniques to bycaught seabirds and sea turtles. In addition, a targeted process-tracing evaluation confirmed changes aligned with the project's Theory of Change.
Output indicator 3.5 SPATIO TEMPORAL ANALYSIS: By Y3 Q2, Analysis of spatio-temporal overlap between artisanal boats, seabirds and sea turtles is informing future bycatch-mitigation decision-making to determine the seasonality, fishery types and species involved in bycatch risk.	Seabird and sea turtle tracking data and artisanal fishing boat movements have been collected in Cabo Verde and the targeted islands to conduct a spatio-temporal analysis. The final analysis is still ongoing and will be available soon.
Output indicator 3.6 MITIGATION AGREED: By Y3 Q3, effective mitigation measures, including reduction target, use of specified best practice mitigation for each specific fishing method are agreed with fishers' associations.	Various mitigation measures including bait change, night setting and the scarybird were identified discussed with fishers and tested to determine their effectiveness. From those, the bait change, the scarybird, and the safe release and handling have been identified as the most effective and socially accepted by fishermen in the hand line fisheries.
Output indicator 3.7 AUDIT SYSTEM IMPLEMENTED: By EoP, audit system on bycatch prevention is implemented and integrated into the local labelling on sustainable fisheries.	A revised audit mechanism was developed and integrated into the Code of Conduct guiding restaurant labelling. This framework includes criteria on sourcing from fisheries applying safe handling and bycatch mitigation practices. By project end, five restaurants in São Vicente were audited and received the label. Preliminary engagement meetings were held with 18 restaurants (14 in Fogo and 4 in Brava), resulting in formal interest and inscription of eight establishments (seven in Fogo and one in Brava) to undergo future audits. In Sal, 15 restaurants were engaged in awareness campaigns on sustainable fishing practices.
<b>Output 4.</b> Knowledge on nature and extent of interactions between seabirds and sea turtles in artisanal fisheries is improved and informs bycatch mitigation policies and solutions being used by artisanal fishers in Cabo Verde and in the wider West Africa region by EoP.	
Output indicator 4.1 By Y1 Q1, an external scientific expert committee is established to provide guidance to the project, foster knowledge-exchange, and ensure cutting-edge practices are implemented.	The Scientific Expert Committee (SEC) was formally established in June 2023 with 14 national and international experts. It meets virtually twice a year and provides strategic input on conservation activities, including data analysis, research validation, and integration of scientific best practices. The SEC contributed to key decisions, such as the behaviour change component, labelling, evaluation of mitigation measures trials and refinement of the protocols, ensuring scientific rigour across project outputs.

Output indicator 4.2 Starting from Y1 Q4, species population monitoring is reviewed using baseline population data (number of individuals, species, seasonality, among others) and information from GOS on the occurrence and distribution of indicator species at sea is collated, analysed and reported. Bycatch reduction is observed in addition to bycatch reporting (3.2 above).	Monitoring data were compiled from 2020 to 2023, covering key nesting sites for seabirds and sea turtles across nine islands. Comparative analysis with 2019/2020 baselines shows signs of population recovery in several sites. The involvement of Guardians of the Sea (GOS) enhanced at-sea data collection on the occurrence and distribution of indicator species, supporting more systematic reporting of bycatch. While turtle bycatch data has shown a noticeable decline, seabird bycatch data has increased during the project time. The relatively short project timeline remains a concern, requiring continued investment in targeted mitigation strategies. However, these monitoring efforts have strengthened the evidence base for ongoing conservation actions.
Output indicator 4.3 Awareness of the value and benefits of adopting more responsible fishing practices and protecting seabirds, sea turtles, sharks, rays, and juvenile fish increases amongst fisheries value chain stakeholders (fishers, fish mongers, restaurateurs, restaurant patrons, government agencies managing fisheries). The campaign reaches at least 60% of the population in target communities at the six islands.	Targeted awareness campaigns reached fishers, fishmongers, restaurants, and consumers through billboards, radio/TV/web programmes, social media, and community workshops. Notable outputs include: rulers for measuring minimum fish size installed in fish markets, ports and airports, 10 banners placed at landing sites, and the Mundo Sustentável TV series with 12 episodes broadcast in Sal and Boa Vista but also videos that are on our YouTube channel and was broadcasted in national television. These efforts have significantly increased understanding of sustainable fishing practices.
Output indicator 4.4 Report on social marketing outcomes and the opportunities /barriers to upscaling to national coverage is shared with local authorities on 6 islands and government agencies at national level, regional (West African), international levels.	A process tracing approach was used to assess alignment between behavioural interventions and the project's Theory of Change. Interviews and feedback from GOS and fishers confirmed changes in perception, behaviour, and increased trust in project partners. These findings are being consolidated with target partners and will be shared with local authorities to strengthen future behavioural change initiatives and guide the strategic scaling of conservation efforts.
Output indicator 4.5 Advocacy is conducted at EOP and post-project on inclusion artisanal bycatch mitigation measures into Marine Protected Area (MPA) management plans and national policies.	Throughout the project, continuous engagement with key institutions such as, Ministry of the Sea, DNPA, and IGQPI helped build momentum for integrating artisanal bycatch mitigation into national fisheries and marine biodiversity frameworks. The project contributed to strategic discussions on marine conservation priorities, including inputs to national level working groups and technical documents. At the regional level, project results and lessons learned were shared at key events such as the CCLME symposium in Guinea-Bissau and the PRCM Forum, reinforcing Cabo Verde's role in promoting participatory marine stewardship and evidence-based bycatch mitigation. These efforts have laid the groundwork for sustained advocacy beyond the project timeline.
Output indicator 4.6 Lessons learned, mitigation bycatch fact sheets, Guardians of the Sea development protocol, and scientific papers produced during this project are shared with policymakers, BirdLife Partners and NGOS in West Africa and to the wider public by EoP.	Key materials developed include: the Guardians of the Sea protocol, HACCP good practice manual, the Code of Conduct for labelling, and summary factsheets on bycatch mitigation. These were disseminated through partner networks and international events (ICCB Kigali, Coalition for Fisheries Transparency workshop in Ghana). A scientific article, currently under development, explores audience segmentation to inform bycatch mitigation and behaviour change strategies in Cabo Verde, and is expected to be submitted post-project
<b>Output 5.</b> At least 70% (n=370) of pilot participatory sustainable fisheries labelling scheme participants (260 people, ~35% women) directly benefit from a 10% increase in income (compared to baseline) by joining the scheme and co-create livelihood benefits, shared amongst the communities for approx. 1,200 people with increasing equitability across genders.	
Output indicator 5.1 14 fishers (M) and fish monger (F) associations (memberships of 1,200 fishers and 130 fish mongers respectively) have improved structure, and governance by Y1 Q3.	Governance models were co-developed through SWOT analyses and participatory workshops, particularly with associations in Sal, Fogo, and Brava. The resulting "Guiding Plan", containing guidelines to build-up on the initiatives "Guardians of the Sea" and the "Amdjer d'Mar" (Women of the Sea), was shared at the inception workshop and used to train

	all NGO partners. This process helped improve transparency, leadership roles, and planning within associations. Continuous support was provided throughout the project to strengthen internal governance and participatory management.
<p>Output indicator 5.2 At least 70% of fishers and fish mongers engaged in the labelling program (n=370, including 240 fishers (M) and 130 fish mongers (F)) report a 10% increase in income resulting from reduced waste, increased fishing efficiency, higher market price for sustainably fished product, better food storage.</p> <p>Baseline: 57 fishers and 40 fish mongers in São Vicente and Sal. Average salary: 150-350 GBP per month.</p>	<p>With 103 fishers, 23 fishmongers and 43 restaurants involved in the process, the initiative was implemented further by applying the code of conduct to 28 restaurants in São Vicente, Brava and Fogo, with 5 of them already successfully meeting the criteria and receiving the sustainable fisheries label. Cooling equipment distribution and better handling practices contributed to improved fish quality and market value, with positive feedback from beneficiaries suggesting income gains. Specifically, a solar-powered ice production initiative in Palmeira and Santa Maria is now benefiting over 365 people, improving accessibility and affordability of ice, key to product conservation and quality which led to an estimated saving of approximately 200 CVE per day, or around 4,000 CVE per month per fisher. This reduction in operational costs represents a tangible gain that can be reinvested in other livelihood needs or fishing activities.</p>
<p>Output indicator 5.3 By Y1 Q4, safety equipment is provided to the 170 fishers engaged in GOS and the labelling, during the first year.</p>	<p>Nearly all active GOS members (185) benefited from safety equipment and associated training, including the use of lifejackets, radios, and first aid kits. Practical sessions were delivered to at least 88 fishers more recently across the target's sites during field visits, while the remaining members received guidance during follow-ups or collective activities. Equipment was distributed across the target islands with partner support. Regular follow-up visits - weekly or bi-monthly - ensured proper use and maintenance, supported by photographic documentation for transparency and visibility.</p>
<p>Output indicator 5.4 By Y3 Q4, ~20% decrease in post-harvest loss of catch for 600 fishers and fish mongers within the 14 associations taking part in the project due to improved sanitary measures for the handling and cooling of fish along the value chain.</p>	<p>Post-harvest loss has been notably reduced across project sites through a combination of targeted training, improved infrastructure, and increased awareness of hygiene practices. In São Vicente, fishers report minimal or no post-harvest loss, as products are either sold fresh or preserved through drying. A total of 33 cooling boxes were distributed, and two fishing communities in Sal Island - Palmeira and Santa Maria - now benefit from solar-powered ice production systems. These systems reduced the cost of ice from 150 CVE per 5 kg (i.e. 30 CVE/kg) to 20 CVE/kg, representing a 33% decrease in price and resulting in estimated savings of up to 4,000 CVE per fisher per month. This innovation has strengthened cold chain capacity and reduced spoilage risks. Complementary training based on HACCP principles was delivered to over 90 participants, and a manual of good practices was disseminated across all project sites to support consistent application of hygiene and quality standards.</p>
<p>Output indicator 5.5 At least 370 people (~35% women) attend workshops explaining social benefits related to taxes and insurance and are supported with follow-up administrative support by Y2 Q4.</p>	<p>Partners held consultations and follow-up meetings with national social security institutions (INPS) and DNPA to explore integration of informal fishers into social protection systems. In addition, partners worked directly with fishers and fishmongers to raise awareness of tax registration, insurance, and administrative responsibilities. New partnerships are being developed to continue supporting financial inclusion and administrative regularisation of artisanal fishing actors beyond the project period.</p>

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
<b>Impact:</b> Marine biodiversity (seabirds, sea turtles, sharks, fish) is recovering around six islands in Cabo Verde and communities benefiting due to increased stewardship and improved fisheries management by artisanal fishing communities. 30 words			
<b>Outcome:</b>  Fishing communities in 6 Cabo Verde islands engage in sustainable, locally defined labelling practices providing livelihood benefits to 1,200 people, reducing seabird bycatch by 25% and turtle unsafe release by 50%.	0.1 By End of Project (EoP), three civil society organizations and 170 Guardians of the Sea (GOS) members have increased capacity for delivering conservation action and visibility as role models.  0.2 A local, pilot participatory labelling scheme is replicated in six islands of Cabo Verde engaging at least 240 fishers (M) and 130 fish mongers (F) and 50 restaurants and results inform wider uptake by EoP.  0.3 By EoP, at least 50% decrease in catch of under-sized, blue-dotted seabass and lobster, caught by GOS and fishers who joined the labelling (n= 240) compared to year 1 baselines.  0.4 By EoP, at least 50% of fishers (GOS and fishers who joined the labelling (n=240)) report a decrease in waste discard against year 1 baselines.  0.5 By EoP, at least ~30% of fishers engaged around the 6 islands are actively performing behaviour changes to minimize unsustainable fishing practices.  0.6 By Y3 Q3, estimated total bycatch of seabirds is reduced by 25% and adherence to the guidelines for release of captured seabirds and turtles is at least 50%.  0.7 At least 70% of fishers and fish mongers engaged in the labelling program (n=370, including	0.1 Inception workshop report. Guardians of the Sea Terms of Reference, exchange visit reports, GOS website. List of GOS members at start and end of project. Number of NGO staff trained and actively engaged in the programme post-training project.  0.2 Agreed guidelines and criteria, List of fishers, fish mongers' associations, restaurants and local authorities signed up to the labelling scheme at project sites, Code of Conduct, proposed compliance mechanisms.  0.3 Reports on fishers' logbook data (fishers use measuring tape/rulers on boats; fish mongers use seabass shaped rulers on markets). Qualitative estimates of fish wastage and release of undersized fish established through surveys. Baseline surveys at landing sites weekly for 2 months Y1Q2, monitored 6 monthly for 1 month (same month each year). Sample feedback before and after awareness campaign.  0.4 Baseline and EoP surveys. Insulation box systems delivered and other equipment in use at the end of the project and stats on discarded fishing gear. Awareness raising workshop reports with fishers' associations, reports on reach of and sampling of feedback from the awareness campaigns including pre and post workshop test of	0.1 The assumption is that more members of the fishing communities wish to engage as GOS. As Associação Projeto Biodiversidade (APB) has successfully engaged 40 fishers on Sal Island to join the GOS program showing high commitment to protecting marine biodiversity and more fishers are waiting to enrol in the program, we are confident that sufficient numbers of fishers will enroll and play an active part.  0.2. and 0.3 Members of the communities in Cabo Verde are willing to join the labelling program, as demonstrated by Biosfera's successful engagement with 150 fishers in São Vicente.  0.4 Fishers who currently use plastic water bottles as ice cube/cooling system will be willing to use the insulation box systems and dispose of fishing gear appropriately on land rather than at sea. As the proposed insulation box systems will protect valuable catch, we anticipate full uptake of this system. Awareness raising workshops will highlight the negative impact of discarding fishing gear at sea, so we expect full compliance.

	<p>240 fishers (M) and 130 fish mongers (F)) report an increase in income (compared to baseline) resulting from reduced fish waste through improved cold-storage facilities at sea and on land, increased fishing efficiency, higher market price for sustainably fished product.</p> <p>0.8 By EoP, at least ~20% decrease in post-harvest loss of catch for 600 fishers and fish mongers within the 14 associations taking part in the project due to improved sanitary measures for the handling, cooling, and processing of fish along the value chain.</p>	<p>participants knowledge of key workshop messages.</p> <p>0.5 Questionnaire survey and semi-structured interviews with fishers, community members, self-reporting forms.</p> <p>0.6 Monthly bycatch figures are collated based on fishers' surveys recorded in a one-week survey, and estimates produced 6 monthly on numbers of individuals of vulnerable species taken, including species, seasons, release rates, impacts on fishing efficiency. Numbers are extrapolated for all areas sampled with &gt;10% of fleet coverage by surveys.</p> <p>0.7 Baseline and EoP surveys. Photographs and video of material/equipment in use. Reports on quantity and type of material distributed.</p> <p>0.8 Start and end of project surveys. Photographs and video of material/equipment in use. Reports on quantity and type of material distributed and in active use.</p>	<p>0.5 Self-reporting is reasonably accurate and consistent between baseline and EoP. GOS are already acting as observers and members of the NGOS will be ground truthing reported information.</p> <p>0.6 Bycatch rates follow the expected binomial distribution, and the data are representative of the whole artisanal fleet in the populations of fishers sampled.</p> <p>0.7 and 0.8 Suggested livelihood improvements for the associations were consulted with communities in the three areas during ongoing projects and may vary depending on local context (see output 5).</p>
<p><b>Outputs:</b></p> <p>1. Increased conservation capacity built amongst 3 civil society organizations and 170 Guardians of the Sea (GOS) members; including behaviour change, sustainable fisheries labelling, and voluntary stewardship.</p>	<p>1.1 SOCIAL SCIENCE METHODS: Three NGOS conduct qualitative and quantitative social science research by Y1 Q1 in order to design messages, identify and prioritize target audiences, trusted influencers, channels of communication, and drivers of change by Y2 Q1.</p> <p>1.2 LABELLING: Two NGOS are trained by Biosfera to replicate a local sustainable fishery labelling scheme by Y1 Q1.</p>	<p>1.1 Questionnaire survey and Semi-structured Interview guide for data collection with fishers, community members, summary results uploaded to preprint server.</p> <p>1.2 Inception workshop report, Number of trained staff replicating local labelling scheme.</p>	<p>1.1 Fishers are open to disclosing information about fishing practices. This should be enabled by strong ongoing engagement by all 3 NGOS.</p>

	<p>1.3 GUARDIANS OF THE SEA (GOS): Two NGOS are trained by APB to replicate the GOS model promoting voluntary stewardship and target species and vulnerable non-target species monitoring (seabirds, sea turtles, sharks, rays) amongst fishers, and the GOS brand has agreed governance and communications strategy by Y1 Q1.</p> <p>1.4 RECRUITMENT OF GOS: At least 170 new volunteer fishers join the GOS programme project sites and are trained to monitor key species and monitor fishing practices by Y2 Q1.</p> <p>Baseline: 40 fishers in Sal.</p>	<p>1.3 Inception workshop report, Terms of reference agreed with fishing cooperatives, number of staff trained, website, t-shirts. Number of staff actively engaged with programme post training.</p> <p>1.4 List of fishers enrolled in GOS, workshop reports, photos. Review of numbers of fishers enrolled in GOS at the start and actively involved at end of the project.</p>	<p>1.4 Fishers in other islands than Sal are willing to become volunteer GOS members. Members become early adopters/influencers of behaviour change for the wider community (see Outcome 1 assumption).</p>
<p>2. A pilot participatory local labelling scheme for sustainable fisheries is implemented by fisheries value chain stakeholders (fishers, fishmongers, restaurants, and consumers) in six islands (Sal, São Vicente, Santo Antão, São Nicolau, Fogo, and Brava).</p>	<p>2.1 Barriers to implement social change, such as customary fishing practices, or material barriers, are identified by Y1 Q2 in workshops and through a participatory process involving stakeholders, barriers to change and potential behavioural change interventions to overcome them are agreed through co-design. Y1 Q4.</p> <p>2.2 Local labelling guidelines and criteria (potentially minimum catch size, seasonality, bycatch mitigation, no discarded fishing gear) reviewed, consulted, and agreed by NGOS and fishing value chain stakeholders, as well as local authorities by Y1 Q4.</p> <p>2.3 By Y1 Q4, at least 50 restaurants on 6 islands agree to participate in the labelling scheme. Baseline 2021: 6 restaurants in São Vicente.</p> <p>2.4 At least 240 Fishers and 130 fish mongers are engaged in the labelling program by Y2 Q3 and trained in the current legislation on fisheries and existing MPAs and their management plans.</p> <p>2.5 Local labelling results are shared with appropriate government agencies and</p>	<p>2.1 Baseline questionnaire survey report identifying barriers and Social Marketing Campaign implementation plan.</p> <p>2.2 Local Labelling Report providing agreed guidelines and criteria, MoUs and listing number of fishers, fish mongers' associations, restaurants and local authorities signing up to take part in the local labelling scheme at project sites, Code of Conduct.</p> <p>2.3 List of restaurants of each island adopting the labelling scheme, signed MoUs.</p>	<p>2.1 The three NGOS will be able to design and implement effective behavioural change. The project will increase capacity to design and implement social marketing campaigns.</p> <p>2.2 Initiatives in this project complement and strengthen existing MPAs and their management planning. They provide examples of management actions which will broaden and strengthen MPA management.</p> <p>2.3.1 Not all restaurants are likely to accept charging the premium onto customers. Based on Biosfera's experience, we are confident that middle-class to high-end restaurants will be willing to engage in the labelling scheme.</p> <p>2.3.2 Artisanal fishers are currently unable to sell their catch to hotels due to hygiene concerns. Improved</p>

	<p>advocacy conducted to transition to formal compliance mechanisms by EoP</p>	<p>2.4 List of fishers and fish mongers adopting the labelling scheme.</p> <p>2.5 Policy document, Code of Conduct, proposed compliance mechanism, roles and responsibilities and any responses thereto.</p>	<p>fish handling may result in new market opportunities and income.</p> <p>2.4 Fishers and fish mongers are willing to participate. We think this will hold true if the added value is clear and the scheme is not too difficult to administer.</p> <p>2.5 The Instituto de Gestão de Qualidade e Propriedade Intelectual (IGQPI) showed interest in formalising the local labelling scheme. Buy-in from the Ministry of the Sea will be necessary to ensure sustainability and wider uptake of the labelling post-project. We believe this will hold true due to ongoing engagement with both agencies in ongoing (industrial) bycatch mitigation project.</p>
<p><b>3.</b> Bycatch mitigation measures, including safe release, protecting seabirds and sea turtles and that do not adversely affect other vulnerable species (sharks, rays) are deployed by 600 artisanal fishers around 6 islands and show a 25% reduction of estimated total bycatch of seabirds (compared to Y1 baseline), and 50% of fishers safely release captured seabirds and turtles by Y3 Q3.</p>	<p>3.1 BYCATCH ESTIMATION: The nature, extent, and intention behind current bycatch is characterized for different species/taxa within specific project sites by Y1 Q2 and at EoP to compare with baseline estimates (% of fishers catching birds, turtles and sharks). 2019 Baseline for handline bycatch: seabirds (77%), sea turtles (55%), sharks (86%). For gillnets, turtles (77%), sharks (86%) and no seabirds. More detailed catch statistics are established through weekly surveys and estimated total catch of target and vulnerable species is estimated from GOS 6-monthly.</p> <p>3.2 MITIGATION: Tailored bycatch mitigation options targeted at reducing seabird and turtle bycatch (bird-scaring devices, line weighting, hook types, offal management, bait thawing, net lights (LEDs)) are explored and assessed by Y1 Q4 and rolled out by Y2 Q4.</p> <p>3.3 SAFE HANDLING: At least 1,200 fishers trained to safely handle and release seabirds, sea turtles,</p>	<p>3.1 Baseline surveys (Gilson, 2019), Questionnaire surveys, weekly self-reporting from selected GOS at each site, on numbers of birds, turtles, sharks and rays taken at specific sites, species, seasons, impacts on fishing efficiency, workshop with fishers' associations reports. Bycatch figures are reported 6 monthly to track changes over time. Numbers are extrapolated for all sites sampled with &gt;10% of fleet coverage by surveys.</p> <p>3.2 Reports providing overview of mitigation measures tried on specific fishing boats and detailing results from mitigation method assessments and uptake of selected methods. Reports on quarterly meeting with fishing associations integrating feedback about the effectiveness of the measures and</p>	<p>3.1. Past relationship between fishers and NGOS have built enough trust to engage transparently in surveys.</p> <p>3.1.2 Fishers are willing to use mitigation measures and understand the benefits of reducing bycatch on fishing efficiency and biodiversity.</p> <p>3.1.3 Bycatch rates follow the expected binomial distribution, and the data are representative of the whole artisanal fleet in the populations of fishers sampled.</p> <p>3.2.1 Measures will be monitored to ensure that they do not adversely affect other vulnerable</p>

	<p>when entangled/hooked by Y1 Q3 to increase chances of survival for released animals and at least 50% report using the safe release methods by EOP.</p> <p>3.4 BEHAVIOUR CHANGE: A social marketing campaign shifting social norms and influencing behavioral patterns is implemented and, by EoP, an increasing number of fishers actively performing behaviours aimed at minimizing bycatch by 30% (n=1,200) compared to baseline and control.</p> <p>3.5 SPATIO TEMPORAL ANALYSIS: By Y3 Q2, Analysis of spatio-temporal overlap between artisanal boats, seabirds and sea turtles is informing future bycatch-mitigation decision-making to determine the seasonality, fishery types and species involved in bycatch risk.</p> <p>3.6 MITIGATION AGREED: By Y3 Q3, effective mitigation measures, including reduction target, use of specified best practice mitigation for each specific fishing method are agreed with fishers' associations.</p> <p>3.7 AUDIT SYSTEM IMPLEMENTED: By EoP, audit system on bycatch prevention is implemented and integrated into the local labelling on sustainable fisheries.</p>	<p>troubleshoot issues about deployment and fishing efficiency.</p> <p>3.3 Training reports, fishers' evaluations, surveys and photographic archive.</p> <p>3.4 Social marketing campaign materials. Final report on social marketing campaign activities implementation and reach. Peer-reviewed publication in scientific journal.</p> <p>3.5 Results report with the spatiotemporal overlap analysis showcasing areas of potential interaction between vessels, seabirds and sea turtles, which are then transformed into targeted management actions, and used to inform approaches across West Africa.</p> <p>3.6 Meeting minutes.</p> <p>3.7 Verification through documentation of activities and port-based surveys of compliance and knowledge of the systems required.</p>	<p>species such as sharks and rays, nor target fish catch are deployed.</p> <p>3.2.2 Bycatch in industrial and semi-industrial fisheries is being addressed in other projects, including starting an observer programme and supporting the Fisheries Department mitigating the impact of their upcoming national fleet.</p> <p>3.3 Available information suggest most bycatch incidents for seabirds and sea turtles is unintentional.</p> <p>3.4 We are drawing on social marketing principles that have been tested and found to be effective in influencing behaviour for biodiversity conservation.</p> <p>3.7 Buy-in from the Ministry of the Sea and National Fisheries Agency will be necessary to ensure sustainability and wider uptake of the labelling post-project. We believe this will hold true due to ongoing engagement with both agencies in MAVA-funded (industrial) bycatch mitigation project where they expressed interest in using best available mitigation technologies for their national fleet.</p>
<p><b>4. Knowledge on nature and extent of interactions between seabirds and sea turtles in artisanal fisheries is improved and informs bycatch mitigation policies and solutions being used by</b></p>	<p>4.1 By Y1 Q1, an external scientific expert committee is established to provide guidance to the project, foster knowledge-exchange, and ensure cutting-edge practices are implemented.</p>	<p>4.1 Committee members list, quarterly meeting reports, reports on guidance provided.</p>	<p>4.1 Best practices are constantly developed and improved. The scientific committee guidance allows adaption and improvement if needed.</p>



<p>artisanal fishers in Cabo Verde and in the wider West Africa region by EoP.</p>	<p>4.2 Starting from Y1 Q4, species population monitoring is reviewed using baseline population data (number of individuals, species, seasonality, among others) and information from GOS on the occurrence and distribution of indicator species at sea is collated, analysed and reported. Bycatch reduction is observed in addition to bycatch reporting (3.2 above).</p> <p>4.3 Awareness of the value and benefits of adopting more responsible fishing practices and protecting seabirds, sea turtles, sharks, rays, and juvenile fish increases amongst fisheries value chain stakeholders (fishers, fish mongers, restaurateurs, restaurant patrons, government agencies managing fisheries). The campaign reaches at least 60% of the population in target communities at the six islands.</p> <p>4.4 Report on social marketing outcomes and the opportunities /barriers to upscaling to national coverage is shared with local authorities on 6 islands and government agencies at national level, regional (West African), international levels.</p> <p>4.5 Advocacy is conducted at EOP and post-project on inclusion artisanal bycatch mitigation measures into Marine Protected Area (MPA) management plans and national policies.</p> <p>4.6 Lessons learned, mitigation bycatch fact sheets, Guardians of the Sea development protocol, and scientific papers produced during this project are shared with policymakers, BirdLife Partners and NGOS in West Africa and to the wider public by EoP.</p>	<p>4.2 Species population surveys are conducted on indicator sites and combined with information about their occurrence and distribution at sea to indicate the state of their populations and their interactions with study fisheries.</p> <p>4.3 Number of people in the target audience reached during social marketing campaigns and sampled feedback before and after campaigns.</p> <p>4.4 Social marketing results report. Lessons learned from the different communities are used to adapt the approach to achieve benefit in all the areas of the programme.</p> <p>4.5 Recommendations on the National Seabird Action Plan revision, National Sea turtle Conservation Plan, MPA plans, National fisheries management plan and any responses thereto.</p> <p>4.6 Scientific paper, recorded webinars are shared on the BirdLife 'Hatch' platform, a capacity building social platform. Recommendations are shared with Departments of Fisheries, Regional Fisheries Management Organisations (e.g., RFMOs and intergovernmental agencies) in West African countries.</p>	<p>4.2 National NGOS (Biosfera, Projecto Vitó, APB) have a close relationship with fishing communities enabling the rapid expansion and adoption of Guardians of the Sea programme. GOS in Sal took 1 year to set up.</p> <p>4.3 Seabirds and sea turtles have wide home ranges including other West African countries where lessons learned will be relevant to replicate the project (e.g., Sao Tome and Principe, Senegal, Mauritania, Guinea Bissau, and The Gambia).</p> <p>4.6 BirdLife has established relationships with Ministry of fisheries and relevant national departments in all West African countries from Mauritania to Sierra Leone due to ongoing collaboration in MAVA-funded bycatch mitigation project in industrial fisheries.</p>
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<p><b>5.</b> At least 70% (n=370) of pilot participatory sustainable fisheries labelling scheme participants (260 people, ~35% women) directly benefit from a 10% increase in income (compared to baseline) by joining the scheme and co-create livelihood benefits, shared amongst the communities for approx. 1,200 people with increasing equitability across genders.</p>	<p>5.1 14 fishers (M) and fish monger (F) associations (memberships of 1,200 fishers and 130 fish mongers respectively) have improved structure, and governance by Y1 Q3.</p> <p>5.2 At least 70% of fishers and fish mongers engaged in the labelling program (n=370, including 240 fishers (M) and 130 fish mongers (F)) report a 10% increase in income resulting from reduced waste, increased fishing efficiency, higher market price for sustainably fished product, better food storage.</p> <p>Baseline: 57 fishers and 40 fish mongers in São Vicente and Sal. Average salary: 150-350 GBP per month.</p> <p>5.3 By Y1 Q4, safety equipment is provided to the 170 fishers engaged in GOS and the labelling, during the first year.</p> <p>5.4 By Y3 Q4, ~20% decrease in post-harvest loss of catch for 600 fishers and fish mongers within the 14 associations taking part in the project due to improved sanitary measures for the handling and cooling of fish along the value chain.</p> <p>5.5 At least 370 people (~35% women) attend workshops explaining social benefits related to taxes and insurance and are supported with follow-up administrative support by Y2 Q4.</p>	<p>5.1 Fishers' associations SWOT Analyses, Terms of Reference, governance structure and membership disaggregated by location, profession, and gender, training workshop materials.</p> <p>5.2 Baseline and end line surveys disaggregated by gender and age, analysis for equitable distribution.</p> <p>5.3 Photographs and video of material/equipment in use. Reports on quantity and type of material distributed (e.g., life jackets, VHF radio)</p> <p>5.4 Baseline and end line surveys, Photographs and video of material/equipment in use. Reports on quantity and type of material distributed (e.g., ice making machines, trays on the boat, durable insulation containers, barrows, fish-preservation and processing facilities, storage place, aluminium tables for improved food hygiene in handling catch at quay and at markets).</p> <p>5.5 Workshop attendance records and feedback. Surveys on number of fishers and fish mongers who followed relevant administrative procedures.</p>	<p>5. The assumption is that there are 5 people per household in Cabo Verde and that resources are shared within a household.</p> <p>5.1 In all three areas, fishers' associations exist but most of them are poorly structured and non-functional.</p> <p>5.1 In Sal, women fish mongers were recently integrated within existing fishing associations. Where appropriate, women will be supported to form independent fish monger associations.</p> <p>5.2 and 5.4 Suggested livelihood improvements for the associations were consulted with communities in the three areas during ongoing projects and may vary depending on local context. E.g., On Sal, GOS members were supported to have a small shop with basic supplies as there wasn't any in that community and they had to travel long distances.</p> <p>5.5 Fishing is not recognised as a 'formal' profession in Cabo Verde, so there is currently no social safety net in place.</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. Increased conservation capacity built amongst 3 civil society organizations and 170 Guardians of the Sea (GOS) members; including behaviour change, sustainable fisheries labelling, and voluntary stewardship.**

- 1.1.1 Behaviour change methodology: OU to build capacity of national NGOS via train-the-trainers sessions in Y1 Q2: identification of influencers, target audiences, barriers to change.
- 1.2.1 Review existing labelling scheme, agree on guidelines, criteria, benefits during Inception Workshop in Y1 Q2.
- 1.2.2 Biosfera to train APB and Projecto Vító on labelling approach during Inception Workshop in Y1 Q2.
- 1.2.3 Create database of species sizes, sampling sites, dates, fishers sampled in Y1 Q2. Establish baseline using weekly GOS self-reporting data and monitor 6 monthly.
- 1.2.4 Train fishers in using self-reporting forms on bycatch, monthly reporting by a selection of GOS to NGOS in Y1 Q2.
- 1.3.1 Guardians of the Sea: Draft Terms of Reference, consult, agree and APB to train Partners at the Inception Workshop in Y1Q2
- 1.3.2 Build numbers of GOS - train to monitor target and non-target catch (seabirds, sea turtles, sharks, rays) from Y1 Q2, report & review 6 monthly.
- 1.3.3 GOS Brand and Communications strategy agreed and rolled out by Y1 Q2.

**Output 2. A pilot participatory local labelling scheme for sustainable fisheries is implemented by fisheries value chain stakeholders (fishers, fishmongers, restaurants, and consumers) in six islands (Sal, São Vicente, Santo Antão, São Nicolau, Fogo, and Brava).**

- 2.1.1 Baseline surveys and semi-structured interviews to determine barriers to social change in fishing practices identified and strategies to mitigate them are determined by Y1Q3
- 2.1.2 Social marketing strategy using most relevant communication channels implemented, monitored (see 3.4.4), reviewed, analysed.
- 2.2.1 Hold a workshop with fishery value chain stakeholders to agree on pilot labelling criteria in Y1 Q4, reporting on these outcomes.
- 2.3 Recruit restaurants, fishers' associations, fish mongers by Y1 Q4, with 6 monthly monitoring.
- 2.4.1 Train fishers in waste reduction, measurement, need to release undersized fish, and existing applicable MPA legislations in Y1 Q3 and annually.
- 2.4.2 Improve the process by iteration of socialising, reporting results to stakeholders, adjusting if needed in Y2 Q2, report 6 monthly.
- 2.5.1 Prepare a Code of conduct with adjusted criteria in Y2 Q2.
- 2.5.2 Analyse results and conduct advocacy with IQGPI to local authorities, government, and fishers' associations to determine formal compliance mechanisms in Y3 Q3.

**Output 3. Bycatch mitigation measures, including safe release, protecting seabirds and sea turtles and that do not adversely affect other vulnerable species (sharks, rays) are deployed by 600 artisanal fishers around 6 islands and show a 25% reduction of estimated total bycatch of seabirds (compared to Y1 baseline) by Y3 Q3, and 50% of fishers safely release captured seabirds and turtles by Y3 Q3.**

### **3.1 BYCATCH ESTIMATION**

- 3.1.1 Review bycatch self-reporting methods in Y1 Q1 and define methodology for sampling fishers re intentional catch & unintended catch rates by Y1 Q2.
- 3.1.2 Establish a baseline level of birds and turtles caught, released alive or landed dead through weekly self-reporting surveys by GOS and report monthly for Y1Q2.
- 3.1.3 Analyse the changes in catch rate by season, area, and fishing method and estimate the reduction in catch.
- 3.1.4 In Y2Q2, review method of catch recording and adjust, if necessary, in relation to species definition, sampling intensity across fishing methods.

### **3.2 MITIGATION**

- 3.2.1 Introduce the topic at Inception workshop and seek volunteers to contribute/test.

3.2.2 Review mitigation methods via workshop with Scientific Expert Committee in Y1 Q2.

3.2.3 With fishery associations, determine adaptations / test in fisheries in Y1 Q4 with a minimum 5 deployments of each at 6 sites by Y2 Q1

3.2.4 Monitor and review outcomes of bycatch mitigation trials with Scientific Expert Committee and define the most effective measures.

### **3.3 SAFE HANDLING**

3.3.1 Create training module for use at Inception workshop and NGOS capacitated by train-the-trainer.

3.3.2 Adapt SPEA (Portuguese) materials for safe handling guides and seek Scientific Expert Committee inputs in Y1 Q2.

3.3.3 Train fishers via workshops in Y1 Q2, monitor using information provided in 3.1, analyse and report.

### **3.4 BEHAVIOUR CHANGE**

3.4.1 Conduct quantitative and qualitative surveys and semi-structured interviews to get insight on motivations, social norms, context of behavioural patterns underpinning fishing activities by Y1 Q2.

3.4.2 University of Oxford to co-design culturally sensitive behaviour change strategy with national NGOS and impact evaluation plan in Y1Q2.

3.4.3 Implement behaviour change/social marketing strategy linked to 2.1.2 in Y1 Q3.

3.4.4 Measure intervention causal impacts by Y3 Q3 through 6-monthly surveys at target and comparison sites and actual behaviours to overcome limitations of self-reported indicators.

3.4.5 Review and adjust methodology following feedback by Y2Q3.

### **3.5 SPATIO TEMPORAL ANALYSIS OF EXISTING DATA**

3.5.1 Review existing data on spatiotemporal overlap between vessels and seabirds to find hotspots for interactions and target data gathering and mitigation efforts by Y1 Q4.

3.5.2 Deploy GPSs on artisanal boats on 6 islands, monitor, analyze, report to understand the seasonality and spatial spread of fishing activity to determine mitigation strategies.

### **3.6 AGREEMENT ON MITIGATION MEASURES**

3.6.1 Using outputs from 3.2, socialise effective mitigation methods with FAs, including changes to target fish catch and target reduction levels (Y3)

3.6.2 Advocacy with government parties/ local authorities, throughout contributing to policies on bycatch reduction a) seabirds; b) turtles; c) MPA implementation; d) fishery sustainability; e) labelling.

### **3.7 AUDIT SYSTEM IMPLEMENTED**

3.8.1 Development of audit scheme based on existing modes in Y1 Q2.

3.8.2 Hold a workshop with IGQPI, FAs, local authorities to identify means of delivery in Y1 Q3.

3.8.3 Trial of the audit scheme, monitor in Y2 Q4 and Y3 Q2, analyse in Y3 Q3, and deliver results to stakeholders & government in Y3 Q4.

**Output 4. Knowledge on nature and extent of interactions between seabirds and sea turtles in artisanal fisheries is improved and informs bycatch mitigation policies and solutions being used by artisanal fishers in Cabo Verde and in the wider West Africa region by EoP.**

- 4.1.1 Scientific Expert Committee established in Y1 Q2, quarterly meetings held virtually, minuted with regular inputs on outputs, noted.
- 4.1.2 Get Committee's advice on extension of activities to West Africa during Y3.
- 4.2.1 Agree indicator populations (seabirds and turtles) for monitoring, based on pre project data and planned activities of local NGOS during the project by Y1 Q2.
- 4.2.2 Use bird and turtle population monitoring data from NGOS to compare to 2019/2020 baselines to identify population changes in indicator populations across the archipelago annually.
- 4.2.3 Train Guardians of the Sea to conduct species and bycatch monitoring at sea and socialize methods in Y1.
- 4.3.1 Three NGOS conduct awareness raising campaigns of fishing communities throughout 6 islands e.g. fish market information tools, posters in buses, radio interviews, television, and newspapers.
- 4.3.2 Report on reach of the campaigns in Y3 Q1-Q2, sample feedback from fishers including pre and post workshop test of participants knowledge of key workshop messages.
- 4.4 Compile results and lessons learned from behaviour change campaign, suggest opportunities in a report for replication at national, regional and global level in Y3 Q2.
- 4.5 Share recommendations with national policymakers (DNA, Ministry of Fisheries, Department of Fisheries, IQGPI) through meetings and events in Cabo Verde in Y3 Q4.
- 4.6.1 Develop communications strategy for the project linked to 1.3.3 identifying key target audiences and channels by Y1 Q2.
- 4.6.2 Develop dissemination materials on project results, mitigation fact sheets, and lessons learned in easy to access formats in Y3 Q2.
- 4.6.3 Write and publish a scientific article on bycatch mitigation results and uptake of measures through social marketing in Y3 Q3.
- 4.6.4 Create interactive forum for uptake & response in WA countries on Hatch platform in Y3 Q4.
- 4.6.5 Share recommendations with policymakers and with fisheries stakeholders in West Africa at regional meetings with governments, and at global conferences in Y3.

**Output 5. At least 70% (n=370) of pilot participatory sustainable fisheries labelling scheme participants (260 people, ~35% women) directly benefit from a 10% increase in income (compared to baseline) by joining the scheme and co-create livelihood benefits, shared amongst the communities for approx.1,200 people with increasing equitability across genders**

- 5.1.1 Governance structure models for fisheries associations to be developed by APB and shared at Inception Workshop. APB to train other partners.
- 5.1.2 NGOS to train fisheries associations on 6 islands through workshops in Y1 Q2, monitor and support strengthening throughout project.
- 5.2.1 Define communities' income and non-financial benefits & costs via Baseline and end line surveys disaggregated by gender and age, analysis for equitable distribution.
- 5.3.1 Assess the safety equipment needs during Y1, identify and implement most equitable distribution across parties with FAs.
- 5.3.2 Training workshop at 6 islands to train participants in use of safety equipment in Y1 Q4.
- 5.3.3 Monitor use of equipment, ensure photos/records are kept, gather commentary (links to comms strategy).
- 5.4.1 Define baseline and EOP post-harvest loss through surveys in Y1 Q2 and Y3 Q2.
- 5.4.2 Define the need and distribution of measures that improve fish handling practices across 6 sites in Y1 Q2.
- 5.4.3 Deliver materials and training for sanitary and cooling to FAs (fishers and fish mongers) in Y1 Q4.
- 5.5.1 Inception workshop - train the trainers from APB to other NGOS on social benefits applicable to fishing communities.
- 5.5.2 Training workshops on tax/insurance aspects with FAs on benefits of involvement, post-workshop surveys to monitor uptake of measures quarterly and adjust/support in Y1 Q3.