



VANGA BLUE FOREST ANNUAL REPORT 2022

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PROJECT OVERVIEW

Project overview	
Reporting period	1 st January 2022 - 31 December 2022
Geographical areas	Vanga Bay mangrove forest
Technical specifications in use	Vanga Blue Forest

	Historical	Added/issued this period	Total
No. of households with PES agreements (where applicable)	0	0	0
No. of community groups with PES agreements (where applicable)	1	0	1
Approximate number of households (or individuals) in these community groups (if known)	974 households	0	974
Area under management (ha) where PES agreements are in place	460	0	460
Total PES payments made to participants (USD)	27,604	28,335	55,939
Total sum held in trust for future PES payments (USD)*	25,865		
Allocation to Plan Vivo buffer (tCO ₂)	1,126	1,650	2,776
Saleable emission reductions achieved (tCO ₂)	9,198	4,821	14,019
Unsold stock at time of submission (PVC)**	0	465	465
Total unsold stock (PVC)**			465
Plan Vivo Certificates (PVCs) issued to date			9,198
Plan Vivo Certificates requested for issuance			4,821
Plan Vivo Certificates available for future issuance (REDD only)			0
Total PVCs issued (including this report)			14,023

*this is the total balance in the ACES account, including anticipated costs. See Table G1

** Allocated to buyers but payment not yet received

PART A: PROJECT UPDATES

A1: Key events

14th January 2022 - A stakeholders meeting was held between the VBF committee, VAJIKI CFA members, KMFRI and KFS officials and the area chief. The aim of the meeting was to clarify and elaborate on the changes made on the benefit sharing structure as revised on the PDD.

2nd - 3rd March 2022 - Three representatives of Plan Vivo Foundation namely; Mr. Keith Bohannon - CEO (front line right), the Capacity Strengthening Coordinator - Caroline Stillman (front line centre), the Blue Carbon Coordinator (front line left) - Evie Ward, visited the project. The purpose of their visit was to meet the community on the ground and better understand their perspective and issues and help answer any questions from the project.



Figure 1: Plan Vivo representatives and VBF committee members scouting the Vanga mangroves

24th March 2022 - Vanga Blue Forest project conducted an education and awareness campaign at Kiwengu village. In attendance were the KFS guard of Vanga post, Kiwengu village head and community members from Kiwengu. The materials that were used during the campaign included posters, banners, T-shirts, written manila papers, and a short play conveying messages on importance of protecting mangroves.



Figure 2: Committee members holding themed banners reading, “Fight against illegal harvesting of mangroves” (left) and “Let’s protect our mangroves” (right) during an ongoing awareness session in Kiwengu.

31st March 2022 - The VBF team had an exchange visit to Mikoko Pamoja to learn from the efforts that have successfully contributed to the reduction of pressure in the mangrove ecosystem, their project milestones and brainstorm on how the two blue carbon projects in Kenya can strengthen their links in the future.



Figure 3: Mikoko Pamoja Chairman addressing the VBF team (left), VBF committee members visiting Mikoko Pamoja community projects (right) in Gazi, Kenya.

27th May 2022 – Two (2) senior researchers and a masters student from the University of Dar-es-saalam Tanzania namely; Dr. Mwita Mangora, Dr. Mwanahija and Ms. Lois Intibona visited the Vanga Blue Forest project to learn from the participating community about how the blue carbon project was initiated within the community, practices and challenges experienced by community in engaging with the government, project partners and the benefit sharing module.

24th -26th June 2022 - The Project coordinator, Ms. Mwanarusi Mwafrica, was amongst seven youths from Kenya representing their organizations in the UN Ocean Conference Youth and Innovation Forum in Lisbon Portugal. The event was hosted by the Governments of Kenya and Portugal, themed scaling up Ocean action based on science and innovation for the implementation of SDG 14. Amongst the Kenyan delegation was the Energy Cabinet Secretary Dr. Monica Juma, Mikoko Pamoja and Kibuyuni Seaweed farmers.



Figure 4: VBF Project coordinator (fourth-right), the former Energy CS-Kenya (fifth-right, red dress), former Mikoko Pamoja coordinator (sixth-right, red head scarf) amongst other conservation group representatives captured during the UN Ocean Conference Youth and Innovation Forum, Lisbon.

26th July 2022 – The VBF Assistant project coordinator, Mr. Hamadi Juma, and the secretary, Mr. Harith Mohammed, represented the Project at the International Day for the Conservation of the Mangrove Ecosystem 2022 that was held at Majoreni, Kwale county. While the project coordinator and VBF committee members held local celebrations in Vanga Bay by engaging the community in planting 1600 mangrove seedlings. Both events were held under the theme: “Mangrove forests - key ecosystem for the blue economy.”



Figure 5: Participants of the World Mangroves Day in Majoreni (left), while community members transplant mangrove seedlings in Vanga Bay (right).

24th August 2022 – VBF committee members organized a community forest patrol within the Vanga mangrove forest. Those involved were community members from Vanga, Jimbo and Kiwegu community, the KFS guard and the area head. The goal was to survey and identify challenges and threats facing the mangrove forest.



Figure 6: Community members patrolling the mangroves of Vanga bay.

15th September 2022 – The VBF team was trained on forest laws governing co-managed areas by KFS manager - Buda station, Mr. Ruwa Kalama, so as to ensure that the community members are aware of the Do's and Don'ts when carrying out different project activities within the Vanga mangrove forest.

17th October 2022 - ITV News visited the project site to film a segment showcasing the project and its success as part of their coverage of COP27 and related activities. The footage can be watched [here](#).

Mangroves gain recognition as ultimate nature-based solution to climate change

WORLD | KENYA | CLIMATE CHANGE | Friday 18 November 2022 at 11:17pm



Figure 7: A committee member walking in the mangrove forest at high tide during filming by ITV news for COP27 coverage.

5-6th November 2022 - A representative from ACES visited the project, The visit was marked with follow ups on community's interest on expansion of the project area, bundling of seagrass to the ongoing mangrove project, and handing over the community projects.

24th November 2022 - The VBF team hosted a group of twelve (12) officials from IUCN, Nature Seychelles, Agha Khan Foundation and Cordio East Africa. The aim of the visit was to gain a first-hand understanding of how communities, LMMA, BMUs can be engaged and structured to develop and execute on ground viable carbon projects by learning from Vanga Blue Forest and Mikoko Pamoja Projects.



Figure 8: A group photo with the visiting team.

A2: Success and challenges

Successes

Sale of carbon credits: The sale of carbon credits has been used for a range of community benefits as documented in section F, including the refurbishment of a science laboratory and purchase of medical equipment for the Vanga community, the reconstruction of Jimbo nursery school and construction of a community teachers quarters in Jimbo village, and the construction and electrification of two classrooms in Kiwego village.

Forest scholars: The socio-economic research conducted last year (2021) by Dr. Anne Kairu, shows that the community is willing to be trained on the assessment of blue carbon which includes taking measurements, analysis and reporting of the mangrove forest. Through grants obtained from Sustainable Ocean Alliance (SOA), the VBF committee recruited five (5) youths from the Vanga community who are being trained to be forest scholars for a period of one year. This initiative will build the capacity of the community in managing their own natural resources.



Figure 9: Forest scholars taking forest measurements on an ongoing forest monitoring activity.

Challenges

Exit of committee members: Two committee members stepped out of their roles after getting jobs away from the village which resulted in lower representation on decision making. In the future, if committee members step down, a process will be in place to replace them with another member of the village that they represented.

Committee election: The committee election was marked with a low turnout of community members despite posting notices around the three villages and making a prior announcement. Ahead of the next election, further reasons for low participation will be investigated and mitigation measures put in place.

A3: Project developments

Seagrass

Consultations were initiated between the VBF committee, fisheries department, the local Beach Management Unit (BMU) and the Kenya Forest Service (KFS). Mapping of the Vanga seagrass was done under the technical guidance of KMFRI (See Annex 4). It is anticipated that the seagrass Locally Managed Marine Area (LMMA) will be designated in the first half of 2023. This will be funded by a 'carbon

plus' model, under which buyers of PVCs will be invited to make an additional donation to fund the protection of seagrass meadows in Vanga Bay. A Project Officer will be recruited to have an oversight and report on the initiation of the seagrass work for a period of six months beginning early January 2023.

Expanding Project Area

Consultation with the Vajiki community to increase conservation of 200ha has begun. Thus, it is anticipated that the project will expand in January 2023 and expect additional credits by February 2024.

Restoration

A baseline study was conducted in Area 4 by an undergraduate student from Edinburgh Napier University. The parameters measured were the above ground biomass, salinity, temperature and elevation levels of the degraded site. From the results, application of hydrological methods was identified to effectively restore the site. The restoration exercise has begun, it involved the training of community members on the systematic breaching of dykes to allow free flow of water into the 5ha of the degraded site. This was attained through technical guidance from KMFRI and KFS.

Installation Of Energy Saving Stoves

Community consultations have begun by elaborating to the Vanga community the efficiency, sustainability, and conservation impact that the stoves contribute, and also identification of the ideal design that community members prefer. This work is being lead by a PhD student who is part of the VBF team.

PART B: PROJECT ACTIVITIES

B1: Project activities generating plan vivo certificates

Vanga Blue Forest has a single technical specification that covers four activity areas, involving avoided deforestation/forest recovery in areas 1 and 2 and mangrove reforestation and ecosystem rehabilitation in areas 3 and 4 respectively. The responsibilities for and benefits from these activities are shared communally within the single project community organization.

Table B1: Project activity summary

Name of technical specification	Area (Ha)	No. of smallholder households	No. of community groups
Avoided degradation Area 1 (Sii island)	199*	NA	1
Avoided degradation Area 2 (mainland)	247.5*	NA	1
Mangrove reforestation Area 3	5	NA	1
Ecosystem rehabilitation (Area 4)	5	NA	1

*Initial areas of forest are 200 (area 1) and 250 (area 2) ha. In order to take a conservative approach, reduced degradation of 80% due to project interventions is assumed. These lower values of 199 and 247.5ha will be given throughout the project accreditation period as an average accounting for forest shrinkage.

B2: Project activities in addition to those generating plan vivo certificates

Publicity and awareness raising

Vanga Blue Forest has showcased its achievements on local, national and international events including, the Mombasa Agricultural show and UN Ocean Conference 2022 in Portugal. Other platforms used to publicize the project on social media are: YouTube, Facebook and Twitter (See Annex 3).

Locally, the project team conducted an awareness raising exercise in Kiwegu village, including a play showcasing the importance of mangrove forests.

PART C: PLAN VIVO CERTIFICATE ISSUANCE SUBMISSION

Table C1: Statement of tCO2 reductions available for issuance as Plan Vivo Certificates based on activity for reporting period 01/2022- 12/2022

Area ID	Total area (ha)	Tech. Spec	tCO2 available from previous periods	Total tCO2 Achieved this period	% Buffer ¹	No. of PVCs allocated to the buffer account	No. PVCs requested for issuance from saleable carbon	tCO2 available for future issuances
Project area 1	199	VBF	0	1,811	25	453	1358	0
Project area 2	247.5	VBF	0	4,774	25	1,194	3580	0
Project area 3	5	VBF	0	0	25	0	0	0
Project Area 4	0.25	VBF	0	10.5	25	3	7	0
TOTAL	451.75		0	6596		1,650	4,821²	0

¹Buffer includes 20% for risk and 5% for leakage

²This final sum is the amount from areas 1, 2 and 4, after subtraction of buffer and then with an additional 2.5% forfeit due to not meeting monitoring targets in area 3 (see table A1.1).

This issuance is based on a signed PES agreement with Vanga Blue Forest Community Based Organisation, as the relevant user group of Vajiki Community Forest Association, complying with all the minimum requirements stated in this agreement.

Table C2: Allocation of issuance request for this reporting period

Buyer name/Unsold Stock	No. PVCs transacted	Registry ID (if available)	Vintage	Tech spec
Arcadia Fund	651	PV-PVC-KE-10400000026945-01012020-31122020-6999987-7000637-MER-0-P	2020	Vanga Blue Forest

Zero Mission	1500	NA - TRANSFER	2021	Vanga Blue Forest
Beahvioural Insights (BI) Team	325	PV-PVC-KE-10400000026945-01012021-31122021-8636236-8636560-MER-0-P	2021	Vanga Blue Forest
Miriam Canella	2	PV-PVC-KE-10400000026945-01012021-31122021-8636623-8636624-MER-0-P	2021	Vanga Blue Forest
Citizen Zoo	5	PV-PVC-KE-10400000026945-01012021-31122021-8636598-8636602-MER-0-P	2021	Vanga Blue Forest
Ocean Bottle	700	PV-PVC-KE-10400000026945-01012021-31122021-8636939-8637638-MER-0-P	2021	Vanga Blue Forest
Master of Science in Marine and Lacustrine Science and Management (Oceans & Lakes), Vrije Universiteit Brussel	50	PV-PVC-KE-10400000026945-01012021-31122021-8633769-8633818-MER-0-P	2021	Vanga Blue Forest
The CORRIENTE XXI project, Vrije Universiteit Brussel	15	PV-PVC-KE-10400000026945-01012021-31122021-8634679-8634693-MER-0-P	2021	Vanga Blue Forest
Alison Baker	10	PV-PVC-KE-10400000026945-01012021-31122021-8636925-8636934-MER-0-	2021	Vanga Blue Forest

		P		
Charles and Kate Hussey	60	PV-PVC-KE-10400000026945-01012021-31122021-8634619-8634678-MER-0-P	2021	Vanga Blue Forest
Yacht Carbon	250	NA - TRANSFER	2021	Vanga Blue Forest
Yacht Carbon	107	NA - TRANSFER	2021	Vanga Blue Forest
Levin Sources	4	PV-PVC-KE-10400000026945-01012021-31122021-8636935-8636938-MER-0-P	2021	Vanga Blue Forest
Levin Sources	37	PV-PVC-KE-10400000026945-01012021-31122021-8636561-8636597-MER-0-P	2021	Vanga Blue Forest
The Safari Collection	800	PV-PVC-KE-10400000026945-01012021-31122021-8633819-8634618-MER-0-P	2021	Vanga Blue Forest
Superflex	42	PV-PVC-KE-10400000026945-01012021-31122021-8634694-8634735-MER-0-P	2021	Vanga Blue Forest
Carbon Chameleon	300	NA - TRANSFER	2021	Vanga Blue Forest

Nico Koedam	20	PV-PVC-KE- 10400000026945- 01012021-31122021- 8636603-8636622-MER-0- P	2021	Vanga Blue Forest
TOTAL	4,227			

The remaining 465 credits have been allocated to buyers, but payments are pending for these and so these sales will be reported on in the 2023 annual report.

PART D: SALES OF PLAN VIVO CERTIFICATES

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
SALES 2021						
2020	Zero Mission	1500				59.3
2020	Superflex	50				59.3
2020	The Safari Collection Footprint	222				59.3
2020	Himaya	12				59.3
2020	James Hagan	3				59.3
2020	Cambridge Conservation Forum	14				59.3
2020	Zero Mission	2050				59.3
2020	Citizen Zoo	4				59.3
TOTAL/AVG 2021		3855				59.3
SALES 2022						
2020	Arcadia	651				39.2*

	Fund					
2021	Zero Mission	1500				39.2*
2021	Behavioural Insights (BI) Team	325				39.2*
2021	Miriam Canella	2				39.2*
2021	Citizen Zoo	5				39.2*
2021	Ocean Bottle	700				39.2*
2021	Master of Science in Marine and Lacustrine Science and Management (Oceans & Lakes), Vrije Universiteit Brussel	50				39.2*
2021	The CORRIENT E XXI project, Vrije Universiteit Brussel	15				39.2*
2021	Alison Baker	10				39.2*

2021	Charles and Kate Hussey	60				39.2*
2021	Yacht Carbon	250				39.2*
2021	Yacht Carbon	107				39.2*
2021	Levin Sources	4				39.2*
2021	Levin Sources	37				39.2*
2021	The Safari Collection	800				39.2*
2021	Superflex	42				39.2*
2021	Carbon Chameleon	300				39.2*
2021	Nico Koedam	20				39.2*
TOTAL/AVG 2022		4,878				39.2
TOTAL/AVG ALL		8,733				49.3

* In 2022, the % share to participants was 39.2%; less than the 60% minimum to participants. This was because community development priorities in 2022 did not require the additional \$15,025 required to meet the 60% minimum. The unspent funds are held in trust and not retained by ACES, but they are not included in the % share to participants here for accounting reasons. This has been communicated with the community and decisions on community spending in 2023 will aim to include this expenditure. The % price to participants in 2023 will be correspondingly higher so that the two years average at least 60% to participants.

Table D2: Unsold stock of Plan Vivo Certificates

Vintage	No of PVCs	Price to participants
2021	465*	0

* These credits have been allocated/sold to buyers but payments are pending as of 21/12/22. These sales will be reported on in 2023, even if payment is made in the remaining days of 2022.

PART E: MONITORING RESULTS

E1: Ecosystem services monitoring results

Monitoring results that support the request for new issuance are presented in Annex 1.

E2: Maintaining commitments

No participant has resigned from the project this year.

E3: Socioeconomic monitoring

Research into social justice in the Vanga Blue Forest project (and Mikoko Pamoja project) was led by Dr Anne Kairu in 2021-22, and the results are currently undergoing peer review. The results will be shared in full once the manuscript has been accepted, however a summary of key themes that emerged is shown below.

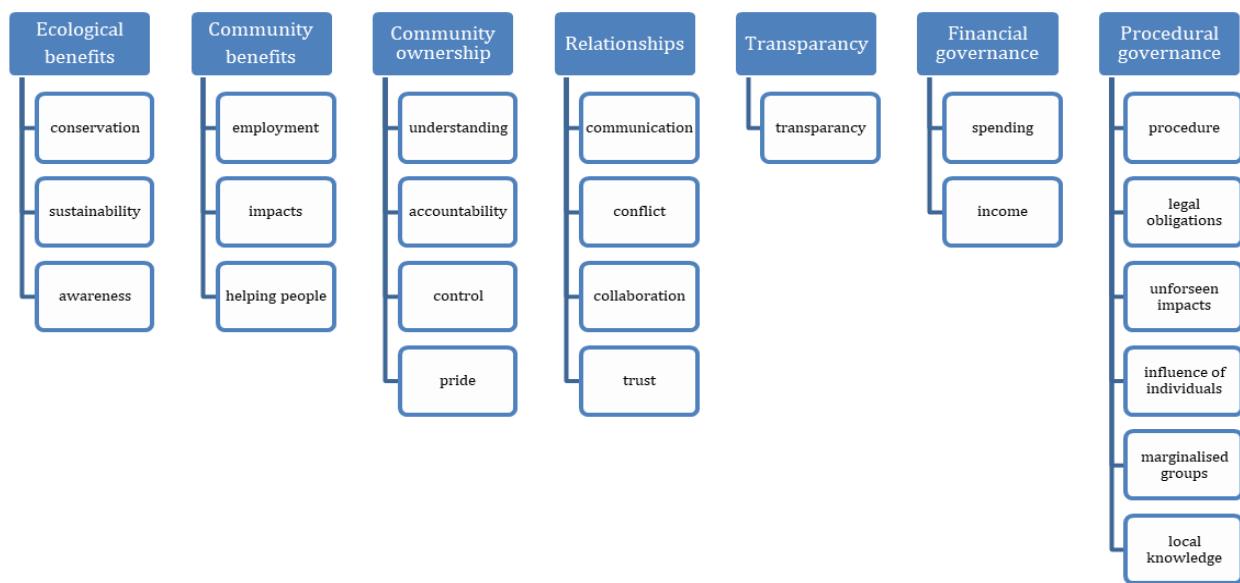


Figure 10: Summary of thematic findings from research interviews of community and committee members in the project area.

E4: Environmental monitoring

Additional biodiversity monitoring was not possible this year due to Covid restrictions on travel by students and researchers. However, this is expected to be carried out with assistance from students from Edinburgh Napier University and/or Bangor University in the coming year.

PART F: IMPACTS

Evidence of outcomes

Through proper village engagement and consultation, **Vanga** village prioritized upgrading a science laboratory at Juma Boy Secondary School and purchasing medical equipment for the local dispensary (2 Glucometer on call and 400 Glucostrips). Jimbo village prioritized the repair of the Jimbo nursery school, the provision of 40 desks, and the construction of a teachers quarters. While in Kiwegu, the construction and electriction of two classrooms and the provision of a speaker and amplifier to Kiwegu mosque was prioritized.

Vanga community projects



Figure 11: Refurbished Science laboratory at Juma Boy Secondary School funded through carbon sales



Figure 12: Medical equipment purchased for the local dispensary through funds obtained from carbon sales

Jimbo community projects



Figure 13: Reconstructed nursery school funded through sale of carbon sales

Kiwegu community projects



Figure 14: Construction and electrification of two classrooms in Kiwegu

PART G: PAYMENTS FOR ECOSYSTEM SERVICES

Table G1: Summary of payments made and held in trust

1. Reporting year (2021-2022)	2. Total payments received (USD)	3. Total payments made (USD)	4. Value retained by ACES* (USD)	5. Total payments held in trust (USD)
1/20 - 12/20	0	0	2694**	0
1/21 - 12/21	46,555.00	27,604.04	12,177	2823***
1/22 - 12/22	72,268.00	28,335.00*** *	21,352	25865***
TOTAL	118,823.00	55,939.04	36,223.00	25,865

* Includes operating costs for ACES, Plan Vivo issuance fees and funds ringfenced for verification.

** Funds were retained by ACES prior to income being received to contribute to a verification fund (an annual transfer). ***Numbers do not exactly add up due to fluctuations in exchange rates between USD and GBP and year to year carryover

**** In 2022, the % share to participants was 39.2%; less than the 60% minimum to participants. This was because community development priorities in 2022 did not require the additional \$15,025 required to meet the 60% minimum. The unspent funds are held in trust and not retained by ACES, but they are not included in the % share to participants here for accounting reasons. This has been communicated with the community and decisions on community spending in 2023 will aim to include this expenditure. The % price to participants in 2023 will be correspondingly higher so that the two years average at least 60% to participants.

Before transfer to the VBF Community Organization, funds are held by the charity The Association for Coastal Ecosystem Services (ACES).

PART H: ONGOING PARTICIPATION

H1: Committee election

A democratic committee election was held on the 13th - 15th of December within Vanga, Jimbo and Kiwengu villages respectively. Members were chosen in consideration of attributes such as; age (both old and youth), ability to read and write, being resident of the area and persons with special abilities. The outcome of the election is that 38% of the committee is constituted of women. This meets the requirement that 30% of committee members must be women. The list of the new committee members is as follows:

Table 3: 2023 -2025 elected VBF committee members.

No .	Name	Status	Village	Gender
1.	Nsema Ferunzi	New	Vanga	Female
2.	Mjaka Juma	New	Vanga	Male
3.	Mwanamisi Omari	New	Vanga	Female
4.	Harith Mohammed Suleiman	Returning	Vanga	Male
5.	Hafife Said Musa	New	Jimbo	Female
6.	Mwanamvua Suleiman	New	Jimbo	Female
7.	Said Mohamed	New	Jimbo	Male
8.	Hassan Bakari	New	Jimbo	Male
9.	Mwichambi Kai Mtoro	Returning	Jimbo	Male
10.	Mwanamkuu Hassan	New	Kiwegu	Female
11.	Hassan Kondo Sheni	New	Kiwegu	Male
12.	Ibrahim Abdi Kenyanjui	Returning	Kiwegu	Male
13.	Omar Kassim Riko	Returning	Kiwegu	Male

H2: Project potential

We do not anticipate recruiting any additional user groups in 2023. The planned expansion would not have any implications on the communities to be included in the project as no new villages or settlements would be included in the project area.

H3: Community participation

A committee of 13 volunteer community members from Vanga, Jimbo and Kiwegu villages governs Vanga Blue Forest project (see meetings held this year in Table H3). Through a participatory approach, the committee is elected democratically during village meetings with close involvement and supervision of the Department of Social Development and the village heads. The committee team comprises four members from each of the three villages, the chairman position rotates amongst the villages. The first committee was chaired by a member from Kiwegu while the new committee elected in December 2022, the position is occupied by a member

from Jimbo.

The committee ensures that the annual work plan is implemented in a timely manner, engages in project activities like monitoring, engages community members in prioritising local development projects through funds obtained from the sale of carbon credits, ensures allocated community funds are used for intended purpose and also addresses arising grievances. In cases where no resolution is arrived at, village heads intervene.

Kiwegu village highlighted that its population has grown bigger over the period of three years, and thus requested to access more funds for community development than the initial years. Previously, the division of funds amongst the three communities was that Vanga got a higher percentage based on its population, Jimbo and Kiwegu had an equal sum of funds that they obtained from carbon sales. The ratio of division was 4:3:3 respectively. This agreement was arrived at initially during the initial project consultation meetings. The situation is yet to be resolved.

Table H3: Meetings held by VBF-CBO 2022

NO.	DATE	MEMBERS	NO. OF MEMBERS	AGENDA
1.	14/01/2022	VBF committee, KMFRI, Sub-county administrator, Social service Officer, Assistant Area chief, KFS officer, VAJIKI CFA	26	✓ VBF PDD clarification on the benefit sharing mechanism.
2.	26/01/2022	VBF members	12	✓ Budgeting of the 2022 VBF activities
3.	02/03/2022	Members and scouts of VBF and representatives of Plan Vivo foundation	19	✓ VBF project and its activities ✓ Discussion about Plan Vivo, its aim and mission
4.	17/03/2022	VBF members, Hamish McGill - student from Napier University	15	✓ Collection of baseline data from the restoration area. ✓ Expansion of VBF project area
5.	09/06/2022	VBF members	10	✓ Inclusion of Bee keeping project ✓ Introduction and selection of Forest scholars ✓ Woodlot project ✓ Progress of the Community projects
6.	28/06/2022	VBF members	10	✓ Sourcing private land for woodlot establishment

				<ul style="list-style-type: none"> ✓ Training of five (5) Forest scholars from Vanga. ✓ Invitation of the Juma Boy and Ngozi girls' secondary schools to participate in the world mangrove day event. ✓ Replacing of some VBF committee members.
7.	15/07/2022	VBF members	10	<ul style="list-style-type: none"> ✓ Progress of the Community projects ✓ Withdrawal of petty cash ✓ Signing of Land lease Agreement for the Woodlot project
8.	02/08/2022	VBF members	13	<ul style="list-style-type: none"> ✓ Review of the VBF account transactions
9.	05/09/2022	VBF members	11	<ul style="list-style-type: none"> ✓ Fencing of the woodlot field. ✓ Discussing the findings of the community forest patrol. ✓ Forest laws training. ✓ Handing over of the VBF community projects to the community.
10.	5/11/2022	VBF members, ACES Director (Prof. Mark Huxham), Vanga Seagrass Project lead (Amy Mumo), 1	18	<ul style="list-style-type: none"> ✓ Follow up on the expansion of project area and bundling of seagrass project.

		seagrass Research student from Edinburgh Napier University and 1 KMFRI staff, Vanga BMU executive members.		<ul style="list-style-type: none"> ✓ Increase of VBF employee salaries. ✓ Introduction of the seagrass project lead to the VBF committee. ✓ Introduction of the ACES representative to the Vanga BMU. ✓ Elaboration of the relation/function of ACES with community conservation groups.
11.	15/11/2022	VBF members	12	<ul style="list-style-type: none"> ✓ Revision of salary for all the four (4) VBF employees. ✓ Organizing end of Mangrove monitoring. ✓ Planning on nursery establishment of fast-growing trees. ✓ Planning for elections of the new VBF committee
12	13-15/12/2022	Vanga, Jimbo and Kiwengu community members, 3 village heads, KFS and Social service officers.	124	<ul style="list-style-type: none"> ✓ Elaboration of VBF activities and contributions to the environment and community. ✓ Committee election
1	19/12/2022	VBF members	11	<ul style="list-style-type: none"> ✓ Election results ✓ Review of the project's financial status

PART I: PROJECT OPERATING COSTS

Allocation of costs

Expense	Narrative	Amount (Ksh): USD in brackets	Contribution from sale of PVCs (Ksh)	Contribution from other sources
Community development projects	-	1,958,000 (USD 15,906)	100%	-
Labour		808,410 (USD 6,572)	100%	-
Project workers salary (all staff)	-	1,012,000 (USD 8,220)	100%	-
Expense for committee and office	-	381,500 (USD 3,101)	100%	-
Ecosystem restoration		235,500 (USD 1,910)	0%	28% from Rotary International 72% from Royal Society of Edinburgh

ANNEXES

Annex 1. Monitoring results for issuance request

Vanga Blue Forest operates on four main project areas. Areas 1 (Sii Island) and 2 (Vanga forest mainland) deliver PVCs through avoided deforestation and forest conservation activities. Areas 3 (mangrove plantation) and 4 (rehabilitation area) involve mangrove reforestation and ecosystem rehabilitation within the project site.

Our methodology involves ex-post claims for carbon accumulated, provided we meet key threshold measures of stump counts and absence of clear fell, as summarized in table A1.2

Table A1.1. Key indicators reporting

Activity area	Forest attribute	Quantity/ ha	Measure last year	Baseline	Remarks	Monitoring target met? (Y/N)
1	AGB (t dw)	361	294	261	AGB showed a large increase, which may partly reflect an underestimate from last year. Stumps went from 0.75 to 2 per plot on average, probably statistical noise. No evidence of new cutting or removal	Y
	Stump Count	200	75	200		Y
2	AGB (t dw)	84	78	75	AGB increased and stumps declined (because of much larger average no. per area less room for relative error than in area 1). No evidence of new cutting or removal	Y
	Stump count	945	1136	1364		Y
3	Stump count	Not known	Not known	Not known	Did not prioritize this year given other objectives*	N
4	Trajectory towards recovery	qualitative	NA	2 trees month ⁻¹ 23% areal cover	Hydrological restoration now commenced with new drainage established and >1000 trees in nurseries ready for planting if required	Y

* Monitoring of Area 3 is hoped to begin in 2023

Table A1.2. VBF Annual Report Carbon Benefits Summary Table

Variable	Indicators and measures	Outcome
Threshold measures	Stump counts	No significant increase
	Evidence of clear felling	No evidence of clear felling
Avoided degradation area 1	Default measure of $8.65 \text{ t CO}_2 \text{ ha}^{-1} \text{ yr}^{-1}$	$199 * 8.65 = 1721$
Avoided degradation area 2	Default measure of $17.3 \text{ t CO}_2 \text{ ha}^{-1} \text{ yr}^{-1}$	$247.5 * 17.3 = 4282$
Avoided deforestation ABG areas 1 and 2	5-year satellite information; annual on-ground surveys and threshold measures. $309 \text{ t CO}_2 \text{ yr}^{-1}$ if met.	309 t CO_2
Avoided deforestation soil carbon areas 1 and 2	5-year satellite information; annual on-ground surveys and threshold measures. $273 \text{ t CO}_2 \text{ yr}^{-1}$ if met.	273 t CO_2
Reforestation area 3	Stump counts and growth increments. Will accumulate $102 \text{ t CO}_2 \text{ yr}^{-1}$	Not measured
Ecosystem rehabilitation area 4	Meeting longer term targets of natural recovery $10.5 \text{ t CO}_2 \text{ yr}^{-1}$	Work initiated this year so 10.5 t CO_2
TOTAL (t CO₂)		6,596
TOTAL AFTER FORFEIT (but before risk buffer subtraction)	Area 3 not measured hence 2.5% forfeit	6,431

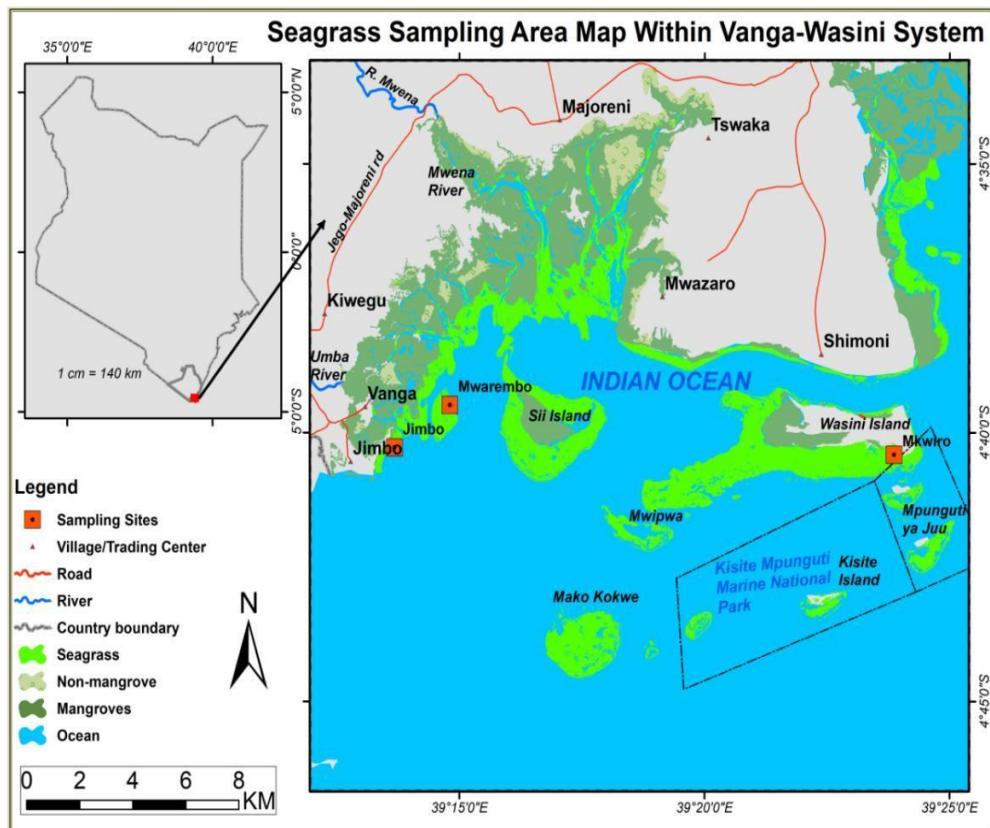
Annex 2: Copies of receipts on expenditure

[VBF 2022 receipts](#)

Annex 3: Media

- a) Vanga Blue Forest on ITV News at 10's coverage of COP27 and related topics:
<https://www.itv.com/news/2022-11-18/mangrove-trees-gain-recognition-as-natures-own-solution-to-climate-change>
- b) Vanga Blue Forest featured in Science Africa:
<https://scienceafrica.co.ke/2022/07/22/sale-of-carbon-curbing-mangrove-loss-along-kenyan-coast/>
- c) The Blue Forest by Rupert Bedford Media:
<https://www.youtube.com/watch?v=qWNdg-sHnvo>
- d) Vanga Blue Forest on Habari za UN (UN Africa news):
https://www.youtube.com/watch?v=enYsA_Z3NUc

Annex 4: Vanga Seagrass Map and Closure Agreement



 Seagrass closure agreement.pdf