2023 Annual Report

Tahiry Honko

Community-led mangrove carbon project
Southwest Madagascar

Submitted by: Blue Ventures
Date of submission: February 2025

Acronyms and glossary
PVC: Plan Vivo certificate
Summary
Part A: Project updates
Part B: Project activities
Part C: Plan Vivo Certificate issuance submission
Part D: Sales of Plan Vivo Certificates
Part E: Monitoring results
Part F: Impacts
Part G: Payments for Ecosystem Services
Part H: Ongoing participation
Part I: Project operating costs
Annexes
Annex 1. Monitoring results for issuance request
Annex 1.1. Prevention of Ecosystem conversion - Strict Conservation and Sustainable Use
Table Annex 1.1 (a) Mean change in mangrove dbh and number of stumps from 2014/15 to 2022
Table annex 1.1 (b) Result of the carbon stocks monitoring
Annex 1.2. Mangrove replanting
Annex 2. Ongoing monitoring results for all participants
Annex 2.1. Mangrove replanting survival rate monitoring
Annex 2.2. Dina enforcement
Annex 2.3. Forest monitoring and patrolling
Annex 3. Reallocation of commitments
Annex 4. Socioeconomic monitoring results
Annex 5. Conservation and monitoring results
Annex 6. Impacts
Annex 7. Community meeting records (summary)

Acronyms and glossary

CAST: Special Appropriations Account of the Treasury

CSE: Monitoring and Evaluation Committee

DBH: Diameter at Breast Height

Dina: Local laws used by communities as a social norm at village level

Fokontany: Smallest unit of administrative level in Madagascar

Foibe: Executive committee of the Velondriake Association

KMD: Dina Enforcement Committee

LMMA: Locally Managed Marine Area

MGA: Malagasy Ariary, local currency

NGO: Non-Governmental Organisation

PES: Payment for Ecosystem Services

REDD+: Reducing Emissions from Deforestation and Forest Degradation

SUZ: Sustainable Use Zones

Vondrona: administrative sub-units of the Velondriake Association

PVC: Plan Vivo Certificate

Summary

Project overview	
Reporting period	January 1st, 2023 to December 31st, 2023
Geographical areas	Bay of Assassins, Rural Commune Befandefa, District Morombe, Region Atsimo Andrefana, Southwest Madagascar
Technical specifications in use	Prevention of ecosystem conversion Improved land use management Ecosystem restoration

Project indicators to date (reporting period end)	
No. smallholder households with PES agreements (where applicable)	NA
No. community groups with PES agreements (where applicable)	10
Approximate number of households (or individuals) in these community groups (if known)	895
Area under management (ha) where PES agreements are in place	1,393
Total PES payments made to participants (USD)	2,715[1]
Total sum held in trust for future PES payments (USD)	$ 20,000*
Plan Vivo Certificates (PVCs) issued to date	0[2]
Allocation to Plan Vivo buffer to date	TBC
Unsold Stock at time of submission (If comprising various vintages, detail all vintages on additional lines as required)	0

*The sum held in trust refers to amounts received from buyers of carbon credits who sent the money with the understanding that they will receive the credits once the policy issues are resolved.

Project activity this reporting period	
No. smallholder households with PES agreements signed	0
No. community groups with PES agreements signed	10
Approximate number of households (or individuals) in these	895

[1] Please note that since certificates have not been issued, in this reporting period Blue Ventures has advanced USD 2,715 for PES payments. This is reported in Table I2 Allocation of costs.
[2] Please note that from 2018-2022, 6,855certificates have been verified, but not issued, due to policy blockages described in section 'A2 Successes and challenges'

community groups (if known)	
Area put under management by participants with PES agreements this year (Ha)	1,393
Plan Vivo Certificates (PVCs) requested for issuance this reporting period	TBC

Part A: Project updates

A1 Key events

Most of the events during this year, whether attended or organised, took place at the international level rather than the local level.

- ***Mangroves and seagrasses workshop organised by the RECOS in Seychelles***

Lalao Aigrette, the National Technical Advisor for Mangroves and Blue Carbon, attended a regional workshop organized by the RECOS project in Seychelles from April 26th to 29th, 2023. The workshop aimed to discuss challenges and share best practices in managing Blue Carbon ecosystems, including seagrass and mangroves, among beneficiary countries (Madagascar, Seychelles, Mauritius, and Comoros). The event provided an opportunity to showcase the Tahiry Honko project and to share best practices, challenges, and lessons learned from the initiative. During the workshop, participants identified key priorities, such as standardising mapping methods for Blue Carbon ecosystems and finding common solutions to policy challenges.

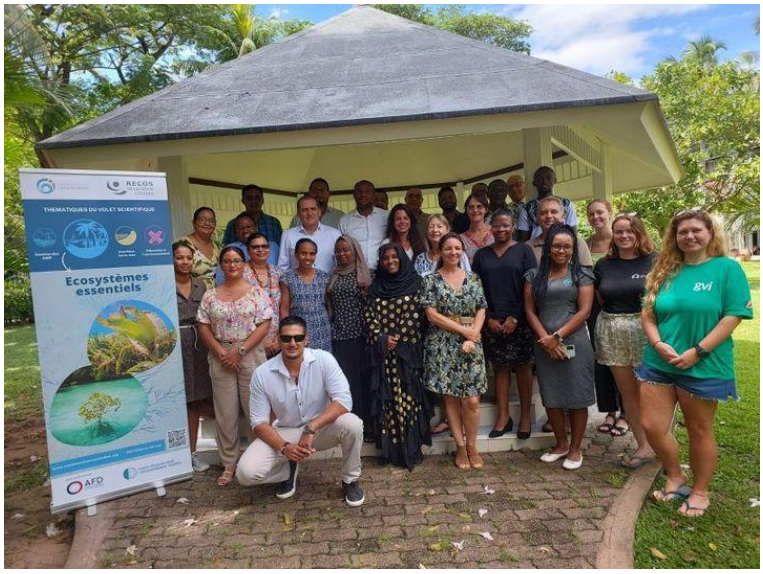

Figure A1 (a): Group photo of the workshop participants (including Lalao Aigrette, in the middle)

- ***WIOMN Country representatives meeting***

As part of the Western Indian Ocean Mangrove Network (WIOMN), Blue Ventures, represented by its National Technical Advisor for Mangroves and Blue Carbon, participated in the network's regular meeting. The meeting took place in Dar es Salaam, Tanzania, from March 20th to 24th, 2023, with country representatives in attendance. The objectives of the meeting included reviewing the Draft Strategic Plan 2023-2027, recommending the approval of Elaborated Options for the Regional Mangrove Vision (RMV), and developing the Regional Mangrove Action Plan (RMAP). This meeting provided an opportunity to incorporate activities from the Tahiry Honko project into the Plan.

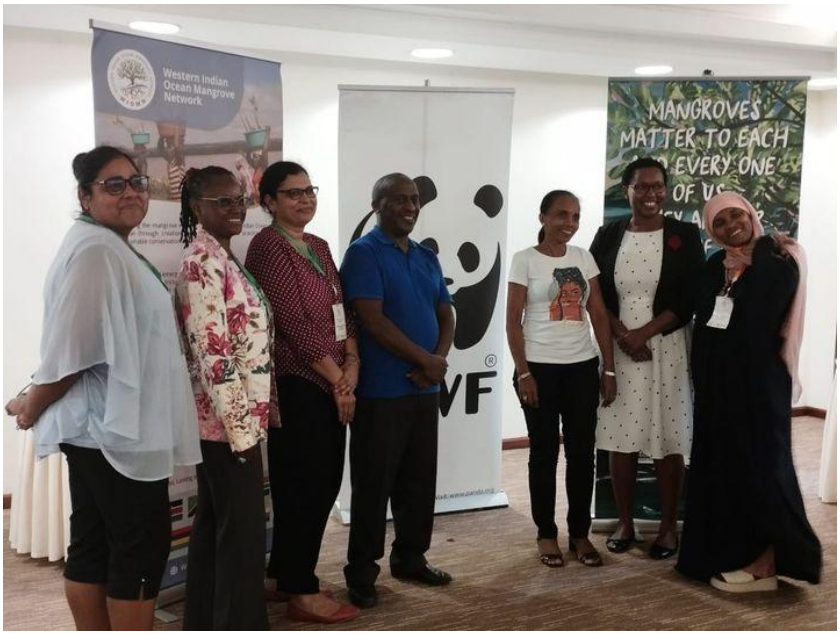

Figure A1 (b): Third from the left, Lalao Aigrette, the National Technical Advisor for Mangroves and Blue Carbon, took photo with the WIOMN participants

- ***Blue Ventures' global blue carbon learning exchange***

The Global Blue Carbon team from Blue Ventures, representing various countries (Madagascar, Indonesia, Timor-Leste, Kenya, Belize, and Senegal), came together in Nosy Be, Madagascar, for a Blue Carbon Ecosystems Learning Exchange. Participants shared their knowledge and experiences in community-led mangrove and seagrass management and governance, mapping and monitoring, policy and advocacy, and carbon markets. This exchange provided an invaluable opportunity for the Tahiry Honko project coordinator to discuss the challenges and lessons learned from the project with a multidisciplinary team and to develop strategic plans for the project's future."

Figure A1 (c): photo of participants in the blue carbon learning exchange

- ***PhD defence from Tahiry honko project research***

In December 2023, Lalao Aigrette, the National Technical Advisor for Mangroves and Blue Carbon, successfully defended her PhD dissertation entitled 'Exploration of the Factors Determining the Success of the Community-Led Blue Carbon Ecosystem Restoration Initiative in Madagascar.' Her research focused on mitigating the effects of climate change by examining the factors that contribute to the success of blue carbon ecosystem restoration efforts in Madagascar, using the Tahiry Honko project's restoration activities as a case study. The findings highlighted the meaningful participation of the community in the design and implementation of the Tahiry Honko project, as well as the key factors that motivated their involvement. This research also provided valuable insights for decision-makers and researchers to develop strategies for sustainably managing blue carbon ecosystems and enhancing community participation in the successful implementation of blue carbon projects.

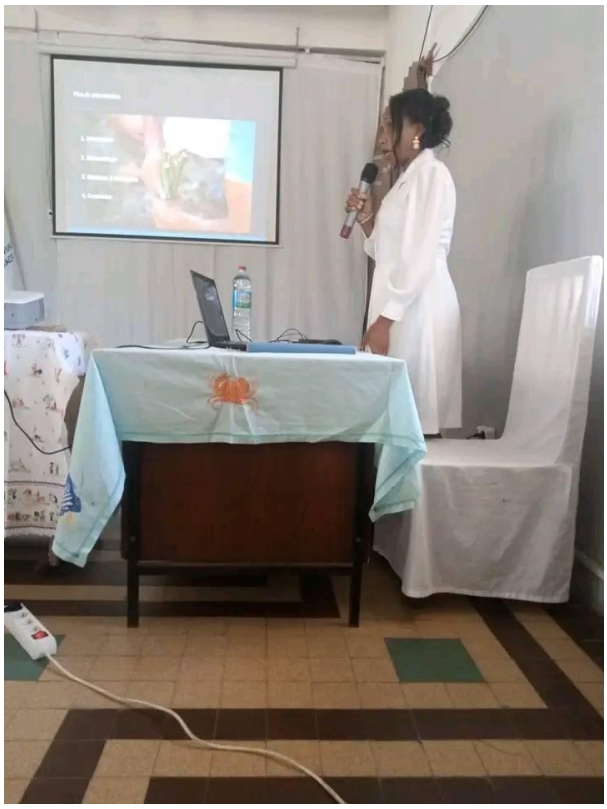

Figure A1 (d): Lalao Aigrette defended her PhD publicly

A2 Successes and challenges

- **Successes**

A national decree related to the Special Allocation Account approved

A national decree regulating the management of accounts for receiving funds from carbon sales in Madagascar was approved in July 2023. This decree mandates the establishment of a 'Special Allocation Account' as outlined in decree no. 2021-1113, which governs

access to the forest carbon market. Once in place, this account will enable the Velondriake Association to sell carbon credits from the Tahiry Honko Project.

Tahiry Honko ratification by the Madagascar government

Following the approval of this decree, the BNCCCREDD+ team, representing the Ministry of Environment and Sustainable Development, visited the Tahiry Honko project villages in October 2023. The aim of this field visit was to observe the activities carried out on the ground as part of the Tahiry Honko initiative, which contributes to reducing carbon emissions, conduct surveys with the Velondriake Association as the manager of the initiative and with members of local communities as beneficiaries, and train local stakeholders and beneficiaries of the Tahiry Honko project on the REDD+ mechanism, its policy and institutional framework, and the management of REDD+ initiatives. One week after the visit, the project got its 'approval act' from the Ministry of Environment and Sustainable Development registered under the number 15/2023-H/MEDD/SG/BNCCCREDD+.

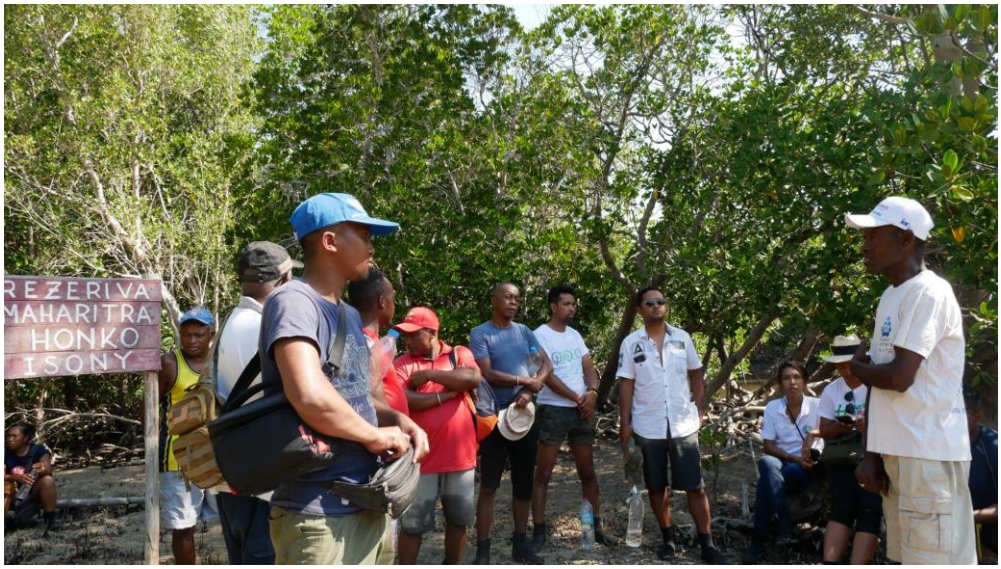

Figure A2 (a): a member of CSE in Vatoavo explained Tahiry Honko project local context during the BNCCCREDD+ field visit

Three peer-reviewed paper related to Tahiry Honko project published

A paper titled 'Lessons for Ensuring Continued Community Participation in a Mangrove

Blue Carbon Conservation and Restoration Project in Madagascar' was published in the Western Indian Ocean Journal of Marine Science. Another paper, titled 'Combining Traditional Ecological Knowledge and Scientific Observations to Support Mangrove Restoration in Madagascar,' appeared in the journal *Forests* (MDPI). The third paper, published in *Marine Policy*, explored the policy and institutional context of a Payment for Ecosystem Services (PES) scheme for mangroves in Madagascar, using the Tahiry Honko project as a case study. The publication of these papers has significantly increased the project's visibility at both national and international levels.

In addition to these publications, project team members Lalao Aigrette and Leah Glass contributed to the development of the *Blue Carbon Handbook* as a nature-based solution for climate action and sustainable development, commissioned by the High Level Panel for a Sustainable Ocean Economy. Lessons learned from the implementation of the Tahiry Honko project were used to enrich this handbook.

- **Challenges**

Although the national decree regulating the management of accounts for receiving carbon funds (Compte d'Affectation Special au Tresor; CAST) has been approved and the Tahiry Honko project ratified under Decree n° 2021-1113, the Emission Reduction Purchase Agreement (ERPA) has not yet been signed by the Ministry of Environment and Sustainable Development. As a result, Blue Ventures and the Velondriake Association are unable to proceed with the sale of carbon credits. Consequently, the funds to cover school fees for all children enrolled in the state and Catholic primary schools in the Tahiry Honko project villages are still being advanced by Blue Ventures.

Another challenge faced at the project site is the suspension of sea cucumber farming in the village of Tampolove. Following the theft of farmed sea cucumbers, the Indian Ocean Trepang (IOT) company responsible for providing juveniles, technical support, and purchasing the harvest decided to halt this activity. While no formal solution has been implemented yet, the Velondriake Association, as the manager of the Velondriake MPA and the Tahiry project, continues to work on addressing this issue. Efforts include ongoing discussions with IOT and exploring alternative livelihood activities for the community.

Seaweed farming (*Kappaphycus alvarezii*) has also faced challenges due to a disease known as Epiphytic Filamentous Algae (EFA), which has significantly reduced production for seaweed farmers. To address this issue, Ocean Farmer, the company providing technical support and purchasing the harvest, introduced a solution: a new strain of seaweed resistant to the disease. This new strain is currently being tested across all the villages in the project area.

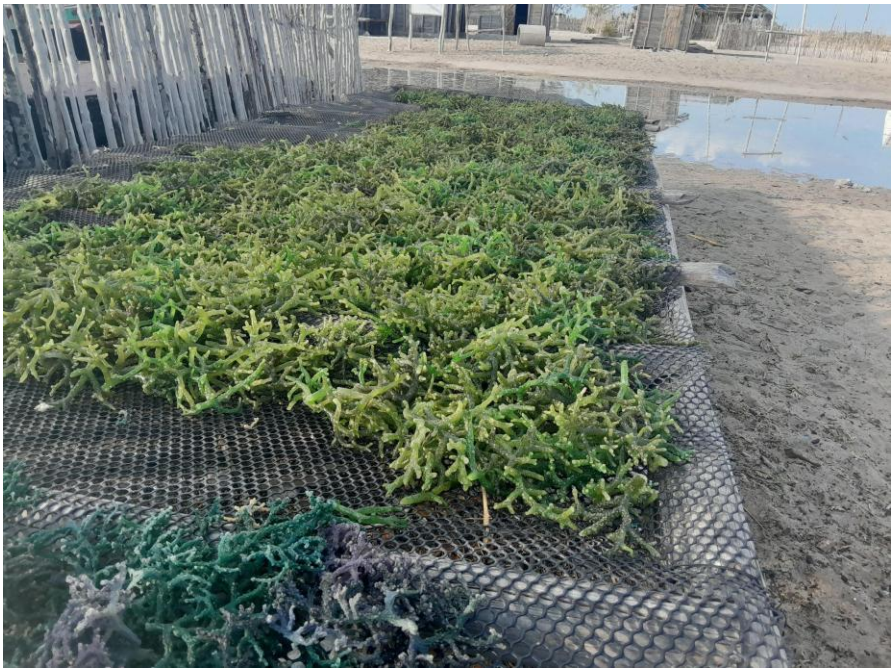

Figure A2 (a): New strain of Kappaphycus alvarezii resistant to disease dried in the Village of Tampolove

A3 Project developments

No update.

A4 Future Developments

No future development is currently planned.

Part B: Project activities

B1 Project activities generating Plan Vivo Certificates

Table B1 Project activity summary

Name of technical specification	Area (Ha)	No smallholder households	No Community Groups
Prevention of ecosystem conversion	257	895	10
Improved land use management	973	895	10
Ecosystem restoration	163	895	10

B2 Project activities in addition to those generating Plan Vivo Certificates

- ***Beekeeping***

Out of the 54 beekeepers who subscribed this year, 11 successfully harvested honey, all from four villages. A total of 133.3 kg of honey was harvested, generating 1,184,000 MGA (approximately 280 USD). Due to the limited quantity, the honey was sold locally.

The main challenge contributing to the low honey production was the escape of bee colonies, primarily due to the arid climate. This year, the region experienced very low precipitation, making it difficult for bees to feed and produce honey. As a result, most of the beekeepers chose not to harvest their honey because their colonies were not strong enough. Another factor affecting production was the low motivation among beekeepers, who have not yet seen significant success from their efforts.

To sustain this activity, Blue Ventures has adopted a strategy of transferring the management to the Velondriake Association while continuing to build the technical capacity of the trained local supervisors. Handing over the activity to the Velondriake Association is expected to enhance beekeeper motivation, as the association has stronger connections with the villagers and can foster a greater sense of ownership compared to when Blue Ventures was leading the initiative.

Table B2 Summary of honey harvest from the four villages

Villages	Number of beekeepers harvesting honey	Total honey harvested (kg)
Befandefa	3	71
Agnolignoly	1	1.5
Ampasimara	1	6.5
Ankindranoke	6	39.5
TOTAL	**11**	**133.3**

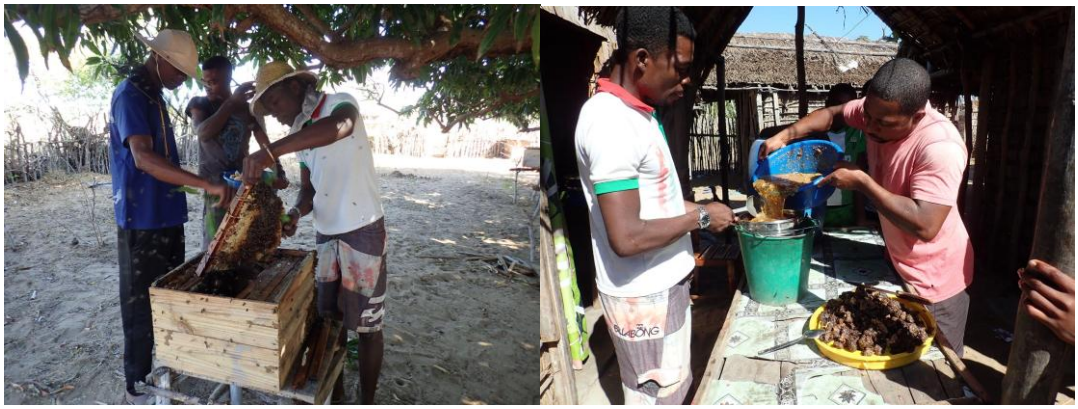

Figure B2 (a): Honey harvested from the village of Befandefa

- ***Terrestrial tree plantation***

825 saplings have been distributed across seven villages in the project area, including 277 fruit trees (papaya) and 548 terrestrial trees (*Albizia lebbeck, Moringa oleifera, Acacia mangium, Dalbergia madagascariensis*).

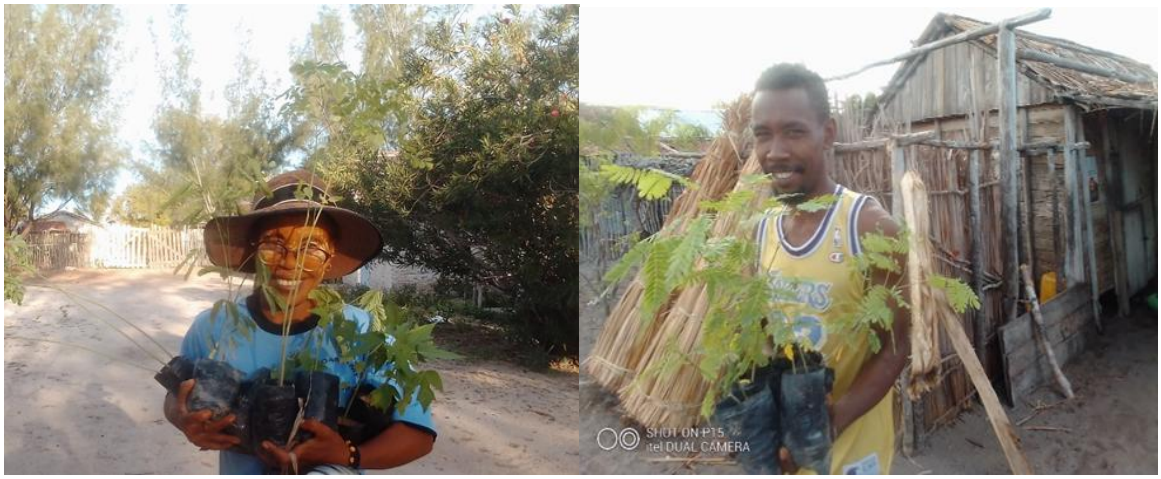

Figure B2 (b): Distribution of saplings in the village of Tampolove and Ankindranoke

Monitoring of the planted saplings revealed an average survival rate of 75%, with survival rates varying from 70% for *Moringa oleifera*, 74% for fruit trees (papaya), to 81% for *Albizia lebbeck*. Unfortunately, *Dalbergia madagascariensis* and *Acacia mangium* did not survive.

Figure B2 (c): Fruit trees (papaya) planted in the village of Tampolove

The primary issues identified by local people as causes of sapling mortality are the lack of precipitation and freshwater. The saplings require careful watering to ensure their survival. Another challenge is securing funding to continue this activity beyond 2024, as it is currently supported by the International Climate Fund through Blue Ventures, which will conclude at the end of that year.

To address sapling mortality, efforts will be concentrated on promoting the growth of species with higher survival rates. Local communities will also receive regular support and guidance on proper planting techniques. Groups within the community, such as schoolchildren and women's associations, will also be targeted, as they tend to be more cohesive and effective in managing this activity.

To sustain this initiative, the Velondriake Association will be consulted about the possibility of allocating a portion of their carbon credit revenue toward tree planting. An annual budget for this activity will be estimated and presented to the association to assist them in funding its continuation.

- ***Seaweed and sea cucumber farming***

During the reporting period, 78 farmers in the village of Tampolove were involved in sea cucumber farming. A total of 12,594 sea cucumbers (*Holothuria scabra*) were harvested, generating a net income of 31,485,000 MGA (7,496.40 USD). This results in an average income of 519,360 MGA (123.50 USD) per farmer.

In terms of seaweed farming, a total of 362 farmers from 8 villages of the project participated in the activity. In total, 101,603 kg of dried seaweed (*Kappaphycus alvarezii)* was harvested, generating an annual net revenue of 152,404,500 MGA (36,286.7 USD).

This resulted in an average income of 3,582,190 MGA (853 USD) per farmer.

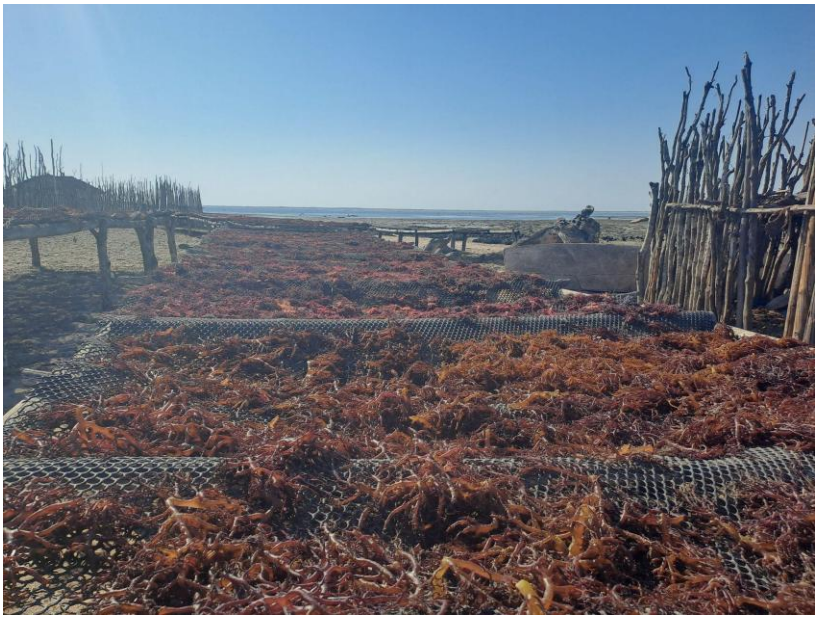

Figure B2 (c): Seaweed (Kappaphycus alvarezii) dried by the farmers in the village of Agnolignoly

Part C: Plan Vivo Certificate issuance submission

C1 Contractual statement

This issuance is based on signed payment for PES agreements with village leaders, as the representatives of the residents of the ten villages in the project area, who have complied with all requirements in the PES agreements.

Village name	Number of households
Tampolove	103
Ankitambagna	31
Agnolignoly	125
Andalambezo	77
Vatoavo	66
Ankindranoke	130
Ampasimara	18
Befandefa	194

Ankilimalinike	38
Lamboara	103
Total	**885**

C2(b) Issuance request for projects where issuance is made on the basis of ongoing activities on land already managed by the project (e.g. avoided deforestation, calculated *ex-post*)

Table C2 (b) Statement of tCO2 reductions available for issuance as Plan Vivo Certificates based on activity for reporting period January 2023 – December 2023

Area ID	Total area (ha)	Tech. Spec	Saleable ER's (tCO_2) available from previous periods*	Total ER's (tCO_2) achieved this period**	% Buffer	No. of PVCs allocated to buffer from ER's achieved this period	Saleable ER's (tCO_2) from this period	Issuance request (PVCs)	ER's (tCO_2) available for future issuances
Strict conservation	*257*	*Prevention of ecosystem conversion*	*595*	*140*	*15*	*21*	*119*	*0*	*714*
Sustainable use	*973*	*Improved land use management*	*2,110*	*497*	*15*	*75*	*422*	*0*	*2,532*
Reforestation	*163*	*Ecosystem restoration*	*4,150*	*977*	*15*	*147*	*830*	*0*	*4,980*
TOTAL	***1,393***		***6,855***			***243***	***1,371***		***8,226***

*Number of tCO_2 sequestered or avoided emission through participants' activities in previous reporting periods which have not yet been issued as PVCs

** Number of tCO_2 sequestered or avoided emission through participants' activities this reporting period.

C3 Allocation of issuance request

Not applicable as we are not requesting for issuance until policy blockages are resolved.

C4 Data to support issuance request

The targets for the prevention of ecosystem conversion, improved land use management and ecosystem restoration have been met.
As detailed in Section E, all of the threshold targets from the project intervention were met, the monitoring result shows that:

- there is no decrease in the diameter at breast height (DBH) when analysing the mean DBH change within standard error between two monitoring dates, indicating

that the “Green” target is reached (Annex 1.1);
- communities have planted 11.83 ha degraded mangrove forest, surpassing the set annual objective to replant 10 ha (Annex 1.2);
- Survival rate of the planted mangrove is 83.12%, surpassing the required 60% (Annex 2.1);
- One infraction was reported and enforced in the village of Agnolignoly (Annex 2,2)

As outlined in the previous report (2022), the number of forest patrols was set at 12 per month, based on available funding and the capacity of local patrollers (Annex 2.3). The Project Design Document (PDD) update is scheduled following the project's five-year audit period.

Part D: Sales of Plan Vivo Certificates

D1: Sales of Plan Vivo Certificates

Although the decree regarding the 'Compte d’Affectation au Trésor' was finalized in October 2023, marking the last step toward the implementation of Decree n° 2021-1113 on the sale of carbon credits, another document has caused delays. The Emission Reduction Purchase Agreement (ERPA) between Blue Ventures as the buyer and the Government of Madagascar as the seller has put the sale of Plan Vivo Certificates on hold. At the beginning of 2023, this document was submitted to the government, represented by the Ministry of Environment and Sustainable Development, for signature. However, the signature remains pending, and as a result, no actual sales have been made due to this bottleneck.

Table D1 Sales of Plan Vivo Certificates

Vintage	Buyer	No of PVCs	% Sale price received by participants
2018	My Climate	943	
2018	Only One	428	

Part E: Monitoring results

E1: Ecosystem services monitoring

Nine indicators are to be monitored to evaluate the success of project activities and determine whether the targets have been met and to request the new issuance. Green indicates that annual threshold target has been achieved, amber (Level 1 mitigation required) indicates that, over the past year, the indicator has failed to reach the green level, and red (Level 2 mitigation required) indicates that a significant shortfall has occurred.

Table E1 (a) Measurable indicators

Specific: Characteristic	Measurable: Indicat		Attainable					
			Green	Amber		Red		
Ecosystem services benefits		Target		Level 1 mitigatior	Mitigation measures	Level 2 mitigation	Mitigation measures	Impact on PES payments
Tahiry Honko	Carbon plots: change in average dbh	No decrease within SE	no decrease within SE	< 10% decrease outside SE	Review management plans and adjust activities, quotas or zones, if necessary	> 10% decrease outside SE	Review management plans and adjust activities, quotas or zones, if necessary	Reduce PES to communities by 10% until average dbh stabilises (no further decrease)
	Number of stumps (harvest not allowed in TH)	No harvest in conservation zones Below quotas for sustainable harvest in sustainable use zones	Less than 5% of number of trees/ha are cut	Between 5% to 15% of number of trees/ha are cut	Increase forest patrols Meet with communities to ensure "no harvest within conservation zones" is understood and respected Ensure signs delineating zones are present	Greater than 15% of number of trees/ha are cut	Increase forest patrols Adjust management zones to enlarge conservation areas Reduce quotas in sustainable use areas	
Forest area	Area replanted (in first 16 years)	10 ha/year for first 16 years	10 ha/yr	Between 7 and 9 ha/year	With communities, plan additional reforestation events to increase hectares planted	< 7 ha/yr	With communities, plan additional reforestation events to increase hectares planted Hold community meetings to discuss reasons for low numbers of reforested hectares	Reduce PES by percentage of shortfall in reforested hectares over any 5-year period if mitigation measures do not succeed
	Survival rate	>60% survival rate	>60% survival rate	30% to 59% surviv	With communities, have areas with low survival fill planted	< 30% survival rate	With communities, have areas with low survival fill planted Investigate possible causes of mortality and address these	
Drivers of degradation	Infractions for illegal logging	% of Dina infractions enforced	> 80% of Dina infractions are charged when individuals responsible are identified	60 - 79% of Dina infractions are charged when individuals responsible are identified	Meet with KMD and VA to review infractions that were not charged Charge any additional infractions	< 60% of Dina infractions are charged when individuals responsible are identified	Meet with Chef Cantonment and regional authorities to reinforce authority of KMD to charge infractions Provide additional training and awareness raising on importance of charging infractions Charge any additional infractions	
	Number of patrols	Target = 16 per month	Annual average ≥ 16/month	Annual average between 10 and 15/month	Review with CSE supervisor reasons for lower number of patrols Provide additional training and support for CSEs, if necessary	Annual average < 10/month	Review with CSE supervisor reasons for lower number of patrols Provide additional training and support for CSEs, if necessary Recruit new and/or additional CSEs, if necessary	

* Figures in the area replanted, between 9ha-10 ha is not presented in the threshold indicators but this is to be adjusted in the next verification

Table E1 (b) Monitoring results

Intervention	Indicator	Target	Monitoring result	Threshold
Tahiry Honko	Carbon plot: change in average DHB	No decrease within SE	No decrease within SE on the mean DBH Annex 1.1	Green
	Number of stumps	No harvest in conservation zone Below quota on sustainable use	Annex 1.1	Green
Forests area	Area planted (ha)	10ha/year	11.83 Annex 1.2	Green
	Survival rate (%)	> 60% survival rate	83.12 % Annex 2.1	Green
Drivers of deforestation	Infraction for illegal harvesting	100 % of infraction reported enforced	One infraction identified was reported and enforced Annex 2.2a	Green
	Number of patrols	16 patrols/month	12 patrols/month Annex 2.2b	Amber*

*The number of patrols is limited to 12 patrols/month because of the change of the approach which will be incorporated to the PDD during the next verification. This target number was achieved.

E2: Maintaining commitments

No participants have resigned from the project this year. Communities from the ten villages remain actively engaged and committed to protecting their mangroves, despite administrative delays at the national level.

E3: Socioeconomic monitoring

Table E3 (a) Other monitoring

Other monitoring							
Institutional indicators	Capacity & activity level of VA	Number of meetings per year	4 or more per year	2 to 4 per year	Review minutes of the VA meetings held Meet to discuss	Less than 2 per year	Review schedule and minutes of VA meetings
	Effectiveness of CSE monitors	Auditing of CSE work	90% of audited reports were accurate	Between 60 and 89% of audited reports were accurate	CSE supervisor to evaluate work of CSEs and provide additional training, if necessary	Less than 60% of audited reports were accurate	CSE to evaluate work of CSEs and provide additional training Replace CSEs with new hires, if necessary
	Number of grievances handled according to procedure	> 90% of grievances received were handled according to procedure	> 90% of grievances received were handled according to procedure	Between 70 and 89% of grievances received were handled according to procedure	Co-managers to meet with Civil Society of Toliara and review grievances that were not handled properly Co-managers to undergo additional training on grievance procedures, if necessary	< 70% of grievances received were handled according to procedure	Civil Society of Toliara asked to review all grievances over the past year and recommend changes to the procedures, if necessary Co-managers to undergo additional training on grievance procedures

The Velondriake Association (VA) carried out eight regular meetings, details found in Annex 4.

Table E3 (b) Institutional indicators

Intervention	Indicator Target	Monitoring	Result	Threshold
Institutional indicators	Capacity and activity level for the Velondriake Association	Number of meetings of the VA per year	Velondriake Association held 05 meetings Annex 4	Green
	Effectiveness of the CSE	Audit of CSE work	CSE work has been audited by the CSE supervisors	Green
	Number of grievances handled	>90% of grievance received were handled according to procedure	No grievance report was received	Green

E4: Environmental and biodiversity monitoring

The biodiversity survey initially planned for this reporting year was postponed in February 2024. This was due to the time needed to develop a methodology suitable for local monitors and to recruit experts to conduct the five-year monitoring. The biodiversity monitoring results will be reported in the annual report 2024.

Part F: Impacts

F1: Evidence of outcomes

961 kids from the ten villages concerned by the Tahiry Honko project (both catholic and public school) received school fees from the Tahiry Honko project advanced by Blue Ventures In addition, details found in Annex 6.

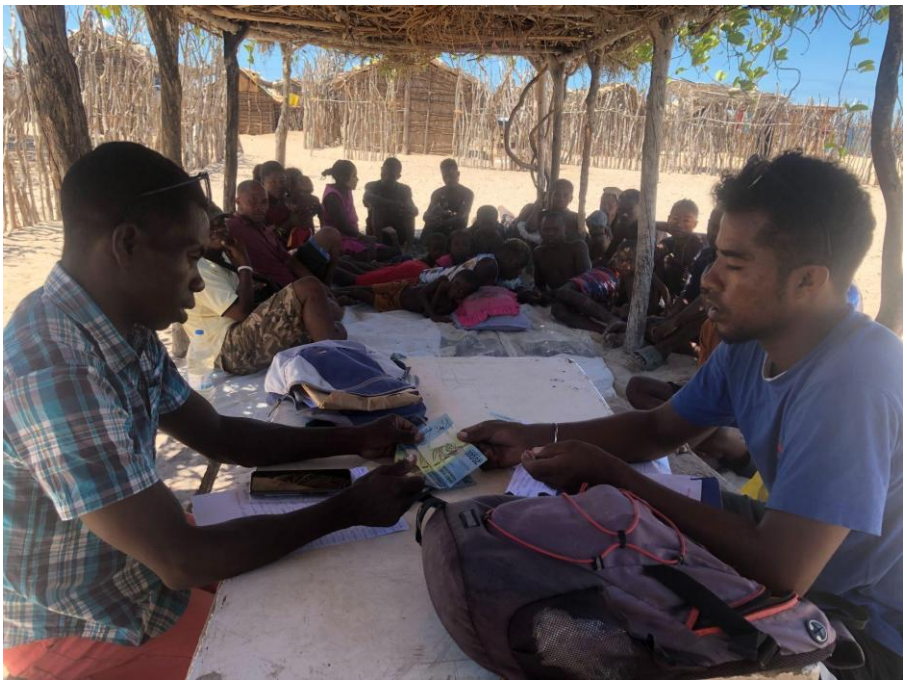

Figure F (a) : A representative of catholic school in the village of Agnolignoly receiving the school fees from Velondriake Association

Part G: Payments for Ecosystem Services

G1: Summary of PES by year

Table 8: Summary of payments made and held in trust

1. Reporting year (mm/yy – mm/yy)	2. Total previous payments (previous reporting periods)	3. Total ongoing payments (in this reporting period)	4. Total payments made (2+3)	5. Total payments held in trust	6. Total payments withheld
2018	0	0	0	0	0
2019	0	0	0	0	0
2020	0	0	0	20,000*	0
2021	0	0	0	0	0
2022	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**20,000**	**0**

* The sum held in trust refers to amounts received from buyers of carbon credits who sent the money with the understanding that they will receive the credits once the policy issues are resolved.

Part H: Ongoing participation

H1: Recruitment

No recruitment occurred during this reporting period

H2: Project Potential

No update

H3: Community participation

There are two types of project activities involving local community members: mangrove reforestation and the annual dissemination of project activities. A total of 769 people from 8 project villages participated in mangrove reforestation, while 337 individuals took part in the annual dissemination events held across 9 villages. Women's participation was higher than men's in both activities, with women making up 61% of participants in mangrove reforestation and 52% in the annual dissemination.

Table H3: Total number of attendees at the mangrove reforestation events and village outreach for dissemination

	Mangrove reforestation		Annual dissemination	
Village	**Men**	**Women**	**Men**	**Women**
Andalambezo	18	30	18	21
Ankitambagna	0	0	18	14
Agnolignoly	22	48	11	22
Tampolove	0	0	25	18
Vatoavo	40	64	26	34
Ankindranoke	45	70	17	39
Befandefa	75	124	20	18
Ankilimalinike	18	29	12	02
Ampasimara	45	50	14	08
Lamboara	11	80	0	0
Total	263	415	161	176
Rate of participation (%)	39	61	48	52

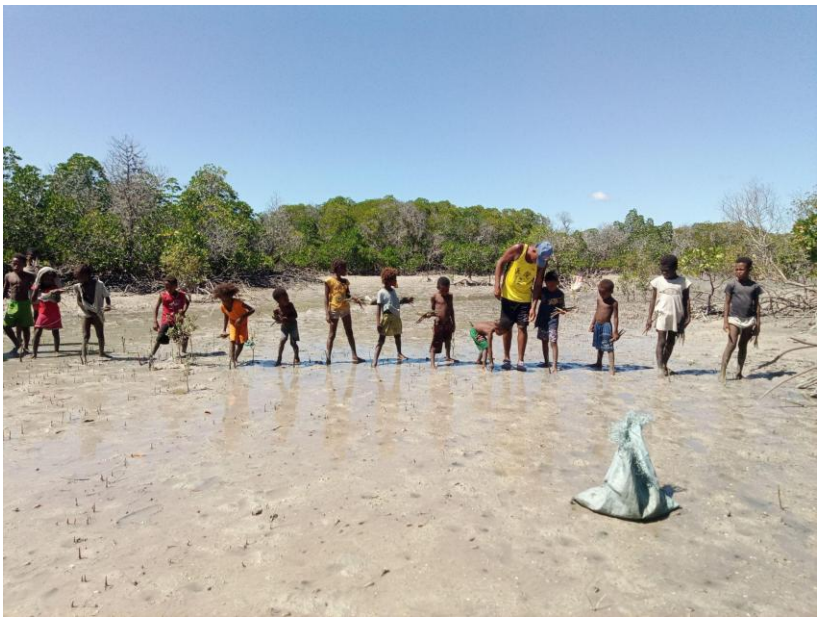

Figure H3 (a): School kids in Vatoavo participated in the mangrove reforestation

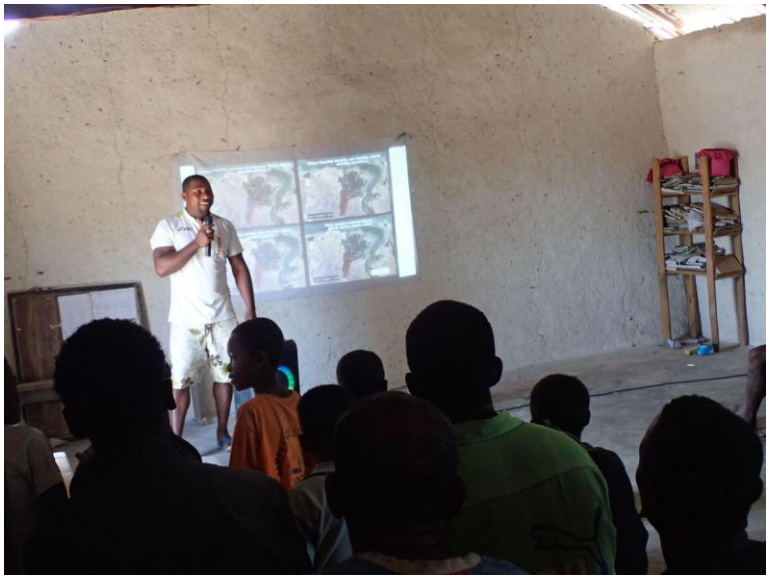

Figure H3 (a): Annual dissemination held in the village of Agnolignoly

Part I: Project operating costs

I1: Allocation of costs

Table I2 Allocation of costs

Expense	Narrative	Amount (USD)	Amount (MGA)	Contribution from sale of PVCs'	Contribution from other sources
Ecosystem restoration	Mangrove plantation (village meals for the 12 sessions)	212	869,700	0	Blue Forest Cartier (from Cartier Foundation)
	Food allowance for the CSE carried out the monitoring of the survival rate of the planted mangrove	813	3,334,500	0	Blue Forest Cartier (from Cartier Foundation)
Forest patrols	Food allowance for the 12 CSE and equipment for the forest's patrols (paints & field sheet)	3037	12,455,000	0	Blue Forest Cartier (from Cartier Foundation)
Carbon stock monitoring	Carbon stock inventory carried out by the CSE	332	1,360,000	0	Blue Forest Cartier (from Cartier Foundation)
Other project activities (alternative wood plantation and beekeeping)	Alternative wood plantation	653.6	2,680,000	0	Blue Forest International Climate Fund (ICF) from DEFRA

	Beekeeping	314	1411500	0	Blue Forest International Climate Fund (ICF) from DEFRA
Governance	Outreach tours in 10 villages to disseminate the Tahiry Honko achievements and update	367	1,650,000	0	Blue Forest Cartier (from Cartier Foundation
	Meeting of the VA executive committee regular mangrove management meeting	273	1,229,000	0	Blue Forest Cartier (from Cartier Foundation
	Meeting of the VA management committee in the southern group (01 meeting)	429	1,929,000	0	Blue Forest Cartier (from Cartier Foundation
	General Assembly	2126	9,566;000	0	Blue Forest Cartier (from Cartier Foundation
Social investment community project	School fees for 961 school children from the 10 villages enrolled at primary school (state and catholic)	2715	12,217,000	From cash advance from Blue Ventures fund (from the 60% community share)	Blue Ventures Unrestricted Fund
	TOTAL	**11271.6**	**36,455,700**		

1USD=4,500 MGA

MGA*: Malagasy ariary (local currency)

Annexes

Annex 1. Monitoring results for issuance request

Annex 1.1. Prevention of Ecosystem conversion - Strict Conservation and Sustainable Use

To assess whether carbon sequestration is maintained or is increasing, tree measurements within one fifth (total = 10 plots) of the carbon plots established in the project area in 2014/2015 were re-taken.

Table Annex 1.1 (a) Mean change in mangrove dbh and number of stumps from 2014/15 to 2023

Management zone	Forest attributes	2014/2015	2023	Mean change	Target status
Strict Conservation	Stump density (ha^{-1})	760.0 (±195.26)	105.0(±61.7)	-655	Significantly decreased
# plot: 10	DBH (cm)	8.45 (±0.78)	7.72 (±0.81)	-0.73	No decrease within SE

Where DBH: Diameter at Breast Height and SE: Standard Error

* Negative values imply that stump density significantly decreased while compared with the baseline data.

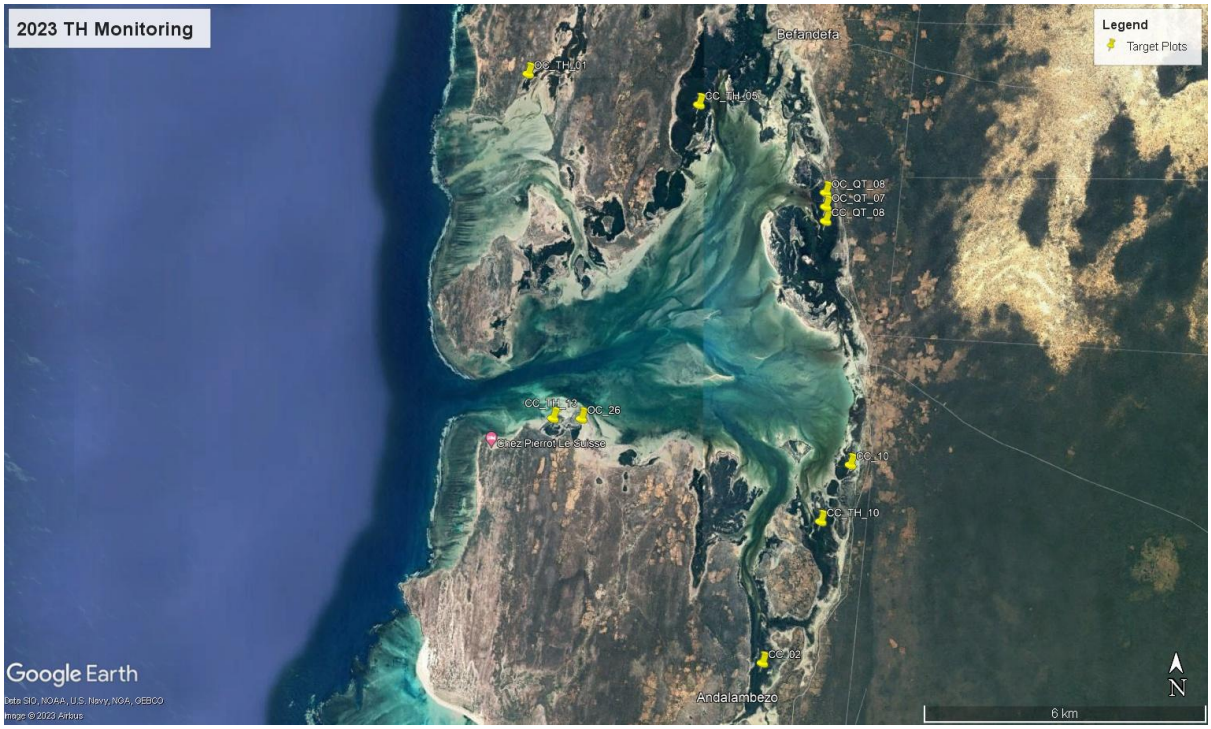

Figure annex 1. - Map of the carbon stock plots remeasured

Table annex 1.1 (b) Result of the carbon stocks monitoring

PlotID	Site_Name	Management_Zone	x	y	2014/2015 Mean DBH (cm)	2023 Mean DBH (cm)	Difference in mean DBH (cm)	2014/2015 Stump density (ha-1)	2023 Stump Density (ha-1)	Difference in Stump density (ha-1)	dbh	stump
CC_02	Andalambezo	Tahiry honko	324235	7536542	7.7	6.8	-1.0	375.0	0.0	-375.0	decreased	decreased
CC_10	Vatoavo	Tahiry honko	326039	7540736	9.7	8.0	-1.8	0.0	0.0	0.0	decreased	no change
CC_QT_08	Ankindranoke	Tahiry honko	325435	7546435	4.6	5.1	0.5	0.0	0.0	0.0	increased	no change
CC_TH_05	Befandefa	Tahiry honko	322740	7548243	7.9	8.1	0.2	1950.0	375.0	-1575.0	increased	decreased
CC_TH_10	Vatoavo	Tahiry honko	325429	7539539	8.3	6.9	-1.5	1250.0	100.0	-1150.0	decreased	decreased
CC_TH_13	Ankitambagna	Tahiry honko	319743	7541639	7.6	7.3	-0.3	1375.0	0.0	-1375.0	decreased	decreased
OC_26	Tampolove	Tahiry honko	320341	7541638	9.0	8.6	-0.4	575.0	0.0	-575.0	decreased	decreased
OC_QT_07	Ankindranoke	Tahiry honko	325442	7546141	6.9	6.2	-0.7	850.0	0.0	-850.0	decreased	decreased
OC_QT_08	Ankindranoke	Tahiry honko	325435	7546435	8.4	5.8	-2.5	675.0	25.0	-650.0	decreased	decreased
OC_TH_01	Bejoho	Tahiry honko	319136	7548840	14.3	14.4	0.1	550.0	550.0	0.0	decreased	decreased

Number of plots with increasing dbh:	2.0	0.0	Number of plots with increasing cut stump
Number of plots with decreasing dbh:	8.0	8.0	Number of plots with decreasing cut stump
Number of plot with unchanged dbh:	0.0	2.0	Number of plots with unchanged cut stump
Mean dbh change:	-0.7	-655.0	Mean stump change
StdDev dbh 2023:	2.6	195.4	StdDev stump 2023
SE Reference value dbh 2023 (N=10):	0.8	61.8	SE Reference value stump 2023 (N=10)

The Monitoring Plan targets stated that there is no decrease in mean DBH within SE and no tree harvest in the conservation zone. Thus, the annual monitoring conducted in 2023 showed that there is no scientifically significant difference in the mean DBH between the baseline data and the monitoring year within the SE. Therefore, the “Green” target is reached, indicating that there is no change in carbon stocks while measuring DBH within the monitoring plots (Table Annex 1.1). In addition, the monitoring results demonstrated that there is a significant decrease in terms of stump density within the conservation zone. This significant decrease in stump density within 2023 monitoring plots can be conservatively inferred by the decomposition over time of most of the old cut stumps measured in 2014/2015 and the assumption suggesting that the stumps measured in 2023 are those that are still remaining of those old stumps.

Annex 1.2. Mangrove replanting

During this reporting period, 11.83 hectares of degraded mangrove areas were replanted, with 26,463 seedlings of three species: *Ceriops tagal, Bruguiera gymnorrhiza, and*

Rhizophora mucronata. Although this is less than the area replanted in the previous reporting period, the community exceeded the annual goal of replanting 10 hectares.

Table Annex 1.2: Mangrove replanting

Year	Date of replanting	Village	Area planted (ha)	Total participants	*Ceriops tagal*	*Bruguiera gymnorrhiza*	*Rhizophora mucronata*	Total Planted
2023	March-17	Lamboara	2.33	99	8,225	31	54	8310
2023	March-18	Ankindranoke	0.82	115	29	831	2236	3096
2023	March-19	Vatoavo	1.14	104	2546	1741	2106	6393
2023	March-20	Andalambezo	1.89	48	101	0	1697	1798
2023	March-21	Ampasimara	1.85	95	15	500	800	1315
2023	March-21	Befandefa	1.15	199	870	0	136	1006
2023	April-19	Agnolignoly	1.97	70	3205	32	78	3315
2023	April-21	Ankilimalinike	0.68	47	1220	0	10	1230
		TOTAL	**11.83**	**769**	**16211**	**3135**	**7117**	**26,463**

Annex 2. Ongoing monitoring results for all participants

Annex 2.1. Mangrove replanting survival rate monitoring

The average survival rate of the seedlings planted during this reporting period was 83.12%, exceeding the target of over 60%.

Table Annex 2.1 Mangrove replanting survival rate monitoring

Year	Date of replanting	Village	Area planted (ha)	*Ceriops tagal*	*Bruguiera gymnorrhiza*	*Rhizophora mucronata*	Total Planted	Date of monitoring	*Survival rate (%)*
2023	March-17	Lamboara	2.33	8,225	31	54	8310	13-April-24	84.6
2023	March-18	Ankindranoke	0.82	29	831	2236	3096	20-April-24	73.66
2023	March-19	Vatoavo	1.14	2546	1741	2106	6393	17-April-24	95.18

2023	March-20	Andalambezo	1.89	101	0	1697	1798	18-April-24	94.64
2023	March-21	Ampasimara	1.85	15	500	800	1315	07-Oct-23	88.40
2023	March-21	Befandefa	1.15	870	0	136	1006	21-April-24	74.99
2023	April-19	Agnolignoly	1.97	3205	32	78	3315	17-April-24	66.27
2023	April-21	Ankilimalinike	0.68	1220	0	10	1230	08-Oct-23	82.61
		TOTAL	**11.83**	**16211**	**3135**	**7117**	**26,463**	**AVERAGE**	**83.12**

Annex 2.2. Dina enforcement

In December 2023, an infringement involving the cutting of mangrove wood was reported by the CSE to the Law (Dina) enforcement committee (KMD) in the village of Agnolignoly. The KMD took action, enforcing the local regulation (Dina), and the individual responsible was fined 260,000 MGA (62 USD).

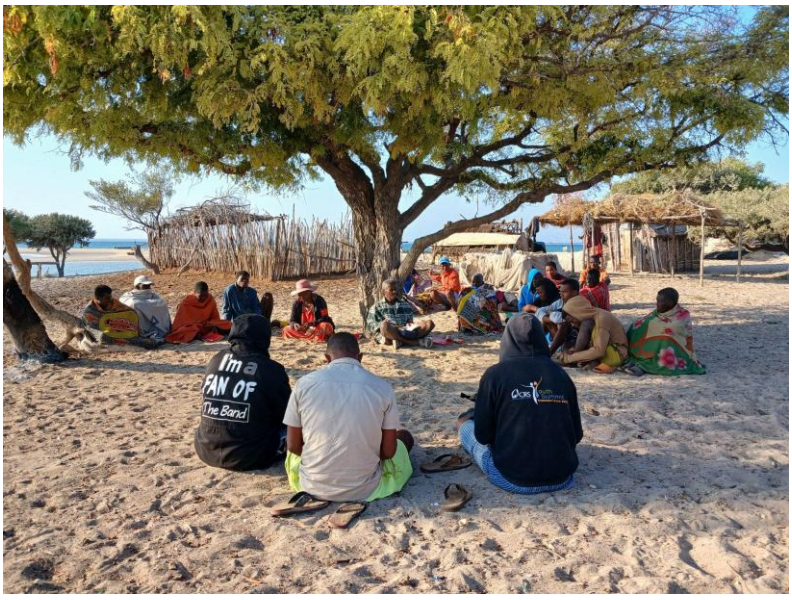

Figure: a community meeting in the village of Agnolignoly with Dina enforcement committee to enforce rules

Annex 2.3. Forest monitoring and patrolling

The number of patrols has been limited to 12 per month due to a change in the approach, which will be incorporated into the PDD during the next five years verification period. During the reporting period, the 12 CSEs conducted a total of 144 patrols. The objective

of conducting one patrol per month per CSE, or 144 patrols annually, was successfully achieved.

Table Annex 2.3. Forest monitoring and patrolling

NUMBER OF PATROLS FOR 2023																	
Village	**Name**	**Sex**	**Role**	**Site TH**	Jan	Fév	Mar	Avr	Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Lamboara	Christie	M	CSE	Bejoho	1	1	1	1	1	1	1	1	1	1	1	1	12
	Alphine	F	CSE	Anky	1	1	1	1	1	1	1	1	1	1	1	1	12
Ankilimalinike	Manovoson	M	CSE	Tsibekoy	1	1	1	1	1	1	1	1	1	1	1	1	12
Ampasimara	Emile	M	CSE	Ampandriambagna	1	1	1	1	1	1	1	1	1	1	1	1	12
Befandefa	Norbert	M	CSE	Andamalama	1	1	1	1	1	1	1	1	1	1	1	1	12
Ankindranoke	Baranda	M	CSE	Ampotapotaky	1	1	1	1	1	1	1	1	1	1	1	1	12
	Mampionina	M	CSE	Andalantsarety	1	1	1	1	1	1	1	1	1	1	1	1	12
Vatoavo	Tsivalake(Naie)	M	CSE	Ampanihy	1	1	1	1	1	1	1	1	1	1	1	1	12
Andalambezo	Andre(Fenty)	M	CSE	Antseragnandaka	1	1	1	1	1	1	1	1	1	1	1	1	12
Agnolignoly	Velomama	M	CSE	Ankatsakitsibogna	1	1	1	1	1	1	1	1	1	1	1	1	12
Tampolove	Jean Noely	M	CSE	Antsahandolo	1	1	1	1	1	1	1	1	1	1	1	1	12
Ankitambagna	Falea	M	CSE	Antsahandolo	1	1	1	1	1	1	1	1	1	1	1	1	12
				TOTAL	**144 patrols**												

Annex 3. Reallocation of commitments

Not applicable

Annex 4. Socioeconomic monitoring results

- ***Integrated Social Survey***

Terms of reference and related questionnaires were developed in November 2023 to assess the five-year social impacts of the Tahiry Honko project. The socio-economic survey is scheduled to take place in early 2024, alongside the five-year biodiversity assessment.

- ***Meeting of the Velondriake Association executive committee***

The Velondriake Association executive committee held five meetings, summarised below.

Table Annex 4. Socioeconomic monitoring results

Date of meeting	Type of the meeting	Topic of the meeting & discussion
6-8 June 2023	General Assembly	• Presentation of the executive committees' structure • Reminder of Internal rules and statutes • MPA statutes • MoU between Blue Ventures and Velondriake Association • Good governance principle • Presentation and discussion of six-monthly work plan • Financial report • Discussion regarding alternative livelihoods (seaweed and sea cucumber farming, beekeeping) • Election of the members of bureau Vondrona • Collaboration with the
18-20 July 2023	Executive committee	• Explanation of SOP within the Velondriake Association • Discussion about the infractions happened in the LMMA • Discussion about the infractions enforcement • Discussion about the Tahiry Honko Scholarship • Collaboration with the local authorities • Discussion about the work plan
17- 18 Sep 2023	Southern Vondrona	• Update from each of the three Vondrona and each villages;

		• Financial reporting for the expenditure April; • Update from each programme (e.g. saving groups, mangroves, fisheries and education.); • Explanation of the collaboration between Blue Ventures and VA; • Work plan of the VA for May-June-July.
20-Nov 2023	Executive committee	• Discussion about the sea cucumber farming issues (theft in Tampolove); • Discussion about the patrols within the LMMA • Preparation of the election of DINA enforcement committees • Discussion about the Tahiry Honko scholarship • Discussion about mangrove and seagrass no take zones
18-19 Dec 2023	General Assembly	• Discussion about the amendment of local regulations (Dina) for Velondriake LMMA • Patrol planning 2024 • Dissolution of Dina enforcement committees and announce of election • Re-discussion of the association's statute • Discussion about the working tools • Reporting of the activities 2023 • Discussion about ecotourism, beekeeping and sea cucumber • Financial reporting • Work plan 2024

Annex 5. Conservation and monitoring results

Terms of reference for the biodiversity assessment and social survey were developed, and recruitment was carried out in November 2023. However, the two individuals initially hired for the assessment resigned, requiring us to restart the recruitment process. As such, the assessment could not be scheduled for December 2023 and was postponed to February 2024.

Annex 6. Impacts

961 primary school children from 10 villages have benefited from scholarships funded by the advance on carbon revenue provided by Blue Ventures.

Table Annex 6. Number of the school children receiving Tahiry Honko scholarships

Villages	Type of school	Number of school children

Ankitambagna	Primary public school	16
Andalambezo	Primary Catholic School	73
Tampolove	Primary Catholic School	108
Agnolignoly	Primary Catholic School	37
Lamboara	Primary Catholic School	39
Vatoavo	Primary Catholic School	48
Ankindranoke	Primary public school	250
Befandefa & Ampasimarà	Primary public school	340
Ankilimalinike	Primary public school	50
	TOTAL	**961**

Annex 7. Community meeting records (summary)

Village meetings were held in the 10 villages participating in the project from September 4th to 9th, 2023. The purpose of these meetings was to provide updates on project activities, including achievements in forest patrols, carbon stock monitoring, mangrove replanting and survival rates, payment of school fees, the status of the national policy, and mangrove beekeeping initiatives. The meetings also served to share information about the next steps for the project.

A detailed report of these community meetings can be found here.