Biodiversity Challenge Funds Projects
Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus
Half Year Report

Note: If there is any confidential information within the report that you do not wish to be shared on our website, please ensure you clearly highlight this.

Submission Deadline: 31st October 2023

Project reference	30-025
Project title	Developing sustainable near-shore sea cucumber aquaculture on Selayar Island, Indonesia
Country(ies)/territory(ies)	Indonesia
Lead partner	Centre For Sustainable Energy and Resources Management, Universitas Nasional, Indonesia (CSERM-UNAS)
Partner(s)	Heriot-Watt University, UK (HWU)
Project leader	Dr. Jito Sugardjito
Report date and number (e.g. HYR1)	HYR 1 - April-September 2023
Project website/blog/social media	https://cserm.unas.ac.id/

Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).

Although we are not looking for specific reporting against your indicators, please use this opportunity to consider the appropriateness of your M&E systems (are your indicators still relevant, can you report against any Standard Indicators, do your assumptions still hold true?). The guidance can be found on the resources page of the relevant fund website.

Approaching the first half-year of implementation our project is on schedule and has achieved all stated outputs as stated in the original timetable. Minor adaptations have been made according to conditions in the field. The individual outputs and associated activities are outlined below:

Output 1: Sea Cucumbers and Seagrass Habitat Ecology Education, Awareness Raising

1.1 - Seagrass habitat assessment and profiling:

May 2023: Preliminary habitat assessment conducted across 30 km of coastline with 2 government agencies (Marine and Fisheries Agency and Regional Planning Agency) at 6 village locations around Selayar Island recommended for aquaculture, based on existing data and interviews with local residents, visit to sea cucumber aquaculture site in West Papua, and the preliminary assessment was presented in the 8th Indonesia Biotechnology Conference (IBC).

June 2023: FGDs conducted with representatives of 20 villages to gather information about condition of seagrass beds (including outlining project aims), particularly with regards to the presence of sea cucumbers, gleaning and other coastal economic activities. 28 potential locations identified across 20 villages for preliminary profiling. Subsequent analyses of substrate, seagrass species, tidal currents and potential predators conducted at 5 priority locations.

August-September 2023: In-depth ecological surveys of identified target sites for aquaculture development at 5 villages (Bontolebang, Bontoborusu, Lowa and Kahu Kahu (2 sites)) alongside PT SPK, including quantified seagrass density and growth rates, biosurvey of benthic fauna, and chemical/physical analyses of water and substrate. This data confirms site selection

for aquaculture development and provides baseline environmental data to establish positive/negative environmental impact of sea cucumber aquaculture. The data was also presented in the Wallace Science Symposium at Hasanuddin University.

1.2 - Production of Education/Engagement Materials

August-September 2023: Compiling data from target aquaculture development sites to present a summary profile of each location, and provide insight to local residents about why certain sites are selected over others. Preparation of simplified project outline leaflet and flyer to provide to local partners (village heads, community leaders and target participants), as well as technical outline for government stakeholders. Creation of PowerPoint materials for community engagement meetings.

1.3 - Women's-only project focus groups

June-August 2023: informal discussions with local residents, specifically women engaged in coastal gleaning for sea cucumbers and other marine resources. Discussions focused on identifying established methods and locations for gleaning, motivations for sea cucumber harvesting, challenges and perceptions of the economic potential and general conditions of social, economic and household welfare.

August 2023: Interviews with women engaged in sea cucumber gleaning to establish baseline economic data and pre-empt any potential needs for additional outreach, engagement, or modification of project aims and methodologies.

September 2023: formal FGD with target women in 2 villages identified as ideal locations for sea cucumber aquaculture as part of regular women-only meetings. Discussion focused on sea grass ecology and benefits, outlining project aims and methods, introducing preliminary framework for participation including roles and responsibilities, anticipated outcomes, time frame etc., to begin engaging potential participants in the pilot project process.

1.4 - Monthly community meetings

May 2023 - Preliminary outreach meetings with village heads to outline general project aims and request permission for initial project surveys and associated activities.

June 2023 - FGDs conducted with village heads and community leaders at 20 villages to exchange information regarding the condition of seagrass beds in potential target locations, introduce project methodologies and secure formal permission for implementation.

July-September 2023 - Ongoing habitat surveys accompanied by village and sub-district heads at each location, including preliminary briefings and informal discussions regarding project aims and potential next steps should their villages be selected as implementation sites.

July-August 2023 - Interviews conducted with fishermen and their households to establish baseline socioeconomic data and pre-empt any potential needs for additional stakeholder engagement during project implementation.

September 2023 - Formal meetings with village heads, local neighbourhood heads, sub-district heads to secure consent for pilot study development in 5 target village locations, including detailed explanation of proposed methodology and outcomes and technical specifications for pilot.

1.5 (1.1, 1.2) - FGDs with government agencies

May 2023 - initial meetings with Marine and Fisheries Agency and Regional Planning Agency to coordinate preliminary project surveys and secure support for project aims and methods.

June-September 2023 - ongoing coordination and information sharing with regional and local governmental bodies to ensure ongoing engagement as project stakeholders, provide details of project activities including invitations to join as observers.

September 2023 - FGD to secure formal support and permission for aquaculture development at identified target sites.

1.6 - Pilot Project Sites Established

September 2023 - aquaculture pilot sites identified at 2 participating villages in preparation for construction of ranching pens.

September 2023 - small-scale 'experimental' aquaculture sites identified at 3 further locations to establish viability for additional capacity expansion.

Output 2: Local Women trained in sea cucumber ranching at 3 project sites

2.1 - Construct Pilot Project Sites

September 2023: Ahead of schedule, preliminary construction of aquaculture ranching pens has been initiated, and is currently underway. Materials have been purchased and organised in

preparation for deployment in the field, with primary fencing columns currently under construction. Local women participants identified at each location and project engagement initiated, registered for stage 1 pilot development.

2.2 - Technical capabilities

August-September 2023:In anticipation of community-focused technical training provided for local women in Q3, the project team participated in a series of internal training sessions with sea cucumber experts and the project's private sector partner PT SPK to prepare required materials. Topics included sea cucumber biology for target species, technical design specifications and operation requirements for aquaculture pens, wild harvesting methods, seagrass ecology analysis and species identification.

2.3 - Modify and refine pilot project operations

August 2023: Site visit to PT SPK sea cucumber aquaculture facility in Lombok to review successful implementation of aquaculture methodology, site conditions etc. Designs for aquaculture ranching pens modified and adapted based on locally available skills and materials for the Selayar context in preparation for construction.

2. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

While overall project implementation has taken place according to plan, several issues of varying significance have arisen with potential to impact the final outcome, outlined below, along with steps taken to remedy any negative impacts.

Technical equipment purchase - delays in procuring a made-to-order water quality tool unavailable domestically forced the preliminary habitat survey (for aquaculture suitability) and detailed ecosystem profile (to measure impacts) had to take place separately, however this was remedied by adjusting the schedule of other activities to avoid wasted time/resources.

Administrative challenges - identifying specific jurisdictions for a complex, intersectoral project presents some challenges in Indonesia. In order to ensure maximum participation permission/support was secured from a wide range of government bodies at the provincial, district and local level.

Scale of seagrass habitat - ideal aquaculture development conditions (including seagrass health, ease of access, protection from tidal surges etc.) at individual target sites concentrated in specific areas. This will be addressed by the preliminary construction of 3 'experimental' sites to establish viability at additional locations before expanding activities and full participant numbers.

Local conservation zone - one target site for aquaculture development has been established as a community-based conservation zone, so in order to avoid overlap and potential conflict of interest additional pilot sites have been identified (see no.3).

Economic surveys - challenges associated with the reliability of sensitive income data provided by participants has precipitated a multi-parameter approach incorporating survey responses, government census data and in-kind calculations of economic contribution to establish baseline participant income.

Nearby settlements - access to marine resources between different villages is an occasional cause of conflict, with non-participating villages under no obligation to support or engage with the aquaculture development process. Discussions with local law enforcement, island-wide information sharing campaigns and direct outreach will be used to anticipate any potential conflict.

Logistics costs - changes in the domestic logistic network have increased the cost of transporting sea cucumber larva from PT SPK hatchery, undermining profitability. During the feasibility study demonstrating ideal ecological conditions, additional options will be explored for business development, including: alternative courier/logistics services, alternative sources of sea cucumber larvae, high-value processing on Selayar to increase sale price.

Staff change - Due to unforeseen health complications, one member of the secondary partner team (Michael Bell) from Heriot Watt University, UK, will no longer be able to participate in the project. His workload and compensation will be distributed between the two remaining team members as agreed via formal change request.

3. Have any of these issues been discussed with NIRAS and if so, have changes been made to the original agreement?	
Discussed with NIRAS:	Yes
Formal Change Request submitted:	Yes
Received confirmation of change acceptance	Yes
Change request reference if known: CR1_30-025, CR2_30-025	

4a. Please confirm your actual spend in this financial year to date (i.e. from 1 April 2023 – 30 September 2023)

Actual spend: [redacted]

4b. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this financial year (ending 31 March 2024)?

Yes ☐ **No** ☒ Estimated underspend: £

4c. If yes, then you need to consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a re-budget Change Request as soon as possible. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes if necessary. Please DO NOT send these in the same email as your report.

NB: if you expect an underspend, do not claim anything more than you expect to spend this financial year.

5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures?

N/A

If you are a new project and you received feedback comments that requested a response, or if your Annual Report Review asked you to provide a response with your next half year report, please attach your response to this document.

All new projects (excluding Darwin Plus Fellowships and IWT Challenge Fund Evidence projects) should submit their Risk Register with this report if they have not already done so.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but should also be raised with NIRAS through a Change Request. Please DO NOT send these in the same email.

Please send your **completed report by email** to BCF-Reports@niras.com. The report should be between 2-3 pages maximum. **Please state your project reference number, followed by the specific fund in the header of your email message e.g. Subject: 29-001 Darwin Initiative Half Year Report**