

2021 Annual Report
Tahiry Honko
Community-led mangrove carbon project
Southwest Madagascar



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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 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, 2021 to December 31st, 2021
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)	N/A
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)	\$ 2,036
Total sum held in trust for future PES payments (USD)	\$ 20,000*
Plan Vivo Certificates (PVCs) issued to date	0 ¹
Allocation to Plan Vivo buffer to date	0
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 community groups (if known)	895
Area put under management by participants with PES agreements this year (Ha)	1,393
Plan Vivo Certificates (PVCs) requested for issuance this reporting period	0

¹ Please note that from 2018-2020, 4,113 certificates have been verified, but not issued, due to policy blockages described in section 'A2 Successes and challenges'

Part A: Project updates

A1 Key events

Every year, women from the Tahiry Honko project area celebrate International Women's Day. To celebrate this, mangrove reforestation events have been organised in four villages including Befandefa, Agnolignoly, Ankindranoke and Vatoavo. During this reforestation event, 4.8 ha of mangrove degraded area were replanted. The participation of women in the event reached 77%.



Figure A1(a): Mangrove replanting in Vatoavo during the International Women's Day



Figure A1(b): A selection of propagules to be planted in the reforestation area in the Village of Ankindranoke

A mangrove reforestation event was also organised during the International Day for the Conservation of the Mangrove Ecosystem, July 26th. This day was celebrated in the village of Befandefa, and 121 participants replanted 2.5 ha of degraded areas.

To celebrate the School Day, usually occurring in February, 127 school children from the villages of Tampolove, Agnolignoly and Befandefa successfully replanted 5.4 ha of degraded areas.



Figure A1(c): School children planting mangroves in the village of Befandefa

A2 Successes and challenges

- **Successes**

The legal framework on access to the forestry carbon market in Madagascar, Decree n° 2021-1113, was officially enacted in October 2021. This decree regulates the ownership carbon rights, the voluntary carbon market and the benefits sharing scheme for the carbon revenue.

The project coordinator, Cicelin Rakotomahazo, published a [peer-reviewed](#) paper articulating the local perceptions of the Tahiry Honko project.

- **Challenges**

Even though Decree n° 2021-1113 has officially been enacted, the infrastructure to receive the carbon revenue, namely the Special Appropriations Account of the Treasury (*Compte d’Affectation Special au Tresor; CAST*) has not yet been put in place. The sale of carbon credits continues to be on hold until the Decree regulating the management of the carbon funds is fully implemented. To address this challenge, Blue Ventures continues to advance funds to the Velondriake Association in order to pay the school fees of all of the school children enrolled at the state and catholic primary schools in the Tahiry Honko project villages, as prioritised in their benefit sharing scheme.

Despite the efforts undertaken by civil society organisations and NGOs supporting community-led mangrove management, including Blue Ventures, to advocate for the revision of Interministerial Decree n° 32100-2014, which prohibits the harvest of mangrove wood, including for domestic use, this law remained in force. Although we originally expected the ban to only be active in the first year of the project, the harvest quota system will not be fully operational for the foreseeable future.

A3 Project developments

No update.

A4 Future Developments

No future development is currently planned but the lessons learned from the Tahiry Honko project were documented to be widely shared as best practice to ensure continued community participation.

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
<i>Prevention of ecosystem conversion</i>	257	895	10
<i>Improved land use management</i>	973	895	10
<i>Ecosystem restoration</i>	163	895	10

B2 Project activities in addition to those generating Plan Vivo Certificates

- *Beekeeping*

To ensure that the beekeeping activities in the project area abide by the existing national law for beekeeping and to be in compliance with the honey marketing rules, 96 beehives across nine villages were registered with the Regional Directorate of Animal Husbandry.



Figure B2(a): Registration of the beehives

In May 2021, 23 beekeepers successfully harvested 67.45 Kg of honey. Given the small amount, the honey was sold locally.



Figure B2(b): Honey harvest in the village of Ankindranoke

- **Terrestrial tree plantation**

In total, 5,729 trees were planted in nurseries: 3,163 fruit trees, including pawpaw, orange, lemon, date and 2,566 terrestrial trees, including *Cordyla madagascariensis* and *Acacia* sp. Over 300 people participated in establishing these nurseries.

A total of 1,727 fruit trees and 67 terrestrial trees were distributed to the members of the local communities within and around the project areas, so that they could plant them in their own land.



Figure B2(c): Monitoring of terrestrial tree nursery

- **Seaweed and sea cucumber farming**

For the reporting period, 78 farmers in Tampolove successfully harvested 22,832 individuals of marketable sea cucumbers, *Holothuria scabra* (with a weight of over 400 g per individual) and 418 farmers within seven villages of the project area harvested 448,859 Kg (dry weight) of seaweed, *Kappaphycus alvarezii*.



Figure B2(d): Sea cucumbers harvesting in Tampolove

Part C: Plan Vivo Certificate issuance submission

C1 Contractual statement

This issuance is based on signed payment for ecosystem services (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.

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 2021 – December 2021

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	357	140	15	21	119	0	476
Sustainable use	973	Improved land use management	1,266	497	15	75	422	0	1,688
Reforestation	163	Ecosystem restoration	2,490	977	15	147	830	0	3,320
TOTAL			4,113			243	1,371	0	5,484

*Number of tCO₂ sequestered or avoided emission through participants' activities in previous reporting periods which have not yet been issued as PVCs

** Number of tCO₂ 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) within standard error ([Annex 1.1](#));
- cutting in sustainable use zones is within the allowable quotas ([Annex 1.1](#));
- communities have planted over 10 ha of degraded mangrove forest ([Annex 1.2](#));
- Survival rate of the planted mangrove is 74.9%, surpassing the required 60% ([Annex 2.1](#));
- One infraction was reported and enforced ([Annex 2.2a](#))

However, the number of forest patrols was not reached because of the change in our approach, which now envisages 12 patrols/month ([Annex.2.2.b](#)). We plan to update the PDD to reflect this change in the next five-year review.

Part D: Sales of Plan Vivo Certificates

D1: Historic sales of Plan Vivo Certificates

The delay of the full implementation of Decree n° 2021-1113 continues to put the sale of Plan Vivo Certificates on hold. No actual sales have been made due to this blockage, but the price was negotiated with the buyers.

Table D1: Sales of Plan Vivo Certificates

Vintage	Buyer	No of PVCs	Price per PVC (\$)*	Total sale amount (\$)*	Price to participants per PVC (\$)*	% Sale price received by participants
2018	My Climate	943	15	14,145		
2018	Only One	428	25	10,700		

*Pricing reported for internal monitoring purposes only. Pricing information will be removed from the final published document.

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:			Attainable					
Characteristic	Measurable: Indicators	Target	Green	Amber	Mitigation measures	Red	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	> 10% decrease outside SE	Review management plans and adjust activities, quotas	Reduce PES to communities by 10% until average dbh stabilises
	Number of stumps (harvest not allowed in TH)	No harvest in conservation zones Below quotas for sustainable harvest in sustainable use zones						
Forest area	Area replanted (in first 16 years)	10 ha/year for first 16 years						
	Survival rate	>60% survival rate						
Drivers of degradation	Infractions for illegal logging	% of Dina infractions enforced						
	Number of patrols	Target = 16 per month						

* 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	Below quota within the sustainable harvest quotas Annex 1.1	Green
Forests area	Area planted (ha)	10ha/year	12.81 Annex 1.2	Green
	Survival rate (%)	> 60% survival rate	74.9 % Annex 2.1	Green
Drivers of deforestation	Infraction for illegal harvesting	100 % of infractions reported enforced	One infraction reported and enforced Annex 2.2a	Green
	Number of patrols	16 patrols/month	11 patrol/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. Due to Covid, 11 patrols were achieved but hopefully these should remain at 12 moving forward.

E2: Maintaining commitments

No participants have resigned from the project this year.

E3: Socioeconomic monitoring

The institutional indicators monitor to be monitored to evaluate the success of project activities and determine whether the targets have been met and to request the new issuance is detailed in the table below.

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 four regular meetings, details found in [Annex 4](#).

The VA received one complaint, but it was not directly related to the project; the parents of the primary school children enrolled at the catholic school raised a complaint on how school fees are increased every year.

Table E3b. Institutional indicators

Intervention	Indicator Target	Monitoring	Result	Threshold
Institutional indicators	Capacity and activity level for the Velondriake Association	Number of meetings	Velondriake Association held 04 meetings Annex.4	Green
	Effectiveness of the CSE	Audit of CSE work	CSE work audited	Green
	Number of grievances handled	90% of grievance was handled according to procedure	One complaint, not directly related to the project , was recorded but handled by the Velondriake Association (VA). The parents complained about the increase of the school fees at the catholic school and delay of the payment of the school fees.	Green

E4: Environmental and biodiversity monitoring

A baseline biodiversity survey in mangrove forest at the project area was undertaken in February 2018. The frequency of the monitoring is every five years throughout the project period. The next survey is therefore scheduled in December 2023.

Part F: Impacts

F1: Evidence of outcomes

In total, 896 primary school children enrolled at the primary state and catholic school within the 10 villages have benefitted from a scholarship from the advance funds from the carbon revenue by Blue Ventures, details found in [Annex 6](#).

Part G: Payments for Ecosystem Services

G1: Summary of PES by year

To date, there are no payments made due to the policy blockage stated in section A2.

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
TOTAL	0	0	0	0	0

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

Part H: Ongoing participation

H1: Recruitment

- No recruitment occurred during this reporting period

H2: Project Potential

- No update

H3: Community participation

Table H3: Community participation

Date of meeting	Type of the meeting	Discussion
09/03/2021	Community meeting at the village level	Validation of the list of the school children receiving school support Signature of the contract between the parents of school children and the Velondrake Association and between the Head of school and the Velondriake Association (Copy of the individual contract form)
10/06/2021	Village outreach tour meeting	Payment of school support
01/06/2021	<i>Dina</i> enforcement for mangrove cutting in the Village of Lamboara	Enforcement of <i>Dina</i> for a case of mangrove illegal cutting. Annex 2.2a

Part I: Project operating costs

I1: Allocation of costs

Table 10: Allocation of costs

Expense	Narrative	Amount (if possible in USD\$)	Contribution from sale of PVCs	Contribution from other sources
Ecosystem restoration	Cost of the village meals during the mangrove reforestation activities	USD 981.66 or 3,435,800 MGA	0	Critical Ecosystem Partnership Facility (CEPF)
	Mangrove replanting survival rate monitoring	USD 1,451.29 or 5,079,500 MGA	0	Start-up funding: UK government
Carbon stock monitoring	Cost of the food allowance and equipment for the CSE undertaking carbon monitoring	USD 743.57 or 2,602,500 MGA	0	Start-up funding: UK government
Forest patrols	Cost of the food allowance and equipment (e.g. paint and printing field sheet) for the CSE undertaking forests patrols	USD 4,743.14 or 16,601,000 MGA	0	Start-up funding: UK government
Governance	Cost of the Velondriake executive committee regular mangrove management meeting	USD 690 or 2,415,000 MGA	0	Start-up funding: UK government
	Outreach tours in 10 villages: producing film and disseminating the Tahiry Honko achievements and update	USD 295.71 or 1,035,000 MGA	0	Start-up funding: UK government
Social investment community project	Payment of the school support for 896 primary schools' children in the 10 villages	USD 2,036.29 or 8,072,000 MGA	0	From cash advance from Blue Ventures fund (from the 60% community share)
Other project activities (alternative wood plantation and beekeeping)	Cost of the nurseries and seeds for the alternative wood plantation	USD 328.71 or 1,150,500 MGA	0	Start-up funding: UK government
	Cost of training of the beekeepers and hives building	USD 4,698.29 or 16,444,000 MGA	0	Start-up funding: UK government
TOTAL		USD 16,238.66 Or 56,835,300 MGA		

1USD=3,500 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 2021

Management zone	Forest attributes	2014/2015	2021	Mean change	Target status
Sustainable use #plot: 10	Stump density (ha ⁻¹)	242.50 (145.34)	145.00 (50.39)	-97.50	Below quota*
	DBH (cm)	8.33 (0.37)	7.85 (0.66)	-0.48	No decrease within SE

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

* Allowable quota is 122.1 trees/ha. 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	SiteName	Management zone	*	V	2014/2015 Mean DBH (cm)	2021 Mean DBH (cm)	Difference in mean DBH (cm)	2014/2015 Stump density (ha-1)	2021 Stump Density (ha-1)	Difference in Stump density (ha-1)
CC_39	Befandefa	Sustainable use	323930	7549734	9.22	7.04	-2.17	0	0	0
CC_TH_04	Befandefa	Sustainable use	322440	7548543	8.14	8.30	0.16	25	50	25
OC_QT_15	Befandefa	Sustainable use	324798	7548239	9.83	12.75	2.92	0	25	25
CC_QT_09	Ampasimaraha	Sustainable use	325151	7545526	7.65	8.80	1.15	100	100	0
CC_08	Vatoavo	Sustainable use	325733	7539833	7.15	6.48	-0.67	1500	175	-1325
OC_25	Vatoavo	Sustainable use	326040	7541042	7.15	5.53	-1.61	0	25	25
OC_18	Vatoavo	Sustainable use	325121	7539241	10.45	5.82	-4.63	125	25	-100
OC_16	Agnolignoly	Sustainable use	323041	7539845	8.12	8.89	0.77	50	225	175
CC_17	Lamboara	Sustainable use	320339	7545242	7.03	6.94	-0.10	400	375	-25
OC_65	Ankilimalinike	Sustainable use	320339	7550356	8.59	7.98	-0.60	225	450	225
					Number of plots with increasing dbh:		4	5		Number of plots with increasing cut stump
					Number of plots with decreasing dbh:		6	3		Number of plots with decreasing cut stump
					Number of plot with unchanged dbh:		0	2		Number of plots with unchanged cut stump
					Mean dbh change		-0.5	-97.5		Mean stump change
					SE Reference value dbh Nov 2021 (N=10):		0.66	50.4		SE Reference value stump Nov 2021 (N=10)

The Monitoring Plan “Green” target stated that stump density does not exceed the harvest quota within the Sustainable Use Zones (SUZ). This practically means that stump density from the annual monitoring should not be greater than the annual allowable cutting quotas (AC/yr) defined in the management plan (PAG) document. On the contrary, if the per hectare stump density exceeds the per hectare annual allowable cutting (AC/ha/yr), we need to determine the difference and review threshold (Amber or Red). We therefore determine whether the stump density (as a proxy for harvesting) exceeds the allowable cutting quotas.

Determination of annual quota at ha - level

Annual allowable cutting quotas have been estimated for the entire SUZ in the PAG document, which are 77,989 (fence timber, DBH<5cm) and 55,317 (house timber, DBH>=5cm) for 1,091.6 ha of mangroves.

It implies that the total annual allowable cutting AC/yr = 77,989 + 55,317 = 133,306 trees (all size).

As the monitoring results are reported per ha, we need to determine the annual quota at ha-level for both diameter class sizes within the SUZ:

$AC/ha/yr = 133,306 / 1,091.6 = 122.1$ trees/ha/yr.

Determination of the mean stump density

It is very important to note that the baseline monitoring was carried out in 2014/2015. Local people have continued to use the mangroves, in particular the family of Rhizophoraceae, since the baseline year. The difference between stump density in 2014/2015 and the November 2021 monitoring results can be defined as the cumulative cutting since 2014/2015. As the sustainable harvest quotas are annual, for the purpose of this analysis the results have been annualised by dividing by the number of years between 2014/2015 and 2021.

Results

The mean stump densities (SD) in 2014/2015 and the plots re-measured in November 2021 are:

2014/2015 SD (/ha) = 242.5

2021 SD (/ha) = 145.0

Annualised SD (/ha/yr) = $(145.0 - 242.5) / (2021 - 2015) = - 16.3$

In conclusion, for the 2021 reporting period, the result of the monitoring conducted in November 2021 showed that stump density (SD) within the re-measured SUZ plots decreased below the annual allowable cutting (AC/ha/yr).

- 16.3 (SD/ha/yr) << 122.1 (AC/ha/yr).

This decrease in stump density within re-measured plots can be explained by the decomposition of most of the cut stumps in 2014/2015 and the assumption suggesting that minimal to no further cutting occurred.

Annex 1.2. Mangrove replanting

The communities in villages partners of the project have successfully replanted 12.81 ha of mangrove degraded area with 42,148 mangrove seedlings of *Ceriops tagal*, *Bruguiera gymnorhiza* and *Rhizophora mucronata*. The achievement surpassed the annual goal to replant 10 ha.

Table Annex 1.2: Mangrove replanting

Year	Date	Village	Area planted (ha)	Total participants	<i>Ceriops tagal</i>	<i>Bruguiera gymnorhiza</i>	<i>Rhizophora mucronata</i>	Total Planted
2021	Feb-25	Agnolignoly	2.47	32	2,080	0	1,680	3,760
2021	Feb-26	Befandefa	1.1	73	0	0	1,000	1,000
2021	Mar-07	Ankindranoke	2.1	99	1,220	230	3,120	4,570

2021	Mar-08	Befandefa	0.57	83	3,940	0	400	4,340
2021	Mar-09	Vatoavo	1.36	82	1,731	4,124	0	5,855
2021	Mar-10	Agnolignoly	0.76	39	1,085	15	3600	4,700
2021	Mar-21	Andalambezo	0.55	17	0	0	400	400
2021	Mar-22	Lamboara	0.66	61	2,108	14	155	2,277
2021	Mar-23	Ampasimara	0.77	41	6,329	60	409	6,798
2021	Jul-26	Befandefa	2.47	121	8,050	180	218	8,448
TOTAL			12.81	648	26,543	4,623	10,982	42,148

Annex 2. Ongoing monitoring results for all participants

Annex 2.1. Mangrove replanting survival rate monitoring

The average rate of the survival of the plantation is 74.9 % as detailed in the table below.

Table Annex 2.1: Mangrove survival rate

Year	Date	Village	Area planted (ha)	Total participants	<i>Ceriops tagal</i>	<i>Bruguiera gymnorrhiza</i>	<i>Rhizophora mucronata</i>	Total Planted	Survival rate (%)
2021	Feb-25	Agnolignoly	2.47	32	2,080	0	1,680	3,760	79.7
2021	Feb-26	Befandefa	1.1	73	0	0	1,000	1,000	89.6
2021	Mar-07	Ankindranoke	2.1	99	1,220	230	3,120	4,570	76
2021	Mar-08	Befandefa	0.57	83	3,940	0	400	4,340	84.9
2021	Mar-09	Vatoavo	1.36	82	1,731	4,124	0	5,855	77.3
2021	Mar-10	Agnolignoly	0.76	39	1,085	15	3600	4,700	50
2021	Mar-21	Andalambezo	0.55	17	0	0	400	400	100
2021	Mar-22	Lamboara	0.66	61	2,108	14	155	2,277	70.2
2021	Mar-23	Ampasimara	0.77	41	6,329	60	409	6,798	71.4
2021	Jul-26	Befandefa	2.47	121	8,050	180	218	8,448	50.3
TOTAL			12.81	648	26,543	4,623	10,982	42,148	74.9

Two sites, in Befandefa and Agnolignoly, have lower survival rates compared with other sites. The replanting in Befandefa occurred on 26th July, as a celebration event of the International Day for the Conservation of the Mangrove Ecosystem, and involved a large number of participants. The large number of participants could explain the low survival rate, as in these cases it is hard to ensure that the planting protocol is fully respected by participants. For the case of Agnolignoly, it is possible that the replanting protocols are not fully respected by the large proportion of youth attending the events (over 50% of the participants, 20 youth and 19 adults). We will ensure participants are fully briefed and supported by field technicians in the activities to promote an adequate application of the protocol'

Annex 2.2a. Dina enforcement

The Dina Management Committee (KMD) received a report of illegal mangrove timber harvesting in Bejoho, Ankilimalinike, and successfully enforced the Dina. The culprit was ordered to replant 200 mangrove propagules and to pay a fine of 50,000 MGA, as prescribed by Art. 57 of the fully approved Velondriake Dina. Details in [Dina enforcement](#).

Annex 2.2b. Forest monitoring and patrolling

For the reporting period, the 12 CSE carried 132 patrols. The objective to carry out one patrol per month per CSE or 144 patrols per year was not reached, as due to Covid-19 restriction, the CSE was not able to carry out patrol in April 2021.

Table Annex 2.2b: Forest monitoring and patrolling

NUMBER OF PATROLS IN 2021																	
Village	Name	Sex	Role	Site TH	Jan	Feb	Mar	Apr	Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Lamboara	Christie	M	CSE	Bejoho	1	1	1	0	1	1	1	1	1	1	1	1	11
	Alphine	F	CSE	Anky	1	1	1	0	1	1	1	1	1	1	1	1	11
Ankilimalinike	Manovoson	M	CSE	Tsibekoy	1	1	1	0	1	1	1	1	1	1	1	1	11
Ampasimara	Emile	M	CSE	Ampandriambagna	1	1	1	0	1	1	1	1	1	1	1	1	11
Befandefa	Norbert	M	CSE	Andamalama	1	1	1	0	1	1	1	1	1	1	1	1	11
Ankindranoke	Baranda	M	CSE	Ampotapotaky	1	1	1	0	1	1	1	1	1	1	1	1	11
	Mampionina	M	CSE	Andalantsarety	1	1	1	0	1	1	1	1	1	1	1	1	11
Vatoavo	Tsivalake (Naie)	M	CSE	Ampanihy	1	1	1	0	1	1	1	1	1	1	1	1	11
Andalambezo	Andre (Fenty)	M	CSE	Antseragnandaka	1	1	1	0	1	1	1	1	1	1	1	1	11
Agnolignoly	Velomama	M	CSE	Ankatsakitsimbogna	1	1	1	0	1	1	1	1	1	1	1	1	11
Tampolove	Jean Noely	M	CSE	Antsahandolo	1	1	1	0	1	1	1	1	1	1	1	1	11
Ankitambagna	Falea	M	CSE	Antsahandolo	1	1	1	0	1	1	1	1	1	1	1	1	11
TOTAL					132 patrols												

Annex 3. Reallocation of commitments

Not applicable

Annex 4. Socioeconomic monitoring results

Table Annex 4. Socioeconomic monitoring results

Date of meeting	Type of the meeting	Topic of the meeting & discussion
15/01/2021	Executive committee regular meeting	Presentation of the results of patrol and monitoring by the CSE and annual work plan Discussion regarding the list of school children receiving school support for the year 2021
28/01/2021	Executive committee	Proclamation of the name of school children receiving school

	regular meeting	support for the year 2021
12/03/2021	Executive committee regular meeting	Presentation of the results of the Tahiry Honko monitoring Discussion on how to pay the school support for the school children
23/03/2021	Executive committee regular meeting	Determination of the date for the payment of the school support
06/05/2021	Executive committee regular meeting	Update about the payment of the school support from the Tahiry Honko cash advance. Payment of the school fees for the school children at the catholic school and general cost for the public school. Discussion about the census of migrants within the Velondriake LMMA. Discussion about the expenses related to the Dina enforcement for mangroves and sea cucumbers.
03/05/2021	Executive committee regular meeting	Presentation of the results of honey harvesting and discussion about the strategy to improve mangrove beekeeping and address the theft issue. Update on the planning to continue the payment of the school support. PV Meeting_03-05-2021
13/08/2021	Southern committee meeting	Update from the 10 villages at the Bay of Assassins: seaweed disease, mangrove beekeeping, and request of the Velondriake management committee to assist and participate on the mangrove forests patrols. Preparation of the agenda for the next regular meeting. PV Meeting_13-08-2021
26/08/2021	Executive committee regular meeting	Update from the three sub-committee. Increase in the number of migrants noticed in Lamboara. Increase in the number of illegal mangrove cutting observed. Initiative of the Velondriake executive committee to raise the awareness on the preservation of mangrove during the payment of the school support. PV Meeting_26-08-2021
22/10/2021	Executive committee regular meeting	Update from each of the three sub-committee (South, Center and North). Update about the Tahiry Honko project: reinforcement of and reminder about the indicators/thresholds of the project; reminder about the roles and responsibilities of the Velondriake Association on the school support from the Tahiry Honko (selection of the school children, payment of the support, reminder about the role and responsibilities of Blue Ventures on the Tahiry Honko project (e.g. technical support and identification of the market). PV Meeting_22-10-2021



Figure Annex 4: Meeting of the Velondriake Southern committee in Tampolove

Annex 5. Conservation and monitoring results

A baseline biodiversity survey in mangrove forest at the project area is scheduled every five years. Given that the biodiversity survey was undertaken in February 2018, the next survey is therefore scheduled in 2023.

Annex 6. Impacts

In total, 896 primary school children enrolled at the primary state and catholic school within the 10 villages have benefitted from a scholarship from the advance funds from the carbon revenue, provided by Blue Ventures.

Table Annex 6: School children benefiting from scholarships

Village	Type of school	Effectif
Andalambezo	Primary Catholic School	61
Tampolove	Primary Catholic School	109
Agnolignoly	Primary Catholic School	64
Lamboara	Primary Catholic School	78
Vatoavo	Primary Catholic School	48

Ankindranoke	Primary public school	162
Befandefa	Primary public school	313
Ankilimalinike	Primary public school	34
Ankitambagna	Primary public school	27
TOTAL		896

Annex 7. Community meeting records (summary)

Beside the tree meeting stated in section H3, community participation, only village outreach tours across the 10 villages took place from the 27th to 31th August 2021 due to the Covid-19 restrictions. The purpose of the village outreach was to provide an update on the achievement of the Tahiry Honko activities.

This was done through a diffusion on the pre-recorded video which summaries the achievements and the next steps. The parents complained about the increase of the school fees at the Catholic school and the delay of the payment of the school support by the Velondriake Association.

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