

## Darwin Initiative Main and Post Project Annual Report

To be completed with reference to the “Writing a Darwin Report” guidance: (<http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms>). It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

**Submission Deadline: 30<sup>th</sup> April 2020**

### - Darwin Project Information

Project reference	24-008
Project title	Effective marine resource co-management in the Pemba Channel Conservation Area
Country/ies	Tanzania
Lead organisation	Fauna & Flora International
Partner institution(s)	-Mwambao Coastal Community Network (Mwambao) -Wildlife Conservation Society, Tanzania programme (WCS) -Department of Fisheries Development, Pemba – Ministry of Natural Resources, Livestock and Fisheries (DFD-Pemba)
Darwin grant value	£ 402,663
Start/end dates of project	Apr 2017 – Mar 2021
Reporting period	Apr 2019 – Mar 2020 ; Annual Report 3
Project Leader name	Alison Mollon
Project website/blog/social media	<a href="https://www.fauna-flora.org/projects/implementing-effective-marine-resource-co-management-pemba-channel-conservation-area">https://www.fauna-flora.org/projects/implementing-effective-marine-resource-co-management-pemba-channel-conservation-area</a>
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### 1. Project summary

Pemba Island’s west coast, an Ecologically Significant Marine Area, was designated as the Pemba Channel Conservation Area (**PECCA**) in 2005. It is considered a hotspot for cetaceans and has high coral and associated species’ diversity. Its marine resources are vital for artisanal fishing, supporting livelihoods and food security for 191,588 people in 34 coastal communities (Shehias) (of whom 45% are classified as poor and >80% are fishers), and fishers from Tanzania.

Biodiversity surveys, fisher interviews, and research demonstrate that PECCA’s integrity and people’s wellbeing are threatened by:

- Coral damage by fishers using drag nets, dynamite and anchors, reducing biodiversity, reef habitats, and protection from storm surges and sea-level rise, confirmed in [IUCN’s Reef Resilience Assessment](#).
- Overfishing of locally important reef fish (e.g. emperors, snappers) and octopus by an increasing number of fishers, demonstrated by undersize individuals; an absence of apex predators (e.g. groupers, reef sharks); and small fish species and juveniles being caught with small mesh nets and traps.
- Hunting and/or by-catch of globally vulnerable species, including four Red-listed sea turtle species, Indian Ocean humpback dolphins (proposed as Endangered), humphead wrasse (Endangered), bumphead parrotfish (Vulnerable), and blacktip reef sharks (Near Threatened), with drift nets, spear guns with SCUBA, and nest poaching.
- Exclusion of fisher women and men from marine resource decision-making due to limited knowledge and management capacity, reducing compliance with regulations.

Despite a clear legal framework, DFD-Pemba and **Shehia Fisher Committees (SFCs)** are constrained by insufficient capacity and resources. Of 34 SFCs, only two actively manage marine resources due to

our pilot (2015-16), trialling temporary reef closures over 436ha. These delivered fishery, reef ecosystem, and wellbeing benefits to the communities, including: three-fold increases in octopus catch weight; more abundant, larger reef fish; and increased participation in decision-making. This provided a solid basis upon which the project is now building.

More specifically, the project activities are working towards 1) building the capacities of six SFCs for these

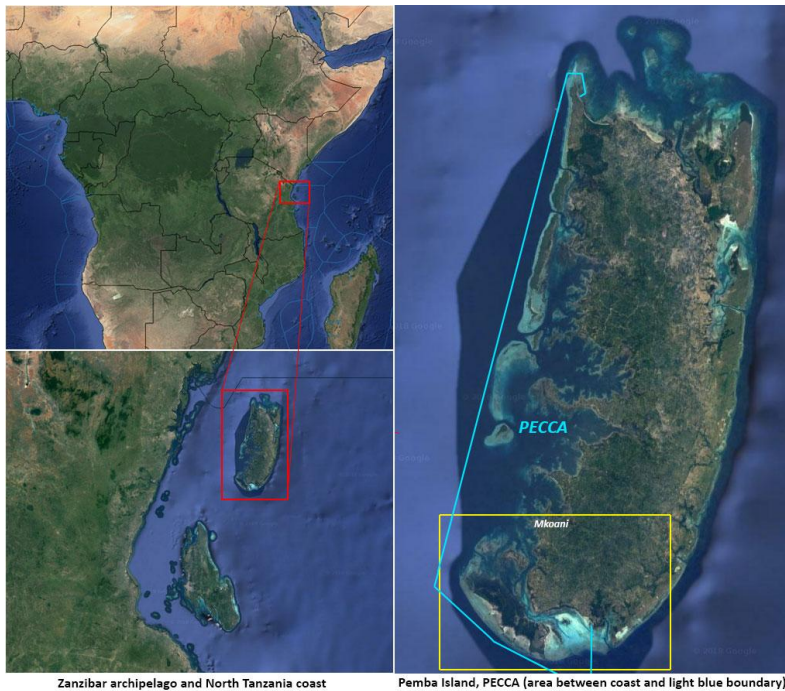


Figure 1 Map of Pemba Island and of the project area (in the yellow rectangle). See Annex 5 for a detailed map of the area of intervention.

to have the skills, knowledge & confidence to implement sustainable marine resources management measures in local fishing grounds; 2) forming a **Collaborative Management Group (CMG)** between the target SFCs to determine and address seascape management issues; 3) training and building the capacities of DFD-Pemba to enable the institution to effectively support marine resources co-management in the long term; 4) providing sufficient understanding and incentives to both male and female fishers in the six target communities to participate in new marine resources co-management measures; and 5) evaluating conservation and social outcomes of the project and sharing findings with target audiences (communities, local government & authorities, conservation community).

## 2. Project partnerships

### Mwambao Coastal Community Network

**Mwambao Coastal Community Network** is a local Zanzibari NGO focus on providing tools and empowering coastal communities managing their resources. They are the project's main implementing partner. Mwambao is responsible for implementing most field activities and FFI for the overall project reporting. A number specific activities fall under FFI's direct responsibility (eg. in Output 3, building DFD capacities, through a consultancy), but especially FFI provides a range of technical input also aiming to build Mwambao's capacities. For instance on socio-economic and wellbeing surveys methods, on the community credit scheme (called Mkuba) or on general Monitoring and Evaluation.

During Y2, Mwambao also been able to more directly input into work under DFD's responsibility under the World Bank's SWIOFish programme (embedded in DFD), in particular through a contract (on a shared bid with a consultancy, "Agrotec") to write the first fisheries management plans for Zanzibar (for Octopus, Reef fish and Small pelagics) and through another contract to train DFD staff to facilitate the establishment of temporary closures (in particular for octopus). These pieces of work have allowed Mwambao to more directly provide DFD with trialled methodologies and guidelines clearly utilising and building on the work funded by Darwin. This has improved the partnership with DFD, notably with central DFD (headquartered in Zanzibar main island, Unguja), DFD-Pemba having been more clearly supportive since the beginning of the project.

The work conducted through this grant has also led Mwambao to develop two new partnerships to build on the work in PECCA, with the NGOs CORDIO and WildAid (funded by USAID Tz-protect programme). Their input has been designed to complement the work supported by Darwin funding and FFI has been in contact at different occasions. This aspect is further developed under section 12. Sustainability and legacy.

### The Department of Fisheries Development – DFD

The components of the SWIOFish programme (within DFD) that most overlap with the work conducted through the Darwin grant is about structuring and rolling out co-management governance in Zanzibar's Marine Conservation Areas (**MCAs**), of which PECCA is the largest. Good collaborative relationships have been built with the principal consultant leading this work for SWIOFish (Dr Chris Horrill) since his start (July 2018). He has strongly supported the work undertaken under our project, and has promoted some of the tools we have designed for official uptake at a higher institutional level (e.g. SFC's Standard

Operating Procedures – **Annex 6**), by facilitating the design with our project’s input on SFC elections guidelines and generally by championing a shared vision for co-management (e.g. with the creation and empowerment of Collaborative Management Groups –**CMG**, gathering several SFCs, within this project’s output 2). This component of SWIOFish has been slower to progress compared to their initial timeline and this year, Tanzania and Zanzibar presidential elections scheduled in Nov. 2020 combined with the Covid-19 outbreak, are further slowing it down, but it should continue until 2021. The SWIOFish co-management programme remains a key support in our project collaborating with central DFD.

Another component of SWIOFish programme has started in September 2019 (led by the consultancy firm [Macallister Elliott & Partners Ltd.](#)) aims to review and update all of Zanzibar MCAs General Management Plan (**GMP**), which includes that of PECCA. The project team has proactively reached out to lead consultant and is providing some input in their work, with the view to secure co-management roles for communities in the next GMP for PECCA, and include local management measures led by those. The consultancy was initially anticipated to be finalised ahead of Nov. 2020 elections but the Covid-19 outbreak has precipitated a delay in that process.

The decentralisation process for DFD and fisheries/marine management themes (flagged in AR2 and HYR3) hasn’t been clarified yet. Mwambao has been in contact with the Principal Secretary and is monitoring any clarification through our SWIOFish, DFD and DFD-Pemba contacts. The process could lead to devolve significant responsibilities in the sectors mentioned above and thus have profound impacts on the management structure of the MCAs. We continue to involve district authorities as started by end of Y2 (e.g. when creating the first CMG “STAMISHIMA” –see Output 2 in the section on Project progress).

Mwambao shares monthly reports (in Kiswahili) with DFD about our project’s progress and a Steering group meeting has been held in December 2019 in DFD-Pemba offices (Wete, North Pemba, **Annex 8**).

### **Wildlife Conservation Society, Tanzania country programme**

The partnership with **WCS Tanzania** was initially aiming to gather evidence of by-catch and targeted catch in the project area of vulnerable fish species such as sharks and humphead wrasse, or illegally caught species of cetaceans and sea turtles. Due to several changes (described in AR2), the project was refocused more specifically on gathering data on Sharks and Rays fisheries to understand the threats and scale of those that these animals face, before considering potential community-led conservation actions. The data collected shows these fisheries concern an overwhelming number of vulnerable species, many listed in the IUCN red list and in the CITES appendixes (see Output 2, activities 2.4 and 2.5 for details). WCS is in charge of disseminating the data to government and this is also informing a broader piece of work that they conduct at Tanzania-level, aiming to create a national Action Plan. Mwambao and WCS also liaise with one another, especially when dealing with the same communities.

### **GreenFi Systems Ltd.**

**GreenFi** was created in 2018 after the project’s start and partly with the aim to provide input and guidance over the feasibility and interest to pilot an eco-credit scheme in our project area. Recognising the value of its input (co-design during the setup phase, then technical guidance and now support to consolidation with plans to scale-up) and also having provided a share of match-funding to invest in the pilot community’s revolving funds, Defra approved our latest change request to include GreenFi as a formal project partner. This allows us to continue our collaboration and appropriately value their work, including with some time to cover their work starting from Year 3.

GreenFi is most often directly in contact with Mwambao in Zanzibar (through some staff training and participating to some activities in the fieldwork, such as the creation of the Mkuba Management Committee – see Output 4, activity 4.3) and liaises with FFI too. We plan to continue to work with GreenFi in the future and beyond the end of this grant, through replicating the successful pilot to new communities.

## **3. Project progress**

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

#### **Output 1 – Six SFCs have the skills, knowledge and confidence to implement sustainable marine resources management measures in local fishing grounds.**

##### **• Activity 1.1 – Train four new SFCs in good governance principles**

5 modules of initial trainings for a total of 13 days were held together with the 3 SFCs of the neighbouring communities of Shidi, Michenzani and Stahabu, concerning a total of 34 individuals (6 women, 28 men) from February 2019 to August 2019. The topics covered, dates and number of days spent are detailed in **Annex 9**. There was also a meeting held with Makoongwe to examine why the first closure was largely unsuccessful. A new SFC was elected in Makoongwe in September 2019, and following this they have received capacity training. In October the new SFC had governance and leadership training (12 SFC

members, 2 female and 10 male), and in March 2020 they received the full capacity training on the following topics; policy and legislation, process of by-law formation, handling conflict for SFC, good governance and leadership, effective communication, patrol and control.

● **Activity 1.2 – SFCs have implemented local marine resource management plans based on locally defined conservation priorities**

Conservation objectives have been identified by Makoongwe, Shidi, Michenzani and Stahabu communities as a first step in management planning process; they included:

- Establishing temporary closures;
- Increased fish productivity;
- Increased octopus production;
- Control illegal fishing so as to increase fish production for the present and future generation of the community;
- Initiate collaborative enforcement;
- Prepare by laws;
- Improve relationships with neighbouring communities;
- Restore natural habitat for improving production of marine creatures including endangered species so as to increase fishers and community income.

Once capacity building training was complete (see activity 1.1), SFCs proceeded to fisheries management. Makoongwe SFC experienced some challenges during 2019, resulting in a re-election at the end September. Their established closure area was invaded by fishers on 1st September before a planned opening. There were no patrols by the SFC between July and November. Makoongwe closure was effective again from 18th November 2019. The new SFC started patrolling in December 2019 following their capacity training with Mwambao. The new SFC are motivated and have been conducting an average of 30 patrols per month since they have been active. In 2019 the SFC arrested 11 people and collected 230,000 TSh (~\$99 USD) in fines (9 arrests by the old SFC, 2 arrests by the new SFC. In January 2020, the SFC arrested 4 people and collected 130,000 TSh (~\$56 USD) in fines. Michenzani, Shidi and Stahabu started closing their areas in September 2019, and this is when they began patrolling. The SFCs in these villages are highly motivated, as can be seen by the average number of patrols each month (Annex 11, tab on patrols). There have been no incidences of poaching and no arrests at this point however the practice of closure has been different to other communities (see activity 1.3 below). The management planning process is now incorporating all the conservations targets and their matching management actions into a local management plan for each of these 4 SFCs.

Management actions in Kisiwa Panza haven't been able to resume in Y3 of the project, due to persisting disagreements within the community. The lack of consensus among the population is preventing the 2 closures established in 2015 and active until half of 2018 to restart. A Participatory Impact Assessment (PIA) held this Year (May 2019, also see details in Output 5 section) showed that people were negative about their current situation, statements including that they are unhappy and that 'nobody cares', that relationships are poor, 'day to day living is hard' and 'life is worse and very difficult'. This is due to the recently increased level of illegal fishing (especially after the SFC became inactive), a weak and inactive SFC, no control, low income from octopus fishing, lower catches, and lack of information sharing. However, the situation during the active management phase was more positive, with increased price for octopus, better relationships (especially reported by women), and better catch during opening times. The skin divers (free diving) in Kisiwa Panza, who are all men, appear to be main group in the community who are unhappy with certain elements of the project but the situation with them is quite complex. They acknowledge that the SFC's capacity has been built and that illegal fishing was less prevalent in their fishing grounds when the SFC was active, but they also say that there was a lack of information sharing. The project team concludes that they prefer to block any community-led restrictions for now. Two consultations were carried out at Kisiwa Panza with the village chief and the SFC members to discuss possibilities of resuming the closure (June 2019 and October 2019). They agreed to consult the DFD and Mwambao will support demarcation and buoys placement. Active engagement with the SFC is planned for 2020 and resuming active management is one of the priorities for Y4 of the project.

● **Activity 1.3 – With each SFC, conduct participatory assessments of key habitats, fisheries, and threats and Activity 1.3 - Facilitate participatory management planning workshops**

Participatory resource mapping in Shidi, Michenzani and Stahabu (map in Annex 10a, August 2019) and Makoongwe (Annex 10b, September 2018) have included the District Fisheries Officer and field survey including all communities. This is the first step in the management planning process. All three communities' fishing grounds are contiguous but unlike other villages previously engaged they do not have a nearshore area in close proximity to the village that is ideal for octopus. The area consists of patch reefs, sand, mudflats and a deeper channel where water moves rapidly during the tidal cycle. Initially the 3 villages selected one large joint area to be temporarily closed that extended from fringing mangroves to



the furthest side of the channel that encompassed a large area of sand and did not allow nearshore fishers anywhere to fish. On discussion this was revised to include discrete areas for each village that included both temporary and permanent closures and also included a river mouth that is a known sheltered breeding site for fish (see map in [Annex 5](#)). These areas were finalised and demarcated and the closure regime started in December 2019 with the designation of appropriate by-laws. Due to the fact that these areas are not prime areas for octopus and are more conducive to fish and shellfish, the appropriate closure period and monitoring regime is still under discussion. One future objective is that under the new 'collaborative management group' arrangement, a joint closure area suitable for octopus might be agreed that can be jointly patrolled. Michenzani opened their closure on 27<sup>th</sup> December 2019 and have remained open since. Shidi opened on 4<sup>th</sup> January 2020 and have remained open since. Shidi collected an opening revenue of TSh 227,000 (\$99). Stahabu opened on 7<sup>th</sup> January and closed on 8<sup>th</sup> January. The in-water biodiversity survey planned for April 2020 will help to indicate the most appropriate management regime for these areas.

By-law formulation training was facilitated to ensure the first by-laws are enacted in all communities. The trainings covered the importance of by-laws but also outlined the process for formulation and approval. Local by-laws underpin local management and are not restricted to specific management areas e.g. closures. Each by-law comprised prohibitions and penalties for those who practice fishing against both the local by-laws but also the national fisheries laws.

Makoongwe SFC which was formed during the MACEMP project (World Bank 2005-2015) in 2006 and still in existence in 2019 (in name at least), was found to be somewhat ineffective with regard to management of their octopus fisheries closure, in particular the chairperson. We were able to capitalise on the new election procedures being piloted by the Department of Fisheries as part of the SWIOFish co-management programme. The community requested to hold a new election although it took 3 months for it to actually take place due to negotiations with all stakeholders. We facilitated these to take place at the end of September. A majority of members (70%) were replaced which necessitated a new governance series of trainings. The implementation of this has meant a delay in the following steps of the management planning workshop that was meant to be completed during this year. This is one of the project team's priorities for Year 4.

- **Activity 1.4 – Provide training and ongoing mentoring to SFCs, patrol teams, and monitoring data recorders to effectively implement management plans**

Kukuu SFC remains highly motivated and has maintained their approach to patrolling the closure area since the beginning of their activities. As can be seen in graph 1 they have experienced a slight decrease in the average number of patrols each month (from 32 per month in 2018 to 27 per month in 2019). The total number of arrests each year dropped from 19 in 2017 to 3 in 2018 and remained at three arrests in 2019. From the three arrests in 2019 Kukuu collected 60,000 TSh (~\$26 USD) in fines.

The new Makoongwe SFC (see activity 1.3) has recently arrested 2 fishers who encroached the area and they were fined TSh 200,000 (\$86) by the police after refusing to pay at the village level. The current SFC opened the closure on March 7<sup>th</sup> until March 11<sup>th</sup> 2020, which was significantly more successful than previous openings. The SFC followed the agreed PMSD procedures (see [Annex 12](#) for report on latest Makongwe opening); meeting to agree date of the opening, the buyers and the octopus price per kg on opening days. The SFC collected a total revenue of TSh. 1,590,000 (\$685) on the opening day, with TSh 700,000 (\$302) going to community development, TSh 350,000 (\$151) to each village. This has enabled the SFC to promote good a relationship and community enthusiasm as encouraged by increased octopus catch and revenue distribution to the community.

Data teams for each community consist of two data recorders at each landing site, collecting fish or octopus catch information from fishers and buyers, and a data entry officer, who inputs the data into excel. For data collected in Pemba there is now a Data Management Officer who checks the data books monthly, checks and organises the data entered on excel and completes basic analysis of data through pivot charts. We now have a total of 4 data recorders, 4 data officers and 1 data management officer.

More information about the data collection can be found in [Annex 13](#)

Kukuu community have continued to collect octopus and fish catch data throughout 2019 and 2020.

Kukuu have managed a very consistent cycle of openings and closures since they began in 2016. During 2019 they opened their closure for octopus in March, April and November consistently across all their openings there was a notably greater catch per unit effort, average octopus size and total catch per day. The number of fishers during the opening fishing periods (called a *bamvua* which corresponds to a spring tide) was slightly higher than the average number fishing during the closure period. During 2019 Kukuu

opened their closure for fish during May and October. During the opening in May the average catch weight per fisher per fishing period was notably higher than during the closure periods. During May and October openings the average income per fisher per fishing period from the fish catch was notably higher than within the closure period. For more detail please refer to [Annex 13](#). Kuku SFC has been fortunate to receive the loan of a patrol boat from a local NGO (named Pemba Foundation) which assisted them to carry out fisheries patrols as well as patrolling a newly piloted community sea cucumber farm (outside of this project). Unfortunately the boat was later reclaimed by the NGO with the claim that they were not keeping the boat under tight enough security.

Makoongwe community have continued to collect octopus catch data throughout 2019 and 2020. They have had three openings since they began management in November 2018. In 2019 they had two openings, one in March and one in September. Both faced challenges, and the opening in September was invaded by fishers the night beforehand. Since September a new SFC have been elected and re-established management activities. In March 2020 they held a successful opening within which the catch per unit effort, average octopus size and total catches per day were notably greater than the closure periods. The average number of fishers per day was in-line with the number experienced during other *bamvuas*. For more detail please refer to [Annex 13](#).

Shidi, Michenzani and Stahabu have not yet started monitoring catch data (see section 1.3 above) as the most appropriate monitoring system has yet to be established (not targeting octopus). Additionally, the practicality of recording fisheries catch needs to be considered by understanding the most used landing sites for each community, and per marine product (it seems for instance that reef fish are mostly landed in the major port of Mkoani where an auction site and a bigger market exists).

Analysing and interpreting the fisheries catch data is carried out within a Participatory analysis activity, more information can be found in section 5.3

## **Output 2 – A Collaborative Management Group is formed between the six target SFCs to determine and address seascape management issues.**

### **• Activity 2.1 – Establish a Collaborative Management planning Group with representatives from each of the six target SFCs, and hold a learning exchange visit with the group and key DFD-Pemba staff to other collaboratively managed fishing grounds in Tanzania**

An exchange visit to Tanzania mainland, Kilwa district, was conducted with the purpose of improving participants' knowledge and understanding on collaborative management as well as patrol procedures. 25 people including fisheries staff (4) Mwambao (5) community SFC members (12) from 4 communities joined the visit which travelled to three CFMG (collaborative fisheries management areas) facilitated by WWF Tanzania. It was a highly successful trip demonstrating to all participants, including government officers, what collaborative management between villages can achieve and how it is managed (see exchange trip report in [Annex 14](#)). Some of the key findings were:

- Composition of Beach Management Units (BMUs – the community institution equivalent to Zanzibar SFCs in mainland Tanzania) compared to SFCs: broader, more inclusive and with more roles and responsibilities in co-management of fisheries
- Building capacities of BMUs, and ownership/support (within the communities and with other stakeholders) takes a long time
- CFMA: benefits and challenges
  - o A CFMA does not have the power of enforcement nor by-laws design itself and rely on the BMUs to do so. It rather serves as a coordination tool across different neighbouring BMUs to harmonise their by-laws, facilitate collaboration between them and join forces for stronger co-management
  - o The CFMA can also be tool to communicate better and with a unified voice with external stakeholders such as fisheries administration, law enforcement, judiciary and politicians

Under the co-management aspect of the SWIOFish programme (World Bank funding to DFD), collaborative management groups have now been embraced and STAMISHIMA (described below) is the first such group in Zanzibar. This first CMG (abbreviated STAMISHIMA) was established to involve 4 communities of **ST**Ahabu, **MI**chenzani, **SH**idi and **MA**koongwe following awareness raising sessions to the SFCs during capacity building trainings in all 4 communities. Two meetings with all SFCs were carried out to discuss the initiation of the CMG. The coordination committee for the CMG includes *Shehas* (village chiefs) and representatives of each SFC. Three CMG sub-committees [including Patrol, 'finance and statistics' and 'good conduct'] were also created to help implementation of day to day activities. The major role of the fisheries committee team-STAMISHIMA will be to organize all activities concerning the area of collaborative management. This team will not execute the activities typically operated by the

SFCs; instead, it will work on coordinating the SFCs' efforts so as to achieve their expected goals (**Annex 15**). The CMG meeting ended with the development of an initial work plan for 3 months.

Following the CMG establishment, follow up awareness visits were conducted in each community by Mwambao staff to extend more understanding to the rest of communities within the CMG.

- **Activity 2.2 – Develop standard operating procedures to establish the roles, rights and responsibilities of the CMG in collaboration with the MCU, to ensure harmonisation with MCU legislation and based on learning from the exchange visit**

Following the establishment of STAMISHIMA – the first CMG in Oct. 2019, the roles of each subcommittee were explored. There is currently no provision in the MCU (Marine Conservation Unit, within DFD) legislation for formal establishment of CMGs; a next step is to suggest how this legislation could be amended to support CMG establishment. On mainland Tanzania there is formal legislation to support the establishment and running of Collaborative Fisheries Management Groups and this will provide a good reference.

Generally, the establishment of the CMG and the contribution of the project has been positively welcomed as it will minimize management cost to DFD as their patrol base is in Misali Island (NW from the project area). At the same time this activity is in line with SWIOFish activities and objectives. Communities are also supportive as it will build their capacity in resources management and will strengthen relationships and unity, aiming to boost socio-economic wellbeing in the area.

MWAMBAO has received some complementary funding under USAID-funded TZ-Protect programme to promote effective MCS (Monitoring Control and Surveillance) within PECCA – using those funds, MWAMBAO has printed a series of posters and leaflets for distribution within PECCA about the advantages of collaborative management across communities/SFCs and how CMGs can be structured. MWAMBAO has also obtained funding from WILDAID (a US-headquartered conservation NGO) to purchase a boat for CMG patrol use. The project team finds this is the appropriate level for material patrol assistance, bearing in mind that not every SFC can be provided with a boat and would be able to maintain such equipment after funding support ends. As part of the TZ-Protect programme training will be provided to the CMG patrol sub-committee on efficient and safe patrol and planning. Joint patrols will take place with the relevant institutions (DFD-Pemba and/or district authorities).

- **Activity 2.3 – Plan and implement joint management measures with the Collaborative Management Planning Group in priority areas of shared fishing groups for key fisheries and vulnerable species**

By end of Y3, the CMG management planning process has started. The CMG members have expressed as a priority, a desire to target illegal gears within the area (e.g. use of drag nets and traps using chicken wire). Under the management planning process, there will also be the opportunity to tackle fishing of endangered species such as some species of sharks and rays, as well as sea turtles who are known to have nested in at least 2 locations within the shared fishing grounds of STAMISHIMA. The next steps in Y4 will involve the collaborative definition of key fishery and conservation targets, some of which have already been elaborated by the member SFCs. The CMG management planning process will mirror the individual SFC process and will culminate with zoning of the area incorporating closed areas and other areas with specific management arrangements.

SWIOFish is currently updating all management plans for all Marine Conservation Areas, including PECCA. This provides us with a good opportunity to input our findings, consider specific roles for CMGs, and propose management areas into the overall plan.

- **Activity 2.4 – Determine the scale of threats to sharks and rays (species present, levels of fishing and seasonal variation), through community data collectors in project area.**

By end of Y3 of the project and after 14 months of community-based data collection in five sites (see **Annex 16**), a total of 2288 animals have been recorded; 68% of which have been fully analysed and identified. In this analysis, 56% of the Sharks and Rays landed are threatened species on IUCN red list (vulnerable, endangered or critically endangered), and 40% are animals listed on CITES appendix I and II. Out of the five sites, two are highly specialised either in Sharks (Chole in the South of Pemba, near Kuuu) or in Rays (Msuka in the North). The three other sites are Kuuu, Mkoani and Wete (the last two being markets in relatively important cities for Pemba).

There is no regulation in Zanzibar nor mainland Tanzania about fishing sharks and rays and landings of these animals were all lumped into sharks or rays in some rather irregular government led monitoring. The collection of these data has thus provided the first insight into species-level data collection of elasmobranchs in Pemba, and these observations are alarming with regards to the conservation status of these species.

The data collected raises many new questions (e.g. at what point did rays become a dominant catch? Could that suggest we have fished multiple shark species to the edge of local extinction? Are rays

targeted because there is a new domestic or international market? Are specific species of rays being targeted, if so what data on life history do we have for those species?), and WCS has already started drafting a set of recommendations which they started using, beginning the development of a national Sharks and Rays action plan (also including mainland Tanzania).

WCS states that the collaboration between FFI, Mwambao (helping to liaise with some community data recorders) data recorders in Pemba is exceptionally valuable. The data has provided useful information regarding species diversity and new insights into the shark and ray fishery which was vastly unknown beforehand. Among the recommendations drafted at this stage by WCS in terms of future conservation actions: it is suggested to delve to conservation work on Wedgefish (a family of rays), as they are critically endangered and subject to increasing fishing pressure; to better understand how the fishing grounds around Pemba for Sharks and Rays are distributed, and habitat utilization of species of concern, like nursery grounds or migration routes to consider those in the overall management of PECCA; and to provide educational content at all scales, from the ministerial level down to villagers and school pupils to increase awareness on the importance of Sharks and Rays and the dangers they face locally/nationally.

- **Activity 2.5 – Identify possible interventions to minimise by-catch and hunting of vulnerable species across the collaboratively managed fishing grounds.**

The resource mapping exercise carried out in Shidi, Michenzani and Stahabu mentioned the use of shark-nets specifically at Matumbini (SE of PECCA), Misali Island (E-SE) and Mapuku showing that sharks are actively targeted in these communities. We will consider sharks and rays conservation measures when progressing into the CMG management planning process in Y4, however it seems clear that a Zanzibar and national/Tanzanian framework (such as a national action plan) will be a more appropriate level of action to curb the fishery of the most threatened species. WCS has started delving into such a process (including with mainland Tanzania authorities) and have shared the data with the relevant data holders and research centres in the country.

### **Output 3 – Training and capacity building provided to DFD-Pemba to effectively support marine resources co-management in the long term.**

With the decentralisation process initiated (information communicated by DFD and SWIOFish co-management consultancy during Q1 2019) and with an additional SWIOFish consultancy (started Sept. 2019) aiming to update Zanzibar's Marine Conservation Areas' (MCAs) General Management Plans (GMPs – flagged in more details in HYR3 section 2a), the project team in agreement with our consultant Pippa Heylings (who had facilitated **activities 3.1** and **3.2** in Y1 and Y2 with the project team) has been holding off organising a workshop with government to delve into PECCA co-management strategic planning (**activity 3.3**). This was considered not to be timely, especially before having a clearer understanding of the latest responsibilities institutions and administrative levels will have in the new/updated frameworks.

There has been nonetheless a close informal collaboration with SWIOFish co-management main consultant since end 2018, providing input in some work (eg. SFC SOPs including SFC election procedures **Annex 6**) to guide co-management frameworks (see **activity 3.4** below).

With the decentralisation process, there is a current drive to devolve much of DFD's activities (including MCA management) to the District level. The mechanisms and structures for this are still evolving but the project team is ensuring involvement of District level authorities wherever possible anticipating decentralisation process for fisheries.

- **Activity 3.4 – Mentor DFD-Pemba to hold regular Management (twice a year) and Advisory (once a year) Committee meetings, inviting relevant government departments and actors (including the tourism sector and other NGOs) concerned with marine resource use and conservation within PECCA where necessary to share information, harmonise activities with national development plans, and facilitate collaboration**

The functioning and roles of the MCAs management and advisory committees are currently under review as part of the SWIOFish MCA management planning consultancy. The anticipated role that the project team had planned in terms of mentoring the Management and Advisory Committee meetings has altered with the changing landscape and DFD taking more ownership. The project team has currently been giving input into this process through consultations with the team established for this purpose as well as the SWIOFish co-management consultancy. These issues are common across the MCAs and therefore a similar pattern needs to be established for all and it is more appropriate for government to lead the process where possible. The project team were invited to be part of a series of workshops reviewing the structure of the MCAs and their management. Unfortunately this has been put on hold due to COVID-19 pandemic.



MWAMBAO through taking part in another SWIOfish consultancy has trained two teams in the DFD on SFC capacity building and octopus closure establishment. The content of these trainings has largely been informed by protocols established under this Darwin project and has used some of the project's trained recorders to train DFD staff (ref [Annex 17](#) training report).

**Output 4 – Sufficient knowledge and incentives provided for both male and female fishers from the six target communities to participate in new marine resources co-management measures.**

- **Activity 4.1 – Create awareness raising materials (e.g. posters) with SFCs regarding by-laws and management plans, and distribute in Pemba at landing sites across the Mkoani District, to enforcement authorities, fish traders, MCU rangers, community meetings.**

Maps have been produced showing the fishing grounds and closure sites for Kuuu, Makoongwe, Shidi, Michenzani and Stahabu. Posters have also been produced (with funding from the EU) and circulated regarding good SFC governance practice ([Annex 18](#)). These are in Kiswahili and English and have proved useful for training purposes.

Two radio announcements by Radio and TV Zanzibar were broadcasted about closure establishment. At the same time one session was aired by Radio Zanzibar following the visit of the Government NGO Registrar that explained about Mwambao activities on CMG development.

Members from 14 SFC members who participated in the study visit in Kilwa and Tanga carried out at least 2 feedback meetings in each community to their SFC and some fishers groups soon after their return.

- **Activity 4.2 – Initiate regular joint meetings between SFCs and community members to enable community members to hold SFCs to account, in accordance with MCU legislation and SFC Standard Operating Procedures.**

Standard Operating Procedures for SFCs were drafted by Mwambao early on in the Darwin project. The SWIOfish co-management team have now taken these on and refined them for DFD use. The final version has not yet been completed but they are de facto in use.

Mwambao has also inputted in a major way into the new SFC protocols for election procedures.

Mwambao has suggested that there is a minimum of 30% representation of women in the SFC structure but this has not yet been formally adopted by the DFD as part of the protocol (See indicator 1.1 in output table 1.2.). Mwambao will continue to advocate for this as guided by the FAO guidelines for securing small-scale fisheries bearing in mind that it takes time for local practices to change. Meanwhile women fully participated in all meetings that have been held including those of the SFCs and the community meetings.

Kuuu SFC have maintained the level of dedication to management activities, as can be seen by the number of meetings and participants in meetings between 2018 and 2019. The overall total number of meetings increased from 19 to 25 between 2018 and 2019, and the number of SFC meetings held was largely responsible for this change with an increase from 10 to 16. The number of men and women who attended meetings decreased slightly between 2018 and 2019. For Makoongwe, Shidi, Michenzani and Stahabu the SFCs started keeping records in 2019, forming the baseline. SFC records can be found in [Annex 11](#), and please refer to section 6 for more information about the Mwambao ME system.

- **Activity 4.3 – Establish a rolling community credit fund with at least one pilot project community, available to community member in groups upon compliance with SFC-led marine resource management plans.**

The 'MKUBA' conservation fund (Mfuko KUtunza BAhari – Fund to care for the ocean) was established in July 2018 with the support of GreenFi Systems Ltd. Five groups of 30 members each receiving a loan fund sufficient for 15 members each to take a loan of initially of \$60 repayable over a 3-month period, as the loans are returned then new borrowers can start their loan cycle. A key feature is that each borrower commits to support the community marine plan by undertaking environmental actions, thus supporting improved ecosystem management at the community level.

Currently the groups are progressing well with most of the groups are in the Third Loan Cycle with the exception of the Seaweed Farmers and SFC Group who are on their Fourth Loan Cycle while the Mangrove Group are still on their Second Loan cycle.

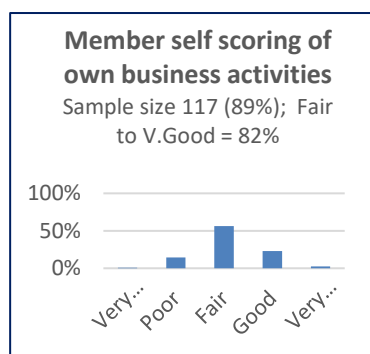
The total amount of loans that has been given out to the members is TSh 41 Million (\$17,943) with an outstanding balance of TSh 6.3 Million (\$2,757) giving a total Seed Fund at Risk to 0.15 %. This reflects the low default rate (2 individuals). Late payments have been more of an issue with 46% of total percentage of late repayment these have been largely on the first loan cycle, and account much less late repayments at end of Y3.

Action has been taken to improve the repayment rate with the development of a stronger overall institutional structure. The first Members Assembly (to be held annually) was held in November and this agreed formation of the MKUBA Management Committee (MMC). This fulfilled a one of the main recommendations of the formal MKUBA review carried out by GreenFi in April 2019. The assembly also agreed to the formation of new MKUBA groups and the holding of business training.

Subsequently the MKUBA Management Committee (MMC) was established in February 2020 and involves 12 members (10 men & 2 women) ([Annex 27](#)). The purpose of establishing MMC is to administer MKUBA programme which includes:

- Ensure that members follow compliance criteria of loans and pay back in a timely fashion
- Support and advise on establishment of new MKUBA groups
- Ensure good governance and proper records are practiced in MKUBA groups
- Provide follow up of MKUBA business and provide advice

The individual group constitutions were consolidated into one overall constitution and reviewed amended and agreed. The MMC has visited all MKUBA groups the idea of visit was to introduce and familiarize the team to the groups and also to have an update information on payment records and late payers. In terms of the environmental commitments community patrols of the fishing closures have reduced the burden on the SFC. In July and August 2019 alone, a total of 327 hours of additional community patrol was recorded. 20,000 mangrove propagules have been reported to have been planted on communal planting days. Improvements of the mangrove planting and patrol reporting score cards are underway. Overall the groups' report an improved understanding, management & conservation of marine resources, increased people participating in patrol, reducing illegal activities in natural resources management, restoration of mangrove ecosystem due to mangrove planting, increase social cohesion and interactions.



In Q4 of 2019 an analysis of the enterprises that people took loans was carried out supported by GreenFi. Twenty-eight types of local businesses and income generating activities were recorded to have been supported by the loans taken. MKUBA members self-scoring of business activity indicated 82% were fair to very good (see figure). Communities report increased trading, business activity and income.

- The need for business training was identified in the April review and business training was initiated and provided for the first group of 30 selected across all groups and including nominated training of trainers from each group. Eventually all members will be trained.

- It is expected that in Q2 2020 a mobile phone application specifically designed to support eco-credit groups such as MKUBA will be introduced into the field and Mwambao staff have been trained in its use.

● **Activity 4.4 – Explore additional incentives, such as gear exchange, to ensure fishers' compliance with resource management measures (especially gear restrictions).**

There is widespread usage of illegal gear within PECCA especially spearguns but also scuba. Enforcement by the authorities is limited and problematic as the problem is so widespread, although communities do self-enforce with regard to restricting the use of spearguns during octopus closure openings (such as was practiced in the recent opening on Makoongwe Island in March 2020 where no spear guns were allowed). There are clearly improvements still to be made in this domain. Mwambao is investigating gear exchange as part of a complementary project with CORDIO but this will only be implemented in 2021.

**Output 5 – Conservation and social outcomes of the project are evaluated and findings shared with target audiences (communities, government, conservation community).**

● **Activity 5.1 – Design surveys of fisher behaviour (including catch of vulnerable species), household wellbeing, and marine resource governance effectiveness, and conduct them with representatives of each of the communities when first engaging with them (to set a baseline). The surveys will utilise a variety of methods, including participatory techniques and a Participatory Impact Assessment (PIA) in Year 4.**

A mid-term **Participatory Impact Assessment (PIA)** took place early in 2019 in the communities of Kuuu and Kisiwa Panza and will be repeated near project end. The PIA methodology is intended to examine how project activities actually benefit the intended recipients. It tries to address the following questions:

- What changes have there been in the community since the start of the project?
- Which of these changes are attributable to the project?
- What difference have these changes made to the lives of women, men and the most disadvantaged in the community?

The results clearly show a marked difference between Kuuu and Kisiwa Panza. In Kuuu all respondents were generally happy with the project and for most of the themes/issues ranked the situation now is better (scored more highly) than before the project. The respondents reported restored reef habitats, new/returned species, bigger fish, more/bigger octopus, the Mkuba scheme with more business opportunities, more education through local school, increased environmental awareness, less illegal fishing, mangrove planting limiting beach erosion, and more cooperation between the SFC and community. The exceptions include the increased burden/time it now takes for fishing further away due to a large area being

off limits due to the closure, particularly for women. Seaweed farming also appears to have been negatively affected, again because large areas have been taken by closures although disease also seems to be more prevalent now than before. The women's group in Kuuu also mentioned facing health problems due to their involvement in project activities, particularly patrolling, due to lack of equipment/clothing. From these preliminary results it does appear that whilst women are (self reportedly) generally happy with the project, they do bear some costs disproportionately.

In Kisiwa Panza, the responses given by men and by women were more similar (to each other). Almost all of the issues ranked in Kisiwa Panza were scored lower for the current situation than before the project. Exceptions to this include increased environmental awareness, mangrove planting (although this is not directly related to project activities) and improved infrastructure (again not related to the Mwambao project). Generally people were negative about their current situation, statements including that they are unhappy and that 'nobody cares', that relationships are poor, 'day to day living is hard' and 'life is worse and very difficult'. This is due to the increased level of illegal fishing increased recently (especially after the SFC became inactive), a weak and inactive SFC, no control, low income from octopus fishing, lower catches, and lack of information sharing. However, the situation during the active management phase was more positive, with increased price for octopus, better relationships (especially reported by women), and better catch during opening times.

Skin divers (fishing while free-diving) in Kisiwa Panza, who are all men, appear to be most unhappy with certain elements of the project.

The **baseline household surveys** have been conducted in 4 communities in end of Y2 – in the newly supported communities of Makoongwe, Shidi, Michenzani and Stahabu, before starting to implement by-laws and related patrols; and those have been analysed in Y3. These surveys have concerned 250 individuals across those 4 communities, with 50% women and 50% men (results: [Annex 19a](#)), and were conducted using mobile devices to record the answers (smartphone-based application, questionnaire in [Annex 19a](#)). They provide household-level information about their different assets and characteristics, their income sources, their perception of marine resource and its governance, and their access to loans.

These surveys will serve as a baseline to compare with at the end of the project, after a repeated household surveys in the same communities. They allowed the project to realise the generally difficult economic situations the respondents were pointing to when reflecting about their well-being and livelihoods. The surveys confirmed that a majority relied on fishing and marine products for the income and taught us that answers are sometimes very different across genders (e.g. types of fishing, types of management activities attracting more interest), sometimes across these neighbouring communities.

- **Activity 5.2 – Conduct governance monitoring at all three levels of governance (SFC, collaborative and MCU) with each governance body, using organisational capacity assessments, to establish effectiveness of governance training and support, and identify further training and mentoring needs.**

In June 2019 an exchange visit was organized for DFD and SFC staff to visit two communities in Tanga region in the mainland to learn about patrol procedures (MCS). 18 community members from 6 SFCs and 2 government staff joined the visit. Some of the critical lessons learned include

- a) Planning and prior intelligence facilitates effective patrols
- b) In patrolling there must be one superior leader for all commands
- c) Preparations for patrols should include availability of patrol boat, fuel, life jackets, collaborations of different stakeholders etc
- d) Effective collaboration and support from government facilitate community conservation success
- e) Managing implementation of law enforcement stimulate combating illegal practices
- f) Understanding and realizing status of resources and their livelihood contribution for instance the mangrove contribution in the fisheries, is key to community support
- g) Effective and confidence in the implementation of by-laws is essential for combating poaching and illegal practices
- h) Understanding status of coral reef degradation and realizing the importance of coral reef in marine biodiversity and productivity stimulates the community to see the need of construction of artificial reef (reef balls) to facilitate productivity and biodiversity restoration
- i) Regular and surprise community patrols are required to eliminate illegal practices
- j) Knowing the common culprits in the fishing practices is essential
- k) Having the knowledge and understanding on how to interrogate those who break the by-laws is essential and critical

Exchange visits such as this result in valuable peer to peer learning.

- **Activity 5.3 – Conduct participatory data analysis with community monitors and the SFCs of data collected through local monitoring plans (e.g. fish catch, coral reef damage, change in gear use) and use findings to inform management planning.**

Participatory analysis of octopus catch records was conducted with Kuuu and Makoongwe in December 2019 (see in data summary report in [Annex 13](#)). Catch recorders, data officers and SFC members were present and results for average total octopus catch per spring tide (kg) and average octopus size per spring tide were charted against each spring tide since recording began. The results and trends were discussed and the teams then presented the data to the DFD-Pemba offices in Wete (North Pemba). Catch trends in Kuuu followed the typical trends previously established with the closure regime which has been operational for 3 years continuously. Makoongwe results illustrated the lack of effective enforcement and expected increases both in catch and average octopus size as a result of closure. This was a lesson that was well received by the new SFC for Makoongwe illustrating the change in active management and patrol required by the new SFC. Results in March showed a marked improvement in catch; see [Annex 13](#).

- **Activity 5.4 – Analyse and assess changes in governance, wellbeing, and reef ecosystem health in response to management interventions.**

Reef ecosystem health is monitored through participatory in-water monitoring surveys. These surveys have been completed in all sites; the second round of surveys were completed in Makoongwe in November 2019, the third round of surveys in Kuuu were completed in April 2020 and the baseline surveys (first round) for Michenzani, Shidi and Stahabu were completed in April 2020. The report and data analysis from April 2020 surveys is currently being completed.

Overall it appears that the reef ecosystem health in Makoongwe gives indications it could be beginning to improve, although no significant changes have been seen yet at this point. The first indications show that there are less small sea urchins, an increasing diversity of fish and macro-invertebrates and an increase in live coral. For the surveys completed in Makoongwe it appears that the abundance of individual indicator fish groups decreased but the diversity of different indicator groups increased within the temporary fishing zone. The abundance of indicator macro invertebrates increased in the temporary closure area (in March 2019 there were sea cucumbers and starfish recorded while in November 2019 there were additionally octopus, clam and tiger cowrie). There does not appear to be a significant decrease in the average density of large sea urchins recorded in the temporary closure or open fishing zones so far, however the average density of small sea urchins decreased from 57 per 250m<sup>2</sup> to none within the temporary closure area. There was a notably higher average % cover of live coral in November in both the temporary closure area and open fishing zones. We will closely look at the next round of surveys in November 2020. More details on the data collected are in [Annex 13](#).

- **Activity 5.5 – Produce posters, presentations and reports to communicate data findings to communities, government departments (especially DFD) and the conservation community, and generate support for marine resources co-management.**

The community of Kuuu featured in two videos used for training purposes with other communities. The first video was funded by a Mwambao EU-funded project focusing on good governance link and focused on the good example provided by Kuuu ([Kuuu: Kamati ya uvuvi yenye ufanisi](#)<sup>1</sup>) and the second video was a training video produced by Mwambao under SWIOfish funding as training material for both DFD and communities ([Kuuu/Fundo: Closure of Fishing Areas to Increase Octopus Production](#)<sup>2</sup>). Although the video production was funded from other sources, the knowledge and experience highlighted in these videos by Kuuu community is solely a result of the Darwin-funded project.

In July 2019, FFI's partnership manager presented [a poster at 11<sup>th</sup> WIOMSA symposium](#)<sup>3</sup> about communities' engagement with buyers as way to support their local management efforts "Generating revenue for local marine management: Fishing village committees engage with octopus buyers, in Pemba Island, Zanzibar". It explains the steps followed in the project to engage into a Participatory Market Systems Development (PMSD) approach, with the aim for local market actors (fishers, local buyers, middlemen, exporters) to coordinate actions and thus create shared additional benefits. Started in 2017, the approach has led to develop a protocol agreed by these actors, aiming to ensure well organised, transparent and fair principles are followed when a temporarily closed area is opened for fishing. One of the outcome was the generation of community income from a levy fee paid to the SFC per kg of octopus. The SFC can thus partly cover its running costs, provide a monetary incentive to the individuals involved in the local patrols and fund some local community projects. Basing on comparable 2018 data for 4

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<sup>1</sup> "An effective SFC" <https://youtu.be/NSXYK1xi-OM>

<sup>2</sup> <https://youtu.be/YWDVhH6ZpoY>

<sup>3</sup> Western Indian Ocean Marine Science Association, symposium gathering many practitioners involved in marine conservation in the Western Indian Ocean, as well as marine sciences academics. The poster presented is listed under no. 24 in the link above.



communities supported by the project, we estimated that this levy fee could cover during that period from 5% to 60% of the SFC expenditures over the same period. This appear highly variable, depending on many fluctuating parameters, but this was helpful to demonstrate such revenue can represent a quite significant source of income for a single community to conduct its management actions.

[A blog article](#) has been published on FFI's website and twitted (October 2019) explaining the principles of the Mkuba credit scheme pilot in Kuuu and providing some of the first positive results as well as challenges.

Mwambao regularly communicates about the project activities progress on their Facebook account ([example1](#), [example2](#), [example3](#), [example4](#)), generating increased visits and engagement.

We held a Project steering meeting in December 2019 with DFD-Pemba and informed all stakeholders of progress.

### 3.2 Progress towards project Outputs

Indicators	Baseline	Change recorded during 2019/2020	Source of evidence
1.1 SFCs are functioning and represent a cross-sector of society, including an average composition across all SFCs of 30% women, in three communities by y1, four communities by y2, 5 communities by y3, and 6 communities by y4.	1 community with a functioning SFC (Kuuu) in the beginning of the project with 2 women (17%), the other community's SFC had collapsed end 2016.	5 SFCs operational, including 3 new (Shidi, Michenzani, Stahabu). 1 SFC dormant (KP) since end of year 2, potential to re-establish management in 2020. % women composition in SFCs: Kuuu: 25% Makoongwe:20% Shidi: 20% Michenzani: 25% Stahabu: 20% Kisiwa Panza: 21%	Lists of SFC members. ( <a href="#">Annex 20</a> )
1.2 Six SFCs have implemented sustainable marine resource management plans to address locally defined conservation priorities (e.g. temporary or permanent closures, gear restrictions), against a baseline of 2, by 2021.	1 community (Kuuu) implementing their local marine resource management plan according to conservation targets identified.  The management plan in Kisiwa Panza had to be redesigned as a result of the SFC collapse in the end of 2016.	1 management plan actively implemented (Kuuu) By-laws defined and approved for Makoongwe, Shidi, Michenzani, and Stahabu. Management planning in process.	Existing by-laws.
1.3 12 community monitors trained and implementing fisheries catch data collection; 12 community monitors trained and implementing coral reef monitoring; six patrol teams trained and implementing patrols by 2021.	4 community monitors trained in fish catch data collection in place across both communities supported, 2 community monitors trained in coral reef monitoring (Kisiwa Panza only) and 1 patrol team (Kuuu only)	6 community monitors trained and implementing fisheries catch data collection, 1 data management officer trained, 8 on coral reef monitoring, and 6 SFC patrol teams trained but KP patrols not active since end of year 2.	Data spreadsheets. SFC members list ( <a href="#">Annex 20</a> ) The method used is <a href="#">Coral Reef Monitoring in Eastern Africa: A guide for communities (CORDIO)</a>

1.4 60% average reduction in the number of breaches of SFC by-laws across all six communities as compared to the first year of by-law implementation in each community by 2021.	First year (March 2016-March 2017) of by-law in Kukuu recorded a total 19 breaches/people arrested.	Makoongwe recorded a total of 11 arrests during 2019, their first year. Kukuu: Kukuu recorded 3 arrests in 2019 a decrease of 84% on the first year. KP: no records kept during 2019 Shidi, Michenzani, Stahabu: first year.	Information is from SFC patrol records (tab in the spreadsheet in <a href="#">Annex 11</a> )
2.1 There is a functioning Collaborative Management Group (CMG) of 12 members between the six target fishing communities by 2020, supported by DFD-Pemba.	No existing collaborative management group gathering representative of the supported communities in the project area	CMG established with 22 members from 4 villages (Makoongwe, Shidi, Michenzani, Stahabu), and supported by DFD-Pemba. There are 5 members from each of 4 the SFCs (4 SFC members and the village leader). There's also 1 influential woman representative and a counsellor.	Workshop report on STAMISHIMA establishment ( <a href="#">Annex 15</a> )
2.2 A joint management plan is established between six SFCs and the Collaborative Management Group to address threats to priority habitats and species of conservation and livelihoods importance by 2021.	No existing collaborative management group gathering representative of the supported communities in the project area	Joint management plan is in the process of being established for CMG between 4 villages.	Meeting minutes for the establishment of STAMISHIMA ( <a href="#">Annex 15</a> ).
3.1 5 key DFD-Pemba staff attend institutional governance training (according to needs assessment), and SFC capacity building training by 2019.	Limited knowledge from DFD-Pemba staff on the role of co-management led by communities contributing to the overall PECCA management objectives	The decision was taken to support the SWIOFish programme of MCA capacity building and assist in the review of the existing management plan	Informal communications between project partners FFI and Mwambao. Report on DFD octopus closures training ( <a href="#">Annex 17</a> )
3.2 A 3-5-year strategic plan for PECCA is established by the Management Committee and reviewed by the DFD by 2020.	Current management plan for PECCA is not really operational.	Project is contributing to ongoing MCA management plan review	Communications with Zanzibar MCA review SWIOFish consultancy (Macallister).
3.3 The PECCA Advisory and Management Committees are functioning by 2018.	PECCA Advisory committee is non-existent and it looks to challenging to convene. The management committee, called Fishers Executive Committee (FEC), is existing but not transparent.	As above – conscious decision to support SWIOFish process to review and activate both committees	Informal communications between project partners FFI and Mwambao: Macallister and SWIOFish consultancy on Co-Management (Chris Horrill)
4.1 A minimum of 10 radio announcements on local stations relating to at least 10 incidents (e.g. new SFC by-laws; enforcement of	3 radio announcements	Makoongwe announced closure on village radio in January 2019. The community radio stations in Kukuu/Makoongwe	Mwambao staff.

by-laws; events) by the end of 2021, against a baseline of three.		(Radio Jamii) were not working for a larger portion of 2019.	
4.2 50% increase in the number of women and number of men attending regular meetings with SFCs by 2021 against the baseline set with each community at the start of the project's engagement with them.	No baseline set with Kukuu and Kisiwa Panza (work started prior to the start of the Darwin-funded activities), no record of the attendance to community meetings called by the SFCs yet.	Records here are for January – December 2019: KP: no records Kukuu: 391 men, 260 women, 25 meetings (8 community meetings, 16 SFC meetings, 1 fisher meeting) Makoongwe: 235 men, 91 women, 22 meetings (3 community meetings, 19 SFC meetings) Shidi: 56 men, 8 women, 6 SFC meetings Stahabu: 49 men, 11 women, 5 meetings (1 community meeting, 4 SFC meetings) Michenzani: 45 men, 10 women, 3 meetings (1 community meeting, 2 SFC meetings)	Information is from SFC dashboards ( <a href="#">Annex 11</a> ) and details on meeting's agendas ( <a href="#">Annex 22</a> )
4.3 Credit scheme is accessed by c.110 men and 110 women across eight groups within one pilot community by 2021, this functions with >80% repayment rates and all surveyed borrowers (representative sample) are able to associate the local management plan with their access to credit. ( <i>Note: indicator change approved in March 2020</i> )	No credit scheme in place.	1 community (Kukuu) have accessed the credit scheme, 132 individuals in total, 66 men and 66 women. Beginning engagement with second community (Makoongwe) in 2020.	Refer to narrative section 4.2. and March 2020 loans tracking summary report in <a href="#">Annex 28</a>
5.1 Information sharing meetings hosted by DFD on implementing effective marine resource co-management in Pemba in 2019 and 2021.	Information sharing from Kukuu SFC to DFD-Pemba about first closures results (impact on octopus catch data).	Participatory data analysis for octopus and fish catch hosted by DFD in December 2019. Information sharing meetings are conducted throughout the year with DFD; 7 conducted with between January – December 2019. Progress reports are shared with the DFD every month.	Monthly reports sent to DFD (in Swahili language, an example can be found in <a href="#">Annex 21</a> ) Participatory data analysis report (Annex)
5.2 Uptake of SFC training materials and standard operating procedures by MCU and associated DFD initiatives (SWIOFish) based on success of project interventions by 2020.	None	SOPs operational but the final wording not yet officially accepted in the DFD. Close liaison with the Co-management advisor to SWIOFish is ongoing.	SFC SOPs as current version with DFD ( <a href="#">Annex 6</a> )
5.3 Project case study documents downloaded from partner websites 200 times by the end of 2021.	None	Two case studies planned for 2020 – Kukuu community success by May 2020, Participatory Market System Development by July 2020.	Poster WIOMSA, slides from Mkuba presentations in Cambridge. ( <a href="#">Annex 23</a> )

### 3.3 Progress towards the project Outcome

**OUTCOME:** Six communities and DFD-Pemba manage marine resources sustainably in key sites, stabilising reef health and function across 10,500ha of PECCA, leading to improved wellbeing for c.10,000 fisher men and women.

During Year 3 we made amendments to two outcome indicators (0.1 and 0.3, see Annex 2 for details). The indicators chosen in the proposals have remained so far adequate for measuring the overall outcome, but we felt the need to tweak some parts, to reflect the diverse realities encountered during the implementation, requiring adaptations for each community supported. This is also the reason why some of these indicators are not fully documented yet for all supported communities: either the implementation (thus monitoring) was slowed down by several hurdles due to communities governance challenges (like in KP and Makoongwe), or some indicators are not cannot be used as such (e.g. Shidi, Michenzani, Stahabu have created a site closure that will not increase octopus population). In the last year of the project we will ensure that all communities have some information to document each indicator and measure how each are contributing to reaching the outcome.

The new closures created in Year 3 and their extent – 440 ha directly actively within 6,500 ha of fishing grounds (excluding Kisiwa Panza, see Annex 4) bring us closer to the figures of area targeted. If Kisiwa Panza resumes management, the outcome should be within reach; therefore working on that with KP is a priority for Year 4. These closures are only a step to truly sustainably manage their resource, but having the capacity and the experience of achieving it for a number of targeted species (octopus, some reef fish, possibly sea-shells) will pave the way for more measures targeting their other marine resources. The reefs including in the closures are providing good signs of progress (e.g. increased fish diversity, reduction of sea urchins, etc.). The final household surveys and PIAs (to be completed in Y4Q3) will provide a more accurate indication of the wellbeing situation more widely, but the results are positive in Kukuu (and were positive for most respondents in KP when management was active according to the PIA answers); the project is therefore quite confident the outcome target is within reach on that aspect too.

#### ***0.1 No significant incidents of coral damage (greater than an area of 1 m squared) caused by human activity in any reef sites protected by community by-laws, against baselines by 2021.***

Progress: No significant coral damage has been detected since the coral reefs baseline surveys (2016 for KP, 2017 for Kukuu, March 2019 for Kukuu/Makoongwe, November 2019 for Makoongwe). No dynamite incidents. Analysis will be completed on Y4Q1 for latest surveys (April 2020) in Kukuu, Shidi, Stahabu and Michenzani.

This indicator remains relevant, but it is noted that reef damage may tend to happen in further off sites (not in those protected by the closures).

Source of evidence: Coral reef surveys (Annex 13)

#### ***0.2 60% average reduction in number of boats observed using damaging or illegal fishing gears (e.g. drag nets, small mesh nets and traps, spear fishing with SCUBA) in sites patrolled by communities by 2021, as compared to the baseline at each site.***

Baselines: **Makoongwe** (2019) formed their first year and baseline. **Kukuu:** (March 2016-March 2017) 19 breaches/people arrested.

Progress: **Makoongwe** recorded a total of 11 arrests during 2019, their first year. **Kukuu** recorded 3 arrests in 2019 a decrease of 84% in the first year. **KP:** no records kept during 2019. **Shidi, Michenzani, Stahabu:** first year (will serve as baseline against next year).

Source of evidence: Patrol records per community/SFC (Annex 11, tab on patrols)

#### ***0.3 50% increase in the individual weight of reef fish caught from selected key families and two-fold increase in average individual weight of octopus caught in the days immediately following a reef closure, as compared to the average weight of octopus caught with no management intervention, by end of project. (Note: Indicator change approved in January 2020)***

Baselines: **Makoongwe:** 2019 formed their first year and baseline: average octopus weight was 764g. The average octopus weight during closure periods was 537g. **Kukuu:** (March 2016-March 2017) 19 breaches/people arrested. **Kukuu:** The average fish catch size per fisher during the closure periods is 1.6kg. **Kukuu:** The baseline average octopus weight was 464g.

Progress: **Kukuu.** The average fish catch size per fisher was 3 kg and 1.6 kg during the openings for fish in May and October 2019. Focussing on 4 key families of fish (Emperor, Goatfish, parrotfish and Rabbitfish), we witness a slight increase in fish weight (on average in each catch there has been a 2%



increase in the weight of parrotfish caught in the closure area, 34% in rabbitfish, 9% in emperor fish and 17% in goatfish), but a significant increase in the number of these fish caught (from 1.72-fold increase for Parrotfish, to up to 5-fold increase for goatfish), when comparing closure periods and opening periods. **Kukuu:** The average octopus weight was 826 g, 653 g and 835 g in the 2019 March, August and November openings.

**Makoongwe:** The average octopus weight was 515 g, 551 g and 879 g from the March 2019, September 2019 and March 2020 openings.

Source of evidence: Fish and octopus data summaries can be found in **Annex 13**, parts on octopus and reef fish landings

#### **0.4 50% increase in the number of fish over 30 cm total length observed from selected key families in reef closure sites, against baselines set for each community by 2021.**

Baselines: **No fish over 30cm** have been observed in any survey baseline (belt transects) [Kukuu Oct. 2017; Makongwe March 2019; Shidi, Michenzani and Stahabu (April 2020)]. However for **fishes between 15 and 30cm**, 3 have been recorded in Kukuu (2 in the permanent closure, 1 in the temporary), in Shidi 2 were recorded, in Stahabu 1, and in Makoongwe and Michenzani none of that size were either recorded in the closures (only smaller fishes)

Progress: In **Kukuu** in April 2020 (2.5 years after the baseline), 59 fishes with a size between 15 and 30 cm have been observed closure (43 in the permanent closure and 16 in the temporary closure), which represents a 19-fold increase. However no fish over 30cm have been recorded yet. In **Makoongwe**, 1 fish between 15 and 30 cm has been recorded in April 2020, compared to none in the baseline (and 1 one over 30cm but in the fishing zone, not in the closure). In **Shidi. Michenzani** and **Stahabu:** the baseline has just been established (progress will be assessed in Y4).

Source of evidence: Coral reef surveys (**Annex 13**, sections with Fish observed during coral reef surveys in Kukuu, Makoongwe, Shidi, Michenzani and Stahabu)

#### **0.5 60% of women and 60% of men surveyed in the six communities report an improved sense of overall wellbeing as a result of project activities by 2021 (including targets for: reduction in numbers of meals skipped, participation in decision-making, income as a result of either or both improved catch and access to credit – see section 14).**

Progress: The PIA exercise in Kukuu (8 women and 8 men) showed that all respondents were generally happy with the project and for most of the themes/issues ranked the situation now is better (scored more highly) than before the project. However the preliminary results suggests that whilst women are (self reportedly) generally happy with the project, they do bear some costs disproportionately.

In contrast almost all of the issues ranked in Kisiwa Panza were scored lower for the current situation than before the project both for men and for women. However, the situation during the active management phase was more positive, with increased price for octopus, better relationships (especially reported by women), and better catch during opening times.

Source of evidence: PIA report (**Annex 24**)

#### **0.6 70% of women, 70% of men, and 70% of SFCs/DFD-Pemba representatives surveyed perceive an improvement in SFC and DFD-Pemba's management effectiveness by 2021 as compared to the baseline.**

Baselines: Baseline established in 2019 in Makoongwe, Shidi, Michenzani and Stahabu, regarding their SFC's and DFD's effectiveness: Men: SFC 55% / DFD 26% ; Women: 52% / DFD 12%. We did not establish a household survey baseline for Kukuu and KP (for which support was already started when the project began). We will ask those questions during end of project PIAs (Y4)

Progress: will be measured at the end of the project

Source of evidence: Household surveys (**Annex 19b**) and end of project PIA (to be conducted)

### **3.4 Monitoring of assumptions**

#### **Outcome level**

**Assumption 0.1:** Community and government stakeholders are willing to participate in collaborative co-management of PECCA. **Comments:** All stakeholders are still willing to participate in collaborative co-management of PECCA although the extent of the District authorities in this process is still unclear as the process of devolution to District level is still ongoing. Kisiwa Panza consists of two major villages, one of which is more willing to participate than the other although there are still many who are in support.

**Assumption 0.2:** Climate change does not result in a significant increase in demand for marine resources if droughts are more severe, or lead to significant coral bleaching, which will degrade the shallow reef habitat. **Comments:** No significant coral bleaching has taken place over this year period.

**Assumption 0.3:** The political landscape provides a stable environment in which to work over the project period. **Comments:** The beginning of the 2020 election year has raised some obstacles for effective implementation in terms of some project members being able to visit village sites. This is being managed through utilising other members of the team wherever possible.

**Assumption 0.4:** Population growth and immigration do not increase beyond predicted estimates. **Comments:** No change in predicted estimates.

## Outputs level

**Assumption 1.1:** Communities wish to engage in local marine resource management. Our pilot study and awareness-raising activities reveal that the majority of local people in the area are supportive of conservation measures. **Comments:** This assumption holds true with the exception of Kisiwa Panza fishing community, specifically a subset of that community - young male skindivers. The PIA showed however during the active management phase the situation was more positive, with increased price for octopus, better relationships (especially reported by women), and better catch during opening times

**Assumption 1.2:** Community-led management is effective in achieving our outcome (based on initial successes during the pilot). **Comments:** Yes this assumption holds true, although the approach needs to adapt to other fisheries, for communities less into octopus fishing. (e.g. shellfish)

**Assumption 1.3:** The number of fishers from outside PECCA does not significantly increase, and thus limit the effectiveness of community-led conservation. **Comments:** There has been no noticeable or marked increase in fishers from outside of PECCA

**Assumption 1.4:** Local community politics do not interfere with agreed management strategies; i.e. kinship, party allegiances. **Comments:** There have been no new incidents of community politics interfering with agreed management strategies

**Assumption 2.1:** Communities are willing to collaborate in the management of their shared resources. Initial awareness raising activities suggest that there is appetite for this. **Comments:** The four communities who have engaged in collaborative management have demonstrated a willingness to collaborate although it is still at an early stage

**Assumption 2.2:** Neighbouring communities based elsewhere in Pemba who fish within the area are willing to recognise established collaborative management measures. **Comments:** This has yet to be put seriously to the test although Kuuu has faced some challenges with neighbouring communities.

**Assumption 2.3:** There are no significant social or political conflicts that hamper any attempt at collaborative management. **Comments:** Not currently.

**Assumption 3.1:** The MCU and the Department of Fisheries remain supportive of engaging in activities to improve their effectiveness. As they are formal project partners, we do not foresee that this will be a problem. **Comments:** The Pemba office of the Department of Fisheries have been very supportive of the project efforts engaging wherever possible.

**Assumption 3.2:** Zanzibar's government continues to support the PECCA initiative. **Comments:** The government continues to support MCAs and has recently declared 2 new areas in Unguja. This is aligned with the SWIOfish consultancies ongoing.

**Assumption 4.1:** Activities under an existing grant improve economic incentives for locally led marine resource management, through positive engagement of the tourism and seafood sectors. **Comments:** It is too early to say whether the tourism sector has truly engaged with locally led marine resource management but certainly the seafood sector, especially local buyers have engaged positively with the PMSDS approach.

**Assumption 4.2:** Community members are able to attend regular meetings, and willing to engage in credit schemes. Our pilot project suggests that we need to enable women to attend meetings in particular. **Comments:** COVID-19 is affecting the ability to hold meetings as from mid-March 2020 and the full impact is yet to be gauged. Before this, all community members were able to engage and MKUBA in particular has encouraged this.

**Assumption 4.3:** Accountability and transparency mechanisms are upheld for the community credit scheme. **Comments:** Stronger governance was found necessary for the community credit scheme and this led to the formation of a management committee. There are some issues with repayments but most groups are doing well with some on their fourth loan cycle since inception.

**Assumption 5.1:** Our data are able to detect a beneficial impact of the project. **Comments:** The household survey provided a baseline but the true impacts will only be detected once this is repeated near project end.

**Assumption 5.2:** The government and project partners remain committed to sharing knowledge and learning. **Comments:** There is tremendous goodwill locally with knowledge sharing and learning although nationally there are some challenges. Mwambao continues to report regularly ensuring that government is informed of activities.

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

The project aims to empower some 10,000 people across 6 fishing communities in the South of Pemba Island, within the boundaries of PECCA, to have more influence on their marine resources access and management. Open-access of marine resources is still a guiding principle on marine management policy in Zanzibar, combined with a strong and steady population growth and few alternative opportunities of livelihoods in these relatively remote villages, are driving over-exploitation of marine species stocks and habitats leading to increased threats on marine biodiversity and reduced incomes from fishing activities. Enabling local communities to manage their fishing grounds is aiming to give way to more sustainable fishing practice locally and contribute to better management of various species stocks (e.g. octopus, some reef fishes) and habitats (coral reefs, seagrass beds). During Year 3, the project team has successfully managed to establish new local management actions in 4 additional communities, in Makoongwe, then in Shidi, Michenzani and Stahabu. For the last three it has not only included temporary closures but also permanent closures, to put under stronger protection areas identified by the communities as having more potential for fish breeding (including coral patches). These have been inspired from Kuuu's example and this is an idea we would like to promote further in Makoongwe (and in KP when a consensus for resuming active management arises). In Year 4, the project team will try to facilitate consolidation of these management measures through mentoring each SFC and taking steps towards operationalisation of the CMG STAMISHIMA, to support each of those, proactively engage into joint-patrols with local authorities and possibly define new areas where to apply new management measures jointly. The efforts will also be multiplied with KP to find solutions to build consensus and finally resume management.

To date and 20 months after its launch, the MKUBA pilot in Kuuu remains very successful, enabling individuals in groups to access short-term small loans through an "eco-credit" model and help them address some of their expenditures instead of relying on increased fishing to do so. We also expect it will contribute in diversifying their sources of income. It has been designed to both incentivise compliance with local management, and thus encourage changes in fishing behaviour to improve their chances of success, but also to offer economic support to impoverished households. It has been quite challenging in designing, tracking and ensuring fair governance of the scheme; as we continue to see it working fairly well, the project team helped by GreenFi now focusses on consolidating the pilot (with 3 additional groups to provide broader access to loans in the community) and documenting what worked and how challenges were overcome to enable replication of the pilot in neighbouring communities.

An improved understanding of threats affecting shark species in the project area will enable informing the project and surrounding conservation community further design specific measures to reduce some of these threats in PECCA,, contributing to better conservation of these vulnerable animals.

## **4. Contribution to the Global Goals for Sustainable Development (SDGs)**

Goal 14 of the SDGs is the most directly related to the project:

- **Target 14.2** "By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans"

This year the project made progress to sustainably manage and protect the marine and coastal ecosystems in and with five communities in PECCA: accompanying continuation of local management efforts in Makoongwe's temporary closure (including through facilitating election of a new SFC and supporting this new one); starting effective management efforts through establishment of 3 temporary and 4 permanent closures across the 3 neighbouring communities of Shidi, Michenzani and Stahabu; and continuing to mentor efforts of Kuuu and their SFC to continue managing their temporary closure and their permanent one.

- **Target 14.4** “By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics”

Functions of SFCs include “to curb all illegal fishing practices, to make by-laws and enforce by-laws that have been established in their respective *shehia* [ward] which will compliment to these regulations” (Zanzibar’s Marine Conservation Unit regulations, 2013). By training and mentoring SFCs in the communities supported the project facilitated the establishment of by-laws and of local patrols by those SFCs, therefore contributing to reducing overfishing and regulating harvesting in these areas.

- **Target 14.A** “Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries”

The collection of landing data in Pemba Island through the partnership with WCS Tanzania for Sharks and Rays at species-level is providing critical new information about the species encountered and fished by local fishers, which is novel information. Prior to the project, to our knowledge no species-level information on fished Sharks and Rays was existing in Pemba; information collected by authorities on these animals were lumped into only 2 categories: Sharks or Rays. This information already shows that a number of CITES-listed and IUCN red-listed species of both Sharks and Rays are caught on a regular basis; some species new to the region have also been reported. Eventually, all the information collected will be handed over to DFD as a compliance measure from the research permit issued by Zanzibar authorities for this work.

- **Target 14.B** “Provide access for small-scale artisanal fishers to marine resources and markets”

The project has been working through the [Participatory Markets System Development approach](#), which included the organisation of 2 workshops (in September 2017 and July 2018) leading supported SFCs to proactively liaise with several buyers ahead of organising a few days of opening period for their reef closure sites, in particular for selling octopuses. The aim of this approach is to better link the small-scale fishers to the market, facilitate them to take a better negotiation position with buyers (like fostering more buyers competition to increase prices), but also to have buyers realising that they can both support local management efforts and have access to larger animals that are more often landed during opening periods.

The project also contributes more marginally to SDGs no. 1, 2, 5 and 16, as follows.

- **Targets 1.4** “By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance”; and **1.5** “By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters”.

The role of local men and women in natural resources management through enabling active management has notably increased in 2019 through their respective SFC in Makoongwe, Shidi, Michenzani, Stahabu, where no active management was in place previously.

Increase reef resilience to climate-related risks by reducing overfishing and destructive fishing in key areas of six community fishing grounds, predominantly through reef closures.

- **Target 2.4** “By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality”.

Octopus fishery on which communities focus their efforts in both communities supported is very important for food security: it is one of the most accessible with few capital investment (eg. no boat required to access coastal fringing reefs, fishing gears are usually iron bars or wooden sticks to catch the animals). It thus attracts many individuals in the project area representing an important source of their income and of food security for them. Several measures have been included in management plans of both communities specifically to avoid harming the ecosystem (coral reefs and reef flats) targeted by the closures, such as only allowing sticks as fishing gears, forbidding to anchor in the area or prohibiting to travel by boat through the area at low tide.

- **Target 5.5** “Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life”

Women representation in the 2 SFCs is currently slightly lower than the 30% targeted (17% in Kuuu, 25% in Kisiwa Panza, 28% in Makoongwe, 25% in Michenzani, 20% in Stahabu, 17% in Shidi) as most committees in those communities actually include a little more than the 10 individuals required. The project team is reiterating towards the SFCs the importance for women to engage more in the SFCs’



activities (moreover with a significant of octopus gleaners being women) and we expect to increase the number of meetings gathering specifically women by facilitating some with the SFCs supported.

- **Targets 16.6** “Develop effective, accountable and transparent institutions at all levels”, **16.7** “Ensure responsive, inclusive, participatory and representative decision-making at all levels”

The project team insisted particularly on transparency of benefits sharing from the income generating during opening days. There is relatively good clarity now on these mechanisms in Kuuu and Makoongwe was also transparent during the 2 openings undertaken in 2019. Particular attention has also been put on representing the various marine resources users groups (eg. seaweed farmers, boat fishers, octopus fishers, skin divers) and the 2 distinct villages within the community during the election of the new SFC in the end of May in Kisiwa Panza. We believe this will help the SFC to more widely represent the community

## 5. Project support to the Conventions, Treaties or Agreements

The CBD focal point, Ms Esther Makwaia in Tanzania, is aware of our project (she has been contacted and informed during the application process) and of our vision to scale-up local co-management on Pemba in the future. She then showed interest in our initiative, but did not engage further when contacted again during the project’s implementation.

All of our official contacts have been with the government of Zanzibar, as appropriate due to the archipelago’s high level of autonomy in the United Republic of Tanzania, in particular with regards to environment and fisheries topics. We share monthly progress reports with DFD-Pemba and organised an annual project update in December 2019 in their offices (with participation representatives from the supported communities).

The project contributes to the following **CBD** articles:

- 7 by ensuring management interventions were based on baseline surveys, ongoing monitoring, and adapted where needed (such as suggesting to add permanent closures to protect key reefs within temporarily closed areas established);
- 8 by integrating conservation and sustainable use of marine resources to minimise adverse impacts on biodiversity; promoting the protection and restoration of marine ecosystems through localised management by supporting SFCs to establish by-laws and protecting threatened species and habitats;
- 10 through support to local communities to conserve and improve reef habitat health, and encouraging customary use of marine resources by facilitating participatory management planning, drawing on local knowledge of marine habitats, resources, and threats, and providing training to implement management plans;
- 11 by supporting the formation of transparent governance structures, and providing training to empower communities and SFCs to understand their rights and responsibilities under MCU regulations, ensuring transparent election processes for SFCs, and clear communications strategies between SFCs and communities;
- and 13 by conducting awareness-raising about the conservation and sustainable use of marine resources and current regulations in focal communities.

The project also contributes to various **Aichi targets**, including:

- 6: Implement management interventions (e.g. establishment of closures, enforcement of legal gear restrictions in patrolled fishing grounds) with SFCs and between community-managed fishing grounds for sustainable management of important fisheries, vulnerable species, and aquatic plants, enhancing ecological connectivity;
- 10: Reduce the impacts of destructive fishing practices on coral reefs (through enforcement of regulations and implementation of closed areas) and subsequently increase reef resilience to climate change;
- and 11: Improve PECCA management through training and mentoring SFCs (output 1) and DFD-Pemba staff (output 3, this year through involving DFD-Pemba staff in learning exchange visits and workshops to establish the first CMG in Zanzibar), and ensuring integrated management of socially and ecologically connected areas (output 2, this year with the establishment of the first CMG).

## 6. Project support to poverty alleviation

In terms of poverty alleviation and its multidimensional characteristics, the project works in four ways:

- Increase influence over marine resource access and management gained through: locally accountable SFC governance in six communities. The Participatory Impact Assessments conducted in Kuuu and KP shows that a majority of the respondents (with the only exception of skin divers in KP remaining opposed to local closures of their fishing grounds) valued the sense of influence to decision making that the project has provided through their SFC. We have questions about this aspect in the baseline household surveys conducted in Makoongwe, Shidi, Michenzani and Stahabu. The end of project repeat of these tools will give us an idea of the change.
- Increased food security and income from 50% improvements in individual size/weight of locally important reef fish and octopus catches from managed areas. We do see an increase in octopus size

and total catch as a result of the management in Kuuu, and we start to see a positive result in Makoongwe too. The results in reef fish landing are also on progress though not as obvious as for octopuses. This currently benefits to households of Kuuu and Makoongwe, mainly selling their catches, and we hope to see similar positive outcome soon in Shidi, Michenzani and Stahabu. The project however doesn't track income levels (only reported changes in household surveys questions)

- Diversified and enhanced livelihoods for women and men through the MKUBA eco-credit scheme piloted in Kuuu. Business opportunities have been created diversified by the provision of MKUBA loan facilities to 132 persons in Kuuu. Although the loans have not all being used for investment in an economic activity, those who have done so express quite good levels of satisfaction on their businesses supported through this access to credit. Some businesses face failure and this is adding economic pressure on the borrower to repay. The project team with the help of GreenFi want to develop a set of basic "business literacy" training (basic accounting, business selection guidance, etc.) to improve the rate of success of the small businesses supported with MKUBA funds.

## 7. Consideration of gender equality issues

- In Year 3, the project upheld good tracking of inclusion of women in various meetings and training, especially at community level, with disaggregated data on gender. However figures continue to show they remain less involved compared to men (which isn't surprising giving predominance of men in all decision making and fishing matters in Zanzibar and Swahili culture).
- The project team has started to facilitate organisation with SFC of women-specific meetings to better reach out and include their voice into the SFC (where the number of members remain low). We have also clearly advocated to including a criteria over gender ratio number to be proposed for SFC elections guidelines (under development by SWIOFish consultancy), but it has been felt this was not a good idea without much argument. Women still represent a significant number of fishers, especially in foot-fishing, which is a fishing activity particularly concerned by our proposed local management model (octopus)
- Mkuba borrowers figures are more balanced and show that more than half of the beneficiaries are women. This also quite unsurprising comparing to figures often seen in community credit schemes (such as VSLAs) regarding gender participation (women can represent up to 80% of the beneficiaries, generally because they tend to group and function as such more often)
- Women tend to better respond to calls for meetings launched by women. The project team currently only has two women involved in field activities regularly (besides Mwambao director), and we will continue rely on them to call for more women meetings.

## 8. Monitoring and evaluation

- The M&E system has been under continued development and improvement since the beginning of the project:
  - o During Year 3, the demands on this system have increased, in line with the number of communities engaged (within this project and with Mwambao also expanding its operations in other parts of Tanzania) and the quantity of information collected frequently. Therefore a new data system is being developed to streamline the process of data collection and it's accessibility for use to inform management decisions. The new system will include a Google-form for data input by field officers, who collect a large quantity of data monthly. Data from all the communities Mwambao work with will be sent from this Google-sheet to standardised data sheets, which in turn will be linked to customised online dashboards to visualise the information. Information will be collected and inputted by field officers. The Google-form, Google-sheet and online dashboards will be managed by the Programme Manager and Programme Support officer. An outline of the system is presented in **Annex 11**, with the old layout in the first tabs and the new layout separated by themes in the following ones.
  - o In August 2019 the Mwambao Programme Manager gained training and support in both GIS mapping and M&E. FFI supported Mwambao with a subscription to ERSI GIS software followed by training in basic ESRI GIS mapping skills from the FFI internal team. Additionally, time was dedicated to support the improvement of the M&E system to strengthen tracking.
- There have been several lessons learnt over the last reporting year, leading to a change in some of the data management and its structure. The following points will be used by the project team to have a more streamlined system, easier to analyse:
  - o Standardise the template for data entry across all-levels and sites.
  - o Simplify data entry tables to minimise mistakes and maximise use by the team with a range of capacity and confidence in using excel and add a Google-form to increase the number of staff who contribute to data input and collection.
  - o New format of excel tables to simplify analysis to ease the production of charts/graphs and therefore the analysis and use of the data collected (for adaptive project management and increased dissemination). Mwambao also subscribed to [tableau](#), an online solution to produce interactive visualisations, aiming to have dashboards for each community, project and high level management decision.

- Challenges and considerations. Collection and accessibility of anecdotal information and additional details remains challenging and needs to be added into the new ME system, to ensure that this information feeds into project management and used in reporting
- The person responsible for managing and collating the data (Mwambao's Programme Manager, a British National) is anticipated to terminate her contract by August 2020. She is thriving to have a fully working and easy system for someone else to continue the work and M&E to be followed as smoothly as possible. Her very heavy workloads led the project team and especially Mwambao's director to adapt the way the team operates and pass down the responsibility of data collection to all field staff for various types of data through regular reports and forms to fill in. Mwambao has put a lot of effort in cleaning the datasets and our hope is that the data-entry system will enable more comprehensive tracking while keeping the same human resources.
- For the activities related to the MKUBA, last year's review report from GreenFi helped us identify the detailed tracking needs to add (on top of basic data like repayments). This had also led GreenFi to invest in the development of a smartphone app which will help each MKUBA group to enter their information which can be followed remotely through online storage (combined with regular field visits). We expect to test that application from Y4Q1 or Q2 for it to be fully working by the end of the project and before replicating the MKUBA experience in other communities

## 9. Lessons learnt

One of the major lessons learned over the past year is that where working with Government, one has to look for opportunities for good collaboration within a continually changing landscape. Y2 and Y3 of the project have taken place during a period where the World Bank-funded SWIOFish programme has become operational in Zanzibar; of particular relevance to this project is the co-management aspect of that project. We have been fortunate to share a common vision for co-management with the advisor appointed (Dr Chris Horrill) and this has worked in all of our favour enabling progress within the DFD which might have been much slower otherwise. It has meant that we have had to adapt our approach to building PECCA management capacity, especially in light of the SWIOFish MCA management planning consultancy however once again we have been able to contribute our learnings from this project to add value to those pieces of work.

Similarly over the last year when bringing on board three new communities, we have had to adapt our co-management planning model to deal with communities that are not primarily octopus-fishers, emphasizing the need for flexibility of approach. Having said this it has highlighted to us that the governance-training component of our work is elemental to any management intervention that maybe introduced and is the lynch-pin to sustainable community-based fisheries management. In addition we have learned that a collaborative group approach between villages, especially where they are in close proximity, has many benefits to offer for all involved.

The work that the partners have achieved so far with the six communities involved has attracted a lot of positive attention from other funders and we have been able to channel this interest in a way that complements and builds on the achievements already made and the model of intervention established during this project.

The model that we have developed for catch data recording has generated a wealth of useful data. Progress over Y3 however has highlighted to us that there needs to be a well-thought out plan of both data management but also a planned progression in what data continues to be collected, in which locations and for how long. It has become apparent that the catch recorders have become dependent on the income that the work generates and we need to be cognisant of this. We plan a full review of the catch data programme during the next year.

### Monitoring & Evaluation

With regard to the Mwambao M&E system there have been several lessons learnt over the last reporting year. As the number of communities engaged has increased (including alongside this Darwin grant, in work with other coastal communities outside of Pemba Island) the demands on the team for collecting and processing this information so that it is accessible and can be interpreted to inform management decisions has increased. Some of the lessons learnt include;

- Standardise the template for data entry across all-levels and sites.
- Simplify data entry tables to minimise mistakes and maximise use by the team with a range of capacity and confidence in using excel and add a Google-form to increase the number of staff who contribute to data input and collection.
- New format of excel tables to simplify analysis to ease the production of charts/graphs and therefore the analysis and use of the data collected (for adaptive project management and increased dissemination). Mwambao also subscribed to tableau, an online solution to produce interactive visualisations, aiming to have dashboards for each community, project and high level management decision.
- Challenges and considerations. Collection and accessibility of anecdotal information and additional details remains challenging and needs to be added into the new ME system, to ensure that this information feeds into project management and used in reporting

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

Response to AR3R feedback and queries:

- 1 *In Section 2 of the AR, please discuss how the partnerships are managed, how communications take place between the various partners; How often does the Steering Group meet? (if it does, please append minutes of meetings to the next AR) etc*

This point is addressed in the section 2. Project partnerships.

- 2 *Do your baselines allow measurement of changes in household income as a result of project interventions?*

2 types of baselines have been used to measure income-related changes: household surveys and Participatory Impact Assessments (PIAs). Household surveys have been used in the project to establish baselines in communities supported prior to starting any local management. They have therefore been used in Makoongwe, Shidi, Michenzani and Stahabu. We will be able to measure the changes with a repeated household survey in those communities in Year 4 and compare with findings from the baseline. In Kuuu and KP, as local management efforts were already ongoing when the project started, we opted for PIAs, a method allowing community members to identify themselves the most important changes to witness (both collectively and individually), to select those they relate to the project intervention and to rank those; however without providing quantification of those changes (other than their relative importance according to the respondents). The method has been already provided insight on Kuuu and KP and we will repeat those PIAs in Y4, in all the communities supported.

- 3 *In Section 5 of the AR please comment on (and provide evidence of) project contributions to Tanzania's CBD commitments*

Added and detailed.

- 4 *Please annex the M&E 'dashboard' for each of the communities you are working with*

The dashboard has evolved into a different spreadsheet layout to ease analysis (production of pivot tables and graphs). It is presented in **Annex 11**.

- 5 *DI ought to be acknowledged on the project's webpage. Indeed, it would be good if more information about progress with project implementation were to be put on line*

Added on the website since Y3Q1 (along with match-funding)

- 6 *The Project Information Summary for AR2 indicates a new Project Leader. No change request for this is on file*

Change request send and approved in Y3Q2.

- 7 *Has the project managed to make good the shortfall in total project cost and the confirmed additional funding indicated in the Grant Application? If not, how has this affected project operations?*

Yes, the project has managed to leverage additional match-funding through an FFI internal funding opportunity. Some additional funding from that source has just been confirmed to start from November 2019 for three additional years, allowing to replicate the MKUBA experience in another community and also work in the North of PECCA where a particularly proactive community has been asking for support.

- 8 *In general, the report would benefit from some Quality Control (by the Project Lead?): there were numerous typographical and grammatical errors in AR2; and non-functional links to Annexes. Annexes would be better kept as individual documents, rather than merged in a single file. The Project Information section wrongly refers to this report as AR1*

We hope this will have improved in this AR3.

## 11. Other comments on progress not covered elsewhere

There are several additional stakeholders now interested in improving PECCA's management effectiveness, directly or through Mwambao, and seeking consistency with our project which is seen as a solid pilot. The NGOs WildAid (headquartered in US) and CORDIO (HQ in Mombasa, Kenya) started activities in partnership with Mwambao to provide complementary efforts building on our Darwin-funded project:

- reviewing current situation about compliance in PECCA, providing guidance and training to DFD–Pemba and to communities working together under the first established CMG (“Stamishima”), in particular on Monitoring, Control and Surveillance (enforcement).
- proposing some studies on fishing gears use and their impact to later introduce improved fishing gears trialled in other parts of the East African coast,
- supporting the project team and identified community-members with further technical guidance on community-led ecological in-water surveys within and around the closure sites,
- laying foundations to build a regional communities learning network (linking Kenyan and Tanzanian communities as a start)



The Nature Conservancy also organised in Y3Q3 a learning exchange visit with communities from Lamu archipelago (North coast of Kenya) to share lessons learned, inviting representatives from communities they support. FFI is also involved alongside TNC in that part of the North coast of Kenya which helped organise this learning exchange visit (eased by the fact that both Kenyan and Tanzanian participants speak Swahili language). We hope at a later stage (not within this Darwin grant) to organise a returning learning exchange visit with Zanzibari/Pemba communities visiting those in Lamu archipelago and learn from their own achievements. An idea of a national then regional network of community of practice has long been considered by Mwambao (stemming the very name of the organisation “Mwambao Coastal Community Network”).

WCS Tanzania has further developed its research on sharks and rays in Pemba through funding data collection in 2 additional sites (on top of the 3 sites funded through this Darwin grant), valuing the quality of data that been gathered in the last 15 months through our partnership.

2020 is a year with many unknowns and potential risks. The **Covid-19 outbreak** reaching Tanzania has led to drastically reduce gatherings of people, and thus limited our project team’s engagement with community members (only small groups are still allowed to meet to date). Mwambao team operates in a semi-remote fashion: with the executive director and the programme manager both back in their home country (UK) since end of March 2020, a part of the team remaining in Zanzibar main island (Unguja, where the organisation has its HQ), and those based in Pemba (the field officer, the community members collecting data for various activities). The project team will assess before end of Y4Q1 the impact of the restrictions of travel and gatherings (as well as impact on livelihoods and fisheries) to see how much the project’s last year will be impacted.

**Presidential elections** are scheduled in November 2020 both for the United Republic of Tanzania (including Zanzibar) and for the government of Zanzibar. In the past those periods have been subject to significant political tensions leading to various disruptions, and sometimes violence. We will continue to closely monitor the effects on the project and especially with the communities supported; we expect that no major governance decision or change will happen in the 2-3 months preceding those elections, possibly immediately after the elections too. We will of course continue to share our progress with DFD and involve their staff as we have done so far.

## 12. Sustainability and legacy

Sustainability of this project is tied to the approach of facilitation and support in the establishment of co-management of fishery resources in PECCA, i.e. through building the capacity of local communities’ representatives (SFCs). The SFCs are relatively young and with a sometimes unstable membership structure (such as in KP has shown, due to community’s internal dissent since September 2018 and in Makoongwe in July-September 2019 leading to the election of a renewed SFC). Currently, six SFCs have been formed, five are active, while one (KP’s) remain involved but with no current active management. Facilitated by Mwambao, the project has adopted a participatory approach that is aimed at cultivating ownership and stewardship of SFCs in fishery management - it has also fostered a progressive approach whereby initial engagement is considerable but decreases allowing the SFC to continue to operate on its own (but with back-up if needed) . It is good to acknowledge additional support from SWIOFish will also contribute to sustainability of the project. During Year 2 SWIOFish has really taken on board many activities/outputs from this project and proactively coordinated or aligned with some of theirs. The Arcadia Fund – a charitable trust of Lisbet Rausing and Peter Baldwin, already providing some of the match-funding to this Darwin grant, has been approved for a new grant and continues to fund this project for 3 additional years (starting from November 2019). FFI and Mwambao have started defining a roadmap for the future of this project and joint fundraising efforts to ensure the work started continues to upscale co-management efforts in PECCA, central to our vision of more effective management of the overall MPA.

## 13. Darwin identity

Darwin is the main funder of this project and has been acknowledged as such. The Darwin logo is used throughout the project on publicity materials – posters (such as SFC posters) and letters of invitation, projects documents sent to DFD-Pemba (eg. Standard Operating Procedures for SFCs). Stickers of the logo were placed on equipment purchased for the project team or communities (such as the motorbike for Pemba Field officer or in a corner of the notice boards displaying educational posters in the communities supported).

FFI’s partnership manager (Tanguy Nicolas) has presented the project on behalf of the consortium through participation to the 11<sup>th</sup> WIOMSA symposium, including a presentation of the work to facilitate engagement of SFC members with buyers in the frame of reef closures’ opening periods. During that symposium Darwin was acknowledged as one funder of the Sharks and Rays data collection during a presentation of initial findings made by WCS Tanzania’s marine programme director (Michael Markovina). GreenFi’s CEO (Rob Wild) has presented in Cambridge Conservation Initiative premises some of the initial findings and reflections, taken from the review conducted at end of Y2, about the MKUBA scheme

piloted in Kuuu, acknowledging Darwin as principal funder of the work. Further information about that activity: a [blog article has been published on FFI's website on 16<sup>th</sup> October 2019](#), to explain about the innovative aspects it represents and how we want to continue exploring its impact for sustained local management in the communities supported.

The project team organised a visit in the project area on Pemba, for the British High Commissioner in Tanzania on 5<sup>th</sup> December 2019. [FFI, Mwambao](#) and the [BHC in Tanzania communicated on twitter](#) on this occasion, mentioning the support provided by UK government for this project (details in [Annex 25](#)). Darwin Initiative team (LTS) had been made aware about the visit ahead of it taking place.

## 14. Safeguarding

Our safeguard policy requirements (which can be found in [Annex 26](#)) are passed down to our sub-grantees as a part of the sub-grant agreement we sign with them, and a copy of the concerned policies is provide as annex. WCS also has a high standard safeguard policy and Mwambao management team regularly checks (during the field visits conducted every month) the behaviour of its staff is as expected. FFI staff themselves regularly visit the partners (on 3 occasions in 2019-2020) and accompanies the project team on the field, thus checking on those occasions that the interactions with community members are upheld to the level of standard expected in the policy. A particular attention is put on the necessity when engaging with population targeted by the project to obtain a Free, Prior and Informed Consent, before conducting further activity. The project team thus explains the objective of any activity before starting it or to a newly engage individual, alongside a brief on the context. That FPIC has been duly obtain for example for each of the 251 completed questionnaire used in the household surveys by end January 2019 and no nominative information (or able to identify the individual questioned) has been recorded (questionnaire in [Annex 19a](#), including the introduction about the purpose of the surveys). FFI staff could also witness this FPIC has also been obtained when conducting the Participatory Impact Assessments (May 2019).

## 15. Project expenditure

- Table 1: Project expenditure during the reporting period (1 April 2019 – 31 March 2020)

Project spend (indicative) since last annual report	2019/20 Grant (£)	2019/20 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)				
<b>TOTAL</b>				

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2019-2020

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
<p><b>Impact</b></p> <p>PECCA's healthy and diverse marine ecosystem is managed effectively by empowered local communities and DFD-Pemba, increasing populations of vulnerable species, locally important marine resources, and peoples' wellbeing.</p>		<ul style="list-style-type: none"> <li>-Reefs and reef flats effectively protected by 5 communities with daily patrols and their management plans approved by DFD-Pemba</li> <li>-Some demonstrated signs of wider biodiversity gains (not only octopus) in temporary and permanently closed areas in Kukuu and in Makoongwe's closure</li> <li>-Increasing individual octopus size in managed areas and some reef fish and related to closure timing</li> <li>-Increasing livelihood opportunities in Kukuu through to Mkuba pilot</li> </ul>	
<p><b>Outcome</b> Six communities and DFD-Pemba manage marine resources sustainably in key sites, stabilising reef health and function across 10,500ha of PECCA, leading to improved wellbeing for c.10,000 fisher men and women.</p>	<p>0.1 No significant incidents of coral damage (greater than an area of 1 m squared) caused by human activity in any reef sites protected by community by-laws, against baselines by 2021.</p> <p>0.2 60% average reduction in number of boats observed using damaging or illegal fishing gears (e.g. drag nets, small mesh nets and traps, spear fishing with SCUBA) in sites patrolled by communities by 2021, as compared to the baseline at each site.</p>	<ul style="list-style-type: none"> <li>-No significant coral damage spotted since the coral reefs baseline surveys (2016 KP, 2017 Kuuu, 2019 Makoongwe) ; No dynamite incidents</li> <li>-No record of boats using damaging or illegal gears in the sites patrolled by communities. Regarding any type of encroachment: Makoongwe is in its first year of patrolling therefore we cannot yet evidence any trend, they did have 2 occurrences of arrests in Feb 2019; in Kuuu the decrease in Y2 compared to baseline is of 90% (2 arrests); in KP 11 arrests in 2 periods</li> </ul>	<ul style="list-style-type: none"> <li>-Coral reef monitoring are continued once yearly using the Mwambao monitoring team</li> <li>-We continue to mentor the SFCs to continue and improve their existing patrols: in particular we work with the STAMISHIMA patrol group so that regular effective patrols are taken of the entire area and records are kept.</li> <li>-We need to go deeper into the analysis of our datasets regarding fish landed, to review the relevance of the indicator/target. Regular octopus and fish catch</li> </ul>

	<p>0.3 50% increase in the individual size of reef fish caught from selected key families and a three-fold increase in average individual weight of octopus caught in reef closure sites by 2021, as compared to the baseline number at each site.</p> <p>0.4 50% increase in the number of fish over 30 cm total length observed from selected key families in reef closure sites, against baselines set for each community by 2021.</p> <p>0.5 60% of women and 60% of men surveyed in the six communities report an improved sense of overall wellbeing as a result of project activities by 2021 (including targets for: reduction in numbers of meals skipped, participation in decision-making, income as a result of either or both improved catch and access to credit – see section 14).</p> <p>0.6 70% of women, 70% of men, and 70% of SFCs/DFD-Pemba representatives surveyed perceive an improvement in SFC and DFD-Pemba’s management effectiveness by 2021 as compared to the baseline.</p>	<p>of restarted closure have happened in Y2 (2018)</p> <p>-57% increase on average octopus weight caught during opening periods in Kuuu, comparing (3-fold increase unrealistic, need to review the objective); only 7% for the same comparison in KP, which may be due to some enforcement difficulties. We are yet to see the results of Makoongwe opening.</p> <p>On reef fish catches monitoring: during openings there appears to be a slightly higher proportion of omnivores and herbivores and a slightly lower proportion of piscivores, planktivores and predators. But no significant difference in terms of size observed yet.</p> <p>-Some notable difference in fish observed in the temporary and permanent closures are the higher diversity index (reef fish diversity increased) and especially increase number of parrotfish (by 475% between 2017 and 2019 in Kuuu). This is also observed by local fishers.</p> <p>-We will seek to confirm that number of meal skipped is a relevant indicator or if there is another one better suiting, when finalising the analysis of household surveys (conducted in January 2019).</p>	<p>monitoring will take place in Kuuu and fish catch monitoring will start in Makoongwe. A realistic and meaningful catch monitoring programme will be designed for STAMISHIMA based on the joint management plan..</p> <p>-We will repeat socio economic surveys (household and PIA) analyses during 2020/21The results will also serve to illustrate progress made during the project period and will monitor indicators 0.5 and 0.6..</p>
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<p><b>Output 1. Six SFCs have the skills, knowledge and confidence to implement sustainable marine resources management measures in local fishing grounds.</b></p>	<p>1.1 SFCs are functioning and represent a cross-sector of society, including an average composition across all SFCs of 30% women, in three communities by y1, four communities by y2, 5 communities by y3, and 6 communities by y4.</p> <p>1.2 Six SFCs have implemented sustainable marine resource management plans to address locally defined conservation priorities (e.g. temporary or permanent closures, gear restrictions), against a baseline of 2, by 2021.</p> <p>1.3 12 community monitors trained and implementing fisheries catch data collection; 12 community monitors trained and implementing coral reef monitoring; six patrol teams trained and implementing patrols by 2021.</p> <p>1.4 60% average reduction in the number of breaches of SFC by-laws across all six communities as compared to the first year of by-law implementation in each community by 2021.</p>	<p>-6 SFCs are trained and functioning. Training for all 6 communities was complete by end of year 3 but KP is still not functioning. Follow-up to KP will be given a priority in year 4. A review of womens representation in each SFC will be made.</p> <p>-Kukuu will continue to implement their management plan during 2020/21 reviewing it and including new areas for sea cucumber farming. A joint management plan is in place for STAMISHIMA which includes all individual SFC closures and the entire nearshore shared fishing ground. KP will implement a closure in at least one location.</p> <p>-A total of 8 community monitors have been trained for fisheries catch data collection, as well as 3 data entry officers and 1 district data manager; 8 community monitors have been trained and implementing coral reef monitoring in 3 communities; 3 patrol teams are trained but only 2 are implementing patrols in the end of Y2 (KP management on pause). 3 others have been trained and by project end will be implementing joint patrols and keeping records.</p> <p>-For all communities by-law breaches will be charted for all years and the average reduction calculated. Breaches</p>
<p>Activity 1.1. Train four new SFCs in good governance principles, conflict resolution, by-law formulation processes, patrolling, patrol record keeping, and financial management, and establish standard operating procedures, through three five-day training workshops held with each SFC (using materials developed during the pilot) and four learning exchange visits to pilot sites.</p>		<p>-6 SFCs have now received good governance training. The more recent SFCs i.e. Makoongwe Shidi and Michenzani have all had learning exchange visits to Kukuu. The emphasis over the coming year is to keep mentoring those SFCs and to carry out refresher trainings where necessary.</p>
<p>Activity 1.2. Conduct participatory assessments of key habitats, fisheries, and threats (to habitats, vulnerable species and livelihoods) with each SFC to establish possible reef management sites, using adapted Participatory Rural Appraisal tools as developed in the pilot.</p>		<p>-Most participatory assessments have been carried out. There is a need now to link the findings of the community biodiversity surveys with the choices made by the SFCs and to see where improvements in the selection of sites can be made. This will be a focus for year 4 and will feed into management planning (activity 1.3 below)</p>
<p>Activity 1.3. Facilitate participatory management planning workshops, totalling 9 days with each SFC, to establish local marine resource management interventions (e.g. temporary/permanent closures, gear restrictions) covering: identification of conservation targets (based on data from 1.2), by-law development; monitoring, control and surveillance planning.</p>		<p>-The management planning approach adopted early in the project will be reviewed and adapted for a collaborative management planning approach with the STAMISHIMA CMG. This will capture all management interventions in the STAMISHIMA area.</p>

<p>Activity 1.4. Provide training and ongoing mentoring to SFCs, patrol teams, and monitoring data recorders (2 per community) to effectively implement management plans.</p>	<p>-Ongoing training has been provided in Kuuu to link the new MKUBA activities to the management plan and monitor activities of MKUBA groups' members. We will seek to improve the tracking tools for this activity to account for the increase patrol effort resulting from MKUBA including use of a phone-based app.</p> <p>-Kisiwa Panza: we have kept communications current with KP SFC and have involved the chair in the community biodiversity surveys. During Yr 3 we have not progressed to active management with the SFC but are still planning to resume management with only one of the 2 villages in the community, which is highly motivated and can start their own closure on their side of the island. Having explored with DFD-Pemba and PECCA regarding splitting the <i>Shehia</i> (ward) in two, it seems the preferred way forward is to work with a sub-committee of the existing SFC.</p>
<p><b>Output 2. A Collaborative Management Group is formed between the six target SFCs to determine and address seascape management issues.</b></p>	<p>2.1 There is a functioning Collaborative Management Group of 12 members between the six target fishing communities by 2020, supported by DFD-Pemba.</p> <p>2.2 A joint management plan is established between six SFCs and the Collaborative Management Group to address threats to priority habitats and species of conservation and livelihoods importance by 2021.</p> <p>2.3 Briefing paper for possible interventions to reduce megafaunal mortality is produced, shared and discussed with project partners by 2021</p> <p>-A collaborative management group from Mid-Year 3 of the project after the exchange visit in mainland Tanzania was started. The focus of Year 4 activities will be to get this functional.</p> <p>-The CMG is centred around Makoongwe, Shidi, Michenzani and Stahabu which are neighbouring communities sharing many fishing grounds. It may be possible to extend the principle to Kuuu, KP and neighbours during Yr 4 but this is considered ambitious.</p> <p>-To be carried out in Year 4 once sufficient data has been collected and analysed (although first analyses have already started in the pre-assessment report completed this year)</p>
<p>Activity 2.1. Establish a Collaborative Management Planning Group with representatives from each of the six target SFCs, and hold a learning exchange visit with the group and key DFD-Pemba staff to other collaboratively managed fishing grounds in Tanzania e.g. Mafia Marine Park.</p>	<p>-We have started leading joint activities across the 4 neighbouring communities (eg. participatory resource mapping, inviting representatives from the neighbouring SFCs) of Makoongwe, Shidi, Michenzani and Stahabu In Y3Q1 we conducted an exchange learning visit to mainland Tanzania in the seascape programme WWF Tanzania managed for over 10 years setting up a Collaborative Fisheries Management Area joining efforts of the local fishers committees (called Beach Management Units –BMUs- in mainland) DFD staff attended the visit and SWIOFish are in favour of adopting this approach throughout Zanzibar. Mwambao has added value to the initiative by partnering with WILDAid and USAID to provide professional training of the new CMG in MCS procedures and will also provide them with a patrol boat. They also plan to support developing compliance plans for Mkoani District to operate and have articulated roles and responsibilities within PECCA-led enforcement</p>

<p>Activity 2.2. Develop standard operating procedures to establish the roles, rights and responsibilities of the Collaborative Management Planning Group in collaboration with the MCU, to ensure harmonisation with MCU legislation and based on learning from the exchange visit.</p>	<p>The roles and responsibilities of the CMG have been explored and drafted with the CMG group members. MCU legislation does not currently recognise this level of institution but the SWIOFish co-management team support the approach and this will lead in time to more supportive legislation.</p>
<p>Activity 2.3. Plan and implement joint management measures with the Collaborative Management Planning Group in priority areas of shared fishing groups for key fisheries and vulnerable species (e.g. fishing gear restrictions), using baseline information from 1.2 and 5.1. Plans will be compatible with the PECCA General Management Plan and embedded into SFC by-laws and communicated through SFCs to ensure adherence to MCU legislation.</p>	<p>To be a focus of Year 4 activities.</p>
<p>Activity 2.4. Determine the scale of threats to vulnerable species across the shared fishing grounds through an effective reporting network, including landing site data collection across the six target communities, and adjacent landing sites (in the case of legally fished species, e.g. sharks, humphead wrasse) and mortality reporting of illegally caught species (cetaceans, turtles). This will build on WCS's existing baseline data on marine megafauna by-catch.</p>	<p>Network of sharks and rays Community Data Collectors continue to be active in 3 sites in the project area, collected data on mobile phones since February 2019. It is hoped that some of the findings of this research work can lead to some applied management in the project area during Year 4.</p>
<p>Activity 2.5. Identify possible interventions to minimise by-catch and hunting of vulnerable species, including megafauna across the collaboratively managed fishing grounds, based on findings in 2.4 and 5.1, and global conservation research and practice.</p>	<p>Year 4, based on information collected. It will now only focus on sharks and rays although where known, it is hoped to address conservation of other vulnerable species through the management planning exercise especially with the CMG.</p>
<p><b>Output 3. Training and capacity building provided to DFD-Pemba to effectively support marine resources co-management in the long term.</b></p>	<p>3.1 5 key DFD-Pemba staff attend institutional governance training (according to needs assessment), and SFC capacity building training by 2019.</p> <p>3.2 A 3-5 year strategic plan for PECCA is established by the Management Committee and reviewed by the DFD by 2020.</p> <p>3.3 The PECCA Advisory and Management Committees are functioning by 2018.</p> <p>-Workshop took place to establish a vision for co-management in PECCA, including how SFCs can obtain by-laws; Skills needed to do it; Agreed way forward More than 10 DFD staff attended, including at least 5 key ones</p> <p>-The General management plan for PECCA (and the other MCAs of Zanzibar) is currently being drafted through a SWIOfish consultancy and is planned to be complete by end 2020. The project has been informally contributing to this work and will formally take part in stakeholder workshops to finalise the plans mid 2020 (Covid-19 allowing) . The process of decentralisation is still ongoing and will change roles and responsibilities and this will become clearer over the next year.</p> <p>-PECCA's Advisory Committee has never convened. The MCA management planning team are considering and revising the role of this committee (for all MCAs) as well as the Fisher Executive Committee and further work on developing their role and responsibilities is premature at this juncture.</p>
<p>Activity 3.1. Hold a series of workshops to train key DFD-Pemba and MCU staff in good governance practice, in accordance with the findings of the capacity assessment (January 2017), to improve implementation of existing governance platforms. Including: meeting facilitation skills (for Management Committee</p>	<p>These 2 activities have been grouped and carried out in Y2Q1 (change request approved in March 2018), the training has been designed in collaboration with our</p>

<p>meetings); conflict resolution (between communities, and between SFCs and DFD-Pemba); transparency in sharing information regarding MCU legislation and procedures (e.g. SFC elections, distribution and use of income generated through tourism revenue).</p>	<p>consultant PHeylings and included 2 days of training with DFD-Pemba and MCU on the priorities listed in the cell above.</p>
<p>Activity 3.2. Hold a 3-day 'training of trainers' workshop, to enable DFD-Pemba staff to use the SFC training manual developed during the pilot project, in order to increase the number of communities engaged in marine resources co-management. Involve DFD-Pemba staff in ongoing SFC training for on-the-job training.</p>	<p>The training allowed a common understanding on why and how co-management as a vision for PECCA will work articulating roles of communities and authorities. We are in regular contact with SWIOFish consultant leading the co-management phase of this programme over joint approaches (General Management Plan and decentralisation process)</p>
<p>Activity 3.3. Facilitate a strategic planning workshop (5 days) with DFD-Pemba to develop an action plan setting out 3-5-year management goals within PECCA for biodiversity conservation and community-based fisheries management. This will be in consultation with SFCs, relevant government departments, and initiatives (SWIOFish) to ensure harmonisation of marine-co management measures.</p>	<p>This activity was planned for Year 2, but we will need to change its focus to work on developing some standard operating procedures / guidelines to improve the FEC's effectiveness and/or formalise what would be SOPs for a district-level FEC (a "DEC"). This need has also been agreed by the Marine Conservation Unit of DFD and in coordination with SWIOFish. We are hoping to propose a change request within the first semester of Y3 to clarify our goals and start a feasible activity given those changes in the context.</p>
<p>Activity 3.4. Mentor DFD-Pemba to hold regular Management (twice a year) and Advisory (once a year) Committee meetings, inviting relevant government departments and actors (including the tourism sector and other NGOs) concerned with marine resource use and conservation within PECCA where necessary to share information, harmonise activities with national development plans, and facilitate collaboration.</p>	<p>It will not be possible to convene any Advisory committee meetings however we may request the convening of the FEC and tourism stakeholders for PECCA to inform them of the progress of the CMG and its role.</p>
<p><b>Output 4. Sufficient knowledge and incentives provided for both male and female fishers from the six target communities to participate in new marine resources co-management measures.</b></p>	<p>4.1 A minimum of 10 radio announcements on local stations relating to at least 10 incidents (e.g. new SFC by-laws; enforcement of by-laws; events) by the end of 2021, against a baseline of three.</p> <p>4.2 50% increase in the number of women and number of men attending regular meetings with SFCs by 2021 against the baseline set with each community at the start of the project's engagement with them.</p> <p>4.3 Credit scheme is accessed by c.270 men and 270 women across all 6 communities by 2021 (1 community in y1, 3 in y2, 4 in y3 and 6 in y4).</p> <p>-2 new radio announcement (one in March 2018, one in December 2018) relating to 2 new closures (KP then Makoongwe) in 2018. An experience sharing radio programme in May 2018 (30 min of discussion about the experience from Kuuu SFC).</p> <p>-KP: 213 men and 67 women, 17 meetings; Kuuu: 474 men, 326 women, 26 meetings; Makoongwe: 29 men, 8 women, 3 meetings; Shidi 2 meetings (2 women and 48 men), and Stahabu 1 meeting (2 women, 28 men) and none yet for Michenzani.</p> <p>-Pilot MKUBA in Kuuu, with 131 borrowers (68 females and 63 males) in 5 groups is still operating and will soon be entering its third year. . We are in the process of expanding that initiative in Kuuu (to cover more households and have more impact as an incentive to relieve some fishing pressure and further implement the management plan) and/or in a new communities. This will be complete by the end of Year 4.</p>



		-A change requested was agreed reducing the expectation to expand MKUBA to all 6 communities as this was unrealistic in the project timeframe.
Activity 4.1. Create awareness raising materials (e.g. posters) with SFCs regarding by-laws and management plans, and distribute in Pemba at landing sites across the Mkoani District, to enforcement authorities, fish traders, MCU rangers, community meetings. Also raise awareness across Zanzibar through radio programmes.		-A poster representing the SFCs and map of Makoongwe and the nearby communities of Stahabu, Shidi and Michenzani has been created to be displayed in the communities' notice board;  -The complementary USAID funded programme has allowed printing of CMG explanatory posters and leaflets and these will be distributed at the main town centres in PECCA as well as at Misali Island.
Activity 4.2. Initiate regular joint meetings between SFCs and community members to enable community members to hold SFCs to account, in accordance with MCU legislation and SFC Standard Operating Procedures. Ensure meetings are held separately for men and women to maximise women's participation.		-The SFCs in the supported communities once they have completed their series of trainings, meet regularly, usually at least once. Community meetings called by the SFC are less frequent and sometimes require encouragement. The project continues to keep records of such meetings and attendance
Activity 4.3. Establish a rolling community credit fund with at least two project communities, available to each community member upon compliance with SFC-led marine resource management plans. Based on IUCN's Community Environment Conservation Fund, seed funding will be provided by the project, and compliance will be checked by an appointed official (possibly from local government). Access to the funds will be through public meetings, and credit loan periods will be a few months long.		-The pilot community credit scheme launched, named MKUBA, was officially started in July 2018The total amount of loans that has been given out to the members is TSh 41 Million (\$17,943) with an outstanding balance of TSh 6.3 Million (\$2,757). Late payments have been more of an issue with 46% of total percentage of late repayment these have been largely on the first loan cycle,  -Action has been taken to improve the repayment rate with the development of a stronger overall institutional structure. The first Members Assembly (to be held annually) was held in November and this agreed formation of the MKUBA Management Committee (MMC). This fulfilled a one of the main recommendations of the formal MKUBA review carried out by GreenFi in April 2019. The assembly also agreed to the formation of new MKUBA groups and the holding of business training.  -Subsequently the MKUBA Management Committee (MMC) was established in February 2020 and involves 12 members (10 men & 2 women)  -In terms of the environmental commitments community patrols of the fishing closures have reduced the burden on the SFC. In July and August 2019 alone, a total of 327 hours of additional community patrol was recorded. 20,000 mangrove propagules have been reported to have been planted on communal planting days. Improvements of the mangrove planting and patrol reporting score cards are underway. Overall the groups report an improved understanding, management & conservation of marine resources, increased people participating in patrol, reducing illegal activities in natural resources management, restoration of mangrove ecosystem due to mangrove planting, increase social cohesion and interactions.

<p>Activity 4.4. Explore additional incentives, such as gear exchange, to ensure fishers' compliance with resource management measures (especially gear restrictions).</p>	<p>Mwambao have added value to the Darwin project by engaging with CORDIO in a complementary project to look at gear modifications within project villages. This complements a similar programme in Kenya. Th</p>
<p><b>Output 5. Conservation and social outcomes of the project are evaluated and findings shared with target audiences (communities, government, conservation community).</b></p>	<p>5.1 Information sharing meetings hosted by DFD on implementing effective marine resource co-management in Pemba in 2019 and 2021.</p> <p>5.2 Uptake of SFC training materials and standard operating procedures by MCU and associated DFD initiatives (SWIOFish) based on success of project interventions by 2020.</p> <p>5.3 Project case study documents downloaded from partner websites 200 times by the end of 2021.</p> <p>-Participatory data analysis hosted by DFD-Pemba (Kukuu and Makoongwe SFC presented their monitoring results in December 2019), followed by a project steering committee meeting which focused on updating the DFD in Wete on project progress.</p> <p>-The SFC SOPs developed by the project team, and the by-laws development process has been informally reviewed and adopted by the DFD. There has been good coordination with SWIOFish</p> <p>-A case study will be produced about the design and piloting of the Mkuba model.</p>
<p>Activity 5.1. Design surveys of fisher behaviour (including catch of vulnerable species), household wellbeing, and marine resource governance effectiveness, and conduct them with representatives of each of the six communities when first engaging with them (to set a baseline), and then in years 2 and 4 to assess project impacts. The surveys will utilise a variety of methods, including participatory techniques and a Participatory Impact Assessment (PIA) in Year 4.</p>	<p>-Surveys of fisher behaviour have been conducted in Y2Q4 (Makoongwe, Shidi, Michenzani, Stahabu) as part of a household survey. This will be repeated before EOP and will yield useful insights into the successes of the project.</p> <p>-PIAs have been undertaken in with Kukuu and KP in Y3Q1 in the form of semi directive interviews (focus groups and individual random interviews) to assess the changes perceived.</p>
<p>Activity 5.2. Conduct governance monitoring at all three levels of governance (SFC, collaborative and MCU) with each governance body, using organisational capacity assessments (adapted from the tool provided on Capacity for Conservation), to establish effectiveness of governance training and support, and identify further training and mentoring needs. This will be analysed in conjunction with participatory governance data collected under 5.1.</p>	<p>We have only started reviewing Kukuu SFC governance against several indicators (as well as including perception questions in the PIA surveys for Kukuu); KP facing again governance challenges isn't ready for such a monitoring and the other SFC have been active only since too recently.</p> <p>We are planning doing new SFC monitoring by end of Y3.</p>
<p>Activity 5.3. Conduct participatory data analysis with community monitors and the SFCs of data collected through local monitoring plans (e.g. fish catch, coral reef damage, change in gear use) and use findings to inform management planning.</p>	<p>Participatory data analysis has been conducted with Kukuu and Kisiwa Panza SFCs on octopus catch data at the end of 2019 and we will repeat this at the end of 2020. Mwambao also plans a review of catch monitoring during 2020 to inform such programmes going forward.</p>
<p>Activity 5.4. Analyse and assess changes in governance, wellbeing, and reef ecosystem health in response to management interventions.</p>	<p>The changes in communities around these topics will be analysed from Y3 against the baselines and PIA surveys led in the communities whose support started in Y1 and Y2</p>

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

### Changes in the logframe agreed during Year 3

- In two outcome indicators
  - o Indicator 0.1: mean of verification changed from “quarterly in-water surveys with communities” to “annual surveys”.
  - o Indicator 0.3: was initially “50% increase in the individual size of reef fish caught from selected key families and a three-fold increase in average individual weight of octopus caught in reef closure sites by 2021, as compared to the baseline number at each site.”
- In one output indicator
  - o Indicator 4.3: was initially “Credit scheme is accessed by c.270 men and 270 women across all 6 communities by 2021 (1 community in y1, 3 in y2, 4 in y3 and 6 in y4).”

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Impact:</b></p> <p>PECCA’s healthy and diverse marine ecosystem is managed effectively by empowered local communities and DFD-Pemba, increasing populations of vulnerable species, locally important marine resources, and peoples’ wellbeing.</p>			
<p><b>Outcome:</b></p> <p>Six communities and DFD-Pemba manage marine resources sustainably in key sites, stabilising reef health and function across 10,500ha of PECCA, leading to improved wellbeing for c.10,000 fisher men and women.</p>	<p>1.1 No significant incidents of coral damage (greater than an area of 1 m squared) caused by human activity in any reef sites protected by community by-laws, against baselines by 2021.</p> <p>1.2 60% average reduction in number of boats observed using damaging or illegal fishing gears (e.g. drag nets, small mesh nets and traps, spear fishing with SCUBA) in sites patrolled by communities by 2021, as compared to the baseline at each site.</p> <p>1.3 50% increase in the individual weight of reef fish caught from selected key</p>	<p>1.1 Snorkel survey assessments of reef sites before protection, and annually afterwards, to record and photograph coral damage.</p> <p>1.2 Patrol record books of SFCs and Collaborative Management Group patrols of fishing grounds; observations by fishers are reported to and recorded by SFCs.</p> <p>1.3 Community monitors measure the individual weight of fish from selected families and individual</p>	<p>Community and government stakeholders are willing to participate in collaborative co-management of PECCA.</p> <p>Climate change does not result in a significant increase in demand for marine resources if droughts are more severe, or lead to significant coral bleaching, which will degrade the shallow reef habitat.</p> <p>The political landscape provides a stable environment in which to work over the project period.</p>

	<p>families in reef closure sites by 2021, as compared to the baseline number at each site, and a two-fold increase in average individual weight of octopus caught in the days immediately following a reef closure, as compared to the average weight of octopus caught with no management intervention, by end of project.</p> <p>1.4 50% increase in the number of fish over 30 cm total length observed from selected key families in reef closure sites, against baselines set for each community by 2021.</p> <p>1.5 60% of women and 60% of men surveyed in the six communities report an improved sense of overall wellbeing as a result of project activities by 2021 (including targets for: reduction in numbers of meals skipped, participation in decision-making, income as a result of either or both improved catch and access to credit – see section 14).</p> <p>1.6 70% of women, 70% of men, and 70% of SFCs/DFD-Pemba representatives surveyed perceive an improvement in SFC and DFD-Pemba's management effectiveness by 2021 as compared to the baseline.</p>	<p>octopus weight caught from temporary reef closure sites.</p> <p>1.4 Underwater Visual Census transects counting the number of individuals over 30cm in these fish families before, and once a year after, management is implemented.</p> <p>1.5 Household-level surveys and group discussions conducted across all 6 communities ensuring a representative sample of different types of fishers, including 50% women before management interventions, and in 2019 and 2021.</p> <p>0.6a Participatory governance assessments conducted with members of each participating community during household-level surveys and focus groups.</p> <p>0.6b Organisational capacity assessments conducted with each SFC and DFD-Pemba.</p>	<p>Population growth and immigration do not increase beyond predicted estimates.</p>
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<p><b>Outputs:</b></p> <p>2 Six SFCs have the skills, knowledge and confidence to implement sustainable marine resources management measures in local fishing grounds.</p>	<p>1.1 SFCs are functioning and represent a cross-sector of society, including an average composition across all SFCs of 30% women, in three communities by y1, four communities by y2, 5 communities by y3, and 6 communities by y4.</p> <p>1.2 Six SFCs have implemented sustainable marine resource management plans to address locally defined conservation priorities (e.g. temporary or permanent closures, gear restrictions), against a baseline of 2, by 2021.</p> <p>1.3 12 community monitors trained and implementing fisheries catch data collection; 12 community monitors trained and implementing coral reef monitoring; six patrol teams trained and implementing patrols by 2021.</p> <p>1.4 60% average reduction in the number of breaches of SFC by-laws across all six communities as compared to the first year of by-law implementation in each community by 2021.</p>	<p>1.1 SFC meeting minutes; election records.</p> <p>1.2 Management plans; by-laws; patrol records.</p> <p>1.3 Training records; monitoring data collection records; patrol data records; post-training surveys.</p> <p>1.4 Patrol records; surveys of community perception of change in the frequency of breaches</p>	<p>Communities wish to engage in local marine resource management. Our pilot study and awareness-raising activities reveal that the majority of local people in the area are supportive of conservation measures.</p> <p>Community-led management is effective in achieving our outcome (based on initial successes during the pilot).</p> <p>The number of fishers from outside PECCA does not significantly increase, and thus limit the effectiveness of community-led conservation.</p> <p>Local community politics do not interfere with agreed management strategies; i.e. kinship, party allegiances</p>
<p>A Collaborative Management Group is formed between the six target SFCs to determine and address seascape management issues.</p>	<p>2.1 There is a functioning Collaborative Management Group of 12 members between the six target fishing communities by 2020, supported by DFD-Pemba.</p>	<p>2.1 Standard Operating Procedures; meeting records, confirming DFD-Pemba presence.</p>	<p>Communities are willing to collaborate in the management of their shared resources. Initial awareness raising</p>



	<p>2.2 A joint management plan is established between six SFCs and the Collaborative Management Group to address threats to priority habitats and species of conservation and livelihoods importance by 2021.</p> <p>2.3 Briefing paper for possible interventions to reduce megafaunal mortality is produced, shared and discussed with project partners by 2021.</p>	<p>2.2 Management plan.</p> <p>2.3 Briefing paper; project steering group notes.</p>	<p>activities suggest that there is appetite for this.</p> <p>Neighbouring communities based elsewhere in Pemba who fish within the area are willing to recognise established collaborative management measures.</p> <p>There are no significant social or political conflicts that hamper any attempt at collaborative management.</p>
<p>training and capacity building provided to DFD-Pemba to effectively support marine resources co-management in the long term.</p>	<p>3.1 5 key DFD-Pemba staff attend institutional governance training (according to needs assessment), and SFC capacity building training by 2019.</p> <p>3.2 A 3-5 year strategic plan for PECCA is established by the Management Committee and reviewed by the DFD by 2020.</p> <p>3.3 The PECCA Advisory and Management Committees are functioning by 2018.</p>	<p>3.1 Training attendance records; surveys before and after training demonstrating a change in knowledge in institutional governance and SFC capacity building.</p> <p>3.2 Strategic plan; DFD meeting minutes.</p> <p>3.3 Meeting minutes, demonstrating evidence of collaboration and harmonisation of plans across PECCA.</p>	<p>The MCU and the Department of Fisheries remain supportive of engaging in activities to improve their effectiveness. As they are formal project partners, we do not foresee that this will be a problem.</p> <p>Zanzibar's government continues to support the PECCA initiative.</p>
<p>sufficient knowledge and incentives provided for both male and female fishers from the six target communities to participate in new marine resources co-management measures.</p>	<p>4.1 A minimum of 10 radio announcements on local stations relating to at least 10 incidents (e.g. new SFC by-laws; enforcement of by-laws; events) by the end of 2021, against a baseline of three.</p>	<p>4.1 Records of dates and times of radio broadcasts, and announcement transcripts, verified by radio stations.</p>	<p>Activities under an existing grant improve economic incentives for locally led marine resource management, through positive engagement of the tourism and seafood sectors.</p>

	<p>4.2 50% increase in the number of women and number of men attending regular meetings with SFCs by 2021 against the baseline set with each community at the start of the project's engagement with them.</p> <p>4.3 Credit scheme is accessed by c.110 men and 110 women in one pilot community by 2021.</p>	<p>4.2 SFC meeting records</p> <p>4.3 Credit scheme records; interviews with a sample of beneficiaries to verify records.</p>	<p>Community members are able to attend regular meetings, and willing to engage in credit schemes. Our pilot project suggests that we need to enable women to attend meetings in particular.</p> <p>Accountability and transparency mechanisms are upheld for the community credit scheme.</p>
<p>5. Conservation and social outcomes of the project are evaluated and findings shared with target audiences (communities, government, conservation community).</p>	<p>5.1 Information sharing meetings hosted by DFD on implementing effective marine resource co-management in Pemba in 2019 and 2021.</p> <p>5.2 Uptake of SFC training materials and standard operating procedures by MCU and associated DFD initiatives (SWIOFish) based on success of project interventions by 2020.</p> <p>5.3 Project case study documents downloaded from partner websites 200 times by the end of 2021.</p>	<p>5.1 Meeting minutes; presentation slides.</p> <p>5.2 SFC training manual and letter of support from SWIOFish project coordinator.</p> <p>5.3 Google analytics for partner websites.</p>	<p>Our data are able to detect a beneficial impact of the project.</p> <p>The government and project partners remain committed to sharing knowledge and learning.</p>

## Annex 3: Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 + 4 Total	Total to date	Total planned during the project
6A	No. of participants to the training: SFC Standard Operating Procedures trainings	85 M 22 F	Tanzanian	12	61	34	107	50
6A	No. of participants to the training: Management planning trainings/workshops	20 M 5 F	Tanzanian	12	13	0	25	50
6A	No. of participants to the training: PECCA (DFD) governance and co-management vision workshop	21 M 4 F	Tanzanian	0	25 incl. 5 key DFD staff	0	25 incl.5 key DFD staff	5 key DFD staff
6A	No. of participants to the training: PECCA (FEC) governance and co-management vision workshop	34 M 4 F	Tanzanian	0	38 incl. 5 key DFD staff	0	38 incl.5 key DFD staff	5 key DFD staff
6B	No. of training weeks provided: SFC Standard Operating Procedures training			1	2	3	6	5
6B	No. of training weeks provided: SFC Management planning training/workshop			1	1	0	2	5
6B	No. of training weeks provided: PECCA (DFD) governance and co-management vision workshop			0	1	0	1	1
6B	No. of training weeks provided: PECCA (FEC) governance and co-management vision workshop			0	1	0	1	1
7	No. of different training materials produced for use by host country: SFC Standard Operating Procedures			1	0	0	1	1
7	No. of different training materials produced for use by host country: SFC by-laws standard approval process			0	1	0	1	1

9	SFCs by-laws (BL) and management plans (MP)			2 (1 BL and 1 MP)	1 (BL)	4 (BL)	7 (6 BL and 1 MP)	6 BL and 6 MP
9	Collaborative Management Group (CMG) gathering neighbouring SFCs management plan			0	0	0	0	1
12A	SFCs Octopus catch data database			2	1	0	3	6
12A	SFCs Reef fish catch data database			0	2	0	2	6
12A	Pemba Sharks and Rays landings database (5 landing sites)			0	1	0	1	1
17	Active SFCs elected in supported communities	57 M 16 F	Tanzanian	2	4 (KP SFC on hold)	1 (new SFC in Makoongwe)	6	6
17	Active CMG gathering supported communities	14 M 2 F	Tanzanian	0	0	1	1	1
23	CML Family foundation							
23	Arcadia foundation							
23	F3-Life (partner of GreenFi), additional seed funding for MKUBA pilot							

• **Table 2 Publications**

<b>Title</b>	<b>Type</b> (e.g. journals, manual, CDs)	<b>Detail</b> (authors, year)	<b>Gender of Lead Author</b>	<b>Nationality of Lead Author</b>	<b>Publishers</b> (name, city)	<b>Available from</b> (e.g. weblink or publisher if not available online)
Participatory Octopus Market System Development strengthens community management of marine resources on Pemba Island, Zanzibar, Tanzania	Journal news update	Kiran Mohanan and Tanguy Nicolas (FFI) Lorna Slade (Mwambao)	M	Indian	Oryx, The International Journal of Conservation Cambridge	<a href="https://www.cambridge.org/core/journals/oryx/article/participatory-octopus-market-system-development-strengthens-community-management-of-marine-resources-on-pemba-island-zanzibar-tanzania/5A28F6E00700F7801BCD71680A472F3E/core-reader">https://www.cambridge.org/core/journals/oryx/article/participatory-octopus-market-system-development-strengthens-community-management-of-marine-resources-on-pemba-island-zanzibar-tanzania/5A28F6E00700F7801BCD71680A472F3E/core-reader</a>

## Annex 4 Onwards – List supplementary annexes

### - Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@itsi.co.uk">Darwin-Projects@itsi.co.uk</a> putting the project number in the Subject line.	Yes
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@itsi.co.uk">Darwin-Projects@itsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	No
<b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes Annexes are in a distinct zip archive available for download
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	