



Mikoko Pamoja

Validation to the Plan Vivo Carbon Standard

Prepared by Charles Henderson of Climate Futures

Amended Report following the address of corrective actions:
Version 24th January 2014



Summary of Findings

Validation Opinion

In the opinion of the validator, Mikoko Pamoja **should be awarded certification** to the Plan Vivo Standard (with agreement on a timetable to address Corrective Actions).

Major and Minor Corrective Actions are summarised in Table 1 along with Observations and Recommendations.

Table 1. Summary of Major and Minor Corrective Actions, and Observations / Recommendations

Theme	Major CARs	Comments on Corrective actions	Minor CARs	Comments on Corrective actions	Observations
Governance	<p>1. Complete contract between ACES / MPCO</p> <p>2. Specify who will take responsibility for 5 yearly Plan Vivo verifications</p> <p>3. Ensure clear ACES/MPCO reporting responsibilities are agreed (including verifications)</p>	<p>contract completed and signed on 9th July 2013. Full signed contract – A1.16 (also available on the Markit registry list of documents)</p> <p>The responsibility for ACES to expedite these verifications is written in to the ACES/PLAN VIVO MoU, where it states: 'The Association for Coastal Ecosystem Services agrees to undertake a third-party verification audit, by an approved Plan Vivo verifier, at least every five years following the date of registration'. This is also made explicit in the financial flow diagram on p17 of the PDD document A1.2</p> <p>These are specified in the ACES/PLAN VIVO MoU signed on the 28 January 2014.</p>	<p>Obtain final KFS approval of the GOGA CFA Forest User Agreement</p> <p>Ensure MPCO/MPSC expectations of the frequency and level of project finance reflect likely and worst case outcomes</p>	<p>This was achieved and is confirmed by the agreement letter – A1.17</p> <p>Recorded in the minutes of our MPCO meetings, held shortly after the validation visit A1.18</p>	-

Carbon	-		-	-	Undertake detailed study into the provenance and use of wood for building and woodfuel – pre and post ban
Ecosystem	-		-	-	Consider other species in addition to <i>Casuarina</i> e.g. fruit, nut trees
Livelihoods	4. Complete contract between ACES / MPCO	contract completed and signed on 9 th July 2013. A1.16	Partners should continue to raise awareness of the MPCO programme and ensure community expectations are managed	The community has responded well during the first year of operation and agreed to spend funds raised on school buildings and school books. By operating a 'simulated payment' using start up funds for this purpose we have given people the experience of a typical year and helped to inform realistic expectations.	-

Table of Contents

Summary of Findings.....	2
Validation Opinion	2
1. Introduction	5
1.1 Mikoko Pamoja	5
1.2 Purpose of the validation.....	7
1.3 Documentation	7
1.4 Site Visit	8
1.5 The Validation Report	9
2. Governance	10
3. Carbon benefits	18
4. Ecosystem Benefits.....	25
5. Livelihood Benefits	28
Appendix I: Documents	33
Appendix II: Images	34
About Climate Futures.....	35

1. Introduction

1.1 Mikoko Pamoja

Mangroves are under threat in Kenya, in common with many of their habitats. Mikoko Pamoja (MP) is a programme which channels carbon finance to improve livelihoods in the local community, and provides long-term incentives for conservation of these ecologically-valuable ecosystems.

1.1.1 Location

Mikoko Pamoja (MP) is being delivered in the Gazi Bay area of the southern coast of Kenya, about 50km south of Mombasa. Its conservation and planting activities are taking place in zones within the 615 hectares of mangroves in the area. There are approximately 5400 residents in two local villages, Gazi and Makongeni. Livelihoods are provided predominantly by fishing, farming and tourism. Other new local employment is provided by titanium mining and sugar cane farming.

1.1.2 Activities

MP aims to protect, enhance and expand mangrove cover in the Gazi Bay area through three distinct and interlinked activities (Appendix I: Document 2; images 1-8):

- **Activity 1:** will protect existing natural *Rhizophora mucronata* forest over an area of 107 ha. This area is currently suffering from degradation and deforestation. *Activity: Avoided deforestation and forest restoration.*
- **Activity 2:** will establish two plantations of *Rhizophora mucronata* of approximately 10 ha in formerly denuded areas. *Activity: Reforestation and forest protection.*
- **Activity 3:** Replanting of a *Sonneratia alba* fringing forest of 40-70m depth and 800m length, along a wave-exposed beach. Wood was originally removed from parts of the area for industrial use, leaving open areas of sand, which have not regenerated naturally, and exposing neighbouring coconut groves to erosion. Annual planting of about 4000 seedlings will be undertaken in phases, in a succession of planting areas of about 0.4 ha each, some behind original trees or successfully replanted plots. The aim is to replant successively for 20 years, thus planting 8 hectares in total. *Activity: Reforestation and forest protection.*

- **Additional activity:** two *Casuarina* woodlots have been planted to provide firewood and poles to the community, and income to the schools where they are established.

1.1.3 Governance and tenure

The community has been closely involved in all stages of development and is managing the programme through a Community Organisation (MPCO), consisting of 13 volunteer individuals (six from each village, and one from the other village to the chairperson). An employee (coordinator) is employed full time by MPCO. A Steering Group (MPSG), with staff of the Kenya Marine and Fisheries Research Institute (KMFRI), Kenya Forest Service (KFS) and other organisations, supports the MPCO and will report back to Plan Vivo. A Scottish charity, the Association for Ecosystem Services (ACES), has been established to provide independent scrutiny of progress, and attract and channel carbon finance. Technical and expert advice is given by research partners, including Nairobi, Edinburgh Napier and Bangor Universities. Human resources are given by the local community and NGOs, including WWF and Earthwatch.

Consultation has been undertaken widely with the community, including through *barazas* (community meetings, which give all participants the opportunity to speak).

The Kenyan government owns the (Gazi) mangroves and has currently licensed extraction to only one individual (there is however evidence of occasional illegal extraction). Under the Kenyan Forestry Act 2005, provision is made for communities to develop a Forest Management Plan and be granted certain powers under a Special User Agreement by KFS. The Gogoni-Gazi Community Forest Association GOGACFA has developed a forest management plan (2013-2017) for the area. MPCO is effectively a User Group of GOGA CFA, alongside 12 others including the Gazi Women's Boardwalk, self-help, farmers and conservation groups.

1.1.4 Distribution of carbon funds

Distribution of carbon finance funds has been discussed by the MP team and community at *barazas*. Agreement was reached that funds will be distributed to a selection of community-enhancing projects, rather than directly to farmers. This reflects the collective management and restoration of the mangroves as enacted by the Community Forestry Association (CFA).

Anticipated carbon credits generated are approximately 2,500 tCO₂ per annum. 15% of these will be deducted as a risk buffer, giving saleable credits of approximately 2,125 tCO₂ per annum.

Agreement has been reached that this will be split: 32% to community projects; 36% to local work teams and individuals; 21% to a project coordinator and the remainder to administration and Plan Vivo fees. At \$7 per tonne CO₂ (a conservative price), credit sales would yield about \$15k per annum.

1.2 Purpose of the validation

A validation was carried out to assess the performance of Mikoko Pamoja against a number of Plan Vivo criteria under four main themes: governance; carbon performance; ecological performance; and livelihoods improvement.

Research techniques included document review, a site visit, interviews and meetings.

1.3 Documentation

Findings were gathered from a combination of documents reviewed prior, during and after the visit. These are summarised in Table 2 and given in Appendix I, including official project documents, Constitutions, Memoranda of Understanding and approval letters. These are referenced in the text. A selection of photos is shown in Appendix II.

Table 2: Documents reviewed for Mikoko Pamoja validation

Document	Date	Author
Mikoko Pamoja Plan Vivo project documents A1.1: Mikoko Pamoja Project Idea Note (PIN) A1.2: Mikoko Pamoja Project Design Document (PDD) A1.3: Technical Specification	March 2010 Jan 2014 9th September 2011	Mark Huxham, MP team Mark Huxham, MP team Mark Huxham, MP team
The Association for Coastal Ecosystems Services (ACES) Charity A1.4: Approval letter from Office of the Scottish Charity Regulator	2 nd May 2013	Office of the Scottish Charity Regulator
Mikoko Pamoja Community Organisation (MPCO) A1.5: Mikoko Pamoja CBO Constitution A1.6: Community Meetings report A1.7: Committee Profile	Undated May 2013 May 2013	MPCO Noel Mbaru MPCO team
Gogoni-Gazi Community		

Document	Date	Author
Forest Association (CFA) / Forest User Agreement A1.8: Constitution of GOGA CFA A1.9: Memorandum of Understanding Gogoni-Gazi CFA User Groups A1.10: Letter confirming Forest User Agreement for Gogoni-Gazi CFA is underway A1.11: Community Forest Management Agreement 2013-2017 A1.12: Gogoni-Gazi Forest Management Plan 2013-2017	Undated 27 th May 2013 27 th May 2013 Unsigned 2013	GoGa CFA CFA (signed by User Group representatives) KFS KFS / GoGa CFA DK Mbugua
Community and Schools A1.13: MoU between Gazi Bay school and MPCO A1.14: MoU between Makongeni school and MPCO A1.15: Interviews with Gazi residents – summary transcripts	2013 2013 31 st May 2013	MPCO MPCO C. Henderson
Additional Documentation to meet CARs A1.16: contract between ACES / MPCO A1.17: KFS approval of the GOGA CFA Forest User Agreement agreement letter A1.18: minutes of MPCO meetings, held shortly after the validation visit	9 July 2013 3 October 2013 5 July 2013	ACES / MPCO KFS MPCO

1.4 Site Visit

A visit was carried out to the Mikoko Pamoja project area in Gazi Bay region of Kenya: 29th May – 1st June 2013.

An itinerary of meetings held, people interviewed and places visited is given in Table 3.

Table 3: Itinerary of Mikoko Pamoja validation visit

Date and time	Activity, location	People
29th May 2013 2.00 – 2.30 pm 3.30 – 5.00 pm 5.00 – 6.30 pm	Introduction to socio-economics of area. Mikoko Pamoja (MP) office Mikoko Pamoja project, introduction, document review and Q&A A guided tour of Gazi village	Mwanokombo Kilalo Noel Mbaru Noel Mbaru Michael Njoroge Hamisi (surname unknown)
30th May 2013 8.30 – 9.30 am	Meeting with MP Committee and	MP Committee and

Date and time	Activity, location	People
9.30 – 10.30 am	CFA Guided tour of Makongeni village	CFA members Mwanakombo / Makongeni village chairman
10.30 – 2.00 pm	Makongeni area sites including mangrove nurseries, fishponds, school woodlot, plantation, test plots and conservation area	MP Chairman, Makongeni representatives, head teacher
3.00 – 4.00 pm	Visit to regional Chief	Michael Njoroge Noel Mbaru
4.00 – 5.00 pm	Visit to Diani town	Ali Rigga Michael Njoroge Noel Mbaru
4.00 – 5.00	Visit to Titanium Mine	Michael Njoroge
31st May 2013		
8.30 am – 4.00 pm	Interviews with Gazi residents, visit to school woodlot, Sonneratia planting areas on beach, seedling nursery, boardwalk project.	Michael Njoroge Noel Mbaru
4.00 – 5.00 pm	Visit to Sugar Cane plantation	Michael Njoroge
1st June 2013		
8.30 - 10.00 am	Visit to KFS office to meet Ms. Njaraje	Michael Njoroge
11.00 am – 12.00pm	Meeting with Dr Kairo	Dr James Kairo
4.30 pm – 5.30 pm	Plenary meeting, preliminary findings and wrap up	MP Committee and CFA members

1.5 The Validation Report

This report is split into a number of sections, in keeping with the themes as outlined by Plan Vivo in its Terms of Reference¹.

- Section 2: Governance
- Section 3: Carbon Benefits
- Section 4: Ecosystem Benefits
- Section 5: Livelihood Benefits

The report is supported by two appendices:

- Appendix I: Documents
- Appendix II: Images

¹ Terms of Reference for Project Validation against the Plan Vivo Standard and Validation Report Template

2. Governance

Table 4: Criteria, findings and recommendations: Governance

Plan Vivo criteria	Findings
1.1 Administrative capabilities <i>"The project has set up a legal and organisational framework with the ability and capacity to aggregate carbon from multiple land-owners and transact to purchasers, and monitor progress across all project operations"</i>	<p>1.1.1 Legal entity (project coordinator) able to enter into sale agreements with multiple producers or producer groups for carbon services</p> <p>Two entities have been established to ensure the sale of carbon credits and distribution of carbon finance back to suitable community projects, once monitoring criteria have been met.</p> <p>ACES (Association for Coastal Ecosystems Services): a Scottish-registered Charity (SC043978), with Trustees including Professor Mark Huxham and Dr Martin Skov. ACES is responsible for selling MP carbon credits to the market and distributing these funds to the MPCO once monitoring criteria are met. Appendix I: Document 4, registration letter.</p> <p>Mikoko Pamoja Community Organisation (MPCO): a registered community producer organisation. Governed by 13 representatives from Gazi and Makongeni villages (Appendix I: Document 7). Responsible for organisation of village <i>barazas</i> to discuss distribution of funds, collection of funds from ACES, facilitating the choice of supported projects, distribution of funds to projects and entering into agreements with other parties e.g. planting partners. Appendix I: Document 5, Constitution.</p> <p>These groups are supported by the MPSG, which will provide oversight.</p>

Plan Vivo criteria	Findings
<p><i>1.1.2 Standard sale agreement templates for the provision of carbon services</i></p>	<p>technical expertise and management.</p> <p>No contractual agreement yet exists between ACES and MPCO. This is required to ensure the tripartite governance structure is legally constituted.</p> <p>Conclusion: Major Corrective Action: Complete contract between ACES / MPCO</p> <p>Response ACES / MPCO: contract completed and signed on 9th July 2013. A1.16</p>
<p><i>1.1.3 Transparent and audited financial accounts able to the secure receipt, holding and disbursement of payments to producers</i></p>	<p>MP is distributing funds to community projects, rather than to individuals (explained in Section 1.1.4). Therefore sale agreements templates are not required and this criterion is not applicable as written.</p> <p>Conclusion: criterion met (as appropriate to the project)</p> <p>MPCO holds a bank account, and has processed salary payments to project coordinators, seedling nursery and administration costs. Payments will be made through this account when community projects are selected. Payments will be made 50% in advance, followed by 30% then 20% on satisfactory completion.</p>
<p><i>1.1.4 All necessary legal permissions to carry out the intended activities</i></p>	<p>Legal permissions include:</p> <ul style="list-style-type: none"> • ACES: Approval letter from Office of the Scottish Charity Regulator. Document A1.4; • MPCO: Mikoko Pamoja CBO Constitution. Document A1.5;

Plan Vivo criteria	Findings
<p><i>1.1.5 Mechanisms for participants to discuss issues associated with the design and running of the project</i></p>	<ul style="list-style-type: none"> • Gogoni-Gazi Community Forest Association (CFA): Kenya Forest Services Letter confirming Forest User Agreement for Gogoni-Gazi CFA is underway and pending signature. Document A1.10. <p>However, two legal documents are pending:</p> <p>Conclusion: Major Corrective Action. Complete contract between ACES / MPCO</p> <p>Response ACES / MPCO: contract completed and signed on 9th July 2013. A1.16</p> <p>Conclusion: Minor Corrective Action. Obtain final KFS approval of the GOGA CFA Forest User Agreement</p> <p>Response ACES / MPCO: This was achieved and is confirmed by the agreement letter – A1.17</p> <p>Village meetings (<i>barazas</i>) are called by the village chief, usually in response to a particular issue. These will continue to be a forum for inclusive discussion of MP. Due to their personal involvement and interests, the 13 members of the MP committee informally represent a voice for a number of community groups such as those involved in education, fishing, conservation and the women's boardwalk. A four-stage process has been designed to ensure benefit sharing: 1. MPCO members collect ideas from their community 2. a full MPCO meeting determines priorities and ranks costs 3. ranked priorities are made public and a month is allowed for response 4. confirmation meeting of MPCO.</p> <p>Conclusion: criterion met</p>

Plan Vivo criteria	Findings
1.2 Technical capabilities	<p><i>"The project, through its participants, is able to provide assistance to producers in planning and implementing productive, sustainable and economically viable forestry and agroforestry systems, and provide support for silvicultural and other management operations."</i></p>
<p><i>Project staff should be able to define clearly who is responsible for the provision of technical extension support</i></p>	<p>The development team and partner support have a wide range of technical experience. This includes partners from local (Nairobi) and international Universities (including Edinburgh Napier and Bangor), KMFRI, NGOs (WWF and Earthwatch). These partners will continue involvement, and support MPSG in their task of monitoring and reporting.</p> <p>Importantly, the lead technical director (Dr James Kairo) is a local resident of Gazi Bay. Michael Njoroge is a Steering Group member, also resident, and his salary is paid by KMFRI. A MP paid member of staff (Noel Mbaru) is project coordinator. Roles and responsibilities are clearly defined.</p>
<p><i>Project staff should be familiar with the content of project technical specifications (e.g species to be planted, spacing requirements, management systems, potential issues)</i></p>	<p>Conclusion: criterion met</p> <p>The technical ability and experience of the project team is very strong, as it is built on a strong foundation of academic research, and practical experience, of mangrove planting and management. The project was born out of academia, with Gazi Bay being one of the most studied mangrove areas in the world.</p> <p>Project Director, Dr James Kairo is a resident of the Gazi Bay area. Overseas partners, including Professor Mark Huxham and Dr Martin Skov are regular visitors for research purposes, and a number of MSc and PhD students are using the area for their research. On a day-to-day basis, Michael Njoroge and Noel Mbaru are amongst the technical staff. A full list of technical (and other)</p>

Plan Vivo criteria	Findings
<p>1.3 Social capabilities</p> <p><i>1.3.1 Able to select appropriate target groups, inform groups about the Plan Vivo System and the nature of carbon and ecosystem services and establish effective participatory relationships with producers</i></p>	<p>meetings is given in Appendix I: Document 6.</p> <p>It is not made explicitly clear in project documents which organisation will take responsibility for five-yearly Plan Vivo verifications.</p> <p>Conclusion: Major Corrective Action. Specify who will take responsibility for 5 yearly Plan Vivo verifications (linked to MCO 1.1.4)</p> <p>Response ACES / MPCO: The responsibility for ACES to expedite these verifications is written in to the ACES/PLAN VIVO MoU, where it states: 'The Association for Coastal Ecosystem Services agrees to undertake a third-party verification audit, by an approved Plan Vivo verifier, at least every five years following the date of registration'. This is also made explicit in the financial flow diagram on p17 of the PDD document A1.2</p> <p>The MP team has undertaken a wide range of engagement activities with local groups throughout the project development phase. These include:</p> <ul style="list-style-type: none"> • suitable groups: active community partners have been identified • the 13 members of the MPCO committee are active in these groups • barazas: meetings are held approximately twice a month. MP has been discussed on a number of occasions. It will be one forum for discussion of fund distribution • outreach: Noel Mbaru, project coordinator spends a large proportion of his work time engaging with local groups actively. These include the two schools with <i>Casuarina</i> woodlots, the Islamic school and user groups. A full list of meetings is given in Appendix I: Document 6

Plan Vivo criteria	Findings
<p>1.3.2 Able to establish land-tenure rights through engaging with producers and other relevant organisations</p>	<ul style="list-style-type: none"> • notice board: has been erected near the village centre (see image 9). This contains information about the project, the science of climate change and carbon offsets • office: the MPCO office is located in the KFFRI building in the centre of Gazi village, and is open to passing visitors. It contains information about the importance of mangroves <p>In some instances, there is a high expectation and hope that carbon finance will be forthcoming in the immediate future. Although there is no reason to anticipate otherwise in the event of a positive validation, it would be prudent to manage the expectations of the committee (and village) in case of unforeseen circumstances.</p> <p>Conclusion: Minor Corrective Action. Ensure MPCO/MPSG expectations of the frequency and level of project finance reflect likely and worst case outcomes</p> <p>Response ACES / MPCO: Recorded in the minutes of our MPCO meetings, held shortly after the validation visit A1.18</p> <p>The Community Forest Management Agreement being processed with KFS hands over a number of powers for land management to the community for a period.</p> <p>NB: this CFM Agreement does not confer land <u>ownership</u> but tenure <u>rights</u></p> <p>Conclusion: Minor Corrective Action. Secure final agreed Community Forest Management Agreement from KFS</p>

Plan Vivo criteria	Findings
<p>1.3.3 <i>Able to consult producers effectively on a sustained basis</i></p> <p>1.4 Reporting <i>"Projects must on an annual basis, according to the reporting schedule agreed with the Plan Vivo Foundation: "</i></p>	<p>Response ACES / MPCO: This was achieved and is confirmed by the agreement letter – A1.17</p> <p>As detailed in 1.3.1</p> <p>Conclusion: criterion met</p>
<p>1.4.1 <i>Accurately report progress, achievements and problems experienced;</i></p>	<p>Effective record keeping is undertaken, with minutes of all project meetings held in folders, in the office, in a secure filing cabinet (see Appendix I: Document 6; Appendix II: Image 16). These include progress, achievements and disagreements in the rare instances they occurred.</p> <p>Annual reporting to Plan Vivo will be undertaken by MPCO/MPSG/ACES.</p> <p>It is not clear who will undertake five-year verifications.</p> <p>Conclusion: Major Corrective Action. Ensure clear ACES/MPCO reporting responsibilities are agreed (including verifications)</p> <p>Response ACES / MPCO: The responsibility for ACES to expedite these verifications is written in to the ACES/PLAN VIVO MoU, where it states: 'The Association for Coastal Ecosystem Services agrees to undertake a third-party verification audit, by an approved Plan Vivo verifier, at least every five years following the date of registration'. This is also made explicit in the financial flow diagram on p17 of the PDD document A1.2</p>

Plan Vivo criteria	Findings
<p><i>1.4.2 Transparently report sales figures and demonstrate resource allocation in the interest of target groups.</i></p>	<p>Sales have not yet occurred. Therefore this criterion is not applicable as written. A system is set up to accurately record sales figures when they are achieved.</p>

Conclusion: criterion met (as appropriate to the project)

3. Carbon benefits

Table 5: Criteria, findings and recommendations: Carbon

Plan Vivo criteria	Findings
<p>2.1 Accounting methodology Carbon benefits are calculated using recognised carbon accounting methodologies and conservative estimates of carbon uptake/storage that take into account risks of leakage and reversibility.</p>	<p>Carbon accounting methodologies used are as specified in the Technical Specification (Appendix I: Document 3). These have been approved by the Plan Vivo Technical Advisory Committee.</p> <p>The accounting system for carbon stocks uses two approaches:</p> <p>1. Field measurements A combination of scientific measurements from the field (including tree diameter and weights of trees and roots), and peer-recognised methodologies. Field measurements were used to derive allometric equations for above and below ground carbon, which were then used to calculate carbon stocks. Findings were subject to scientific scrutiny within the MP team and partners.</p> <p>Expected impacts of unlicenced cutting (prevailing deforestation rates) were estimated from peer-reviewed evidence, aerial photographs and evidence from the field.</p> <p>2. Eco-physiological modelling Using the The Biome BGC 5.0 biogeochemical model available for Excel, and using field data.</p> <p>The calculations are conservative for a number of reasons:</p>

Plan Vivo criteria	Findings
	<ul style="list-style-type: none"> for calculations of carbon gain due to avoided deforestation and degradation: <ul style="list-style-type: none"> a low deforestation rate is assumed it is assumed there would be no degradation in the absence of the project (as degradation estimates are unreliable) mangroves deposit large stocks of below ground carbon through live and dead roots, and which, over time, create a large carbon sink as peat and soil. MP has allocated below ground carbon stocks to only the first 60cm of soil. Peat deposits extend far below this <p>Conclusion: criterion met</p>
<p>2.2 Baseline <i>Carbon benefits are measured against a clear and credible carbon baseline.</i></p>	<p>A baseline was calculated for each of the three project activities. In each case, peer reviewed methodologies were used with published data, supported by direct measurement.</p> <p>Conclusion: criterion met</p>
<p>2.3 Additionality <i>Carbon benefits are additional, i.e. the project and activities supported by the project could not have happened were it not for the availability of carbon finance. Specifically this means demonstrating, as a minimum:</i></p> <p>2.3.1 The project does not owe its existence to legislative decrees or to commercial land-use initiatives likely to have been economically viable in their own right without payments for ecosystem</p>	<p>Additionality tests have been defined and met by the project (Appendix I: Documents 1.2 and 1.3).</p> <p>Mangrove conservation and prevention of illegal harvesting were established for MP by the community, and a group of national and international</p>

Plan Vivo criteria	Findings
<p>services; and</p> <p><i>2.3.2 In the absence of project development funding and carbon finance, financial, social, cultural, technical, ecological or institutional barriers would have prevented the project activity.</i></p>	<p>stakeholders.</p> <p><u>Regulatory surplus:</u> Activities would not occur without the intervention of MP, the GOGA CFA forest management plan and the CFA agreement. It does not owe its existence to legislative decrees or commercial land-use initiatives.</p> <p><u>Common Practice:</u> Illegal harvesting and legal extraction were the baseline case before the intervention of MP.</p> <p>Conclusion: criterion met</p> <p>In the absence of project development funding and continued carbon finance, a number of barriers would have prevented the project activity. These include the granting of licences to harvest wood in Activity Area 1, little or no natural regeneration in Activity Areas 2 and 3. This would leave these areas increasingly deforested and degraded.</p> <p>These financial, technical and institutional implementation barriers have been overcome by the project.</p> <p>Conclusion: criterion met</p>
<p>2.4 Permanence</p> <p><i>2.4.1 Potential risks to permanence of carbon stocks are identified in project technical specifications and effective mitigation measures implemented into</i></p>	<p>Risks to permanence of the carbon stocks include loss of planted or naturally regenerated trees through illegal harvest or loss to natural events such as wave damage, storm damage or pests. A full analysis of risks has been undertaken.</p>

Plan Vivo criteria	Findings
<p><i>project design, management and reporting procedures.</i></p> <p><i>2.4.2 Producers enter into sale agreements with the project coordinator agreeing to maintain activities, comply with the monitoring, implement management requirements and re-plant trees felled or lost.</i></p>	<p>These are being avoided and minimised through:</p> <ul style="list-style-type: none"> • Matching species to sites and choosing appropriate provenance and origin for seed stock • Species mixing to lower the risk of loss to pests • Zonal planting behind other existing mangrove trees, particularly on the beach • Timing of planting to avoid the worst effects of weather and tidal damage • Effective patrolling for illegal harvesting • Monitoring procedures linked to a payment plan which releases funds only if no unnatural losses are incurred <p>Conclusion: criterion met</p> <p>Monitoring procedures include weekly perimeter patrols, monthly reports and annual indicators. A report will be produced by MPCO and circulated to partners, and submitted to Plan Vivo.</p> <p>The MPCO will be responsible for distributing funds to local groups. It will also be responsible for ensuring recipients meet their funding requirements.</p> <p>MPCO is also responsible for implementing planting, management etc., whether or not the 100% funding threshold is met.</p> <p>Should illegal harvesting be identified, the community is collectively responsible for reporting this to the KFS so enforcement measures may be implemented.</p>

Plan Vivo criteria	Findings
<p><i>2.4.3 As a minimum, a 10% risk buffer is deducted from the saleable carbon of each producer, where the level of buffer is recommended in the technical specifications according to the level of risk identified, and subsequently reviewed annually following annual reporting.</i></p> <p>2.5 Leakage <i>Potential sources of leakage have been identified and effective mitigation measures implemented.</i></p>	<p>Conclusion: criterion met</p> <p>A 15% risk buffer is being applied, despite an 11% buffer being calculated as sufficient (Appendix I: Document 3). These carbon 'credits' are being kept aside and not sold.</p> <p>Conclusion: criterion met</p> <p>Potential sources of leakage include the firewood and poles from areas other than the newly protected mangrove (see images 13-15). This is being mitigated partly by MPCO through the planting of <i>Casuarina</i> woodlots at the Gazi and Makongeni primary schools.</p> <p>Information on the wood volumes currently taken from the mangrove (under licence) was not readily available from MPCO or KFS. It was also unclear where all woodfuel used in the project area was sourced, although anecdotal evidence suggests a significant proportion is available from local fallen tree branches and palm frond stems. Sourcing wood from gazetted terrestrial forests such as Gogoni reserve is highly illegal and punished severely – therefore it is unlikely to be significant when other sources are available. Some more information on woodfuel use is available through Swahili Seas' research. To reach a satisfactory conclusion on leakage a more detailed analysis will be required.</p> <p>Observation: understanding carbon leakage is a complicated task</p>

Plan Vivo criteria	Findings
2.6 Traceability and double-counting <i>Carbon sales are traceable and recorded in a database.</i>	<p>as there are many potential sources of wood for building materials and woodfuel, in the absence of mangrove wood. The project is not yet underway and it is not possible to predict the change in wood flows.</p> <p>Recommendation: undertake a more detailed study into the provenance and use of wood for building and woodfuel before the mangrove ban is introduced, and once the project is underway</p>
2.7 Monitoring <i>2.7.1 Monitoring is carried out against targets specified in technical specifications;</i> <i>2.7.2 Monitoring is carried out accurately using indicators specified in technical specifications;</i>	<p>Carbon sales are not yet underway. The intention is to record these in the Markit database.</p> <p>Conclusion: criterion met (as far as possible to date)</p> <p>A monitoring schedule and targets have been specified (Appendix I: Document 2).</p> <p>Conclusion: criterion met</p> <p>Project monitoring is underway. The first monitoring report will be produced in autumn 2013.</p> <p>Conclusion: criterion met (as far as possible to date)</p>

Plan Vivo criteria	Findings
<p>2.7.3 <i>Monitoring is accurately documented and reported to the entity responsible for disbursing payments to producers;</i></p> <p>2.7.4 <i>Corrective actions are prescribed and recorded where targets are not met, and followed up in subsequent monitoring.</i></p> <p><i>Producers draw up Plan Vivos as part of a participatory process that ensures proposed land-use activities:</i></p> <ul style="list-style-type: none"> • <i>Are clear, appropriate and consistent with approved technical specifications for the project;</i> • <i>Will not cause producers' overall agricultural production or revenue potential to become unsustainable or unviable.</i> 	<p>see 2.7.2.</p> <p>Conclusion: criterion met (as far as possible to date)</p> <p>Corrective actions are identified in the monitoring criteria should thresholds not be met.</p> <p>Conclusion: criterion met (as far as possible to date)</p> <p>A Forest Management Plan has been developed for the Gogoni-Gazi area. This fulfils the criteria of Plan Vivos.</p> <p>Conclusion: criterion met</p>

4. Ecosystem Benefits

Table 6: Criteria, findings and recommendations: Ecosystems

Plan Vivo criteria	Findings
3.1 Planting native and naturalised species <i>3.1.1 Planting activities are restricted to native and naturalised species.</i>	<p>Conservation of existing mangroves is occurring in a 107 ha area in Activity Area 1. It will be left to regenerate naturally and in some cases underplanting will be undertaken.</p> <p>Planting of new mangroves in the two areas, Activity areas 2 and 3, will use only native and naturalised species, including <i>Rhizophora</i>, <i>Sonneratia</i>, <i>Avicennia</i>, <i>Bruguiera</i> and <i>Ceriops</i>. Species are being selected carefully for planting in suitable sites within the intertidal zones. This is based on site-specific research in the area (see images 1-4).</p> <p><i>Casuarina equisitifolia</i> has been selected for the two woodlots based on its presence along the coast as wild (naturalized) trees and in woodlots, local expertise for its management, and its fast growth rate.</p> <p>Conclusion: criterion met</p> <p>The non-native, naturalised <i>Casuarina</i> is being used only for woodlots. It is fast growing and commonly grown and used locally for poles and firewood.</p>
<i>3.1.2 Naturalised (i.e. non-invasive) species are eligible only where they can be shown to have compelling livelihood benefits and:</i> <ul style="list-style-type: none"> • Producers have clearly expressed a 	<p>The two schools have shown a wish to grow <i>Casuarina</i>, and have signed</p>

Plan Vivo criteria	Findings
<p>wish to use this species;</p> <ul style="list-style-type: none"> • <i>The areas involve are not in immediate proximity to conservation areas or likely to have any significant negative effect on biodiversity;</i> • <i>The activity is still additional i.e. the producers in the area are not doing this activity or able to do this activity without the intervention and support of the project;</i> • <i>The activity will have no harmful effects on the water-table.</i> 	<p>MoUs (Appendix I: Documents 13 and 14)</p> <p>The <i>Casuarina</i> woodlots are not near conservation areas (Appendix I: Document 2, images 5, 6).</p> <p>The <i>Casuarina</i> woodlots are not being used for carbon offset purposes (but to provide an alternative source of wood and mitigate against leakage).</p> <p>The <i>Casuarina</i> woodlots will have no discernable effects on the water table due to their size and location, the high water table and abundant rainfall.</p> <p>Conclusion: criterion met</p> <p>Observation: the community would benefit from other species in addition to woodlots for food diversity e.g. fruit, nut trees</p>
<p>3.2 Ecological impacts</p> <p><i>Wider ecological impacts have been identified and considered expressly including impacts on local and regional biodiversity and impacts on watersheds.</i></p>	<p>Reducing the detrimental ecological impacts caused by mangrove destruction is a major driver behind MP. These include erosion and sediment loss in intertidal mudflats and along the beach, loss of habitats and associated biodiversity.</p> <p>Protected and new mangrove areas will also slow the runoff of rainwater through the catchment, improving habitats, and reducing salinity. These are discussed at length in the PDD (Appendix I: Document 2) and Technical</p>

Plan Vivo criteria	Findings
	<p>Specification (Appendix I: Document 3).</p> <p>Conclusion: criterion met</p>

5. Livelihood Benefits

Table 7: Criteria, findings and recommendations: Livelihoods

Plan Vivo criteria	Findings
<p>4.1 Community-led planning <i>Project has undergone a producer/community-led planning process aimed at identifying and defining sustainable land-use activities that serve the community's needs and priorities.</i></p>	<p>MP has been developed over an eight-year period, with wide consultation with the community throughout. This has been underpinned by rigorous academic research. During this process, areas have been identified for conservation, restoration and replanting. No significant opposition has been met. Ultimately, these preserved and new mangroves will best serve the needs of the community.</p> <p>Interviews with five randomly selected Gazi village residents showed (Appendix I: Document 15; images 10-12)):</p> <ul style="list-style-type: none"> • There is limited understanding of the ecological benefits of mangroves • Many recognise their importance as a source of wood for building and fuel • All had heard of MP • They all expected it to bring financial benefits to the village and region • Little was known about the level of financial support likely through the project – but it was nevertheless expected to bring significant benefits to the village • Four interviewees gave the same priorities: education for primary and secondary age pupils and improvements to health facilities e.g. a clinic • One interviewee expressed an interest in microfinance fund: this she would use to fund a fruit and vegetable stall

Plan Vivo criteria	Findings
<p>4.2 Continued participation and training <i>Mechanisms are in place for continued training of producers and participation by producers in project development.</i></p>	<p>Conclusion: Minor Corrective Action. There are high expectations in the community, particularly on levels of finance from the project. Partners should continue to raise awareness of MPCO and ensure community expectations are managed</p> <p>Response ACES / MPCO: The community has responded well during the first year of operation and agreed to spend funds raised on school buildings and school books. By operating a 'simulated payment' using start up funds for this purpose we have given people the experience of a typical year and helped to inform realistic expectations.</p> <p>The MP coordinator, Noel Mbaru, is responsible for regular outreach and will continue to 'train' and educate the community once the first tranche of carbon finance is released. It is possible that further mangrove zones will be protected and planted under future phases of MP. This may involve the existing community or those further afield.</p> <p>MoUs with schools in Gazi and Makongeni show how relationships may be built with planting and delivery partners. The school head teachers expressed satisfaction about being involved in MP and look forward to the income from their woodlots, and also support for local education, which has shortcomings including unfinished classrooms, lack of desks and materials.</p> <p>Conclusion: criterion met</p>
<p>4.3 Sale agreements <i>Project has procedures for entering into sale agreements with producers based on saleable carbon from Plan Vivos, where:</i></p>	

Plan Vivo criteria	Findings
<p>4.3.1 Producers have recognised carbon ownership via tenure or land-use rights;</p>	<p>Under the Community Forest Association agreement letter of KFS (Appendix I: Document 10), it is stated that carbon rights will require a tripartite agreement between the User Group (i.e. MPCO), the CFA and the buyer.</p>
	<p>Payments are being received initially by ACES from the carbon buyer, and then distributed through MPCO to community projects, planting and staff costs. This chain of command is well recognised by the MPCO and MPSG. Note however that the finer points are unlikely to be understood by the community, but who do recognise the role that MPCO plays in distribution of funds.</p> <p>An agreement is required between ACES and MPCO to ensure payments and outcomes in the event of poor monitoring are agreed (as per section 1.1.1).</p> <p>Conclusion: Major Corrective Action. Complete contract between ACES / MPCO</p> <p>Response ACES / MPCO: contract completed and signed on 9th July 2013. A1.16</p> <p>Agreements on the quantity of carbon to be sequestered, is a function of the area of mangroves conserved and planted. The protection of these areas has been agreed with the community and formalised through the Gogoni-Gazi CFA User Groups Memorandum of Understanding (Appendix I: Document 9).</p> <p>A risk buffer of 15% is specified in the Technical Specification (Appendix I: Document 3). An equivalent proportion of carbon credits will not be sold each year.</p>

Plan Vivo criteria	Findings
<p>4.3.3 <i>An equitable system is in place to determine the share of the total price which is allocated to the producer;</i></p>	<p>Payments to MPCO of carbon finance, by ACES, will occur only if monitoring criteria are met.</p> <p>Conclusion: Major Corrective Action. Complete contract between ACES / MPCO</p> <p>Response ACES / MPCO: contract completed and signed on 9th July 2013. A1.16</p> <p>A breakdown of the payment split has been agreed by the MPCO, and is specified in the PDD (Appendix I: Document 2). A total of 68% of carbon finance will be distributed to the community annually, with the remainder used to cover planting costs and administration. However, an agreement is required on the dispersal of income in the event of lower than anticipated income.</p> <p>Conclusion: Major Corrective Action. Complete contract between ACES / MPCO</p> <p>Response ACES / MPCO: contract completed and signed on 9th July 2013. A1.16</p>
<p>4.3.4 <i>Producers enter into sale agreements voluntarily.</i></p>	<p>Community groups will be encouraged to apply for funds from MPCO once carbon finance is released. Supported projects will be chosen by the MPCO as described in 1.1.5. In return, these groups will <u>not</u> be bound to deliver carbon-related activities.</p>
<p>4.4 Payments to producers</p>	<p>Conclusion: criterion met</p>

Plan Vivo criteria	Findings
<p><i>"Project has an effective and transparent process for the timely administration and recording of payments to producers, where:"</i></p>	
<p><i>4.4.1 Payments are delivered in full when monitoring is successfully completed against targets in sale agreements;</i></p>	<p>Payments will be released, by ACES to MPCO, on the basis of the findings in an annual monitoring report. These payments will be made for 100%, or 50%, or 0% of the recent carbon sales (estimated at 2,125 tonnes CO₂ - Appendix I: Document 3).</p>
	<p>Conclusion: criterion met (as far as possible currently)</p>
<p><i>4.4.2 Payments are recorded in the project database to ensure traceability of sales.</i></p>	<p>Payments will be recorded in a project database.</p>
	<p>Conclusion: criterion met (as far as possible currently)</p>

Appendix I: Documents

(all are available from the Plan Vivo Foundation upon request)

Document	Date	Author
Mikoko Pamoja Plan Vivo project documents A1.1: Mikoko Pamoja Project Idea Note (PIN) A1.2: Mikoko Pamoja Project Design Document (PDD) A1.3: Technical Specification	March 2010 Jan 2014 9th September 2011	Mark Huxham, MP team Mark Huxham, MP team Mark Huxham, MP team
The Association for Coastal Ecosystems Services (ACES) Charity A1.4: Approval letter from Office of the Scottish Charity Regulator	2 nd May 2013	Office of the Scottish Charity Regulator
Mikoko Pamoja Community Organisation (MPCO) A1.5: Mikoko Pamoja CBO Constitution A1.6: Community Meetings report A1.7: Committee Profile	Undated May 2013 May 2013	MPCO Noel Mbaru MPCO team
Gogoni-Gazi Community Forest Association (CFA) / Forest User Agreement A1.8: Constitution of GOGA CFA A1.9: Memorandum of Understanding Gogoni-Gazi CFA User Groups A1.10: Letter confirming Forest User Agreement for Gogoni-Gazi CFA is underway A1.11: Community Forest Management Agreement 2013-2017 A1.12: Gogoni-Gazi Forest Management Plan 2013-2017	Undated 27 th May 2013 27 th May 2013 Unsigned 2013	GoGa CFA CFA (signed by User Group representatives) KFS KFS / GoGa CFA DK Mbugua
Community and Schools A1.13: MoU between Gazi Bay school and MPCO A1.14: MoU between Makongeni school and MPCO A1.15: Interviews with Gazi residents – summary transcripts	2013 2013 31 st May 2013	MPCO MPCO C. Henderson
Additional Documentation to meet CARs A1.16: contract between ACES / MPCO A1.17: KFS approval of the GOGA CFA Forest User Agreement agreement letter A1.18: minutes of MPCO meetings, held shortly after the validation visit	9 July 2013 3 October 2013 5 July 2013	ACES / MPCO KFS MPCO

Appendix II: Images

Activity Areas

- 1: Makongeni - deforestation (and regeneration)
- 2: Makongeni: plantation (already established)
- 3: Gazi fringing beach: deforestation and planting area
- 4: Gazi fringing beach: planting area (and team photo)
- 5: Makongeni Woodlot
- 6: Gazi woodlot
- 7: Makongeni nursery
- 8: Gazi nursery

Outreach

- 9: MP display board
- 10: Interviewee 1
- 11: Interviewee 3
- 12: Interviewee 5

Wood use

- 13: Timber frame house
- 14: Rocket stove
- 15: Licensed collected mangrove poles

Management

- 16: Filing cabinet

About Climate Futures

Climate Futures is a multidisciplinary consultancy and research agency specialising in carbon project verification, market development of sustainable tree products, climate adaptation and agro-forestry.

Current and recent projects in Sub-Saharan Africa include:

- **JANEEMO enterprises:** the development of markets for smallholder grown Jatropha, Neem and Moringa in Malawi. Client: Scottish Government / James Hutton Institute
- **Afri-Flame:** bio-energy implementation and research in Uganda, Ethiopia and Cameroon. Client: African Union Commission / EU
- **Moringa Miracles:** market research for a Malawian moringa producer. Client: Business Innovation Facility
- **Satemwa Tea Estate:** climate adaptation review for a Malawian tea producer. Client: Imani Development



Climate Futures Ltd 164 Montgomery St Edinburgh EH7 5ER
Registered in Scotland SC3348804
e: charles@climatefutures.co.uk t: +44 131 652 1893
www.climatefutures.co.uk