

2020 Annual Review

ICF Blue Forests (Blue Ventures) Programme Year 4

1. Summary Sheet

Title: Blue Forests Programme		
Programme Value: £10.1m	Review Date: February 2021	
Programme Code: ICF-PO001-BV	Start Date: Jan 2017	End Date: Dec 2024 (original end date: Dec 2023)

1.1. Summary of Programme Performance

Year	2017	2018	2019	2020	2021	2022	2023	2024
Score	A	A	A	A				
Risk Rating	Moderate / Major	Moderate / Major	Moderate / Major	Moderate / Major				

DevTracker link to Business Case:	https://devflow.northeurope.cloudapp.azure.com/files/documents/Blue-Ventures-Business-Case-Final-20190927040900.pdf
DevTracker Link to results framework:	https://devflow.northeurope.cloudapp.azure.com/files/documents/ICF-Blue-Forests-Logical-Framework-(2020-20201211101204.04.07)-(1).xlsx

This annual review covers the period January 2020 to December 2020, coming at the end of the fourth year of the Blue Forests programme. This annual review reflects on the overall good performance and progress of the programme in 2020 and identifies the challenges experienced and lessons learned throughout the year, and recommendations for the year ahead. The key message of this Annual Review is that **the majority of portfolio outputs are meeting or exceeding expectations** despite the challenging year of the COVID-19 pandemic.

The most evident impact of the COVID-19 pandemic on the Blue Forests programme has been delays to project delivery as travel and meeting restrictions prevented activities from taking place on the ground. This contributed to the majority of a £164,454 underspend in Year 4. To mitigate the possible reduction in long-term programme impact and to avoid missing overall impact indicator targets due to this underspend, Defra and Blue Ventures agreed a no-cost extension in December 2020 whereby the programme has been extended by one year to finish in December 2024 and the underspend will be reallocated in the additional Year 8.

1.1.1. Summary of Progress

The Blue Forests programme is currently operating at five sites in total across Madagascar (3 Sites: Ambanja Bay (Site 1); Velondriake (Site 2); and Mahajamba Bay (Site 3)) and Indonesia (2 Sites: Sembilang National Park (Site 4); and Kubu Raya (Site 5)). Development at Site 4 has since been slower than expected due to delays in securing a collaboration agreement (PKS) between Blue Ventures' project partner and Sembilang National Park Authorities (see below for more detail).

Overall, the Blue Forests programme has weathered a difficult year that was dominated by the COVID-19 pandemic. Travel restrictions and social distancing measures implemented by the Government of Indonesia (GoI) and the Government of Madagascar (GoM), resulted in planned activities being delayed or prevented from taking place, particularly due to the repatriation of Blue Ventures staff (both nationally and internationally). While this has resulted in some indicator targets not being

met, overall impact has still been achieved due to Blue Ventures' successfully adapting its model to meet immediate short-term needs, particularly in terms of viable livelihoods and increased support for community health clinics (see Section 5). The holistic nature of the BV programme has therefore been flexible to withstand huge socio-economic pressure and continued to support communities in areas where national governments fall short.

Defra and Blue Ventures have worked closely throughout 2020 to monitor the impacts of the COVID-19 pandemic and the programme has been extended by one year to ensure planned activities can take place. Defra has undertaken due diligence and is confident that any delays will be recouped, and overall impact of the programme will be achieved, albeit one year later than anticipated.

As a result, the **Blue Forests programme scored an average of A for this Annual Review**, meeting expectations despite the challenges of the COVID-19 pandemic.

Revisions to the livelihoods component of the logical framework took place in 2020 to reflect final site selection, data generated at each selected site, the suspension of the sea cucumber hatchery at Site 1 and the outcomes of feasibility studies conducted for particular livelihood activities. These revisions have impacted the expected outcome and output targets for 2020 (see Section 5 for further detail) and will be incorporated into the lessons learned from the continuing evolution of the programme.

1.1.2. Progress against the Delivery Plan

The Blue Forests programme continues to deliver well against the delivery plan, and the majority of spending remains on track. The major accomplishments of the programme in 2020 are:

- 1,005,865 mangrove propagules planted including 30,000 seedlings planted with Pur Project as part of the development of a tree nursery at Site 1 to help address the market demand for charcoal that is driving mangrove loss in the region.
- Third sea cucumber farm opened in Antsatsamoroy (Site 2) on 18 November 2020, including the first collective pen. 50 farmers from four villages received their first delivery of 12,000 juvenile sea cucumbers.
- First annual report for the Tahiry Honko carbon project at Site 2 approved by Plan Vivo. First carbon credits payment made to the Velondriake Association and an agreement made to enable income generated through carbon credit sales to cover the costs of primary school fees.
- Agreement with private aquaculture partner to ensure a guaranteed fish price for farmers while ensuring restrictions on minimum fish size and destructive fishing gear to limit environmental and ecological impact at Site 3.
- SMART forest and fisheries community monitoring patrol groups at Site 5 established, trained and operational.
- The Madagascar PHE (Population, Health, Environment) Network, supported by Blue Ventures, implemented a range of responses to the COVID-19 pandemic from awareness-raising, provision of handwashing stations and masks to livelihood strengthening and socially distanced natural resource management meetings.

However, political barriers, conflicts of interest and the various impacts of the COVID-19 pandemic on community priorities and the ability for activities to take place on the ground have resulted in delays and efforts which have been unsuccessful.

Barriers to successful Sea Cucumber Hatchery at Site 1. Plans to establish a sea cucumber hatchery at Site 1 (Ambanja) by the GoM overlapped with Blue Ventures' livelihoods efforts to establish a community-owned sea cucumber hatchery at Site 1. Blue Ventures' proposed sea cucumber hatchery has since been suspended. While this has delayed the expected impact of the livelihood component of the programme at this site, it has led to the scoping of further models which have the potential to expand the suite of livelihood models available to trial at existing and new sites.

Barriers to formalising Blue Carbon. There are significant challenges in integrating voluntary blue carbon projects into national/ jurisdictional REDD+ policy frameworks, putting additional pressure on blue carbon livelihoods. These are complex and Blue Ventures and Defra are working to understand these challenges further in order to identify the best action to take to appropriately resolve them and ensure the long-term viability of blue carbon as an alternative livelihood.

Barriers to securing permission to work at Site 4. Delays in securing the PKS for Sembilang National Park has prevented activities from taking place on the ground. This has, in part, been due to the impacts of COVID-19 on government priorities and availability. As Site 4 has significant areas of mangroves and high impact potential, these delays have had a disproportionate impact on the mangrove management efforts of the Blue Forests programme and subsequently the indicator results for this year. These delays will continue to pose a risk to programme impact and require a contingency plan, which is already in the pipeline, to mitigate against reduced impact if they cannot be resolved.

Impacts of COVID-19. Restrictions and repatriation efforts (see above for more detail) delayed and/or prevented activities from taking place, resulting in a redirection of funds to respond to changes in community needs. Where activities could continue, there were shifting baselines in terms of community income, health, fisheries management and livelihoods as programme priorities changed. Efforts to meet targets for 2020 doubled in light of the additional challenges, and whilst some targets have been missed (e.g. income generated) and programme impact for 2020 can be considered low, the results achieved in Year 4 are impressive when taking account of the unexpected barriers Blue Ventures and local communities had to overcome.

1.1.3. Action against Previous Year (2019) Recommendations

Recommendations for the previous year were:

- i. **Blue Ventures closely monitor the development and implementation of alternative livelihood activities across programme sites throughout Year 4.** Blue Ventures has continued to monitor and communicate to Defra the delays in developing livelihood activities throughout Year 4. Despite some delays, the flexibility of the programme has enabled it to successfully adjust activities and livelihood models in response to the needs of local communities. New short-term livelihoods such as vegetable growing and making face masks were developed, and models such as fish drying and smoking were expedited as these were more viable when wet fish markets closed. This has enabled the programme to continue to deliver against the expected outcomes, thereby reducing delivery risks.
- ii. **Blue Ventures closely manage the roll-out of activities to sites in Indonesia and monitor performance of the programme at these sites against the delivery plan and spend targets to ensure current and/or future delays do not result in an underspend for 2020 or poor performance against log frame targets.** As mentioned above, activities in Indonesia have not progressed as expected. However, Blue Ventures has managed these unforeseen barriers well, with frequent communication with Defra to mitigate impact, including early development of a contingency plan for Site 4 and agreement of a no cost extension whereby the programme has been extended by one year to allow underspend and delayed activities to take place.
- iii. **Blue Ventures continue to finalise a revised version of the Theory of Change (ToC) and make required amendments to the log frame and finalise the scope of the final programme evaluation and consider new ways of communicating beneficiary feedback from programme sites to Defra.** Blue Ventures worked with Defra to finalise a revised version of the ToC in 2020 which takes into account lessons learned throughout the programme. Further minor amendments are required to reflect more recent changes in livelihood indicators and any potential changes to the health indicators. The scope for the final programme evaluation has been finalised and work is underway to secure additional ICF funding to cover the costs.

1.1.4. Recommendations for the Year Ahead (2021)

Recommendations for the year ahead focus on primary areas of risk which may impact the continued effective implementation of the programme.

- i. **Blue Ventures should continue to work with Defra to develop, finalise and implement a robust contingency plan / Plan B in the case the Sembilang PKS is not secured.** Due to the extent of delays, a deadline ('cut off point') to secure the PKS / resolve the issues should be identified and a contingency plan developed should this deadline not be met. Options for the contingency plan should be assessed against specific criteria and, if adopted, the ToC and log frame should be reviewed to ensure they reflect any changes to the expected results and impact of the programme. The development and approval of a contingency plan should be a priority and implementation should begin as soon as possible, combined with the gradual phasing out of current work at Sembilang National Park.
- ii. **Blue Ventures should continue to monitor, reflect upon and inform Defra of the impacts of the COVID-19 pandemic on the Blue Forests programme and its beneficiaries to ensure risk and further delays can be managed appropriately.** The COVID-19 pandemic has had short- and long-term impacts on the programme and the communities it works within. As health and economic pandemics are likely to become more regular occurrences, increased resilience of programmes and communities is vital. Therefore, Blue Ventures should understand and disseminate learnings on how the programme can be improved to respond to future crises.
- iii. **Blue Ventures should continue next steps in the evaluation plan** by working with Defra to finalise and release the Terms of Reference and Invitation to Tender for the final programme evaluation and undertake a robust assessment of bidders to select the most suitable external contractor to complete the independent evaluation.
- iv. **Defra should work with the British Embassy in Madagascar and other government departments to further the development of blue carbon in Madagascar.** Due to the barriers to formalising blue carbon, HMG should work with the GoM via Post to help integrate blue carbon accounting into REDD+ strategies. As COP 26 Presidency, it is important that HMG utilises this position and the central theme of nature to lead on and encourage the inclusion of nature-based solutions such as blue carbon in Nationally Determined Contributions and national policies. Lessons learned across HMG mangroves and blue carbon programming can be shared to progress negotiations.

1.1.5. Lessons Learned

The lessons learned in 2020 focus on three key areas:

- i. **Overcoming legal and governmental obstacles.** The need to ensure sufficient time and resources to overcome political and legal barriers were highlighted in the previous annual review. For site 4, Blue Ventures has yet to receive the required PKS from the GoI and Berbak-Sembilang National Park offices to begin on the ground activities. While some delays have been unavoidable due to the impacts of the COVID-19 pandemic, and despite the formal registration of Blue Ventures' in-country partner in Indonesia, Yayasan Pesisir Lestari (YPL) in Year 3, which has greatly supported government relations, progress has been slow. Blue Ventures recently hired an independent consultant in October 2020 to unblock progress. Blue Ventures should seek to understand why the PKS continued to be delayed and seek early engagement with the Embassy, Post and relevant stakeholders to understand how future delays can be avoided. In addition, Defra and Blue Ventures should explore the benefits of the independent consultant and consider designing this approach into future programmes which risk additional legal and governmental obstacles. It is clear that even robust delivery plans can be affected by external factors which risk the ability of the programme to achieve expected targets. In this case, Defra and Blue Ventures should consider the likelihood that some sites may not proceed and the viability to develop surplus sites in future programmes.

- ii. **Responding to the COVID-19 pandemic.** The COVID-19 pandemic has had a major impact on activities and resulted in a one-year extension to the Blue Forests programme. Despite this, the Blue Ventures' model represents best practice in terms of a community-led approach. Blue Ventures' primary learnings from the pandemic have been published in papers.^{1, 2} These stress that a holistic approach to community programmes which includes health work is vital to increasing the climate resilience of communities.
- iii. **Implementing and scaling successful blue carbon models.** Following the successful validation of the mangrove carbon project, known as Tahiry Honko, at Site 2 in Year 3, its implementation has highlighted the complex legal frameworks that govern carbon projects. These policy barriers must be overcome if blue carbon is to be a scalable solution for sustainable marine management. It is critical that the negotiations regarding Article 6 of the Paris agreement lead to clear guidance at COP26 in Glasgow. Lessons learned from the Tahiry Honko project will be shared widely and contribute towards the transformational change resulting from this ICF programme. These lessons are also informing Blue Ventures' future strategy for its blue carbon work, to ensure that the benefits of climate finance are maximised for coastal communities.

Introduction and Context

1.2. Outlines and Rationale for Intervention

The Blue Forests programme aims to design and implement a model for the sustainable management of mangrove habitats. Coastal communities rely on these habitats to support coastal livelihoods, endangered marine biodiversity, carbon sequestration and other ecosystem, adaptation, and resilience services such as natural defences against floods and coastal erosion. However, mangroves are among one of the most endangered habitats with 30-50% of mangroves lost in the past 50 years due to clearance for development, overexploitation, and aquaculture.³ Mangrove deforestation is primarily driven by a lack of land and tenure rights and management techniques which enable local communities to invest in sustainable long term use of fisheries and/or alternative livelihoods supported by mangroves; and a limited market value for the diverse ecosystem services mangrove habitats provide.

The Blue Forests programme addresses these drivers by working with local communities, the private sector, and national governments to establish improved livelihoods and explore green business opportunities which are underpinned by sustainable mangrove forestry and fisheries management. The programme directly benefits coastal communities through improved climate resilience and adaptation capacity which is ensured through sustainable long-term management and conservation of endangered marine biodiversity and mangrove habitats.

The Blue Forests programme focuses on four key pillars:

- i. Blue carbon sequestration and forestry management;
- ii. Small-scale fisheries management and improvement;
- iii. Livelihood diversification;
- iv. Community health and women's empowerment.

¹ Walters et al. (2020) "Covid-19, Indigenous Peoples, Local Communities and Natural Resource Governance" *Parks* (Special Issues) 27:57-72 <<https://blueventures.org/publication/covid-19-indigenous-peoples-local-communities-and-natural-resource-governance/>>

² Phua et al. (2020) "Marine Protected and Conserved Areas in the time of Covid" *Parks* (Special Issues) 27:65-102 <<https://blueventures.org/publication/marine-protected-and-conserved-areas-in-the-time-of-covid/>>

³ <https://www.thebluecarboninitiative.org/about-blue-carbon>

The programme is delivered and managed by UK non-government organisation (NGO) Blue Ventures whose aim is to develop transformative approaches for catalysing and sustaining locally led marine conservation.

1.3. Overview of Expected Results

NB: The Blue Forests programme has been extended by one year with no additional cost to Defra and is due to end in December 2024 rather than the original December 2023. This is due to an underspend which took place in year 4 due to the impacts of COVID-19 and subsequent restrictions on planned activities which were either prevented or delayed. By extending the programme, it is expected that long term results will still be met albeit later than originally planned. In line with Official Development Assistance (ODA), the no-cost extension has been approved by the Senior Responsible Officer for the programme. Further detail is provided in Section 1.

Investment in the Blue Forests programme is planned to be £10.1 million over a period of 8 years with an expected total impact period of 20 years. This is under the expectation that additional funding from the private sector can be leveraged. Over the lifetime of the programme, expected results can be categorised into the following. This combination of strategies is predicted to be worth over £49.5 million over 20 years:

- **Poverty and income benefits.** Improved small-scale fisheries management and the provision of alternative livelihoods such as apiculture and sustainable sea cucumber harvesting is expected to alleviate poverty in targeted coastal communities and benefit 86,000 people.
- **Carbon savings.** Conservation and restoration of mangrove habitats will reduce deforestation rates and increase capacity for carbon sequestration. A total of 7.8 MtCO₂e is expected to be saved over 20 years through avoided deforestation and mangrove restoration and 5.7 million carbon credits produced.
- **Halting deforestation.** Sustainable habitat and fisheries management techniques and diversification of livelihoods is expected to save 4,413 hectares of mangroves from deforestation over 20 years, and place 181,678 hectares of mangrove forest under protection or sustainable management over 8 years.
- **Ecosystem services benefits.** Benefits of ecosystem services, diversity, and wildlife are extensive. Economic benefit from increased shoreline protection, pollution abatement and protection from sedimentation is expected to equate to US\$524,259 over 8 years.

Transformational change is a key indicator which cuts across these results. As models prove to be successful and benefits are realised, neighbouring communities recognise the benefits of adopting the same livelihoods, fisheries and sustainable mangrove management models. By establishing Blue Ventures' models in 5 sites, it is expected that an additional 99 sites will benefit from the natural proliferation of communities realising benefits and adopting the same models.

2. Performance and Conclusions

The annual review was developed through data gathering from the logical framework (log frame), alongside interviews and engagement with the project operations lead, monitoring and evaluation (M&E) lead, and staff on the ground.

2.1. Programme Management Tool summary

This section briefly summarises the output / performance of some of the programme management tools over the past year:

- i. **Log frame summary.** As previously indicated, revisions have been made to the outcome and output indicators for the livelihood component of the programme in 2020 to reflect lessons learned and developments within the programme (see Sections 1 and 5 for more detail). Despite these changes, the overall long-term impact of the programme remains the same.
- ii. **Value for money summary.** Revisions to the expected output and outcome results and impacts of the COVID-19 pandemic on the capacity to deliver programme activities has impacted the value for money assessment of the Blue Forests programme.
- iii. **Risk summary.** The Blue Forests programme has maintained a moderate / major risk rating with the COVID-19 pandemic and delays at Site 4 posing the most prominent risks (see Section 6 for more detail).

2.2. Impact Assessment

The overall impact aim of the Blue Forests programme is:

*Mangrove forests and ecosystem services (fisheries etc.) protected and restored,
preventing carbon emissions and supporting security of livelihoods in coastal
communities.*

Performance toward this impact is assessed through five Impact Indicators (see Table 1 below). In Year 4, the Blue Forests programme remains broadly on track with three of the five key results exceeding targets and one coming close to target. The ability to maintain this level of performance despite delays implementing activities at Site 4 and the challenges of the COVID-19 pandemic is impressive, demonstrating that a diverse portfolio of five sites, spread across different regions and countries, has brought some level of risk mitigation to the programme. Impact Indicator 1, which measures tonnes of CO₂ emissions avoided (KPI 6), is behind due to the delayed site having the most carbon-rich mangrove forests. In contrast, Site 1 has highly valuable ecosystem services (KPI 10) despite lower carbon stocks and has exceeded expectations in terms of restoration, greatly overperforming on Impact Indicator 5. This has compensated for the lack of performance at the delayed site. Improvements to data accuracy, with forest mapping technology coming online at 3 sites, also brings more confidence to our ability to track real progress on the ground. A full methodological note is provided in Appendix A.

Table 1: Impact Indicator Performance

Impact Indicator	2020 Milestone	Progress	
1. Tonnes of CO ₂ emissions prevented (KPI 6) (MtCO ₂)	432,021	308,508	Below target
2. Number of forest dependent people with livelihoods benefits protected or improved (KPI 3) (#)	33,000 ⁴	32,855 ⁵	Below target
3. Extent to which ICF intervention is likely to have a transformational impact (KPI 15): number of additional sites adopting models tested and proved within this programme (outside the five ⁶ sites) (#)	72	102	Above target

⁴ Improved understanding of livelihoods benefits at 3 sites. Census and baselines in Indonesia established.

⁵ Census being updated in Site 1 in 202; Site 4 work yet to start awaiting cooperation agreement with Government.

⁶ The number of sites supported by interventions by the Blue Forests programme was reduced from six to five in 2019 (as detailed in the 2019 Annual Review).

4. Total number of hectares where deforestation has been avoided (KPI 8) (ha)	464	487	Above target
5. Value of ecosystem services (KPI 10); difference in mangrove forest ecosystem services income (\$/yr)	207,307	281,680	Above target

The Blue Forests programme drives a meaningful transformational change (KPI 15) within mangrove habitats and the communities which rely upon them, placing people and accessibility at the centre of the model. Further details are provided in Annex A.

2.3. Annual Outcome Assessment

The overall outcome of the Blue Forests programme is:

Sustainable mangrove forestry and fisheries management activities implemented at six sites where coastal communities are supported by alternative livelihoods and improved access to health care, and therefore models for replication are validated.

Performance is assessed against this outcome through five indicators which focus on mangrove habitat and ecosystem management, conservation modelling, alternative livelihoods, and community health. A full methodological note is provided in Appendix A. At the end of Year 4, performance is impressive:

Significant livelihood and conservation benefits. The resilience of Blue Ventures' model should not be underestimated. Although the expected target for Outcome Indicator 3 was just missed, the diversity of livelihoods has ensured income generation despite unexpected market closures in Year 4. The empowerment of communities to adapt has avoided significant underperformance. Of note in Year 4, the first carbon credits payment was made to the Velondriake Association and the first collective pen in a sea cucumber farm opened in Antsatsamoroy at Site 2.

For outcome indicator 5, the number of new pieces of evidence for individual conservation models notably exceeded expectations at 11 compared to the expected 5. Evidence of particular note include a peer reviewed paper on Blue Ventures' own engineered Google Earth Engine Mangrove Mapping (GEEMM) tool and a factsheet on fish smoking, a livelihood adopted by communities impacted by the closure of wet fish markets due to the impacts of the COVID-19 pandemic, among others.

Less protection, more restoration. The hectares of mangrove area protected or under sustainable local management in 2020 (8,512 hectares) fell short of the expected target of 9,299 hectares. This is due to activities being delayed or prevented as a result of the COVID-19 pandemic and challenges in securing the PKS at Site 4. Despite this setback, 30,000 seedlings were still planted with contractor Pur Project as part of the development of a tree nursery at Site 1 as well as a total of 1,005,865 mangrove propagules.

Increased fisheries management. Three sites, compared to an expected two sites, conducted fisheries management activities in Year 4, including the continuation of monitoring activities and temporary fisheries closures which help revitalise depleted stock and increase catch in the longer-term. In addition, Blue Ventures has worked at Site 2 to help data collectors identify potential reserves to further advance fisheries management interventions. These interventions are being recognised as best practice for small-scale sustainable fisheries through the publication of peer reviews on reef fish

biomass recovery⁷ and overfishing in small-scale fisheries⁸ and the provisions of a case study on mud crab fishing for an FAO report on securing sustainable small-scale fisheries.⁹

Increased family planning. Performance against outcome indicator 4 has improved on performance in 2019. The total number of unintended pregnancies in Year 4 is 1,560 compared to 1,270 in 2019.

Table 2: Outcome Indicator Performance

Outcome Indicator	2020 Milestone	Progress	
1. Hectares of mangrove area protected or under sustainable local management (ha)	9,299	8,512	Below target
2. Number of sites implicated in fisheries management, including but not limited to fisheries projects (registered or action plans being implemented) (#)	2	3 (Site 1, Site 2 and Site 5)	Above target
3. Percentage of active producers making agreed model profit from alternative activity (%)	16	23.2	Above target
4. Number of unintended pregnancies averted	No target set.	1,560	
5. Number of new pieces of evidence (per year) for individual conservation models (e.g. crab fishery closure model, Plan Vivo model) (#)	5	11 ¹⁰	Above target

2.4. Overall Output Score and Description

The 2020 Blue Forests Annual Review has scored an average of **A**. This is based on quantifiable and readily reportable progress made on the output indicators in 2020 with further detail provided in Section 4 below.

Table 3: Output Indicator Performance

Output Number & Description	Impact Weighting (%)	Score
1. Sustainable community owned mangrove forestry management plans in place	30	A
2. Mangrove fisheries management or improvement projects in place	25	A
3. Implementation of viable new livelihood mechanisms	25	B

⁷ Gilchrist H. et al. (2020) "Reef Fish Biomass Recovery within Community-managed No Take Zones" *Ocean and Coastal Management* 192. Available at <<https://blueventures.org/publication/reef-fish-biomass-recovery-within-community-managed-no-take-zones/>>

⁸ Gough, C. L. A. et al. (2020) "Evidence of Overfishing in Small-scale Fisheries in Madagascar" *Frontier in Marine Science* 7(317). Available at <<https://blueventures.org/publication/evidence-of-overfishing-in-small-scale-fisheries-in-madagascar/>>

⁹ Kasprzyk Z. and A. Levrel (2020) "Madagascar's Mud Fishery: How Fishers Can Earn More While Catching Less" in Zelansney J. et al. (eds) *Securing Sustainable Small-scale Fisheries: Showcasing Applied Practices in Value Chains, Post-harvest Operations and Trade*. FAO Fisheries and Aquaculture Technical Paper No. 652. Available at <<http://www.fao.org/3/ca8402en/CA8402EN.pdf>>

¹⁰ This includes five peer reviewed papers (losses of soil organic carbon; reef fish biomass recovery; overfishing in small-scale fisheries; lessons learned in Velondriake; the Google Earth Engine Mangrove Mapping tool), two technical reports (fish smoking factsheet; sandfish farming manual), one case study in FAO report (mud crab fishery) and three sections accepted in the marine chapter of *Natural History of Madagascar* (seagrass; mangrove; coral reef).

4. Increased access to family planning services	10	A+
5. Organisational and financial structures in place to support 20-year programme vision	10	A
	100	Average: A

3. Detailed Output Scoring

This section will go into detail on the progress toward and recommendation for the programme output indicators, reflecting on the key milestones and challenges over Year 4.

3.1. Output 1: sustainable community-owned mangrove forestry management plans in place

Output 1: Sustainable community-owned mangrove forestry management plans in place			
Output number per LF:	1	Output score:	A
Risk:	Major	Impact weighting (%):	30
Risk revised since last AR:	n/a	Impact weighting (%) revised since last AR:	No

Indicator	2020 Milestone	Progress	
1.1. Number of sites with community-led mangrove management plans	4	4 (Site 1, Site 2, Site 3 and Site 5)	On target
1.2. Number of sites with an estimated carbon baseline scenario	3	4 (Site 1, Site 2, Site 3 and Site 5)	Above target
1.3. Number of carbon credits produced (with a minimum of 50% revenue shared with community)	0	0	On target

3.1.1. Key Points

The Blue Forests programme has met or exceeded all output 1 targets for this year, despite challenges (see below).

NB: While progress is on track for output indicator 1.1., progress relating to this indicator is dependent on work in Site 4 which is experiencing delays.

Progress at Site 1: Madagascar

Site 1 (Ambanja Bay) has progressed well in its mangrove preservation, restoration and sustainable management efforts. The historical unsustainable practice of felling mangroves for firewood and building materials without replanting has been reduced and 1,005,865 mangrove propagules and 38,000 alternative fast-growing (Acacia) wood trees and seedlings planted in the last year. To strengthen local governance and thus increase protection of both newly planted and long-standing forests, equipment has been provided to ten village patrol groups; a request for the transfer of management rights of natural resources was submitted for one new village (Maropamba); and one community association renewed a 10-year mangrove management contract with the Regional Direction of Environment and Sustainable Development.

Progress at Site 2: Madagascar

Site 2 (Velondriake) has progressed well overall despite challenges faced on the sale of carbon credits (see below). Mangrove replanting is showing a 64-91% success rate while regional authorities have

trained members of the Community Monitoring and Evaluation (CSE) Group on how to record and report mangrove cutting infractions. The Velondriake Association has met to review progress against the 2015-2019 Management Plan and create a new 5-year plan for the Velondriake Marine Protected Area (MPA).

Progress at Site 3: Madagascar

An estimated carbon baseline scenario is now available for Site 3 (Mahajamba Bay) as a result of participatory mangrove mapping. This has been presented to the 14 communities in the management unit and have been used to create a map to identify mangrove resource areas and uses. Different mangrove management transfer options have also been analysed via an inclusive, community-owned SWOT analysis which considered the strengths, weaknesses, opportunities and threats of each option.

Progress at Site 4: Indonesia

Despite significant delays at Site 4 (Sembilang National Park), some work has progressed. Blue Ventures' partner Yayasan Hutan Biru (YHB) has completed Phase 1 of the assessment of the Mangrove Forests Landscape Restoration (MFLR) opportunity in Sembilang National Park using the Restoration Opportunity Assessment Method (ROAM). Monthly coordination and strategic development meetings between the Sembilang National Park managers and non-government organisations (NGOs) have been established, facilitated and coordinated by Blue Ventures' site leader (two meetings were held in 2020).

Progress at site 5: Indonesia

Site 5 (Kubu Raya) was established in early 2020 and has since progressed well. Village Forest Management Institutions (LPHDs) across Teluk Pakedai and the Kubu subdistricts have been formalised and strengthened through continued support and training to manage the permit and area of forest via, for example, annual work plans. In the Batu Ampar subdistrict, training in data collection has taken place to enable the mapping of resource uses and locations for fisheries, non-timber forest products such as Nypah palm and forest honey, charcoal production and cultural or protected habitats.

3.1.2. Justification for log frame revisions

There were no log frame revisions for Output 1 in Year 4.

3.1.3. Issues

The programme has experienced two key challenges relating to forestry management in Year 4:

Carbon credit sales at Site 2. The 2019 annual review outlined legislation introduced in Madagascar which requires the Malagasy government to be signatories on all carbon credit sales. This legislation has resulted in bureaucratic processes which have delayed the sale of carbon credits and transfer of income to communities. While this has not impacted the log frame results as carbon impact from Site 2 is not included in the log frame, these legislative challenges will pose a risk to the future progress and impact of output 1.3 *number of carbon credits produced (with a minimum of 50% revenue shared with community)* if they cannot be resolved. Communities will not sufficiently benefit from their conservation efforts, impeding their access to diversifying income streams and valuing natural assets.

Delayed approval to work at Site 4. Delays in securing the PKS for Sembilang National Park is preventing activities from taking place on the ground. As Site 4 has significant areas of mangroves and high carbon mitigation potential, these delays have had a disproportionate impact on the mangrove management efforts of the Blue Forests programme and subsequently the indicator results for this year. These delays will continue to pose a risk to programme impact and require a contingency plan to mitigate reduced impact if they cannot be resolved.

3.1.4. Recommendations

Blue Ventures and Defra should continue to explore the complexities and challenges associated with carbon credit schemes and blue carbon programmes, including how to manage costs and operate voluntary carbon projects in the increasingly wide adoption of REDD+ approaches. If the challenges are too great, the log frame targets may need to be reviewed.

3.2. Output 2: mangrove fisheries improvement projects in place

Output 2: Mangrove fisheries improvement projects in place			
Output number per LF:	2	Output score:	A
Risk:	Moderate	Impact weighting (%):	25
Risk revised since last AR:	n/a	Impact weighting (%) revised since last AR:	No

Indicator	2020 Milestone	Progress	
2.1. Number of fisheries being monitored	9	9	On target
2.2. Number of Sites trialling/pilot locally relevant fisheries management (e.g. periodic closures, gear restrictions)	3	4 (Site 1, Site 2, Site 3 and Site 5)	Above target
2.3. Number of local fisheries management plans developed (e.g. Agreed harvest rules concerning a fishery or wider management contracts)	2	2 (Site 1 and Site 2)	On target

3.2.1. Key Points

The Blue Forests programme has met or exceeded all output targets relating to fisheries management for this year. Support for the establishment and progression of monitoring and fisheries management plans has been a key achievement in Year 4.

Progress at Site 1: Madagascar

Site 1 (Ambanja Bay) has continued as expected, making good progress. The same three fish, crab and sea cucumber fisheries have been monitored throughout Year 4 and two new crab reserves have been established in addition to the five permanent reserves already existing within the mangrove areas. Crab reserve monitoring has been conducted alongside participatory seagrass and coral reef mapping to explore future marine reserves. An annual training workshop was held for 13 community data collectors to help improve catch monitoring techniques and ensure consistent data collection for use in Management Plans. Blue Ventures continues to support communities with the implementation of the Fisheries Management Plans which are in place to establish, for example, the production of best practice guides for sustainable fishing gears and crab fishing.

Progress at Site 2: Madagascar

Site 2 (Velondriake) has continued as expected, making good progress. Monitoring has continued for octopus and fish throughout Year 4. However, finfish monitoring was paused at the end of 2020 to reconfigure the monitoring plans and transfer to a mobile monitoring data collection system in 2021. The annual report for the Fishery Improvement Project (FIP) has been validated by FisheryProgress. The second six-month update for the FIP was also approved by the Sustainable Fisheries Partnership and was awarded a rating of A.

Progress at Site 3: Madagascar

Site 3 (Mahajamba Bay) has progressed well in its improvement of mangrove fisheries and work to support sustainable small-scale and locally managed fisheries. Locally relevant fisheries management began trialling in 2020 through participatory mapping; supporting data collectors to identify potential reserves and management tools and understand local laws; fishing gear improvements; and post-harvest loss reduction via [best practices for crab fishing](#), training for fish smoking and product market scoping.

Progress at Site 4: Indonesia

Progress at Site 4 (Sembilang National Park) has been lower than expected due to challenges experienced in securing the Sembilang PKS throughout Year 4, delaying the implementation of activities on the ground. As fisheries diagnostic could not take place as expected, Blue Ventures approached a local university which has approved site access with a view to develop fishery baseline data. The Fishing Cooperative – a consortium of 88 members – has been strengthened through increased governance training and facilitated meetings. Planning for the Fishing Cooperative Annual General Meeting (due to be held in March 2021) has been supported by the Blue Ventures site leader.

Progress at site 5: Indonesia

Fisheries management trials at Site 5 (Kubu Raya) such as crab fisheries closures remained on track, continuing throughout Year 4. Blue Ventures has also enabled suitable governance and data collection to move toward fishery management plans. Twelve community members have been trained in the tools required to collect fisheries profiling data through the collection of necessary data from communities across two villages (Batu Ampar and Medan Mas). Questionnaires and focus-group discussions have sought to collect baseline information on key fisheries (for example, number of fishermen; fishing techniques and gear; income generation; seasonal calendars; supply chain mapping). This included governance and management indicators such as fishing gear, fishery institution structure, management systems and policies and will enable the mapping of current issues and potential solutions for small-scale fisheries management within the two communities.

3.2.2. Justification for log frame revisions

There were no log frame revisions for Output 2 in Year 4.

3.2.3. Issues

The programme has experienced two key challenges relating to fisheries management in Year 4:

Impacts of the COVID-19 pandemic. Travel and meeting restrictions due to the COVID-19 pandemic has impacted progress against Output Indicator 2 in various ways across the sites. For example, an independent consultant was due to carry out octopus stock assessments at Site 2 in 2020. These assessments were expected to inform discussions at a regional workshop and confirm a resultant management plan. Travel and meeting restrictions have meant the independent consultant, who would have travelled internationally to conduct the work, could not travel to site. Work continues to be on hold as the management plan cannot be confirmed without the data collected from these assessments. Other impacts include, fluctuations in fishing markets, which disrupted income generation, and impacts to tourism dependent livelihoods.

Delayed approval to work at Site 4. Delays in securing the PKS for Sembilang National Park is preventing activities from taking place on the ground. However, to mitigate the impacts of these delays, Blue Ventures entered into agreements with the University of Sriwijaya and the regional Government of the Banyuasin District, both of which have the required site access, to conduct fisheries baseline surveys. The COVID-19 pandemic and bureaucratic instruments will continue to be a barrier to progressing fisheries activities within the region if these issues cannot be resolved.

3.2.4 Recommendations

Blue Ventures should continue to work with partners at Site 4 to deliver activities as much as possible in light of delays to securing the Sembilang PKS. If the PKS is not secured and a contingency plan is required, Blue Ventures should engage early with beneficiaries at Site 4 to develop a phased exit from Site 4.

3.3. Output 3: implementation of viable new livelihood mechanisms

Output 3: Implementation of viable new livelihood mechanisms			
Output number per LF:	3	Output score:	B
Risk:	Major	Impact weighting (%):	25
Risk revised since last AR:	n/a	Impact weighting (%) revised since last AR:	No

Indicator	2020 Milestone	Progress	
3.1. Number of people engaged in alternative livelihoods	886	848	Below target
3.2. Total income generated	\$152,003	\$137,659	Below target
3.3. Number of new alternative livelihoods developed by Site	7	7	On target

3.3.1 Key Points

Livelihood activities are on track at most sites, although some targets have been missed in Year 4 (see below). Adaptive management and the diversity of livelihoods has enabled communities to weather the COVID-19 pandemic through innovative new models that responded to community needs. Performance against output indicator 3.1 remains strong, despite just missing the target, due to the high numbers of participants engaged in alternative livelihood activities at site 2. That said, there is a need to increase uptake at other Sites to ensure a sustainable model is developed across the communities. The total income generated through these activities (output indicator 3.2) is reduced due to issues of hive disease in honey production at Site 1, and a reduction of sea cucumber profit due to partner revisions of the model pricing structure for sustainability and wider uptake. The weak value of the Malagasy Ariary during 2020 has also had an impact on the income reported in USD.

Progress at Site 1: Madagascar

Site 1 (Ambanja Bay) has experienced challenges relating to the implementation of new livelihood models but has progressed steadily throughout Year 4. The proposed sea cucumber hatchery at Site 1 has been suspended due to overlap with government projects (see Appendix B2). However, terrestrial fuelwood and beekeeping have been established as alternative activities and 127 people are currently engaged in these livelihoods.¹¹ Blue Ventures have also analysed potential aquaculture sites and collected information from communities and partners on seaweed, oyster and sea sponge farming. 69 people across five villages (Andimakafito, Ambolikapika, Andrahibo, Ampampana and Ampondrabe / Mahamanina), of which 55 are women, have also been trained in vegetable growing. 32 people participated in a practice session and one village (Andrahibo) has successfully had its first harvest.

¹¹ NB: Only active producers (those who have recorded a sale in the past year) are now reported against output indicator 3.1.

However, long-term scalability and profitability of vegetable growing is currently unknown as assessments are ongoing and therefore not included in the calculations for Output Indicator 3.3.

Progress at Site 2: Madagascar

Seaweed, sea cucumber and honey continue as livelihood models at Site 2 (Velondriake) with a high number of community members (831 of the total 848 actively engaged across the programme) involved. A new financial model has been implemented at the sea cucumber farms to standardise prices to the farmers and the contributions to the Velondriake Community Association. In addition, new governance and management tools have been developed to strengthen the capacity of the community association in seaweed farming.

Progress at Site 3: Madagascar

A pilot for honey production (including 12 people) has been established at Site 3 (Mahajamba Bay). This resulted in the training of local community beekeepers in beehive construction, the transferring of bee colonies, and daily monitoring. In addition, 40 traditional beekeepers who use artisanal techniques have been identified and an exchange visit has been planned for October-December 2021 (COVID-19 restrictions permitting) with beekeepers who have been trained through co-funding to improve traditional techniques.

Progress at Site 4: Indonesia

Site 4 (Sembilang National Park) has not progressed as expected in the implementation of new livelihood models due to challenges experienced in securing the Sembilang PKS throughout Year 4, preventing site access and the implementation of activities on the ground. Livelihood models have therefore not been trialled or developed at Site 4 beyond remote (desktop) investigations into model feasibility.

Progress at Site 5: Indonesia

Site 5 (Kubu Raya) is the most recently established site and is currently at Stage 1 (desktop feasibility) of the livelihood component of the programme. Desktop feasibility studies are being conducted for livelihood models including crab fattening and honey. Focus-group discussions and interviews have taken place in two villages (Batu Ampar and Medan Mas) to understand existing forest and marine based livelihoods and the opportunities for alternatives. BV's project partner in Indonesia YHB has also begun to identify specific timber and non-timber products which could be placed within a silviculture management plan, including mangrove palm. In addition, a new education and knowledge sharing initiative in Batu Ampar enabled discussions on livelihood issues and opportunities, providing an entry point to discussing sustainable natural resource management. Three communities are currently involved in this initiative and activities have included the making of soap and hand sanitiser from mangrove leaf extract.

3.3.2. Justification for log frame revisions

The proposed sea cucumber hatchery at Site 1 has been suspended due to overlap with government projects. While this has delayed the expected impact of the livelihood component of the programme at this site it has led to the scoping of further models which have the potential to expand the suite of alternative livelihood models available to trial at existing and new sites. The sea cucumber hatchery was to be a strong milestone in achieving the expected long-term impact of the programme. The loss of the hatchery paired with the uncertainty of scoping future models contributed to the need to revise the log frame to reflect the most up-to-date expectations for the livelihood component of the programme.

3.3.3. Issues

Hive disease within honey production at Site 1. A mite which attacks and feeds on honeybees is spreading viruses which can be lethal to honeybee colonies. To date, this has only reduced the income generated and colonies at Site 1 continue to be productive despite reduced numbers. However, these mites are a significant issue in global honey production and the potential impact at Site 1, and other Sites, is currently unknown. The situation will continue to be monitored as Blue Ventures works to mitigate the effects of mite infestations.

Theft of sea cucumbers at Site 2. Approximately 2,000 sea cucumbers were stolen from Site 2 during January 2020. While this resulted in a loss of income and disruption to the community, it also led to the implementation of strengthened lease agreements and improved management tools and security measures such as search lights, more detailed monitoring books and communal pens to ensure equal profits.

Silk production is not viable at Site 3. The feasibility assessment for silk production has been finalised at Site 3 with unpromising results. A technical support partner also withdrew, and the potential buyer is no longer interested. This is possibly due to the complexities of the silk production sector and its high labour intensity which risks low return on investment. **NB:** It is natural that not all livelihood models will become functional and profitable.

Relationship challenges at Site 5. Conflicts of interest within local communities and a distrust of International NGOs (due to past experiences) has limited progress at Site 5. Blue Ventures continues to work with the communities to improve relationships: conflicts of interest are managed through regular facilitated communication and expectation management between community members, institutions and village governments; distrust of INGOs is addressed through regular communication with village governments and at the community level to ensure support is given to strengthen the village institutions and developing livelihoods are sustainable and community-based.

3.3.4. Recommendations

Performance against future milestones relies largely upon the scoping of further livelihood models at Site 1 and Site 3, and the ability of markets and communities to recover from the impacts of the COVID-19 pandemic and other challenges such as hive disease. Blue Ventures should focus efforts on the scoping and recovery of livelihoods and continue to monitor the implementation of activities at all sites, reporting any concerns to Defra.

3.4. Output 4: increased access to family planning services

Output 4: Increased access to family planning services			
Output number per LF:	4	Output score:	A+
Risk:	Moderate	Impact weighting (%):	10
Risk revised since last AR:	n/a	Impact weighting (%) revised since last AR:	No

Indicator	2020 Milestone	Progress	
4.1. Needs assessments completed at each Site	5	5	On target
4.2. Number of villages served by community-based health services	19-33 (plus Indonesia)	47 (44 plus 3 in Indonesia)	Above target
4.3. Number of outreach missions completed by	4 mobile outreach missions per year across two sites, plus new sites. All targets	12 in total (5 in Site 1; 4 in Site 2; and 3 in Site 3)	Above target

reproductive health partner	dependent on resource of partner organisations		
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3.4.1. Key Points

The Blue Forests programme continues to exceed expectations on its health objectives. For Year 4, this is largely due to a shift in priorities whereby the health response has been critical in the first year of the COVID-19 pandemic.

For all sites, Blue Ventures provided and supported awareness raising on the COVID-19 pandemic, including how it is transmitted and precautionary measures to limit the possibility of infection, alongside the training of COVID-19 vigilance committees in each village about their roles and responsibilities. Community Health Workers (CHWs) were trained in sites 2 and 3 on how to identify, monitor and report suspected COVID-19 cases and support the Public Health Service. The Madagascar PHE (Population, Health, Environment) Network (supported by Blue Ventures) mobilised quickly to disseminate important Ministry of Public Health information to all 40 of its members, including the National Contingency Plan for COVID-19 and various public health education resources. The PHE network also developed and shared guidance and tools to support members to implement their own cross-sector (health, livelihoods and conservation) responses to the pandemic. Tools included illustrated posters suitable for use in low-literacy rural settings. Network members are now implementing a range of responses to COVID-19 from awareness-raising, provision of handwashing stations and masks to livelihood strengthening and socially distanced natural resource management meetings.

Progress at Site 1: Madagascar

Site 1 (Ambanja Bay) is progressing well in the health component of the programme. Support and training have continued throughout Year 4 for CHWs and Youth Group Leaders on areas such as maternal child health care and reproductive health respectively. 22 missions have been conducted, including work with MSI Reproductive Choices (Marie Stopes¹²) to provide implants, intrauterine devices and long acting reversible contraception. Many of the missions and training have been used as an opportunity to raise awareness of the COVID-19 pandemic.

Progress at Site 2: Madagascar

Site 2 (Velondriake) is also progressing well in the health component of the programme. As above, missions have been undertaken with Marie Stopes based on community needs assessments. Awareness raising activities have also taken place with Mothers Groups and Youth Groups including 30 villages and 750 youth members on reproductive health and family planning topics.

Progress at Site 3: Madagascar

The Single Provider Outreach Nurse from Marie Stopes completed a mission to all 14 target villages at Site 3 (Mahajamba Bay) to offer mid- and long-term contraceptive methods.

Progress at Site 4: Indonesia

Site 4 (Sembilang National Park) has completed Stage 1 (community needs assessment) of the health component of the programme. No missions have been undertaken and no health services have been provided in Year 4.

¹² Marie Stopes is a UK charity which provides sexual and reproductive services to over 145 million women worldwide alongside UK based efforts.

Progress at Site 5: Indonesia

2020 is the first year community-based health services have been provided and/or supported in target villages at Site 5 (Kubu Raya). A week-long workshop has been held with government agencies and NGOs in Pontianak, capital city of West Kalimantan province. This workshop launched the integrated health-environment approach and initiated the training of Health Ambassadors (HAs) in the area whereby 13 new HAs have been recruited and trained, and refresher training provided for 17 pre-existing HAs from three villages (Sungai Nibung [Teluk Pakedai subdistrict], Mengkalang and Seruat Dua [Kubu subdistrict]). HAs visited 746 households across the three villages to provide access to services and health information. An evaluation of the HA approach, and progress, has also been held quarterly throughout Year 4.

3.4.2. Justification for log frame revisions

The log frame indicators and expected targets for the health component of the programme will be revised following this Annual Review to better reflect health care needs in Indonesia. The current scope of health support offered by the Blue Forests programme is narrow, focused primarily on family planning as the model has been transferred from Madagascar where need is high. Data collection activities in Indonesia will identify community priorities in relation to health and inform how best to expand the scope of health activities provided by the programme.

3.4.3. Issues

The programme has experienced one key challenge relating to community health in Year 4:

Low and/or decreased engagement from communities at Site 4 and Site 5. There has been low and/or decreased engagement from communities in Indonesia throughout Year 4. This is due in part to reduced enthusiasm following continual data collection and a low baseline in the capacity of community HAs. Once activities progress past information gathering and training outreach missions, more engagement is anticipated as the use and impact of HAs will be better perceived. The scope of the programme's health component is also narrow, primarily focused on family planning which does not meet community need in Indonesia (see above).

3.4.4. Recommendations

Blue Ventures should review the log frame indicators and expected targets for the community health component of the programme and work with Defra to set agreed revisions to reflect need in Indonesia (see above). The updated indicators should then be reported against in the 2021 Annual Review.

3.5. Output 5: Organisational and financial structures in place to support 20-year project vision

Output 5: Organisational and financial structures in place to support 20-year project vision			
Output number per LF:	5	Output score:	A
Risk:	Moderate	Impact weighting (%):	10
Risk revised since last AR:		Impact weighting (%) revised since last AR:	No

Indicator	2020 Milestone	Progress	
5.1. <u>Organisational capacity</u> . Number of relevant community structures (organisational; financial; administrative)	3	15 (Site 1, Site 2, Site 3 and Site 5) ¹³	Above target

¹³ Site 1: one Federation (11 associations); Site 2: one management association; Site 3: seven community associations; and Site 5: six Lembaga Pengelola Hutan Desa (village forest management body).

in place to support local mangrove and fisheries management			
5.2. <u>Monitoring capacity.</u> Number of Sites where community resource monitoring protocol is in place	4	3 (Site 1, Site 2 and Site 5)	Below target
5.3. <u>Enforcement capacity.</u> Number of sites where a community-led coastal management law enforcement protocol is in place.	3	3 (Site 1, Site 2 and Site 5)	On target
5.4. <u>Conservation agreements.</u> Number of Sites with functioning, transparent community conservation agreements	4	3 (Site 1, Site 2 and Site 5)	Below target

3.5.1. Key Points

The Blue Forests programme has not met some output 5 targets for this year due to slow progress experienced at Site 3. This is largely due to challenges relating to the geography of the site (see below). However, significant support for local mangrove and fisheries management has been formalised through adaptive community structure models which account for the differing social and governance contexts of each site.

Progress at Site 1: Madagascar

Site 1 (Ambanja Bay) is progressing steadily. Support for the Federation to strengthen its monitoring, enforcement and management capacity continued. The first general assembly of Federation Miaramientagna (the official federation of 11 community associations) has been supported to ensure effective management of the federation and recruitment for the Monitoring and Evaluation Committee has been launched to record infractions of the *Dina* (local laws). In addition, enforcement equipment has been distributed to security patrollers in 10 villages, and a pilot scheme to ensure medical insurance for mangrove patrollers has been undertaken. The Government's Local Service of Environment has carried out three mangrove patrols with an additional patrol led by 12 community mangrove patrollers.

Progress at Site 2: Madagascar

A management association and capacity building are already in place at Site 2 (Velondriake) and continued throughout Year 4. Regional authorities trained members of the Community Monitoring and Evaluation (CSE) Group on how to record and report mangrove cutting infractions to decrease the rate of cutting in target villages. In addition, Blue Ventures trained the CSE Group on the use of Spatial Monitoring and Reporting Tools (SMART). Biweekly forest patrols and monitoring are carried out by 14 of these members, and a Cybertracker has been piloted to ensure infraction data are recorded and disseminated to inform mangrove management action. 28 members of the Velondriake *Dina* Committee met with local authorities and community representatives to evaluate four years of work on the *Dina* and develop solutions for improving its application.

Progress at Site 3: Madagascar

Organisational capacity at Site 3 (Mahajamba Bay) focuses on the village rather than LMMA level as there is no LMMA or *Dina* established. Therefore, a Community Association is present, compared to the Management Association and Federation at Site 2 and Site 1 respectively. All seven associations in the management unit are now formalised following the formalisation of four new Community Associations. Capacity building for the board of the seven fishers' associations has also been completed, focusing on association management. In addition, the identification of capacity building needs continued as the associations progress toward establishing monitoring and enforcement

protocols. Site 3 is now in a good position to set up monitoring of adherence and enforcement following 21 waves of *Dina* consultations with community members from all seven community associations.

Progress at Site 4: Indonesia

Site 4 (Sembilang National Park) has not progressed as expected due to challenges experienced in securing the Sembilang PKS throughout Year 4, preventing site access. Blue Ventures have therefore not been able to approach and/or develop relevant community structures to the extent of other sites.

Progress at site 5: Indonesia

Site 5 (Kubu Raya) is the most recently established site and is progressing well. A law enforcement protocol is now in place and four mangrove patrol groups across four villages have been formalised in the Teluk Pakedai subdistrict (Sungai Nibung) and the Kubu subdistrict (Seruat Dua, Mengkalang and Mengkalang Jambu). These patrol groups covered 9,625 hectares on mangroves in Year 4 using the SMART methodology.

3.5.2. Justification for log frame revisions

There were no log frame revisions for Output 5 in Year 4.

3.5.3. Issues

The programme has experienced one key challenge relating to organisational and financial structures in Year 4 which is an annual issue:

Rainy season limits progress at Site 3. Access to Site 3 is heavily, if not entirely, restricted during the annual rainy season (January-April) due to health and safety concerns. During this time, access is only reliably possible via alternate forms of transport such as helicopter or private plane which Blue Ventures does not have access to. Therefore, for every 12 months of work at the other sites, the equivalent of 8 months is achieved at Site 3, limiting the possible extent of progress.

4.5.4. Recommendations

Blue Ventures should review how annual restricted access to Site 3 will affect the long-term impact of the programme and consider if updates to the log frame are required or reduced activity can be compensated for at alternate sites. The latter should be prioritised.

5. Value for Money & Financial Performance

5.1. Key Costs Drivers and Performance

The main cost drivers have not changed significantly in Year 4, or since the start of the programme. In 2020, Madagascar experienced inflation of 4%, Indonesia 2% and the UK 1%. The exchange rate between Madagascan Ariary and Pounds Sterling (GBP) increased by 12.2%, following an overall increasing trend since the beginning of the programme. This, combined with a smaller inflation rate compared to previous years, decreased the overall GBP cost of the programme, marginally increasing Blue Ventures' purchasing power. Blue Ventures continues to monitor the impact of shifting inflation and exchange rates and highlight any risks to Defra.

5.2. Value for Money Performance

The one-year extension of the programme and reduction in livelihoods log frame targets could be seen to reduce the value for money of the programme. However, Defra takes into account non-quantifiable benefits when assessing value for money, as well as performance against the log frame targets.

The Blue Forests programme is held in high regard in terms of its transformational impact whereby the programme demonstrates successful models for the protection, restoration and sustainable management of mangrove habitat which can be replicated and scaled across the coasts of targeted geographies. While *Impact Indicator 3: number of additional sites adopting models tested and proved within this programme* presents highly successful results, with the programme already exceeding its lifetime target of 99 sites, this is only one representation of a complex and often non-quantifiable model. The success of these models is emphasised by the programme's ability to respond rapidly to changing socio-economic context. The impact of the COVID-19 pandemic has been significantly mitigated by Blue Ventures' well-established health work and intra-community working arrangements, particularly in Madagascar where the programme is more fully established. Embedding community health into nature and climate benefits, and placing people at the centre of conservation efforts, Blue Ventures' model has enabled a rapid and agile response to changes in community need. The significance of this cannot be understated and Defra realises its value.

In addition, the alternative livelihoods income work was not included in the original cost-benefit analysis, resulting in the original benefit-cost ratio (BCR) at 12.6:1 presenting greater value for money than it otherwise would have been. The impact of the log frame revisions is therefore negligible in this respect.

The BCR is now calculated at 8.3:1 and the Net Present Value (NPV) of the programme is £49 million, and Defra continues to believe the Blue Forests programme represents **good value for money**. Further detail is provided below.

5.2.1. Economy

Economy relates to buying inputs of the appropriate quality at the right price. Blue Ventures are currently undertaking a salaries benchmarking exercise which will be completed in 2021 and impact spend for that year. This exercise will ensure a fair and defensible salary is paid to Blue Ventures' employees, in comparison to other organisations in the same sector and geography and of the same size. Blue Ventures prides itself on hiring national staff wherever possible, with a current rate of 93.2% national, to ensure the longevity of project work and economy, and reduce overhead costs by not relying on expatriate staff.

To negate any negative impacts of fluctuating exchange rates, grant funds are held in GBP in the UK for as long as possible, releasing funds only when they are needed by Site Offices. Partner subgrants are now being made in local currency so that Blue Ventures can closely manage the risk of exchange rates overall. As with Site Offices, Blue Ventures monitors partner spending to ensure funds are held in the UK until they are needed.

5.2.2. Efficiency

Efficiency relates to how well inputs are converted into outputs, i.e. 'spending well.' Blue Ventures has implemented a number of new systems to ensure efficiency and reliability in spending, including [hibob](#) for Human Resources management, [TeamTailor](#) for recruitment management and [Access](#) for financial management.

Indonesian partners YHB and YPL have shown great efficiency in their subgrants in 2020 through the consolidation of activities and field visits. For example, Participatory Rural Appraisal and Participatory Action Research training in Indonesia was moved to the village level to save venue costs and avoid unnecessary movement of people during the COVID-19 pandemic to reduce health risks. Virtual platforms were also used wherever possible while travel and meeting restrictions have been in place.

Output 1: Sustainable community owned mangrove forestry management plans in place is the most crucial to achieving the intended outcome of the programme, with an impact weighting of 30%. The

programme is meeting or exceeding all target for Year 4 under this output, suggesting efficient allocation and use of funds.

5.2.3. Effectiveness

This relates to whether the outputs produced by the intervention are having the intended effect, i.e. 'spending wisely'.

The Blue Forests programme is meeting or exceeding most impact, outcome and output indicators for Year 4 (c. 73%) despite the challenges mentioned throughout this Annual Review.

Delays to project implementation at Site 4 and access issues at Site 3 are having the largest impact on the effectiveness of the programme. The extent of impact resulting from delays in securing the PKS at Site 4 is unknown but may be significant. The recommendations for the coming year therefore address this uncertainty and identify mitigating actions which can be taken forward by Blue Ventures and Defra (see Sections 1.1.4 and 4.5.4) to minimise delivery risk.

In addition, the COVID-19 pandemic hindered the effectiveness of the programme to progress as expected against the delivery plan. However, the programme proved its value for transformational change, balancing missed targets against exceeded targets as funds were redirected to meet changes in community need. The agility and rapid response of the programme (see Section 5.2) enabled communities to effectively weather the global health crisis and is highly promising for future effectiveness.

Revisions to log frame targets and baselines

As detailed above, the alternative livelihoods component of the programme underwent revisions in Year 4 (see Appendix B1 for more detail). Tables 4 and 5 below outline the livelihoods indicators that have been revised in the past year and their new programme lifetime targets. As the programme has been extended by one year, the lifetime has also been revised from Year 7/Year 20 to Year 8/Year 20.

Impact indicators. No impact indicators or lifetime impact targets of the Blue Forests programme have been impacted by revisions to the log frame since the 2019 annual review.

Outcome Indicator 3 has been refined: The expected percentage of people making agreed model profit from alternative livelihood activities been rephrased to reflect beneficiaries who are *actively* involved in alternative livelihood activities only. 'Active producers' are defined as those people who have made a sale in the last calendar year. The final target of 60% is expected to be met after 8 years rather 7 years, resulting in proportional decreases for the years prior. This means that the expected percentage of people making agreed model profit from alternative livelihood activities in Year 4 has reduced from 30% to 16%.

Table 4: *Outcome Indicator Revisions in Year 4 (2020)*

Outcome Indicator	Original Year 4 Target	Revised Year 4 Target	Original Lifetime Target (Year 7)	Revised Year 7 Target	Revised Lifetime Target (Year 8)
3. % of people making agreed model profit from alternative activity	30		60		
3. % of active producers making agreed model profit from alternative activity		16		44	60

Output Indicator 3.1 has reduced significantly. The expected number of people engaged in alternative livelihoods has reduced significantly from 1,763 to 886. This is due to a combination of site-specific data generated on the feasibility of successfully replicating seaweed and sea cucumber aquaculture at other sites and the suspension of the sea cucumber hatchery at Site 1 which has reduced overall uptake.

Output Indicator 3.2 has reduced significantly. The expected total income generated has reduced significantly from US\$281,452 to \$152,003. This is due to site-specific data generated to reflect the true profitability and more accurate timescales for development and scaling of livelihood models.

Output Indicator 3.3 has increased. The expected number of livelihood models developed has increased from 9 to 15. This is largely due to the need to scope new alternative livelihoods options to mitigate the challenges of replicating seaweed and sea cucumber models in different sites.

Table 5: Output Indicator Revisions in Year 4 (2020)

Output Indicator	Original Lifetime Target (Year 7 / Year 20)	Revised Target (Year 7 / Year 20)	Revised Lifetime Target (Year 8 / Year 20)
3.1. Number of people engaged in alternative livelihoods	5,235 (Year 20)	-	1,875 (Year 20)
3.2. Total income generated from alternative livelihoods	\$1,319,094 (Year 7)	\$461,460 (Year 7)	\$719,453 (Year 8)
3.3. Number of alternative livelihoods developed	9	-	15

Revisions were also made to the forestry indicators in 2019 to reflect improved knowledge of the project sites and updated scientific data on baseline deforestation rates. While these revisions impact the long-term expectations (7-year and/or 20-year impact) of the programme, they do not impact the expected targets for 2020 and are therefore not detailed in this annual review. The health indicators will be revised in 2021 and will be reported against in future annual reviews.

5.2.4. Equity

Equity refers to how fairly the benefits are distributed and to what extent marginalised groups will be met, i.e. 'spending fairly'.

The programme works towards improved gender outcomes, e.g. through family planning activities in some sites which enables recipients to make their own choices on family size and timing of pregnancies.

As well as addressing equity on the ground/amongst stakeholders, in 2020 BV developed an Equality, Diversity and Inclusion (EDI) group to ensure reporting, discussion and addressing of inequity in the organisation and its work. The group has 13 staff working to develop an action plan that will be reviewed by an external expert, for changes and improvements to Blue Ventures' policies and procedures in 2021.

This includes the inclusion of females at all levels of management of the project for example, the project manager, the Indonesia country lead and two of the five site leaders are female.

5.3. Value for Money Assessment: Does the Blue Forests Programme Continue to Represent Value for Money?

NB: The most recent value for money assessment is indicative, taking into account that the programme has been extended by one year and new baselines and subsequent proportional changes to some targets have not yet been calculated.

The reduced lifetime targets of the programme have led to a reduced NPV, falling to £49.5 million compared to £54 million in the 2019 Annual Review and the original NPV of £141 million in the Business Case. In contrast, the Benefit-Cost Ratio (BCR) has increased, rising to 8.3:1 compared to 6.07:1 in the 2019 Annual Review, although this remains lower than the original BCR of 12.6:1 in the Business Case.

The original business case appraised three funding level options: £3.7 million; £5.1 million; and £10.1 million. Defra chose to provide the highest level of funding as this had the highest BCR and NPV. Revisions to the indicators which have resulted in the programme's most recent BCR and NPV would have affected all funding level original options equally and, as a result, Defra believes that the highest level of funding continues to be the strongest option.

It is unusual for the BCR to increase while the NPV is reduced. In this case, the previous BCR calculation in 2019 captured various additional costs faced by the delivery partner which do not need to be included when determining Defra's BCR. This resulted in a lower BCR in the last Annual Review than it otherwise would have been. In comparison, the BCR for this Annual Review is based on the benefits and costs attributed to Defra only to ensure these are proportional and more accurately represent Defra's impact.

The COVID-19 pandemic and resultant programme extension have impacted the value for money assessment and Blue Ventures continues to closely monitor the long-term implications. The programme is underperforming against the most significant indicator for achieving programme impact, *Outcome 1: Hectares of mangrove forest area protected or under sustainable development*. However, the programme is meeting or exceeding all other measurable outcome indicators and the high transformational change potential of the programme, which is largely non-quantifiable, must be accounted for. The resilience of Blue Ventures' model has been proved by the programme's ability to adapt to and weather the COVID-19 pandemic. Defra believes the programme is achieving good value for money, considering the progress made against output and outcome objectives over the first 4 years of the programme, and the strong value for money case (see Section 5.2) despite a slight reduction to the NPV. The NPV and BCR continue to be positive and Defra believes that the non-quantifiable potential for transformational change (KPI 15) largely contributes to the good value for money of the programme.

5.4. Quality of Financial Management

Financial management has been strengthened in Indonesia in 2020 with the establishment of subgrants with two partners and the creation of a separate NGO (YPL). This focus should continue in 2021 as Blue Ventures ensures that the management of partner finances meets the required standards of both Defra and Blue Ventures.

All annual reports have been submitted on time with financial updates provided as part of quarterly Steering Group meetings. Monthly finance meetings are also held internally in Blue Ventures where partners must provide regular financial reports as part of their contractual (subgrant) requirements.

Blue Ventures' financial year runs from July to June and a project-specific audit is budgeted for the end of the programme, as required.

Title: Blue Forests Programme	
Date of last narrative financial report:	29 June 2021

Date of last audited annual statement:	29 June 2021
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6. Risk and Risk Management

6.1. Overall Risk Rating

The Blue Forests programme has maintained a **moderate** / **major** risk rating but at a decreased level compared to the last Annual Review. While the challenges faced in securing the PKS at Site 4 and the impacts of COVID-19 are slowing expected progress, the programme has proved it can successfully mitigate unexpected challenges through the holistic and agile nature of Blue Ventures' model. Defra regularly reviews programme risks through its governance processes and discusses Blue Ventures' risk register with them at each quarterly Steering Group meeting.

6.2. Overview of Programme Risk

The risks and associated mitigation measures and contingency plans if risks occur are listed in the table below.

Probability (or likelihood) is based on a scale of very unlikely > unlikely > possible > likely > almost certain.

Impact is based on the scale of insignificant > minor > moderate > major > severe.

Risk Rating is based on the Red Amber Green (RAG) system.

Risk	Probability	Impact	Risk Rating	Mitigation	Contingency
Sembilang collaboration agreement (PKS) is not secured, preventing vital activities taking place. This may risk value for money and drastically reduce programme outcomes due to lost restoration and carbon sequestration potential of mangroves in Sembilang National Park.	Likely	Moderate	Major	Consultant with good track record and line to ministers has been appointed to liaise with Indonesian government	March 2021 deadline has been set to unblock PKS. If blockages are not resolved, a Plan B will be adopted (see Section 1.1.4).
Impacts of Covid-19 continue to delay or prevent activities from being delivered. This may cause the programme to miss log frame targets, underspend, and/or is unable to deliver	Likely	Moderate	Major	No-cost extension secured. Defra continues to work with BV to understand the impact of CV-19 on the programme.	A further extension may be considered in the future or programme targets will be revised and expected performance

<p>expected results over the lifetime of the programme</p>					<p>will be lower than expected. Alternative activities and redistribution of funds across activities considered to enable programme to continue throughout the pandemic.</p>
<p>Blue Ventures downgrade expected results and/or a decision is made that Defra is unable to claim expected results after the lifetime of the programme. This may cause reputational damage for the department and may call into question value for money.</p>	<p>Almost certain</p>	<p>Major</p>	<p>Severe</p>	<p>Maintaining regular communication with Blue Ventures to monitor timeframes and assess need for log frame target revisions. Large transformational change benefits could outweigh missed targets.</p>	<p>If targets are significantly downgraded, the BCR and value for money will be recalculated. If the programme no longer provides good value for money, Defra will work with Blue Ventures to identify improvement opportunities or withdraw funding.</p>
<p>Blue Ventures are unable to form an agreement with timber concession owners at Kubu Raya, impacting livelihoods and site performance. This may result in the programme not meeting indicator targets.</p>	<p>Possible</p>	<p>Moderate</p>	<p>Major</p>	<p>Maintaining regular communication with Blue Ventures to monitor timeframes and assess log frame target revision potential.</p>	<p>Work with BV to seek other opportunities at the Site, which will allow work to continue and reach expected results.</p>
<p>Blue Ventures are unable to effectively manage the programme due to internal or external factors and/or insufficient internal</p>	<p>Rare</p>	<p>Moderate</p>	<p>Low</p>	<p>Quarterly steering group meetings take place with risk as a standing agenda. A programme</p>	<p>Support Blue Ventures in setting up proper internal programme management tools to</p>

<p>systems. This may lead to delays and slow progress which would result in failure to meet expected targets.</p>				<p>risk and issues register has been established.</p>	<p>effectively manage and mitigate risk.</p>
<p>Lack of M&E prevents effective measurement of outcomes, reporting against KPIs, and determining value for money.</p>	<p>Unlikely</p>	<p>Moderate</p>	<p>Moderate</p>	<p>Log frame has been developed and agreed as well as indicator methodologies and a final programme evaluation plan which will include an assessment of M&E systems and data by an external evaluator.</p>	<p>Supporting Blue Ventures in the final programme evaluation plan will ensure key areas of performance and outcomes are measured effectively for a robust project completion report.</p>
<p>Lack of engagement from the governments of Madagascar and/or Indonesia limits performance and ability for the programme to meet its aims and indicators.</p>	<p>Possible</p>	<p>Moderate</p>	<p>Major</p>	<p>Communication between UK Ambassadors, Post, and Blue Ventures to guide engagement.</p>	<p>Regular communication with in-country UK HMG ambassadors to flag any issues.</p>
<p>Delays pose a risk to meeting milestones for future years, resulting in underspends and lower payments made annually in December in line with the Grant Agreement.</p>	<p>Possible</p>	<p>Minor</p>	<p>Moderate</p>	<p>Continuous monitoring of programme performance assesses the likelihood of delays and impact on spending.</p>	<p>Blue Ventures reallocates funds to ensure no rolling underspend.</p>
<p>Lack of support from targeted communities prevent or reduce effectiveness of site activities. This may significantly reduce performance and</p>	<p>Unlikely</p>	<p>Severe</p>	<p>Major</p>	<p>Blue Ventures conduct significant scoping of all new sites to ensure communities are open to</p>	<p>Support Blue Ventures in assessing the ability to engage local communities and, if possible, assess the</p>

failure to meet expected results.				programme aims and engagement. Ongoing stakeholder and community dialogues ensures need is met.	value of continuing the programme.
Programme fails to create interventions which are sustainable in the long term (over 20 years). This may result in failure to meet targets and transformational impact.	Unlikely	Major	Major	All new sites begin at the pilot/scoping stage (Stage 1) to identify most suitable interventions. Activities do not progress if likelihood or feasibility deemed insufficient in the long-term. Permanence of benefits and addressing needs are prioritised in programme design.	n/a

6.3. Issues for Consideration

As detailed throughout this annual review, the Blue Forests programme has experienced a number of challenges and changes throughout Year 4.

- Blue Ventures’ proposed community-owned sea cucumber hatchery at Site 1 (Ambanja Bay) has been suspended due to overlap with project plans from the GoM to establish a government-owned sea cucumber hatchery within the same area. Blue Ventures has begun scoping for further livelihood models.
- At times, community ownership and engagement in blue carbon projects has been damaged (and will continue to be damaged if viable long-term solutions are not found) due to several challenges in integrating voluntary blue carbon projects into national/jurisdictional REDD+ policy frameworks.
- Negotiations between the GoI and Blue Ventures’ partner to secure the PKS continue, delaying progress at Site 4. These delays will continue to pose a risk to programme impact and require a contingency plan to mitigate reduced impact if they cannot be resolved.

- Revisions have been made to the log frame and expected results relating to the livelihoods component of the programme. However, the programme continues to represent value for money and poses limited risk.

6.4. Safeguarding Concerns

The Blue Forests programme has not experienced any safeguarding concerns in Year 4 at sites funded by Defra's ICF.

However, Blue Ventures notified Defra of a safeguarding issue reported at another site which is not funded under the ICF Blue Forests programme. Blue Ventures continued to update Defra and the issue has been resolved following a full investigation conducted by an external consultant.

7. Commercial Considerations

7.1. Delivery against the Planned Timeframe

The Blue Forests programme has experienced challenges throughout Year 4 relating to keeping pace against expected timeframes detailed in the programme log frame and delivery plan. Delays to delivery are primarily across three focal areas:

- The development of new livelihood activities at Site 1.** The planned sea cucumber hatchery has been suspended due to overlap with plans from the Government of Madagascar. Blue Ventures will continue to work with local communities to scope and establish new alternatives to sea cucumber farming.
- The initiation of activities at Site 4.** Progress in securing the PKS which would give permission to work within Sembilang National Park has been slow, preventing activities from taking place. Blue Ventures will continue to simultaneously progress the PKS and develop a contingency plan in the case the PKS is not secured.
- Delays in carrying out activities due to the COVID-19 pandemic.** Travel and meeting restrictions imposed worldwide, and repatriation efforts, prevented some activities from taking place while some national and international markets shut down, preventing progress. Blue Ventures will continue to monitor and inform Defra of the impacts of the COVID-19 pandemic on the programme.

Despite delays, the programme has continued to perform above target on a number of indicators, balancing poor performance against others. This is largely a result of which activities could continue, and to what extent, during the COVID-19 pandemic and the reallocation of funding to those activities which could be delivered on or above the planned timeframe.

7.2. Performance of Partnership

7.2.1. Defra / Blue Ventures

The relationship between Defra and Blue Ventures continues to be productive and positive. Blue Ventures has been proactive in data collection and reactive to procedural requests. They are a high-quality delivery partner and are transparent with risks and issues and willing to contribute to documentation to fulfil HMG obligations even when it is not in line with their normal processes. They are also adaptive to HMG and ODA requirements and processes.

7.2.2. Blue Ventures / Additional Partners

Yayasan Hutan Biru (also known as Blue Forests) in Indonesia has continued to be productive and has adjusted reporting and working methodologies in 2020 as they transfer from being a consultant in the project to a full project partner with subgrants to manage. Their progress has been hampered by the

delay in securing the PKS at Site 4 but they have willingly helped with progressing the PKS and other unforeseen tasks as Blue Ventures work to mitigate the impact of this delay.

Yayasan Planet Indonesia in Indonesia continues to be a productive and professional project partner. They have proactively been working with Blue Ventures to ensure a good flow of information to enable suitable and timely reporting to Defra via Steering Group meetings and other means as required.

Yayasan Pesisir Lestari was established by Blue Ventures as a separate legal entity in Indonesia. In 2020 they have taken on staff and are now spending ICF funding. Blue Ventures will support their recruitment of a Director and will continue to work with them to help them further establish their operations as an independent organisation.

7.3. Asset Monitoring and Control

The purchase of new programme and project assets follows the Blue Ventures Procurement policy whereby a purchase request, quotations and delivery details are identified before the asset is delivered and loaded into the Asset module of Blue Ventures' finance system. The asset register for equipment in Madagascar is maintained by the Operations Manager who is responsible for adding new assets and capturing information such as asset values, donor project codes and locations and names of staff responsible for assets.

Tangible fixed assets are accounted for at cost less depreciation and coded to the unique project code on the Blue Ventures accounting system. This is then used to generate an asset report by project for verification or spot checks undertaken by in-country teams or as part of internal control support visits or audits.

Blue Ventures has a policy in place for the reporting of lost or stolen equipment and has adequate insurance to mitigate risk to donors whereby a claim could be made if loss, damage or theft occurs.

8. Monitoring and Evaluation

8.1. Evidence and Evaluation

The Blue Forests programme is monitored and evaluated through the assessment of progress against the programme log frame which outlines impact, outcome and output indicators and highlights the key performance indicators. The log frame and indicators are reviewed regularly and revised as appropriate to reflect the expectations of the programme.

The Annual Review is a vital monitoring and evaluation tool which assesses programme performance and makes recommendations for improvement. It monitors progress against expected timeframes and deliverables, but also provides a qualitative evaluation of how the programme and delivery partner responds to challenges, what is done well, and what could be improved. The Annual Review provides an ongoing measurement of success which is complemented by a final programme evaluation conducted at the end of the duration of the programme.

The 2019 annual review suggested that indicators for the health and livelihoods components would need to be updated. Revisions to the livelihood indicators were approved January 2021 in time for this Annual Review following a report written by Blue Ventures which summarises the changes and the evidence behind them (see Appendix B1). As detailed in the report and in Section 5.2.3, the outcome and output indicators linked to income generated from alternative livelihood activities and the number of beneficiaries engaged in these activities have seen the most significant adjustments.

Revisions to the health indicators are in draft and are expected to be finalised in summer 2021. These indicators will be reported against in the 2021 Annual Review. The decision to extend the programme

by one year aims to mitigate the effects of the COVID-19 pandemic on the long-term impact of the programme. However, some revisions may still need to be made to the log frame to reflect changes to expected lifetime targets. These revisions will be a mixture of targets that remain the same but have been delayed by one year, targets that are reduced, and targets that are increased. This will be explored in more detail over the next year, as per the recommendations outlined in Section 1.

8.2. Programme Design Questions

As outlined in the 2019 Annual Review, the programme ToC was revised throughout 2019 to reflect the development and refining of the assumptions that underpin the intervention and ensure the ToC and log frame properly align. The ToC has been revised and a narrative drafted, which requires only minor updates, in early 2020 and revisions made livelihood indicators. Revisions to the health indicators have not yet been approved but are expected to be finalised before the next annual review.

Blue Ventures also began working with Defra to draft the ToR for the final programme evaluation which expected to run from 2021 to January 2025. This, and other relevant documentation, is expected to be finalised in early 2021 with an invitation to tender released shortly after.

8.3. Disaggregation of Data

Output indicator 3.1, which is the only output indicator relating to the number of direct beneficiaries, can be disaggregated by gender.

8.4. Monitoring Progress throughout the Review Period

The monitoring systems used by the Blue Ventures field teams are continually being improved. As highlighted in the 2018 and 2019 annual reviews, health monitoring moved to a monthly monitoring system in 2018 to reflect requirements set out by the Malagasy Ministry of Health. This has since undergone review to make reporting improvements which were successfully implemented in 2020. Monitoring tools for tracking the progress of outputs and outcomes and social and ecological impacts are also strengthened continually despite already robust M&E procedures.

Fisheries. Data continues to be collected using a basic pen and paper system. Processes for double entry and checking to ensure accuracy of transcription of all fisheries data and centralised data management systems have enabled more effective and efficient turnaround of data back to the field team. Blue Ventures are also exploring further development of a number of approaches to mobile monitoring within our fisheries monitoring in the coming year, both independently and in partnership.

Alternative livelihoods. Improvements made in 2019 to simplify the monitoring of sea cucumber farming, including the addition of harvest monitoring, have since been replicated in 2 additional villages in Southwest Madagascar (with some minor adjustments to sampling for villages with a community pen). As highlighted in the 2019 Annual Review, an initial pilot using the Photovoice method was conducted in partnership with the University of Edinburgh in 2019 to assess the wider social impacts of sea cucumber farming. This was then developed into an evaluation of the impacts of sea cucumber farming at Site 2 and informed baseline assessments conducted at Site 1 in early 2020. In addition, an annual average exchange rate was used. This avoided the risk of short-term fluctuations skewing reported figures.

Health service monitoring. Throughout 2020, Blue Ventures reviewed the forms in line with ministry requirements (including COVID-19 disease surveillance) and updated reporting tools. Blue Ventures aims to use monthly mobile monitoring and online data visualisation to support punctual reporting to

both national and regional health ministries and community health workers to help inform them of changes and improve their programming decisions at site level.

Needs assessment. A variation of a full needs assessment, adjusted to adhere to travel and meeting restrictions due to the COVID-19 pandemic, has been undertaken at Site 5. A needs assessment has also been undertaken at Site 4, although challenges in securing permission to work within Sembilang National Park resulted in a further reduced assessment.

Annex A: How the Blue Forests Programme Contributes to KPI 15: Transformational Change

Transformational change is of critical importance to ICF's strategy. The [2020 HM Government Support for Policy Change report](#), conducted in collaboration with Climate Change Compass, recommends that ICF programmes should seek to motivate, generate evidence, and build capacity to deliver political change. Strategic interventions enable ICF to provide integrated support to developing countries to commit to more ambitious and effective national and subnational climate change policies and practices (including regional and local).

KPI 15: How the Blue Forests programme results in a transformational change

As expressed in the rationale for intervention, there is a clear market failure in the lack of land and tenure rights and management techniques which enable local communities to invest in sustainable long term use of fisheries and/or alternative livelihoods supported by mangroves; and a limited market value for the diverse ecosystem services mangrove habitats provide. The Blue Forests programme works to address the unsustainable demand for and management of products from mangrove habitats (e.g. mangrove wood for charcoal and building materials and pressures on species populations due to high levels of fishing which depletes stocks). In addition, it takes a multisectoral approach to address barriers in gender equality, particularly in terms of access to health care, livelihoods and education. Blue Forests drives a meaningful transformational change within mangrove habitats and the communities which rely upon them through:

Improved livelihoods and green business opportunities. Green business opportunities underpin sustainable mangrove forestry and fisheries management. Blue Ventures works with local coastal communities to develop and implement livelihoods and sustainable fishery models which meet immediate and long-term need while ensuring community engagement. Models are created with high levels of community input, meaning that they are accessible and once community members are trained, they can conduct the implementation, monitoring and financing of livelihoods without support from intervention partners. This secures livelihoods for long after the programme is complete and enables a relatively simple adoption of these models across sites. The short-term tangible benefits of the models, such as increased octopus yield and income generation, also encourages communities to continue with the alternative livelihoods developed. **The success of these models is clear with Blue Forests already exceeding its 20-year target of 99 sites adopting models tested and proved within the programme with 102 sites having adopted models by the end of Year 4.** These models have also proven to be flexible with livelihoods and management techniques such as beekeeping, sea cucumber farming and temporary fishing ground closures successfully implemented across multiple country and site contexts.

Responsive livelihoods models. The full extent of transformational impact is not captured in the log frame with qualitative results not as readily reported against. The COVID-19 pandemic has highlighted previously unseen value in the programme whereby the community focused livelihoods models could adapt quickly in response to changes in demand of fresh products. The development of models such as fish drying and smoking were expedited as they were more viable when wet fish markets closed. Smoked and dried fish could be kept for longer than wet fish, reducing product loss as communities waited for collectors to arrive following travel restrictions. Short-term livelihoods such as vegetable growing and making face masks were also adopted. While these are less feasible in the long-term, they responded to the immediate needs of the communities while also ensuring movement within the economies. This has enabled the programme to continue to support communities through a global crisis which has had repercussions on markets, economies and

people worldwide. **Vital lessons emerged and have been disseminated by Blue Ventures to better inform the sector of blueprints for successful long-lasting livelihood models (see Section 1), expanding the potential for wider transformational change as other organisations adopt similar models.**

Improved access to health care. Access to health care has wide-ranging benefits beyond improved community health. Blue Ventures' community health project known as 'Safidy' – meaning 'choice' in Malagasy – was established in Velondriake in 2007 in response to the unmet need for family planning expressed by communities. While the programme was not funded by Defra's ICF at this time, subsequent support has enabled Safidy to continue and expand exponentially. The project now serves 47,000 people across 100 villages on the west coast of Madagascar and includes a range of community health services. By providing health care which focuses on improving the health of women and children, barriers to community participation and education are being gradually eliminated. As a result, there have been impressive advances in gender equality in local marine resource management among other community management and livelihoods. In short, when women and girls are in better health, they may have more time, are better able to earn a livelihood and receive an education, feel more empowered and demonstrate longer term thinking. **Blue Ventures' multisectoral approach to the Blue Forests programme combines community health with economic need, recognising the important role and potential of women and girls, transforming their ability to contribute to and advance the effectiveness of coastal communities in managing their resources.**