ICF Blue Forests (Blue Ventures) Programme: Year 5 Annual Review

Contents

1.	Sum	nmary Sheet	2
	1.1.	Introduction and Context	2
	1.2.	Lessons Learned	7
	1.3.	Performance and Conclusions	8
	1.4.	Programme Management Tool summary	8
	1.5.	Risk summary	9
	1.6.	Impact Assessment	9
2.	Deta	ailed Output Scoring	11
	2.1.	Output 1: sustainable community-owned mangrove forestry management plans in place	11
	2.2.	Output 2: mangrove fisheries improvement projects in place	14
	2.3.	Output 3: implementation of viable new livelihood mechanisms	16
	2.4.	Output 4: increased access to family planning services	18
	2.5.	Output 5: Organisational and financial structures in place to support 20-year project vision	19
3.	Valu	ue for Money & Financial Performance	22
	3.1.	Key Costs Drivers and Performance	22
	3.2.	Value for Money Performance	22
	3.3.	Does the Blue Forests Programme Continue to Represent Value for Money?	24
	3.4.	Quality of Financial Management	24
4.	Risk	and Risk Management	25
	4.1.	Overall Risk Rating	25
	4.2.	Overview of Programme Risk	25
	4.3.	Issues for Consideration	30
5.	Com	nmercial Considerations	30
	5.1.	Delivery against the Planned Timeframe	30
	5.2.	Performance of Partnership	30
	5.3.	Asset Monitoring and Control	31
6.	Mor	nitoring and Evaluation	31
	6.1.	Evidence and Evaluation	
	6.2.	Programme Design Questions	
	6.3.	Disaggregation of Data	32
7.	Ann	exes	33
	7.1.	Annex A. Full Theory of Change	33
	7.2.	Annex B. KPI 15: How the Blue Forests programme results in a transformational change	33
	73	Anney R. Sea Cucumber hatchery development - Ambania, Madagascar	35

1. Summary Sheet

Title: Blue Forests Programme				
Programme Value: £10.3m	Review Date: June2022			
Programme Code: ICF-PO001-BV	Start Date: Jan 2017	End Date: Dec 2024		

Summary of Programme Performance

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

DevTracker link	to	https://devflow.northeurope.cloudapp.azure.com/files/documents/Blue-
Business Case:		Ventures-Business-Case-Final-20190927040900.pdf
DevTracker Link	to	
results framework:		

1.1. Introduction and Context

1.1.1. 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 the world's mangroves lost in the past 50 years due to clearance for development, overexploitation, and aquaculture. Mangrove deforestation is primarily driven by a lack of land tenure rights and appropriate 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:

- 1. Blue carbon sequestration and forestry management;
- 2. Small-scale fisheries management and improvement;
- 3. Livelihood diversification;
- 4. Community health and women's empowerment.

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

1.1.2. Overview of Expected Results

The Blue Forests programme has been extended by one year with no additional cost to Defra and will now end in December 2024 rather than the original December 2023. This is due to an underspend which took place in year 4 as a result of the impacts of COVID-19 and subsequent restrictions on planned activities which were either prevented or delayed. By extending the programme by one year, it is expected that long term results will still be met albeit later than originally planned. Due to the continued issues created by the pandemic, and the change of Site 4 from Sembilang National Park to Indrigiri Hilir (Inhil) an underspend from 2021 was also moved to the final year (2024), but no further extension of the timeframe was requested.

Investment in the Blue Forests programme is planned to be £10.3 million over a period of 8 years with an expected total impact period of 20 years (2037). Funding to sustain the impact of the project over the 20-year period is envisaged to come from a range of sources: revenue generation from project activities, including livelihoods and carbon; handover to government and partner services; and finally new grant funding.

Private sector engagement across the revenue generating activities has been productive, albeit yielding modest revenues so far, and with some blockages along the way. These include for example the regulations for the sale of carbon credits, and licences for the extension of community-based aquaculture. We anticipate these will be resolved in the medium-term, with BV's long-term work across the project geographies assisting progress here.

Health and education activities within the project are being progressively handed over to sector experts, including government and partner NGOs specialising in these areas. This follows BV's approach of helping communities address the barriers to effective participation in marine conservation, including advocating for extension of services in currently under-served areas.

Fundraising is ongoing and is expected to continue over the lifetime of the programme. Expected results depend on a combination of two strategies: 1. continued support from BV via their own fundraising and long-term commitment to the regions we support; and 2. direct funding and capacity building to implementing partners and community associations to ensure these groups are able to secure grant funding themselves. Together they are predicted to be worth over £49.5 million over 20 years (2037).

1.1.3. Headline Expected Benefits

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 (2037) through avoided deforestation and mangrove restoration and 5.7 million carbon credits produced.

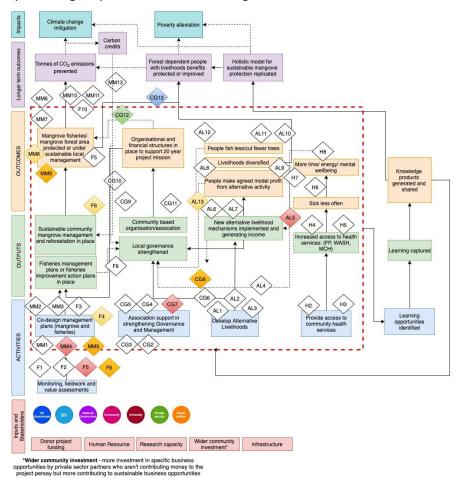
Halting deforestation. Sustainable habitat and fisheries management techniques and diversification of livelihoods is expected to save 4,413 hectares of mangroves from deforestation over 20 years, and place 181,678 hectares of mangrove forest under protection or sustainable management over 8 years.

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 per year by the end of the 8 years.

Transformational change is a key indicator which cuts across these results. As models prove to be successful and benefits are realised (i.e. with target for Impact Indicator 2 being exceeded) neighbouring communities recognise the benefits of adopting the same livelihoods, fisheries and sustainable mangrove management models. By establishing the Blue Ventures models in 5 sites, it is expected that an additional 99 sites will benefit from the proliferation of communities realising benefits and adopting the same models over the 20 year impact of the programme. This annual review covers the period January to December 2021, at the end of the fifth year of the Blue Forests programme. This annual review reflects on the continued overall good performance and progress of the programme in 2021, identifies the challenges experienced and lessons learned throughout the year, and recommendations for the year ahead.

1.1.4. Theory of Change

A summary Theory of Change is pictured here, and a long-form version can be found in annex A.



1.1.5. 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: Indragri Hilir (Site 4); and Kubu Raya (Site 5)).

The most significant change in this review period was at site 4, where due to delays in securing a collaboration agreement (Perjanjian Kerjasama – PKS) between Blue Ventures' project partner and Sembilang National Park Authorities, the decision was taken in August 2021 to shift away from Sembilang National Park and opt for an alternative; Indragri Hilir (see below for more detail).

Blue Ventures and their sister organisation in Indonesia, Yayasan Pesisir Lestari (YPL) have identified two implementing partners for the new Site 4 (Inhil): Yayasan Hutan Biru (YHB), Yayasan Mitri Insani (YMI), and are building the programme delivery structure through securing consultancy and subgrant agreements, hiring relevant staff and relationship building with local stakeholders.

Newly established sites in Indonesia mean significant programme expansion and so we also see significant changes to output results compared to last year's Annual Review. Where targets have been exceeded Blue Ventures should, in discussion with Defra, consider re-baseline the Logframe where appropriate to reflect how the expansion of the programme naturally increases the targets for outputs.

Overall, despite the challenges the Blue Forests programme faced with the COVID-19 pandemic and the change in site 4, the programme has been able to meet or exceed the majority of its targets. Programme staff have worked closely with Defra in creating solutions to mitigate delays and setbacks beyond the programme's control, and delivery is now underway at 5 sites as planned.

The major accomplishments of the programme in 2021 are:

- In Madagascar, the Tahiry Honko carbon project continues to receive national and international attention, and the project was covered in a paper in the well-regarded Land Journal. Tahiry Honko also won the 2021 IUCN Pathfinder Award in the climate change category during COP26, out of 400 projects.¹
- The community association "MIEZAKA", one of Blue Ventures' partners in northwest Madagascar, won the Fagnoesa Competition for the best locally based community managing its own marine resources. More than 100 associations participated in the competition.
- Although the decision to leave Sembilang National Park as a location for Site 4 was necessary after a series of continued blockages, the extensive scoping for alternatives in the run up to and after this decision enabled to swift identification of Indragri Hilir, Sumatra and a new implementing partnership with locally-based NGO Yayasan Mitra Insani which has had a successful first six months.
- The procurement and assignment of NIRAS (LTS International Ltd, trading as NIRAS-LTS International)
 as the project evaluators, followed by introductory workshops (internal and external), meetings of the
 Evaluation Steering Committee and drafting of the evaluation inception report have led to an
 independent assessment of Blue Ventures' Monitoring, Evaluation and Learning framework.

In addition, environmental education work has also progressed, and communities continue to benefit from greater understanding of the resources they access and use, including their importance, uses, biology and risks. This includes literacy work to ensure that communities can fully take part in community discussions on resource monitoring and management. Blue Ventures also supports various other environmental education activities such as beach clean-ups, Environment Clubs, climate change awareness campaigns, school curriculum enhancement, and resource provision. This is an important part of the programme and in meeting the Blue Planet Funds objectives. Benefits through this strand of work deliver on outputs 1 and 5 but they are not currently reflected in the project log frame. These activities are not currently included in the Logframe as they are being explored by Blue Ventures as small scale work or as trials. Future inclusion is possible, but indicators would need to be created to monitor progress.

Political barriers, conflicts of interest and the ongoing impacts of the COVID-19 pandemic have resulted in the following **challenges**:

Barriers to Blue Carbon. The significant challenges to progressing voluntary blue carbon projects persist, in addition to the already demanding nature of credit verification.

¹ Tahiry Honko wins IUCN Pathfinder award - Blue Ventures

In Madagascar, integrating voluntary blue carbon projects into the national/ jurisdictional REDD+ policy framework continues to be slow. The long process to build the policy infrastructure to approve a decree² which will regulate the sale of carbon offsets generated by Tahiry Honko, and the relevant policy infrastructure to enact it, is ongoing. Blue Ventures used the global audience of the 2021 United Nations Climate Change Conference to try and highlight and address some of these issues. These challenges are discussed in a report called 'Identifying mangrove blue carbon barriers – key considerations for policy makers' which was published by Blue Ventures during COP26 and has been shared with relevant stakeholders.³

In Indonesia, in May 2021, there was an official request from the Government of Indonesia not to pursue any carbon projects in social forestry at this time and for any organisations that have started initiatives (carbon certification/ trading) to stop the process until its own domestic targets are met under the Paris Agreement. This is an evolving situation, and BV are keeping abreast of developments, but it is likely to create project delays in later years.

Delays in starting work at Site 4. As aforementioned, in March 2021 Blue Ventures' application to work in Sembilang National Park was refused and scoping was undertaken to find an alternative site. An alternative was found, Indragiri Hilir (colloquially referred to as Inhil), which was presented to Defra in May and approved in August. Work at this new site has made a very promising start, in no small part thanks to new project partner Yayasan Mitra Insani (YMI), meaning delivery here is now progressing well again.

Impacts of COVID-19. An update on the impacts of the COVID-19 pandemic on the project was provided in the August 2021 steering group meeting, including recognition that all project-related countries (UK, Indonesia, and Madagascar) experienced significant peaks in COVID cases and accompanying disruption in 2021. The long-term implications of the pandemic are still unknown but it is clear that the direct and indirect impacts are still significant beyond the one-year project extension that was agreed in 2020.

Blue Ventures continues to learn about the implications of the pandemic and what they are highlighting for the ongoing and future focus of our work, for example the importance of financial security (savings groups) and secure, profitable livelihoods (value chain additions) - as discussed also in Sections 3.2.3 and 3.5.3.

1.1.6. Action Against Previous Year (2020) Recommendations

Recommendations for the previous year were as follows in black, with action against them in green

- 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 (government approval) is not secured. Blue Ventures, in conjunction with their Indonesian partners, scoped and assessed appropriate alternative sites and made a recommendation to Defra within 3 months. The alternative site was agreed, and work has begun in earnest.
- 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. Blue Ventures continues to monitor the impacts of the pandemic and note those that could be mitigated (e.g., by having virtual meetings, reallocating resources, ensuring/encouraging vaccinations for staff/communities as appropriate) and those that could not (e.g. the transportation of equipment between sites, the closing of government offices, international learning exchanges etc). An update on the impacts was provided to Defra in August 2021, highlighting that the main peaks in cases had occurred during 2021, over a year after the start of the pandemic.

² Decree 2021-1113 on Regulations for the Access to the Forest Carbon Market

³ Key policy barriers (mangrove projects).pdf (blueventures.org)

- Blue Ventures should continue next steps on 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. The Terms of Reference were finalised, an invitation to tender submitted and a contractor was chosen through a fair and transparent open recruitment process.
- Defra should work with the British Embassy in Madagascar and other government departments to
 further the development of blue carbon in Madagascar. This is an ongoing piece of work and Defra
 continue to maintain a strong relationship with the British Embassy in Madagascar as well as the work
 of other government departments on this issue. This has included joining the quarterly REDD+ crossWhitehall working groups to discuss challenges like those experienced in Madagascar with the REDD+
 policy framework

1.1.7. Recommendations for the Year Ahead (2022)

- BV 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.
- BV and DEFRA should discuss better integrating the importance of land tenure into their monitoring processes by adding "Number of tenure rights have been secured" as part of the programme log frame. This will give a long-term indication of how Mangrove deforestation has been avoided, as tenure rights encourage local communities to invest in sustainable long-term use of fisheries and/or alternative livelihoods supported by mangroves.
- BV and Defra should explore together re-baselining the log frame where targets have been exceeded, equally lowering targets where context changes out of the control of the programme may have caused targets to be set too high.
- BV should aim to share knowledge with other coastal communities. This can be done through sharing best practices with other programmes in the Blue Planet Fund.
- Given the issues regarding the sale of carbon credits in Indonesia, BV should look to amend Output Indicator 1.3 and look at carbon emission reductions or removals linked to community-focused financial incentive schemes.
- BV and DEFRA should discuss implementing a health output indicator focussing on delivering against community needs.

1.2. Lessons Learned

The lessons from the previous year (2020: overcoming legal and governmental obstacles; responding to the COVID-19 pandemic; and implementing and scaling successful blue carbon models) were still relevant in 2021 and continued to be assessed and learned from. A few additions have been added under the same headings below.

1.2.1. Legal and governmental obstacles

Blue Ventures (BV) ongoing interactions with government entities continue to highlight the importance but also the varied risk of this aspect of our work. Some government interactions have been very favourable and helpful in progressing our work, for example engaging with the Malagasy delegation at the UNFCCC COP26 in Glasgow and with the Indonesian National Agency for Peatland and Mangrove Restoration's (BRGM). However, other interactions continue to create delays, for example: the approval of permits for alternative livelihoods (Site 1); frequent changes in government structure and staff delaying the transfer of management rights to communities (Site 2); opposition to the Dina (local customary law) ratification in Site 3; the rejection

of our application to work in Site 4; and the creation of no-take-zones that overlap with communities' historical fishing grounds in Site 5.

These issues are difficult to predict and mitigate and although some impacts can be smaller scale, for example a change in staff delaying meetings, some can be fundamental to the achievement of project targets, for example the issues mentioned previously around carbon financing. These obstacles have taught BV to allow additional and ample time in project planning to acknowledge and highlight the risks and assumptions associated with this type of work from the outset, due to the unpredictable nature of work areas involving significant interaction with and reliance on government entities.

1.2.2. The COVID-19 pandemic

Blue Ventures has shared and published its lessons learned with regards to COVID-19 via these papers:

- COVID-19, indigenous peoples, local communities and natural resource governance
- Marine protected and conserved areas in the time of COVID

1.2.3. Weather events in Madagascar

The project area has seen a significant number and intensity of major storms over the course of the reporting year (such as cyclone Ana in January that impacted Site 3). Cyclone Ana caused heavy rainfall by two different tropical weather systems and resulted in flooding, landslides, destruction of infrastructure and loss of life, particularly affecting the country's capital, Antananarivo, and other areas in the centre of the country. More cyclones hit Madagascar in February, including cyclone Batsirai, tropical storm Dumako, which made landfall over the Soanierana Ivongo District in the North East, and tropical cyclone "Emnati", which made landfall over southern Madagascar. Since mid-2021, southwest Madagascar has been suffering from widespread famine due to its worst drought in 40 years, compounded by sandstorms, plant and animal pests and diseases, and the impact of COVID-19. These events appear to have become more prevalent and unpredictable within the project period so far, making delivery of the project all the more vital yet also more challenging at the same time.

BV will continue to try and schedule activities around known periods of bad weather although they may be/become more unpredictable and frequent, highlighting BVs mission is becoming even more critical, but also difficult.

1.3. Performance and Conclusions

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

1.4. Programme Management Tool summary

This section briefly summarises the performance of the core programme management tools over the past year:

Log frame summary. As explained in section 1.1.4, BV should look to re-baseline their logframe targets to reflect the expansion of the programme in site 4 and 5 and consider re-baselining targets where they have been met and exceeded.

Value for money summary. The Blue Forests Initiative continues to offer strong performance and value for money despite the effect of the COVID-19 pandemic and by the necessary revisions to the expected output and outcome results, therefore impacting the value for money assessment of the Blue Forests programme.

1.5. Risk summary

The Blue Forests programme has scored a Moderate risk rating, while there were challenges faced around securing Site 4 and reducing the impact of COVID-19, the programme has proved it can successfully mitigate and overcome unexpected challenges through the holistic and agile nature of Blue Ventures' model. The risk rating stands at Moderate as the most prominent risks are considerable. Firstly, the delay in Sembilang Park limits the overall impact of what site could achieve by the end of the project. Secondly, Covid-19 continues to impact the project in relation to continued spikes, stalling baselines for health and income, meaning some targets were no longer possible. Thirdly, Carbon projects progress in both Madagascar and Indonesia continue to be stalled for a significant period requiring a change in targets or approach.

1.6. Impact Assessment

"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 5, the Blue Forests programme remains broadly on track with four of the five results exceeding targets and one coming close to target. The ability to maintain this level of performance despite challenges surrounding Site 4 and the challenges caused by COVID-19 pandemic is striking, demonstrating that a diverse portfolio of five sites, spread across different regions and countries, has brought some level of risk mitigation to the programme.

Last year the programme was below target on Impact Indicator 1 due to the delayed site having the most carbon-rich mangrove forests; however, with the change in site 4 to Indragiri Hilir the target for Impact Indicator 1 has been successfully met. Similarly Impact Indicator 2 has exceeded targets by just under 100% with the contribution of the two new sites in Indonesia. Impact Indicator 3 has successfully exceeded its target, The Blue Forests programme drives a meaningful transformational change (ICF 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. Although there has not been progress on Indicator 4 and Indicator 5 from 2020, neither target increased in 2021 so both are still on track after exceeding in 2020.

For Impact Indicator 4 and 5 there has been no progress because they are based on the predictive model (included in the business case). Like impact indicator 1, they are only measured in Year 4 (2020) and at the end of the project. For all the other years, BV report the predicted value. The model used to predict these values is done by using published data to inform a set of assumptions. As BV do not have updated data on the impact of Covid-19 on the model assumptions, BV could not accurately update predicted values. The targets will change however with the logframe adjustment, as Inhil will be included in the modelling.

Figure 1: Impact Indicator Performance

Impact Indicator	2021 Milestone	Progress	
1. Tonnes of CO ₂ emissions prevented (KPI 6) (MtCO ₂)	432,021	432,021	On target
2. Number of forest dependent people with livelihoods benefits protected or improved (KPI 3) (#)	32,855	62,967	Above target
3. Extent to which ICF intervention is likely to have a transformational impact (KPI 15): number of additional	78	139	Above target

sites adopting models tested and proved within this programme (outside the five ⁴ sites) (#)			
4. Total number of hectares where deforestation has been avoided (KPI 8) (ha)	487	487	On target
5. Value of ecosystem services (KPI 10); difference in mangrove forest ecosystem services income (\$/yr)	281,680	281,680	On target

1.6.1. Annual Outcome Assessment

The overall intended outcome of the Blue Forests programme from the Business Case 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 four indicators which focus on mangrove habitat and ecosystem management, conservation modelling, alternative livelihoods, and community health. A full methodological note is provided in Annex A. At the end of Year 5, the programme is broadly on target.

Less protection, more restoration.

Reforestation work has significantly improved from year 4across all sites. The significant increase in trained community-led projects has meant there has been an impressive progress with indicator 1, in comparison to last year, with 8512ha in year 4 and 30407ha in year 5. The reforestation work in Madagascar, Tahiry Honko (Site 2) was highlighted in a paper in the Land Journal and won the 2021 IUCN Pathfinder Award in the climate change category during COP26, out of 400 projects.

Significant livelihood and conservation benefits.

Despite challenges caused by COVID-19 and unexpected market closures, there has not been a shortage in the diversity of alternative livelihoods. The adaptability of communities has been essential to reaching targets for indicator 3. In Madagascar, Ambanja (Site 1) BV have strengthened collaboration with beekeepers, other NGOs and the Swiss development organisation Helvatas Suiss Intercooperation (HSI) to support honey production, including formation of a beekeeping association. In addition, baseline surveys on seagrass cover before and after the implementation of sea cucumber farms are showing positive increases in seagrass cover, fish abundance, fish diversity and invertebrate abundance and decreases in abiotic cover within the farms, compared to control areas. Results from baseline surveys are helping to inform decision-making, including for future sea cucumbers farms in Antsatsamoroy and in Morombe (Site 2).

Increased fisheries management.

In Indonesia, YPL welcomed leaders from 17 local partners representing our work across 49 sites/villages in 15 provinces across Indonesia, including the two sites under the ICF Blue Forests project, to participate in the 3rd Annual Partner's Forum. This year our focus was on establishing a consortium to strengthen national support for local fisheries management and conservation. Whilst in Madagascar much coordination work is being done between fishers, sharing best practices on establishing crab reserves

⁴ 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).

Performance against outcome indicator 4 has improved on performance in 2020. The total number of unintended pregnancies in Year 5 is 1,850 compared to 1,560 in 2020 (Further details are provided in Annex B).

Figure 2: Outcome Indicator Performance

Outcome Indicator	2021 Milestone	Progress	
1. Hectares of mangrove area protected or under sustainable local management (ha)	30,407	30,407	On target
2. Number of sites implicated in fisheries management, including but not limited to fisheries projects (registered or action plans being implemented) (#)	5	4	Below target
3. Percentage of active producers making agreed model profit from alternative activity (%)	23%	23%	On target
4. Number of unintended pregnancies averted	No target set	1,850	
5 (e.g. crab fishery closure model, Plan Vivo model) (#)	4	6	Above target

1.6.2. Overall Output Score and Description

The outputs within the 2021 Blue Forests Annual Review have scored an average of **A**. This is based on quantifiable and readily reportable progress made on the output indicators in 2021 with further detail provided in Section 4 below.

Figure 3: Output Indicator Performance

Output Number & Description	Impact Weighting (%)	Score
1. Sustainable community owned mangrove forestry	30	Α
management plans in place		
2. Mangrove fisheries management or improvement projects	25	Α
in place		
3. Implementation of viable new livelihood mechanisms	25	Α
4. Increased access to family planning services	10	A+
5. Organisational and financial structures in place to support	10	A+
20-year programme vision		
TOTAL / AVERAGE	100	Α

2. 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 5.

2.1. 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:	Moderate	Impact weighting (%):	30			
Risk revised since last AR:	n/a	Impact weighting (%) revised since last AR:	No			

Indicator	2021 Milestone	Progress	
1.1. Number of sites with community-led mangrove management plans	5	5	On target
1.2. Number of sites with an estimated carbon baseline scenario	3	3	On target
1.3. Number of carbon credits produced (with a minimum of 50% revenue shared with community)	0	0	On target

2.1.1. Key Points

Blue Ventures is on track to meet all of its targets in relation to this set of indicators. Carbon credits are due to be produced (under indicator 1.3) in 2022, however this is highly dependent on the resolutions of the issues highlighted below. Awareness raising events, for example via 16 radio broadcasts on World Wetlands Day at Site 1 and via mangrove reforestation sessions run by Youth Groups at Site 3, continue to improve knowledge and understanding of the importance of mangroves. One awareness raising session about mangroves and climate change alone reached 1,000 local authority, community and youth group members. The risk rating for this output has come down from Major to Moderate this year with the start in start in site 4 and the stabilisation of Covid-19.

Progress at Site 1: Madagascar

Blue Ventures reforestation work has progressed even better than planned this year. They have reforested 250 ha (1,266,215 propagules) of mangroves via 212 reforestation sessions, 6,882 participants and 28 community members trained as reforestation leaders. The average survival rate of the mangrove replanting is 88.6%. Trained community members monitored survival rates that averaged 84%. To prevent further deforestation, 5 nurseries of acacia trees (used as fuelwood and an alternative to mangrove wood) were installed in 4 villages and 22,500 seeds were planted. A contractor was also used to develop bio-charcoal and sustainable charcoal cooking stoves that have an improved carbonisation technique (large cook stoves and biocarbon). A bio-charcoal pilot was established.

Progress at Site 2: Madagascar

As with Site 1, Blue ventures has continued its reforestation work, covering 2.47 ha of mangroves during International Mangrove Day alone (July 2021). Survival rates of propagules have again been monitored over time in the Bay of Assassins, with help from the Halieutic Marine Science Institute (IHSM). The average survival rate of the mangrove replanting is 84.53% for the southwest including Velondriake. Tahiry Honko's carbon project continues to receive national and international attention – Blue Ventures undertook a virtual webinar about blue forest communities and social justice to showcase Tahiry Honko and the involvement of the community in this project, while the community's perceptions of the project were encapsulated in a paper in the Land Journal. Tahiry Honko also won the 2021 IUCN Pathfinder Award in the climate change category during COP26, out of 400 projects.

Progress at Site 3: Madagascar

There have been 28 sites reforested in 2021 with 414 participants planting 72,426 mangrove propagules, covering 20.84 ha. Monitoring of the mangroves was put in place and the average survival rate was 87%. BV

worked with the government and 22 communities to plant 3,000 alternative fuelwood seedlings with a survival rate of 92%. A mangrove inventory of ¾ of the entire bay has allowed for a study of the mangrove uses in the bay and the preparation of local management plans.

Progress at Site 4: Indonesia

The number of sites with a carbon baseline scenario has reduced from last year due to the change of this site from Sembilang National Park to Inhil. However, despite work only starting on this site in July, great progress has been made on socialising the project and starting activities. Workshops were undertaken to: socialise and address mangrove rehabilitation opportunities (32 delegates attended via video and in person) and community-based sustainable management of mangrove ecosystems (50 participants, including multiple government entities); and to facilitate the preparation of their long-term forest management plan. Training was carried out on mangrove nursery management and monitoring (1 village) and data collection to identify mangrove rehabilitation areas (6 villages). The BRGM's mandate to restore over 600,000 hectares of mangrove forest by 2024 is hoped to bolster support for Blue Ventures work at this site.

Progress at Site 5: Indonesia

Following the formalisation of seven Village Forest Management Institutions (LPHDs), work is continuing to:

- Increase their capacity (e.g. via training on organisational roles and capacity development);
- Map natural resource use and locations (through Participatory Action Research and Participatory Rural Appraisals);
- Identify mangrove restoration sites and business development opportunities; and
- Formalise their management rights (e.g. the LPHD in Mengkalang received their permit securing 1,984 ha of surrounding mangrove forests as a village forest).

A campaign video detailing the issues of using mangrove wood for charcoal in Batu Ampar was also completed.

2.1.2. Justification for log frame revisions under Output 1

A log frame adjustment was completed in 2021 to include the additional 8th year (2024) following the project extension agreed in 2020 and to include the change of Site 4 agreed in 2021. The end of project targets for Output 1 have not changed.

2.1.3. *Issues*

Carbon credit sales. As mentioned previously, the delays in the Government of Madagascar finalising and implementing the policy to allow the sale of carbon credits, and the current requirement of the Government of Indonesia to put carbon projects on hold, is likely to significantly impact this Output, particularly indicator 1.3 which has significant targets from 2022 onwards.

2.1.4. Recommendations

- Blue Ventures and Defra should continue to explore the complexities and challenges associated with carbon credit schemes and blue carbon programmes, adjusting the log frame and targets accordingly as required.
- The enforcement team in Madagascar (Comité de suivi et d'evaluation CSE) is equipped with GPS units, it would be useful for them to collect perimeter location data for areas of interest, such as recently deforested areas (which can be incorporated into GIS maps).

2.2. Output 2: mangrove fisheries improvement projects in place

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

Indicator	2021 Milestone	Progress	
2.1. Number of fisheries being monitored	9	11	Above target
2.2. Number of Sites trialling/pilot locally relevant fisheries management (e.g. periodic closures, gear restrictions)	4	4	On target
2.3. Number of local fisheries management plans developed (e.g. Agreed harvest rules concerning a fishery or wider management contracts)	3	2	Below target

2.2.1. Key Points

Two new fisheries are being monitored this year (mud crab in Inhil, Site 4 and finfish in Kuba Raya, Site 5). The existing 9 fisheries continue to be monitored and improved via trainings and the digitisation of data to better inform management plans. The target for indicator 2.3 was not reached due to Mahajamba, Site 3 for the reasons described below.

Progress at Site 1: Madagascar

The same three fish, crab and sea cucumber fisheries have been monitored throughout Year 5 and 2 new crab reserves have been created in Maropamba and Ampondrabe (making 9 in total). Monitoring of the fisheries is being enforced and improved via: capacity building with the government for 24 patrollers on law enforcement; refreshing the skills of 16 data collectors; training on sustainable fishing gear and best practices for crab fishing; and the use of KoBo Toolbox for virtual data storage and analysis.

Progress at Site 2: Madagascar

Monitoring has continued for octopus and fish throughout Year 5 including implementing and monitoring the impact of 13 closures. As with Site 1, trainings were done for data collectors, to improve monitoring methods and include Catch Per Unit Effort (which increased following closures), for ecological monitors on the use of GIS and to move to virtual data collection. In recognition of the ongoing impact of the pandemic, a meeting of the Octopus Fishery Management Committee was held in September gathering all community leaders for the entire southwest coast, together with operators (Copefrito, Murex, Blue Ocean, Velontehake), NGOs (BV, WWF, WCS), regional fisheries administration representatives and committee members to discuss how to adapt to the COVID-19 situation.

Progress at Site 3: Madagascar

The training of data collectors and virtual data use has also been undertaken at Site 3. The production and selling of fisheries products are being improved via the use of smoking materials, discussions with the private sector to increase selling points and piloting the use of storage rooms. Though Dina consultations occurred, management plans were not developed as there were issues in finalising the *Dina* (see the Issues section below) and the site is awaiting the results of a fisheries census for the whole bay to inform the management plan.

Progress at Site 4: Indonesia

Data collection has started for the fisheries baseline and profile and is complete in three villages. The mud crab fishery is now being monitored following data collectors and district government representatives being trained in mud crab data collection.

Progress at Site 5: Indonesia

Scylla Serrata (previously reported as mangrove crab) and finfish fisheries are now being monitored. The project expanded the fisheries monitoring programme in the Dabong landscape to all landed species, not solely mud crab, to increase the consistency of the monitoring year-round. Extra capacity has been added via 13 newly recruited data collectors. Periodic river closures took place between October 2020 and January 2021 and June and September 2021 with SMART (Spatial Monitoring And Reporting Tool) patrols measuring their impact. Two manuals were developed to aid the river fisheries closures and develop a culture of best practice: 1. Crab Fisheries Data Collection Manual; and 2. a Technical Pocketbook for SMART Patrol Officers.

2.2.2. Justification for log frame revisions

A logframe adjustment was completed in 2021 to include the additional 8th year (2024) following the project extension agreed in 2020 and to include the change of Site 4 agreed in 2021. The end of project targets for Output 2 have not changed.

2.2.3. *Issues*

Value Chain Additions

To ensure the most efficient use of natural resources and the best prices available to the communities, Blue Ventures has included work on value chain additions under the project, for example the use of cooling pots for octopus, storage rooms and fish smoking. This is an important area for all community livelihoods in relation to fish and non-fish products, but as the Logframe focusses on alternative livelihoods rather than expanding or enhancing the sustainability of existing livelihoods it is not currently reflected in the project Logframe. Reframing is possible but could need work on indicators and is noted at this point for transparency.

Fisheries Management Plans

Blue Ventures did not manage to get fisheries management or enforcement activities started in Mahajamba (indicators 2.3 and 5.3) mainly because of the delays in getting the Dina (local law) officialised.

Recommendations

Blue Ventures should continue work with Dina to work on a deadline to get a fisheries census to inform the management plan on how to increase selling points and piloting the use of storage rooms.

2.3. Output 3: implementation of viable new livelihood mechanisms

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

Indicator	2021 Milestone	Progress	
3.1. Number of people engaged in alternative livelihoods	991	1,036	Above target
3.2. Total income generated	\$155,044	\$95,208	Below target
3.3. Number of new alternative livelihoods developed by Site	8	12	Above target

2.3.1. Key Points

This is the first year that the project has exceeded two of the three indicator targets in this output. Sites 2 and 5 in particular are showing great progress whilst Sites 1 and 3 are experiencing delays. More livelihood options are being investigated than initially planned, which benefits communities by providing tried and tested examples and a more diverse income stream. The income generated per livelihood is lower than expected however as the targets were based on more profitable livelihoods.

Progress at Site 1: Madagascar

Site 1 has doubled the number of livelihoods being developed (from 2 to 4), including a trial of oyster farming. The number of people participating in existing livelihoods has reduced slightly but the income has still increased for those remaining, with 71% making the agreed profit model (Outcome 3). Oyster farming and sea cucumber fattening pilots are underway. At the end of 2021 there were 97 beehives in seven villages and 217 kg of honey was harvested. A beekeeping association has been formalised, but income levels and motivation are still low.

Progress at Site 2: Madagascar

In Site 2 there is a higher number of people involved than expected, but income is lower than planned. The three sea cucumber farms continue to be strengthened via a finance tool to enhance financial management of the management committee and via supervising the contracts between the private partner and the farmers. Baseline surveys on seagrass cover before and after the implementation of sea cucumber farms are showing positive increases in seagrass cover, fish abundance, fish diversity and invertebrate abundance compared to control areas. Eight seaweed sites and 440 seaweed farmers are now operating with a new seagrass and mangrove reserve planned around the Bay of Antseranasoa (40 ha). 31 new bee colonies have been developed in seven new villages which have harvested 67 kg of honey. Part of the profits go towards the management of the Locally Managed Marine Area.

Progress at Site 3: Madagascar

Site 3 was due to have people actively engaged in and making a profit from alternative livelihoods this year. 12 beehives were built and capacity building undertaken but participants did not always sustain the livelihood consistently over the year. A consultant has been engaged to look for other livelihoods that might be trialled.

Progress at Site 4: Indonesia

Alternative livelihoods have not started at Site 4 yet as the site was only established in July. However, needs assessments are being undertaken.

Progress at Site 5: Indonesia

Site 5 has already engaged 108 people in 3 livelihoods, despite targets not starting until 2022. Non-Timber Forest Products are being developed via community groups (Coastal Field Schools). The two groups have developed tea from mangrove leaves (Acanthus ilicifolius) and sugar harvested from nipah palm (Nypa fruticans). These products are being assessed for a distribution permit which includes earning a Food Safety Certificate. The products have already been presented at meetings convening local governments, forest management bodies and community leaders, increasing their visibility.

2.3.2. Justification for log frame revisions

A log frame adjustment was completed in 2021 to include the additional 8th year (2024) following the project extension agreed in 2020 and to include the change of Site 4 agreed in 2021. The end of project target for Output 3.1 was adjusted from 1,640 to 1,481. In Site 2 (Velondriake), we have reached the project target for the number of alternative livelihoods developed at this site. Therefore, future work will focus on improving management, increasing profit of current farmers and developing new farmers where possible. This is particularly relevant for sea cucumber farming, where there is a need to hand over management of the existing operation to the Velondriake Association. This requires sufficient capacity in the Association to manage the farming effectively to ensure sustainable long-term growth, and to extend work into the areas to the north and south (outside the project area) to reduce encroachment by neighbouring fishers without alternative livelihoods.

2.3.3. *Issues*

The project's work on livelihoods has experienced various issues, for example the need to abandon plans for a hatchery at Site 1 in 2020 delays to the approval of government permits and the realisation that some livelihoods are not as profitable as those the project was modelled on (see Annex B). For example, beekeeping creates less income than sea cucumber and seaweed farming and as honey harvesting only happens once a year, motivation for this activity can be low. The trialling of new livelihoods will always encounter some that are more profitable or feasible than others for differing reasons. This has somewhat impeded progress overall on this output, despite the overall progress made this year.

2.3.4. Recommendations

Indicator 3.3 ("Number of new Alternative Livelihoods developed by site") should be revised since the quantity of livelihood models developed is not an accurate estimate of the contribution of these livelihoods to income or poverty alleviation (livelihoods that are financially inviable would be included in this indicator). This indicator should measure the number of livelihood models that provide a minimum (pre-determined) either set amount/month or year to each family or a percentage of their income, and should be disaggregated by site.

2.4. 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	Impac	Impact weighting (%):		
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	47 (plus Indonesia)	66 (59 plus 9 in Indone	sia)	Above target	
4.3. Number of outreach missions completed by reproductive health partner	4 mobile outreach mi per year across 2 sites new sites. All to dependent on resource partner organizations.	11 in total (4 in site 1, site 2 and 4 in site 3)	3 in	Above target	

2.4.1. Key Points

Blue Ventures has significantly exceeded its health targets for 2021 and averted 1,850 unintended pregnancies (Outcome 4). This has been partly made possible due to the flexibility of Defra to allow the partial reallocation of focus and resources during the COVID-19 pandemic. Velondriake (Site 2) in particular (the project's most established site). Having established sites in Madagascar (particularly Site 2) enabled Blue Ventures to continue and expand support more effectively during the pandemic. Community health workers continue to collect information on COVID-19 cases in villages thanks to the training they receive and provide on COVID-19 symptoms. Blue Ventures also continues to provide equipment to help tackle the spread of the disease (handwashing stations, face shields, masks, hygiene hats, alcohol etc).

Progress at Site 1: Madagascar

Missions continue with health partner Marie Stopes to offer family planning including long acting reversible contraceptives, intrauterine devices and implants. 513 children were vaccinated, and 488 antenatal visits conducted. Traditional birth attendants were trained on the importance of pre- and post-natal consultations, as well as COVID-19 awareness and prevention. Youth Group leaders carried out three educational sessions for the other Youth Group members about reproductive health and also gave three educational sessions to the Mothers' Groups about child/mother health. The performance of 19 community health workers (CHWs) were reviewed showing that 89% were performing well.

Progress at Site 2: Madagascar

As in Site 1, missions continue with Marie Stopes and CHWs are reviewed to ensure they are functioning well. CHWs also took part in polio and COVID-19 vaccination campaigns and support was provided to government-led HIV testing campaigns. The CHWs are now collecting health data using KoBo Toolbox to ensure data is more immediately available, protected and easily analysed.

Progress at Site 3: Madagascar

In addition to missions with Marie Stopes, continued training on COVID-19 and data digitisation, the government's input and knowledge in relation to community health has been a priority in Site 3. Blue Ventures

carried out training on the National Policy on Community Health in Majunga with the District Department of Public Health, the community health centre chief in Andranoboka, Andranoboka's mayor, the village President and partners (Access, PSI, Marie Stopes) to improve community health. The site also continues to share information with the Health District Authority by participating in their annual review, to ensure they have reliable data to make informed decisions on government policy, budgeting and support.

Progress at Site 4: Indonesia

Despite starting in July, Site 4 already has villages supported by community-based health services. A needs assessment and village profiles were completed, and health ambassadors were selected in all six villages, the first step in strengthening the role of local health workers and building a more proactive health service.

Progress at Site 5: Indonesia

A public health clinic was organised in June for the communities of Sungai Nibung and Kuala Karang, which was attended by 247 adults. Health ambassadors carried out 655 visits to households across six villages, and a public health clinic was organised for the communities of Sungai Nibung and Kuala Karang, all of which offered BMI, blood pressure, cholesterol, blood sugar, uric acid and haemoglobin checks for all community members. In total, 61 health ambassadors have been recruited (all females) 19 of them were recruited in 2021, and existing ones continue to be supported.

2.4.2. Justification for log frame revisions

A log frame adjustment was completed in 2021 to include the additional 8th year (2024) following the project extension agreed in 2020 and to include the change of Site 5 agreed in 2021. The end of project targets for Output 4 have not changed.

2.4.3. Issues

Narrow focus of the health indicators

The health indicators in the log frame are based on family planning (and specifically unintended pregnancies). This is a narrow view of the health work included under the project, particularly in light of the pandemic. This is due to the early assumption that the health needs and demands in Madagascar sites would be the same as those in the Indonesian sites (as the Indonesian sites had not yet been chosen). This was highlighted in the 2020 annual review and the recommendation was that the log frame be amended in 2021. During 2021, when it became apparent that a project evaluation would be undertaken, it was decided between Blue Ventures and Defra that this would be delayed to 2022 to incorporate the expert guidance of the project evaluation contractors.

Recommendations

Review and align the Community Health associated indicators, ToC and MEL framework aligned with the contexts in Madagascar and Indonesia.

2.5. 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:	n/a	Impact weighting (%) revised	No
		since last AR:	

Indicator	2020 Milestone	Progress	5
5.1. Organisational capacity. Number of relevant community structures (organisational; financial; administrative) in place to support local mangrove and fisheries management	3	18	Above target
5.2. Monitoring capacity. Number of Sites where community resource monitoring protocol is in place	4	5	Above target
5.3. Enforcement capacity. Number of sites where a community-led coastal management law enforcement protocol is in place.	4	4	On target
5.4. Conservation agreements. Number of Sites with functioning, transparent community conservation agreements	4	6	Above target

2.5.1. Key Points

The project's work on organisational development has shown the greatest progress in 2021 compared to the other outputs, in terms of the number of indicators reported as on or above target. Mahajamba (Site 3) and Inhil (Site 4) now have community resource monitoring protocols in place. Inhil also has a coastal management protocol and a conservation agreement in place.

Progress at Site 1: Madagascar

The *Dina* was approved by the court in July and then officialised by the authorities for 11 community resource management associations supported by Blue Ventures. The Dina brings into law the management and enforcement measures agreed by the community (e.g. laws against cutting mangroves). With these laws in place, the communities have the authority to enforce their management rights. In October awareness raising missions about the *Dina* were carried out together with the district chief, mayors, village chiefs etc.

The community association "MIEZAKA", one of Blue Ventures' partners in northwest Madagascar, won the competition for the best locally-based community that manages its own marine resources. More than 100 associations participated in the competition, including communities that partner with Conservation International (CI), Wildlife Conservation Society (WCS) and World Wildlife Fund (WWF).

Progress at Site 2: Madagascar

Community patrols continue to receive training on local fishing laws and to use cyber-tracker and SMART, leading to illegal fishing gear being seized. Blue Ventures provided capacity building on financial management for the Locally Management Marine Area Association. In November, the national octopus closure (15th December 2021 to 15th January 2022) appeared on TV, as well as a documentary on the communities' impressions of the impact of the health programme on marine conservation.

Progress at Site 3: Madagascar

Site 3 now has a community resource monitoring protocol in place but did not manage to establish a community-led coastal management law enforcement protocol (Output 5.3) or a conservation agreement (Output 5.4) as planned for the reasons described in the 'Issues' section below (Section 3.5.3). Site teams have been working to formalise the *Dina* in relation to fisheries and mangrove management, including via

consultations about local-level management plans and rules to be included in *Dina*. They also carried out training for the community associations on governance and day-to-day association operations. All of the seven associations completed their work plans for 2022.

Progress at Site 4: Indonesia

Despite only establishing the site in July 2021, Site 4 is already recording results for all four of the indicators under Output 5 – 3 of them are ahead of schedule. The core management teams from the four LPHDs in four villages have established an integrated mangrove forest monitoring and management protocol by signing a joint agreement. The document was developed and signed by each LPHD, and will be taken by LPHD leaders as reference for all LPHDs to monitor and manage areas that are prone to threats from destruction that may negatively impact their mangrove and fishery ecosystems. A fisheries data collection team consisting of 12 community members has been set up and initial training has been completed, resulting in the first round of data collected in December.

Progress at Site 5: Indonesia

Organisational structures are continuing to strengthen in Kubu Raya. Six villages are developing a joint village regulation for fisheries management in the Protected Forest Landscape of Seruat Pulau Tiga Regency. It is hoped formal ratification will be reached in 2022. A further fisheries monitoring group has been established to expand the fisheries landing data collection to monitor year-round and include finfish species.

2.5.2. Justification for log frame revisions

A log frame adjustment was completed in 2021 to include the additional 8th year (2024) following the project extension agreed in 2020 and to include the change of Site 4 agreed in 2021. The end of project targets for Output 5 has not changed.

2.5.3. Issues

Savings Groups

Financial stability is an essential part of community organisational development, particularly during unforeseen shocks such as the pandemic. This is why Blue Ventures supports the development of savings groups under the project including the creation of Saving Group Unions which take part in exchanges with other such unions to build their experience and knowledge. So far there are 77 savings groups in Madagascar (including 497 men and 1,323 women) and 10 savings groups in Indonesia. This is an important area for all communities and is often heavily linked to the work on fishers and alternative livelihoods, but it is not currently reflected in the project log frame. This does not necessarily need addressing in log frame changes but should be noted for transparency.

Dina finalisation at Site 3

The delayed *Dina* ratification in Mahajamba Bay is delaying the enforcement work. The delay is due to government opposition - the *Dina* was developed at the local management level but the government wants it to be added to the regional *Dina*, which could take a long time. Blue Ventures is dealing with this via targeted advocacy work at different levels, but it is delaying the achievement of targets in terms of management plans and enforcement.

Indicator 5.1

This indicator refers to the number of relevant community structures supporting local mangrove and fisheries management. Previously targets have reflected on the number of sites in which community structures are in

place whereas in reality, as sites progress in the project journey, there will be more than one structure per site. Eventually however, where there are multiple structures and they grow in governance and capability, the usual progression is for a Federation structure to develop as an umbrella for the existing structures/associations. In reality the number of structures would therefore start at one per site, increase to numerous structures per site, and then decrease again to one umbrella structure per site (e.g. at Site 1). This could look like a reduction in progress in terms of numbers reported over time but is actually a good sign of developing governance. It is suggested that the remaining targets for this indicator are reviewed in 2022 to reflect this in a better way.

2.5.4. Recommendations

BV have performed strongly in this Output, with above target delivery on 3 of 4 indicators. BV and Defra should work together to consider increasing targets to ensure maximum efficiency and value for money.

3. Value for Money & Financial Performance

3.1. Key Costs Drivers and Performance

The main cost drivers have not changed significantly in Year 5, or since the start of the programme. UK inflation rose throughout 2021 and is currently sitting at around 9%. Blue Ventures' main UK cost is on salaries, which was adjusted with an inflation-based cost of living increase in mid-2021 in line with Blue Ventures' financial year, and before inflation had reached its current high. In 2022, UK inflation is expected to further reduce the value of the ICF grant. Madagascar inflation was circa 5.8% and 1.5% in Indonesia. Blue Ventures will continue to monitor this and the impact it will have on the project goals.

3.2. Value for Money Performance

The impact of COVID-19 and change in site 4 has caused an underspend in year 5, resulting in some delays in reaching log frame targets. This could be seen to reduce the value for money of the programme; however, Defra Commercial and Finance have agreed to reallocate the underspend from year 5 to year 8. Additionally, despite these challenges the performance of the programme has not been massively compromised, BF have either met or exceeded on majority of their 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 intracommunity 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. Blue Ventures' agility is also demonstrated in their success in securing Inhil as their fourth site, making significant changes to their delivery plan to guarantee optimal results. The significance of this cannot be understated and Defra realises its value.

3.2.1. Economy

Blue Ventures has recently undertaken salary benchmarking activities across their programme in Madagascar. This showed that an increase in staff costs was necessary and appropriate. No additional benchmarking has occurred in Indonesia, but staff costs are currently underspent compared to budget.

Blue Ventures is overseen by an independent board of Trustees and required to be annually audited. The 2021 audit reported that Blue Ventures followed the Companies Act 2006 relating the financial operations and management approaches.

Blue Ventures' Procurement Policy contains rules and procedures for contracting local people and agencies. It covers procurement controls, process and financial delegations for local purchases, competitive quotes and tendering process for large purchases/ contracts and process for capital expenditures. The policy, in our view, has continued to provide value for money to this programme.

3.2.2. 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, <a href="https://hibob.nih.google.com/hibob.nih.google.c

There has been wide coordination with different project partners, this has ensured the best use of the available financial resources to deliver the outputs. For example, *Yayasan Mitri Insani (YMI)* the most recent project partner, based in Inhil have partnered up with YPL, YMI and YBH to hold project coordination meetings, organise field visits and strengthen relationships with local and regional government. This has not only increased the value for money on field trips but also ensured a greater level of buy in from the community contributing to the effectiveness of the programme. The approach enabling Inhil to contribute to log frame targets despite the disruptions to site 4.

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 all target for Year 5 under this output, suggesting efficient allocation and use of funds.

3.2.3. 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 5 despite the challenges mentioned throughout this Annual Review.

Delays to project implementation at Site 4 had the largest impact on the effectiveness of the programme. However, work has begun in Inhil and is successfully contributing to outputs and targets (see section 7.2). We have no concerns that this delay in implementation is a fundamental problem in delivery or will impact overall value for money of the programme.

In addition, the COVID-19 pandemic hindered the effectiveness of the programme to progress as expected against the delivery plan. For example, the pandemic continued to disrupt travels from different islands and many villages had self-enforced lockdowns. In Inhil, the site coordinator had troubles recruiting (see section 1.2.2 to for information on how these issues were mitigated). Despite these difficulties, 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 1.1.5 enabled communities to effectively weather the global health crisis.

These delays were beyond Blue Ventures control and therefore it is reasonable to revise the log frame in accordance with these factors arising.

Revisions to log frame targets and baselines

The ToC was updated in 2019 to ensure that it was in line with the indicator framework. The MEL framework itself was changed in June 2021 due to the ongoing global COVID-19 pandemic and a change in location for Site 4. The changes involved mainly a revision of the targets.

All 2021 log frame baselines will need to be reviewed to reflect how the expansion of the programme increases the targets for the outputs. Many targets have been met and exceeded as it was measured by the 2021 log frame baselines, which did not include expected results from site 4 and 5.

3.2.4. Equity

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

BV addresses ICF KPI 15 by setting in place a grassroots approach to conservation and sustainable use of natural resources in communities that depend on these, and with a high degree of vulnerability to resource overexploitation. Their holistic approach to sustainable conservation is underpinned by developing elements like carbon finance, sustainable fisheries management, alternative livelihoods, and most of all by a strong focus on community engagement and community-led management initiatives.

The programme works towards improved gender outcomes. There are family planning activities in sites which enables recipients to make their own choices on family size and timing of pregnancies (see Annex B). As well as addressing equity on the ground amongst stakeholders, BV continue their commitment to Equality, Diversity and Inclusion (EDI) group to ensure reporting, discussion and addressing of inequality in the organisation and its work. In Madagascar, Ambanja 12 youth group leaders were trained on climate change, where they then carried out their workshop raising awareness of the topic across 5 villages, where 276 people attended (113 women and 163 men).

3.3. Does the Blue Forests Programme Continue to Represent Value for Money?

Whilst there is some under-delivery against the log frame targets, most of these are easily explainable and due to factors beyond organisational control. Despite the challenges, we remain confident that the programme is in line with the value for money parameters as laid out in the approved business case.

3.4. Quality of Financial Management

Financial management has been strengthened in Indonesia in 2021 with subgrantee YPL. YPL continues to grow in independence including the establishment of its own systems and processes. With the establishment of Inhil as Site 4 we have started subgranting to a 4th Indonesian partner, helping to grow capacity in local organisations. The subgranting process is going well and has expanded with the start of the Blue Action Fund project, co-funding the Blue Forests project, which has led to 3 additional subgrants to the Indonesian partners.

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:	11/02/2021
Date of last audited annual statement:	11/02/2021

4. Risk and Risk Management

4.1. Overall Risk Rating

The Blue Forests programme has scored a Moderate risk rating, a decreased level compared to the last Annual Review. While there were challenges faced around securing Site 4 and reducing the impact of COVID-19, the programme has proved it can successfully mitigate and overcome 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.

4.2. Overview of Programme Risk

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	Severity of Impact	Risk Rating	Mitigation
COVID-19 disrupts BV's delivery of programmes and expeditions, BV's finances, and the environment in which BV operates	likely	4		 COVID-19 panel created to communicate guidance and advice (health, safety and work related) as well as respond to questions via focal points to staff in all countries. Consistent communication to all staff via various channels (email, team meetings, group conference calls and BV wide channel on Workplace) about health, logistics since late February.
				3. HR and Operations policies developed and communicated to all affected teams.4. Operations teams focused on support, financial and logistical, to teams as required.
				5. All existing funders have been contacted with an update on the impact the outbreak will have on their programme, and a request for further flexibility in use of their funds.
'Over reliance and potential loss of key staff, resulting in undue pressure, deteriorating	possible	3		- Formal annual appraisal process in place

			Annual alriantica anticas for shaff
performance and/or			- Annual objective settings for staff
resignations. Loss of			performance and professional development
institutional knowledge			with monthly 1:1 catch ups,
or BV's ability to deliver at such a scale			- Talent identification & retention measures
at such a scale			including further study, new role within BV
Value For Money for	unlikely	3	- Financial authority levels are documented,
project expenditure			and reviewed on an annual basis
BV Financial management policies and procedures are not			- Procurement Policies in place, and policies and procedures are reviewed on an annual basis for new staff, new processes and to manage larger amounts of funding. It also
fully effective or followed			ensures anti-corruption and anti-money laundering policies are in place and effective
			 Internal staff training for local offices with timely escalation of issues to Director level/Trustees as appropriate and continued CPD of Finance Team
			- Regular review and monthly reconciliations of site funds undertaken by London Finance team with spot checks
Major investment in new finance system	unlikely	3	'- Success of project built into MGM (Finance Director's) performance objectives.
consumes management resources and does not deliver promised benefits			- Project oversight given by the BV Board's Finance Sub-Committee via regular email updates and meetings.
Foreign exchange risk - forex fluctuations or Brexit result in higher	unlikely	2	 Almost all of BV's income is in hard currencies, providing some protection against forex turbulence
costs or depleted reserves			- BVC seeks to minimise currency purchase and sale, and does not hold soft currencies in reserve
			- BV holds GBP, USD and EUR accounts in the UK, and matches receipts and payments in the same currency where possible
			- BV uses Western Union and INTL FC Stone to execute foreign currency payments, and issues FairFX cards to travelling staff who need to access a variety of currencies
			- GBP to MGA exchange rate is monitored closely each week. As Madagascan Ariary is an exotic currency it cannot be traded so we cannot mitigate this risk through financial markets.

		I _	
Business continuity and	unlikely	5	- Crisis management insurance in place, with
disaster planning are			a Disaster Recovery Plan in place and tested
inadequate, including in response to a natural			- Business continuity cover included under
disaster in countries of			general insurance cover
operation			- Offsite working current norm for UK staff
			and cloud based server established
			- Regular security updates to Director team
			and sharing of information and risk
			assessments with local teams. Regular review
			and withdrawal / pausing of activities if
			required
Performance and service	possible	4	- FY21 operating plan is in place with a heavy
delivery affected by	possible	•	focus on people, learning and development.
inadequate pool of skills			
within BV, low staff			- Reports on staff turnover and other KPIs
morale or high staff			provided to Board quarterly
turnover			
Safeguarding	likely	4	Safeguarding review carried out in 2018 and
environment	пкету	-	significant work carried out to develop and
CHVIIOIIIICIIC			improve policies and procedures in 2019 and
			are still ongoing. All related policies reviewed
			and updated. Reporting framework reviewed
			and improved. Safeguarding and Reporting
			committee created to oversee these
			elements of BV's work. Key staff trained in
			2018 and 2019 with more training planned
			for all countries as annual refreshers.
			Dedicated staff in place to create and then
			support a culture of Safeguarding as a
			priority.
Organisational structure	possible		- BVC takes legal advice in all countries of
does not meet			operation to work to regulations
compliance			- Partnerships will be developed with key
requirements in overseas operations			partners, governments and the British
resulting operational			Embassy to support our efforts.
and legal problems, and			
finds difficulty in			
registering in overseas			
countries, including			
Indonesia. BV are			
therefore unable to			
function effectively to			
deliver the project and			

therefore employ the			
right team.			
Natural Disaster for example, Cyclones, pandemics, earthquakes, flooding etc.	Very unlikely	4	 BV has well evolved and practiced emergency protocols to deal with tropical storms, cyclones and emergencies. Risk assessments for site selections will also be incorporated at Stage 1 and fed into feasibility assessments. COVID-19 experience and response that BV has taken so far is still current but will help
			form a plan for future disease/virus outbreaks.
Support for sustainable forestry and fisheries displaces unsustainable activities into other locations through "leakage"	possible	3	Leakage will be partially managed through working to address directly the drivers of deforestation, providing alternative livelihoods and introducing management regimes where currently they do not exist or are inadequate. The model is designed to be replicable across jurisdictions.
Projects fail to create interventions that are sustainable in the long term	possible	3	Project designed so that all sites start with Stage 1 (the pilot/scoping stage) to assess most suitable interventions. Sites and/or activities do not progress if likelihood or feasibility not deemed sufficient for long-term.
Poor delivery performance damages BV's reputation amongst	possible	3	'- Programme Status Report presented at each Board meeting
funders			- This a key responsibility for the dedicated FO manager
Failure to identify private sector buyer for carbon credits, or price	Very unlikely	3	- Maintaining strong interactions with potential buyers of carbon credits on the voluntary carbon market.
of carbon falls below level required to motivate behaviour change. Difficulty securing private sector			- Continue to work in close collaboration with private sector organisations involved in natural resource exploitation in target countries, including seafood collection and export businesses.
support for livelihood interventions, for			- Pollen street capital
instance fisheries improvement projects.			- Review resourcing of BC team

Don't develop sellable carbon propositions. Only one at the moment. Lots of BC directed work elsewhere (Ambanja), however unless you have a verified credit or alternative saleable prop, you don't have anything to sell. Want to break open BC market with more community conservation p2p verified alternative. High barrier to entry on verified credits.			
Delays in carbon credits being passed to BVC by Govt of Madagascar. In this situation onus falls on BVC to front cash to communities to keep programme going	Very likely	2	 Sustained engagement and advocacy at the ministerial level in Madagascar, leveraging HMA support where necessary Seeking understanding carbon offsetters who are willing to make payments with no guarantee of receiving credits
Whitespot outbreak in Mahajamba (ICF Site 3)-UNIMA bio-security zone. If Unima is negatively impacted by White Spot, they shut up shop, no longer provide office, support, travel links, local clinics etc. We could carry on without them today but would be tough. If Unima aggressively extend security zone to mitigate biosecurity zone, negative impact on nearby communities.	unlikely	3	 Communities in proximity of UNIMA's proposed new biosecurity zone may be relocated and compensated. Potential for this to impact up to 500 people. Reputational and delivery risk to BV and Defra. Discussions ongoing with UNIMA (shrimp aquaculture company) in Mahajamba Bay including a meeting in early July attended by senior BV and UNIMA staff. Options are available in terms of contingencies, and BV's safeguarding committee are contributing."
Reputational damage to BV and Defra/HMG through partners financial conduct, UNIMA in particular	possible	3	 Following allegations in Le Monde newspaper and Mongabay journal in October 2018 of financial impropriety by UNIMA, including featuring in the 'Panama Papers'. Ask UNIMA for their position on the allegations; monitor press ongoing; maintain

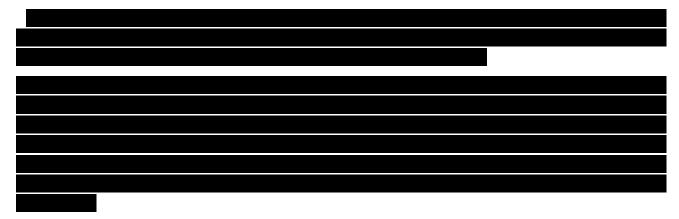
			Mahajamba momentum; keep Unima partnership and proximity under review.
Insufficient capacity for M&E compromises effective measurement of project outcomes against logframe	unlikely	3	For ICF: M&E framework and logframe developed in close consultation with Defra including developing a reporting framework and schedule

4.3. Issues for Consideration

Although BV have exceeded on target in ensuring the number of people engaged in local livelihoods, these alternative livelihoods are not sustainable and will require adapting. BV are looking to make these alternative livelihoods more profitable by finding a technical partner to ensure/improve the implementation, technical monitoring, marketing and packaging of the product. BV are working on this but it is not a large field. Another area BV can investigate is adding value to the product through improved packaging and marketing.

Significant delays to the sale of carbon credits (see section 4.1.3.).

4.3.1. Safeguarding Concerns [Redacted]



5. Commercial Considerations

5.1. Delivery against the Planned Timeframe

- 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.
- The development of new livelihood activities. Whilst local engagement with beekeeping as an alternative livelihood has been successful BV have started to venture other alternatives as it beekeeping has not proven as sustainable as predicted. Bee keeping does not generate enough income for local communities to sustain themselves in the long-term.

5.2. Performance of Partnership

5.2.1. 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.

5.2.2. Blue Ventures / Additional Partners

- Yayasan Hutan Biru (also known as Blue Forests) in Indonesia has continued to be productive and is also a partner on the Blue Action Fund grant lead by Blue Ventures, that started in August 2021 and co-funds the Blue Forests Programme in Kuba Raya.
- Yayasan Planet Indonesia in Indonesia also continues to be a productive project partner. They are
 also a partner on the Blue Action Fund grant lead by Blue Ventures, that started in August 2021 and
 co-funds the Blue Forests Programme in Kuba Raya.
- Yayasan Pesisir Lestari continues to grow in terms of grant income, personnel (19 staff) and professionalism since its establishment. This year they made some key recruitments to grow the capacity of their teams including a Grants Coordinator, Finance Specialist and Programme Officer. In Bali YPL welcomed leaders from 17 local partners, including YHB and YPI, representing Blue Ventures' work across 49 sites/villages in 15 provinces across Indonesia, including the two sites under the ICF Blue Forests project, to participate in the 3rd Annual Partner's Forum.
- Yayasan Mitri Insani (YMI) in Indonesia is the most recent project partner, based in Inhil. It is a young and dynamic organisation that has risen to the challenge, with YPL, or establishing Inhil as the last Blue Forests project site. Project coordination meetings with YPL, YMI and YHB were carried out. Field visits to Inhil established and strengthened relationships with local and regional government, local NGOs, community members, the University of Riau and other government stakeholders such as the BRGM and the Ministries of Environment and Forestry, and Fisheries. A field office (shared by YPL and YMI) and a project team was set up in Tembilahan City, Riau Province.

5.3. 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.

6. Monitoring and Evaluation

6.1. Evidence and Evaluation

This year has been particularly important with regards to evidence and evaluation as the contractor to undertake the project evaluation was chosen via an open tender procedure. NIRAS (LTS International Ltd, trading as NIRAS-LTS International) was chosen as the project evaluators. Subsequently Blue Ventures and/or NIRAS held introductory workshops (internal and external). The Evaluation Steering Committee was also

established and convened. NIRAS compiled information from Blue Ventures, Defra and the project partners in order to write the inception report for the evaluation. Due to scheduling conflicts; the depth of feedback provided on the report and the need for several rounds of review, it was not finalised in 2021 as planned but the final draft has now been submitted for sign off by the evaluation steering committee. It is expected that a log frame review will be undertaken by NIRAS in 2022 to provide any suggested edits.

6.2. Programme Design Questions

As part of the project evaluation inception period, NIRAS has reviewed the Theory of Change. It is expected that their feedback on this document (once finalised) will be addressed during the intermediate phase of the review. In the interim, the inception report which is due to be finalised in early 2022 will include the agreed list of evaluation questions that will form the basis of the project evaluation.

6.3. 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.

6.3.1. Monitoring Progress throughout the Review Period

Development of our monitoring systems

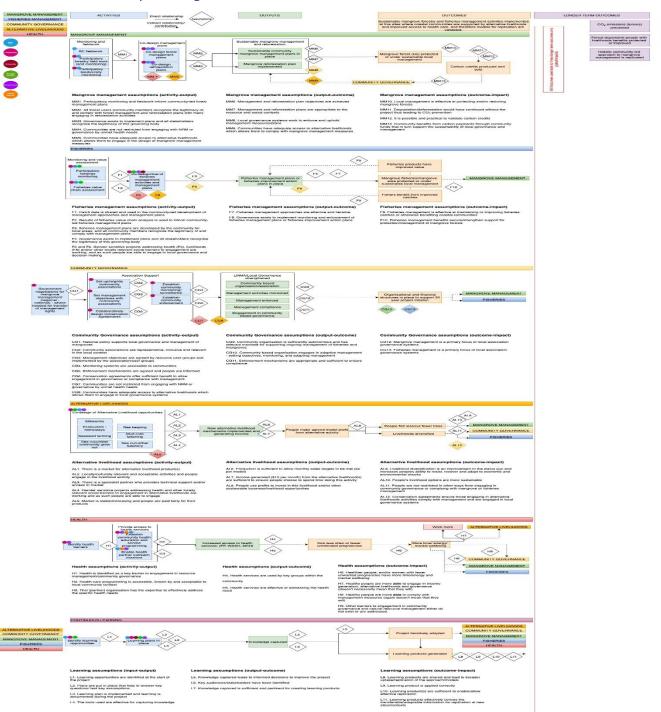
The monitoring systems used by the Blue Ventures field teams are continually being improved. To support this continuous improvement, NIRAS evaluators were asked to review our current M&E system and provide recommendations for improvement. This included a review of the log frame and support in review and development of our health indicators. Log frame updates and potential indicator revisions will be proposed in the coming year.

Fisheries

Over the last year, Blue Ventures and partners have been rolling out mobile monitoring of fisheries data at a number of different sites globally. Mobile monitoring pilots have been carried out at Sites 1, 2, 3 and 5 over the last year and it is anticipated that scaling of digital data collection approaches will continue in the coming years. Alongside digital data collection initiatives, we have been working to develop organisational data systems that facilitate the collation, quality checking and visualisation of data across our portfolio. Development of our systems will include a global fisheries cloud-based database and will enable timely feedback of data to communities at the sites where we work.

7. Annexes

7.1. Annex A. Full Theory of Change



7.2. Annex B. 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 5. 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, 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 more than 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.

7.3. Annex B. Sea Cucumber hatchery development - Ambanja, Madagascar

One of the alternative livelihoods originally envisaged for sites in Madagascar was sea cucumber farming. The 'grow-out' model developed in the southwest of Madagascar entails the stocking of farms with juveniles, eliminating harvesting of adult or subadult wild sea cucumbers. A hatchery that produces juvenile sea cucumbers is required. Sea cucumbers are then reared in community-owned pens in the intertidal area, and sold for export when the sea cucumbers reach a marketable size. In the southwest of Madagascar, a commercial hatchery was already set up by a local business. Our model there used this opportunity to establish a partnership with the private company, enabling Blue Ventures to focus its support on the community 'outgrowing' phase.

In the northwest site of Ambanja, there is a vast amount of ideal habitat for the outgrowing phase of sea cucumber production. However there is no hatchery present to provide the juvenile sea cucumbers. Existing commercial partners were not interested in establishing a new hatchery in the area during the timeframe of this project, so Blue Ventures embarked on a plan to build a hatchery as part of a fully integrated community-based production model.

During the first 3 years of the ICF project, Blue Ventures designed the hatchery (based on research and scoping globally), secured community engagement and an appropriate site (under community tenure), and engaged local and regional government bodies who sanctioned the plan. However, in the final stages of the negotiations and approval processes, a national government fisheries project funded by the World Bank (SWIOFish2 - \$84 million over 6 years) was launched with an ambition to develop its own sea cucumber hatchery in the region, thwarting our plans built up over the past few years. This was unforeseen, as the World Bank funding was announced long after our project planning began.

Blue Ventures spent an additional six months discussing and negotiating with the national ministry in order to find a collaborative solution, including for example Blue Ventures working with the ministry to develop the hatchery. However, a later condition of the government's plans was that any hatchery and the land that it is sited on had to be fully owned by the government. This meant that the site that Blue Ventures had identified, and agreed with the community, would not be suitable as it was under community tenure. A key motivation for Blue Ventures to embark on building a hatchery was to create a more equitable integrated production model, with community ownership of where possible. This is in line with Blue Ventures' core value of 'communities first'. Blue Ventures' team has tried multiple strategies to discuss and find common ground, consuming considerable time due first to difficulties engaging the ministry, and second to their plans ultimately changing with the arrival of the new SWIOFish funding this year.

In July 2020 we decided to cut our losses and wrote to the Government of Madagascar informing them we were withdrawing. We understand the government plans to build a hatchery at a different site in the area, and we have offered the government our technical assistance with this in the future. We will monitor developments closely, and revisit a community "grow-out" model if and when they are producing juveniles reliably.

However we are not confident this will be delivered within the timeframe of the ICF project (if at all), and so have decided to focus our energies on developing a suite of other livelihood activities at the Ambanja site, including sponge, oyster and seaweed cultivation, as well as land-based activities such as vegetable gardening or soap making.

While a setback for the ICF project, this decision mitigates further delays on the vital livelihoods part of our work. An internal review is considering the lessons learned, with likely emphasis on cheaper, lower-risk, interventions yielding quicker returns. Locally in Ambanja the team is now underway exploring the alternatives mentioned above. We look forward to updating the Defra team on progress here in due course.