

Programme Evaluation Report



The Dutch-Sino East Africa Bamboo Development Programme 2016/17-2018/19

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PEGASYS

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ABBREVIATIONS AND ACRONYMS

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| AR | Annual Report |
| BARC | Bamboo and Rattan Congress |
| CGCF | China Green Carbon Foundation |
| DAC | OECD's Development Assistance Committee |
| EA | East Africa |
| EFCCC | Ethiopian Environment, Forest and Climate Change Commission |
| ESA | Ethiopia Standards Agency |
| EARO | East Africa Regional Office |
| INBAR | International Bamboo and Rattan Organisation |
| KEBS | Kenya Bureau of Standards |
| KEFRI | Kenya Forestry Research Institute |
| KFS | Kenya Forest Services |
| MCSPBFM | Methodology for Carbon Sequestration Project of Bamboo Forest Management |
| MoFCOM | Ministry of Finance and Commerce |
| NFA | National Forestry Authority |
| OECD | Organisation for Economic Co-operation and Development |
| SME | Small - to - Medium Enterprise |
| TOR | Terms of Reference |
| UBA | Uganda Bamboo Association |
| UNBS | Uganda National Bureau of Standards |
| VCS | Verified Carbon Standard |
| ZAFU | Zhejiang Agricultural and Forestry University |



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EXECUTIVE SUMMARY

Introduction

The final evaluation of the INBAR Dutch Sino's East Africa Bamboo and Rattan Development Programme was undertaken at the end of the 3-year programme implementation period in December 2019. The evaluation set out to assess the performance of the programme against attainment of its main objective of contributing to green economic growth and international trade and investment between Europe, China, and East Africa. Specifically, the programme was intended to:

- I. develop pro-poor industrial value chains for bamboo in East Africa- utilising international Dutch and Chinese expertise, to generate benefits for African, European and Chinese investors and consumers, and
- II. restore degraded lands in Africa and to contribute to climate change mitigation

The programme was guided by a Log frame with 3 key results areas¹ each with specific activities, expected outputs and indicators, upon which performance towards fulfilment of objectives would be tracked.

According to the terms of reference, the purpose of the evaluation is to assess the performance of the programme and capture achievements, challenges, lessons learned and factors contributing to the achievements². The evaluation also set out to explore the programme's alignment with ongoing development interventions, to assess potential for scaling up and generate lessons for a possible second phase. Specifically, the evaluation was intended to:

1. assess the programmes achievements, effectiveness, efficiency, relevance and sustainability of the current Dutch-Sino East Africa Bamboo Development Programme, and
2. provide concrete lessons learned and recommendations for learning and improvements for a second phase of the programme.

The evaluation also served as a means to ensure accountability to both donors and stakeholders across the beneficiary countries. Detailed in this report are the findings of the programme's evaluation.

Methodology

Broadly, the scope of the evaluation covered programme activities across the entire three-year implementation period. The evaluation process involved a review and analysis of programme documentation, interviews with various programme stakeholders and partners, field visits to observe various programme intervention aspects

¹ Refer to Table 1- Programme Results areas and activities

² Terms of Reference for the Evaluation



(including bamboo nurseries, plantations, processing/semi-processing plants, crafts centres, workshops, among others). Stakeholder categories interviewed during evaluation were, programme Steering Committee members, National Coordinating and Implementing Agencies, Beneficiaries (nursery operators, farmers, traders, craftsmen and women, civil society, private sector, small and medium enterprises, entrepreneurs in bamboo, etc) as well as Project Partners from China and the Netherlands.

The beneficiary country level field visits and stakeholder interviews were conducted as follows: Ethiopia (7th – 11th December 2019); Kenya (11th – 14th December 2019) and Uganda (14th – 18th December 2019).

Thereafter, analysis and documentation of evaluation findings was undertaken, leading to the production of this evaluation report.

Summary of Evaluation Findings

The evaluation analysis was guided by seven OECD DAC criteria of Programme Relevance, Partnership and Coordination, Gender Mainstreaming and Social Inclusion, Programme Effectiveness, Likely Impact and Sustainability, and Efficiency of the Programme. The evaluation report details findings and emphasises the performance of the programme with respect to the DAC criteria. At a high level, the evaluation findings were as follows:

The analysis reveals that the programme was **significantly relevant** to the three beneficiary countries and international players for two key reasons. Firstly, the programme was a direct response to the realisation of a hugely untapped economic opportunity in East Africa's bamboo sector – known to have sub-Saharan Africa's largest natural bamboo forests and accounting for around 3-4 per cent of the world's total known bamboo coverage. Until this intervention, the three East African countries of Ethiopia, Kenya and Uganda had been largely excluded from the international/export trade in bamboo products already valued at over US \$ 1.8 billion. This was due to low value products and a lack of capacity to adhere to international standards. Also, their domestic markets remain under-developed. Secondly, the programme was designed to be “demand-driven” ensuring that it remained relevant to the beneficiary needs (i.e. smallholder farmers, traders, private sector investors/industry, SMEs, women, technical agencies, research institutions, civil society organisations, organised groups, government agencies, etc.). This was confirmed through anonymous interviews with the various stakeholder categories (as listed above) from beneficiary countries who confirmed and agreed that the programme thematic areas were highly aligned with the priority needs of their governments and partners³.

With respect to **programme design** and **partnership and coordination** aspects, the programme was designed with a clear intervention logic as demonstrated in the logical framework⁴. The programme interventions were inclusive and highly visible in an approach that directly targeted a broad range of stakeholders across all levels from government all the way to grassroots/community level with activities

³ Stakeholder interviews _Ethiopia, Kenya, Uganda

⁴ Refer to logical framework in Annex



reaching both organised groups as well as individuals. The programme incorporated both hardware (equipment, tools, seedlings, etc.) and software (workshops, awareness campaigns, research, technology transfer through trainings and exchange visits, etc.) components, and took on a logic that was adapted and refocused by the national Steering Committees that helped to ensure prioritisation of work plans following each year of implementation.

The South-South-North partnership has realised various benefits as highlighted by the programme stakeholders and beneficiaries. Among those highlighted by beneficiaries were knowledge sharing and exchange, technology transfer, as well as skills development and training.

The evaluation also noted the significant role of a highly capable and hands-on Programme Manager who maintained a balance between a strong focus for results at all levels (regional, national and community) while ensuring a hands-on delivery of programme activities at the grassroots levels. This was evident through interviews with community and national level stakeholders across the three countries, majority of whom identified the programme manager's name as one of the trainer's – noting how easily relatable and memorable his impact had been during the programme implementation.

With respect to **Gender Mainstreaming and Social Inclusion**, analysis shows that whilst the programme was very close to reaching the targeted number of 50% women farmer beneficiaries (of the 5000 targeted farmers), attribution was not very straight forward due to the complex and often patriarchal land ownership systems in the beneficiary settings. What was more apparent was the significantly higher number of women participating in the bamboo industry compared to men especially in the area of bamboo- crafts making, nurseries, household charcoal briquetting enterprises, edible shoots and trinkets. A clear recommendation emerging from this observation is to provide for scaling up of women centred livelihood enhancing activities in the next phase e.g. crafts making, nurseries, household charcoal briquetting enterprise that would involve women as majority suppliers, women involvement in household bamboo planting, community nurseries run by women among others. Also, the second phase could consider replicating and supporting more organised bamboo industries such as the SA Bamboo PLC and Adal Industries PLC both Ethiopian entities supported during the first phase of the programme. In addition, SME enterprises that created jobs for many women in weaving and crafts in Ethiopia should be replicated.

In **evaluating the Programme Effectiveness, Likely Impact and Sustainability, and Efficiency**, three key questions guided the analysis: (i) Firstly, did the programme achieve what it set out to do (effectiveness)?;(ii) Secondly, Is the programme likely to make measurable impacts (impact)?;and (iii) Are the outputs and outcomes (and likely impacts) delivered likely to continue after programme funding ceases (sustainability).

To this end, the programme did achieve what was intended. The programme produced annual reports within which both the planned and achieved outputs for each activity over time were captured. With respect to impact, the programme achieved many of the target impacts at the activity-level. Expected impacts from individual activities included influencing national policies, stimulating institutional reforms within key sectors, or informing the design of new government programmes, among others. Seven of the 11 activities in the sample (64



percent) succeeded in achieving their target impacts include (a) Conduct three national bamboo resource assessments, (b) Conduct 3 national market studies to assess main market opportunities in beneficiary countries and region; (c) Conduct 3 National Public Awareness Campaigns for E. Africa consumers, covering households, public sector procurement and enterprises; (d) Providing a platform for increased dialogue between East African bamboo producers and investors and consumers from Africa, EU, China and multilateral funds; (e) Building bamboo planting material delivery systems; (f) Capacity development for local communities on bamboo resource management, on-farm planting and restoration and (g) Quantifying E. Africa region bamboo carbon sinks and establishing mechanisms to finance increased CC mitigation via reforestation and reduced degradation. An additional four activities (36 percent) yielded some impacts, this include (a) Conduct physical, mechanical and chemical testing of main bamboo species from different areas across their geographical ranges; (b) Capacity development and technology transfer for East Africa bamboo producers on market study-identified value chains; (c) Develop technical guidelines on bamboo products /processing for East African INBAR member states and (d) Capacity development for East African producers on meeting bamboo product/process standards and raising their awareness about requirements of EU exporters. However, we qualify this observation and conclusion of these activities partially achieving the intended impact by emphasising that the lack of a programme-level baseline and robust monitoring and evaluation (M&E) framework made it impossible to prove clear links between programme outputs and the outcomes and impacts that were observed.

At the outcome / results level, the programme exceeded in achieving one intended outcome (Increased Bamboo-based Land Restoration and Mitigation of Climate Change in E. Africa) and partially achieved the another two outcomes ((i) Value chains developed/enhanced for 5 bamboo products, increasing at least 5,000 people's livelihood opportunities (50% women) and average incomes by 10-15% (3,000 Ethiopia; 1500 Kenya; & 500 Uganda); and ii) trade in bamboo products into and out of East Africa increases by 5-10% and domestic markets grow, with €1-3 million in new grant/loan investments made to East Africa's bamboo sector by project end). For outcome 1, the evaluation could not find clear attributable evidence of "increasing at least 5,000 people's livelihood opportunities (50% women) and average incomes by 10-15%". Whilst the trainings and other interventions did reach more than 5000 people and there are clear indications on increased engagement and income among beneficiaries. However, there was no clear linkage and attribution on how the programme has increased their "livelihood opportunities" and "average incomes by 10-15%". There was no baseline of livelihoods and income levels before the programme commenced neither did the programme have a tracking and reporting system on how beneficiaries' incomes are or have changed and by how much. This requires some attention if the programme will be scaled-up so that results, outputs, outcomes and impacts can be easily quantified and qualified with minimal attributional challenges. For outcome 2, based on the stakeholder's interviews and observation, there are clear indications that there is growth in domestic market with emergence of enterprises, availability of new products, export to neighbouring countries (Adal Industries PLC) and initial engagement of large brands such as IKEA (SA Bamboo PLC). The clear attribution of 5-10 % increase in international trade will be difficult to ascertain mainly due to the unorganised nature of the sector, and lack of credible data source. However, the programme is successful in developing loan/grant proposals including (1)



IFAD: Inter-Africa Bamboo Development Programme where Ethiopia is a beneficiary country (USD 2.5 million); (b) supported loan proposal to SA Bamboo PLC with Common Fund for Commodities; and (3) CIDCA/MoFCOM Bamboo Bio-energy project for Ethiopia (USD 1.1 million) in final stages of approval⁵.

Expected impacts were identified from the programme documents, while impacts achieved were identified from the latest annual report in which each activity appeared. To support these findings, we also drew from information collected during the stakeholder interviews. We note that though this analysis may suggest the programme may have partially yielded desired impacts, we believe it tells another story: that the impacts that were targeted at the outset of the activity may not have been realistically defined. Many of the targeted impacts were **far** “downstream” of the activity itself and would not realistically have been achieved within the three-year programme life cycle. For example, one target impact of “Reduced poverty and green economic growth secured via the development and improvement of industrial bamboo value chains in East Africa” was to induce “Value chains developed/enhanced for 5 bamboo products, increasing at least 5,000 people's livelihood opportunities (50% women) & average incomes by 10-15% (3,000 Ethiopia; 1500 Kenya; & 500 Uganda).” However, because this is an end result that would necessarily take time and would be contingent on many other factors (other than developing the industrial and SME value chain itself), this may not have been an appropriate target to set. As a result, many of the activities yielded positive impacts that contributed to the programme achieving its overall targets, but strictly speaking may not have fully met the target impacts of the activity such as levels of increase in incomes and trade. Some of the key positive impacts include the large portion of each of the activities listed above which partially made an impact. This means whilst the activity has done and achieved most of the intended outputs and outcomes, there were some small but vital elements (as explained above) that did not maximally and optimally reached the intended impact. So apart from these minor elements, which are largely design and attribution related, the programme activities performed as expected.

Further, the programme's monitoring and reporting system was robust, which provided and facilitated clear efforts to demonstrate the impact of the programme, both to donors and to external parties. The activity-level analysis showed that the programme generally used appropriate and effective delivery models. We also conclude that the mix of projects selected for support from the programme was efficient for mitigating risks, and also relevant to the needs of the stakeholders and beneficiaries. The programme further ensured sustainability of results with its efforts by (a) supporting development of bamboo strategies and policies to mainstream bamboo into the three EA government priorities; (b) creating enabling environment (studies, awareness raising, standards, technical guidelines, investors meet, etc.); and (c) formation of community based organisations around bamboo enterprises.

The evaluation identified the following factors as critical to the programme's success: a) Steering Committee and Programme Manager's understanding of the bureaucracy and its priorities ; b) Buy-in from the respective governments; c) Donor/funding and collaborating partner commitment and engagement; d) Flexibility of the

⁵ Page 24 – Year 1 annual report; and Appendix XIII of Year 2 annual report



programme; e) Learning by doing and ‘identification of champions’; f) Availability of local collaborating institutions such as EFCCC, KEFRI, NFA ; g) Multi-stakeholder approach creating linkages and collaboration at all levels – ministries, industries, SME, civil society, grass root, etc; and h) Access to information and other resources on INBAR and partner websites.

As a measure of overall performance of programme, many programme activities successfully produced the target outputs anticipated in the logical framework, 90 percent of which were utilised as anticipated by programme documents towards the achievement of intended results. A detailed analysis of the findings and performance of the programme is provided in the body of the body of the document.



1 Introduction

This report documents the outcome of the final evaluation of the Dutch Sino East Africa Bamboo Development Programme 2016/17- 2019. The evaluation was undertaken at the end of project implementation in December 2019.

1.1 Background

The International Bamboo and Rattan's (INBAR's) Dutch-Sino East Africa Bamboo Development Programme was commissioned in October 2016, with the overall objective to contribute to green economic growth and international trade and investment between Europe, China, and East Africa. The programme was then implemented for a 3-year period from January 2017 to December 2019, across three East African countries namely Ethiopia, Kenya and Uganda.

1.2 Programme Objectives

The overall programme objective comprised of a two-fold *specific objective, i.e.:*

- I. to develop pro-poor industrial value chains for bamboo in East Africa- utilising international Dutch and Chinese expertise, to generate benefits for African, European and Chinese investors and consumers, and
- II. to restore degraded lands in Africa and to contribute to climate change mitigation.

The onset of the programme had three key results areas each with corresponding activities and expected outputs logically sequenced towards the attainment of these objectives. These are presented in Table 1⁶ below.

Table 1: Programme Results Areas and Activities

| |
|---|
| <p>Result Area 1: Reduced poverty and green economic growth secured via the development and improvement of industrial bamboo value chains in East Africa</p> <p><u>Specific Activities</u></p> <p>1.1 Conduct three national bamboo resource assessments</p> <p>1.2 Conduct physical, mechanical and chemical testing of main bamboo species from different areas across their geographical ranges</p> <p>1.3 Conduct 3 national market studies to assess main market opportunities in beneficiary countries and region</p> <p>1.4 Capacity development and technology transfer for East Africa bamboo producers on market study-identified value chains</p> |
|---|

⁶ The programme logical framework clearly details the results areas, activities and outputs. Notably, the activities in each year were adjusted as deemed necessary by the steering committees at national level.



Result Area 2: Increased bamboo domestic markets in East Africa and growing international trade and investment between Europe, East Africa and China

Specific Activities

- 2.1 Develop technical guidelines on bamboo products /processing for East African INBAR member states
- 2.2 Capacity development for East African producers on meeting bamboo product/process standards and raising their awareness about requirements of EU exporters
- 2.3 Conduct 3 National Public Awareness Campaigns for East Africa consumers, covering households, public sector procurement and enterprises
- 2.4 Providing a platform for increased dialogue between East African bamboo producers and investors and consumers from Africa, EU, China and multilateral funds

Result Area 3: Increased Bamboo-based Land Restoration and Mitigation of Climate Change in E. Africa

Specific Activities

- 3.1 Building bamboo planting material delivery systems
- 3.2 Capacity development for local communities on bamboo resource management, on-farm planting and restoration
- 3.3 Quantifying East Africa region bamboo carbon sinks and establishing mechanisms to finance increased CC mitigation via reforestation and reduced degradation.

1.3 About the Programme Evaluation

Pegasys Limited (Pegasys) was the entity contracted by INBAR East Africa Regional Office (EARO) to undertake the final evaluation of the Dutch-Sino programme East Africa Bamboo Development Programme.

The purpose of this evaluation was to assess the performance of the 3-year programme and capture achievements, challenges, lessons learned and factors contributing to the achievements⁷. The overall aim of the evaluation was to explore alignment of the programme with ongoing development interventions for scaling up and provide lessons for a possible second phase.

Specifically, the evaluation was intended to:

1. To assess the programmes achievements, effectiveness, efficiency, relevance and sustainability of the current Dutch-Sino East Africa Bamboo Development Programme
2. To provide concrete lessons learned and recommendations for learning and improvements for a second phase of the programme.

In addition, the evaluation serves as a means to ensure accountability to both donors and beneficiaries within the recipient countries and partnering entities.

⁷ Terms of Reference for the Evaluation



2 Methodology

As a final evaluation, the scope was to assess programme performance covering activities implemented over the entire 3-year period. The approach was both qualitative and quantitative in assessing performance.

The evaluation was guided by a set of evaluation criteria (questions) and a Log frame⁸ which outlined the 3 result areas, corresponding activities, expected outputs, indicators as well as assumptions.

An evaluation work plan⁹ and fieldwork schedule were developed to guide stakeholder engagements in the three countries.

Prior to field engagements, programme documents were reviewed including the programme proposal, log frame, annual reports, steering committee meeting minutes, and others to inform the evaluation. Questionnaires (tools) were developed and helped to guide the various categories of stakeholder engagements. Key categories engaged were:

- The Steering Committee Members
- National Coordinating and Implementing Agencies
- Beneficiaries (nursery operators, farmers, traders, researchers/academia, civil society, private sector, small and medium enterprises, entrepreneurs in bamboo including craftsmen and women, etc.)
- Project Partners in China and the Netherlands¹⁰

How the evaluation was conducted?

Following the approved methodology in the inception report, the evaluation involved the review of programme documents, engagements with stakeholders across the three countries, and project partners using the tools developed, as well as field visits.

The fieldwork involved trips to Ethiopia (7th – 11 December), then to Kenya (11th – 14th December) and finally to Uganda (14th – 18th December) 2019.

Stakeholder engagements were held centrally in each of the countries, while field visits were paid to a selected number of programme beneficiaries from bamboo-nurseries, to plantations, to crafts centres, to semi-processing plants and industry, and to SME workshops and showrooms, etc. The detailed schedules per country are provided in the annex B.

⁸ Logframe in the Annex section

⁹ Workplan and field schedule detailed in the Annex section

¹⁰ The consultants reached out to Arjan van der Vegte of MOSO and he indicated that he was going to respond in January as his December schedule was too hectic. There was still no response by the 8th of January when the revised report was finalised. Inputs were received from Edwin Keijser from WUR. The full list of stakeholders is provided.



An analysis was conducted following the documentation review, field observations and stakeholder engagements undertaken, the result of which is this evaluation report.



3 Evaluation Findings

The evaluation findings are organised into the key DAC framework aimed for coherent analysis and understanding of the evaluation findings.

3.1 Programme Relevance

Evaluating the relevance of the Dutch-Sino Bamboo programme means checking that the objectives and approach of the programme are aligned with the needs of beneficiaries, and with the goals of other stakeholders. The programme's key stakeholders are the three beneficiary countries in Eastern Africa: Ethiopia, Kenya and Uganda, and includes China and the Netherlands, as a knowledge provider. This step is essential as the DAC guidelines have rightfully listed this due diligence as the first step in conducting an evaluation. If the programme's stated objectives were not aligned with what the three beneficiary countries in Eastern Africa and donors expected, then it is unlikely that the programme will have achieved its objectives. To determine whether the programme was relevant, we focused on two questions:

- To what extent has the programme helped to implement the strategic objectives?
- How closely are the programme objectives and approach aligned to key stakeholder needs?

In the second question, we interpreted "approach" to mean **how** the programme planned to support the objectives of its stakeholders, that is, the thematic areas and activities that the programme focused on across the three countries.

3.1.1 Relevance for target groups

The programme was initiated as a direct response to the demand for sustainable pro-poor livelihoods alternatives which the region's largely untapped bamboo sector offers - noting the potential for economic and environmental gains as demonstrated by the US \$ 1.8 billion trade internationally. Once developed, the bamboo industry has the potential for contributing to pro-poor sustainable development while ensuring environmental benefits for EA as it has in other parts of the world. Notably "*East Africa's bamboo sector remains largely untapped, despite the region having sub-Saharan Africa's largest natural bamboo forests and accounting for around 3-4 per cent of the world's total known bamboo coverage. Low value products and a lack of capacity to adhere to international standards has resulted in Ethiopia, Kenya and Uganda's exclusion from global export trade in bamboo products already valued at over US \$ 1.8 billion, while their domestic markets remain under-developed*" (Annual Report 2018). The objectives of the programme were set well and aligned with priority needs in all the three countries in response to the identified challenge. The programme alignment was through application and contextualisation of the experiences and lesson learned from the hugely "*successful transformation of Asia and Europe's bamboo market to East Africa, thus enabling Ethiopia, Kenya,*



and Uganda to fully participate in and benefit from the new bamboo economy of the 21st century” (Annual Report, 2018).

The overall programme **goal** is to contribute to green economic growth and international trade and investment between East Africa, Europe and China whilst the specific objectives entailed: 1) developing pro-poor industrial value chains for bamboo in East Africa with Dutch and Chinese expertise that, in the long-term, generate benefits for African, European and Chinese investors and consumers; and 2) restoring degraded lands in Africa and contribute to climate change mitigation.

The strategic objectives of the programme closely aligned with those of the stakeholder partners in the three beneficiary countries. The programme’s objectives were clearly defined in the original proposal, annual reports and work plans, and were confirmed by the Steering Committee Members and other participants during stakeholder interviews. Interviews with stakeholders revealed three key points came up to demonstrate the relevance of the programme as summarised by a Kenyan key stakeholder

“The linkage between the regions, South-South-North i.e. North (Europe - Dutch), South-South (China and East Africa) was based on the philosophy to share and learn in terms of technology and production and management. And provision of market opportunities, tying broadly three opportunities and strengths from each region (technology processing, EA- for production of raw materials). However, EA was not to be considered only in production because capacity building was a major part of the programme. The second point of alignment was framed on how to generate the bamboo value chain in EA where linkage with farmers and stakeholders was key; and finally removing bamboo from government confinement. Prior to the programme, bamboo was only to preserve / conservation for KEFRI, KFS...now KFS involves other stakeholders in bamboo development leading to establishment of Kenya Bamboo Association”

The same sentiments were echoed by beneficiaries at different levels. A partner stakeholder from China rated the programme’s relevance highly and remarked thus:

“The programme is closely related to the partner country needs, especially the assessment of bamboo resources in partner countries. With the basic resource data, it is possible to guide the following resource utilization. The programme connected the 3 partner countries in eastern Africa via bamboo, and they could share experiences from each other. As I know, Ethiopia has been deployed some other bamboo project and already has some achievements, so in this programme, Ethiopia acts like a forerunner and show good examples and possibilities in bamboo value chain”.

Based on this and analysis of all the completed fifty-two interviews held with stakeholders in EA, Europe and China, there was no stakeholder who made reservations about the relevance of the programme for their constituency and the country. Instead, there was wide affirmation of how relevant and useful the programme has been in addressing the priority needs across scales. For example, at national level, all the three EA countries developed bamboo policies and strategy where two were already launched (Ethiopia and Uganda).



At SME level, results show that there have been huge uptake and scaling-up of the support provided by the programme into niche value chain activities especially in Ethiopia and to a lesser extent, Uganda.

We can therefore conclude that the programme was well aligned to implement the strategic objectives as defined and conceptualised at inception phase in late 2016. Moreover, the programme outputs justify the relevance of the programme in the three countries which shows that it was well informed and aligned with government policies and priorities as well as the needs of local beneficiaries.

3.1.2 Was the programme aligned to stakeholder needs and priorities?

The programme was designed to be “demand-driven.” This means it was designed to support technical equipment, tools and capacity training work on topics where there was a demonstrated need by the three EA countries in general and targeted beneficiary groups, and where these needs overlapped with the donors’ priorities. This demand-driven approach was followed in practice, as the programme’s objectives and approach were closely aligned with the needs of its stakeholders (including programme actors e.g. government agencies, research entities, etc., as well as direct beneficiaries e.g. farmers, nursery operators, craftsmen, traders, SMEs, industry, organised groups, civil society organisations, etc.). However, there were also opportunistic interventions where individuals with potential to contribute and make an impact on specific activities and outputs were spotted, identified and supported.

To confirm our finding, we also asked government officials to confirm if the programme generally met many of the Government’s key priorities. The officials we interviewed **unanimously** confirmed that the thematic areas chosen by the programme matched the needs of the government and partners.

Conclusions on alignment with stakeholder needs

We conclude that the programme succeeded in choosing strategic objectives, thematic areas and activities that were relevant, to the three EA country governments and to China and the Netherlands. The programme routinely compiled annual progress reports as documented and shared with the evaluation team. These annual reports detailed the key activities and work plans for the following year facilitated by the programme management team led by the Steering Committee and operationalised by the Programme Manager and team. This helped to ensure that the programme’s thematic areas and activities remained relevant to the stakeholders’ context and evolving priorities. The programme also identified donors’ interests when the programme was initially set up, and later these areas were refined to eliminate duplication of efforts among the programme and other donors in certain thematic areas.



3.2 Partnership and Coordination

3.2.1 Quality of programme design

The programme was well designed with a clear intervention logic. The Dutch-Sino Bamboo programme design was inclusive and incorporated both hardware (equipment, tools, seedlings, etc.) and software (workshops, awareness campaigns, research, as well as technology transfer through trainings and exchange visits, etc.) components. The programme was visible to all stakeholders, including communities who participated in several community-led initiatives as both groups and individuals. The programme's intervention logic was adaptive and refocused at the Steering Committee level to prioritise work plans for each of the following years after year one. The evaluation found that through these iterations, the programme did not deviate from its initial focus, but instead, adapted to an evolving operational environment across the three countries. The programme log frame provided the compass through which the various activities, outputs, indicators and outcomes were laid out.

The programme's overall **goal** to contribute to green economic growth and international trade and investment between East Africa, Europe and China was purposeful, relevant and with a clear intent. The attendant two *specific objectives* were (a) to develop pro-poor industrial value chains for bamboo in East Africa with Dutch and Chinese expertise that, in the long-term, generate benefits for African, European and Chinese investors and consumers; and (b) to restore degraded lands in Africa and contribute to climate change mitigation. These specific objectives are well aligned with the three-pronged climate, livelihoods improvement and economic growth themes in the three countries.

3.2.2 Partnership and coordination

The South-South-North partnership has been beneficial to the programme stakeholders and beneficiaries. The sharing and exchange of knowledge, technology transfer, skills development and training were some of the most popular activities highlighted by the local level beneficiaries. The Steering Committee and National level stakeholders highlighted the strength of the partnership in defining a "new path for our country with the bamboo¹¹". There was a general sense of satisfaction amongst all the 52 interviews we completed with 80 individuals.

The partnership and coordination of the programme was further strengthened by a capable and hands-on Programme Manager who has a strong focus for results without losing human empathy. The Programme Manager easily related and communicated with all key stakeholders from micro to macro levels. This has created trusting relations with beneficiaries as one community stakeholder in Kenya remarked "...without the patience and support from Dr Durai and INBAR, our project wouldn't be off the ground the way we have managed to achieve unlike our competitors...he trained us, mentored us and coached us in different things

¹¹ SC member Ethiopia.



and we now have a thriving nursery and improved quality bamboo produce". Throughout the interviews with different stakeholders, the special mention of the Programme Manager and the brilliant work he has delivered with his team was repeatedly mentioned.

3.3 Gender Mainstreaming and Social Inclusion

Gender mainstreaming and the inclusion of men and women in the programme was a serious consideration by the programme. Whilst the programme was ambitious to set a 50% target for the targeted 5000 farmers, it is important to note that the programme made significant strides towards this goal. The deep-rooted patriarchal structures across the three countries albeit with different layers of conservatism largely influenced the participation of women in the bamboo value chain. There are two aspects of the gender and social inclusion that we focused on:

- The qualitative indicators focusing on the type and quality of decision-making roles women occupied in the bamboo value chain, and
- The actual numbers of women and men who participated in each activity.

Analysis shows that whilst the programme was very close to reaching the targeted number of 50% women farmer beneficiaries, this was not very straight forward to attribute due to complex and often patriarchal land ownership systems. However, what was apparent was that the number of women participating in the bamboo industry was significantly higher than men especially when it comes to crafts, nurseries, bio-energy production edible shoots and trinkets. However, when it comes to SME and semi-industrial scale, the evaluation team came across few women enterprises owned and managed by women in Ethiopia, Kenya and Uganda. Some of the women led and managed enterprises include Ms. Kidist Alameyu enterprise in Ethiopia; Divine Bamboo, AW Bamboo Enterprises Limited (AWBEL) dealing with edible bamboo shoots, and Bamboo cosmetics in Uganda; and Greenport Enterprises in Kenya. There was a serious observation that in Ethiopia women face difficult hurdles to participate in the bamboo value-chain at enterprise level both micro and SME owing to the structural and cultural context of the country.

On qualitative metric of women's participation in decision-making positions, the evaluation team was informed that during one of the steering committee meeting in Uganda, Ms. Elizabeth Carbine represented the Netherlands as a steering committee member in Jan 2019. From the analysis of documents, the programme has made purposeful targeting of women as beneficiaries of training, technology transfer, exchange visits, investor tours and exhibitions among other activities. The actual numbers of men and women beneficiaries for each of the key activities where aggregated data by gender is available is presented in Table 2. The evidence shows serious intent and delivery of the targeted threshold for women to meaningfully participate and benefit from the value chain. Going forward, there were two key suggestions that were made: a) that the programme should replicate successful enterprises by women role models especially in Ethiopia, Kenya and Uganda; b) that there is need to improve on the participation of women in decision-making roles such as the Uganda Bamboo Association (UBA) chairperson who is a woman. To this end, a clear recommendation emerging from



this analysis is to provide for scaling up of women engaging bamboo livelihood enhancing activities in the next phase.

These would include bamboo crafts making, bamboo nurseries to be run by either individuals or organised women groups (e.g. Divine Bamboo nurseries in Uganda), bio-mass production specifically advancing the household charcoal briquetting enterprise involving women as main suppliers of the raw material (charcoal dust) collected from households, women involvement in household bamboo planting for fodder or selling of culms, among others. Also, the second phase could consider replicating more organised bamboo industries such as the SA Bamboo PLC and Adal Industries PLC both Ethiopian entities supported during the first phase of the programme. Notably these industries once replicated have demonstrated the potential for job creation especially for women. SME's focusing on crafts and weaving as was seen in Ethiopia could be replicated. Additionally, supporting more or replication of the Divine bamboo nurseries, and the bamboo shoots drying unit (AW enterprises) in Uganda, that are run by women would help cement the gender inclusion component of the next phase of the programme. Suffice to say, all programme activities including trainings should aim to have deliberate equal participation of men and women, and possibly include vulnerable groups e.g. persons living with disabilities (PLWDs).

3.4 Programme Effectiveness, Likely Impact and Sustainability

Evaluating the Dutch-Sino Bamboo programme's effectiveness and sustainability is at the centre of our evaluation. Answering the questions relating to these Development Assistance Committee (DAC) criteria allowed us to determine if:

- The programme achieved what it set out to do (effectiveness)
- The programme is likely to make measurable impacts (impact)
- The outputs and outcomes (and likely impacts) delivered are likely to continue after programme funding ceases (sustainability).

We relied on the key activities outlined in the log frame, annual reports and work plans to answer most of the questions specified in the TOR and as detailed in the evaluation matrix for these evaluation criteria. Answering these questions at a programme level was made easier because the annual reports, which represented the most comprehensive record of activities funded by the programme, reported progress and the targets for each activity. We could therefore assess how the programme performed against **expectations**. We assessed the 11 activities and the three key result areas to determine if they did or did not produce a desired result, and then drew conclusions on the performance of the programme based on the results from this analysis. We used available programme-level information to support any conclusions that were based on the sampled responses from the stakeholder consultations.

Because many of the effectiveness, impact, and sustainability evaluation questions are closely related, we organise our responses accordingly: First, we present our findings on the effectiveness of programme in achieving targeted outputs and outcomes (Section 3.4.1). Secondly, we present our findings on the likely



impacts of the programme activities. Thirdly, we respond to the remaining effectiveness, impact, and sustainability questions, which are grouped together. We conclude by presenting our finding on the **overall effectiveness of the programme** (Section 3.4.6).

3.4.1 What outputs and outcomes were achieved?

The most basic measure of the programme's effectiveness is whether it achieved its planned outputs and outcomes. Through review and analysis of programme documents and interviews with stakeholders, we found that each activity funded by the programme had a unique set of expected outputs¹² and outcomes¹³, therefore no two activities were exactly alike. Whilst the ideal way to evaluate whether the expected outputs and outcomes were achieved for the entire programme would be to have a robust reporting framework that tracks both the planned and achieved outputs and outcomes for **each activity** over time, indeed, such results were captured in programme's annual progress reports. However, to make reporting and tracking of evidence easier, and for future programmes, these results should be captured directly and updated on the programme "log frame" - to track results achieved against targeted outputs and outcomes. Log frames allow programmes to aggregate data across multiple outputs and outcomes to measure the overall effectiveness of a programme. This will then be better illustrated through the theory of change and this aspect will be reserved for the recommendations section of the report. The programme management team shared the proposed draft log frame and theory of change for the next phase. The evaluation team conducted a quick review of the theory of change and can confirm that this is a significant improvement from the current project under evaluation.

The Programme had a robust reporting framework which could be improved

The programme had such a reporting framework where the annual reports (which constituted the most comprehensive record of work carried out under the programme) comprehensively reported the outputs that had been produced to-date either the outputs or the outcomes (or both) that had been observed. Whilst this was comprehensive and detailed, it is important to note that there was no baseline against which to compare programme results although there were consistent results reported for all activities. The comprehensive programme records (annual reports and work plans) tracked the work that had been done, but it never checked if this was the work that **should have** been done. The evaluation mission's stakeholder consultations and field visits sought to test some of these through the sampled respondents. It is suggested that for the next phase of the programme, the programme require a log frame, theory of change, and a monitoring and evaluation framework guided by a results chain in order to track the work done and ensure it is indeed what should have been done. This will not only facilitate smooth reporting of results, outputs, outcomes and impacts but also

¹² The DAC defines outputs as "the products, capital goods, and services which result from a development intervention...". OECD. 2002. "Glossary of Key Terms in Evaluation and Results Based Management." <http://www.oecd.org/development/peer-reviews/2754804.pdf> (accessed 22 July 2014).

¹³ The DAC defines outcomes as "the likely or achieved short-term or medium-term effects of an intervention's outputs."



provides a clearer lens for easy attribution of the results across the board. This will further make it possible to differentiate direct and indirect impacts as well as intended and unintended.

Methodology for evaluating outputs and outcomes for the programme activities

With the type of aggregate reporting framework, it was possible to evaluate the programme's overall effectiveness using this standard approach. We used the key findings on **effectiveness of all the activities** as one of the key inputs to determining the overall effectiveness of the programme. Our conclusions on the programme's effectiveness i.e. achieving the outputs and outcomes it set out to achieve, are, therefore, presented towards the end of this section.

In evaluating the effectiveness of the programme at the activity level, we reviewed the annual reports (AR) and work plans for all the 11 activities, and the three result areas. Each annual report identified the planned outputs (to be produced using the programme resources allocated), as well as the outcomes that were expected given these outputs. In turn, we then compared the planned outputs and outcomes against what was actually achieved, which was determined by reviewing documents (such as the annual reports) and interviewing stakeholders. The results of our activity-level analysis are provided in Table 2. The table presents our understanding of the following:

- Planned outputs at activity inception versus what was actually achieved
- Planned outcomes at activity inception versus what was actually achieved
- A summary of what happened as a result of these outputs and outcomes (the impacts)

For each output and outcome, the table explains what was expected and what was achieved. The cell is highlighted green and marked with a check mark only if the targeted outputs or outcomes were **fully** achieved (100%), the amber (yellow) indicate that the activity, output and outcome were partially achieved (50 – 70%) and red (0-45%) denoting that the outputs, outcomes and impacts were not achieved. In this programme, we did not find any red-marked output, outcome and impact. All the activity / output level indicators were satisfactorily achieved. At the outcome level, the programme has exceeded in achieving one outcome element, and there are two outcome level elements that may have partially yielded impact because of the lack of baseline and clear attribution. As stated elsewhere, we qualify this observation and conclusion of these activities partially achieving the intended impact by emphasising that the lack of a programme-level, robust monitoring and evaluation (M&E) framework made it impossible to prove clear links between programme outputs and the outcomes and impacts that were observed.

This table is designed to present a holistic picture of what the activity did and how it made a difference. Brief summaries of the activities' scopes and timelines are captured in the AR reviewed by the evaluation team. Following Table 2, we provide a general analysis of the activity data. A more detailed discussion of these activities' impacts, and what they mean for the overall impact of the programme, is also presented in the same section.



Table 2: Achievement of Outputs, Outcomes, and Impacts for the 11 Programme Activities

| Activity | Target Outputs | Actual Outputs | Target Outcomes | Actual Outcomes | Likely Impacts—What Happened? |
|--|--|--|--|---|--|
| 1.1 Conduct three national bamboo resource assessments | 1 regional training on bamboo remote sensing resource assessment and 3 sub-national trainings for on-farm assessments held by month 6; | Training on bamboo remote sensing resource assessment conducted = 2 of 24 (17M/7F); | Reduced poverty and green economic growth secured via the development and improvement of industrial bamboo value chains in East Africa | Accomplished (Value chains developed/enhanced for 5 bamboo products, increasing at least 5,000 people's livelihood opportunities (50% women) & average incomes by 10-15% (3,000 Ethiopia; 1500 Kenya; & 500 Uganda) | <p>The trainings of trainers courses conducted have generated a lot of interest and the trained beneficiaries have started training others creating a continuous pool of capacitated personnel;</p> <p>The use mobile application is being widely used especially by partner organisations such as KEFRI, NFA as well as by some individual farmers. This has scope to further develop into a community of practice among farmers;</p> <p>The programme has sparked the participation of men and women in bamboo value chain activities to generate income for supporting livelihoods;</p> <p>Some beneficiaries in Ethiopia, Kenya and Uganda are already earning improved incomes through their participation in the project. Only Ethiopia has some industrial-scale bamboo value chains factories in East Africa whilst in the two other countries the value chain is in</p> |
| | A regional bamboo resource assessment report by month 9; | Sub-National training on on-farm resource assessment conducted = 5 of 92 (80M/12F) | | | |
| | online bamboo mapping system functioning by month 12 | Mobile application and web-platform developed http://inbar.gfd.com.vn:2206/ and hosted in INBAR server http://bambooafrica.inbar.int/ | | | |
| | | A regional bamboo resource assessment report compiled = 1 Report and 1 Scientific Journal | | | |
| | | On-line bamboo mapping system developed = Developed http://bamboomap.inbar.int/ and hosted & maintained in INBAR server. | | | |



| Activity | Target Outputs | Actual Outputs | Target Outcomes | Actual Outcomes | Likely Impacts—What Happened? |
|--|--|--|-----------------|-----------------|---|
| 1.2 Conduct physical, mechanical and chemical testing of main bamboo species from different areas across their geographical ranges | Full set of property data for 2 indigenous E. Africa bamboo species by month 9 | Property test report published for 2 indigenous bamboo species (<i>Yushania alpina</i> and <i>Oxytenanthera abyssinica</i> – 4 specimen set from Kenya and Uganda); and 1 exotic species (<i>Dendrocalamus asper</i> from Kenya) | | | its infancy and largely confined to micro and SME level. In Ethiopia, the participation in the bamboo value chain is becoming streamlined with various individuals and SMEs creating niches that are morphing into industrial scale production of quality products whilst in Kenya and Uganda, there are early signs of interest in the bamboo value chain across scales/levels. |
| 1.3 Conduct 3 national market studies to assess main market opportunities in beneficiary countries and region | 3 national market study reports by month 12 | 3 market study reports developed and launched in the Ethiopia-Kenya-Uganda. | | | |



| Activity | Target Outputs | Actual Outputs | Target Outcomes | Actual Outcomes | Likely Impacts—What Happened? |
|---|---|--|---|---|--|
| 1.4 Capacity development and technology transfer for East Africa bamboo producers on market study-identified value chains | 39 training courses on processing/tech transfer held between months 12-36; 3 model bamboo enterprises set up by month 24; 1 new composite/resonated fibre board conversion route for african bamboo by month 30; 6 MoFCOM training courses held by month 36 | Training on improved processing and products =78; 3 model enterprises = 3; Chinese MOFCOM training courses = 4; Technical support to industries / WUR on composite = 1; Overall Training and Capacity Building = 3734 (2100M/1634F); | | | |
| 2.1 Develop technical guidelines on bamboo products /processing for East African INBAR member states | Up to 8 product/processing guidelines developed and published by month 21 | Product / Processing guidelines developed = 12 Working group meetings conducted = 10 with 159 (120 M/ 29 F) | Increased bamboo domestic markets in E. Africa and growing international trade and investment between Europe, East Africa and China | Trade in bamboo products into and out of East Africa increases by 5-10% and domestic markets grow, with €1-3 million in new grant/loan investments made to East Africa's bamboo sector by project end | Based on attendance records for the capacity training and awareness campaigns, we have determined that they had a major impact by enabling dialogue among all of the key stakeholders in the bamboo sector; |
| 2.2 Capacity development for East African producers on meeting bamboo product/process standards and raising their awareness | 2 trainings on standards conducted between months 12-36; C3 | Seven standards development with ESA; 6 standards developed with KEBS; and 5 standards developed with UNBS. Workshop conducted = 3 with 57 (50 M/07F); | | | Developing and launching the policy strategies has led to a series of initiatives within the respective governments to harmonise other policies to conform the sector structure to the economy; The number of beneficiaries reached through other |



| Activity | Target Outputs | Actual Outputs | Target Outcomes | Actual Outcomes | Likely Impacts—What Happened? |
|---|---|---|-----------------|-----------------|---|
| about requirements of EU exporters | | ISO TC P-Member =2 countries. | | | awareness mechanisms such as exhibitions, video, radio, talk shows, newspaper etc were not included and this shows the demonstrable impact of the model used for creating awareness by the programme. |
| 2.3 Conduct 3 National Public Awareness Campaigns for E. Africa consumers, covering households, public sector procurement and enterprises | 3 campaigns run Month 12-36 with 3 national and 1 regional workshops held, television and radio programmes in local languages produced, up to 5 public and private sector green procurement policy briefs published | <p>National Awareness campaign including press releases = 10031;</p> <p>Policy and strategy (Bamboo Strategy and Action Plan of Ethiopia: Proclaimed; National Bamboo Policy of Kenya: at Cabinet; Bamboo Strategy and Action Plan of Uganda: Proclaimed).</p> <p>Videos produced and broadcasted¹⁴;</p> <p>National Workshops = 8 with 623 (482 M/142 F);</p> <p>Regional Workshops = 1 with 41 (36M/5F);</p> | | | |

¹⁴ The following videos were produced: 28 Minute bamboo awareness video of Ethiopia: Produced and broadcasted; 29 Minute bamboo awareness video of Uganda: Produced and broadcasted; 30 Min Video talk show along with Uganda National bamboo strategy workshop in NBS channel; Support to BBC for production of bamboo video covering Uganda Bamboo sector entrepreneurs.



| Activity | Target Outputs | Actual Outputs | Target Outcomes | Actual Outcomes | Likely Impacts—What Happened? |
|---|---|--|---|---|--|
| | | Radio, Print and TV communication Products = 23; Overall awareness = 10695; | | | |
| 2.4 Providing a platform for increased dialogue between East African bamboo producers and investors and consumers from Africa, EU, China and multilateral funds | 1 Investor tour to E. Africa by Month 27; E. African producers participate in 5 trade fairs/congresses/forums (3 national/regional; 2 international) & 3 bamboo loan/grant proposals for E. Africa submitted by month 36. | International congress / forum = 2; BamBoost Conference = 1; Bamboo and Rattan Congress (BARC) = 1; National trade fair/exhibition =11; Investor tour = 1; Loan / grant project submitted = 3 ¹⁵ ; Association = 3; and International forum ¹⁶ | | | |
| 3.1 Building bamboo planting material delivery systems | 17 bamboo nurseries established by month 12 and 3 micro-tissue culture household units set up by month 30; | 18 large-scale nurseries; No. of plants = 2513257; | Increased Bamboo-based Land Restoration and Mitigation of Climate Change in E. Africa | 1,500ha of degraded bamboo forest under sustainable management & 1,175ha degraded lands restored by | The programme outcomes for this component were largely exceeded and the results are on a good trajectory towards the key impact. |

¹⁵ Page 24 – Year 1 annual report; and Appendix XIII of Year 2 annual report

¹⁶ Wageningen University & Research - Sino-Europe Food Valley Alliance- Fuzhou University-INBAR: the 3rd International Conference on Bamboo Application – Green Circular Economy and Technology. June 16-18, 2019, Fuzhou University (Qishan Campus), Fuzhou, People's Republic of China: 230 participants



| Activity | Target Outputs | Actual Outputs | Target Outcomes | Actual Outcomes | Likely Impacts—What Happened? |
|--|---|---|-----------------|---|-------------------------------|
| | 2.135 million bamboo plants covering up to 5 species distributed to beneficiaries by month 36 | Village nurseries / small scale nurseries = 15; No. of plants = 357074; No. of species = 8; Micro tissue culture lab = 3 Plant production capacity = Three existing research laboratory facilities | | project end, benefitting 5000 farmers (50% women) | |
| 3.2 Capacity development for local communities on bamboo resource management, on-farm planting and restoration | 60 trainings on bamboo resource management conducted by month 36 | Training courses for communities = 118 Number of beneficiaries = 5 073 (3439 M / 1634F) MOFCOM training course = 2 and 57 (42M/15F); Bamboo brought under Sustainable management = 1250.39 ha Restoration of degraded lands = 1465.9 ha and 3342 households | | | |



| Activity | Target Outputs | Actual Outputs | Target Outcomes | Actual Outcomes | Likely Impacts—What Happened? |
|--|--|---|-----------------|-----------------|-------------------------------|
| 3.3 Quantifying E.Africa region bamboo carbon sinks and establishing mechanisms to finance increased CC mitigation via reforestation and reduced degradation | 2 VCS standards by month 12; Bamboo carbon credit demonstration project covering 2,000 ha set up & 1 regional training by month 24; carbon credits issued by month 36 on either VCS or CGCF platform | <p>VCS methodology entitled “Methodology for Carbon Sequestration Project of Bamboo Forest Management” (MCSPBFM) and submitted it to the VCS for review, which is currently under review.</p> <ul style="list-style-type: none"> - Bamboo forest of over 2000ha demarcated. - Fifty (50) plot level data / inventory collected and submitted to ZAFU for processing | | | |

The activities generally produced targeted outputs and outcomes

The analysis presented in Table 2 demonstrates that the 11 activities in the programme generally produced the outputs and outcomes that were expected.



The outputs produced by the activities were high quality

We found that stakeholders almost unanimously agreed that the programme's outputs (studies, reports, trainings, awareness campaigns, exchange visits, technology transfer, etc.) were all very high quality and targeted to their needs. As stated earlier, we present our conclusions on the overall effectiveness of the programme after answering other relevant evaluation questions that are closely related and support our programme-level conclusions in the following sections.

How Were the Outputs of Different Interventions Used?

If the programme's outputs were used for other purposes or not used at all, this would decrease the likelihood that the intended outcomes and impacts would happen. To assess if the programme's outputs were used as intended, we asked stakeholders if they found the outputs useful and, if so, how they used them. For ten of the eleven activities in the programme (90 percent), the outputs were used precisely as expected at activity inception. For example, Activity 1.1 Conduct three national bamboo resource assessments, the programme proposal explains that donors expected the three EA governments and stakeholders to use the national "Technical Background Documents" to inform the drafting of its bamboo policy and strategy policy. Our interviews confirm that this is exactly what happened. We spoke to the various stakeholders across programme strata and found that these documents were used to form the country's bamboo policy and strategy.

The programme achieved many of the target impacts at the activity-level

We also attempted to evaluate whether the activities in the programme succeeded in achieving their own, unique target impacts. Impacts that were expected from individual activities included influencing policies, stimulating institutional reforms within key sectors, or informing the design of new government programmes, among others. Seven of the 11 activities in the sample (64 percent) succeeded in achieving their **target** impacts include (a) Conduct three national bamboo resource assessments, (b) Conduct 3 national market studies to assess main market opportunities in beneficiary countries and region; (c) Conduct 3 National Public Awareness Campaigns for E.Africa consumers, covering households, public sector procurement and enterprises; (d) Providing a platform for increased dialogue between East African bamboo producers and investors and consumers from Africa, EU, China and multilateral funds; (e) Building bamboo planting material delivery systems; (f) Capacity development for local communities on bamboo resource management, on-farm planting and restoration and (g) Quantifying E. Africa region bamboo carbon sinks and establishing mechanisms to finance increased CC mitigation via reforestation and reduced degradation. An additional four activities (36 percent) yielded some impacts, although they were not exactly those that were targeted at activity inception. This include (a) Conduct physical, mechanical and chemical testing of main bamboo species from different areas across their geographical ranges; (b) Capacity development and technology transfer for East Africa bamboo producers on market study-identified value chains; (c) Develop technical guidelines on bamboo products /processing for East African INBAR member states and (d) Capacity development for East African producers on meeting bamboo product/process standards and raising their awareness about requirements of EU exporters. The details are explained in Table 3.



However, we qualify this observation and conclusion of these activities partially achieving the intended impact by emphasising that the lack of a programme-level baseline and robust monitoring and evaluation (M&E) framework made it difficult to prove clear links between programme outputs and the outcomes and impacts that were observed.

At the outcome / results level, the programme exceeded in achieving one intended outcome (Increased Bamboo-based Land Restoration and Mitigation of Climate Change in E. Africa) and partially achieved the another two outcomes ((i) Value chains developed/enhanced for 5 bamboo products, increasing at least 5,000 people's livelihood opportunities (50% women) and average incomes by 10-15% (3,000 Ethiopia; 1500 Kenya; & 500 Uganda); and ii) trade in bamboo products into and out of East Africa increases by 5-10% and domestic markets grow, with €1-3 million in new grant/loan investments made to East Africa's bamboo sector by project end). For outcome 1, the evaluation could not find clear attributable evidence of "increasing at least 5,000 people's livelihood opportunities (50% women) and average incomes by 10-15%". Whilst the trainings and other interventions did reach more than 5000 people and there are clear indications on increased engagement and income among beneficiaries. However, there was no clear linkage and attribution on how the programme has increased their "livelihood opportunities" and "average incomes by 10-15%". There was no baseline of livelihoods and income levels before the programme commenced neither did the programme have a tracking and reporting system on how beneficiaries' incomes are or have changed and by how much. This requires some attention if the programme will be scaled-up so that results, outputs, outcomes and impacts can be easily quantified and qualified with minimal attributional challenges. For outcome 2, based on the stakeholder's interviews and observation, there is clear indication that there is growth in domestic market with emergence of enterprises, availability of new products, export to neighbouring countries (Adal Industries PLC) and initial engagement of large brands such as IKEA (SA Bamboo PLC). The clear attribution of 5-10 % increase in international trade will be difficult to ascertain mainly due to the unorganised nature of the sector, and lack of credible data source with government. However, the programme is successful in developing loan/grant proposals including (1) IFAD: Inter-Africa Bamboo Development Programme where Ethiopia is a beneficiary country (USD 2.5 million); (b) supported loan proposal to SA Bamboo PLC with Common Fund for Commodities; and (3) CIDCA/MoFCOM Bamboo Bio-energy project for Ethiopia (USD 1.1 million) in final stages of approval¹⁷.

Expected impacts were identified from the programme documents, while impacts achieved were identified from the latest annual report in which each activity appeared. To support these findings, we also drew from information collected during the stakeholder interviews. We note that though this analysis may suggest the programme may have partially yielded desired impacts, we believe it tells another story: that the impacts that were targeted at the outset of the activity may not have been realistically defined. Many of the targeted impacts were **far** "downstream" of the activity itself and would not realistically have been achieved within the three-year

¹⁷ Page 24 – Year 1 annual report; and Appendix XIII of Year 2 annual report



programme life cycle. For example, one target impact of “Reduced poverty and green economic growth secured via the development and improvement of industrial bamboo value chains in East Africa” was to induce “Value chains developed/enhanced for 5 bamboo products, increasing at least 5,000 people’s livelihood opportunities (50% women) & average incomes by 10-15% (3,000 Ethiopia; 1500 Kenya; & 500 Uganda).” However, because this is an end result that would necessarily take time and would be contingent on many other factors (other than developing the industrial value chain itself), this may not have been an appropriate target to set. As a result, many of the activities yielded positive impacts that contributed to the programme achieving its overall targets, but strictly speaking may not have fully met the target impacts of the activity such as levels of increase in incomes. Some of the key positive impacts include the large portion of each of the activities listed above which partially made an impact. This means whilst the activity has done and achieved most of the intended outputs and outcomes, there were some small but vital elements (as explained above) that did not maximally and optimally reached the intended impact. So apart from these minor elements, which are largely design and attribution related, the programme activities performed as expected.

3.4.2 To What Extent Have the Activities Contributed to Sound Policy or Strategy Formulation?

This question is particularly relevant because of the **analytical** nature of programme’s work. The programme was designed to lay the foundation for future donor engagements with the three EA countries and beneficiaries, by supporting technical and analytical work across key thematic areas. This was based on the provision that if the analytical and technical work led to improvements in policies and strategies, these improvements signal to donors that the respective governments and beneficiaries have the capacity and commitment to engage on topics where the priorities of the governments and donors overlap.

We investigated whether the outputs that were produced under each of the 11 activities in the programme informed any policies or strategies. We first asked government stakeholders how the technical and analytical work funded by the Dutch-Sino may have informed their policymaking decisions. When the ministry stakeholders identified examples, we also asked if they thought the same policies or strategies would have resulted without the technical and analytical work performed with programme. Our activity-level analysis revealed contributions to policy or strategy formulation resulting from 9¹⁸ of the 11 activities (82 percent). Of these nine activities, six¹⁹ provided “major” contributions, meaning that the government stakeholders thought that the technical and analytical work funded by the programme was the largest factor that contributed to the formulation of the policy or strategy. The remaining three activities provided “minor” contributions, meaning that the analytical and technical support influenced the policy outcome, but was not the largest contributing

¹⁸ Inclusive of all activities 1.1 to 1.4, 2.1, 2.2, 2.3, 3.1, and 3.2 variably contributed towards policy and strategy, market assessment, standards etc

¹⁹ These include specific activities 1.1 to 1.4, 2.1 and 2.3.



factor. Only two activities in the programme did not lead to any measurable contributions to policy or strategy formulation.

3.4.3 Are There Any Unintended impact or contributions made by the Implementation of the Activities?

The purpose of this question is to understand whether the programme-supported activities may have led to any unintended impact that were not anticipated when the activities and work plans were approved. To answer this question, we looked for evidence of unintended impact or contributions resulting from the 11 activities. Evidence was drawn from reviewing programme documents and interviewing key stakeholders. During these interviews, whenever possible, we also asked questions to determine the level of attribution of these unintended impact and contributions to the programme funded activities. This allowed us to conclude if the programme funded activities were necessary to create these unintended impact and contributions.

Of the 11 activities in the programme, in just one instance were unintended benefits or contributions identified and attributed to the programme engagement. For example, in Uganda, the programme assisted with the sustainable management of the bamboo forest. Then during the evaluation field visit, the team discovered that an entrepreneur had invested his own resources into bamboo craft making through purchasing raw materials from the government managed forest. Whilst this was an unintended benefit, it was a useful case study to consider for replication and scaling-up in other places. The programme has created an unintended positive impact benefit. From review of literature as well as discussions with stakeholders, it is clear that bamboo needs management, that means annual selective harvesting as this helps in regrowth of new shoots and at the same time helps in carbon sequestration (not allowing bamboo poles to die and deteriorate), and this provides opportunity for sustainable green economy development. The project supported sustainable management and harvesting to aid age graded and size graded raw materials to industry and enterprises. Previously government forest has poor stands with no management. This has twin benefits healthy forest and raw material for enterprises and industries. This case example therefore provides a window of opportunity for replication in other areas across Uganda and where applicable, Ethiopia and Kenya.

3.4.4 Are the Targeted Beneficiaries Aware of Interventions Meant to Assist Them?

For the programme to have a meaningful impact on the targeted stakeholders, it is important that the stakeholders actually knew about the work the programme was funding. If targeted stakeholders were unaware of the programme's intervention, they would be less likely to use the documents, training, and other benefits supported by the programme, thus lowering the programme's effectiveness. To answer this question, we identified the programme's targeted beneficiaries (farmers, nursery operators, craftsmen and women, bamboo SME operators, industries, traders, organised individuals and groups, researchers, civil society groups, government entities, private sector, etc), and determined their level of awareness of the programme intervention. We interviewed the targeted beneficiaries identified during our field visit to the three countries, asking about their awareness of our sample 11 activities.



During the project evaluation inception phase, we assembled a matrix of targeted beneficiaries for the activities in the sample. This matrix included all direct beneficiaries identified in the proposal and annual reports, as well as indirect beneficiaries that we hypothesised might have had knowledge of the work funded by the programme. We interviewed more than 80 stakeholders although the completed interviews were only 52²⁰. For each activity, we assessed the level of awareness of all relevant beneficiaries for that specific activity. However, various beneficiaries were interviewed for more than one activity. We found that a majority of the beneficiaries we interviewed (85 percent) were aware of the Dutch-Sino programme, and the programme supported activities. The beneficiaries also indicated the usefulness and adequacy of the training and technical support provided by the programme, where 90 per cent stated that the programme's training was very useful.

Based on this finding, we conclude that the programme ensured that direct beneficiaries were aware of the technical and analytical support relevant to them, while 36 percent of indirect beneficiaries in the sample were not always aware. The programme did particularly well in making sure that both direct and indirect beneficiaries were aware of activities within the programme. Overall, the programme activities were clearly understood and known by the beneficiaries.

3.4.5 What Were the Programme's Critical Success Factors and How Did the Programme Perform?

Critical success factors are features of the design and operation of the programme that were necessary for the programme to perform well i.e. to deliver the expected results (outputs, outcomes, and impacts). Identifying these success factors is critical for understanding what made the programme effective, so that the factors can be taken into consideration in designing future programmes. These critical success factors were not formally defined by the programme, however, we identified them during our interview with the Programme Manager, Steering Committee members and some stakeholders amongst the beneficiaries. We then assessed how the programme performed on each of these factors, using information from our document review and stakeholder interviews. According to the Programme Manager, Steering Committee Members and beneficiaries, the key critical success factors included the following:

- Steering Committee and Programme Manager's understanding of the bureaucracy and its priorities
- Buy-in from the respective governments
- Donor/funding and collaborating partner commitment and engagement
- On-ground orientation: flexible approach based on ground realities on countries
- Learning by doing and 'identification of champions'
- Implementation approach: Availability of local collaborating institutions such as EFCCC, KEFRI, NFA etc offering strong collaboration and usage of its extension systems (eg KFS support to KEFRI). Leverage of parallel resources by strong collaboration.
- Access to information and other resources on INBAR and partner websites

²⁰ This was largely due to the fact that some of the interviews were held with more than one person but with a group of stakeholders.



- Multi-stakeholder partnership: Linkages and collaboration at all levels (ministries, industries, SME, civil society, grass root, etc.)
- South-South-North exchange and knowledge sharing enabled widening of capacities and outlook.
- Effective communication among all stakeholders and partners, and strong stakeholder commitment and ownership.
- Availability of resources at right time.

3.4.6 Was the Programme Effective Overall?

We found that the programme was generally effective in achieving its objectives, its target outputs and outcomes. This conclusion is based on the key findings for two questions:

- Did the activities we reviewed achieve their target outputs and outcomes? (effectiveness of the sample)
- Did the programme spend its resources on the right things? (relevance of the programme)

The programme activities produced many of the targeted outputs that they set out to produce, and many of the target outcomes were ultimately achieved. We also found that 11 of the 11 activities in the sample also stimulated some of the impacts that were expected by funding and collaborating partners. We, therefore, conclude that the sample of activities was effective.

The programme also did all the right things to ensure that it stayed relevant to the technical and analytical needs of the three EA countries and beneficiaries. The programme was closely aligned with the needs of the donors and of the three EA governments as indicated earlier in this report. The programme also relied on a robust process for determining funding priorities, which involved routine consultations with the stakeholders, technical dialogue on activity proposals by the Programme Manager and his team, and higher-level deliberation among the Steering Committee Members within the Steering Committee. The programme generally succeeded in ensuring that those activities that enjoyed mutual buy-in from the stakeholders and donors actually received funding and performed as expected.

3.5 Efficiency of the Programme

Assessing the programme for efficiency and accountability involves checking (i) that the programme delivered value for money; (ii) that donors can verify how their funds were spent; (iii) that the programme's design and operations were suitable for its objectives; and (iv) that there were processes in place to ensure the programme was using least-cost options to achieve expected results. To be efficient and accountable, the programme needed to have strong systems in place to manage costs, monitor interventions, and disseminate key findings.

The evaluation of efficiency and accountability is based on the following four evaluation questions:



- How appropriate has the programme's operational model and programmatic design been for the stated objectives?
- How effectively were activities designed and supervised?
- How effectively were funds distributed, used, and accounted for?
- How effectively were key findings documented and disseminated?

3.5.1 How Appropriate Was the Programme's Operational Model and Programmatic Design?

The way that the programme is structured plays a large part in how effectively and efficiently it can achieve its objectives. To answer this question, we examined how the programme was organised and its rules and processes were defined; how well it staffed the Regional Office; and if it distributed funds appropriately among, and within, activities in its portfolio. We also examined how the programme set target timeframes for completion; whether it chose the right activities to meet the programme's objectives; and if the programme chose the right ways of producing the results.

Organisational structure and governance

We assessed the organizational structure and governance of the programme as defined in the proposal and annual reports. These documents define the operational framework of the programme, setting out the roles and responsibilities of entities involved, and explaining the processes in place for identifying activities for the programme to support.

Roles and responsibilities within the programme

The programme organisational structure consists of the Steering Committee and the Regional INBAR office in Addis Ababa where the Programme Manager also seats on the Steering Committee (SC). From reviewing documents and interviews with stakeholders, we found that the SC comprised of members from all the beneficiary countries (Ethiopia, Kenya and Uganda), and knowledge provider (China and the Netherlands) and was established at the programme inception in 2017. The steering committee meets once a year to deliberate on the achievements, work plan and budget. Two steering committee meetings were conducted till the end of 2017.

The third steering committee meeting of the Dutch-Sino East Africa Bamboo Programme, which was supposed to be held in Dec 2018, got postponed due to lack of suitable time with few steering committee members. The third steering committee meeting was held in Kampala, Uganda between 16-17 January 2019. In addition to one-day steering committee meeting additional one days of field visits to bamboo nursery, plantation, micro and small enterprise and industry was organised.

From the interviews, it was noted that whilst the SC is a useful structure, there is need to improve the coordination and scheduling of meetings earlier on in the year so that the key dates are diarised and locked to avoid unnecessary delays and postponements. This is especially critical given that the SC members are often very busy people with other pressing commitments. Regardless of this observation, the SC has been very



useful in guiding and re-purposing the programme by reviewing and approving the programme's annual work plans. The SC also reviews performance against targets after the implementation of the activities. As one SC member noted, the only *"design limitation was the gap in facilitation such as the lack of logistics like a programme vehicle but KEFRI brought one vehicle on board"*. Another SC member remarked that *"For each activity, the status updates will be provided by the national coordinator regularly. The steering committee meeting was held each year to review the annual progress"*. Whilst these affirmations assisted the evaluation team in understanding the operations and importance of the SC, there is need for speed in reviewing and approving work plans to avoid delays. The programme activity approval process followed as explained to the evaluation team was as follows: a) Steering committee meets annually and discusses achievement and agrees on new work plan; b) Minutes of meeting, work plan and budget are prepared and then shared with steering committee. c) Once all agree, work plan (with activities) and budget submitted to Donor for approval. It is reported that no challenges were encountered with approvals over the 3-year implementation period.

The Dutch-Sino Bamboo programme was efficient in fulfilling its mandate.

The programme's operational model was generally appropriate. Its funding levels, project mix, and delivery models were all highly appropriate, though the programme could have set more realistic time frames for implementing some of the activities in the first year given the political economy of the country in Ethiopia and the elections in Kenya at the time. To address this and other foreseeable (and unforeseeable) challenges for the second phase of the programme, the SC can play a role in considering no-cost extensions based on the country's context and ground realities. This is very important given the often inflection nature of periodic and episodic activities such as elections, political disturbances and social strife, some of which one cannot anticipate in advance. Therefore, having that flexibility and ability within the SC to consider no-cost extensions on a case-by-case basis and ground realities will make the programme more agile and adaptive. Overall, funds were disbursed efficiently, were spent in accordance with INBAR's procurement procedures, and were accounted for using both independent audits and internal accounting systems.

Notably, the programme documented key findings well, but it did not disseminate some of these widely apart from sharing them on the INBAR and partner websites. Findings from the sampled beneficiaries show that whilst the website was routinely updated, where donors and country partners had easy access to many of the outputs that were produced, several beneficiaries in Kenya and Uganda indicated that they were not aware of the outputs such as "the various guidelines". The opposite was experienced in Ethiopia where almost all beneficiaries were aware of the key outputs that were relevant to them. This finding calls for strengthening of local partners in disseminating the programme's outputs and knowledge products to targeted and participating programme beneficiaries. Furthermore, the programme's monitoring and reporting system was robust, which provided and facilitated clear efforts to demonstrate the impact of the programme, both to donors and to external parties.



The activity-level analysis showed that the programme generally used appropriate and effective delivery models. We also conclude that the mix of projects selected for support from the programme was efficient for mitigating risks, and also relevant to the needs of the stakeholders and beneficiaries.

Conclusions on the governance and organisational structures

The programme had clearly defined roles and responsibilities for donors and the SC, as well as a sensible organisational structure to ensure proper management of the programme. The programme also did well to define a process for setting funding priorities and identifying activities, though this process was not always on time as the SC meetings were sometimes delayed and/or postponed due to unforeseeable circumstances.

3.5.2 How Effectively Were Activities Designed and Supervised?

The proper design and execution of a monitoring framework is vital: without it, it is nearly impossible to credibly assess the effectiveness of an intervention. To answer this question, we considered (i) how adequate the indicators that existed were, (ii) how well results were tracked and monitored, and (iii) what improvements (if any) were made to the M&E framework.

The indicators that were defined were adequate whilst the outcomes were not clear

Whilst the programme log frame provided an intervention logic which defines indicators for the programme's target outputs and outcomes, the outcomes were not clearly crafted as they are neither easily articulated, measurable nor meaningful. We suggest that the next phase of the programme should have a clear logical framework and theory of change as living documents that can be adjusted as the programme changes. The original log frame never improved despite various changes to the work plans as approved by the SC. The log frame should be utilised to capture the programme changes before and during implementation.

Apart from this observation, the programme activities were designed and supervised rigorously. The activity design and approval were largely the mandate of the SC whilst credit should be given to the Programme Manager for leading the execution and supervision of these activities on the ground. During the evaluation field mission, it was apparent that the Programme Manager was not only popular with different stakeholders but was also highly respected for the contribution he has made on the ground and learning by doing to ensure activities achieve the desired outputs.

3.6 Sustainability of the Programme

In earlier sections, we identified impacts that were broadly achieved and partially achieved by the programme. We also identified the specific impacts that were achieved by each activity. Yet, we have not answered the question: **Are the results and impacts of the programme's activities likely to continue after funding has stopped?**

To assess the sustainability of impacts from closed activities (and projects), we asked beneficiaries if these impacts had, so far, continued after programme funding stopped. For ongoing activities (and projects), we



assessed the likelihood that benefits would continue in the future. For instance, if the programme outputs are currently being used to shape future plans, then the benefits will likely continue. We also asked key stakeholders their view on whether these benefits would be sustained in the future. The results of this analysis are presented in Table 3.

Table 3: Likelihood of Sustained Results and Impacts for the Sampled Activities

| Activity | Are the Results and Impacts Likely to be Sustained? |
|--|--|
| 1.1 Conduct three national bamboo resource assessments | Yes - The resource assessments set into motion an ongoing process to fully validate the bamboo resource and continue the process toward attracting private investment in the value chain. This will continue independently of any continued support from the programme or donors. |
| 1.2 Conduct physical, mechanical and chemical testing of main bamboo species from different areas across their geographical ranges | Maybe - Although the targeted impacts have not yet been achieved, the analysis indicate that the E. Africa partners and beneficiaries are likely to use the findings to implement many of the recommendations contained in the study to benefit the value chain. There is also a need to further in-depth study on age-wise and species wise study to optimise value-addition and sustainable management. |
| 1.3 Conduct 3 national market studies to assess main market opportunities in beneficiary countries and region | Yes - The three market studies that were developed and finalised with support from the programme are being used by the stakeholders and beneficiaries to define what products to produce, how and where to participate and create a niche in the value chain, and identify and streamline what resources are required to produce the desired product. This document will help the beneficiaries (as individuals or groups) to make a good case for bankable business proposals based on the report. |
| 1.4 Capacity development and technology transfer for East Africa bamboo producers on market study-identified value chains | <p>Maybe –The targeted impacts were far “downstream” of the activity itself and would not realistically have been achieved within the three-year programme life cycle and it is contingent on a number of other external factors.</p> <p>Capacity training and technology transfer has already started yielding significant impacts. Even once funding ends for these activities, having a robust pool of capacitated and enthused stakeholders is likely to have lasting impacts for the economies of the three countries. By ensuring appropriate and intensive training and technology transfer, the beneficiaries are likely to benefit from improved quality products and incomes. This is contingent on the application and use of the training and technologies appropriately.</p> |
| 2.1 Develop technical guidelines on bamboo products /processing for East African INBAR member states | Maybe – Apart from Ethiopia where most of the beneficiaries were aware and using the available guidelines, only a few beneficiaries in Kenya and Uganda were aware of and using the product/process guidelines. However, the impact of these guidelines |



| | |
|---|--|
| | is likely to continue if/when the necessary awareness and dissemination is done now and during the second phase. |
| 2.2 Capacity development for East African producers on meeting bamboo product/process standards and raising their awareness about requirements of EU exporters | Maybe – Again, whilst Ethiopia is the only country with relatively advanced value chain participants and application of product/process standards currently, the drafting and launching of the various standards across the E. Africa countries will have an impact beyond the programme. The programme support on the standards has set the groundwork for finalisation of the process as the value chains mature. |
| 2.3 Conduct 3 National Public Awareness Campaigns for E.Africa consumers, covering households, public sector procurement and enterprises | Yes – the awareness campaigns have been one of the greatest achievements of the programme resulting in massive participation in the bamboo value chain at different scales and levels. This is likely to continue and get better defined as stakeholders find their niche within the value chain as well as forming syndicates and community groups to maximise benefits and opportunities. Especially, development of bamboo strategies and action plan (Ethiopia and Uganda) and bamboo policy (Kenya) will enable mainstreaming of bamboo into government and international agenda. |
| 2.4 Providing a platform for increased dialogue between East African bamboo producers and investors and consumers from Africa, EU, China and multilateral funds | Yes – This activity set into motion a collaborative platform including redefinition of roles and responsibilities among the partners (South-South-North) governments, agencies and private sector. The E. African governments are working to execute this reorganization, which requires harmonisation of other policies, as well as enabling legislation to be passed to ensure maximum benefits to the economy and environment from the bamboo. For example, in Kenya, the Water Towers initiative by the MoWE illustrates this seriousness. Once complete, this initiative (among others) should enable improved quantity and quality of water from restored areas as well as best practice management of water resource development and water quality. |
| 3.1 Building bamboo planting material delivery systems | Yes - The initial programme support has led to the development of new nurseries and has enabled the partners and beneficiaries to continue the bamboo planting materials based on the knowledge gained from the initial training and support of the programme and peer learning. Without the technical support provided by the programme, it is unlikely that the nurseries would have reached this stage. The programme has provided a firm foundation for scaling up bamboo planting material production in E. Africa. Further support in producing quality planting material at reduced prices will benefit the overall bamboo sector in long run. |
| 3.2 Capacity development for local communities on bamboo resource management, on-farm planting and restoration | Yes – this is another example of how those who were trained through the training of trainers' courses, have also managed to train others and generate a pool of resource people with knowledge and capacity. This is likely to continue as stakeholders; especially direct beneficiaries define and streamline their participation in the value chain. |



| | |
|--|---|
| <p>3.3 Quantifying E Africa region bamboo carbon sinks and establishing mechanisms to finance increased CC mitigation via reforestation and reduced degradation.</p> | <p>Yes - From review of literature as well as discussions with stakeholders, it is clear that bamboo needs management, that means annual selective harvesting as this helps in regrowth of new shoots and at the same time helps in carbon sequestration (not allowing bamboo poles to die and deteriorate), and this provides opportunity for sustainable green economy development. This is likely to continue and yield more impact during the second phase.</p> |
|--|---|

In summary, seven of the 11 activities (64 percent) have delivered sustained benefits (or are likely to deliver sustained benefits) beyond the duration of the programme. Four of the 11 activities (36 percent) may yield sustained benefits, if their target impacts are achieved. However, if the target impacts are not achieved, they are unlikely to produce any sustained benefits either because no measurable impact will be achieved, or because the impacts were never intended to be sustained.

While in some cases the work supported by the programme was unlikely to be carried forward in the short term without outside donor funding, the benefits of the activity are nonetheless sustainable. This is because of absence of initial analysis; these programmes would have lacked the technical underpinning to justify donor support to carry out programmatic work. In fact, both the two Ethiopian examples of industrial product processing have benefitted from funding through the early engagement and support from the programme. These two ventures are likely to become some of the most successful enterprises in the region with little further support from the programme.

Given the technical, analytical and abstract nature of the work supported by the programme, it is difficult to say with full confidence that its impacts will be sustained. However, based on our assessment of the sustainability of the sample of 11 programme activities, we conclude that these examples provide credible (though not conclusive) evidence that the programme has contributed to sustained impacts. More broadly and by way of further elaborate examples, the programme further ensured sustainability of results as follows:

1. Bamboo programme agenda mainstreamed in EA government priorities

The programme mainstreamed bamboo into the three EA government priorities. This helped create confidence and increase investment potential by private sector to promote sector sustainability. Governments embraced the programme and accepted to play the role of implementing agencies (KEFRI, NFA, EFCCC).

2. Policy and regulatory support as enabling environment

The programme was able to create a favourable environment for bamboo infancy to thrive in EA through the provision of policy and regulatory support, as well as allocation of manpower (e.g. dedicated bamboo foresters) for bamboo development. Through the programme, policy documents including guidelines and strategies on bamboo as well as standards were developed and published. These are accessible to the public via existing websites.

3. Formation of Community based organised groups around bamboo enterprises



The programme has through its activities seen the grouping of individuals into cooperatives that have formed and are working together in bamboo enterprises. Examples of groups such as UBA, and a cooperative promoting the production of bamboo-based beehives in Mbale district in Uganda, have members committed to paying membership fees and convene regularly with respect to the bamboo enterprises.

3.7 Scaling-up to Phase 2

Based on the evaluation findings and comments from the programme stakeholders, this section provides a brief summary of the key activities that the programme should scale-up into the next phase. It is important to note that there is already a draft logframe for the next phase which we also reviewed to ensure internal consistency with our suggestions herein.

The next phase should continue with most of the activities that were implemented in phase 1 given that the value chain and markets have not been fully developed whilst the resources planted are yet to mature (or nearing maturity). This proposed continuation is not a blanket recommendation for a catch-all but a targeted scaling-up of those key triggers and catalysers that will enhance the impact and sustainability of the achievements made during the first phase. Whilst we generally agree with the proposed activities for the next phase, some specific activities that we suggest should be scaled-up include:

- Baseline study
- Gender analysis study
- Capacity building / technology transfer and provision of basic equipment's; entrepreneurship and BDS for East African SME's
- Biomass and charcoal enterprises benefiting women.
- Research, development and innovation
- Strengthening bamboo planting material delivery systems
- Scaling up bamboo restoration and sustainable management
- Enhancing property testing of bamboo species in E. Africa
- Capacity development for local communities on bamboo resource management, on-farm planting and restoration
- Support and strengthen the development of community associations (cooperatives, farmer groups etc)
- Developing standards and certification mechanism
- Develop multiproduct supply-chains for bamboo products to move SMEs and Industries from low market level production in to efficient and integrated bamboo Value chain.
- Quantifying E. Africa region bamboo carbon sinks and ecosystem services; and establishing mechanisms to finance increased CC mitigation.

Whilst the list above is not exhaustive, it is important to note that the proposed activities for the next phase does not include “gender analysis” as a key activity. This is very important given the need to understand the



gendered nature of the bamboo value chain across scales and levels. Doing so will provide the programme with better clarity on how and where to invest resources to particularly improve the lives and livelihoods of women and girls.

The next missing key activity that needs to be included in the next phase and before commencement of other activities, is establishing the baseline. This can and should be done during the preparatory stages of the Phase II implementation based on the review of the information already available and augmented by a small survey sample across strata of both stakeholders and beneficiaries.



4 Conclusions, Recommendations and Lessons Learned

4.1 Conclusions

It has been demonstrated that with respect to the overall objective, the programme intervention was largely relevant to contextual needs, effective and efficient in its delivery, as well as deliberate in its inclusiveness and gender responsive approach to development. The programme was mostly successfully implemented with the result that the outputs achieved within the 3-year implementation period indicate a clear trajectory towards full realisation of the set objectives. The programme set out a strong awareness campaign, which helped to persuade a shift away from the negative perceptions around bamboo and shed a new light on the economic opportunity that offered demonstrable hope of the way out of poverty utilising bamboo, in an environmentally sustainable manner for the three EA countries.

With respect to attainment of pro-poor development and green economic growth, it is evident that the range of programme activities have jointly contributed to the realisation of economic as well as environmental benefits for national as well as local level stakeholders. The programme has seen the emergence of individual entrepreneurs including small to medium enterprises across the three countries, including men and women who have started to realise some form of income from the bamboo value-chain enterprise. In addition, significant hectareage of bamboo plantations have been realised and management improved through the programme on land availed nationally as well as individually, helping to promote the restoration of formerly degraded lands contributing to addressing climate change impacts. Sustainable management of plantations now means that bamboo can be utilised for supporting livelihoods without having negative impacts on the environment.

The programme experienced significant buy-in among all three national governments an aspect that may be attributed to a clear and strong alignment of the programme objectives with the national development priorities of addressing poverty through pro-poor development initiatives while attaining green economic growth.

By embedding the programme implementation in existing national entities/structures such as ESA, EFCCC, NFA, KEFRI, KBS, UNBS, UIRI, etc., the programme successfully managed to ensure sustainability beyond its short timeframe. Also, other aspects cementing sustainability of programme results involved the creation of community based organised groups (e.g. associations), awareness creation helping to change community perceptions on economic value of bamboo, technology and skills transfer, capacitation of national entities as well as local communities in the bamboo enterprise (various value chain skills). The transfer of knowledge, technical skills as well as equipment in bamboo within such a setting (existing structures) meant that even after the programme ends, the capacity to continue (sustainability) will have been created within the national implementing agencies.



Also, the programme's top-down and bottom-up approach to implementation helped to ensure that the programme was anchored within national policies and strategies to provide an enabling environment for grass-roots bamboo enterprises to thrive.

Broadly, the evaluation findings have demonstrated that the 3-year INBAR Dutch-Sino EA bamboo development programme intervention performed satisfactorily with respect to delivering target outputs within budget towards intended results and are on the trajectory to contributing to achievement of the set objectives.

4.2 Recommendations

Whilst the programme attained commendable success within the 3-year implementation period, there are a few strategic recommendations.

In consideration of an extension or a possible next phase, key suggestions emerged from the evaluation as follows:

- a) The programme should replicate successful enterprises including those success stories achieved by women role models already benefiting from bamboo. For example, in Uganda, the bamboo shoots business model that involved the drying unit run by a woman, can be replicated as there is already a local market and it offers job opportunities for many poor people.
- b) There is need to improve on the participation of women in decision-making roles from Steering Committee level to national e.g. such as the UBA chairperson who is a woman. This will improve the quality of the roles and participation women are involved in rather than only focusing on the numbers of women either participating or benefiting.
- c) For the next phase, it would be important to cement and maximise the utilisation of knowledge products developed in this phase through increased dissemination to stakeholders.
- d) There is an opportunity for the next phase to promote collaboration with government entities-where programme activities are embedded within government implementation plans and budgeting processes. For example, the Uganda Industrial Research Institute highlighted that there is budget set aside for trainings and that together with the INBAR programme training initiatives, the benefits of the trainings would be scaled up improving coverage.
- e) While annual reports were used to track progress on outputs and outcomes for each activity over time, in future, it is recommended that **results should be captured directly and updated into the programme "log-frame"** - to track results achieved against targeted outputs and outcomes. Log frames allow programmes to aggregate data across multiple outputs and outcomes to measure the overall effectiveness of a programme.
- f) In addition, it is recommended that future similar programmes adopt **a theory of change** in addition to a programme log frame. The theory of change would help to explain the process of change by outlining causal linkages in an intervention, i.e., its shorter-term, intermediate, and longer-term outcomes. The



identified **changes** are mapped – as the “outcomes pathway” – showing each outcome in logical relationship to all the others, as well as chronological flow²¹.

4.3 Lessons Learned

A number of key lessons emerged from the implementation of this programme.

Increase dissemination efforts and improve the quality of communication - the programme could also have been more effective in communicating the findings from supported activities, and other key achievements of the programme. The programme should consider posting all outputs that are fit for public consumption on their website and also consider establishing a public information centre or sharing e-platforms within the countries to help disseminate the outputs produced. Under the programme, donors should ensure that the Programme Management has the capacity to disseminate the outputs and communicate key findings timely, widely, and strategically. This is very critical for the second phase.

Ensure that a robust M&E framework is in place, and that it is used - the programme did not have a robust framework to monitor and evaluate the performance at a programme level. To ensure that the programme makes the greatest impact - and that this impact is tracked - donors and SC should agree on a well-defined M&E framework at the inception, complete with meaningful, measurable indicators of the programme’s progress. They should also ensure that this framework, once defined, is actually used to help communicate the achievements of the programme. This is an integral and essential element required to improve programme impact for the second phase.

Fine-tune administrative processes to boost the programme’s operational efficiency - the programme did not always operate as efficiently as it could have in the first year particularly in Ethiopia and Kenya. For example, some of the activities were affected by the political environment in Ethiopia whilst the elections in Kenya also affected the programme delivery of the key activities. Whilst these issues did not adversely affect the efficiency of the programme, these issues could be solved through minor adjustments to administrative processes. This includes building more flexibility for the Steering Committee to better respond to minor contingencies on a case-by-case basis and work with the Programme Management team to improve the programme’s ability to deliver as planned.

Realisation of Benefits of bamboo. The programme has managed to influence change in perception towards the value of bamboo, where it has for long existed within EA and yet been minimally utilised or even regarded as an invasive species/weed by the indigenous population. Stakeholders within government as well as at the grass roots have through this programme realised the significant economic potential and environmental benefits that exist within the bamboo industry. The value has been demonstrated through programme tours and exchange visits within EA and to China and Netherlands where bamboo enterprises are more advanced. Also, pilots within the three East African countries, during this implementation period have demonstrated the

²¹ H. Clark & D. Taplin (2012). *Theory of Change Basics: A Primer on Theory of Change*



potential economic and environmental benefits. Unlike wood-based products, it has been demonstrated that bamboo offers is a non-wood product option that can be developed, managed and utilised for sustainable economic benefits while also promoting environmental sustainability.

Role of Bamboo Champions. The programme has led to the emergence of champions both at national and local levels among programme stakeholders. This has been critical to driving interest in bamboo enterprise beyond the programme activities, helping to ensure sustainability of results. At national level, the programme saw buy-in from political figures in all three EA countries who bought into the bamboo enterprise and have individually invested in bamboo plantations. Also, the programme created champions within local level stakeholders who are individually realise the benefits of bamboo and are committed to spreading the knowledge and skills acquired among other interested groups including schools.

Programme Leadership. Finally, the role of the programme management and his team was key in achieving the success realised in the 3 years of implementation. The programme was led by an astute programme manager, who characteristically utilised the ability to accurately assess situations and people across the various EA contexts (including engaging with national level stakeholders, while also conducting one on one grass roots engagements in communities) and turn this to his advantage ensuring maximum benefit for the programme not only at national but at grass-roots levels simultaneously. Together with a team of dedicated national programme coordinators and national implementing agencies, the programme was able to attain the success that it has realised.

As lessons for future replication of this programme's success, emphasis needs to be placed on key success factors for future programme interventions and these include:

- Steering Committee and Programme Manager's understanding of the bureaucracy and its priorities
- Buy-in from the respective governments
- Donor/funding and collaborating partner commitment and engagement
- On-ground orientation: flexible approach based on ground realities on countries
- Learning by doing and 'identification of champions'
- Implementation approach: Availability of local collaborating institutions such as EFCCC, KEFRI, NFA etc. offering strong collaboration and usage of its extension systems (eg KFS support to KEFRI). Leverage of parallel resources by strong collaboration.
- Access to information and other resources on INBAR and partner websites
- Multi-stakeholder partnership: Linkages and collaboration at all levels (ministries, industries, SME, civil society, grass root, etc.)
- South-South-North exchange and knowledge sharing enabled widening of capacities and outlook.
- Effective communication among all stakeholders and partners, and strong stakeholder commitment and ownership.
- Availability of resources at right time.



Overall, within its 3-year infancy, the bamboo programme managed to demonstrate through the various activities (awareness, resource assessments, market study, trainings and technology transfer, SME and industry development, exchange visits to advanced bamboo countries, etc.) that the economic potential and environmental benefits offered by the bamboo industry are within reach for East Africa. The demand from stakeholders for more of the programme services through a next phase further emphasises the impact and buy-in the project has had in EA.



APPENDIX A : Logframe, Workplan and Tools

| Item | Attachment |
|---|---|
| Programme Log frame |  INBAR Logframe.xls |
| Evaluation Workplan |  INBAR Workplan.xls |
| Evaluation Tool for Programme level stakeholders_ |  Tool 1_KII INBAR Programme-Level Intx |
| Evaluation Tool for National Coordinators and Implementing Agencies |  Tool 2_KII INBAR National Coordinators |
| Evaluation Tool for Beneficiaries |  Tool 3_KII INBAR Beneficiaries_v1.docx |
| Evaluation Tool for Steering Committee Members |  Questions Checklist for Steering Commitee |
| Field Schedule for Country Evaluation Engagements |  INBAR Evaluation_ Country Schedule.doc |
| Evaluation Tool_ Programme Level Partners Outside Africa |  Tool 5_KII Programme-Level Intx |

APPENDIX B List of Stakeholders Interviewed

ETHIOPIA Interview Participants: 8th – 10th December 2019

| Date | Name | Organisation Interviewed/visited | No of participants | Interview Location |
|------------|---------------------------------|---|--------------------|--------------------|
| Dec 8-11 | Ashebir Wondimu | Steering Committee Member EFCCC / Bamboo Focal | 1 (M_) | INBAR EARO |
| | Addisu Hailu | SA Bamboo Ltd | 1 (M) | INBAR EARO |
| | Seyoum Teshome | Federal Small and Medium Industries Development Authority | 1 (M) | INBAR EARO |
| | Yared Tadese | Oromia Industry Bureau | 1 (M) | INBAR EARO |
| | Nuru Fujaga Shikure Moti Nebiyu | Federal Technical, Vocational and Training Institute | 2 (M) | INBAR EARO |
| | Masresha Armida | Oromia forest and wildlife enterprise | 1 (M) | INBAR EARO |
| | Tasfayi Haile | Ethiopia Tourist Trading Enterprise | 1 (M) | INBAR EARO |
| | Abera Getahun | Bahir-Dar Environment and Forestry Research Centre | 1 (M) | INBAR EARO |
| | Dires Mare | Amhara TVED | 1 (M) | INBAR EARO |
| | Ebrahim Alkadir | Bahir Dar city Atsuteuledros Sub-City TVED Office | 1 (M) | INBAR EARO |
| | Yawukal Tarekegn | Bahir Dar city | 1 (M) | INBAR EARO |
| | Amsalu be yenle | Bahir Dar City Bamboo furniture | 1 (M) | INBAR EARO |
| | Hioult Melaku Lemnh | Bahir Dar City | 1 (M) | INBAR EARO |
| | Markos Wondie Minale | Bahir Dar City | 1 (M) | INBAR EARO |
| | Alemayehu Gebreyes | Ethiopian Standards Agency (ESA) | 1(M) | INBAR EARO |
| | Teferi Tadesse | Sidama Zone Forest Office | 1 (M) | INBAR EARO |
| | Adane Berhe | ADAL Industrial PLC | 1 (M) | INBAR EARO |
| Hadie Gaga | Arbegona Bamboo Association | 1 (M) | INBAR EARO | |

Kenya Interview Participants: 11th - 14th December 2019

| Date | Name | Organisation Interviewed/visited | No of participants | Interview Location |
|------|--|---|--------------------|-------------------------|
| | Dr Paul Ongugo | Steering Committee Member Science Leader, Kenya Forestry Research Institute (KEFRI) / Focal Point | 1 (M) | Vehicle on way to Nyeri |
| | Dr. John Otuoma | KEFRI Migori | 1 (M) | KEFRI Offices |
| | Godfrey Odony Ali | Alogo Enterprises | 1 (M) | KEFRI Offices |
| | Paul and Mwani | Kenya Bureau of Standards Kenya Forestry Research Institute (KEFRI) | 2 (M) | KEFRI Offices |
| | Jacklyne Namadi, Robert Sunya and Team | Eco Green | 4 (2 M + 2F) | KEFRI Offices |
| | Richard Krop | Kenya Water Towers Programme | 1 (M) | KEFRI Offices |



| | | | |
|---------------------------------------|--|--------------|---------------|
| Priscilla, Peter and Patrick | Botula Bamboo Farmers | 3 (2 M +1F) | KEFRI Offices |
| Lillian, Aisha Karanja, Ambrose Ngoge | Back to Basics | 3 (2 F + 1M) | KEFRI Offices |
| Hon. Geoffrey Vukaya; Victor Mwanga | Tirika Bamboo (and Vihiga County Govt) | 2 (M) | KEFRI Offices |
| Edmond | Greenbelt Movement | 2 (M) | KEFRI Offices |
| Carol Kariuki and Kuki Njeru | Green pot Enterprises | 2 (F) | KEFRI Offices |
| | | | |

Uganda Interview Participants: 14th – 17th December 2019

| Date | Name | Organisation Interviewed/visited | No of participants | Interview Location |
|---------------|---------------------------------------|---|--------------------|--------------------|
| Dec 15 | Ms. Divine Nabaweesi | Divine Bamboo Group Ltd | 4 (F), 1(M) | Najeera, Kampala |
| | Hon. Flavia Munaaba | Uganda Bamboo Association (UBA) | | Busega, Kampala |
| | Ms. Rebecca | NFA Lwamunda bamboo plantations | 1(F) 2(M) | Mityana |
| | Ms. Mercy | NFA Nandagi nursery | 1 (F) | Mbalala, Mukono |
| | NFA Zirimiti | NFA Zirimiti (Ntengeru Buikwe) bamboo plantations | 1(M) | Buikwe |
| | Mr. Gerald Iwe | Muni University | 1(M) | NFA Boardroom |
| Dec 16 | Mr. Andrew Kalema Ndawula | Talent Agroforestry | 1(M) | NFA Boardroom |
| | Mr Issa Katwesige | Ministry of Water and Environment | 1(M) | NFA Boardroom |
| | Mr Herbert Mugisha | Mgahinga Cultural Craft Centre | 2(M) | NFA Boardroom |
| | Eng. Fred Ijjo Vukoni Jimmy | Friends of Bamboo Moyo Community Leader | 2(M) | NFA Boardroom |
| | Ms Irene Walimbwa Josephine Kisaka | AW Bamboo | 2(F) | NFA Boardroom |
| | Ms Gertrude Newumbe | Elgon Naturals | 2(F), 1(M) | NFA Boardroom |
| | Mr Sajjabi Tom | Bamboo products Uganda (crafts) | 1(M) | NFA Boardroom |
| | Ms Stella Watsemba Mr Watutu W Joseph | Bamasaaba bamboo artisan association | 1(M) 1(F) | NFA Boardroom |
| Dec 17 | Mr Tom O Okello | Executive Director, National Forestry Authority | 1(M) | NFA Boardroom |
| | Mr Ebong Davis Ms Ayamba | EEEE/Agro-processors | 1(M) 1(F) | NFA Boardroom |



| | | | |
|--|--|--------------|---------------|
| Mr David Kayhul | Uganda National Bureau of Standards | 1(M) | NFA Boardroom |
| Mr Mununuzi David Mr Stewart | Steering Committee member, NFA Plantation Director | 2 (M) | NFA Boardroom |
| Mr Birungi Deus | Bamboo farmer | 1 (M) | NFA Boardroom |
| Mr Watsibi Rogers | Mt Elgon Coffee and Honey Cooperative Society | 1 (M) | NFA Boardroom |
| Ms Christine Mwanja | National Agriculture and Forestry Resources Research Institute | 1(F) | NFA Boardroom |
| Mr Tuhaise Samuel | National Agriculture Research Organisation | 1(M) | NFA Boardroom |
| Mr Sande Omballa Mr Dickens Onyang Ms Juliet Namukwaya | Uganda Industrial Research Institute | 1(F) 2(M) | NFA Boardroom |

External (Outside Africa) Stakeholders contacted:

- Dr. Tingting Mei – Zhejiang Agriculture and Forestry University (ZAFU), China
- Keijsers, Edwin – Wageningen University and Research (WUR), the Netherlands
- Dam, Jan van – Wageningen University and Research (WUR), the Netherlands
- Arjan van der Vegte – MOSO International BV, the Netherlands
- Prof Zhang Rong – Steering Committee Member, International Centre for Bamboo and Rattan (ICBR), China.
- Prof. Peng Gong, Tsinghua University, China.



APPENDIX C : Field engagements Schedule for Evaluation

| Day | Dates | Activity | Travel |
|---|-------------------------|---|---|
| ETHIOPIA Stakeholder Engagements Schedule : 7-11 December 2019 | | | |
| 1 | 07 Dec 2019 Saturday | | Travel from South Africa to Addis Ababa |
| 2 | 08 Dec 2019: Sunday | Meeting at INBAR EARO | Meeting with programme team and steering committee, Ethiopia |
| 3 | 09 Dec 2019: Monday | Ethiopia: Meeting / Field Visit | Beneficiary/Stakeholder engagements at EARO |
| 4 | 10 Dec 2019: Tuesday | Ethiopia: Meeting / Field Visit | Beneficiary/Stakeholder engagements at EARO |
| 5 | 11 Dec 2019: Wednesday | Ethiopia: Half day meeting | Fly to Kenya on 11 Dec 2019 |
| KENYA Stakeholder Engagements Schedule : 11-14 December 2019 | | | |
| 6 | 12 Dec 2019: Thursday | Kenya: Meeting / Field visits | Meeting at KEFRI, Field Visit to bamboo nurseries, and farm in Nyeri county, Green Pot Enterprises. |
| 7 | 13 Dec 2019: Friday | Kenya: Meetings / Field visit | Beneficiary/Stakeholder engagements at KEFRI |
| 8 | 14 Dec 2019: Saturday | Kenya: Half Day meeting | Fly to Uganda |
| UGANDA Stakeholder Engagements Schedule : 14-17 December 2019 | | | |
| 9 | 15 Dec 2019: Sunday | Uganda: Field visits to bamboo nursery and plantation sites | Divine Bamboo nurseries, UBA, Lwamunda NFA forest reserve, Zirimiti, etc |
| 10 | 16 Dec 2019: Monday | Uganda: Meeting with stakeholders | Beneficiary/Stakeholder engagements at NFA |
| 11 | 17 Dec 2019: Tuesday | Uganda: Meeting with stakeholders | Beneficiary/Stakeholder engagements at NFA (continued) |
| 12 | 18 Dec 2019: Wednesday | Half day meeting | Fly back to South Africa |