

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: 30th April 2020

Darwin Project Information

Project reference	25-024
Project title	Securing marine biodiversity and fishers’ income through sustainable fisheries, Mozambique
Country/ies	Mozambique
Lead organisation	Zoological Society of London - ZSL
Partner institution(s)	Associação do Meio Ambiente (Ama), Coastal Oceans Research and Development in the Indian Ocean (CORDIO), Universidade Nova de Lisboa, Faculdade de Ciências Sociais e Humanas (NOVA FCSH), Universidade Lúrio (UniLúrio), University of Aveiro, Department of Biology & CESAM (Centro de Estudos do Ambiente e do Mar), Wildlife Conservation Society
Darwin grant value	£349,975
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Reporting period (e.g. Apr 2019 – Mar 2020) and number (e.g. Annual Report 1, 2, 3)	Annual report 2 April 2019 – March 2020
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Project website/blog/social media	Webpage: https://www.zsl.org/conservation/regions/africa/our-sea-our-life Facebook: @ZSLMarineAndFreshwaterConservation Twitter: @OurSeaOurLife
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1. Project summary

Northern coastal Mozambique has the highest levels of marine biodiversity in East Africa, with fewer anthropogenic impacts and evidence of resilience to coral bleaching (Obura 2012). Human communities here are among the poorest in Mozambique and highly dependent on marine resources (Rosendo et al. 2011). Since 2013, Our Sea Our Life (OSOL) has identified key problems through biological and socioeconomic research, finding several marine species populations are depleted due to unsustainable fishing practices in the Cabo Delgado Province (e.g. IUCN Red List species *Epinephelus multicoloratus*, *Cheilinus undulatus* and *Triaenodon*

obesus), thus affecting the resilience of coral reefs and mangrove overexploitation. The exploitation of natural gas in the north of Cabo Delgado is driving socioeconomic change, with a 175% population increase projected for the city of Pemba (2017 to 2040). This will increase pressure on marine resources, driving food insecurity and poverty for coastal communities.

National Fishing Regulations (N° 43/1003) authorise Community Fisheries Councils (Concelhos Comunitarios de Pesca/CCPs) to manage fisheries but there is no enforcement due to non-existent sustainable financial support. Darwin project 20-023 (2013 – 2017) successfully piloted Locally Managed Marine Areas (LMMAs) and established CCPs in two villages (Nsangue Ponta and Lalane) in Cabo Delgado Province, doubling the number of LMMAs in Mozambique, and informing replication in four villages. However, gender equity proved challenging, with women feeling marginalised by LMMAs impacting their primary fishing methods (illegal mosquito nets), and only having 24% representation in CCPs. While Village Savings and Loan Associations (VSLAs) improved wellbeing and poverty indicators in >153 households, many VSLA members are yet to take loans due to a lack of investment opportunities.

This project will implement a scalable and sustainably-financed LMMA model addressing the advanced participation of women in sustainable fishing practices in two demonstration sites in the south of the Cabo Delgado Province to improve the resilience of coral reefs against increasing pressure on marine resources and to secure food and reduce poverty for coastal communities.

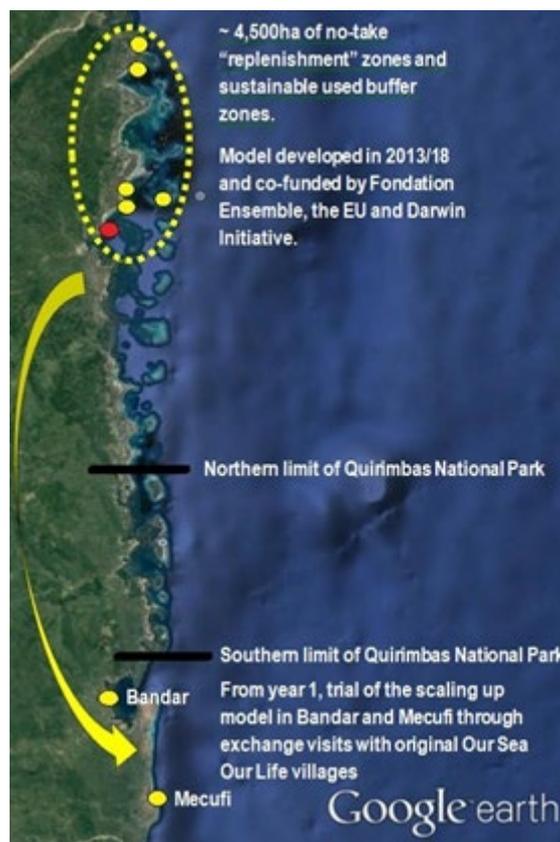


Figure 1: Location of the eight original Our Sea Our Life villages (red dot indicates a co-management plan implemented over the jurisdictional area of three separate villages) and two demonstration project sites, Bandar and Mecufi (respectively 30km and 65km from Pemba).

2. Project partnerships

OSOL's strong collaborative approach involves seven organisations (ZSL, Ama, CORDIO, NOVA FCSH, UniLúrio, University of Aveiro, WCS) with a history of working together through challenging logistical contexts. The project has strong technical and practical knowledge, including experiences gained from other Darwin projects (e.g. Darwin grant 20-023). OSOL's effective coordination by ZSL is contingent on clear definition of roles and responsibilities for the partners, reinforced by signed agreements that define the terms of the collaborations (budget, activities and expected outputs). ZSL centralises the narrative and financial reports submitted by the partners after a mission or a specific task (monthly basis for Ama, quarterly basis for the other partners). Regular communication is maintained between ZSL and project partners through emails, WhatsApp messages and online meetings, and also directly in Mozambique when partners physically meet during field activities. ZSL team members visited Mozambique three times in Yr2, NOVA FCSH team members once, CORDIO team twice and University of Aveiro twice. Ama and UniLúrio are based in Pemba, with WCS being based in Maputo. All of the field activities described in 3.1 below were undertaken in collaboration with DPMAIP (provincial fisheries authorities), SDAE (district fisheries authorities), administrators of both districts and community leaders. Community leaders are engaged throughout the project in its objectives and activities, and technical staff from DPMAIP or SDAE participate in activities in the field with the project team.

3. Project progress

3.1 Progress in carrying out project Activities

Output 1: Two multi-use zonation LMMAs (Bandar, Mecufi) based on equitable governance

1.1. Project presentation and consultation meetings towards generation of Free Prior Informed Consent (FPIC) from local communities and local government authorities.

See ZSL Yr1 annual report to Darwin Initiative.

1.2. Conduct community profiling using existing Rapid Rural Appraisal (RRA) tools.

See our Yr1 annual report to Darwin Initiative and our report about the rapid rural appraisal in Annex 1.

1.3. VSLA Formation in each LMMA sites with environmental funds

Since April 2019, we provided support to the creation of 10 savings groups (224 members), in Bandar and Mecufi focal areas, which by 31st March 2020 had saved a total amount of \$US7.500, of which 25% have been taken as loans. This money is being invested mainly in small-scale businesses (small shops), fish trade, fishing gears, household improvements (roof, door, windows, mattresses) and farming (see Annex 2). See 4.3 below regarding our work on creating environmental funds.

1.4.1. Participatory mapping and assessment of resource, habitat and fisheries

The project has been working with two Community Fisheries Councils (CCPs) in Bandar and Mecufi. The rapid rural appraisal we did in Yr1 (Annex 1) mapped the fishing grounds, the marine habitats, the species important for fisheries and fishing gears for each social group (see picture 3 in Annex 3). In Yr2, we assessed the resource trends of key fisheries species in the last 20 years and the associated threats to these resources through community consultations (see pictures 1 and 2 in Annex 3).

1.4.2. Exchange/learning visits of community leaders/champions to existing LMMA sites

This has not yet happened but in Y3 we intend to create an exchange visit of community mangrove nursery groups between Bandar and Mecufi (see 1.5.2) for Bandar's new community nursery group learn from Mecufi's experience in Yr3.

1.4.3. Community consultation using existing decision-making process for LMMA zonation design

After 1.4.1, in support of the CCPs members, we carried on community consultations in Bandar and Mecufi focal areas to develop management objectives including local leaders and influential community members (see pictures 4, 5, 6 and 7 in Annex 3). Objectives range from ecological (i.e. rebuilding fish stocks, protecting key habitats and spawning aggregation sites), to socioeconomic (i.e. improving catches) and governance (i.e. reducing illegal fishing gear). We then identified and agreed on management measures that can be put in place to achieve the objectives established, such as temporary-closed reserves or permanent reserves. We considered the opportunity costs for each social group and for neighbouring communities. One example are women, who are relatively vulnerable to co-management measures as their main fishing gear (mosquito nets) is prohibited by law. Enforcing the law in this case would therefore require developing compensatory approaches such as Integrated Territorial User Rights in Fisheries associated to bivalve farming (see 2.1 below). After these consultations, the participants decided on potential sites for the LMMA zonation before assessing the ecological suitability, the demarcation of the LMMA zonation, and validating the co-management plan.

1.4.4. Participatory physical mapping of the LMMA Zonation

In Bandar, a temporary-closed reserve of about 800ha containing mangrove habitat was agreed, to enhance the population of shrimps and crabs, and maximise the fishers' profits when the reserve opens. An even larger, permanent reserve covering rocky and coral reef habitats was agreed. In Mecufi, a temporary-closed reserve of about 180ha was agreed, to enhance the population of *Lethrinus variegatus* (emperor fish) and *Siganus sutor* (rabbitfish) and maximise the fishers' profits when the reserve opens. However, the last step of the process is to verify the proposed reserve sites' ecological suitability in-situ, together with the CCP members. This activity was planned for March 2020, however, it has been delayed due to the start of the coronavirus pandemic.

1.5.1. GIS mapping of mangrove areas and assess mangrove community structure, including identifying target areas for replanting

The mangrove community structure was assessed in Bandar with CCP and VSLA members, and identified the following species: *Rhizophora mucronata*; *Avicennia marina*; *Ceriops tagal*, *Sonneratia alba*; *Bruguiera gymnorrhiza* e *Xillocarpus garnatum*. Their uses here include for medicinal reasons, for firewood, to build boats and beds. Community members are also aware that mangrove mitigates coastal erosion and provides shelter for marine life to feed and breed. A lack of local income sources forces youth to resort to cutting mangrove to sell (1US\$ per mangrove pole) which although illegal in Mozambique, the law is not properly enforced. Bandar requires a mangrove nursery group (see 1.5.2) to replant the degraded mangrove areas. Mecufi already has one and was involved in the replanting described in 1.5.3. The GPS mapping of mangrove degraded areas is still to be achieved (planned for Yr3) in Bandar and Mecufi, to fix targets of mangrove plantation in the LMMA co-management plans.

1.5.2. Train communities in mangrove nursery establishment and monitor and support nurseries

Mangrove users (crustacean gleaners, people selling wood for construction/firewood and shrimp fishers) were approached in Bandar (see picture 7b in Annex 3) and gathered to discuss mangrove sustainability. The group agreed that their activity was detrimental to the mangrove and their own activity, if not managed properly, and agreed in forming a community nursery group of 20 members in order to rehabilitate the degraded mangrove areas.

1.5.3. Conduct replanting

The community mangrove nursery group of Mecufi mobilized the community members to replant a degraded area of mangrove in June 2019, during celebrations for World Oceans Day. Approximately 3,000 plants were planted over 3ha, with an 85% survival rate (see pictures 8, 9, 10 and 11). This event will be repeated in Yr3 once the target area for mangrove planting is established during GPS mapping activity (see 1.5.1).

1.6.1. CCP strengthening and integration of women and VSLA members

Early in Yr2, we conducted a CCP diagnostic in Bandar and Mecufi focal area (see Annex 4 and Figure 2 below) to assess how CCPs here perform in terms of financial management,

operations and governance. As a result, we were able to establish needs to strengthen and improve CCPs' performance. We also delivered training to define and clarify roles and responsibilities of the CCP members (see Annex 17). A work plan was established to build the two CCP offices (see pictures 12, 13, 14 and 15 in Annex 3) detailing actions and materials needed (either by the community members or the project) against a timeframe.

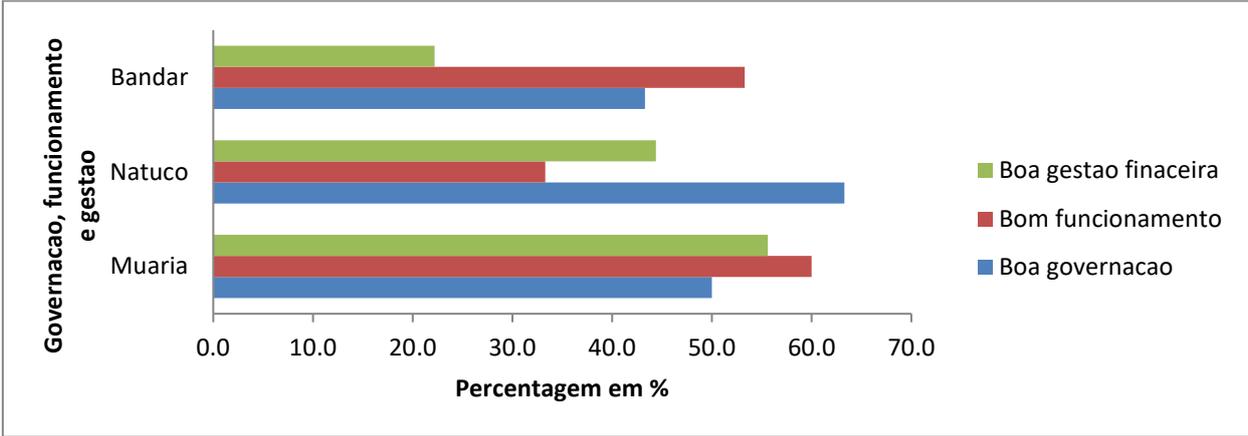


Figure 2: Score of CCPs in Mecufi focal area (Muaria, Natuco) and Bandar in terms of financial, functioning and governance performance.

Early in 2020, DPMAIP conducted a training of the CCP members in Bandar and Mecufi about the roles and responsibilities of each CCP member focusing on enforcement activities (Annex 11 and pictures 15b, 15c, 15d, 15e and 15f in Annex 3).

1.6.2. Development of LMMA co-management plan

The ecological suitability of the selected marine areas to become reserves is due to be confirmed by the project's marine biologists (after the COVID-19 pandemic), the information gathered during the community consultation process (including information under 1.6.4) will be discussed and validated before the LMMA co-management plans are written out with community members.

1.6.3. LMMA zoning and demarcation

CCP members received training in bamboo buoy system preparation for LMMA demarcation (bamboo buoys were found to be resistant to marine environment and cheap to replace in case of theft or loss, see pictures 16, 17, 18 and 19 in Annex 3).

1.6.4. LMMA regulation and enforcement plan drafting and approval by local authorities

On 12th August 2019, we attended a Co-management Committee in Metuge District, gathering all CCPs of the district and fisheries local authorities (SDAE for district level, DPMAIP for provincial level) to address the communication requirements between the CCPs and SDAE and DPMAIP, specifically regarding fishing licensing and LMMA enforcement operations (see picture 20 in Annex 3). The communities were then consulted on the rules, regulations and fines (see Table 1 below) associated to the reserves (see pictures 21 and 22 in Annex 3). Roles and responsibilities of the community leaders were appointed in the process of enforcement of the LMMAs (CCP, religious leaders, local court, professors) but also of the SDAE and the police force. The money originating from the fines will pay for social needs at community level (school, hospital, church, etc.).

	Fishing gears	Fine in MZN
1	Linha de mão	5,000.00
2	Rede de emalhar	7,500.00
3	Rede de arrasto	15,000.00
4	Arma submarina	2,500.00

5	Jarifa	10,000.00
6	Gaiola	3,500.00
7	Palangre	6,500.00
8	Chicocota ou Makuerere	25.000.00
9	Arpão	1,000.00
10	Rede mosquiteira	3,500.00
11	Recolecção	8000.00
12	Martelo	3.500.00

Table 1: List of prohibited fishing gears in the temporary-closed reserve and associated fines in Bandar

1.7.1 Design and establishment of marker buoys

See 1.6.3. The buoys will be set up when the process of development of the co-management plans is complete (see 1.6.2).

1.8.1. Conducting CCP's capacity need assessment

See 1.6.1. The CCP's capacity need assessment will be conducted again in Yr3.

1.12. Outreach campaign activities targeting VSLAs, CCP, women group and the broad community members conducted in each LMMA sites

See responses related to community consultations and community engagement from 1.4.1 to 1.5.3, related to focusing the project's approach on reminding the importance of protecting the natural habitats and managing sustainably the marine resources (see picture 25 in Annex 3). Also see 4.3.

We delivered trainings to savings groups that aimed to reduce mangrove cutting by incentivising the use of charcoal from sustainable wood sources and the use of clay ovens produced locally as alternatives (see pictures 23 and 24 in Annex 3).

1.13. Conduct underwater surveys fish underwater visual census and coral cover in Yr 1 (baseline)

We are conducting biological monitoring using three different approaches:

- CPUE (Catch Per Unit Effort) survey through community-based smartphone application
- Community-based LMMA underwater survey
- CPUE survey

CPUE survey through community-based smartphone application consists in training volunteers (CCP members and fishers, see pictures 26, 27 and 28 in Annex 3) to collect fish catch data. Each community decides a limited list of species they want to monitor permanently. Once the data (simplified list of questions to save inquirers' and fishers' time) are on the smartphone application, it goes to an online server where all information is compiled saving time on data analysis (conducted by UniLúrio). Thousands of data have been received since the beginning of the project and is analysed in Annex 5 (see Figure 3).

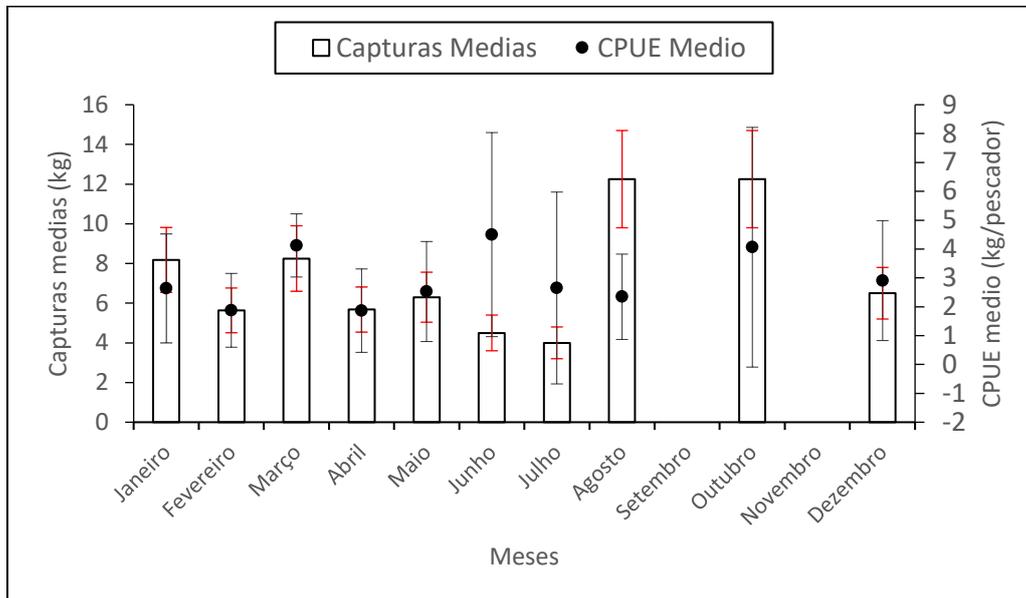


Figure 3. Averages of catches (Kg) and CPUE (Kg/fisher) in Bandar from March 2018 to March 2019 (baseline)

The community-based LMMA underwater survey is a simplified protocol that involves community members in the monitoring. Training was conducted by CORDIO (see picture 29 in Annex 3). This survey consists in collecting data informing on coral reef health, presence of algae, indicator species, damaged habitats etc. This survey will be conducted within the reserves as soon as these are validated by community members (see 1.6.2).

The CPUE survey differs from the community-based survey (above) in that it collects data for all species and involves a comprehensive list of questions (Annexes 15 and 16) to fishers to be as detailed as possible, which as a result requires scientifically trained staff (Ama staff have been trained by CORDIO). This CPUE survey (see pictures 30, 31 and 32 in Annex 3) involves limitations in timings (3 months in dry and rainy season) and will complement the ongoing community-based one. This CPUE survey is currently being undertaken.

Output 2: Women-led bivalve aquaculture

2.1. Community consultation for Integrated Territorial User Rights in Fisheries regulation

During the decision-making process (see 1.4.3 above and see pictures 33, 34 and 35 in Annex 3), it was established that women would particularly struggle to maintain their access to natural resources. As a result, in Mecufi, 15 female gleaners (related to five different savings groups) formed a bivalve aquaculture group. In Bandar, local authorities opted to allow the CCP (27 members, of which, 8 are women) to pilot bivalve aquaculture as a start before introducing this livelihood to the community members. These two groups (total of 42 members, with 55% of women) agreed to develop associated Territorial User Rights in Fisheries regulations and boundaries as they experiment bivalve aquaculture before scaling up the activity at community level.

2.2. Conduct training on Integrated Territorial User Rights (TURF)

This training will be conducted in Yr3 before scaling up the activity at community level.

2.3. Physical demarcation of TURF area.

There is no physical demarcation of TURF area yet. The areas being used in Bandar and Mecufi for piloting bivalve aquaculture were agreed with bivalve aquaculture groups with consent from the CCP and the community leaders. The physical demarcation will be conducted as soon as the LMMA co-management plan is validated by the communities (see 1.6.2 and 1.6.3).

2.4. Participatory design of sustainable fishing and bivalve aquaculture zonation

See 1.4.3 and 2.1.

2.5. Exchange/learning visits of community leaders/champions to existing aquaculture sites

We intend to organise an exchange visit between Bandar's and Mecufi's bivalve aquaculture groups in Yr3.

2.6. Conducting communities' female fishers capacity need assessment for bivalve farming

The recent household survey (Annex 6) shows that out of the 52 families involved in this study in Mecufi 80% (looking at the past 30 days) were feeding on moringa leaves when there was no food; 25% didn't cook from one to several days; 19% of them were so hungry that they had to ask their neighbours for food and 11.5% of the families had to work for food, all indicators of food insecurity. Women would be more vulnerable to the enforcement of co-management measures (see 2.1). The rapid rural appraisal (Annex 1) shows that women rely on illegal mosquito net fishing activity. Our study on existing market for bivalves and local consumption showed that bivalves are consumed locally and that the markets for trading bivalves are in Pemba, Montepuez and Chiuri (Annex 7). This study allowed to conclude that the production of bivalves could be trialled in Bandar and Mecufi.

2.7. Conducting first bivalve farming training workshop (Yr2) (for 50 female fishers in total- 25 in Bandar, 25 in Mecufi)

15 female fishers in Mecufi and 27 CCP members (of which eight are women) in Bandar were trained in bivalve farming (see Annex 7 and pictures 36, 37, 38 and 39 in Annex 3) for *Modiolus philippinarum* (mussel) and *Saccostrea cucullata* (oyster): seed collection, building bivalve racks, everyday maintenance for cleaning bivalves in bags. The University of Aveiro sampled the individuals for quantifying the levels of heavy metal (mercury) and nutrients (sugar, lipid, protein), see Annex 8. Mercury is below maximum authorised levels for consumption for oyster and mussels, fresh and dry. Mussels are almost as nutritive fresh or dry. Oysters are significantly losing nutrients during traditional drying processes. Microplastics were found in bivalves and are still to be characterized.

2.8. Conducting first bivalve farming training workshop (Yr2) (for 100 female fishers in total- 50 in Bandar, 50 in Mecufi)

We have not yet scaled up bivalve farming. In consultation with the CCP members and the community leaders, we are still in a process to define with the current two aquaculture groups which aquaculture areas are more productive in terms of recruitment and growth (avoiding predation) for bivalves *Modiolus philippinarum* and *Saccostrea cucullata*.

2.9. Conducting second training workshop (Yr2) including evaluation prior the training

Prior to the second training, there was more sampling in order to determine the best preservation methods (in salty water and dried, dried salted bivalves, dried, smoked, smoked with oil layer) that would maximise nutrient levels of bivalves and also to monitor the levels of biological contamination such as of *E. coli* and salmonella (pictures 40, 41, 42 and 43 in Annex 3). The second training will be conducted in Yr3.

Output 3: Equitable governance

3.1. Focus group discussions and key informant interviews conducted to understand the differences in gender roles, activities, constraints, opportunities and perceived risks for people involved and affected by fisheries and marine resource management project implementation. Differences in gender roles and activities have been captured by the rapid rural appraisal (see sections 2.4, 3.4 and 4.3 in Annex 1) and also by the CCP diagnostic (see Annex 4). In addition, the constraints, opportunities and perceived risks were discussed through community consultations in focus groups (see 1.4.3).

3.2. Analysis undertaken of findings from the research internally and sessions run with different groups in the community to brainstorm specific adjustments or additions to the project plan and priorities to produce better outcomes for gender-based opportunities and constraints for involvement of women.

The CCP diagnostic (see 3.1) recommends that a special focus is given on gender representativity within CCPs so that gender equity is achieved in decision-making processes. The consultations as explained in 3.1 led, for instance, in trialing bivalve aquaculture for women, being more vulnerable to the enforcement of the co-management measures as they still depend on prohibited mosquito nets to access natural resources (see 2.1). Furthermore, of the 224 members who saved \$US7,500 across the 10 savings groups formed (see 1.3), 90% are women. Further consultations will need to be conducted in Yr3 at community level to monitor the benefits or constraints of the LMMA co-management measures on community members with a gender perspective for the project to keep producing project outcomes as inclusive as possible.

3.3. Conduct sessions with CCP on co-management plan, based on findings from research, if required hold separate feedback sessions to get higher levels of participation from females in the decision making process

CCP strengthening sessions will be conducted in Yr3 and will focus specifically on gender aspects in the decision-making process.

3.5. Conduct training on outreach with women in VSLAs and CCPs

See 1.3, 1.12.

3.6. Conduct training on VSLAs and Village Agent role

See 4.3.

3.7. Identify existing or develop indicators to measure gender participation across activities and integrate into existing survey tools and methods.

Wellbeing indicators disaggregated by gender were elaborated in the rapid rural appraisal (see sections 2.8, 3.8 and 4.7 in Annex 1) and are related to (i) livelihood, (ii) households and (iii) children at school. Indicators of gender participation will be developed with CCPs during capacity building activities in 3.3 in Yr3.

Output 4: Sustainable financing mechanisms

4.3. Conduct sessions with VSLAs on Environment Fund to plan contribution towards CCPs (Yr 2)

Meetings with savings groups were organised to deliver messaging and discuss the ocean and the marine environment, as an introduction to the concept of the Environment Funds (see pictures 44 and 45 in Annex 3 and Annex 9). We intend to link up the savings groups with sustaining the LMMA co-management plans through an Environment Fund. Savings groups have already shown interest in taking this step and we expect to have the Environment Funds established in Yr3. In addition, we trained four Village Agents (three women, one man) that are the focal points in Bandar and Mecufi (two from each community) to provide support to savings groups, on a volunteer basis, and mobilize community members to adhere to new savings groups. This training focused on the creation and functioning of savings groups and on the process to establish Environment Funds (Annexes 9 and 10).

3.2 Progress towards project Outputs

Output 1. Two multi-use zonation LMMAs (Bandar, Mecufi) based on equitable governance agreed and implemented with high social acceptance, advanced representation and participation of women, strong enforcement and effective management capacity of trained CCP members in collaboration with law enforcement agencies, resulting in compliance with LMMA regulations by fishers.

Instead of three sites (as mentioned in the Darwin Yr1 annual report), the community consultations (see activity 1.4.3) were undertaken in two sites (Bandar and Mecufi) as the third site was found to be too remote. The communities have selected temporary-closed reserves

and permanent reserves (no-take zones). On the condition that the latter has suitable ecological conditions (biological assessment has been postponed due to COVID-19 pandemic), both no-take zones will cover a total of approximately 1,000ha protecting coral reefs and marine species (exact area still to be confirmed by GPS). Both communities also agreed on creating temporary-closed reserves protecting mangrove habitat. 10 VSLAs (see activity 1.3), of which 90% of members are women (see activity 3.2), are active and outreach sessions are being delivered to establish environment funds (see activity 4.3). Village Agents have been trained to support the monitoring and formation of new VSLAs but also the establishment of environment funds (see activity 4.3). Both CCPs were strengthened with the building of a new office and trainings on roles and responsibilities and enforcement strategies in collaboration with DPMAIP and local authorities (see activity 1.6.1).

Output 2. Integrated Territorial User Rights in Fisheries zones integrated into LMMAs to incorporate sustainable fishing and women-led bivalve aquaculture initiatives in Bandar and Mecufi to incentivise enforcement of LMMA and replace illegal mosquito net fishing for vulnerable female groups.

During the decision-making process (see activities 1.4.3 and 2.1), it was established that women would particularly struggle to maintain their access to natural resources because they rely on illegal mosquito net fishing activity for their household's income. In activity 2.6, we concluded that the production of bivalves could be trialled in Bandar and Mecufi. As a result, in Mecufi, 15 female gleaners (belonging to five different savings groups) formed a bivalve aquaculture group. In Bandar, local authorities opted to allow the CCP (27 members of which eight are women) pilot bivalve aquaculture as a start before introducing this livelihood to the community members. These two groups (total of 42 members with 55% of women) agreed to develop associated Territorial User Rights in Fisheries regulations and boundaries as they experiment bivalve aquaculture before scaling up the activity at community level. They were both trained in setting bivalve racks and their maintenance (activity 2.7).

Output 3. Equitable governance and management of marine resources and sustainable bivalve aquaculture ensured through advanced representation and participation of women in CCPs and LMMA management.

Differences in gender roles and activities have been captured by the rapid rural appraisal (see sections 2.4, 3.4 and 4.3 in Annex 1) and also by the CCP diagnostic (see Annex 4) that recommends that a special focus is given on gender representation within CCPs, so that gender equity is achieved in decision-making processes (workshop with CCP members to be conducted in Yr3 and that will define specific indicators for advanced representation and participation of women). In addition, the constraints, opportunities and perceived risks were discussed through community consultations in focus groups (see 1.4.3). We therefore concluded in Output 2 that the production of bivalves could be trialled in Bandar and Mecufi to benefit specifically women, being more vulnerable to the enforcement of the co-management measures as they still depend on illegal mosquito nets to access natural resources (see 2.1). Furthermore, 90% of the 224 members who saved \$US7,500 across the existing 10 savings groups (see 1.3) are women. Further consultations will be conducted in Yr3 at community level to monitor the benefits or constraints of the LMMA co-management measures on community members with a gender perspective for the project to keep producing project outcomes as inclusive as possible.

Output 4. Sustainable financing mechanisms (business models, functional VSLAs, legalizing LMMAs contributing to improve access to national and international funds to sustain management costs) established for Bandar and Mecufi LMMAs fostering multi-use zonation, sustainable bivalve aquaculture and gender equity [Note: output changed and approved by LTSI in change request during Y2]

Temporary-closed reserves have been selected by the community members, but their validation is conditioned by the assessment of their ecological suitability, an activity that has been postponed due to COVID-19 pandemic (see Output 1). In principle, temporary-closed reserves will close soon for a scheduled opening end of 2020. The octopus and fish will be sold

at a premium price. 10 VSLAs have saved \$US7,500 so far, and are being introduced the concept of Environment Fund which we aim to have established in Yr3 (see activity 4.3). Our work on LMMA legalization, the endorsement of the LMMA budget and secured funding will be undertaken in Yr3.

3.3 Progress towards the project Outcome

Outcome:

A scalable gender-inclusive, pro-poor, multi-zonation and sustainably financed LMMA model for Mozambique, recovers threatened fish populations and mangrove, improving food security for 400 households in two Cabo Delgado communities.

On the condition that the two LMMAs have suitable ecological conditions (biological assessment postponed due to COVID-19 pandemic), both no-take zones will cover a total of approximately 1,000ha protecting coral reefs and mangrove (exact areas still to be confirmed by GPS) and their marine life (see Output 1). We expect both LMMA co-management plans to be endorsed by local authorities in Yr3 as they have been engaged throughout the process. This will enable an effective enforcement of LMMA where each stakeholder (CCP, police force, SDAE, DPMAIP) has roles and responsibilities. Furthermore, a workshop with both CCPs will be organised in Yr3 to establish the indicators that will be used to measure the success of inclusivity (specifically for women) in LMMA co-management processes. The end-line socioeconomic survey will be undertaken in Yr3 to measure the impact of the project against food security and wellbeing indicators. Currently, 224 households are benefiting from financial services of savings groups. The CPUE survey baseline through community-based smartphone application was conducted and the analysis of ongoing data collection will be repeated to measure the impact of the project in Yr3.

As is the case elsewhere, the COVID-19 pandemic has impacted the project activities and we are unable to plan for we will be able to get back to the normal project implementation routine. As a result, we foresee that the project may suffer delays for implementing the Yr3 workplan. We will be in touch with Darwin Initiative throughout Yr3 to inform about the progress of the project and will adjust the project expected outputs and outcome accordingly, and in agreement with Darwin Initiative.

3.4 Monitoring of assumptions

All of the assumptions described in the logframe are unchanged. However, provided the natural disasters affecting Beira in March 2019 (cyclone Idai) and Cabo Delgado in April 2019 (cyclone Kenneth), we include the following assumption related to adverse weather conditions:

Outcome Assumption 7: Adverse weather conditions (floods, storms) are reduced in the project geographical areas and keep the six project sites accessible

Cyclone Idai, besides its exceptional intensity, was occurring in the expected tropical cyclone belt. However, cyclone Kenneth is exceptional for being the first one occurring in northern Mozambique located outside this belt. This assumption still holds true but these climate change-related events remind us how they can quickly, unexpectedly and suddenly affect an entire region in the long-run. As often happens, the communities we work with cope with the aftermath with much resilience and have quickly come back to daily routine a couple of months after main roads and village infrastructures suffered damage. They benefited from humanitarian support from organisations we were in touch with such as World Food Programme, International Organization for Migration and VAMOZ (spontaneous citizen initiative that succeeded in providing valuable support to Idai cyclone victims) that were acting in Cabo Delgado in response to cyclone Kenneth.

The global crisis related to the COVID-19 pandemic is not included in the project assumptions and we suggest to add it as it will surely affect the project timetable in Yr3. As mentioned in our above response in 3.3, we will be in touch with Darwin Initiative within Yr3 to inform about the progress of the project and we will adjust the project expected outputs and outcome accordingly and in agreement with Darwin Initiative.

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

The overall impact in our original application form is to achieve a gender-inclusive, pro-poor, multi-zonation and sustainably financed LMMA network that secures resilient coastal ecosystems, whilst fostering income-generating activities in growing coastal communities, enhancing food security and reducing poverty in northern Mozambique.

In the past 12 months we have progressed towards a positive impact on biodiversity by mapping and designing LMMA zonation in Bandar and Mecufi focal areas, that feature critical habitats such as mangroves and coral reefs, benefiting marine biodiversity. Advancements in mangrove community assessments in Bandar from Yr2 will contribute towards identification of areas for replanting (Output 1). There were also advances in the Open Data Kit (ODK) for smartphone data collection for CPUE in Yr2, with consistent results, and the CCPs involved demonstrating continuity and quality in their samplings. Capturing information on the predominant families (of species, eg. Lethrinidae) and fishing gear used (eg. beach seine) at different sites in order to incorporate into management decisions and to be used by the CCPs to monitor species with high ecosystem and commercial importance for the communities (see output 1.13). Outreach activities in Yr2 through CCPs and VSLAs for promoting the sustainable management of marine resources have facilitated community's advocacy for the project's objective 1- including sessions to incentivise the use of charcoal from sustainable wood sources and the use of clay ovens produced locally as alternatives to reduce mangrove cutting (see output 1.12). We have collected data to develop the current profile of the CCPs (see 1.6.1), by assessing the current functioning of the existing and legalised community-based organisations in charge of co-managing marine resources we are working with in Bandar, Mecufi focal sites, as a basis to improve their governance in terms of election modality of their representatives, their transparency and participatory approach. The CCP diagnostic activities in Yr2 have allowed us to develop workplans and design appropriate training.

The project has also progressed towards contributing to positive impact in human development and wellbeing (poverty alleviation) through supporting the creation of 10 saving groups in Bandar and Mecufi focal areas (see 1.3) that is providing financial services to improve the well-being of the saving groups' members, with savings currently being invested mostly in small-scale businesses (small shops); fish trade; fishing gear, household improvements and farming. From the rapid rural appraisal (RRA) in Yr1, we had mapped the existing horticulture initiatives in Bandar and Mecufi focal sites, which are important to link up to saving groups and support messaging to enhance such livelihoods (non-fishing practices which could have the potential to alleviate pressure on marine resources and contribute to food security) and maximise these with loan use (ensuring the loans respond to overcoming identified challenges such as transport, quality standard, production techniques). Similarly, we listed the existing livelihoods in the three communities such as farming, basketry, pottery, wood charcoal and salt production. For instance, promoting basketry (through the formation of VSLA groups) could strengthen the value chain for bivalve farming that need baskets to operate sustainably. In Yr2, we have undertaken bivalve farming training, following female fishers' capacity needs assessment, and have sampled preservation methods prior to conducting further training in Yr3 (see 2.8). These initiatives fill a gap in coastal efforts to address poverty and stand as a socioeconomic barrier against the current unrest in northern Cabo Delgado limiting disillusionment of people in coastal areas. We have continued the discussions on small-scale fisheries to understand the capacity of the fishing grounds the communities rely on. This information is essential for the following steps that will identify whether some species are overfished and how to address it. This is about managing marine resources with the perspective to alleviate poverty. It will help (i) gain increased recognition of LMMAs' positive impact nationally for their replication to new areas where they haven't previously been implemented and (ii) advocate LMMAs recognition under the Mozambican legislation.

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

In Yr2, the project has contributed to the SDG's (and Mozambican government's commitment to delivering these) as follows:

SDG 1 – Through the 10 VSLAs the project has supported so far, we are contributing to access to appropriate financial services to build resilience in coastal communities and contribute to ending poverty.

SDG 2- We have advanced with bivalve farming training in Yr2, and are contributing towards ending hunger by building resilience and working towards improving food security in target communities

SDG 5 – We have engaged female 23 fishers in bivalve aquaculture initiatives so far, while working towards ensuring representation in CCPs and access to fair and appropriate governance and financial services will ensure gender equity.

SDG 12 – Outreach activities in Yr2 have targeted messages for raising awareness of stakeholders of the importance of development activities that align with the preservation of biodiversity. LMMA co-management agreements will work towards ensuring sustainable management and efficient use of fish stocks.

SDG 13 and 14 –In Yr2 LMMA zonation has started our contribution to maintaining healthy coastal ecosystems (including reefs that have demonstrated resilience to coral bleaching), in order to strengthen resilience and build the adaptive capacity of communities in relation to climate-related hazards and natural disasters. Sustainable co-management and establishment of LMMAs will protect and sustain fish stocks and ensure the maintenance of coastal marine ecosystems.

Furthermore, Mozambique joined the global call-to-action movement launched by the UN and various bodies responsible for the sustainability of the oceans in the framework of the implementation of SDG14, establishing a permanent dialogue meeting, on biennial basis, designated the "GROWING BLUE" Conference. The aim of the conference was to promote consultation, alignment and knowledge sharing required to effectively fulfilling the commitments made within the framework of the implementation of SDG14.

The project was mentioned in the intervention of the EU Ambassador and presented during the parallel session on Technology, Innovation and Society. We delivered a presentation of OSOL's unique model of Locally-Managed Marine Areas enforced by the CCPs (audience included the Rector of the Eduardo Mondlane University and the representative of UNESCO in Mozambique) and the potential of replication for OSOL's model along the Mozambican coastline. OSOL received very positive feedback from the presentation at this conference, specifically from the Ministry of Fisheries who expressed admiration for OSOL and Ama's intervention, being the only civil society organization from Mozambique showcased at the event.

5. Project support to the Conventions, Treaties or Agreements

Mozambique has ratified the CBD and approved the Aichi Targets, underscoring the development and implementation of its National Strategy and Action Plan for Conservation of Biological Diversity (2015-35). This project supports Mozambique's commitments as follows:

CBD articles

7 – Monitoring populations of IUCN red list fish species and species of importance to local fisheries: we have continued to collect data of species captured (over 3,000 entries, see Annex X) in Yr2. This database (biological baseline) has been analysed and discussed.

8, 10, 11– The zonation of LMMAs as well as training in bivalve aquaculture have started in Yr2 and will work towards ensuring conservation and sustainable use of marine biodiversity and preservation of coastal ecosystems from Yr3.

17 – FPIC principles applied in Yr1 involving provincial, district and community levels. Surveys and monitoring activities have taken place in Yr2 (such as ODK baseline).

Aichi Targets

A1, A2 – In Yr2, awareness-raising activities have focused on the value of marine biodiversity and were incorporated into co-management plan discussions with CCPs

B6 – LMMAs have been identified in Yr2 and will contribute to the recovery of fish stocks and ensure their sustainable use.

B7 - Bivalve aquaculture initiatives have started in Yr2

C11 – LMMAs will contribute to the target of 10% of coastal/marine areas being effectively and equitably managed

C12 – Recovery of populations of IUCN red list species will be achieved in the waters under management in Yr3.

D14 – Coastal ecosystems (including reefs and mangrove) have been identified to be included in LMMAs in Yr2, ensuring that associated ecosystem services are maintained (including provision of fish stocks, and contribution to protection and resilience against natural disasters and climate change).

E18 – The traditional use of coastal resources by fishers will be maintained and will be incorporated into the co-management plans and co-management measures will ensure sustainability.

Furthermore, contact has been established with the CBD focal point for Mozambique, Evenilde Tamele (see email communications in Annex 18), with some unsuccessful attempts to meet (including invitation to a project event in Maputo in June 2019) in order to share OSOL activity information on how the project contributes to Mozambique's NBSAP 2015-35. Although not yet successful, we will maintain contact, and aim to coordinate an appropriate meeting time/date as soon as it is possible to do so.

6. Project support to poverty alleviation

The project is working to alleviate poverty, through the higher-level impact we intend to achieve as described here: 'A gender-inclusive, pro-poor, multi-zonation and sustainably financed LMMA network secures resilient coastal ecosystems whilst fostering income-generating activities in growing coastal communities, enhancing food security and reducing poverty in northern Mozambique'. The expected direct beneficiaries of this work are (as per the 2017 census) the ~500 fishers and ~18,500 inhabitants (indirect beneficiaries) in Bandar and Mecufi focal areas. The project has progressed in targeting some of the drivers of poverty in the area, towards increasing access to marine resources that have replenished fishing grounds (ecosystem services) through the LMMAs, which are based on inclusive decision-making and good governance, supported by access to essential financial services.

Marine species with different biological life cycles are considered for management measures with the communities, and are expected to respond positively with different time lapse to the management measures. For example, the population of octopus can recover relatively quickly (in a matter of months), whereas groupers require several years of efficient management measures. The project will also establish mechanisms that address the root causes of gender inequality in small-scale fisheries, so that women are empowered and benefit from equitable benefit sharing arrangements. The development of bivalve farming specifically will be an opportunity for women, as they mainly glean shells and fish in the intertidal area, and may help to reduce dependence on illegal mosquito net fishing. VSLAs that have started to be established and are key for poverty alleviation to (i) strengthen market linkages in remote communities, (ii) buffer regular inflation on food prices and (iii) improve material style of life indicators. Our latest VSLA report with data up to the end of Yr2, shows a total saving of around US\$7,500/507,000MZN by the groups and 129 loans taken out, with investments going towards small businesses, house improvements among others. The established VSLAs have provided a platform for outreach in Yr2 as planned, with sessions being delivered at the end of Yr2 on the Environment Fund concept. VSLAs are becoming a platform for us to advance the conservation constituency within the communities. In Yr3 we will progress with our work towards the improvement of locally specific indicators for food security and subjective and material well-being in the target communities, using the baseline information collected in Yr1 and 2.

Our improved understanding of the CCP structure and function in our project sites in Yr2, has enabled us to direct interventions that increase engagement and transparency and ensure that CCP activities account for impacts on wellbeing. So far, the project has trained 10 saving groups (in Bandar and Mecufi District, see output 1.3) that will provide financial services that can contribute to improving the well-being of the saving groups' members. The ten VSLAs already established in Yr2 provide a platform for replicating this model. The data from our RRA and household survey results from Yr2 (Annex 6), has provided us with an understanding of the communities we are working with in Bandar and Mecufi focal areas, to inform LMMA management options that will help us to tackle the threats to the local marine environment, to build local communities' resilience and reduce poverty. From the RRA, we've been able to map existing horticulture initiatives in Bandar and Mecufi focal areas, which are embedded both in different contexts (see 1.2). Existing horticulture practices and markets were assessed to understand how we could improve the livelihood outcomes. This understanding is important in order to link up the saving groups to this sustainable livelihood (non-fishing practice alleviating pressure on marine resources and contributing to food security) so that the purpose of loans taken responds to overcoming identified challenges (transport, quality standard, production techniques) in order to maximise profits. It is particularly relevant for the households that rely on fishing (for their subsistence and income) and need to compensate for the opportunity costs of the LMMAs.

The results from the household survey have shown that the majority of families in the focal areas depend more on own food production than on income to buy food (which can come from fishing activity), when compared to results from communities in phase 1 of the project, where fishing was the primary source of cash income, used primarily for purchase of food products such as rice, cooking oil and salt. The results also show that during more difficult times, families appear to have more alternatives to fishing for income (such as odd jobs for neighbours; salt production). These are encouraging results for the objectives of the project, as it suggests the opportunity costs of LMMAs in these communities could be relatively low and can present opportunities to maximise investment in livelihoods other than fishing and link these to VSLAs (such as bivalve aquaculture which we have started in Yr2, and horticulture). Furthermore, the data from the household survey in Mecufi shows that the participants are receptive of, and positive towards, the LMMAs to be established in their communities, which is linked to higher compliance of LMMA regulations once established, increasing their success/effectiveness potential and further helping the project to address the drivers of poverty.

7. Consideration of gender equality issues

This project aims to deliver a gender-integrated approach, ensuring equal access, participation and opportunities to both men and women throughout the project cycle.

The Output 1 aims to establish two multi-use zonation LMMAs based on equitable governance. VSLAs provide a key platform for increasing gender equitable governance, by the end of Yr2 10 VSLA groups were established, with almost 250 members in total (90% women), which we will use as platforms for replication in Yr3. Training of Village Agents has started in Yr2, which will help us build women's influence on biodiversity outcomes within social networks, and as communicators (leading awareness-raising) and entrepreneurs (bivalve farming). We ran focus group meetings with women in Bandar, Natuco and Metacane to capture women's view on existing livelihoods, well-being, food security and use of marine resources (fishing grounds, fishing gears, species targeted). For Output 4 we will prioritise financial support taking into account the gender perspective in the communities. Gender considerations from the CCP diagnostic highlight the need to increase women representation in CCPs, the CCP diagnostic in Yr2 helped us understand the reasons for this (cultural perspective of CCP being a male role), however one CCP president (Natuco) is female, and this has been identified as an opportunity to increase women CCP members (through invitations by the female president as well as conversations between CCPs to remove cultural barriers).

We have progressed with Output 2 on the development of women-led bivalve aquaculture as livelihood initiative that has been introduced through the project to address constraints and opportunities to access diversified livelihoods. A group of 42 individuals (55% women) in

Bandar and Mecufi focal areas were identified for bivalve aquaculture training, aiming to ensure equal capacity building and participation and avoid issues of jealousy within male groups that could hinder progress in achieving gender equity, or create a dangerous environment for women. This activity supports the IUCN's climate change and gender action plan for Mozambique.

Our work towards equitable governance (Output 3) has acknowledged information collected from the RRA and CCP diagnostic (Annex 1 and 4), utilising focus group discussions, key informant interviews and other social science methods to incorporate gender issues and anticipate gender related outcomes into the design and implementation phase. Acknowledging from previous work (20-023) that women are a particularly vulnerable group, we have started to plan strategies to remove barriers from their participation with targeted interventions (eg CCP membership as per Annex 4) and will monitor this. We aim to contribute towards the broader institutionalisation of gender integration through a regional workshop in Yr3.

8 Monitoring and evaluation

The OSOL project is a collaborative work of seven partners (ZSL, Ama, CORDIO, NOVA FCSH, UniLurio, University of Aveiro, WCS). This partnership is contingent on clear definition of roles & responsibilities and adequate monitoring plan of the project progress. ZSL/partners agreements, describing activities to implement and output to achieve, have been signed. There are regular communications between project partners' in-country and the UK via email, SMS texts, WhatsApp and Skype so that we monitor the smooth and efficient running of the project.. The project has both biological and social targets which are monitored using a Before-After-Control-Impact (BACI) design, to monitor key biodiversity and socioeconomic indicators periodically through a range of tools across relevant themes to assure that the project is meeting targets and to measure impact. These include: LMMAs, Village Savings and Loan Associations (quarterly) and socioeconomic (annually). NOVA FCSH went to Pemba in July 2019 to follow up on the socioeconomic and household survey. Progress in project activities and completion of key milestones are monitored through monthly reports submitted to the lead organisation by all project partners (see example of report by ZSL in Annex 12, Ama in Annex 4, CORDIO in Annex 14, NOVA FCSH in Annex 1, UniLurio in Annex 5, University of Aveiro in Annex 13). UniLurio is collecting CPUE data in the three communities of the project since mid-2018 which will become the baseline before we have the LMMAs running in these sites (see Annex 5).

9 Lessons learnt

We have received negative decisions for match funding applications from three major donors (Fondation Ensemble, Blue Action Fund and BIOPAMA). Fondation Ensemble approved our application and a grant agreement was in process, but the unrest in north Cabo Delgado during the 2018 Christmas period forced them to cease any agreement with any project in northern Mozambique. This lack of success in raising funds has hindered the project in proceeding with Output 4 and especially in regard to operating biodiversity offsetting in the short-term. We put in a change request to Darwin Initiative that was agreed early in 2020 readjusting the Output 4 and WCS's role from Yr3.

Darwin project 20-023 (2013 – 2017) successfully piloted Locally Managed Marine Areas (LMMAs) and established CCPs in two villages in Cabo Delgado Province. An LMMA toolkit was produced thanks to this experience and is now much useful for implementing guidelines of best practices successfully tested.

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

The issues raised by the reviewer of our last year's annual report are:

- a- Methodology used for mapping marine resources and fishing grounds

See activities 1.4.1, 1.4.3 and 1.4.4 above.

- b- Progress report by partners

Example of progress reports of the project partners are as followed: ZSL (Annex 12), Ama (Annex 4), CORDIO (Annex 14), NOVA FCSH (Annex 1), UniLúrio (Annex 5), University of Aveiro (Annex 13).

- c- Potential markets for bivalve aquaculture (selling price, cost of production)

See activity 2.6 and Annex 7.

- d- Sustainability of women's access to bivalve aquaculture (men also trained, not a marginalised activity)

As described in activity 2.1 above, there are 42 community members trained in bivalve aquaculture of which women account for 55%. During the community consultations described in activity 1.4.3, women from Mecufi have been naturally acknowledged as vulnerable in relation to co-management measures as they will be prevented from using mosquito nets in the intertidal area. Alternatively, bivalve aquaculture, an intertidal livelihood, was well accepted among women without creating conflict or misunderstanding with men. In Bandar though, local authorities preferred for the CCP to be in charge of trialling bivalve aquaculture i.e men and women together. We will monitor whether arrangements evolve unequally between men and women but it is a probable scenario that men will tend to lead on trading while women produce. We will also conduct CCP sessions in Yr3 about gender equality to think together with CCP members how to provide equal opportunity in decision-making and benefit arrangements between men and women.

11 Other comments on progress not covered elsewhere

As anywhere else, the COVID-19 pandemic slowed down the project activities and we can't predict for sure by when we will be able to get back to the normal project implementation routine. As a result, it is likely that the project may suffer delays for implementing the Yr3 work plan. We will be in touch with Darwin Initiative along Yr3 to inform about the progress of the project and we will adjust the project expected outputs and outcome accordingly and in agreement with Darwin Initiative.

12 Sustainability and legacy

We organised a national conference in June 2019 in Pemba with the project partners, MIMAIP (Ministry of Fisheries) and DPMAIP representatives who acknowledged the positive contribution of this innovative LMMA model trialled by OSOL and captured by the LMMA toolkit (made possible by Darwin project 20-023 and that we are using now) to achieve the NBSAP targets for coastal and marine protection and its potential for cost-effective replication in support of CCPs.

We participated in the regional conference WIOMSA (West Indian Ocean Marine Sciences Association) in Mauritius in July, where OSOL delivered two posters and two oral presentations (see pictures 46, 47 and 48 in Annex 3). One poster explored the negative results of violent events that have been occurring in the north of Cabo Delgado province since October 2017 on marine co-management. These events have prevented us from organising exchange visits of CCP members between current sites and the ones hosting LMMAs established in the period 2013/18 (Phase 1 of Our Sea Our Life, Darwin Project Ref. 20-023). A second poster focused on the role of VSLAs in marine co-management and their positive outcome on wellbeing and Material Style of Life indicators. One of the oral presentations described the phenomenon of itinerant fishing in Cabo Delgado province, as well as the threats and opportunities related to it. Additionally, the initial results of community-based oyster farming trialled in the period 2013/18 were presented and explained (these are used as a reference for the community work undertaken in Output 2 below). We were also able to attend a special session to connect a network of conservationists in the West Indian Ocean and share data regarding the capture of octopus following the opening of temporary-closed areas (within LMMAs), with an aim to refine and maximise the socio-economic benefits of these openings to the coastal communities while ensuring octopus populations are not at risk.

The exit strategy is still valid. Premium prices for fish and bivalves will be harvested following sustainable approaches within temporary-closed areas and TURFs. This approach will make meaningful social, economic, financial and ecological contributions towards the ongoing management of the LMMA. However, we put in a change request to Darwin Initiative to suggest a readjustment of the Output 4 and WCS's role originally in charge of leading the process for biodiversity offsets. This is due to two unsuccessful funding opportunities (Fondation Ensemble, Blue Action Fund). WCS's role now addresses the legalization of Locally Managed Marine Areas (LMMAs), due to a missing legislative link detected end of 2018, instead of advancing the Biodiversity Offset pathway. Legalizing LMMAs is a fundamental condition to access a diversity of sources of funding that 25-024 will seek to secure.

13 Darwin identity

The project has its own clear identity "Our Sea Our Life/Nosso Mar Nossa Vida" and is currently recognised as a Darwin Initiative-funded project. We have continued to ensure that the Darwin Initiative is acknowledged verbally, in writing or visually in all meetings, reports, presentations and informative materials and communications (posters, banners, leaflets, videos, publications etc.).

As part of ZSL's conservation work, Our Sea Our Life and the Darwin Initiative identity as the project's funder feature in communications via ZSL's social platforms. ZSL has 8 social media channels covering the major social platforms (Twitter, Facebook, Instagram, YouTube) with 17 accounts in total, including a dedicated ZSL Africa conservation programmes (@ZSLAfrica) and 'Our Sea Our Life' project (@OurSeaOurLife) Twitter accounts. The @OurSeaOurLife Twitter account aims to have one publication about the project per week, depending on the fieldwork being undertaken, with frequent support (re-tweets) from other ZSL accounts and linked to the Darwin Initiative's social media channels. Via their online presence, ZSL has a total reach of 64.9 million (Facebook) with 4 million unique users to the ZSL website per annum. @ZSLConservation has over 24,000 followers on Twitter, which regularly features Africa-specific posts on ZSL's overseas conservation work, complemented by @ZSLAfrica, which posts about ZSL's Africa conservation work around 10 times per month.

We use this extensive social media reach to publicise our donors' support (including Darwin Initiative). All social media posts reporting on project activities credit the donors responsible (whereby Darwin initiative and the UK Government are recognised and logos added to images where possible) or via the use of a hashtag (following guidelines presented at LTS' grantee workshop in 2019). In addition to crediting donors in social media, Our Sea Our Life has a [page](#) on the ZSL Conservation website where all donors are listed next to the project which they support. In addition, ZSL's external communications to its Fellows, Members and supporters, via direct mail and printed communications, list DEFRA as a key supporter of our Conservation and Policy work.

14 Safeguarding

ZSL has invested heavily in its safeguarding policies and procedures both in the UK and globally. The Council of Trustees and Executive Management Committee have formally recognised safeguarding as a key area of responsibility and are fully committed to strengthening and rolling out ZSL safeguarding approach. Where necessary these efforts are applicable to staff, partners and other stakeholders ZSL works with. Relevant policies have been updated and new policies and procedures implemented and policies to align to this commitment including; Global safeguarding policy; Safeguarding policy for UK staff; Global whistleblowing policy and procedures; Global code of conduct; DBS and criminal record check policy; Employing younger worker policy; Disciplinary Policy and procedures; Reference request policy; Violence and aggressive behaviour policy; The 4 R's safeguarding policy; Staff handbook.

ZSL has also implemented measures to ensure the effective delivery of these policies by:

- designating a named 'Safeguarding Trustee' who meets regularly with the Designated Safeguarding Lead (HR Director, Fiona Evans).

- a number of Designated Safeguarding Officers.
- a strategic group which meets every few months to consider how the rollout of our safeguarding is going and to provide direction (our Safeguarding Trustee, Designated Safeguarding Lead, and Head of Legal) along with a wider working group to help lead implementation.
- received updated global safeguarding training from independent experts including s of 'train the trainer' sessions to allow safeguarding leads to provide this training in-house in ZSL; and
- raised awareness of the updated Whistleblowing Policy by creating posters in different languages to be distributed amongst ZSL staff.
- These policies easily accessible and have been translated into a number of key languages in the countries we are operating in. Existing and newly joined staff, consultants and partners are made aware of these and participate in an induction into the policies, related procedures and implications irrespective of the length of time they will be working/collaborating with ZSL.
- In addition to these safeguarding efforts, ZSL is looking to develop and transition its environment and social management system to align to the IUCN ESMS standards – as a minimum standard of operating. A number of projects are currently trialling to inform the transition plan. The IUCN standards include undertaking a project level Social and Environment Impact Assessment, which will include the recently developed Security and Human Rights Screening. A Free, Prior and Informed Consent (FPIC) process may be triggered at this point to safeguard indigenous people's rights to give or withhold consent to a project that may impact them and/or their way of living or their land. In accordance with legal guidelines they will have the right to withdraw consent at any given stage of a project. The ZSL process will align to FAO guidelines to meet FPIC requirements through the whole project cycle - including monitoring and evaluation, to be participatory and accommodate indigenous group's needs.
- The results of the review and recommendation of the assessment will be captured and managed through an Environmental and Social management plan (ESMP) with a Stakeholder Engagement Plan (SEP) and Grievance Mechanism adapted to be appropriate for the context of each project. All will be developed in an inclusive and participatory manner in collaboration with partners, beneficiaries and other stakeholders. Other additional requirements may include Access Restriction Mitigation Process. Framework, Indigenous Peoples Plan, Pest Management Plan, and Resettlement Management Plan and livelihood related assurances (including Child labour).
- ZSL is committed to enabling Gender Equity and Social Inclusion (GESI) throughout project implementation with targeted activity to provide entry points to marginalised groups within different recognised groups e.g. women and those with disabilities. ZSL is developing an institutional indicator framework to ensure projects are delivering impact in this area. Furthermore, the project is working towards gender equity as described in section 7.

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)				

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

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
<p>Impact</p> <p>The Mozambique gender-inclusive, pro-poor, multi-zonation and sustainably financed LMMA network secures resilient coastal ecosystems whilst fostering income-generating activities in growing coastal communities, enhancing food security and reducing poverty</p>		<p>Two LMMA will cover a total of approximately 2,000ha protecting coral reefs and mangrove and its marine life to provide resilient coastal ecosystems to at least 224 households that saved so far \$US7,500 through VSLAs. Environment Funds are introduced to VSLA members for their future establishment to sustain the LMMA operations. Bivalve aquaculture is trialed by women to address the opportunity cost of co-management measures (they must stop the use of prohibited fishing gears such as mosquito nets).</p>	
<p>Outcome A scalable gender-inclusive, pro-poor, multi-zonation and sustainably financed LMMA model for Mozambique, recovers threatened fish populations and mangrove, improving food security for 400 households in two Cabo Delgado communities.</p>	<p>0.1 A minimum of (i) 200ha of strict no-take zones within each LMMA, (ii) 400ha of buffer zones (sustainable use regulations such as aquaculture zones or fishing gear restriction zones) covering at least 2 critical habitats (of seagrass, mangrove and coral reef) approved by local authorities and being effectively enforced by the two target villages with support from local police by year 2 (from baseline of 0ha).</p> <p>0.2 Decrease in use of destructive fishing gears outside no-take zones (all fishing activities already prohibited within no-take zones) within two LMMAs from Yr1 (baselines) to 0 infractions by Yr3 (infraction assessment on a yearly basis)</p>	<p>On the condition the two LMMAs have suitable ecological conditions (biological assessment postponed due to COVID-19 pandemic), both no-take zones will cover a total of approximately 1,000ha protecting coral reefs and mangrove (exact areas still to be confirmed by GPS) and its marine life (see Output 1). We expect both LMMA co-management plans to be endorsed by local authorities in Yr3 as they have been engaged all along the process. This will enable an effective enforcement of LMMA where each stakeholder (CCP, police, SDAE, DPMAIP) has a role and responsibilities. Also, a workshop with both CCPs will be organised in Yr3 to agree the indicators that will be used to measure the success of inclusivity (and especially for women) in LMMA co-</p>	<p>1.9 Enforcement bodies training 1.10 Conducting enforcement activities 1.11 Formation and training of Village Agent</p> <p>2.11 Conducting second training workshop (Yr3) including evaluation prior the training.</p> <p>3.8 Organise and deliver an interdisciplinary workshop to share experiences and promote approaches to gender equity consolidated and documented through a regional workshop of humanitarian, development, academic and other relevant organisations working on this topic</p> <p>4.1 Community consultation with different groups for sustainable</p>

	<p>0.3 Implement recommendations and targets from gender analysis (output 3) to define and encourage women's participation appropriately in CCPs and LMMA co-management processes in each of the two coastal communities by Yr2.</p> <p>0.4 Improvement of locally specific food security indicators (decreased frequency of taking credit, asking for food, selling assets to local shops) and subjective and material wellbeing indicators (including material style of life and income) by Yr3 from baselines set in Yr1 for 400 households.</p> <p>0.5 CPUE baselines established in Yr2 and ongoing monitoring ensuring no declines in catches during project period. Measures put in place in this project are expected to deliver improvements in CPUE post-project.</p>	<p>management processes. A repeated socioeconomic survey will be undertaken in Yr3 to measure the impact of the project against food security and wellbeing indicators. For now, 224 households are benefiting from financial services of savings groups. The CPUE survey baseline through community-based smartphone application was done and the analysis of ongoing data collection will be repeated to measure the impact of the project in Yr3.</p> <p>As anywhere else, the COVID-19 pandemic slowed down the project activities and we can't predict for sure by when we will be able to get back to the normal project implementation routine. As a result, it is likely that the project may suffer delays for implementing the Yr3 work plan. We will be in touch with Darwin Initiative along Yr3 to inform about the progress of the project and we will adjust the project expected outputs and outcome accordingly and in agreement with Darwin Initiative.</p>	<p>financing mechanism options (temporary c</p> <p>4.2 Business model formation meeting and design losures and bivalves).</p> <p>4.4 Meetings with the National Administration for Fisheries, the National Administration for Conservation Areas and other relevant national stakeholders to guide on how to legalize LMMAs</p> <p>4.5 Meetings with the Provincial authorities of Cabo Delgado and Districts of Pemba and Mecúfi and local stakeholders to proceed with guiding procedures for LMMA legalization</p>
<p>Output 1. 1. Two multi-use zonation LMMAs (Bandar, Mecufi) based on equitable governance agreed and implemented with high social acceptance, advanced representation and participation of women, strong enforcement and effective management capacity of trained CCP members in collaboration with law enforcement agencies, resulting in compliance with LMMA regulations by fishers.</p>	<p>1.1 Two multi-zonation LMMAs established in Bandar and Mecufi by end of Yr1 with co-management agreements in place, each incorporating at least 200ha of no-take zones covering at least 2 critical habitats in each village (from seagrass, mangrove and coral), 50ha of buffer zones for preferential user rights, one temporary closure area, and mangrove rehabilitation area.</p> <p>1.2 At least 10 VSLAs implemented by yr 2 through CCPs, providing platform for outreach (1.5) with members contributing to co-management plan in</p>	<p>Instead of three sites (as mentioned in the Darwin Yr1 annual report), the community consultations (see activity 1.4.3) were undertaken in two sites (Bandar and Mecufi) as the third one is too remote. The communities have selected temporary-closed reserves and permanent reserves (no-take zones). On the condition the latter have suitable ecological conditions (biological assessment postponed due to COVID-19 pandemic), both no-take zones will cover a total of approximately 1,000ha protecting coral reefs and marine species (exact area still to be confirmed by GPS). Both communities also agreed on creating temporary-closed reserves protecting mangrove habitat. 10 VSLAs (see activity 1.3), of which 90% of members are women (see activity 3.2), are running and outreach sessions are conducted to establish environment funds (see activity 4.3). Village Agents were trained to support the monitoring and formation of new VSLAs but also the establishment of environment funds (see activity 4.3). Both CCPs were strengthened with the building of a new office and trainings on roles and responsibilities and enforcement strategies in collaboration with DPMAIP and local authorities (see activity 1.6.1).</p>	

	<p>Yr1 (1.1) and “environment funds” in each VSLA by Year 3.</p> <p>1.3 Village Agents from original VSLAs are identified and trained and double the number of VSLAs by Yr3.</p> <p>1.4 CCPs in Bandar and Mecufi strengthened through training in LMMA management, leadership, conflict resolution, social communication and outreach by Yr2 and using VSLAs as key community partner groups, and advise from gender equity assessments being implemented by year 3 to address imbalances.</p> <p>1.5 Two outreach campaigns (one in Yr1, one in Yr2) about unsustainable fishing practices and compliance with LMMA regulations undertaken in Bandar and Mecufi through VSLAs</p> <p>1.6 Six CCP members from each LMMA sites are effectively trained in two separate sessions in the LMMA enforcement procedures, boat handling and fully equipped by Yr2; conduct regular weekly patrol; successfully apprehend and report at least 80% of violators to local authorities by Yr3</p> <p>1.7 Workshop conducted with local authorities leading to agreement on roles and responsibilities for different departments, and relevant fish wardens and enforcement agencies are effectively trained in two separate session in the LMMA enforcement procedures, boat handling and fully equipped by Yr2; conduct monthly patrol; successfully prosecute all reported violators by Yr3.</p>	
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	1.8 VSLAs trained and operating as informant networks by Yr 3.	
Activity 1.1 Project presentation and consultation meetings towards generation of Free Prior Informed Consent from local communities and local government authorities.	See Yr1 annual report to Darwin Initiative.	
Activity 1.2 Conduct community profiling using existing RRA tools.	See Yr1 annual report to Darwin Initiative and our report about the rapid rural appraisal in Annex 1.	
Activity 1.3 VSLA Formation in each LMMA sites with environmental funds	Since April 2019, we provided support to the creation of 10 savings groups (224 members), in Bandar and Mecufi focal areas, which by the 31 st March 2020 had saved a total amount of \$US7.500, of which 25% have been taken as loans. This money is being invested mainly in small-scale businesses (small shops), fish trade, fishing gears, household improvements (roof, door, windows, mattresses) and farming. Please see Annex 2. See 4.3 below regarding our work on creating environmental funds.	10 VSLAs formed, all 20 with environmental funds
Activity 1.4 Participatory design of LMMA zonation	In support of the CCPs members, we carried on community consultations in Bandar and Mecufi focal areas to develop management objectives including local leaders and influential community members (see pictures 4, 5, 6 and 7 in Annex 3). Objectives range from ecological (i.e. rebuilding fish stocks, protecting key habitats and spawning aggregation sites), to socioeconomic (i.e. improving catches) and governance (i.e. reducing illegal fishing gear). We then identified and agreed on management measures that can be put in place to achieve the objectives established, such as temporary-closed reserves or	<p>Participatory mapping and assessment of resource, habitat and fisheries</p> <p>Exchange/learning visits of community leaders/champions to existing LMMA sites</p> <p>Community consultation using existing decision-making process for LMMA zonation design</p> <p>Participatory physical mapping of the LMMA Zonation</p>

	<p>permanent reserves. We considered the opportunity costs for each social group and for neighbouring communities. One example are women, who are relatively vulnerable to co-management measures as their main fishing gear (mosquito nets) is prohibited by law. Enforcing the law in this case would therefore require developing compensatory approaches such as Integrated Territorial User Rights in Fisheries associated to bivalve farming (see 2.1 below). After these consultations, the participants decided on potential sites for the LMMA zonation before assessing the ecological suitability, the demarcation of the LMMA zonation, and validating the co-management plan.</p>	
<p>Activity 1.5 Protect and restore mangrove areas</p>	<p>Mangrove users (crustacean gleaners, people selling wood for construction/firewood and shrimp fishers) were approached in Bandar (see picture 7b in Annex 3) and gathered to discuss mangrove sustainability. The group agreed that their activity was detrimental to the mangrove and their own activity, if not managed properly, and agreed in forming a community nursery group of 20 members in order to rehabilitate the degraded mangrove areas. The community mangrove nursery group of Mecufi mobilized the community members to replant a degraded area of mangrove in June 2019, during celebrations for World Ocean's Day. Approximately 3,000 plants were planted over 3ha, with an 85% survival rate (see pictures 8, 9, 10 and 11). This event will be repeated in Yr3 once the target area for mangrove planting is</p>	<p>GIS mapping of mangrove areas and assess mangrove community structure, including identifying target areas for replanting</p> <p>Train communities in mangrove nursery establishment and monitor and support nurseries</p> <p>Conduct mangrove replanting</p> <p>Monitor survival and growth (monthly) and mangrove community structure (annually)</p>

	established during GPS mapping activity (see 1.5.1).	
Activity 1.6 Establishment of governance structure with equitable membership	<p>Early in Yr2, we conducted a CCP diagnostic in Bandar and Mecufi focal area (see Annex 4 and Figure 2 below) to assess how CCPs here perform in terms of financial management, operations and governance. As a result, we were able to establish needs to strengthen and improve CCPs' performance. We also delivered training to define and clarify roles and responsibilities of the CCP members (see Annex 17). A work plan was established to build the two CCP offices (see pictures 12, 13, 14 and 15 in Annex 3) detailing actions and materials needed (either by the community members or the project) against a timeframe. Early in 2020, DPMAIP conducted a training of the CCP members in Bandar and Mecufi about the roles and responsibilities of each CCP member focusing on enforcement activities (Annex 11 and pictures 15b, 15c, 15d, 15e and 15f in Annex 3). The communities were consulted on the rules, regulations and fines (see Table 1) associated to the reserves (see pictures 21 and 22 in Annex 3). Roles and responsibilities of the community leaders were appointed in the process of enforcement of the LMMAs (CCP, religious leaders, local court, professors) but also of the SDAE and the police force. The money originating from the fines will pay for social needs at community level (school, hospital, church, etc.).</p>	<p>Integration of women and VSLA members in CCPs</p> <p>Development of LMMA co-management plan</p> <p>LMMA zoning and demarcation</p> <p>LMMA regulation and enforcement plan drafting and approval by local authorities</p>
Activity 1.7 LMMA infrastructure establishment	See 1.6.3. The buoys will be set up when the process of development of	<p>Placing of marker buoys</p> <p>Design and construction of guard house</p>

	the co-management plans is complete (see 1.6.2).	
Activity 1.8 CCP capacity building	See 1.6.1. The CCP's capacity need assessment will be conducted again in Yr3.	Conducting CCP's repeat capacity need assessment
Activity 1.9 Enforcement bodies training	n/a	<p>Conducting CCP training on LMMA regulation and enforcement plan</p> <p>Conducting Fisheries officer training in LMMA law enforcement</p> <p>Conducting training in patrol boat handling</p> <p>VSLA training in LMMA regulation and enforcement procedure</p>
Activity 1.10 Conducting enforcement activities	n/a	<p>Weekly enforcement patrol conducted by CCP</p> <p>Monthly joint patrol conducted by CCP, fisheries officers and Ama</p>
Activity 1.11 Formation and training of Village Agents	n/a	More Village Agents identified and trained
Activity 1.12 Outreach campaign activities targeting VSLAs, CCP, women group and the broad community members conducted in each LMMA sites	<p>See our responses related to community consultations and community engagement from 1.4.1 to 1.5.3 that relate to focusing our approach on reminding the importance of protecting the natural habitats and managing sustainably the marine resources (see picture 25 in Annex 3). Also see 4.3.</p> <p>We delivered trainings to savings groups that aimed to reduce mangrove cutting by incentivising the use of charcoal from sustainable wood</p>	Outreach campaign activities targeting VSLAs (Environment Fund), CCPs (Gender), broad community members (environment) conducted in each LMMA site

	sources and the use of clay ovens produced locally as alternatives (see pictures 23 and 24 in Annex 3).	
Activity 1.13 Conduct underwater surveys fish underwater visual census and coral cover in Yr 1 (baseline) and Yr 3 endline)	<p>We are conducting biological monitoring using three different approaches:</p> <ul style="list-style-type: none"> - CPUE (Catch Per Unit Effort) survey through community-based smartphone application (baseline done) - Community-based LMMA underwater survey (postponed due to COVID-19 pandemic) - CPUE survey (underway) 	<p>CPUE (Catch Per Unit Effort) survey through community-based smartphone application (endline)</p> <p>Community-based LMMA underwater survey (postponed from Yr2 due to COVID-19 pandemic)</p> <p>CPUE survey (continue)</p>
<p>Output 2. Integrated Territorial User Rights in Fisheries zones integrated into LMMAs to incorporate sustainable fishing and women-led bivalve aquaculture initiatives in Bandar and Mecufi to incentivise enforcement of LMMA and replace illegal mosquito net fishing for vulnerable female groups.</p>	<p>2.1 Sustainable fishing zones and bivalve aquaculture zones identified and incorporated within LMMA plans by Yr2.</p> <p>2.2 Rules on who can use these buffer zones and how, under what conditions, any benefit-sharing arrangements, and how this is enforced included in appropriate management plans by Yr2 and being implemented by Yr3.</p> <p>2.3 50 female fishers (25 in Bandar, 25 in Mecufi) trained in bivalve farming Yr1. 100 female fishers (50 in Bandar, 50 in Mecufi) trained in bivalve farming practices Yr2. 150 female fishers (50 in Bandar, 100 in Mecufi) trained in bivalve farming practices by Yr3. Training conducted through VSLAs.</p> <p>2.4 Two female village agents identified per community trained to conduct outreach and deliver monthly trainings on bivalve farming to VSLAs from Yr1.</p>	<p>During the decision-making process (see activities 1.4.3 and 2.1), it was agreed that women would particularly struggle to maintain their access to natural resources because they rely on prohibited on mosquito net for the benefit of their household. In activity 2.6, we concluded that the production of bivalves could be trialled in Bandar and Mecufi. As a result, in Mecufi, 15 female gleaners (related to five different savings groups) formed a bivalve aquaculture group. In Bandar, local authorities chose the option to let the CCP (27 members of which eight are women) pilot bivalve aquaculture as a start before introducing this livelihood to the community members. These two groups (it sums up to 42 members with 55% of women) agreed to develop associated Territorial User Rights in Fisheries regulations and boundaries as they experiment bivalve aquaculture before scaling up the activity at community level. They were both trained in setting bivalve racks and their maintenance (activity 2.7).</p>

	<p>2.5 At least six VSLA groups are engaged in and sharing bivalve farming revenue equitably by Yr3</p> <p>2.6 Two functional bivalve farms are set up Yr1 (one in Bandar, one in Mecufi). Four functional bivalve farms are set up by Yr2 (two in Bandar, two in Mecufi). Six functional bivalve farms are set up by Yr3 (two in Bandar, four in Mecufi).</p> <p>2.7 The average bivalve farmer's yearly income is of 90USD Yr1, 135USD Yr2 and 180USD Yr3.</p> <p>2.8 50% reduction of owned illegal mosquito fishing nets by Yr2 and at least 75% reduction by Yr3 compared to Yr1 baseline in Bandar and Mecufi</p>		
<p>Activity 2.1 Community consultation for Integrated Territorial User Rights in Fisheries regulation</p>		<p>During the decision-making process (see 1.4.3 above and see pictures 33, 34 and 35 in Annex 3), it was established that women would particularly struggle to maintain their access to natural resources. As a result, in Mecufi, 15 female gleaners (related to five different savings groups) formed a bivalve aquaculture group. In Bandar, local authorities opted to allow the CCP (27 members, of which, 8 are women) to pilot bivalve aquaculture as a start before introducing this livelihood to the community members. These two groups (total of 42 members, with 55% of women) agreed to develop associated Territorial User Rights in Fisheries regulations and boundaries as they experiment bivalve aquaculture before scaling up the activity at community level.</p>	<p>Consultations will continue with communities as we develop TURFs</p>

Activity 2.2 Conduct training on Integrated Territorial User Rights (TURF)		This training will be conducted in Yr3 before scaling up the activity at community level.
Activity 2.3 Physical demarcation of TURF area	There is no physical demarcation of TURF area yet. The areas being used in Bandar and Mecufi for piloting bivalve aquaculture were agreed with bivalve aquaculture groups with consent from the CCP and the community leaders.	The physical demarcation will be conducted as soon as the LMMA co-management plan is validated by the communities (see 1.6.2 and 1.6.3).
Activity 2.4 Participatory design of sustainable fishing and bivalve aquaculture zonation	See 1.4.3 and 2.1.	
Activity 2.5 Exchange/learning visits of community leaders/champions to existing aquaculture sites		We intend to organise an exchange visit between Bandar's and Mecufi's bivalve aquaculture groups in Yr3.
Activity 2.6 Conducting communities' female fishers capacity need assessment for bivalve farming	The recent household survey (Annex 6) shows that out of the 52 families involved in this study in Mecufi 80% (looking at the past 30 days) were feeding on moringa leaves when there was no food; 25% didn't cook from one to several days; 19% of them were so hungry that they had to ask their neighbours for food and 11.5% of the families had to work for food, all indicators of food insecurity. Women would be more vulnerable to the enforcement of co-management measures (see 2.1). The rapid rural appraisal (Annex 1) shows that women rely on illegal mosquito net fishing activity. Our study on existing market for bivalves and local consumption showed that bivalves are consumed locally and that the markets for trading bivalves are in Pemba, Montepuez and	n/a

	Chiuri (Annex 7). This study allowed to conclude that the production of bivalves could be trialled in Bandar and Mecufi.	
Activity 2.7 Conducting first bivalve farming training workshop (Yr2) (for 50 female fishers in total- 25 in Bandar, 25 in Mecufi)	15 female fishers in Mecufi and 27 CCP members (of which eight are women) in Bandar were trained in bivalve farming (see Annex 7 and pictures 36, 37, 38 and 39 in Annex 3) for <i>Modiolus philippinarum</i> (mussel) and <i>Saccostrea cucullata</i> (oyster): seed collection, building bivalve racks, everyday maintenance for cleaning bivalves in bags. The University of Aveiro sampled the individuals for quantifying the levels of heavy metal (mercury) and nutrients (sugar, lipid, protein), see Annex 8. Mercury is below maximum authorised levels for consumption for oyster and mussels, fresh and dry. Mussels are almost as nutritive fresh or dry. Oysters are significantly losing nutrients during traditional drying process. Microplastics were found in bivalves and are still to be characterized.	n/a
Activity 2.8 Conducting first bivalve farming training workshop (Yr2) (for 100 female fishers in total- 50 in Bandar, 50 in Mecufi)	We have not yet scaled up bivalve farming. In consultation with the CCP members and the community leaders, we are still in a process to define with the current two aquaculture groups which aquaculture areas are more productive in terms of recruitment and growth (avoiding predation) for bivalves <i>Modiolus philippinarum</i> and <i>Saccostrea cucullata</i> .	Conducting bivalve farming training (delayed from Yr 2)

<p>Activity 2.9 Conducting second training workshop (Yr2) including evaluation prior the training</p>	<p>Prior to the second training, we did more sampling to determine the best preservation methods (in salty water and dried, dried salted bivalves, dried, smoked, smoked with oil layer) that would maximise nutrient levels of bivalves and also to monitor the levels of biological contamination such as <i>E. coli</i> and salmonella (pictures 40, 41, 42 and 43 in Annex 3). The second training will be conducted in Yr3.</p>	<p>Conducting second training (delayed from Yr2) workshop including evaluation prior the training</p>
<p>Activity 2.10 Conducting first bivalve farming training workshop (Yr3) (for 150 female fishers in total- 50 in Bandar, 100 in Mecufi)</p>	<p>n/a</p>	<p>Conducting first bivalve farming training workshop (Yr3)</p>
<p>Activity 2.11 Conducting second training workshop (Yr3) including evaluation prior the training.</p>	<p>n/a</p>	<p>Conducting second training workshop (Yr3) including evaluation prior the training.</p>
<p>Output 3. Equitable governance and management of marine resources and sustainable bivalve aquaculture ensured through advanced representation and participation of women in CCPs and LMMA management</p>	<p>3.1 Differences in gender roles, activities, constraints, opportunities and perceived risks for people involved and affected by project implementation in both target communities understood by end of Yr 1</p> <p>3.2. Appropriate gender integration mechanisms and strategies e.g. separate venue for women to feed into LMMA management process, developed for each community by end of Yr1 and implemented by mid Yr2</p> <p>3.2. Appropriate gender integration mechanisms and strategies developed for each community by end of Yr1 and implemented by mid Yr2</p> <p>3.3. Gender sensitive monitoring plan designed and integrated into existing M&E tools, where appropriate, by Yr1</p>	<p>Differences in gender roles and activities have been captured by the rapid rural appraisal (see sections 2.4, 3.4 and 4.3 in Annex 1) and also by the CCP diagnostic (see Annex 4) that recommends that a special focus is given on gender representativity within CCPs so that gender equity is achieved in decision-making processes (workshop with CCP members to be conducted in Yr3 and that will define specific indicators for advanced representation and participation of women). In addition, the constraints, opportunities and perceived risks were discussed through community consultations in focus groups (see 1.4.3). This is why we concluded in Output 2 that the production of bivalves could be trialled in Bandar and Mecufi to benefit especially women, being more vulnerable to the enforcement of the co-management measures as they still depend on prohibited mosquito nets to access natural resources (see 2.1). Also, of the 224 members who saved \$US7,500 across the existing 10 savings groups (see 1.3), 90% are women. Further consultations will be conducted in Yr3 at community level to monitor the benefits or constraints of the LMMA co-management measures on community members with a gender perspective for the project to keep producing project outcomes as inclusive as possible.</p>

	<p>3.4. Inter-disciplinary (humanitarian, development, academic and other relevant organisations) regional workshop held on effective approaches to share experiences and promote gender equity approaches in marine resource management and governance held by yr2.</p>	
<p>Activity 3.1 Focus group discussions and key informant interviews conducted to understand to understand the differences in gender roles, activities, constraints, opportunities and perceived risks for people involved and affected by fisheries and marine resource management project implementation.</p>		<p>Differences in gender roles and activities have been captured by the rapid rural appraisal (see sections 2.4, 3.4 and 4.3 in Annex 1) and also by the CCP diagnostic (see Annex 4). In addition, the constraints, opportunities and perceived risks were discussed through community consultations in focus groups (see 1.4.3).</p> <p>Repeat of CCP diagnostic will be conducted to monitor change in gender roles</p>
<p>Activity 3.2 Analysis undertaken of findings from the research internally and sessions run with different groups in the community to brainstorm specific adjustments or additions to the project plan and priorities to produces better outcomes for gender-based opportunities and constraints for involvement of women.</p>		<p>The CCP diagnostic (see 3.1) recommends that a special focus is given on gender representativity within CCPs so that gender equity is achieved in decision-making processes. The consultations as explained in 3.1 led for instance in trialing bivalve aquaculture for women, being more vulnerable to the enforcement of the co-management measures as they still depend on prohibited mosquito nets to access natural resources (see 2.1). Also, of the 224 members who saved \$US7,500 across the 10 savings groups formed (see 1.3), 90% are women.</p> <p>Further consultations will have to be conducted in Yr3 at community level to monitor the benefits or constraints of the LMMA co-management measures on community members with a gender perspective for the project to keep producing project outcomes as inclusive as possible.</p>
<p>Activity 3.3 Conduct sessions with CCP on co-management plan, based on findings from research, if required hold separate feedback sessions to get higher levels of participation from females in the decision-making process</p>		<p>CCP strengthening sessions will be conducted in Yr3 and will focus especially on gender aspects in the decision-making process.</p> <p>CCP strengthening sessions will be conducted in Yr3 and will focus especially on gender aspects in the decision-making process.</p>

Activity 3.4 Conduct training on oyster farming with women in VSLA.	n/a	
Activity 3.5 Conduct training on outreach with women in VSLAs and CCPs	See 1.3, 1.12.	
Activity 3.6 Conduct training on VSLAs and Village Agent role	See 4.3.	Village Agent training will continue in Yr3
Activity 3.7 Identify existing or develop indicators to measure gender participation across activities and integrate into existing survey tools and methods.	Wellbeing indicators disaggregated by gender were elaborated in the rapid rural appraisal (see sections 2.8, 3.8 and 4.7 in Annex 1) and are related to (i) livelihood, (ii) home and (iii) children at school	Indicators of gender participation will be developed with CCPs during capacity building activities in 3.3 in Yr3.
Activity 3.8 Organise and deliver an interdisciplinary workshop to share experiences and promote approaches to gender equity consolidated and documented through a regional workshop of humanitarian, development, academic and other relevant organisations working on this topic	n/a	Organise and deliver an interdisciplinary workshop on gender equity
<p>Output 4. Sustainable financing mechanisms (business models, functional VSLAs, legalizing LMMAs contributing to improve access to national and international funds to sustain management costs) established for Bandar and Mecufi LMMAs fostering multi-use zonation, sustainable bivalve aquaculture and gender equity</p>	<p>4.1 Business models with income from the sale of premium octopus (associated with temporary closures) and bivalves (from aquaculture) contributing towards the CCP costs and local coordination costs by Yr3 compared to a baseline of 0USD Yr1.</p> <p>4.2 VSLAs integrate environment funds by Yr3 and saving \$500 annually contributing towards CCP operating costs for enforcing the LMMAs.</p> <p>4.3 Two LMMAs are legalized by Yr3</p> <p>4.4 Operating budget for LMMAs agreed with local officials and funding agreement secured</p>	<p>Temporary-closed reserves have been selected by the community members but their validation is conditioned by the assessment of their ecological suitability, activity postponed due to COVID-19 pandemic (see Output 1). In principle temporary-closed reserves will close soon for a scheduled opening end of 2020. The octopus and fish will be sold at a premium price. 10 VSLAs have saved so far \$US7,500 and are introduced the concept of Environment Fund which we believe will be established in Yr3 (see activity 4.3). Our work on LMMA legalization, the endorsement of the LMMA budget and secured funding will be done in Yr3.</p>
Activity 4.1 Community consultation with different groups for sustainable financing mechanism options (temporary closures and bivalves).	n/a	Prepare temporary-closed reserves openings and selling of bivalve production with fishers, farmers, middle

		men and main buyers to agree on premium prices and logistics.
Activity 4.2 Business model formation meeting and design	n/a	Development and design of selling agreements with main buyers
Activity 4.3 Conduct sessions with VSLAs on Environment Fund to plan contribution towards CCPs (Yr 2)	We met with savings groups to share information and discuss about the marine environment and the ocean as an introduction to Environment Funds (see pictures 44 and 45 in Annex 3 and Annex 9). We intend to link up the savings groups with sustaining the LMMA co-management plans through an Environment Fund. Savings groups show interest in working this direction and we expect to have the Environment Funds established in Yr3. In addition, we trained four Village Agents (three women, one men) that are focal points in Bandar and Mecufi (two from each community) to provide support to savings groups, on a volunteer basis, and mobilize community members to adhere to new savings groups. This training focused on the creation and functioning of savings groups and on the process to establish Environment Funds (Annexes 9 and 10).	In Y3, Environment Funds will be established in Y3 and linked up with VSLAs
Activity 4.4 Meetings with the National Administration for Fisheries, the National Administration for Conservation Areas and other relevant national stakeholders to guide on how to legalize LMMAs	n/a	As described in Activity 4.4
Activity 4.5 Meetings with the Provincial authorities of Cabo Delgado and Districts of Pemba and Mecúfi and local stakeholders to proceed with guiding procedures for LMMA legalization	n/a	As described in Activity 4.5

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

[Note: new logframe as per agreed change request as of January 2020]

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact</p> <p>The Mozambique gender-inclusive, pro-poor, multi-zonation and sustainably financed LMMA network secures resilient coastal ecosystems whilst fostering income-generating activities in growing coastal communities, enhancing food security and reducing poverty</p> <p>(Max 30 words)</p>			
<p>Outcome:</p> <p>(Max 30 words)</p> <p>A scalable gender-inclusive, pro-poor, multi-zonation and sustainably financed LMMA model for Mozambique, recovers threatened fish populations and mangrove, improving food security for 400 households in two Cabo Delgado communities.</p>	<p>0.1 A minimum of (i) 200ha of strict no-take zones within each LMMA, (ii) 400ha of buffer zones (sustainable use regulations such as aquaculture zones or fishing gear restriction zones) covering at least 2 critical habitats (of seagrass, mangrove and coral reef) approved by local authorities and being effectively enforced by the two target villages with support from local police by year 2 (from baseline of 0ha).</p> <p>0.2 Decrease in use of destructive fishing gears outside no-take zones (all fishing activities already prohibited within no-take zones) within two LMMAs from Yr1 (baselines) to 0 infractions by Yr3 (infraction assessment on a yearly basis)</p> <p>0.3 Implement recommendations and targets from gender analysis (output 3) to define and encourage womens participation appropriately in CCPs and LMMA co-management processes in each of the two coastal communities by Yr2.</p>	<p>0.1. Official government-endorsed CCP co-management plans with GIS maps of zones plotted with associated rules and regulations.</p> <p>0.2. Weekly beach patrols report by CCPs and monthly boat patrols joint report by provincial fisheries authorities and Ama, including GPS routes patrolled and infraction details.</p> <p>0.3. Biological underwater survey Yr1 and repeat survey Yr3 both undertaken by CORDIO, building on data from 2013 and Catch Per Unit Effort (CPUE) data recorded using existing tested Open Data Kit (ODK) app by CCP members.</p> <p>0.4. Annual fishing gear census by Fisheries Community Councils (CCPs) and provincial fisheries authorities</p> <p>0.5. Existing socioeconomic baseline data and household surveys in Yr 1 and repeat surveys Yr 3 undertaken by NOVA FCSH and Ama.</p> <p>0.6. Records of bivalve growth, survival and sales records; names of women engaged in bivalve farming collected on a quarterly basis by</p>	<p>Potential changes in government and associated fisheries departments resulting from the 2018 national elections confirm official approvals of management plans beyond the life of the project.</p> <p>Potential changes in government and associated fisheries departments resulting from the 2018 national elections confirm the role of the Provincial Marine Police in the enforcement of LMMAs</p> <p>Biological cycles of the six flagship IUCN Red List threatened marine species are unchanged by events related to climate change</p> <p>Coral reefs recover from 2017 bleaching events</p> <p>The project strategy and progress are resilient to slow bureaucracy in government agencies and unclear responsibilities between national and provincial government</p>

	<p>0.4 Improvement of locally specific food security indicators (decreased frequency of taking credit, asking for food, selling assets to local shops) and subjective and material wellbeing indicators (including material style of life and income) by Yr3 from baselines set in Yr1 for 400 households.</p> <p>0.5 CPUE baselines established in Yr2 and ongoing monitoring ensuring no declines in catches during project period. Measures put in place in this project are expected to deliver improvements in CPUE post-project.</p>	<p>Ama with the support of the University of Aveiro.</p> <p>0.7. CCP member lists, records from CCP meetings on a biannual basis by Ama.</p> <p>0.8. VSLA member lists, presence and savings in environment pouch on VSLAs' 1st, 12th, 24th and share-out meetings by Ama.</p> <p>0.9. Note from OSOL consortium about eventual planned replications in new coastal communities with the support of organizations external to the OSOL consortium and inspired by the project by Yr3.</p> <p>0.10. Mangrove survey undertaken by Ama Yr1 and Yr3 as per the existing guidelines on ZSL's "Community-based mangrove rehabilitation training manual" with remote technical support provided by ZSL Philippines.</p>	<p>Outbreaks of disease (cholera, etc.) are non-existent in the six coastal communities</p> <p>Adverse weather conditions (floods, storms) are reduced in the project geographical areas and keep the six project sites accessible</p> <p>The fluctuation of the New Metical currency is reduced on international markets or induces low price of Mozambique main goods imports</p> <p>The communities' perception in regards to women improving their income and extending their interest and participation in decision-making related to fisheries co-management is sensible and benevolent</p>
<p>Outputs:</p> <p>1. Two multi-use zonation LMMAs (Bandar, Mecufi) based on equitable governance agreed and implemented with high social acceptance, advanced representation and participation of women, strong enforcement and effective management capacity of trained CCP members in collaboration with law enforcement agencies, resulting in compliance with LMMA regulations by fishers.</p>	<p>1.1 Two multi-zonation LMMAs established in Bandar and Mecufi by end of Yr1 with co-management agreements in place, each incorporating at least 200ha of no-take zones covering at least 2 critical habitats in each village (from seagrass, mangrove and coral), 50ha of buffer zones for preferential user rights, one temporary closure area, and mangrove rehabilitation area.</p> <p>1.2 At least 10 VSLAs implemented by yr 2 through CCPs, providing platform for outreach (1.5) with members contributing to co-management plan in Yr1 (1.1) and "environment funds" in each VSLA by Year 3.</p>	<p>1.1 Official document endorsing the establishment of the two multi zonation LMMAs, their regulations and enforcement plans.</p> <p>1.2 Ama VSLA establishment report; record from co-management plan development consultation and VSLA saving record.</p> <p>1.3 Village Agent Training report and Ama VSLA establishment report</p> <p>1.4 Training report including evaluation conducted post-training; written report of activities conducted by the CCPs, and observations from Ama team during field activities conducted together with CCPs.</p> <p>1.5 Ama outreach report</p>	<p>Process for legalising LMMAs is established or clarified.</p> <p>Appropriate mechanisms for gender based knowledge to feed into LMMA co-management plans identified and implemented.</p> <p>Community acceptance and willingness to implement LMMA and co-management plan and based on equitable governance.</p>

	<p>1.3 Village Agents from original VSLAs are identified and trained and double the number of VSLAs by Yr3.</p> <p>1.4 CCPs in Bandar and Mecufi strengthened through training in LMMA management, leadership, conflict resolution, social communication and outreach by Yr2 and using VSLAs as key community partner groups, and advise from gender equity assessments being implemented by year 3 to address imbalances.</p> <p>1.5 Two outreach campaigns (one in Yr1, one in Yr2) about unsustainable fishing practices and compliance with LMMA regulations undertaken in Bandar and Mecufi through VSLAs</p> <p>1.6 Six CCP members from each LMMA sites are effectively trained in two separate sessions in the LMMA enforcement procedures, boat handling and fully equipped by Yr2; conduct regular weekly patrol; successfully apprehend and report at least 80% of violators to local authorities by Yr3</p> <p>1.7 Workshop conducted with local authorities leading to agreement on roles and responsibilities for different departments, and relevant fish wardens and enforcement agencies are effectively trained in two separate session in the LMMA enforcement procedures, boat handling and fully equipped by Yr2; conduct monthly patrol; successfully prosecute all reported violators by Yr3.</p> <p>1.8 VSLAs trained and operating as informant networks by Yr 3.</p>	<p>1.6 Training report including evaluation conducted post-training; weekly beach patrols and joint monthly boat patrol with fisheries authorities' logbook recording GPS routes patrolled, and records of apprehensions and reports</p> <p>1.7 Workshop report; Training report including evaluation conducted post-training; joint monthly boat patrol with fisheries authorities' logbook recording GPS routes patrolled, and records of apprehensions and prosecution minutes, and amount of fine collected.</p> <p>1.8 Training report and information gathered through VSLA</p>	
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<p>2. Integrated Territorial User Rights in Fisheries zones integrated into LMMAs to incorporate sustainable fishing and women-led bivalve aquaculture initiatives in Bandar and Mecufi to incentivise enforcement of LMMA and replace illegal mosquito net fishing for vulnerable female groups.</p>	<p>2.1 Sustainable fishing zones and bivalve aquaculture zones identified and incorporated within LMMA plans by Yr2.</p> <p>2.2 Rules on who can use these buffer zones and how, under what conditions, any benefit-sharing arrangements, and how this is enforced included in appropriate management plans by Yr2 and being implemented by Yr3.</p> <p>2.3 50 female fishers (25 in Bandar, 25 in Mecufi) trained in bivalve farming Yr1. 100 female fishers (50 in Bandar, 50 in Mecufi) trained in bivalve farming practices Yr2. 150 female fishers (50 in Bandar, 100 in Mecufi) trained in bivalve farming practices by Yr3. Training conducted through VSLAs.</p> <p>2.4 Two female village agents identified per community trained to conduct outreach and deliver monthly trainings on bivalve farming to VSLAs from Yr1.</p> <p>2.5 At least six VSLA groups are engaged in and sharing bivalve farming revenue equitably by Yr3</p> <p>2.6 Two functional bivalve farms are set up Yr1 (one in Bandar, one in Mecufi). Four functional bivalve farms are set up by Yr2 (two in Bandar, two in Mecufi). Six functional bivalve farms are set up by Yr3 (two in Bandar, four in Mecufi).</p> <p>2.7 The average bivalve farmer's yearly income is of 90USD Yr1, 135USD Yr2 and 180USD Yr3.</p> <p>2.8 50% reduction of owned illegal mosquito fishing nets by Yr2 and at least 75% reduction by Yr3 compared to Yr1 baseline in Bandar and Mecufi</p>	<p>2.1 Ama technical reports, CCP meeting reports</p> <p>2.2 Training course reports; names of women engaged in bivalve farming</p> <p>2.3 Household baseline survey Yr 1 and repeat surveys Yr3</p> <p>2.4 Community endorsed map of zonation of bivalve farming activities</p> <p>2.5 VSLA member lists, and savings on VSLAs' 1st, 12th, 24th and share-out meetings by Ama</p>	<p>Red tides or other natural or anthropogenic events will not compromise bivalve culture</p> <p>Viable local markets remain in place for cultured bivalves.</p> <p>The communities' perception in regards to women improving their income is sensible and benevolent</p> <p>DPMAIP's main interest remains to foster high quality food production processes to address the population increase in the Province of Cabo Delgado</p>
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<p>3. Equitable governance and management of marine resources and sustainable bivalve aquaculture ensured through advanced representation and participation of women in CCPs and LMMA management</p>	<p>3.1 Differences in gender roles, activities, constraints, opportunities and perceived risks for people involved and affected by project implementation in both target communities understood by end of Yr 1</p> <p>3.2. Appropriate gender integration mechanisms and strategies e.g. separate venue for women to feed into LMMA management process, developed for each community by end of Yr1 and implemented by mid Yr2</p> <p>3.2. Appropriate gender integration mechanisms and strategies developed for each community by end of Yr1 and implemented by mid Yr2</p> <p>3.3. Gender sensitive monitoring plan designed and integrated into existing M&E tools, where appropriate, by Yr1</p> <p>3.4. Inter-disciplinary (humanitarian, development, academic and other relevant organisations) regional workshop held on effective approaches to share experiences and promote gender equity approaches in marine resource management and governance held by yr2.</p>	<p>3.1. Focus group discussion and key informant interviews documented and attendance lists disaggregated by gender.</p> <p>3.2. Meeting notes and sessions documented. Key information disaggregated by gender. Project reports</p> <p>3.3 CCP member lists, records from CCP meetings.</p> <p>3.4 VSLA member lists and attendance disaggregated by gender.</p> <p>3.5 Directory of village agents with contact details.</p> <p>3.6 List of bivalve farmers and income earned disaggregated by gender.</p> <p>3.7 Workshop participant list, workshop report with recommendations.</p>	<p>Current cultural, tradition and religious barriers to gender equity can be reduced.</p> <p>Appropriate local mechanisms for women to increase willingness to be involved in local marine management can be found and agreed by all community groups</p>
<p>4. Sustainable financing mechanisms (business models, functional VSLAs, legalizing LMMAs contributing to improve access to national and international funds to sustain management costs) established for Bandar and Mecufi LMMAs fostering multi-use zonation, sustainable bivalve aquaculture and gender equity</p>	<p>4.1 Business models with income from the sale of premium octopus (associated with temporary closures) and bivalves (from aquaculture) contributing towards the CCP costs and local coordination costs by Yr3 compared to a baseline of 0USD Yr1.</p> <p>4.2 VSLAs integrate environment funds by Yr3 and saving \$500 annually contributing towards CCP operating costs for enforcing the LMMAs.</p>	<p>4.1 Documentation of functional business models by Ama with support of ZSL and NOVA FCSH (reports of selling of octopus and bivalves by CCP members, CCP financial reports)</p> <p>4.2 Reports by Ama and CCP members of how VSLA environmental funds contribute towards enforcing the LMMAs</p>	<p>There is ongoing appetite from public sector for enforcing the legalization process of LMMAs in Mozambique</p> <p>The new REPMAR will be approved by the Mozambican Government in the first half of 2020</p>

	<p>4.3 Two LMMAs are legalized by Yr3</p> <p>4.4 Operating budget for LMMAs agreed with local officials and funding agreement secured</p>	<p>4.3 Official documents endorsed by the government proving the legalization of the two LMMAs</p> <p>4.4 Signed funding agreement of LMMA operating budgets</p>	<p>VSLA members are prone to contribute towards CCP operating costs</p> <p>Private sector stakeholders are prone to engage in Price Premium schemes</p>
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Activities (each activity is numbered according to the Output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

1. Two multi-zonation LMMAs established in Bandar and Mecufi by end of Yr1 with co-management agreements in place, each incorporating at least 200ha of no-take zones covering at least 2 critical habitats in each village (from seagrass, mangrove and coral), 50ha of buffer zones for preferential user rights, one temporary closure area, and mangrove rehabilitation area.
 - 1.1 Project presentation and consultation meetings towards generation of Free Prior Informed Consent from local communities and local government authorities.
 - 1.2 Conduct community profiling using existing RRA tools.
 - 1.3 VSLA Formation in each LMMA sites with environmental funds
 - 1.4 Participatory design of LMMA zonation
 - 1.4.1 Participatory mapping and assessment of resource, habitat and fisheries
 - 1.4.2 Exchange/learning visits of community leaders/champions to existing LMMA sites
 - 1.4.3 Community consultation using existing decision-making process for LMMA zonation design
 - 1.4.4 Participatory physical mapping of the LMMA Zonation
 - 1.5 Protect and restore mangrove areas
 - 1.5.1 GIS mapping of mangrove areas and assess mangrove community structure, including identifying target areas for replanting
 - 1.5.2 Train communities in mangrove nursery establishment and monitor and support nurseries
 - 1.5.3 Conduct replanting
 - 1.5.4 Monitor survival and growth (monthly) and mangrove community structure (annually)
 - 1.6 Establishment of governance structure with equitable membership
 - 1.6.1 CCP strengthening and integration of women and VSLA members
 - 1.6.2 Development of LMMA co-management plan
 - 1.6.3 LMMA zoning and demarcation
 - 1.6.4 LMMA regulation and enforcement plan drafting and approval by local authorities
 - 1.7 LMMA infrastructure establishment
 - 1.7.1 Design and establishment of marker buoys
 - 1.7.2 Design and construction of guard house
 - 1.8 CCP capacity building
 - 1.8.1 Conducting CCP's capacity need assessment
 - 1.8.2 Conducting first LMMA management Training workshop

- 1.9 Enforcement bodies training
 - 1.9.1 Conducting CCP training on LMMA regulation and enforcement plan
 - 1.9.2 Conducting Fisheries officer training in LMMA law enforcement
 - 1.9.3 Conducting training in patrol boat handling
 - 1.9.4 VSLA training in LMMA regulation and enforcement procedure
- 1.10 Conducting enforcement activities
 - 1.10.1 Weekly enforcement patrol conducted by CCP
 - 1.10.2 Monthly joint patrol conducted by CCP, fisheries officers and Ama
- 1.11 Formation and training of Village Agent
- 1.12 Outreach campaign activities targeting VSLAs, CCP, women group and the broad community members conducted in each LMMA sites
- 1.13 Conduct underwater surveys fish underwater visual census and coral cover in yr 1 (baseline) and yr 3 endline)

2. Integrated Territorial User Rights in Fisheries zones integrated into LMMAs to incorporate sustainable fishing and women-led bivalve aquaculture initiatives in Bandar and Mecufi to incentivise enforcement of LMMA and replace illegal mosquito net fishing for vulnerable female groups.
 - 2.1 Community consultation for Integrated Territorial User Rights in Fisheries regulation
 - 2.2 Conduct training on Integrated Territorial User Rights (TURF)
 - 2.3 Physical demarcation of TURF area.
 - 2.4 Participatory design of sustainable fishing and bivalve aquaculture zonation
 - 2.5 Exchange/learning visits of community leaders/champions to existing aquaculture sites
 - 2.6 Conducting communities' female fishers capacity need assessment for bivalve farming
 - 2.7 Conducting first bivalve farming training workshop (Yr2) (for 50 female fishers in total- 25 in Bandar, 25 in Mecufi)
 - 2.8 Conducting first bivalve farming training workshop (Yr2) (for 100 female fishers in total- 50 in Bandar, 50 in Mecufi).
 - 2.9 Conducting second training workshop (Yr2) including evaluation prior the training
 - 2.10 Conducting first bivalve farming training workshop (Yr3) (for 150 female fishers in total- 50 in Bandar, 100 in Mecufi)
 - 2.11 Conducting second training workshop (Yr3) including evaluation prior the training.

- 3 Equitable governance and management of marine resources and sustainable bivalve aquaculture ensured through advanced representation and participation of women in CCPs and LMMA management
 - 3.1 Focus group discussions and key informant interviews conducted to understand to understand the differences in gender roles, activities, constraints, opportunities and perceived risks for people involved and affected by fisheries and marine resource management project implementation.
 - 3.2 Analysis undertaken of findings from the research internally and sessions run with different groups in the community to brainstorm specific adjustments or additions to the project plan and priorities to produces better outcomes for gender-based opportunities and constraints for involvement of women.
 - 3.3 Conduct sessions with CCP on co-management plan, based on findings from research, if required hold separate feedback sessions to get higher levels of participation from females in the decision making process
 - 3.4 Conduct training on oyster farming with women in VSLA.
 - 3.5 Conduct training on outreach with women in VSLAs and CCPs
 - 3.6 Conduct training on VSLAs and Village Agent role
 - 3.7 Identify existing or develop indicators to measure gender participation across activities and integrate into existing survey tools and methods.
 - 3.8 Organise and deliver an interdisciplinary workshop to share experiences and promote approaches to gender equity consolidated and documented through a regional workshop of humanitarian, development, academic and other relevant organisations working on this topic

- 4 Sustainable financing mechanisms (business models, functional VSLAs, legalizing LMMAs contributing to improve access to national and international funds to sustain management costs) established for Bandar and Mecufi LMMAs fostering multi-use zonation, sustainable bivalve aquaculture and gender equity
 - 4.1 Community consultation with different groups for sustainable financing mechanism options (temporary closures and bivalves).
 - 4.2 Business model formation meeting and design
 - 4.3 Conduct sessions with VSLAs on Environment Fund to plan contribution towards CCPs (Yr 2)
 - 4.4 Meetings with the National Administration for Fisheries, the National Administration for Conservation Areas and other relevant national stakeholders to guide on how to legalize LMMAs
 - 4.5 Meetings with the Provincial authorities of Cabo Delgado and Districts of Pemba and Mecúfi and local stakeholders to proceed with guiding procedures for LMMA legalization

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 Total	Total to date	Total planned during the project
2	Master thesis in bivalve aquaculture	F	Portuguese	0	1			2
6A	People trained to form aquaculture groups	19M+23F	Mozambican	0	42			150
6B	Number of training weeks (aquaculture, gender equity, CCP functioning)			0	4			12
9	Co-management plan endorsed			0	0			2
11B	Socioeconomic and biological papers submitted to peer-reviewed journals			0	0			2
12B	Socioeconomic database to be enhanced and handed over to the host country			0	1			1
13B	CPUE database to be enhanced and handed over to the host country			0	1			1

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
n/a						

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

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@itsi.co.uk putting the project number in the Subject line.	
Is your report more than 10MB? If so, please discuss with Darwin-Projects@itsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	
Do you have hard copies of material you want to submit with the report? 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.	
Have you involved your partners in preparation of the report and named the main contributors	
Have you completed the Project Expenditure table fully?	
Do not include claim forms or other communications with this report.	