

Report of the Evaluation Team on Endline Assessment of EU Switch Asia Project

“Promote Bamboo MSME Clusters for Sustainable Development in India”

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Executive Summary

Project Overview, Evaluation Methodology and Process

The project “Promote Bamboo MSME Clusters for Sustainable Development” - involving a total donor funding of Euro 2,499,824 and co-financing of Euro 624,956 - was implemented by FMC as Lead Implementing Agency. Other partners were SIDBI, CEMCA and Copenhagen Business School. The Project Associates were GDI/DIE and RGVN.

The overall objective of the Action was to promote bamboo as sustainable resource and boost entrepreneurship with emphasis on women, leading to green jobs. There were 5 inter-related work packages in the design of the Action synchronised to produce results for specific objectives. Performance of the project was especially looked into against each work package. FMC had put together a project management structure for efficient implementation which was also reviewed. To substantiate the theory of change, the evaluation team collected data and information from a range of sources and informants. The team tried to ensure an evidence-based and credible evaluation and identify causal and transformational pathways from the project results and impacts, identifying alongside the key drivers and barriers, so as to feed into the design of any future projects.

The evaluation process involved an inception phase, where the evaluation team developed the basic objectives and methodologies, zeroed in on the approaches to deal with specific issues, identified sites to be visited, prepared a list of stakeholders to be interviewed and developed basic questionnaires. This was followed by desk review and data analysis after which the interview phase began. The key people interviewed included the Heads/officials of FAs engaged, State Heads of FMC, experts engaged, project partners and FMC’s Executive Management. Some artisans were also consulted in the process. Field visits to clusters and CFCs were taken up next. When all the information was in place and data collected was synthesised, the report writing began.

To form a well-rounded view, the evaluation team also relied on on-site observation of results, review of videos/films made on the intervention and review of case studies – all of which helped the team in firming up and substantiating its findings. The broad evaluation questions were developed after careful consideration and thought and were directed at the specific target groups. The team also endeavoured to assess the likelihood of sustainability of the project results after the project completion.

For final rating of the project, the evaluation Team used a Rating Matrix covering overall design, relevance, effectiveness, efficiency, sustainability of benefits, cross-cutting performance criteria such as gender mainstreaming, M&E, results-based management, as well as performance of partners. The team firmed up its final rating based on each input and highlighted the key rating drivers. Performance against each log-frame item was also rated on a scale of 1 to 6, ranging from highly satisfactory to highly unsatisfactory.

Project’s contribution to Development Results - Effectiveness and Impact

Despite delays in project commencement, lockdown due to covid 19 and a host of other setbacks, the project has done exceedingly well. The intervention has been successful in promotion and development of entrepreneurship, providing skill development training, financial linkages, market linkages etc., introducing social security schemes, providing OHS inputs, infrastructure support in the form of CFCs, support from value chain and bamboo experts. As a result, entrepreneurs were able to develop new products, find new markets, the income and employment levels of artisans increased, they received better social security

support, their ergonomic conditions improved through OHS support and their children started going to schools.

On a log frame basis, the intervention excelled in 29 out of 34 parameters, going well beyond 100% achievement of targets. The average achievement of log frame targets was 169%. There were only 5 log frame indicators where achievement of target was less than 100%. These were: Market Generated (99.15%); Impact Livelihood (88.26%); MSMEs linked with FIs (88%), Midterm Project Evaluation (60%) and Workers receive OHS inputs and social security linkages (35.12%). The output relating to exploring line of credit was abandoned as no need was felt thereof, due to Indian banks already having good liquidity. Besides, an international line would have proved costly.

FMC has used its expertise to assist, train and advise technical personnel working for the South Asian Association for Regional Cooperation (SAARC) funded project "Promoting Integrated Bamboo based Enterprise Development among SAARC Countries". Local IAs of SDF bamboo project in Bangladesh, Nepal and Bhutan expressed immense satisfaction for the support coming from FMC in various areas.

FMC also arranged the services of 8 experts in the area of policy, value chain, procurement, bamboo waste management, etc. The content and quality of various documents produced under the intervention were appreciable particularly "E Pathshala document, audio visual material, Community Radio Station contents and OHS report, all exhibited high standards of content, quality and coverage. FAs and FMC staff worked closely, seamlessly and with a sense of ownership.

The intervention has resulted in behavioural changes at various levels of implementation in terms of advance a reasonable degree of economic competitiveness through substantial increase in income over base line; market competitive improved products; easing the working capital problem of artisans; doubling the average loan size etc. The project has been included by EU as one of the 7 exemplary business cases covered in 2020 in the EU publication on "Business Cases for Financing Sustainable Consumption and Production Practices" funded by it over a period of time.

The entire intervention was 100% environmentally sound in view of faster growth bamboo, being a 'renewable' resource, and its soil binding properties. There was no gender bias against women observed in the entire functioning of FMC.

FAs were effective in sensitising State Governments, Bamboo Missions, Forest Departments and SRLMs in bringing support for the intervention. They were also effective in sensitising bankers for enhanced credit linkages.

The CFCs set up by the intervention in project states are being used in a shared manner by the artisans. With increased artisanal activity, aggregators for marketing of bamboo products came up in 3 States. The project was able to significantly enhance the perception of Bamboo as a means to prosperity. Many FAs admitted that the intervention enhanced their own capacities. The project has been able to enhance status of women in the family or society by way of increased income, prevention of early marriage and instead sending daughters to schools etc. The intervention has also had an Impact on the State Government / Forest Department. Other agencies have also funded trainings, 3 clusters have their own CFC, funded by other agencies.

FMC was able to get good social media reach to promote bamboo. More than 15 million views were noticed on social media channels, close to 50k followers joined and video films got more than 4 lakh views.

By continuously engaging with a multitude of state and district level bamboo-related Government, private sector and civil society groups, the intervention has impacted sector policies. It has been able to Sensitise Forest departments, bankers and policy makers from India and policy makers of the SAARC countries. Some of the clusters in a State which were not covered by the intervention, have desired that such intervention should be made in their cluster also.

Bamboo has huge global prospects. China has created an industry of USD 35 billion from 6 million hectares of bamboo which employs over 8 million people. In terms of area under Bamboo, India is 2nd largest with 40% of global forest cover with 3 m people working on bamboo. In 2020, global trade in bamboo was to the tune of USD 2.969 billion, dominated by China (71.83% share) while India's share was a meagre 1.90%. Since 1980's, China has introduced a number of policy reforms such as a 10 year bamboo plan, tax exemptions, subsidies, standardisation, etc. The next phase of the EU Bamboo project can draw upon the Chinese experience.

Project's quality and performance

The project's quality and performance in terms of its design, relevancy, efficiency, sustainability and gender mainstreaming is outstanding. Logic of intervention is quite clear and well laid out in the log frame. FMC's in-depth field experience gels well with comparative advantages of other implementing agencies and overall project aligns well with priorities of National and State govts. The design of the programme promotes green development and green jobs covering all aspects of developmental needs along the value chain. the work packages are comprehensive and well defined. MSME and household units have actively participated in the project either on their own or through production networks they are part of. The contracted facilitating agencies fit well with their mandate, expertise, and intention to continue the work beyond the timelines of the project. The Diagnostic Studies in clusters were comprehensively done, although the evaluation team felt such a study would have served better purpose if done before drawing up the detailed log-frame.

The program was relevant to needs of the target groups – Household units and MSMEs. The intervention rightly identified clusters of Bamboo units across 9 states. The intervention rightly focused on one pilot cluster in each of these 9 states. The programme targeted capacity building of primary processors, harvesters , input suppliers and other service providers. Govt as a buyer and as a supporter along with Banks and other developmental institutions too were integrated into design and implementation. The programme was customized to different capacity building needs of various stakeholders across 9 states. Many of existing subsidy schemes of national and state govts were dovetailed into implementation of the programme. Strengths of different Implementing agencies complemented each other. The Facilitating agencies were also picked up as per their suitability and relevance to Bamboo sector.

Strongly collaborative model of working within IAs and with other FAs leant efficiency to the process of implementation. Their roles were clearly articulated in the project document and were well understood by all. The contractual agreements between various actors were well drafted and served the overall need of efficiency in implementation.

The project focused on sustainability and continuation of developmental efforts even beyond the duration of the programme. The enhanced capacities of the artisans / household units / MSMEs in design, manufacture and business activities related to Bamboo will go a long way in ensuring sustainability of efforts. Income enhancement experienced by artisans and other stakeholders at various levels will continue to motivate all to explore newer aspects of Bamboo business. Some of the e-learning modules will go much beyond the contours of project to help units not only in those 9 states but much beyond. Private sector actors like buyers, designers, raw material suppliers, NBFCs and many others have upgraded their skills to participate more actively in the business activities of the clusters.

Gender focus has been a very important attribute of the whole programme – given that more than 50% of processors are women / women led groups. Many women were helped to start a new enterprise and many more moved from their traditional roles of supplying labour to more active participation in design and commercial activities. Many households saw an improvement in bargaining position of women.

Performance of Partners (FMC)

FMC provided overall coordination support for the entire Action. The structure of the implementation mechanism was appropriate and based on a strongly collaborative model. The roles of stakeholders were clearly defined and detailed organogram was framed. The FAs for all the 9 clusters were efficiently selected after the finalisation of the terms of reference, selection methodology, identification of states for project implementation, mapping of districts and clusters. 5 FAs were selected in the last quarter of 2018 and the remaining 4 were selected in January 2019. The entire bidding process for selection of the FAs was conducted smoothly. The FAs were properly oriented for the project.

The number of enterprises that received technical, managerial and financial inputs was much higher at 3764 against the target of 2250. Harvesters trained were 456 (target 450). Overall market generated (Euro Million) was 3.53 mn Euros (target 3.50 mn). Several workshops and exposure visits were organised for the FAs/TAs. OHS inputs and social security linkages were provided to only 3512 workers (target 10,000). This was mainly because initially there was a hesitation among women artisans who did not share their ergonomic and health or safety related problems with them.

FMC got 7 market assessment studies conducted in line with the target. It also arranged setting up of 9 physical incubators (target 9), 70 Start-ups incubated (target 20); created linkages with 61 potential public and private buyers (target 20); 44 New buyers undertook sourcing of high potential products through start-ups (target 20).

FMC came out with a detailed document on bamboo standards available in India, which mentions a list of about 15 major BIS standards around Bamboo. FMC had engaged the services of a senior public procurement expert for exploring the public procurement route. In view of the elaborate set of requirements for public procurement, not much success could be achieved. Nevertheless, this highlighted a key area for more planned and concerted efforts during the next potential phases of the intervention.

FMC stationed a technical advisor in every district along with senior team from the head office. FMC also identified and linked 84 Strategic BDSPs (target 40); 12 Local FAs were capacitated by FMC (target 9); identified and capacitated 34 equipment and input suppliers (target 30); created a pool of 136 local BDSPs (target 100); organised 68 Producer Networks (PNs) and provided inputs to them (target 50).

Regarding exit strategy, FMC indicated that the key activity was to build capacities of FAs so that they continue to serve the bamboo sector and entrepreneurs even after the project is over.

The action was able to prepare 22 model business plans (target 20); sensitise and train 832 (target 150) local bankers from 54 FIs (target 10); Create financial linkages for 1981 MSMEs (target 2250) for 3.43 mn euros (target 1.88 mn euros), further, as per estimates made by FMC on Self investment made by units, about INR 49.76 mn was self-investment made which is about 20.46% of total investments made. FMC also explored international banks' credit lines for enabling offtake of SCP financial products.

FMC organised 18 regional workshops (target 12), 2 national workshops (target 2), One international workshop (target 1) and 8 learning documents (target 4). It also disseminated the learnings through 34 events (target 20) and created one two-way learning platform (target 1), as also organised 2 capacity building events for SAARC countries (target 1). FMC fell short to some extent in getting Mid-term Project Evaluations done – It conducted 6 evaluations against a target of 10.

The local FAs of SDF Bamboo project in Bangladesh, Nepal and Bhutan expressed appreciation for the technical support and knowledge sharing provided by FMC in various areas.

FMC was successful in arranging the services of about 8 experts in the area of policy, value chain, procurement, bamboo, waste management etc. FAs have generally appreciated quality of training provided and deliberations at orientation workshop.

The project kept a keen eye on ensuring quality of outputs and results, continuously by sector specialists and the FMC's "Technical Advisors" in the nine states. FAs and FMC staff worked closely, seamlessly and with a sense of ownership.

While this report is being written, the project had spent about 98% of the allocated budget. There was no extravagance observed. The procurements were generally governed by FMC's Handbook on Procurement Policy. Currently, FMC is getting a scrutiny carried out of its Procurement Policy by a veteran procurement expert.

Overall, FMC's performance has been excellent except for certain instances mostly because of factors beyond its control.

Factors facilitating or limiting the achievement of results

Based on the feedback gathered, the following supporting and hindering factors came to light. The major contributing factors were : 1. The overall concept and design of the project was very well conceived. 2. The project partners were highly competent. 3. The FAs hired were highly experienced and had a good local connect 4. The Indian Government had created a conducive policy environment around Bamboo including shifting it from 'tree' to 'grass' category, 5. State Governments and local agencies played a supportive role in furthering the project objectives 6. The bamboo conclave organised at Dumka, Jharkhand with huge participation brought lot of attention to Bamboo 7. Large natural resource base of bamboo in project states and 8. Huge market potential of bamboo where a lot is yet to be explored.

The key limiting factors observed were : 1. Time loss due to 3 Force Majeure events such as two waves of Covid-19 with lockdown and restricted mobility, significant political unrest after the announcement of the Citizenship Amendment Act which restricted movement, and

amendment in Foreign Currency Regulation Act which put in a restriction on transfer of funds to partner organizations. Overall, the project lost around 12 months and also the momentum that was created in 2019. 2. Staff attrition, which kept hindering the pace of implementation with continuity loss every time a critical resource moved out, although FMC was able to find quick replacements and achieve an average success rate of 169% of targets despite this. 3. Lack of a formal coordination mechanism among stakeholders due to which actions/achievements and insights coming from one FA/expert could not be shared with others. 4. Late engagement of project experts on various aspects related to Bamboo including design/marketing gave the experts little time to make a huge difference. Nevertheless, the work done by experts held lot of promise for future. 5. General lack of interest among unemployed youth who did not wish to tow the family line and work on traditional bamboo artefacts or utility items due to low remunerative nature of traditional artisanal activities.

Some other barriers faced were lack of knowledge of most FAs about of international best practices and exposure, satisfaction of most artisans with making of low value-added products, lack of market linkages for high value items, lack of demand aggregation which came in the way of accessing big buyers, and lack of quality suppliers of tools and machinery.

One of the reasons why the project met with such a resounding success with overachievement in almost all the areas, was its efficient and well laid out monitoring system. This helped in not only tracking every parameter but also the efforts that were going into it. The fact that the intervention operated an excellent intense internal monitoring system was unanimously mentioned by all the FAs, during interaction with the Evaluation Team. The Lead IA provided overall coordination support for the entire project, ensuring collaboration among various partners across all work packages, documenting financial and non-financial records, monitoring progress, and reporting to the EU. Roles and responsibilities were clearly defined between partner IAs. SIDBI carried out the verification visits efficiently and ensured timely disbursement of performance-based incentives to FAs.

Overarching Assessment

Overall, the project has done exceedingly well when compared to numerical targets assigned, as most of the project parameters saw more than 100% achievement. On an average, the achievement of targets was 169%. In the assessment of the evaluation team, 85% of project parameters received an “excellent” rating, with a perfect score of 6. As such the overall project rating is also found to be “excellent”. The average score of project parameters was 5.76 out of 6. Based on the rating rationale, the following ratings were assigned to achievements against each project parameter:

#	Evaluation criteria	Rating Assigned (out of 100)
A	Impact	90.83
B	Project design	97.50
C	Project performance	95.00
D	Cross-cutting performance criteria (Gender, M&E, RBM)	94.26
E	Performance of partners	92.50
Overall Score		94.02
Overall assessment		Excellent

The project achievements could have been higher but for the force majeure events, which were beyond the control of the project management team/stakeholders.

Conclusions, recommendations and lessons learned

Overall, the project achieved its targets despite covid restrictions. Most of the clusters picked up have achieved some vibrancy and most of the places will continue to be supported by implementing agencies even as the project draws to a close. Livelihoods have improved across clusters due to credit infusion, skill upgradation, new market linkages and newer products. With focus on women artisans, women empowerment has been a direct result of interventions. Many implementing agencies have got motivated to include Bamboo developmental work into their mainstream work.

It is recommended that India comes up with a long-term strategy and an integrated approach to develop Bamboo cluster- given its huge scope and a positive impact on women empowerment, green economy and green jobs and livelihoods. FMC can play a very important role in Policy advocacy on this front. A national Bamboo expert group can be set up with the mandate of suggesting a road map for key Bamboo clusters across India. National Bamboo Industry Development plan (2013-2020 and 2021 –30) developed by China can come in handy to suggest a few policy initiatives that need to be taken at the National level. What is also needed is a national level promotional campaign to promote Bamboo usage in place of other materials such as Plastic, steel etc. Govt can play a key role in demonstrating this by buying Bamboo products for its day to day use as well as showcasing a few important Housing and construction projects. Further the raw material chain needs strengthening and most of raw material supply is with Forest Department. Govt also needs to set up a coordination committee for all Bamboo related schemes. A bamboo start-up scheme and a PLI scheme to promote Bamboo units can go a long way in getting investments into the sector. A challenge fund can help experiment with new ideas and newer areas of research.

At the project level, it is suggested that diagnostic studies as the project is conceived would help better design the project at the initial stage itself. A central marketing agency can be associated with such a project as one of the implementing partners. New products , new designs and continuous and demand based training programmes will help keep the clusters vibrant for a long time. E-pathshala document, which is a comprehensive document on each and every aspect of Bamboo, need to be made to house under a national agency and a plan needs to be worked out to put it to proper and continuous use. FMC may like to explore collaboration with INBAR , an inter-governmental organisation that promotes environmentally sustainable development using Bamboo and rattan.

Key lessons learnt during the project are that Bamboo has a huge potential in ushering sustainability, improved livelihood and women empowerment. Sustained efforts in improvement in design, credit infusion skill upgradation and marketing linkages can go a long way in infusing dynamism into Bamboo clusters. A range of experts deployed by the project helped look at newer issues of waste reduction, exports and setting up of bigger units. Next phase of programme can help tie many of these together.

Next phase of Bamboo development programme can focus upon challenges in raw material supply and promotion of privately owned planation. CFCs can help usher in efficiency in production. Robust national and international marketing linkages can help bring markets closer to processors in the clusters. A conducive policy environment and credit eco system can help Bamboo clusters achieve their potential in National Development.

Chapter 1

1.1. Evaluation objectives and scope

The evaluation assignment - referred to as an independent Endline Assessment (EA) in ToR - was given to a team of two experts, viz. Mr. Surendra Srivastava (Senior Evaluation consultant, Team Leader) and Mr. Anand Prakash Srivastava (National Domain Specific Evaluation Consultant) through a bidding process in line with EU procurement guidelines. Additional support was provided to the team by engaging a domain specific expert Mr Jitendra Kalra to evaluate the project from a design, execution and skills perspectives. The bidding process was completed timely, and the evaluation assignment was initiated from September 01, 2022. The evaluation time frame was spread over 4 months with designated number of man-days for each expert, followed by a report writing phase.

As brought out in the Term of Reference laid out for the evaluation team, the purpose of this evaluation has been to independently assess the project to help FMC improve performance and results of ongoing and future programmes and projects. This independent Endline Assessment (EA) covers the whole duration of the project from its starting date in January 2018 to the completion date i.e., October 2022. The evaluation carried out was aimed to achieve 3 specific objectives:

- Assess the project performance in terms of design, relevance, effectiveness, efficiency, sustainability, and progress to impact.
- Develop a series of findings, lessons, and recommendations for enhancing the design of new and implementation of ongoing projects by FMC and disseminate them globally with other potential organisations.
- Identify suitable institutions or international organisations in SAARC, working on upliftment and development of bamboo sector in the country. The team was also supposed to hold initial interactions with some organisations and plan and organise events for the cross learning of the achievements of our project with the organisations.

1.2. Overview of the Project Context

There are more than 5 million people, half of them being women, in the tribal regions across 18 states, out of the 29 states of India, where abundant quantity of bamboo is available as a resource for their livelihoods. However, in the bamboo processing and product manufacturing segment, the number is likely to be around 3 million only. While this bamboo resource has been augmented by a range of public initiatives but not sufficiently harnessed in terms of its market applications. There is a huge scope for replacement of less sustainable resources and for creation of green jobs by effectively harnessing bamboo by upgrading existing products and introducing new products duly linked with markets. However, despite several public

support initiatives, this scope is not realised due to lack of customised, coordinated and converged local action that integrates a package of inputs through a strong self-sustainable local eco-system. There is need to demonstrate the efficacy of local multi-stakeholder governance systems with integrated development models for further replication. The Action, therefore, targets 9 districts among 9 bamboo resource-rich states wherein geographically contiguous clusters of enterprises will be identified for targeted action. These states have been selected because they hold sufficient critical mass of very small enterprises that can be upgraded and new ones created to help generate 10,000 green jobs directly and positively impact the environment by substituting less sustainable materials such a timber, cement, plastic and steel. The Action also targets sustainability with high replication potential through multi-stakeholder initiatives, creating linkages with banks & financial institutions, strengthening local governance systems, building supply chain partnerships and creating a cadre of local business development service providers (BDSPs).

1.3. Overview of the Project

1.3.1 General

Project donor(s)	EU
Project implementation start date	1st January 2018
Project Duration	58 months
Project implementation end date	October 2022
Donor funding	Euro 24,99,824
Co-financing by Implementing Agencies	Euro 6,24,956
Total project cost	Euro 31,24,780

The project “Promote Bamboo MSME Clusters for Sustainable Development” was implemented by FMC as Lead Implementing Agency. Other partners were Small Industries Development Bank of India (SIDBI), Commonwealth Media Educational Centre for Asia (CEMCA) and Copenhagen Business School (CBS).

The Project Associates were German Development Institute / DeutschesInstitutfür Entwicklungspolitik (DIE) and RGVN (North East) Microfinance Ltd.

1.3.2 Project Partners

A brief description of each is given below :

Foundation for MSME Clusters (FMC): FMC was the overall coordinator and a major implementer of the Action. FMC’s primary role in implementation was to help create sustainable supply chain of bamboo products to the construction, furniture and lifestyle sector as buyers (WP2). Out of 5 work packages created in the project, FMC was leading the implementation of WP2 (Promote select new bamboo products among high potential buyers),

WP3 (Sustain and upscale local initiatives through community-led multi-stakeholder development models) and WP5 (Strengthen policy dialogue and dissemination of proven development models relevant for bamboo sector). FMC was also actively engaged with SIDBI under WP1 in a supporting role, to provide technical inputs to the grass root implementing agencies called Facilitating Agencies (FAs). FMC also provided overall coordination support for the entire Action, ensuring collaboration among various partners across all work packages, documenting financial and non-financial records, monitoring the progress and reporting to EU.

Small Industries Development Bank of India (SIDBI): SIDBI was a major implementation partner for promoting MSMEs based on bamboo through its acclaimed MEPP scheme (Micro Entrepreneurship Promotion Programme) and providing access to finance to enterprises. SIDBI's role was mainly to coordinate the implementation of WP1 (Support enterprise development for sustainable supply of bamboo products and generate improved livelihoods) and WP4 (Promote sustainable linkages between financial institutions and local enterprises), but is also contributing in terms of knowledge sharing, ideating and supporting initiatives across the entire Action comprising of a total of 5 work packages.

Commonwealth Education and Media Centre for Asia (CEMCA): CEMCA was contributing in WP1, WP3 and WP5 by creating relevant content and building capacity of practitioners using media enabled learning. CEMCA used Community based media like radio and video programmes, mobile applications and IVR to empower the community with the right knowledge and information to achieve sustainable livelihoods. CEMCA was responsible for creating the technology platform for disseminating knowledge and skills in a Flexible and Blended model and create a Community of Practice. The best practices and case studies were to be showcased in national and international forums.

Copenhagen Business School (CBS): CBS is a European Partner that was to contribute to the Action through WP5 by way of creating learning documents for policy to promote sustainable consumption and production and preparing case studies emerging from the Action activities especially on the gender aspect.

1.3.3 Final Beneficiaries

More than 3 million people, half of them being women, were estimated to be employed in bamboo MSMEs, mostly in tribal regions across 18 states of India. The project focussed on these potential beneficiaries.

1.3.4 Target Group

The target group for the project was spread across creation, growth of, or reaching out to, 2250 bamboo product manufacturing MSMEs, 450 harvesters, 50 Producer networks (PNs), 40 Strategic Business Development Service Providers (BDSPs) and 30 Equipment suppliers

and 10,000 workers from marginalised community with gender balance; 20 institutional buyers and their representative groups, 150 bankers from 10 Financial Institutions (FIs)

The overall objective of the Action was to promote bamboo as sustainable resource and boost entrepreneurship with emphasis on women, leading to green jobs. The Action was designed to help local community and other private sector stakeholders collaborate for the promotion of green economy, sustainable growth, economic prosperity and poverty reduction in India along with mitigation of climate change.

1.3.5 Work Packages created for the Action

There were 5 work inter-related packages in the design of the Action synchronised to produce results for 5 specific objectives respectively. The first key guiding principle for design of the Action is to follow integrated approach around multi-stakeholder groups. The second principle was to follow life cycle approach that ensures (i) Full bamboo resource utilisation through multiple applications (ii) improved efficiency in the production system, and (iii) offtake of bamboo products through consumer education & awareness creation, by aligning to product & production standards. The third principle is to ensure sustainability through replication of knowledge at various levels in the private sector and policy makers. Fourth principle is to align and support business activities. Fifth principle has been to build on existing competencies, institutional structures and public support systems to ensure value for money.

Work Package 1: Promote enterprises for sustainable production	
Specific Objective	To promote enterprise development for sustainable supply of bamboo products and generate improved livelihoods
Partners involved	SIDBI (Lead), FMC, CEMCA
Results expected	2250 MSMEs start/expand bamboo product supply worth 25.3 million Euros to existing/new markets, impacting 10,000 livelihoods through new income to the tune of 13 million Euros, improved occupational health & safety (OHS) and social security. The bamboo product supply target was later reduced to Euro 3.53 million with EU approval, after realising that the bamboo enterprises were not formal in nature and were mostly household enterprises.
Publications, Tools and Reports to be produced	R1: 9 diagnostic study reports including OHS practices and social security status of MSMEs, T1: 4 Training modules T2: 1 IEC platform

Work Package 2: Create Market Opportunities for high potential products	
Specific Objective	To Promote select new bamboo products among high potential buyers
Partners involved	FMC (Lead)
Results expected	New buyers undertake sourcing of 5 high potential bamboo products in targeted clusters through 20 successful business start-ups.
Publications, Tools and Reports to be produced	P1: Market assessment study to identify high potential timber and other unsustainable product substitutes T1: Learning app for e-modules T2: Self-learning AV modules on OHS and social security measures T3: Modules on a) Post harvesting techniques. b) Seasoning, storage, grading and sorting; T4: Promotional videos on 'Benefits of using bamboo products'

Work Package 3: Strengthen local governance systems and intermediaries	
Specific Objective	To sustain and upscale local initiatives through community-led multi-stakeholder development models
Partners involved	FMC (Lead), CEMCA
Results expected	9 local Facilitating agencies (FAs) provide services beyond Action, 50 Producer networks (PNs)
Publications, Tools and Reports to be produced	R1: Curriculum of 4 training programmes for FAs R2: Detailed Project Reports for 9 CFCs; R3: List of 40 strategic and 100 local BDS providers R4: List of 30 Potential equipment and inputs suppliers

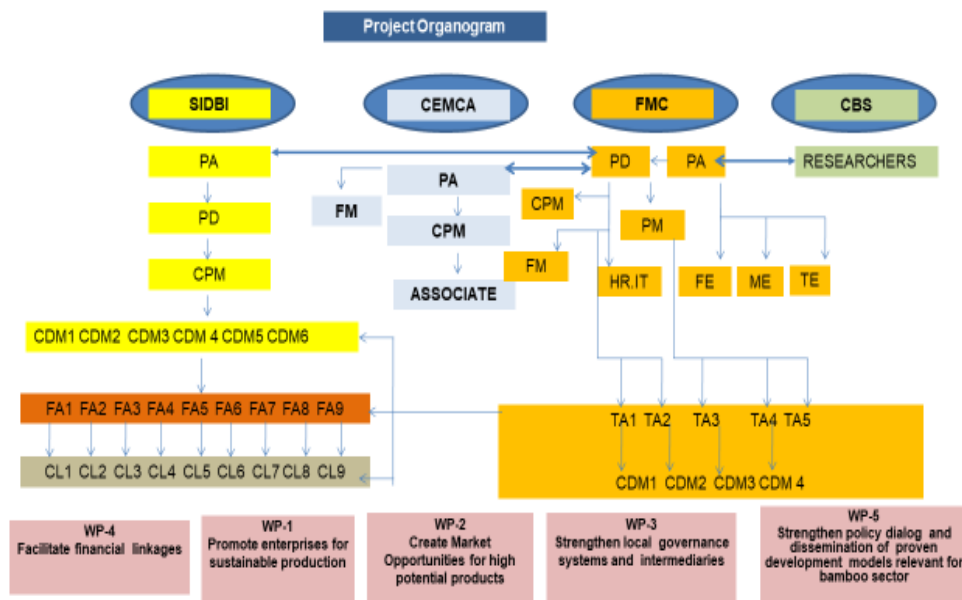
Work Package 4: Facilitate financial linkages	
Specific Objective	To promote sustainable linkages between financial institutions and local enterprises.
Partners involved	SIDBI (Lead), RGVN
Results expected	10 FIs provide credit through cluster financing instruments to 2250 MSMEs worth 9 million Euros. The amount was later revised by EU to 1.88 million Euros.
Publications, Tools and Reports to be produced	R1: Model business plans (20) for bamboo based businesses among MSMEs

Work Package 5: Strengthen policy dialogue and dissemination of proven development models relevant for bamboo sector

Specific Objective	To strengthen policy dialogue and disseminate proven development models relevant for bamboo sector, more particularly at the state, national and international level.
Partners involved	FMC (Lead), SIDBI, CEMCA, CBS, DIE, RGVN
Results expected	200 Policy makers from India and the SAARC countries sensitised and 9 Indian states initiate replication of similar intervention models
Publications, Tools and Reports to be produced	<p>P1-4: One policy learning document and 2 policy briefs each on</p> <ul style="list-style-type: none"> (i) SCP Financing (ii) Gender dimensions in bamboo Value Chains (iii) Local Governance and Bamboo value chains (iv) Skill development <p>T1: Learning platform for project stakeholders using cluster observatory R1-12: 'Learnings from Regional Policy Event' R13-14: National workshops one on financing and another one on gender, governance & value chains; R15: International workshop on replication potential of bamboo based development in SAARC countries R16: Capacity building on skill development (Bangladesh) R17: Mid-term project evaluation R18: End-term project evaluation</p>

1.3.6 Project management Structure

The project management structure as designed by FMC is summarised below.



PA: Project Advisor, PD: Project Director, CPM: Component Project Manager, CDM: Cluster Development Manager, FM: Finance Manager, HR.IT: Human Resource, Information Technology, FE: Financial Expert, ME: Marketing Expert, TE: Technical Expert, TA: Technical Advisor, FA: Facilitating Agency, CL: Cluster, WP: Work Package

1.4. Theory of Change

- A theory of change is a method that explains how a given intervention, or set of interventions, are expected to lead to a specific developmental change, drawing on a causal analysis based on available evidence. A thorough theory of change helps guide the development of sound and evidence-based programme strategies, with assumptions and risks clearly analysed and spelt out.
- When the project implementation was commenced it was felt that most of the enterprises in all the 9 places of intervention were involved in making of traditional products like bamboo mats, baskets, etc. The focus of the project was to train a significant number of enterprises to shift to contemporary products which would generate higher profit margins for the enterprises. The major challenges in doing the same was lack of working capital, proper skills, understanding the need for correct treatment of bamboo and technique thereof, getting tools and machinery, exposure and design inputs and marketing efforts to connect to the right buyers. In order to achieve the results, the projects worked on various skill enhancement trainings, design interventions, market generating activities, technical upgradation trainings, creating/strengthening of CFCs, skill development on usage of jigs, fixtures, tools, machinery etc. The change from traditional to contemporary products was important for overall scaling up of the enterprises. The intervention also led to an increase in the working capital requirement from Rs.2000 to Rs 40000/month for which bank linkages, bankers' orientation etc was required. The intervention also led to an increase in the income of artisans in of around 40% on an average going upto 70%-80% in some cases. The intervention has brought in the beginning of a change in the bamboo-based clusters of India which could help in the replication of the learnings as also may lead to immergence of vibrant and modern model clusters making high end bamboo products.

Box 1: Pramod Barange / Betul, Madhya Pradesh

From Seasonal Bamboo Worker to Retailer: Barange' s Story of Perseverance

Pramod Barange, from Betul was a seasonal bamboo worker. The FMC team provided him assistance to improve on his products and production capacity, through incorporating latest design, developing new products and by assisting him in obtaining credit of Rs 42000 under Mukhyamantri Swarojgar Yojana from Bank of Maharashtra. The team gave special effort on improving Barange' s communication and marketing skills. He has now shifted from being a seasonal bamboo worker to a full-time bamboo artisan earning Rs 24000 a month, a 6-fold increase in income. He has also been incorporated as a trainer at FMC. His success has motivated other artisans in the cluster to take up bamboo as a full-time work with 30 units producing high quality bamboo craft.

- To substantiate the theory of change, the evaluation team collected data and information from a range of sources and informants. The team paid due attention to

triangulating the data and information collected before forming its assessment. This was essential to ensure an evidence-based and credible evaluation, with robust analytical underpinning, which the evaluation team was able to achieve.

- The theory of change helped the evaluation team identify causal and transformational pathways from the project outputs to outcomes and longer-term impacts, and drivers as well as barriers to achieve them. The learning from this analysis may prove to be useful to feed into the design of the future projects.

1.5. Evaluation Methodology

A. Approach

- The evaluation team has carried out the evaluation as an independent in-depth exercise using a participatory approach whereby all key stakeholders of the project were consulted during the evaluation. The evaluation team liaised with the FMC Project Management Team on the conduct of the evaluation and methodological issues.
- The project was evaluated in the following domains:
 1. Adherence to overall objectives
 2. Project design and marketing
 3. Skills and technology
 4. Financing, and
 5. Policy promotion

B. Evaluation Process

- The evaluation assignment began effectively from September 01, 2022, two months before the project was to officially end. The evaluation work has been conducted from September to December 2022. Thereafter the work of report writing was taken up. The target for submission of the final report was set as January 31, 2023. The evaluation was undertaken in five phases which were not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

Phase 1	Inception. Here the evaluation team developed the basic objectives and methodologies for evaluation, found out the correct approaches to deal with specific issues for the evaluation, identified sites to be visited, developed the basic questionnaires for various target groups such as IAs/FAs/Experts etc., and prepared a list of stakeholders to be interviewed, etc.
Phase 2	Desk review and data analysis.

Phase 3	Conducting interviews with FAs, and discussion with Project Partners and Experts engaged.
Phase 4	Field visits (Clusters, CFCs, etc.)
Phase 5	Data analysis and report writing.

C. Data Collection Methods

Following were the main instruments for data collection used by the evaluation team:

1. **Desk and literature review** of documents related to the project, including:
 - a. The original project document/contract and business plan, log frame etc.
 - b. Monitoring reports. This included the progress and financial reports, mid- term review report, output reports, ROM report and other relevant correspondence.
 - c. Internal Notes shared by FMC related to the project.
 - d. Various reports, manuals, audio visual tools, case studies and presentations prepared under the project by the experts engaged.
 - e. Learning papers created under the project
 - f. Technical papers on bamboo

*(Complete list of documents reviewed as part of literature review is enclosed as **Annexure 3.**)*

2. **Stakeholder consultations.** This was conducted through structured / semi-structured interviews. Key personnel interviewed included the following:
 - a. Heads/officials of FAs engaged in various states/locations
 - b. FMC State Heads
 - c. Experts engaged in the project
 - d. Project partners and associates
 - e. FMC Executive Management and key staff involved in the project

*(List of stakeholders interviewed is enclosed as **Annexure 4.**)*

3. **Field visits** to some project sites in India.
4. **Interaction with stakeholders in other countries** with whom the project findings/learnings were shared (Bangladesh, Bhutan and Nepal)
5. **On-site observation of results** achieved by the project, including interviews of actual and potential beneficiaries of improved technologies and designs.

6. **Review of video/films** made on the intervention, highlighting the findings, challenges, achievements and emerging issues.

7. **Review of case studies** prepared under the project.

D. Evaluation key questions and criteria

The broad evaluation questions to which the evaluation team sought to find answers were the following:

1. What were the key drivers and barriers to achieve the long-term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long-term objectives?
2. How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?
3. What have been the project's key results (outputs, outcome and impact)? To what extent have the expected results been achieved?
4. To what extent the achieved results will sustain after the completion of the project?
5. What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

The evaluation team also endeavoured to assess the likelihood of sustainability of the project results after the project completion.

The key evaluation criteria assessed by the evaluation team is summarised in section F. The detailed questions to assess each evaluation criterion are also given therein.

E. Evaluation Framework - Project evaluation criteria

The evaluation team used the following framework to form an overall assessment of the project achievements:

#	Evaluation criteria	Mandatory rating
A	Impact	Yes
B	Project design	Yes
1	Overall design	Yes
2	Log-frame	Yes
C	Project performance	Yes
1	Relevance	Yes
	Effectiveness	Yes
3	Efficiency	Yes
4	Sustainability of benefits	Yes

D	Cross-cutting performance criteria	
1	Gender mainstreaming	Yes
2	M&E <ul style="list-style-type: none"> ○ M&E design ○ M&E implementation 	Yes
3	Results-based Management (RBM)	Yes
E	Performance of partners	
1	FMC	Yes
F	Overall assessment	Yes

F. Key considerations for evaluation of the project

The key considerations with which the evaluation team approached the discussion with the stakeholders for their views revolved around the following:

1. Was the design of the project appropriate to the needs and rights of target group?
2. What are the key drivers and barriers to achieve the targets. In areas we did not get desired results, what were the barriers? In areas where we achieved great results, what were the drivers?
3. What additional things, project would have done more, to enable you to have better performance?
4. What are the activities, the project should not have undertaken and why?
5. Did the project spend too much time, energy, or resources on some items where it got too little results?
6. What are the key project achievements which are replicable?
7. If we had to do a similar project now, what changes in approach, design, or implementation strategy shall we recommend?
8. Did the intervention have an adequate internal monitoring system? Was it sufficient?
9. Are the results of the project sustainable in the long run or will wither away with time? How to keep the momentum going?
10. Unintended / unexpected/ allied results achieved by the project and lessons learnt.
11. Which locations/project states/clusters did exceedingly well and why? Which ones lagged substantially and why?
12. What is the unfinished agenda?
13. What should come as phase II of the project?
14. To what extent are results inclusive i.e. ensuring the fair distribution of effects across different groups of the population?
15. Do you think that project should have different strategies for different types/size/level of units/beneficiaries, instead of a common strategy.
16. How did COVID affect the project? If COVID was not there, what could have been achieved more.
17. What lessons can be drawn from the successful, good practices and unsuccessful practices in designing, implementing and managing the project?

18. What is the contribution of this intervention to achieving gender equality and human rights outcomes?
19. How effective were the training modules? How effective was outreach?
20. Whether the environmental and social safeguards were addressed appropriately in the project's design and implementation?

G. Performance of Lead Partner

The evaluation also endeavoured to assess the performance of the Lead partner, i.e, FMC. This was done with two specific criteria in mind:

- Quality of Implementation, e.g. the extent to which the agency delivered effectively, with focus on elements that were controllable and how well risks were identified and managed.
- Quality of Execution, e.g. appropriate use of funds, procurement and contracting of goods and services.

Although the EV team held interactions with other project partners, viz. SIDBI, CBS and CEMCA, they were not assessed, as they were outside of the scope of the ToR.

H. Rating System

Finally, the evaluation team assigned ratings to various outputs and outcomes as detailed in the log-frame of the project, on the following basis :

Scoring criteria

Score	Definition	Basis	Rating
1.	Highly satisfactory	Level of achievement presents no shortcomings (90% - 100% achievement rate of planned expectations and targets).	Excellent
2.	Satisfactory	Level of achievement presents minor shortcomings (70% - 89% achievement rate of planned expectations and targets).	Good
3.	Moderately satisfactory	Level of achievement presents moderate shortcomings (65% - 69% achievement rate of planned expectations and targets).	Satisfactory
4.	Moderately unsatisfactory	Level of achievement presents some significant shortcomings	Unsatisfactory

		(30% - 64% achievement rate of planned expectations and targets).	
5.	Unsatisfactory	Level of achievement presents major shortcomings (10% - 29% achievement rate of planned expectations and targets).	
6.	Highly unsatisfactory	Level of achievement presents severe shortcomings (0% - 9% achievement rate of planned expectations and targets).	

1.6. Limitations of the Evaluation

The evaluation team wishes to highlight the following limitations faced while evaluating the project:

- The evaluation team trusted the documents presented to it on face value and did not try to ascertain the veracity of the documents. It had no reason to assume that the documents were not bona fide or not trustworthy.
- The overall approach of the evaluation team was to (a) estimate the level of achievements, (b) identify the weaknesses and the barriers wherever the project performed below expectations and (c) suggest how the future interventions could be better designed, planned, implemented and monitored.
- It was not possible to travel all project sites, but the evaluation team did visit a few destinations. With instances of new covid variant rising, extensive travel was not the preferred route the evaluation team undertook. Most discussions were held online, with sufficient time devoted to understanding the stakeholder viewpoints. It was endeavoured not to miss out on any facilitating agency, project managers/state heads of FMC, experts or partners. Everyone's view was taken in forming an overall assessment of the project.

Chapter 2

2. Project's contribution to Development Results - Effectiveness and Impact

2.1 Project's achieved results and overall effectiveness

A. Comments on achievement of intended Log frame targets

Despite delays in project commencement, lockdown due to covid 19 and a host of other setbacks, the project has done exceedingly well. 29 out of 34 project parameters saw more than 100% achievement.

The intervention has been successful in promotion and development of entrepreneurship, providing skill development training, financial linkages, market linkages etc., introduce social security schemes, OHS inputs, infrastructure support in the form of CFCs, support from value chain and bamboo experts etc.. As a result, entrepreneurs were able to develop new products, find new markets, the income and employment levels of artisans have increased, they have better social security support, their ergonomic conditions have improved through OHS support and their children are going to schools etc.

The action demonstrated that bamboo as a product has a huge potential and helps in reducing GHG emissions, increasing forest area (Quick Replenishment) and reducing pollution. Through the activities undertaken in WP5 the Action ensured that policy makers recognize that increase in its usage would help us in reducing the reliance on unsustainable products or raw materials that requires many years to replenish and are also not environmentally sustainable. The project has reduced carbon emissions by approximately 5138 tonnes. With bamboo-based green job creation getting embedded in the biggest livelihood creation program of the government, the contribution to climate change mitigation will grow many folds in the next 3 to 5 years.

The intervention contributes to Sustainable Development Goals (SDGs) 5, 8, and 12. To SDG 5 ("Achieve gender equality and empower all women and girls") by enabling women to work decently and in managerial positions in rural industries and access financial services (though not via land ownership or law reform as this SDG foresees). To SDG 8 ("Foster sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all") through support to entrepreneurship, creativity and innovation (SDG 8.3.), resource efficiency and the prevention of environmental degradation (8.4.), a safer working environment through the promotion of Occupational Health and Safety (8.8) and access to financial services (8.10); and to SDG 12 ("To ensure sustainable consumption and production patterns") by promoting an alternative, profitable and renewable input for a range of users including the construction and lifestyle sectors.

Parameter-wise achievement of the Outcomes (OCs) and Outputs (OP) as compared to numerical targets assigned under the project is as follows:

OC/OP#	Output/Outcome Parameters	Log Frame Target	Achievement against Target	% Achievement
Oc 1.11	Enterprises started/expanded	2250	2604	115.73%
Oc 1.12	Women enterprises started/expanded	900	2089	232.11%
Oc 1.21	Impact Livelihood	7000	6178	88.26%
Oc 1.22	Impact Livelihood of women	3600	4139	114.99%
Oc 1.3	Market Generated (Euro Million)	3.53	3.50	99.15%
Oc 2.1	New buyers undertake sourcing of high potential products through start-ups	20	44	220.00%
Oc 3	9 CFCs created/ strengthened	9	15	166.67%
Oc 4.1	FIs provide credit (overall)	10	54	540.00%
Oc 4.2	Credit provided (Million Euro)	1.88	3.43	182.00%
Oc 5	Policy makers sensitised from 3 SAARC Countries and 9 states	200	357	178.50%
	OUTPUTs			
Op 1.1	Enterprises received technical, managerial and financial inputs	2250	3764	167.29%
Op 1.2	Harvesters trained	450	456	101.33%
Op 1.3	Workers receive OHS inputs and social security linkages	10000	3512	35.12%
Op 2.1	Market assessment study	7	7	100.00%
Op 2.2	Physical incubators set up	9	9	100.00%
Op 2.3	Start-ups incubated	20	70	350.00%
Op 2.4	Organise linkages with potential public and private buyers	20	61	305.00%
Op 3.1	Local FAs capacitated	9	12	133.00%
Op 3.2	Strategic BDSPs identified and linked	40	84	210.00%
Op 3.3	Created a pool of local BDSPs	100	136	136.00%
Op 3.4	PNs organised and provided inputs	50	68	136.00%
Op 3.5	Equipment and input suppliers identified and capacitated	30	34	113.33%
Op 4.1	Model Business plans prepared	20	22	110.00%
Op 4.2	Local bankers sensitised	150	832	554.67%
Op 4.3	MSMEs linked with FIs	2250	1981	88.00%
Op 4.4	Explore and link international bank credit line	0	0	-

OC/OP#	Output/Outcome Parameters	Log Frame Target	Achievement against Target	% Achievement
Op 5.1	Regional Workshops	12	18	150.00%
Op 5.21	National Workshops	2	2	100.00%
Op 5.22	International Seminar	1	1	100.00%
Op 5.3	Learning documents	4	8	200.00%
Op 5.4	Dissemination of learning in 20 events	20	34	170.00%
Op 5.5	Create two-way learning platform	1	1	100.00%
Op 5.6	Capacity building event for SAARC countries	1	2	200.00%
Op 5.7	Midterm Project Evaluation	10	6	60.00%
Op 5.8	End term Project Evaluation	1	1	100.00%

Under Outcome 1 (Number of MSMEs expanded, of which 40% women with revised target of EUR 1.77 million of new income (product supply target of 25.3 million Euros was later reduced to Euro 3.53 million with EU approval, after realising that the bamboo enterprises were not formal in nature and were mostly household enterprises. Since the income is considered as 50% of turnover, the income target also got reduced to Euro 1.77 million), improved Operational Health and Safety (OHS) and social security): 2604 enterprises (2089 female owned) have been set up or expanded against a target of 2,250 and 900 respectively. In Assam, target for grounding 350 enterprises was achieved and additional targets of 250 units were given and achieved. In Tripura also original target of 250 (achieved 270) and additional target of 75 was achieved. Out of 7,000 targeted green jobs, 6178 (4039 female) jobs were created. Approximately EUR 3.50 mn euro worth of market was generated (target : EUR 3.53 million).

Under Outcome 2 (Number of new buyers sourcing new bamboo products through business start-ups): 44 new buyers (target: 20) have been connected. 70 innovative start-ups (target: 20) and 9 incubators were set up (target 9).

Under Outcome 3 (Number of Facilitating Agencies providing services beyond the Action, Producer Networks are created, input suppliers and Business Development Service Providers provide strategic services): 12 Facilitating Agencies were capacitated (target 9), 68 Producer Networks (target: 50), created 15 Common Facility Centre (target: 9), linked out of 34 equipment suppliers to the businesses (target30) and identified 84 strategic (target 40) and 136 local business development services providers (target 100) (consultants, architects, marketing experts, financial advisors etc.).

Under Outcome 4 (Number of Financial Institutions provide cluster financing instruments to MSMEs worth EUR 1.88 million): 54 banks/NBFCs/MFIs are now providing credit to the MSMEs (here the intervention overshoot the target of 10). However, the loan sizes approved

are small, largely due to the small credit needs of smaller artisans, reaching a total of EUR 3.43 mn euro (target: EUR 1.88 million euro).

Under Outcome 5 (Number of policy makers are sensitised and initiating similar intervention models in SAARC countries): 357 policymakers have been involved in consultations (target: 200). At National level, FMC interacts with policy makers such as NITI Ayog. In response to market demand, in 2017, Bamboo was earlier categorised as a grass and not forest tree, facilitating easy availability of bamboo to artisans / businesses. FMC has also given inputs to NITI Ayog on formation of [14 groups on Bamboo for the techno commercial study on bamboo](#). FMC is also part of various sub-committees formed by NITI Ayog for undertaking a techno-commercial study for the bamboo sector. Forest departments have been providing bamboo to local producers in a cheap and easy manner than before. Key sector studies relating to Value Chains, financing and Gender have been completed which would make important contributions to the strategic orientation of the intervention and future endeavour in this direction.

FMC have an MoU with Meghalaya Basin Management Agency for the development of bamboo sector in the state.

Proposed engagement with DAYNRLM

Deendayal Antodaya Yojna - National Rural Livelihood Mission (DAY-NRLM) has a vision of supporting 25 million rural women to enable them to earn an income of Rs One lakh per annum and making them takhpati through DAY-NRLM, out of which one million women will get green jobs/enterprises by establishing bamboo value chains and bamboo based rural industries.

FMC is in discussion with DAY NRLM for collaboration with them. Through this collaboration, FMC plan to support the creation of around 10 lakh green jobs in the country through various interventions in the bamboo sub sectors like energy, construction, furniture, farming, cultivation and also the handicraft sector. There is huge potential for women to get embedded in corporate supply chains after establishing individual and/or group enterprises and/or through their producer companies.

FMC has also requested DAY NRLM for appointing FMC as a Technical Support Agency at the national for DAYNRLM and utilize them for the economic and social development of rural India and provide support to various SRLMs for establishing bamboo and other sectors' value chains for the benefit of rural women.

During the end line evaluation, the facilitating agencies and State representatives of IAs interviewed mentioned that the innovative technical ideas, new business plans and links with banks and subsidies have created new business opportunities for them. They also mentioned that they were able to produce better quality bamboo products than before.

The intervention has also prepared a document containing 16 Case Studies which point to some real successes, for example, a single mother of five children in Arunachal Pradesh who no longer needs to access informal moneylenders with their prohibitive rates and practices but instead has grown her business with official loans she obtained with the help of the project, or an artisan in Chhattisgarh who has doubled his income thanks to new processing techniques acquired.

B. Specific comments on Log frame items where achievement of target was less than 100%

Out of 34, there were 5 log frame indicators where achievement of target was less than 100%. These were : OC 1.21- Impact Livelihood (88.26%); OC 1.3 - Market Generated (99.15%); OP 1.3 - Workers receive OHS inputs and social security linkages (35.12%); OP 4.3 - MSMEs linked with FIs (88%) and Op 5.7 - Midterm Project Evaluation (60%). Under each of these, the reasons of lower achievements are explored below.

Livelihood promotion

Op/Oc#	Parameter	Target	Achievement	% Ach
Oc 1.21	Impact Livelihood	7000	6178	88.26%

Comments :

The work on creating impact livelihood got delayed as field level was seriously restricted due to force majeure conditions. The second wave of Covid further dampened the results. However, FMC could reach about 88% of targets, expediting results in later phase of the project.

Market generation

Op/Oc#	Parameter	Target	Achievement	% Ach
Oc 1.3	Market Generated (Euro Million)	3.53	3.50	99.15%

Comments :

During the interactions with the facilitating agencies and State representatives of IAs, it was indicated that at the commencement or design of the programme, it was assumed that bamboo enterprises would be formal SME units which require higher investment and bank loans and would employ at least 3-4 persons. After the feasibility studies were done, it was found that most of them are household or own account enterprises requiring lesser investment, lesser bank finance and would employ hardly 1-2 persons. The total target of 2250 enterprises could not have achieved the production volume required to generate the original market generation figure of Euro 25.30 million. This log frame target was set keeping large and medium units

also in mind and was done before FMC intervened in the clusters. Further, the project also started off late, as during 2018, implementation partners were working out their exact roles and deployment of local teams. Project actually started in 2019. 2020 and half of 2021 was lost to COVID. However, the Diagnostic Studies done for the 9 clusters and the results (market of Euro 1.53 million at the time of annual review December 2021) achieved so far, suggest that additional target of Euro 3.53 million turnover is optimum to start/expand the targeted 2250 enterprises, as they are mostly coming from micro and also within that mostly from household and micro enterprises. Also, the slowdown is due to Force Majeure conditions as no off line market promotion like trade fairs or buyer seller meets were possible and also the Index of Industrial Production of the country was negative in 2019-20 and 2020-21. The target for market generation was accordingly reduced with EU approval, and the achievement was thereafter more than 99%, which is satisfactory.

Worker health and safety

Op/Oc#	Parameter	Target	Achievement	% Ach
Op 1.3	Workers receive OHS inputs and social security linkages	10000	3512	35.12%

Comments :

The quality of OHS training was very good and the project has also come out with a very good report on the entire OHS Training (see box below). However, FMC could not achieve the target of providing OHS inputs and social security linkages to 10,000 workers. The Evaluation Team tried to explore the reason for low achievement. During interaction, the FAs informed that there was a hesitation among women artisans who did not share their ergonomic and health or safety related problems with them. As a result, their whole hearted participation in the OHS programmes could not be ensured. This was a handicap FMC had to live with.

Box 2 **OHS Training**

The lifestyle and working conditions of artisans heavily impact their bodies on a daily basis, leading to long term physical and mental health challenges which affect their craft practice. It is for this reason that OHS measures are a crucial factor to consider when we think about offering benefits to the artisans. The OHS training, gauged the well-being of the artisan across the 3 OHS Hazard parameters viz. Work Environment, Physical Health and Mental and Psycy-Social Health.

Bamboo craft is a tedious and laborious art form that is physically taxing on the body in the short term, while also posing general health, postural, socio emotional, and lifestyle hazards in the long term. During in-person conversations, over 80% of artisans shared experiencing some form of mental or physical pain and challenge.

The OHS measures were designed with the goal of offering self-care techniques and body-mind interventions that would allow artisans to relax, increase their productivity and happiness quotient, along with improving their posture to reduce fatigue, pain, bodily wear and tear, et cetera.

To create a tangible impact for 5000 artisans in nine states across India, the team hand picked 20 volunteer trainers (VTs) from within the artisan clusters. the VTs underwent a master training process for the 18 OHS modules on good posture and holistic wellbeing.

The Outcome: By the end of the project, Movement Matters delivered the following:

1. Created and taught 18 OHS training modules in developing holistic health to 500 artisans directly, and 5,000 indirectly;
2. Personally trained a team of 20 Volunteer Trainers (VTs) on-site.
3. Curated, wrote, translated, and provided reference manuals for 18 OHS training modules to the VTs;
4. Designed a posture calendar with 12 good postures for the purpose of displaying at the artisans' homes;
5. Researched and curated ergonomic design recommendations for a bamboo workstation for artisans while also incorporating the insights and feedback of the artisans on the prototype.

Credit Linkage

Op/Oc#	Parameter	Target	Achievement	% Ach
Op 4.3	MSMEs linked with FIs	2250	1981	88.00%

Comments :

Initially, banks were not comfortable in entertaining loan requests of bamboo artisans. Lending process was also not very smooth. Multiple interaction with banks and support from industries department by the FAs and FMC team helped in engaging the bankers better. The FA helped in preparing Project Reports and also helped banks in recovery of past loans. This brought down the bad debt level and turned the bankers around. Loans are still being sanctioned by banks for bamboo related activity. Loans availed by bamboo artisans are reported to have been generally repaid on time and the incidence of non-performing loans is minimal. Further, the project also started off late, as during 2018, implementation partners were working out

their exact roles and deployment of local teams. Project actually started in 2019. 2020 and half of 2021 was lost to COVID.

Further, the focus of the project was pro-poor and primarily women several of them having no bank history and were unbankable for various reasons. They moved ahead by making self-investments. As per details provided by FMC on Self investment made by units, about INR 49.76mn was self-investment made which is about 20.46% of total investments made. The share of self-investment to total investment was lowest in Assam at 5.81% and highest in Arunachal Pradesh at 79.24% followed by Odisha at 70.17%.

Yet, there was considerable success in creating financial linkages in terms of amount of credit channelised and number of FIs which came on board. The success ratio in these parameters was 182% and 542%, as illustrated in the following table.

Op/Oc#	Parameter	Target	Achievement	% Ach
Oc 4.1	FIs provide credit (overall)	10	54	540.00%
Oc 4.2	Credit provided (Million Euro)	1.88	3.43	182.00%

Overall, creating financial linkages for bamboo artisans was one of the major highlights of the whole programme and has a huge replication potential.

Project Evaluation

Op/Oc#	Parameter	Target	Achievement	% Ach
Op 5.7	Midterm Project Evaluation	10	6	60.00%

Comments :

FMC fell short to some extent in getting Mid-term Project Evaluations done – It conducted 6 evaluations against a target of 10. The force majeure events like two strong waves of Covid and somewhat delayed start of the bidding process for engagement of FAs played a role in falling short of target. However, this did not affect the quality of implementation.

Exploring a credit line

Op/Oc#	Parameter	Target	Achievement	% Ach
Oc 4.4	Explore and link an international bank credit line	0	0	-

Comments :

As the target shows, FMC's job was to just explore this possibility since it was one of the areas where the EU was interested in terms of what was written in the call for proposals. FMC and SIDBI however felt that there was no need for any international line of credit from Europe as

Indian banks were having high liquidity and were flush with money then. There was very limited bilateral trade in bamboo necessitating the possibility of bilateral bank linkages, the international credit lines were carrying high interest rates where Indian banks were not interested as the Indian rates were then reasonable and the line would have had the additional risk of foreign currency fluctuations, etc. However, this was not documented. It is difficult to say whether an international credit line would have helped in enhancing credit linkages during the project period, as getting a line approved is itself a very time consuming process and the credit linkage performance of the project was anyway satisfactory.

C. Other aspects

The evaluation team also looked into several other aspects related to project implementation, which are detailed in section 4 and are enumerated briefly below :

a. Technical support provided to IAs in SAARC countries

In order to assess the technical support and knowledge sharing provided by FMC to SAARC countries, the evaluation team visited Bangladesh, Nepal and Bhutan and held discussions with local IAs viz. Bangladesh rural Industries foundation (BRIF), Bangladesh Tarayana, Bhutan and ABARI, Nepal. –These agencies expressed immense satisfaction for the support coming from FMC in various areas such as making the proposal to SDF, CFC manual preparation, E-pathshala learning document, identification of machinery suppliers, in building and managing the project logframe, exposure visit to North Eastern Region (NER), Kudal cluster, Dumka Bamboo Conclave etc. feedback and guidance on Abari’s annual plan, orientation programme organised by FMC at Delhi, webinar / teleconferencing organised by FMC,

b. Arranging services of National Level Experts

FMC was very successful in arranging the services of various experts in the area of policy, value chain, procurement, bamboo waste management, etc. The Evaluation team observed that the quality of these experts was very good. The EV team during the interaction with these experts have received valuable inputs on the project as well as for future endeavours.

Overall, 8 experts were engaged by the project, as listed hereunder :

#	Name of the expert	Area of expertise
1	Mr. Sudhir Rana	Public Procurement Expert for bamboo sector
2	Prof K. R. Chari	Technical expert on use of bamboo as a fuel
3	Ms. Rachel Ruth Alexander	International Research Expert
4	Dr. Tilman Altenburg	Expert - Quality Assurance, GDI

5	Mr Sanjeev Karpe	Bamboo Expert, Konbac, CFC, Kudal
6	Ms Deepa Subramaniam	Expert, Bamboo Supply Chain
7	Ms Priya Kenkre	Communication Expert Co-Founder & Director, UVW Consultants LLP
8	Prof. A G Rao,	Bamboo Studio, IIT Mumbai – Training on Bamboo moulds, jigs and fixtures.

In addition, quality feedback was received from Ms. Sangeeta Agasty, Regional Director (South Asia), INBAR, who herself was the Project Manager, FMC in this EU Switch Asia project, till August, 2020.

c. Documents and tools produced

The content and quality of various documents produced under the intervention were appreciable. The Diagnostic Study Reports, the policy papers, the Conclave meeting reports and other documentation, “E Pathshala document - a manual covering each and every aspect of bamboo, audio visual material produced, Community Radio Station contents and “Occupational Health Safety Training for the Bamboo Artisan Community in India” - OHS report on the project by “Movement Matters” – all exhibited high standards of content, quality and coverage.

d. Community Radio Stations

Content for about 20 Community Radio stations were prepared and broad casted. This include almost everything about bamboo such as Bamboo Basics, Plantation, storage & Treatment, various Products, marketing etc. These broadcasts had good listnership and feedback.

A summary of data from 5 States is given below:

State	Number of episodes	Broadcasts	Listeners (In Lacs)
Odisha	24	96	9.02
Madhya Pradesh	18	54	4.2
Tripura	13	13	3.0
Assam	6	18	0.6
Total	61	181	16.82

Box 3

OHS Success Story

Pinky, VT from the district of Khinda shared that learning the OHS interventions helped her overcome generalized anxiety, and insomnia, and made her feel safer when she closes her eyes. This young mother was constantly taunted by her fellow artisans for being a person who watches excessive television at the expense of her chores. On being counselled one-on one, she opened up about how her eldest son suffered from sickle anemia. This left her disturbed, angry, and anxious. Binge watching television till 1:00 a.m. every day had, unconsciously, become Pinky's means of emotional escape. She always felt threatened, in fact, her anxiety was so high that she found it difficult to even keep her eyes closed for a few seconds. The OHS consultant counselled Pinky on respect for self and others, along with finding purpose through service and giving happiness to other artisans as a VT. Further, she was encouraged to believe that she lived in a friendly universe. Post training, learning exercises, and sharing space and experiences with other VTs, Pinky's community realized what the root cause of her binge-watching was. Soon, they started empathizing and stopped making fun of her and Pinky too, transformed. Her gaze softened, her confidence improved and she began enjoying the process of teaching others. She came to acknowledge that the breathing exercises she learned were able to help her sleep by 8:00 p.m. now and that teaching others to lead a better life could be her life's purpose and mission.

e. Quality Assurance

The project kept a keen eye on ensuring quality of outputs and results. This was done continuously by sector specialists and the FMC's Technical Advisors in the nine states. It was found that FAs and FMC staff worked closely, seamlessly and with a sense of ownership.

The IAs / FAs met regularly and kept in touch with the state level and district level bodies. Monitoring and Evaluation aspects are covered separately in section 5.1.

f. Cost control and efficiency

While this report is being written, the project had spent about 98% of the allocated budget. In the assessment of the Evaluation Team, there was no extravagance observed.

Overall, FMC's performance has been excellent except for certain rare instances as brought out under the evaluation of work packages above, where it fell short of targets, mostly because of certain uncontrollable factors.

g. Gender issues

There was no gender bias against women observed in the entire functioning of FMC – neither in project design and implementation nor at the field level handling of issues. The project achievements in fact indicate a superior involvement of the feminine gender.

h. Overall Effectiveness

The intervention has been quite effective in many ways. It combined the resourcefulness and experience of agencies such as FMC, SIDBI, CEMCA and CBS in various domains. FMC was able to arrange quality trainings besides bringing in its rich expertise of technical and value chain based development. The effective and intense monitoring helped the project keep on track and deliver good results. FMC was able to manage attrition related disruptions to the project well. FAs were effective in sensitising State Governments, Bamboo Missions, Forest Departments and SRLMs in bringing support for the intervention. They were also effective in sensitising bankers for enhanced credit linkages. FAs were very effective in motivating and changing behaviour of artisans to adopt new training and tools etc.

2.2 Progress towards impact

2.2.1. Behavioural change

The intervention has resulted in behavioural changes at various levels of implementation. The Evaluation Team tried to assess the impact and looked at behavioural change mainly from 3 angles – whether the change brought out was economically competitive, was it environmentally sound and whether it was socially inclusive.

2.2.1.1 Economic Competitiveness

The intervention was able to advance a reasonable degree of economic competitiveness. The income of the artisans increased by an annual average of 49% over baseline. This was achieved in 3 ways :

- More work was available and the artisans were able to put in more hours per day.
- The product quality improved, which made it easy to sell and acquire new customers, and
- The margins improved significantly, bringing in better return on capital.

The artisans sold their goods on merits without requiring support for organising periodic fairs and melas and realised the price the market was ready to pay. The mindset of *producing-*

what-I-know and trying to find a buyer thereafter was replaced by *producing-what-the-market-wanted*, in exchange of a better price.

The intervention has made artisans economically competitive by various means, as narrated below.

Improved Products

The project was instrumental in bringing about a sense of economic competitiveness among the bamboo based enterprises/artisans. The skill development programmes have resulted in small producers making better quality products which seek new markets and fetch better prices. Interaction with the supply chain consultant Ms Deepa revealed that quite a few products were developed in Tripura, Assam and Jharkhand. These were aesthetic products such as lighting, organisers, containers, baskets, home organising products, etc which people started noticing. The IAs/FAs interacted by Evaluation team have indicated that the artisans have been able to make new products, their packaging has improved, designs have improved, and their negotiation skills went up. The products are now coloured more professionally and their look and feel is much better.

Box 4

Lalduhkimi / Aizawl, Mizoram

Crafting Contemporary Utility Products from Bamboo: Lalduhkimi's Story of Success through Design Innovation

Lalduhkimi, an artisan in the hilly village of Edenther, was engaged in her traditional activity of weaving utility items and basketry. With an annual turnover of Rs 25,000, Lalduhkimi's growth stagnated due to unavailability of finance and market linkage.

FMC's team incorporated her in the Skill Development Training program for crafting trendy products out of bamboo. This included designer household items like mirrors, vases, and small furniture. With a period of 3 months, FMC facilitated a credit line of INR 1,00,000 from Northeast Small Finance Bank for her working capital requirement.

Lalduhkimi hired a team of 4, together with registering her unit under Udyam. Within a span of a year, her turnover shot to Rs 1,00,000 with an increase in profitability by 20 percent. This can be attributed to the trendy designs that sold at higher margins. With a steady income, Lalduhkimi can now save a significant portion in the bank account, especially for health care needs. She renovated her home with a part of the savings, providing her family with better amenities.

Lalduhkimi earned a prominent position in the bamboo craftsperson's community of Aizawl. She was incorporated as a master artisan by several Government agencies and non-profits. Lalduhkimi is now enabling other bamboo workers, including her two sons, to follow her path and break away from the cycle of poverty.

Box 5

Nandita Chakraborty /Dharmanagar, Tripura Delivering Sustainable Bamboo Upholstery to Taj Group: Nandita's Story of Entrepreneurial Success

Nandita established Srishti Crafts in 2014. Working with a small team of 3 artisans, Nandita produced boxes and pouches made of bamboo mat. These flexible bamboo mats were then fabricated into utility and decorative products. Srishti Crafts managed a turnover of Rs 5.22 lakhs per annum, earning a gross profit of 12%.

FMC developed a technical and financial proposal for a modern production unit that can manufacture premium bamboo-mat products for modern utility. Starting its operation in June 2021. A loan of Rs 8.64 lakhs was sanctioned from the Punjab National Bank and Srishti Crafts received a subsidy on the capital investment under the Government of India's Credit Linked Capital Subsidy scheme. FMC assisted Nandita in procuring and installing mat weaving handlooms, industrial sewing machines and product assembling tools. FMC further trained the new workers which included 18 artisans and a supervisor. The new line of products was displayed in FMC's e-portal for higher outreach and within a short period of time, Nandita started receiving orders from reputed clients. They are supplying bamboo upholstery to premium clients such as Taj Vivanta, Guwahati. She had a turnover of Rs 19.80 lakhs in the first year of operation.

Enhanced employment and income

The artisans which were earlier working for few hours (5-6 hrs) a day or few days (15-18 days) a month (6-7 months a year) on bamboo, have started working full day and full month (22-24 days a month for 10 months a year) on bamboo. Their output is reported to have increased by 50-60%. As per assessment made by FMC for increase in income over base line in respect of 1786 units supported during 3 year period (2019-2021), absolute increase in income was 152 % during these 3 years, whereas average Percentage increase in income per annum over base line was 49%. In case of MP, income is reported to have increased by 200-300% during 4 years and output doubled at least for 60% of the units. There is hardly any closure of units and units are running well.

FA Assam reported that in case of smaller units, earlier their monthly income was in the range of Rs.2000-3000 pm, which was not even regular. Now their average income is in the range of Rs. 5000-6000 pm which is now regular. In case of larger units now they earn between Rs. 15,000 – 20000 pm.

In Meghalaya, one young entrepreneur got motivated to set up a bamboo stick making unit with investment of Rs.20 lakh of which Rs. 14 lakh was bank loan. He is successfully running the unit and has even generated employment for another 8-9 persons.

Availability of finance

During the intervention, the working capital problem of artisans got resolved through bank / MFI linkage to a large extent. Finance is now available to Bamboo artisans, as also evident from 182% achievement of credit linkage targets. Initially, banks were not comfortable in entertaining loan requests of bamboo artisans. Lending process was also not very smooth. Multiple interaction with banks and support from industries department by the FAs and FMC team helped in engaging the bankers better. The FA helped in preparing Project Reports and also helped banks in recovery of past loans. This brought down the bad debt level and turned the bankers around. Incidentally during the project period, the loan size increased on an average from 817 euro in 2019 (0.68 mn euro for 832 units) to 1731 (3.43 mn euro for 1981 units at project end) an increase of 111 % i.e more than doubled. Loans are still being sanctioned by banks for bamboo related activity. Loans availed by bamboo artisans are reported to have been generally repaid on time and the incidence of non-performing loans is minimal. In 2020, the EU decided to conduct a review of the grant scheme of the SWITCH-Asia programme which aims to draw lessons learned from the economic, environmental and social impacts of the SWITCH-Asia pilot projects. 130 projects funded across the entire programme period between 2007-2020 were analysed. The review specifically focused on access to finance opportunities as a key area for scale-up and replication of SCP practices tested by grant projects. In correspondence to the increased importance of access to finance on the international development agenda, it showed that finance-related activities of SWITCH-

Box 6

Coverage of the project among 7 business cases in EU publication

The project “Promote Bamboo MSME Clusters for Sustainable Development” being evaluated by the Evaluation Team, is one of the 7 business cases covered in the EU publication. These 7 cases were selected from amongst 130 projects funded under EU Switch Asia across the program period of 2007-2020. Some highlights:

Joint creation of business plans for every financed enterprise (out of 600 cases, around 500 were very similar and a standard module could be used; for larger entities, more details were necessary). Project used Schemes of Indian Government (“MUDRA Scheme”) that does not require collateral; also integrating State Government programmes.

Combining offers by different financial institutions and government programmes. Linking up with financing schemes of Government of India and State Governments.

Many state governments have their own products with subsidy schemes. The project used a wide range of products, e.g. the PMEGP loan (Government of India Scheme) with subsidies ranging from 10-30% of total loan amount, depending on the enterprise category; the subsidy is going directly to the bank as down payment.

Asia grant projects have built up over time, with more than 75% of projects commissioned since 2014 conducting financing activities.

Based on the review, EU has come out with a publication on “Business Cases for Financing Sustainable Consumption and Production Practices” funded by it over a period of time. For this publication, seven exemplary projects representing various sectors and countries covered by the programme were selected. It seeks to inform on the enabling factors for developing successful financing components, shows the variedness of challenges and solutions and seeks to present the individual approaches that grant project teams took to making financing and scaling-up possible for their business cases.

The project “Promote Bamboo MSME Clusters for Sustainable Development” being evaluated by the Evaluation Team, is one of the 7 business cases covered in the above publication. Some of the highlights of the project, as mentioned in the business case, are as under:

- Joint creation of business plans for every financed enterprise (out of 600 cases, around 500 were very similar and a standard module could be used; for larger entities, more details were necessary).
- Project used Schemes of Indian Government (“MUDRA Scheme”) that does not require collateral; also integrating State Government programmes.
- Combining offers by different financial institutions and government programmes. Linking up with financing schemes of Government of India and State Governments.
- Many state governments have their own products with subsidy schemes. The project used a wide range of products, e.g., the PMEGP loan (Government of India Scheme) with

Box 7

Md. Abul K. Azad / Barpeta, Assam

Taking Assam’s Bamboo Handicraft to all over India:

Md. Azad’s Story of Achieving the Odds

Md. Abul Kalam Azad is a trader, who takes these products from the artisans to the market, mostly via fairs and exhibitions. He would travel across the country, showcasing his products in temporary stalls, earning Rs 12-15 thousand a month.

With idea of expansion, Md. Abul decided to participate in an awareness camp organised by FMC at Barpeta. There was only one hurdle – limited working capital. FMC took note of the issue and assisted Md Abul to apply for a loan of Rs 4,75,000 from SBI under the PMEGP scheme.

Once a small trader, Md Abul now procures cane and bamboo products worth Rs 25 lakhs per annum. Earning Rs 10 lakhs a year, Md Abul employs 8 workers to smoothly conduct his business. The trickle-down effect can be observed at the artisan households, who are busy fulfilling orders for Md Abul. Their income has also multi-folded over a period of 2 years, enabling them to afford a quality life.

subsidies ranging from 10-30% of total loan amount, depending on the enterprise category; the subsidy is going directly to the bank as down payment.

Access to Market

The skill development programmes have resulted in small producers making better quality products which seek new markets. FMC also entered into 3 different types of market promotion: i) Giving advance to Innovation Centers to procure, ii) Web based marketing and iii) Institutional marketing. These initiatives help achieve market generation of Euro 3.50 mn. Interaction with the supply chain consultant revealed that products developed in Tripura, Assam as also in Jharkhand were aesthetic products which people started noticing. They received orders from resorts based in Goa, Ooty as also from 2 boutiques in Chennai and Bengaluru.

The IAs/FAs interacted by Evaluation team have indicated that earlier artisans were catering to only local market, but now they have multiple products and multiple markets, with many buyers coming to them.

Odisha reported that traders come to them every two three days and pay instant money. About 70 – 80 traders in these 4 districts of Odisha. They are even taking up small hotel projects, interior projects, etc. Assam reported that new markets have been tapped viz. Bombay, Bangalore, Haryana, Hyderabad, Lucknow etc. An artisan Mr Biplav Thangkiew had set up Agarbatti sticks unit with 48 people engaged. He took loan from Meghalaya Cope Apex Bank. Earlier Agarbatti unit was not a success in Meghalaya. He is paying good remuneration also to his workforce. FA, Odisha reported that for cooler pads – buyer linkage was created with direct connect with the buyers (not through middlemen anymore). ORMAS – Orissa Rural Marketing Society helped in marketing of products. They are promoting all products developed by artisans and endeavour is on to tie up with Amazon.

Prevention of migration

FA, Odisha reported that to promote bamboo based livelihood in the area, their main job was first to prevent migration. 45% people in their area usually migrated and got into labour work. The FA helped 60 such persons – out of which 12 were from bamboo. With bamboo related activity picking up, now people are not migrating.

2.2.1.2 Environmental soundness

The entire intervention was focussed on promoting the green economy with increasing use of bamboo and was 100% environmentally sound. This is because bamboo grows fast, matures within a few years and regrows after harvesting without the need for replanting, making it an essentially 'renewable' resource. Moreover, bamboo can be grown on peripheral soil or as part of intercropping farm systems, ensuring that it does not compete with productive

agricultural land. The plant can play an important role in land restoration and water management. Bamboo's extensive root systems bind soil, prevent water run-off and make the plant capable of surviving and regenerating when the biomass above ground is destroyed by

Box 8

Sasmita Bhue / Sambalpur, Odisha

Environment-friendly Air-Cooler Pads with Bamboo & Dry Grass: Sasmita's Story of Empowerment through Diversification

Sasmita Bhue, a 27-year-old bamboo artisan used to weave a number of traditional bamboo basketry. Working as per seasonal demand, Sasmita hardly earned Rs. 15,000 a year. The onset of the Covid pandemic in March 2020 led to a fall in demand for bamboo basketry leaving her with negligible income to support her family.

Sasmita was introduced to the craft of cooling pad manufacturing when she attended a training workshop by FMC. FMC was soon able to link her with traders from both Odisha and Chhattisgarh and also facilitated a working capital loan of Rs 10,000. FMC further trained her to maintain proper accounts, improving her financial efficiency. She also received assistance in obtaining an Artisan card from DC Handicrafts, which would enable her to avail beneficial schemes in the future.

Within a period of 6 months, Sasmita was able to sell cooling pads worth Rs 1,00,000 earning Rs 50,000 in profits. The opportunity has allowed her to save Rs 1500 per month for her daughter's future. She also sets aside the surplus income in her savings bank account to accommodate for future expenses, especially for health care -accumulating Rs 12,000 so far. 20 more artisans from the village have taken up the cooling pad manufacturing, and are also experiencing similar growth. Sasmita's

fire.

Bamboo presents an opportunity to be a renewable resource to replace the use of slow-growing timber, iron and steel, and plastic lifestyle items. A Bamboo crop replenishes itself every 3-4 years.

The intervention reported that its use of bamboo has not had any negative environmental effects so far (biodiversity, soil quality etc.) and that there is no risk of it negatively affecting India's gigantic bamboo resources (40% of the world's supply).

The intervention can be considered supportive of the climate change commitments. The intervention rigorously promotes bamboo as an eco-friendly resource to replace non-renewables, which is likely to have a positive effect on Climate Change in the long run. The bamboo also absorbs significant amounts of CO₂ and releases oxygen (while it is still growing).

In recent decades, industry developments have vastly increased the potential of bamboo to contribute to durable, low-carbon and sustainably sourced products. ***Bamboo can be a recyclable replacement for single-use plastic or wood products***, including cutlery, cups, paper and packaging, and can help fight the ongoing plastic pollution crisis.

As a result of interaction by FAs/IAs, the Forest Department offices have started providing

Box 9

Phulkumari Hansda / Dumka, Jharkhand

Colourful Basketry for Pilgrims of Baba's Dham: Phulkumari's Story of Forging New Market Linkages

10 women artisans under the leadership of Phulkumari Hansda came forward to participate in the project being implemented by FMC. The women were trained in scientific production techniques. It included advanced pre-processing techniques that made the bamboo both flexible, durable, and fungi-free. They were trained on contemporary product design, which eventually helped the artisans weave baskets that had aesthetic value along with utility. The female artisans also received tutelage on raw material sourcing methods, and order and inventory management.

Under Hansda's leadership, they developed colourful baskets to be sold at Baba Basukinath Dham, prices ranging from Rs 75 to Rs 150. The bamboo baskets were an instant hit with the local retailers and orders poured in at Hansda's SHG. FMC further assisted Hansda and her group for obtaining working capital loan of Rs.12,000 each. Having a total of Rs 1,20,000 at their disposal, Hansda's SHG soon took to production. Their husbands came for support, helping them in procuring, slitting, slicing and chemically treating the bamboos.

Their household income rose by 75 percent, to each household now earning close to Rs 350-400 per day. The income is expected to elevate further with Hansda's group trying to enter into the

bamboo to local producers in a cost effective and easy manner than before, facilitating easier availability of bamboo to artisans / businesses. FA, Odisha reported that earlier middlemen, villagers used to cut bamboo unauthorised. Now Forest Management Committee gives bamboo at reasonable price, bringing in a sense of legitimacy and fairness.

FA Odisha reported that they motivated 80 artisans for bamboo plantation. District Rural Development Agency – (handles MNREGA) started giving orders for bamboo-made tree guards for Rs. 5 to 6 lakh annually.

Carbon credit study its implications: FMC have submitted a proposal for getting carbon credits for having undertaken bamboo plantation in the distt. of Sindhudurg, Maharashtra where there are 3 parties involved viz. a) Farmers Group comprising some 3000 bamboo farmers b) KONBAC: The local organiser NGO that has access to the farmers and enjoys trust & credibility with them and c) A professional agency based in Gurugram that has the technical knowledge to document and file such an application with the UNFCCC. All the 3 parties essentially contribute in terms of time/money and enjoy the benefits by selling the carbon credits, almost by 1/3rd each. The document has been prepared and submitted to the Indian representative of the UNFCCC for formal onward submission. This initial work of about Rs. 6 lacs has been funded under the project as a sample case for replication/ scaling up in future. Within the same application, more farmers from other states/ districts can be added.

2.2.1.3 Social inclusiveness - Creating shared prosperity

The intervention has focussed on bamboo, which is identified with low income people in these relatively backward targeted States. Most artisans are women. These target groups were provided skill development training, financial linkages, market linkages etc. and were introduced to social security schemes. As a result, their income and employment have increased, they have better social security support, their ergonomic conditions have improved through OHS support and their children are going to schools etc.

FA, Odisha reported that Social security linkages (ration card, pension etc.) were provided to Artisans. As a result, and through a variety of other support measures, they came back to bamboo. Earlier they did not work on bamboo round the year – but now they are engaged all through the year. Earlier, the tree guard for roadside plantation was made of plastic. The FA took up with the forest department and they gave an order for bamboo tree guards. Now every year the artisans get this order. Even in lean season, they have at least this work.

The CFCs set up by the intervention in project States are used in a shared manner by the artisans. Fostering bamboo products as a sustainable substitute of less renewable resources like timber and promoting economic prosperity of the tribal communities including women in less developed regions of India, remains highly relevant in economy.

The women folk took the centre stage in the whole intervention. Successful artisans engaged more workers to meet the increased demand and in some places (Barpeta) as much as 95% of the village (Raypur) was involved in the activity. Order aggregation and distribution among artisans brought in more collaborative ways of working and individual growth shifted to community growth.

Stakeholder wise impact

a. Impact on Artisans

The Action started with training of artisans. When artisans were trained, they moved from semi-skilled to skilled status and later became trainers. This opened up a new income stream for them as they were now also able to earn from imparting training, apart from their usual bamboo based income. For example, Mr Suresh Koli from MP became a skilled artisan and is now earning from training activity also.

Artisan Chudamani, an arts student, was motivated to work on bamboo who creates faces from bamboo wastage. He has received appreciation even from the Chief Minister. His income went up from 7000 pm to 25000 pm from face artistry using bamboo.

The FA in general were able to change the perception of artisans from negative to positive – an activity that could bring them good returns and contribute to their livelihood and prosperity.

With increased artisanal activity, **aggregators** came up in Chattisgarh, MP and Mizoram. In Assam, one furniture maker whom the intervention supported, set up a store in Barpeta and has plans of setting up 4-5 bigger outlets. He also goes to attend exhibitions at Bangalore, Delhi etc. The FA of Odisha reported that earlier the children of artisans did not go to school and wandered around in jungle. During the intervention, around 48 children were admitted to schools who started getting proper education.

Box 10

Mukesh Mohli / Deogarh, Jharkhand

Empowering Woman SHGs of Deogarh: Mukesh's Story of Driving Change through Aggregation

Mukesh's community – the Mohlis are engaged in bamboo craftsmanship. Mukesh took to producing traditional bamboo items and selling them at the bi-weekly local markets thereby rining Rs 14,000 a month. The traditional basketry had a dwindling demand and margin due to competition from plastic or similar materials.

Mukesh had attended several skill training workshops organised by the Government of Jharkhand, India. Mukesh convinced the women artisans, including his wife to attend FMC's skill training workshops, where he was engaged as a master artisan. With FMC's support, Mukesh and the women artisans soon developed a range of modern bamboo products, mostly utility basketry – with a contemporary design. The products were a hit in the local market and FMC further linked Mukesh to large buyers like ESPCL, Namaste Bamboo and ESAF Retail.

Mukesh became a trader, also actively involved in designing and production supervision. 2 women SHGs, having 20 artisans, crafts bamboo products for Mukesh, generating a monthly turnover of Rs 60,000. This has empowered the women artisans who were previously dependent on low agricultural income. The women can now invest in their family's welfare and save for medical emergencies. Mukesh, on the other hand, is planning for further growth with FMC's support. He aims to bring more SHGs under the umbrella of the project, targeting an annual turnover of INR 25 lakhs.

A review of photos/videos recorded during various visits by the FMC team suggested that the project not only was able to significantly enhance the perception of Bamboo as a means of livelihood among artisans, but also as a means to prosperity. Experience at some places demonstrated that the bamboo artisans/workers started from producers of low cost low returns items like baskets/*supri daliya* to high value items like lamp shades, trays, bottles and furniture etc. and moved up in economic prosperity value chain. The workers who were earning 4000/- p.m. moved up to Rs.15,000/- p.m., bought own motorcycles and built *pakka* houses. They also went on to engage more people in the activity, to be able to supply higher quantities, and moved up from accessing local *haat* market to become a supplier to reputed buyers like Ikea.

Box 11

Chanchal Goswami / Dharmanagar, Tripura

Establishing a State-of-the-art Incense Stick Factory: Goswami's Story of Entrepreneurial Success

Chanchal Goswami had a vision of having his own incense manufacturing plant in Tripura. An expert with over 20 years of experience in the incense stick sector, Goswami provided training to government and non-government agencies in incense stick manufacturing and marketing. Having ample knowledge of the market, Goswami also used to trade incense sticks and agarbattis from the local SHGs and small manufacturers. FMC agreed to assist him in setting up a modern incense stick manufacturing unit at Dharmanagar in North Tripura District of Tripura.

Goswami planned to value-add in the ecosystem of agarbatti making, by setting up a plant that can machine-roll the ignitable coat onto the bamboo sticks. The finished products are to be then sold to established brands across various states in India.

The technical and financial proposal was soon developed, and a loan of Rs 30 lakhs was sanctioned from the bank. Goswami received 60 percent subsidy on the capital investment under the Government of India's Credit Linked Capital Subsidy scheme. Registering his firm under the name "Ankur Gramin Udyog", Goswami constructed a 750 square feet workshed, installing 9 fully automatic machines, which can bulk manufacture high-quality incense sticks. Production began at Goswami's unit in 2020. The unit staff 15 full-time workers.

FMC further helped him to market his products through an online portal, increasing his outreach to buyers across India.

FAs interviewed have indicated that overall, the project have been able to upgrade the lives of artisans in general. The evaluation team concurs.

b. Impact on Bankers

Initially, banks were not comfortable in entertaining loan requests of bamboo artisans. Lending process was not very smooth. Multiple interaction with banks and support from industries department by the FAs and FMC team helped in engaging the bankers better. FA Assam reported that they created awareness among artisans, conducted assessment of the needs and requirements of artisans, talked to buyers and then spoke to bankers with due preparation. They also helped in assessing the repayment capacity of artisans. SPMN (FA, Assam) also arranged for a visit by RBI officials to the cluster, which sensitised and spurred the bankers in the area. The FA helped in preparing Project Reports, taking all necessary inputs into account. They also helped banks in recovery of past loans. This brought down the bad debt level and turned the bankers around. Loans are still being sanctioned by banks for baboo related activity.

SPMN, Assam reported that at least 200 artisans have been sanctioned loans by banks over and above project artisans. Loans availed by bamboo artisans are reported to have been generally repaid on time and the incidence of non-performing loans is minimal.

c. Impact on FAs

Many FAs admitted that the intervention enhanced their own capacities. For example, FA-Odisha reported that their own capacity got built particularly on entrepreneurship development, during the programme. During the project, a training course on bamboo was also designed in Chhattisgarh with support from Microsoft. Microsoft and Accenture both are ready to support training.

Box 12

Neelam Patil / Betul, Madhya Pradesh

From Retailing Sarees to Trading Bamboo Products: Neelam's Story of Embracing Opportunity

Neelam Patil, a mother of two and a saree retailer in her early 40s had been persistent about sending her children to a good school and later on, to a college. But given her meagre income from the saree shop, providing for a good education was a distant dream - let alone provide for a good standard of living for her family.

Neelam would earn Rs 6000 per month selling sarees, suits and dress material. Sensing opportunity, Neelam Patil started retailing bamboo basketry at her saree shop. But with limited capital, she was able to stock products worth Rs 1500 to 2000 at a particular point of time.

She had hardworking nature and good communication skills. FMC team assisted Neelam in availing a working capital loan of Rs 1,00,000 from Bandhan Bank, and facilitated both backward and forward integration – linking her with artisans, large traders, and buyers. The team also trained her in contemporary designs and products, inventory management, marketing, and basic accounting.

Neelam's trading business soon took off. From a side-hustle, Neelam now dedicates her entire time and effort to bamboo – even constructing her own warehouse to stock the products in lean production season. Neelam earns more than Rs 50,000 per month during peak season and roughly Rs 10,000 per month during lean season, averaging Rs 5.5 to 6 lakhs per annum. Neelam procures from 60 artisans in the cluster providing them with stable income throughout the year. With the money earned, Neelam has invested in a provisional store, which is being run by her husband. She has admitted her children to a reputed school, sowing seeds for their better future.

FMC during discussions indicated that all FAs were to be strengthened so that it comes in their DNA. They should be able to carry forward activities.

ESAF (Jharkhand and Orissa) and TRIBAC 2 states, have become technical agency for their states – so their capacity building has happened.

AiD et action earlier worked with banks. They were apprehensive about funding from MFIs. Now they have started working with MFIs also. Earlier they were focused on livelihood promotion (skill development and get job) – Now they have started enterprise promotion. AID et Action – they are continuing to work on bamboo in all 4 states beyond project duration. Thus, despite the project closure, the action is continuing in 7 states.

In view of above, it may be said that the project has had a positive impact on FAs too.

d. Impact on Women

FA Assam reported that increased income from this project for women enhanced their status in family /society. In some households, the husbands left their drinking habits and started contributing to the work done by women artisans when they saw some income flowing in from bamboo activity. They now borrowed money from their women, telling the women that they will return the money in a few days, as women now had an income of their own and were richer in cash flow. This brought more respect to the women in household and the family bond improved. In some cases, the intervention also helped in prevention of early marriage and instead sending daughters to schools. Some women artisans reported that they were able to send their children to school even during the tough period of COVID due to livelihood opportunities created by the project .

In Betul, MP, a women entrepreneur Ms Neelam Patil who earlier ran a garment business shifted to Bamboo successfully. She is a national award winner. She earlier earned INR 5000 to 6000/- pm. Under the intervention, a working capital loan of Rs 1,00,000 was arranged from Bandhan Bank for Ms Neelam, and FMC facilitated both backward and forward integration – linking her with artisans, large traders and buyers. Now she has moved to bamboo and procures material/products from about 60 artisans. She has an average annual income of INR 600,000 now.

e. Impact on the State Government / Forest Department

As a result of interaction by FAs/IAs, the forest departments have been providing bamboo to local producers in a cost effective and easy manner than before, thus facilitating easy availability of bamboo to artisans / businesses. FA, Odisha reported that earlier middlemen, villagers used to cut unauthorised. Now Forest Management Committee gives at reasonable price.

FA, Mizoram reported that other agencies also funded two trainings viz. Mizoram State Aids Control Society. Further, 3 clusters (Chite, Edentharr, Sesawang) have their own CFC, funded by Baboo Dev Agency (State Government agency – funded by national bamboo mission).

Box 13

Gelhei Ray / Sambalpur, Odisha

Producing Tree Guards for Sambalpur's Green Cover: Gelhei's Story of Success through Adaptability

Gelhei Ray, a woman in her late 40s, is an artisan belonging to the Sambalpur bamboo cluster. Her product line included winnowing trays, seeding baskets, and baskets for religious use. With such skill and product line, Gelhei could only fetch a meagre Rs 20,000 per annum. The bamboo products had seasonal demand – mostly purchased during harvesting period or festivals. The immediate strategy would be to introduce products that had consistent demand, and accordingly upskill Gelhei's group.

FMC mobilised Gelhei and her group, training them to produce tree guards of the required specification by Forest Department. A working capital loan of Rs 20,000 was also arranged from Utkarsh Small Finance Bank. Gelhei, soon received her first batch of orders from an accredited supplier.

Gelhei improved her product line further, producing an array of packaging materials – which are used for product and gift packaging.

From a seasonal worker, Gelhei is now a full-time bamboo artisan, with a consistent flow of income to the tune of Rs 300 per day.

ESAF has reported that State Government, Jharkhand has supported setting up of 2-3 CFCs outside project,

In Assam, an integrated baboo park is coming up with support from ADB.

f. Impact of FMC's initiatives on awareness building for Bamboo

In order to promote and track the awareness of its bamboo related initiatives, FMC hired a Social Media outreach agency known as Whitevox. The idea was to reach out to substantial number of people to promote bamboo as a material in general and also ensure that FMC's audio visual films (44 in number) that were created on promoting bamboo based entrepreneurship and technical films on bamboo based production of different items reached as widely as possible. A report card on what the agency could achieve in general and how many views the films/videos got over a period of one year (FY 2022) was shared by Whitevox. Key highlights are given below :

a. Outreach through social media

Impact of FMC's social media outreach programme			
#	Key Performance Indicators (KPIs)	Minimum Criteria	Actual Views
1	The agency should increase the reach on	Reach 70 L people by Dec 20th 2022.	
	Facebook		1,06,50,020
	Instagram		31,44,970
	YouTube		10,16,284
	Twitter		4,86,764
	LinkenIn		1,00,726
	Total		Total reach achieved - 15.3 million
2	The agency should increase the follower base on	Achieve an overall Social Media Follower Base of 50K by Dec 20th 2022	
	Facebook		47,000
	Instagram		653
	YouTube		107
	Twitter		779
	LinkenIn		324
	Total		Total followers base - 48,863

b. Viewership of Films/Videos

SL No	Video Title	Total Views
General Films		
1	Motivation to Become an Entrepreneur	11071
2	Various players stakeholders of Supply chain of Bamboo based industries	236
3	Market Survey to identify business opportunity	281
4	Creating a Business Plan specific to Bamboo related enterprise – contextualized for specific bamboo based industry	110523
5	Understanding and evaluating various risks related to bamboo based enterprise	15118
6	Credit Rating – What & How to maintain new	6750
7	How to apply and service	221
8	Government schemes relevant to MSME in Bamboo Sector	22163
9	Income & Expense	272
10	Basics of Banking	8984
11	Insurance & Risk Management	286
12	Investment	26764
13	Financial Planning – Setting Goals, Prioritizing, Budgeting	126

Bamboo related films		Total Views
1	Potential of Bamboo as a Sustainable product	33
2	Home Decor and Craft Products	28
3	Bamboo Furniture	2
4	Bamboo Preservation	3
5	Bamboo Plantation	7
6	Bamboo Nursery	13
7	Designing and Prototype of a Bamboo Based Project	59
8	Design and Development of Bamboo Houses	58
9	Bamboo as Construction Material	39
10	Bamboo Incense Sticks	11
11	Bamboo Waste Material and Bio-Fuel Management	36
12	Bamboo Harvesting	31
13	Introduction to Bamboo	14000
14	Fruit Basket	6600
15	Hanger 1	287
16	Hanger 2	64
17	Hanger 4	136
18	Table Mat	13000
19	Tray with Round handle	99
20	Tray with Simple Handle	528
21	Treatment	60
22	Dustbin	60
23	Weaving Technique	108068
24	Finishing Technique	307
25	C Clamp Hanger	224
26	Dyeing Process	275
27	Bamboo Stool	11000
28	Bamboo Woven Bowl	2000
29	Bamboo Partition	36000
30	Hanger round with support line	110
31	Bamboo Lamp Shade	10000

Grand Total 4,05,933 views

More than 15 million views on social media channels, close to 50k followers joining and video films getting more than 4 lakh views, indicates an impressive social outreach. Besides, there were two important findings:

- The films are classified in two categories – one on general management & entrepreneurship promotion and the second on technical matters related to production

- both got almost equal views. But within each one of them, some of them received very large no. of views (2 films got more than 100,000 views) while others got very few.

- Secondly, it was envisaged that by making these films in 5-6 local languages (Bangla, Odia, Khasi, Assamese etc.), they would get many views. However, this did not happen. The films made in Hindi alone got most of the views and those in local languages did not.

Overall, the Evaluation Team found that good awareness was built by FMC through its social media outreach programme.

2.2.2 Broader adoption

2.2.2.1 Mainstreaming

The intervention was able to mainstream many initiatives. It sought to build a common platform for learning and dissemination of a multitude of state-led bamboo initiatives. There have been numerous state-funded bamboo initiatives in India over the last two decades, and the intervention has reached out to these for knowledge sharing and linkages. For example, the Ministry of MSME under its "Scheme of Fund for Regeneration of Traditional Industries"(SFURTI) extends subsidies to business and training schemes, laboratories, storage, and other facilities. Under its arrangements with the Ministry, the intervention supported at least one SFURTI scheme in each state by linking the beneficiaries into it. FMC supported, also through its learning from the intervention, the Ministry of Rural Development with staff training and scheme and gave inputs to Ministry of Food Processing for their proposed MSME promotion scheme.

In terms of linkages with other bamboo-related schemes, FMC has used its expertise to assist, train and advise technical personnel working for the South Asian Association for Regional Cooperation (SAARC) funded project "Promoting Integrated Bamboo based Enterprise Development among SAARC Countries". The project duration was March 2017 to March 2021 and the target countries were Afghanistan, Bangladesh, Bhutan, India and Nepal. Overlaps with this intervention include exposure visits, exchange of technical information, sharing e-pathshala document, and helping bamboo experts connect.

FMC had arranged an exposure visit for "Transforming Rural India Foundation (TRIF)", a large organization with about Rs. 80 crore turnover. They have indicated that they will engage in bamboo at large scale in Chhattisgarh.

A bamboo park is being planned in Bagru, Jharkhand, where the idea is to stay in bamboo rooms and dine in bamboo restaurant.

A training course on bamboo was designed in Chhattisgarh with support from Microsoft.

In Assam, the FA dovetailed govt schemes like “Swayam” to enhance credit linkages, where projects up to Rs. 2 lakh of project cost with 35% subsidy component are supported.

In Odisha, ORMAS, has invested into a CFC in Bamboo. Such demands are also coming from other clusters.

ESAF has reported that State Government, Jharkhand has supported setting up of 2-3 CFCs outside project,

FA, Mizoram reported that other agencies also funded two trainings viz. Mizoram State Aids Control Society. Further, 3 clusters (Chite, Edenthur, Sesawng) have their own CFC, funded by Baboo Dev Agency (State Government agency – funded by national bamboo mission). At various places schemes of State Bamboo Mission, State Rural Livelihood Mission etc were dovetailed with the intervention.

2.2.2.2 Replication

Replicability of a system refers to the ability to be duplicated in another location or time. The term “Replication” in the intervention has been analysed from this angle.

The intervention sought to contribute towards addressing the gaps at micro, meso and macro level through a multi-stakeholder partnership and in active collaboration with the policy makers and development institutions to build and replicate integrated and inclusive models of local development. By continuously engaging with a multitude of state and district level bamboo-related Government, private sector and civil society groups, the intervention has impacted sector policies. The Forest departments in states are now supplying bamboo to artisans in at reasonable rates. The project had sensitized bankers and policy makers from India and policy makers of the SAARC countries. The bankers and MFIs in India have increasingly supported bamboo artisans. The "India Bamboo Forum", organised by the intervention, headed by a Member of Parliament, has prepared 22 recommendations.

The IAs/FAs interacted by Evaluation team have indicated that the intervention could be replicated in other districts. Some of the clusters in a State which were not covered by the intervention, have desired that such intervention should be made in their cluster also.

Govt of Jharkhand had setup 2 CFCs . FA, Jharkhand has reported that there is a demand from ODISHA for setting up CFC. In Odisha, under the Railway’s – one station one product project, at Bolangir, one stall was given to artisans on the railway platform. Artisans sit there and promote marketing of bamboo products. Also, the way the FA improved the credit linkage with banks – by giving comfort to them in collections/reducing NPA, can be replicated to other centres also. FAs are also working closely with forest officials for allotment of bamboo at reasonable price, which has replication potential at other centres too.

SPMN, Assam reported that at least 200 artisans have been sanctioned loans by banks over and above project artisans.

The E-Pathshala Publication is a very comprehensive manual prepared by the intervention on bamboo. It covers almost all spheres of bamboo such as plantation, harvesting, treatment, uses, high end products etc. During interactions with IAs and FAs in India as also in Bhutan, Nepal and Bangladesh, it was observed that this manual has been appreciated by them and has a potential to be used not only in future training programmes but also by master craftsman and artisans, farmers etc.

The intervention has also prepared e-learning modules (Self Learning Audio-Visual tools) targeting trainers and micro enterprises in the areas of "entrepreneurship", "financial literacy" and "social security" which were shared with cluster stakeholders and various other policy stakeholders (e.g., the Industries' Departments including their District Industry Centres) and training institutions.

Locally, there has been a lot of replication within the clusters assisted. Several anecdotal evidences point to the replicability of the intervention. For example, in Barpeta cluster, the 4 villages where the intervention actively worked and where the coverage of bamboo activity reached about 95% of the households, is now spreading to another 6 villages. All the data that FMC shared about the ground level deliverables (grounding of units, market linkages, financial linkages, income enhancement etc.) is about those 2500 enterprises who have been directly assisted under the project. The indirect effect was neither intended nor has been captured but in the assessment of the evaluation team, at least an equivalent number of enterprises/artisans have either been already positively impacted or will be impacted in the coming 2 years or so. The photos and video clippings recorded during visits of FMC / FAs to several clusters amply substantiates this. It is possible to witness 50-100% replication in many of the clusters, particularly the relatively more vital ones. The stronger a cluster is, the more replicability may be witnessed.

NRLM and several SRLMs have replicated the project strategy and have started hiring TSAs whose primary responsibility is to provide training to artisans, provide design inputs, link with regional and national markets and ensure supply chain management. For example Jharkhand State Livelihood Promotion Society, in July 2021 released EOI towards hiring services of an agency for consulting services for "development of bamboo craft cluster" in Jharkhand. Similarly, Assam State Rural Livelihoods Mission Society (ASRLMS), in August 2021, Hiring technical support agency to undertake cluster development activities in cane and bamboo under national rural economic transformation project (NRETP)

However, the full impact in terms of replication would be visible may be couple of years later. Nevertheless, the project's achievements have a high replicability potential and behavioural changes are clearly visible.

2.2.2.3 Scaling-up

At the intervention level, the project has helped in technical scaling up of artisans and rural industrial capacities in a big way as also on increasing financial linkages, creating market linkages etc. The CFCs supported under the intervention, have enabled artisans make better quality product, scaling up their income and employment levels. However, the COVID and other disturbances have resulted in below optimum level of exposure trips and market linkages as also upscaling high end products such as lifestyle products, furniture and use of bamboo in housing and construction industry. As such, there is need to upscale further, in above areas by way of a separate project.

Box 14

Judisha Myrthong / Mawsynram, Meghalaya

Producing Modern Amenity Products for Tourists: Judisha's Story of Utilizing Bamboo to Fight Poverty

Judisha had access to both raw materials and market – only deterrent being design knowledge and financial availability. Not keeping up with changing trends in design and utility, artisans like Judisha have not been able to attract buyers. Certain non-clamp varieties of bamboo, found in abundance in this region, make the perfect raw material for modern amenity products. FMC's project provided the essential push, in the form of skill upgradation and financial linkage. She attended several training workshops on trendy designs and new products. With further handholding, Judisha was able to form her own firm Nagroi Bamboo Enterprise - producing modern amenity items like tea coasters, water bottle holders and tiffin baskets. The products caught demand in the local market and soon Judisha was busy fulfilling orders, with the help of 3-4 workers.

Within the span of a year, Judisha was able to contribute significantly towards her family expenditure – providing much needed support to her husband who was the sole earner in the family. The couple can now save for their child's higher education – which seemed like a distant dream a year back.

However, the scalability of a system may also be looked at from the point of view of its ability to increase in size, scope or range. Whether more clusters were undertaken by other institutions (Govt. or non-Governmental) beyond the 9 clusters the intervention worked on, could be a check point for assessing scalability. It is seen that across India, under SFURTI scheme of GoI, 40 clusters are being supported, many of them by FMC since FMC is one of the nodal agencies and also in many cases, the Technical Agency. In FMC's assessment, around 40 more clusters may be picked up in the next 3 years.

But should scalability also be seen from the view point of following the same approach by other stakeholders as followed by the intervention? The evaluation team does not think so. Projects implemented by different stakeholders may follow different approaches even with the same objective. For example, even if the government opens more CFCs looking at the success of CFCs supported under the EU project, the intensity of support beyond physical

CFC may not be feasible with limited financial resources made available under soft Interventions of the Govt of India (with a capping of about Rs. 25 lacs there out of the total budget of about Rs. 5 Cr). But National Rural Livelihood Mission is the scheme of the Ministry of Rural Development which has announced, formally or informally that they will be taking up 100 clusters where the soft component is a max. of Rs. 4 cr. out of the max. cap of Rs. 5 Cr. So, the soft interventions (SI) value is 80% of the budget including the HR component of the development agencies like the EU project. FMC has also shared a 10-year plan with various national Ministries (Agriculture, Rural Development, MSMEs) that provides a framework for generating 1 million jobs which holds lot of promise and some traction is already visible there. This could lead to scaling up in terms of size, scope and range.

The intervention did not see the scaling up by State Bamboo Missions (SBM) although they appreciated the achievements but did not pick up the lessons to take it forward. This was probably because the framework of the support available under the SBM scheme is not in sync with the cluster approach followed under the EU/SDF projects. At the international level, in Afghanistan, Bhutan, Nepal and Bangladesh, their starting points are such clusters which are at the equivalent lower levels of vibrancy among the 9 Indian clusters. Moreover there is also an issue of the capacities of the organisations that are the IAs there and the overall limited eco system (banks/ FIs/ Govt. schemes of assistance/ market readiness etc). While they have come a long way from where they were (scaling up), those are not comparable.

FMC estimated that at least 50-60% of enterprises must have been covered additionally, over the targeted figure of 2250.

Like replication, the impact in terms of scalability may be achieved over a long period of time. FMC had mentioned in the EU project that the intended impact was for a 10 years framework (2018-28). In the assessment of FMC, the scalability potential may slowly come into effect. If the movement's momentum is maintained the way it is seen now, it may still take some 15 years to achieve that.

Scalability potential at Bamboo Sector level

Bamboo has huge global prospects. Given that China has created an industry of USD 35 billion from 6 million hectares of bamboo, the world could conceivably have bamboo industry worth USD 170 billion if its existing 30 million hectares of bamboo are developed and utilised to their full potential.

China is a shining example of what countries could do with bamboo. For several decades, China has used bamboo as an ecological instrument to support sustainable socio-economic development, with startling results. China's bamboo sector employs over 8 million people, and bamboo forest has become a key part of the country's environmental protection and climate mitigation strategies in bamboo producing areas.

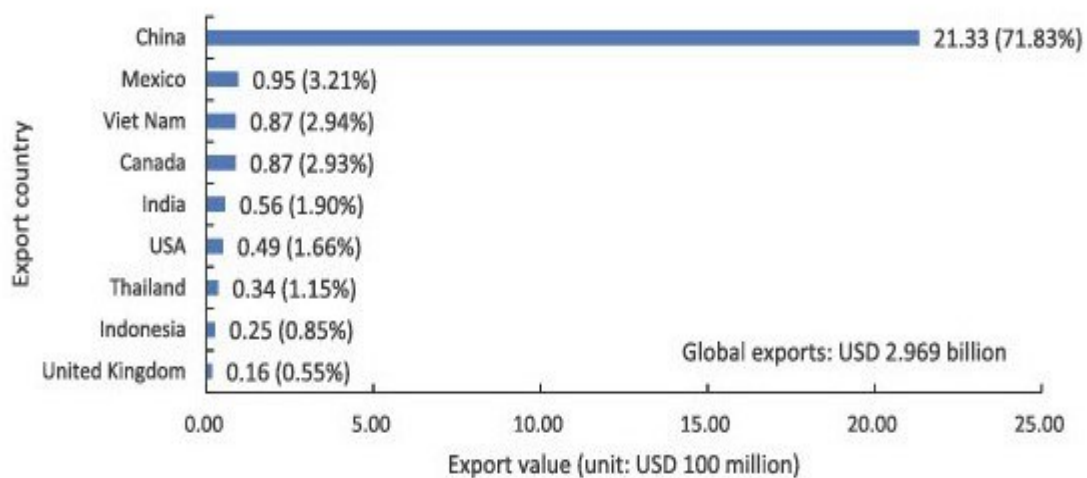
The annual value of China's bamboo industry in the year 2018 was 246 billion yuan (USD 37 billion).

Although the project was able to achieve most of the assigned targets and even exceed them, the scale at which the bamboo industry operates in China as compared to India leaves a lot to be desired. A comparison with major bamboo producing country viz China, indicates the huge potential India holds in scaling up the bamboo sector.

China and India

Globally, 2 bn people depend on bamboo. In 2020, according to statistics from the UN ComTrade database, global trade in bamboo was to the tune of USD 2.969 billion . This is dominated by China (71.83% share- mainly bamboo tableware and kitchenware; daily use items) whereas India's share was a meagre 1.90% - items of daily use. India also imports bamboo raw material of almost equal to its bamboo exports.

Main exporters of bamboo commodities in 2020

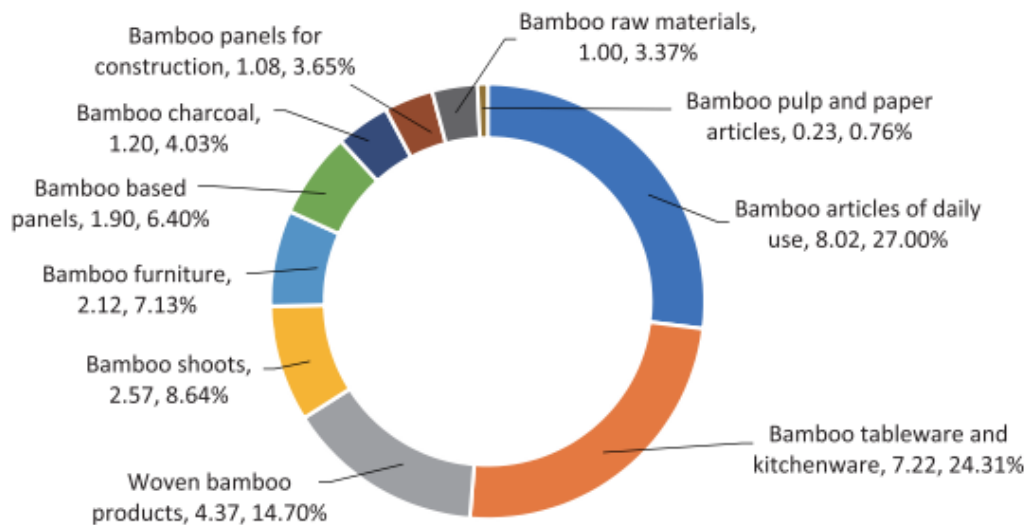


Source - INBAR (2022) *Trade Overview 2020: Bamboo and Rattan Commodities in the International Market*. INBAR: Beijing, China

Data Source: *Statistics and Collation from the UN ComTrade database.*

Globally Traded bamboo Products - 2020

Proportion of the global main bamboo commodities in 2020 (unit: USD 100 million; %)



Data Source: Statistics and Collation from the UN ComTrade database.

Source - INBAR (2022) Trade Overview 2020: Bamboo and Rattan Commodities in the International Market. INBAR: Beijing, China, <https://www.inbar.int/wp-content/uploads/2023/01/Global-trade-report-2020-EN.pdf>

In 2020, the EU, the USA and Japan were the main importers of bamboo products, importing USD 820 million (30.50 per cent), USD 720 million (26.90 per cent), and USD 280 million (10.50 per cent), respectively.

In India in terms of area under Bamboo, India 2nd largest with 40% of global forest cover but contribution to GDP and share in world market is low. About 3 m people work on bamboo. In comparison, In China about 37mn people are engaged in bamboo and its contribution in national economy is about 16-17%.

Vietnam has a very small recourse base, but contribution to exports very high, specialised clusters making the high end products – Bamboo plantation has been done on waste land.

In India, supply side /demand side enablers are there. Connect between buyer, supplier and artisans is not there. Policy, Academia, industry connect is missing. We need to enable such connect.

Major policy initiatives in China

- Since 1980's, bamboo is an integral part of China's national forest resources inventory, which provide fundamental data and information for industrial development and planning.
- Bans or restrictions on timber logging (trees) since the 1990s have incentivized research and development into bamboo alternatives to wood products. In many cases, companies have started organically experimenting with bamboo.
- The State Forestry and Grassland Administrative (NFGA) has released "National Bamboo Industry Development Plan (2013-2020)" in 2012, which enabled the design and all-inclusive framework from the central government for the sustainable development of whole sector. The National Bamboo Industry Development Plan was renewed in 2020 for the next decade (2021 –30), to address and adapt to new challenges and situation.
- Several provinces (Sichuan, Zhejiang, Yunnan, etc.) in China have since developed their own bamboo strategies. As per the plan, between 2013 to 2020, the total investment in the afforestation / improvement of bamboo forest base for production of shoot, timber and pulp is 30 billion yuan (USD 4.16 Bn). Out of which, 12 billion yuan are invested in new bamboo forests (40 %); 18 billion yuan are invested in the improvement of low-yield bamboo forests (60 %).
- Taxes on bamboo harvesting and transportation was eliminated since 2002 in most parts of China, which in turn boost the increasing productivity of bamboo resources.
- Bamboo was named as a priority crop in several national initiatives for poverty alleviation and reforestation since the 1980s, e.g. the Grain for Green Programme
- The government provides subsidies for smallholders to establish bamboo plantations (USD 250/ha); provides discounted loans for companies and ecotourism projects (5% discount); VAT and stamp tax exemption for cooperatives; export duty refunds (9% for industrial products and 13% for furniture);
- China is the leading country in bamboo standards development. Till now, China has developed/ratified 196 standards for the bamboo and rattan sector, of which 39 are national-level standards.
- China has supported science and technology innovations by providing financial support for research institutions, universities, national labs, etc. through various Five Year Plans for research. Under the support from the Chinese government, several national key laboratories were established (ICBR and their networks) and several large research programmes on bamboo genome, space, mutation breeding were launched.
- In China, after 1979 reforms, the ownership status still remains the same (collectively owned or state owned), but management rights have been transferred to individual households, and the main focus of management rights has been on equity consistent economic efficiency. In India, even after 1988 Forest Policy, there is no sharing of management rights between the state and local communities on bamboo forestlands.

However, in India, many households, in given villages, have right on forest produce such as bamboo, but the state takes the responsibility to supply the forest produce to these households, and this mechanism is highly inadequate and inefficient.

- In India, the local bamboo artisans continue to make the age-old traditional products such as bamboo baskets or umbrella for local use, and hence are unable to get high-returns or even the returns for their labour. There are no inputs either from the government or from private enterprises to develop new fancy products, and to develop the products as per the demand from wider national and international markets. Some local NGOs, who are trying to make some new products, are also unable to provide increased returns to local workers.
- In India, bamboo is mainly used for the benefit of industrial organizations mainly pulp mills, and at the village-level, its use is limited only for subsistence purposes. But it has neither been used nor has been intended to use for eradication of poverty or for increasing the income-levels of bamboo-dependent people beyond subsistence levels. In China, in bamboo-dominant areas, bamboo has played a critical role in substantially increasing the income-levels of people who were poor prior to 1979-reforms. In China, the use of bamboo is not limited to the lower strata of the society, but many people are in the rich class of the society due to bamboo contributions.

During interactions, the Evaluation Team had with IAs and FAs, many suggestions on scaling up the intervention had come. These are covered in detail in section 6 (Recommendations).

Chapter 3

3. Project's quality and performance

3.1. Design

The underlying logic of this intervention is clear, logical and well laid out in the Log-frame and is well supported by comparative advantage of agencies involved. The design of the Log-frame is based on the FMC's in-depth field experience and research and aligns well with the developmental priorities of National and State governments including promotion of livelihoods with focus on sustainability and women empowerment.

The intended impact of “contributing to promoting a Green Economy and economic prosperity of tribal India” is well conceived through five defined outcomes. The Outcomes and Outputs are specific to the purpose they are supposed to achieve; are mostly measurable quantitatively; are within the resources given; and are relevant to the needs of the target groups/end beneficiaries.

Detailed and mostly quantitative targets are set for all indicators and are based on in-depth field and sector research in the design phase. Since most targets have been achieved, despite COVID and staff attrition etc, they could be considered realistic.

As was brought out in the discussions with various stakeholders, the criteria for choosing project were well laid out and reflected current priorities of National, State govt, other funding partners and Switch Asia's priorities including but not limited to its possible impact on gender, livelihood of poor, mainstreaming and Scale up.

The design covers all important dimensions of the project to achieve its objective viz. is Value chain inefficiencies, limited capacity of value chain actors like harvesters, producers (skills, linkages), service providers (design, equipment etc) , bankers , retailers , research and a conducive policy framework and synergy with other ongoing programmes on bamboo and enterprise development.

The intervention fully addresses a range of pertinent needs of the target groups and end beneficiaries. The five work packages cover a wide spectrum of work dimensions in a very comprehensive way. The Work Package (WP) 1 aims to promote enterprise development for sustainable supply of bamboo products and generate improved livelihoods. The WP 2 aims to promote select new bamboo products among high potential buyers. The WP 3 aims to sustain and upscale local initiatives through community-led multi-stakeholder development models. The WP 4 aims to promote sustainable linkages between financial institutions and local enterprises. The WP 5 aims to strengthen policy dialogue and disseminate proven development models relevant for bamboo sector, more particularly at the state, national and international level.

To implement these work packages the IAs engaged were found to have rich experience in their respective areas of operation viz. FMC on project management, technical know-how on bamboo, cluster development, skill development, monitoring and evaluation, policy advocacy etc; SIDBI on financial aspects including micro enterprise promotion and lending, CEMCA on media and communication, CBS on studies and policy etc. All these IAs are institutions of repute. These WPs have well defined activities, plans, publications, tools and reports.

The respective roles of IAs are well defined in the TORs and clearly understood by them.

The MSMEs have actively participated in seeking techno managerial inputs under the Action, building on their awareness about available market opportunities. These MSMEs then collaborated among themselves and with their value chain partners to form groups and production networks (PNs) for supply chain engagement with potential buyers for their commercial benefit. Common Facilities Centres (CFCs) were set up being owned and managed by formal & legally registered producers' organisations (POs). The equipment suppliers and BDSPs participated for seeking capacity building inputs and linkages with potential buyers of their products & services. The financial institutions provided institutional credit to capacitated MSMEs. They participated in training and awareness programmes to gain knowledge about the bamboo sector, its potential business applications, the stakeholders and learning about appraisal skills to assess techno economic business viability.

The contracted Facilitating Agencies (FAs) had good experience of either working on bamboo or on enterprise promotion, financial linkages or cluster development. They participated in training programmes required to help them complete their deliverables effectively and continue their engagement in clusters for sustainability of their own business operations. Most of them will continue to work in the bamboo clusters despite this project coming to a close. Though some of them did not have a prior experience of working in Bamboo clusters, their relevant exposure to community development or enterprise promotion has fitted well with the approach taken by the project. A few of them indicated their willingness to expand their work in a greater number of bamboo clusters – having picked up enough experience and confidence from this project.

The FAs interacted with by the evaluation team have mentioned that the project was very aptly designed and clearly articulated.

The stability of Indian economic fundamentals, a conducive bamboo policy framework, and stable law and order have helped project achieve its objective. Despite challenges posed by covid disruptions, the project has managed to achieve its overall targets and has set in a momentum which is likely to continue in many of the clusters.

The Evaluation Team felt that Diagnostic Study Reports could have been done earlier, so that what later emerged could have been found earlier – for example the fact that most of the bamboo enterprises were household enterprises in the 9 states, not formal MSMEs. Also,

there was feedback from most FAs that skill trainings were shorter than required and could have been designed specific to the target groups.

3.2. Relevance

Relevance to the needs of Target Group

The intervention to “Promote Bamboo Micro Small and Medium Enterprises (MSME) clusters for Sustainable Development” fully addresses a range of pertinent needs of the target groups and end beneficiaries and contributes to the attainment of some of their rights. Moreover, fostering bamboo products as a sustainable substitute of less renewable resources like timber and promoting economic prosperity of the tribal communities including women in less developed regions of India, remains highly relevant to the planned target groups of the intervention and serves the cause of sustainable development.

The intervention rightly identified clusters of high bamboo availability within a sector that is characterized by limited capacity of producers/household units, poor skills, irregular availability of raw material, lack of skills, poor market linkages and weak eco system of service providers. The intervention identified one high-priority area of concentration in each of nine states (Jharkhand, Meghalaya, Arunachal Pradesh, Assam, Mizoram, Tripura, Odisha, Chhattisgarh, and Madhya Pradesh). The intervention strategy the intervention did not cover the entire area of these nine states as this would neither be relevant nor feasible within the given resources but. focused on selected clusters of enterprises.

The programme targeted capacity building of primary processors (both harvesters and household artisans), their skill upgradation , exposure to markets , design inputs and linkages to local , regional and national markets. The primary processors included both the household units and the small and micro enterprises. A diagnostic study was conducted at most of the chosen clusters to find out missing and weak linkages and programme focussed on bridging those gaps. They were supported through a range of skills development initiatives to expose them to different product lines, market linkages and access to finance implemented through technical and business training and matchmaking with other relevant market actors. There are also some innovative start-ups with a higher risk appetite who (sometimes) already had some existing financial resources. They were benefited through exposure to new prototypes and potential buyers in "Incubation Centres" set up by the intervention.

The Activities and Outputs and planned Outcomes also respond to the needs of harvesters, input suppliers and corporates as well as Government buyers, to identify better market linkages and market information about bamboo, while putting a wide range of business service providers (architects, consultants, technical experts, financial advisors) in touch with producers.

The intervention also supported banks with Orientation Programme for senior and mid- level Branch Managers in all states to orient them on Bamboo enterprise financing needs and

opportunities. More intensive training in the assessment of business plans, credit requirements, repayment capacities and monitoring of business performance was under the responsibility of SIDBI with technical support of FMC. About 22 business plans were prepared, 832 bankers sensitised and 1981 MSMEs were linked with FIs.

The final beneficiaries were the bamboo sector in India at large which currently employs over 5 million people, not all of whom are fully realizing their earning potential.

The intervention was strong on including women entrepreneurs and has achieved more than the already ambitious Gender targets. It worked both in matrilineal (tribal) states, but also in non-tribal states.

Relevance to the capacities of Stakeholders

The programme was designed post diagnostic studies conducted to understand gaps in capacities of various stakeholders including harvesters, primary processors, raw material suppliers, machinery and tool supported stakeholders as diverse as forest officials, forest raw material depots and sustainability experts. Most often the focus was on building capacity of local officials to continue the developmental work not only in the chosen cluster but also other clusters of the provincial Govt., bank and other financial institution officials, local public functionaries and producer networks. The intervention focussed not only on economic aspects but also environmental and sustainability aspects.

Sustainable harvesting of Bamboo is an important driver of economic prosperity and environmental sustainability. Range of activities trained the relevant stakeholders around the issue. Linkages that can ensure regular supply of raw material to artisans helped the cause of regular production and helped check migration of workers in the seasons when raw material availability was a challenge.

Designers and trainers were supported to design suitable skill upgradation activities for the household producers as also come up with designs of products that could be made using the local raw material available and would sell in local/ regional markets. The intervention was planned to introduce machinery and tool suppliers to the clusters as also spread best practices on use of tools and machineries across clusters.

The subsidy schemes are implemented through the Ministry of MSMEs and the National Bamboo Mission whose goal is to "promote holistic growth of the bamboo sector by adopting area-based, regionally differentiated strategies and to increase the area under bamboo cultivation and marketing".

Most of the bamboo work happens in remote, tribal areas. Poverty is endemic. Govt, through its various programmes and schemes is chasing economic goals of development with balancing the environmental goals of protection and sustainability. The intended programme focused its attention on building local linkages with Govt officials and helping dovetail locally

available schemes of development with the overall objectives of the programme. The intervention is consistent with these priorities by promoting bamboo as a replacement for non-renewable (slow growing) timber, plastic, and iron ore, and because it reduces non-organic waste.

Box 15

Mandram Tikka / Bilaspur, Chhattisgarh

Replacing Plastic-wares with Bamboo: Mandram's Story of Success through Innovation

Originating from a family of Bastar tribals, traditionally involved in bamboo craft, Mandram with limited exposure and little capital, used to produce traditional bamboo wares like jhuris, supas and jhapis. Working with his wife, Mandram could barely support his family of 7 with his limited income of less than Rs. 250 per day.

FMC encouraged him to participate in a skill upgradation program to be held at Kudal, Maharashtra. The program provided Mandram with much-needed exposure and skill to craft modern products, made of bamboo. These products like lamp shades, home temples, pen stands had greater demand and profitability.

Equipped with new designs and skill, trained his wife along with 4 other artisans. Subsequently they formed a new unit named Laxmi Baans Kala Kendra, further applying for artisan cards. FMC's team further enhanced their efforts by connecting them with traders and helping them participate in district and state exhibitions – also assisting them to arrange for a working capital credit of Rs.40,000 from a local microfinance institute.

Laxmi Baans Kala Kendra, now has an annual turnover of Rs. 10 lakhs, with the 6 artisans Mandram's story reflects how the right concoction of cluster development strategy, together with an individual's willingness and effort can bring about positive changes in their life and the society as a whole.

The capacities of the target groups were continuously assessed as new artisans and business got included. The Activities and Outputs of the intervention were explained to the target groups (including Government) by the Implementing Partners (IPs) in detail through a range of workshops, trainings, meetings, and written communications, as applicable. The interactions held by endline evaluation team showed that they were fully understood.

The intervention has provided a mechanism for more innovative, risk-friendly start-ups whose capacities were enhanced by helping them access "Incubation Centres" – show rooms where they could explore proto-types and interaction with technical staff and a wide range of Business Development Service Providers (architects etc.).

Relevance of IAs / FAs

The intervention is implemented by a consortium led by a specialist Indian CSO called the Foundation for MSME Clusters (FMC), in collaboration with the Small Industries Development Bank of India (SIDBI), apex public sector development bank for promotion, development and financing of MSMEs; the Commonwealth Educational Media Centre for Asia (CEMCA), an institution that has governmental status; the Copenhagen Business School (CBS); the

German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE); and RGVN (North East) Microfinance Ltd., an Indian micro-lender and consultant. This consortium brings together expertise on design, networking, linkages, research, finance, policy advocacy and communication skills to benefit the project design, its implementation, sustenance and scale up.

The IAs' skills, experience and familiarisation with the implementation environment and their respective tasks are fully adequate.

FMC is a leading, specialised CSO with 17 years of rich experience in MSME support in India but also in 20 other countries such as Bangladesh, Bhutan, Pakistan, Myanmar, Iran, Ethiopia, Palestine, Montenegro, South Africa, Trinidad and Tobago, etc. FMC, as the Lead Implementing Partner, coordinated the whole intervention as well as directly managed the implementation of Activities under Outcomes 2, 3 and 5. FMC has the deep knowledge of the bamboo sector and its policy eco-system.

SIDBI is the Indian Government's apex development organisation for MSME financing and advisory services and implements Activities under Outcomes 1 and 4, including the production of a learning paper on financing for Sustainable Consumption and Production.

CEMCA is an intergovernmental organisation founded in 1994 to assist governments and institutions in the Commonwealth Countries of Asia to expand the scale, efficiency, and quality of learning by using multiple media on open, distance and technology-enhanced platforms, especially for users with limited literacy and numeracy. CEMCA helped implement Activities under Outcome 5.

CBS is a prestigious European business school and was responsible for conducting in-depth studies, including on the role of women in the bamboo Value Chain.

DIE is a European think-tank and had carried out research and prepared briefs on the governance of "green" Value Chains.

RGVN is a microfinance institution founded in 1990 to serve local CSOs in the north-eastern States with financing solutions and is headquartered in Guwahati, Assam State, with branches in all the north-eastern States. However, RGVN could not actively participate in the project as reported by FMC, as they were preoccupied with conversion into a small finance bank. However, the gap was filled by FMC.

The grant contract (a Contribution Agreement) was awarded in 2017 through a Call for Proposals under the regional programme "SWITCH-Asia II - Promoting Sustainable Consumption and Production", governed by Decision D-038-690 and financed through the Development Cooperation Instrument (DCI). SWITCH-Asia II aims to promote sustainable growth, contribute to economic prosperity and poverty reduction in Asia, and mitigate climate change.

FMC has bilateral agreements (financial Memorandum of Understanding (MoUs) in place with the project partners viz-SIDBI and CEMCA. For external actors, it has signed MoUs with the State Bamboo Mission in Chhattisgarh, Sri Sri University in Odisha, World University of Design in Sonipat (near Delhi), and Northeast Centre for Technology Application & Reach (HQ-Delhi). These are all non-financial MOUs.

The Facilitating Agencies (FAs), selected by SIDBI and FMC for 9 Clusters/ States are all experienced agencies either in bamboo or in enterprise promotion/development/cluster development and bank financing. Most of these agencies have brought their previous experience to the intervention and have contributed to the success of the programme.

In summary, the grant modality pursued is a good vehicle to bring together a wide range of actors with different roles, from direct, field-based implementation to mediation with banks and Government, media outreach, research, and policy advocacy.

3.3. Efficiency

The structure of the implementation mechanism was appropriate and based on a strongly collaborative model of multiple actors. Their roles were clearly articulated in the project document and well understood by all actors as they got into implementation. , FMC and SIDBI have long working relationship. There was also a high level of financial competency across the IAs. The partners communicated on a frequent basis, both internally and with external stakeholders.

The main contractual arrangement guiding the intervention is the grant contract between the EC and FMC, agreements are in place with SIDBI and the partners. The Evaluation team for the project found that work packages and key deliverables were well understood by relevant actors. The implementation mechanisms chosen for this intervention were conducive for achieving the planned Outputs and for contributing to expected outcomes in an efficient manner.

FMC's Project Manager, a key resource since the design stage, left FMC (mid-2020). The Project Manager was an exceptionally dedicated staffer with 15 years of experience in the MSME and bamboo sectors and was one of the driving forces behind the intervention. However, the Executive Director (ED) has provided directions to the project and the project has shown good progress under his leadership mitigating any possible negative impact of Project Manager's departure.

It was observed in Chhattisgarh that Quite a substantive time was wasted by FA due to ideological challenge of not dealing with MFI in the initial years.

3.4. Sustainability

Acquisition of capacities

The technical and business skills of the artisans, small firms and other actors like Bankers, service providers like machine and tool suppliers have definitely improved through skilling and exposure interventions. During interviews and discussions, most of the cluster facilitating agencies expressed satisfaction over the basic skilling inputs and design inputs. Exposure visit to other clusters have led to cross learnings enabling artisans to convert this new knowledge into increases in jobs and incomes.

Many a Case Studies shared by the project showcase successful interventions on capacity building side. Many artisans are now able to produce not only simple baskets type products but also high-end value-added lifestyle products such as dustbins, laundry bags, flowerpots, office stationery, and light balls. Some of the clusters (Barpeta) are making furniture products. Many an artisans have got skilled and graduated into marketi9ng roles and leadership roles at producer networks, SHG group and help group members take decisions to improve business. Most units have got trained in accessing and using credit to benefit of expanding business activities.

IAs/FAs indicated that some handholding would still be required by units. Quite a significant time was lost due to covid disruptions and continued handholding for some more time would go a long way in sustaining the benefits of the project.

Box 16

Dongche Yanik / Papum Pare, Arunachal Pradesh

Crafting Contemporary Utility Products from Bamboo: Success through Design Innovation

Dongche Yanik was engaged in crafting Murhas, small seating objects made of bamboo sticks. She had good communication skills, hardworking nature, and leadership abilities. FMC's team imparted them with training especially in modern method of bamboo processing and treatment, and contemporary design techniques. FMC assisted Dongche Yanik and her fellow artisans to form a SHG, further helping them avail a micro-finance credit of INR 1 lakh for working capital requirement.

They soon started producing Murhas at a larger scale, selling to local markets and even in Assam. The turnover increased from INR 288000 to INR 360000, with daily incomes rising significantly. Dongche Yanik was able to renovate her old bamboo house using her income from bamboo. The group is further trying to promote sales through online medium.

The FAs interacted by the Evaluation Team, have generally reported that the existing entrepreneurs supported by the intervention will sustain after the intervention. However, the new entrepreneurs supported by the intervention will require handholding for some more time in order to sustain. FAs have informed that they would continue to hand hold them.

Affordable access to benefits

The intervention aims at contributing to promoting a Green Economy and economic prosperity of tribal India. Through the course of the intervention's implementation, the planned target groups have participated in the intervention activities at no additional cost. Despite covid disruptions, target groups have made good use of the inputs provided and secured a place for themselves in local, regional or national value chains. In many places access to raw material has got smoothed due to collective initiatives of groups created and through involvement of local forest officials. Education about changed status of bamboo too has helped ease regulatory challenges.

The E-Path Shala manual and e-learning modules continue to remain accessible to users after the intervention. Most of the FAs intend to continue association with the chosen clusters and hope to continue extending their handholding support for some more time. The services of FAs and the Incubation Centres would continue to be available.

Institutional credit flows to the MSMEs are likely to continue. The local Govts are integrating more and more of bamboo projects in to their schemes of development.

Financial Institutions such as SDF, Bhutan and SGP, Bhutan have shown their willingness to fund future endeavour of FMC and local FAs in SAARC countries such as Tarayana etc. CEMCA has also shown keen interest to be associated with future endeavour as communication partner.

Private sector involvement

The intervention was deliberately designed to support private sector development. In addition, it also has strong links with the public sector. The intervention has been able to create linkages with 61 potential public and private buyers against the target of 20.

Through the intervention nine Business Incubation Centres (ICs) have been set-up which have provided techno-managerial inputs to the start-ups. About 70 start-ups have been incubated as against the target of 20. FAs will continue to provide support to these start-ups.

The intervention has also capacitated the Facilitating Agencies (Civil Society Organisations) to strengthen the bamboo Value Chain where they provide a wide range of services to principal firms. They are incentivized through fees received by linking businesses to banks, and this could be a source of income in the future.

Many NBFCS and public banks have been roped in to provide credit to various actors along the value chain.

Regarding the overall economic vulnerability of the poorest artisanal households, the intervention is certainly increasing their resilience through a combination of skills transfer and

integration in the bamboo Value Chain (linkages with suppliers, banks, consultants etc.). In many cases, the income has been reported to have increased by more than 100%. Also, the seasonal nature of work (few hours a day and few months a year) have changed to regular hours a day and round the year work helping check migration of workers to other places for work.

3.5. Gender Mainstreaming

Bamboo's income potential is particularly important for women. Its light weight and linear splitting nature makes it easier to process than timber, which provides farmers, many of whom are women, with opportunities to engage in initial processing, and so increases their share in value addition. Bamboo can also reduce the risks associated with collecting timber for fuelwood, a job typically done by women in certain parts of the world.

The project had a specific focus on issues of gender mainstreaming. The intervention promoted gender equality by addressing needs of women led enterprise and helped many a women start new enterprise. Through the intervention, 2604 enterprises were started/expanded, 2089 (80.22 per cent) being women led as against the project target of 900 (40 per cent) women led enterprises. Women led enterprises are 232.11 % of the target of 900.

Women were trained on newer skills, newer products as also in softer skills of negotiating and marketing. Case studies shared with the evaluation team show many a women take up leadership roles in their clusters.

The target enterprises collectively employed an estimated 6178 persons, 4139 (67 per cent) being women against the envisaged target of 50 per cent women employment. The women employment of 4139 is 114.99% Of the target of 3600. The intervention could be classified as significant, e.g., while implementing the intervention activities' special needs of women and men have been considered.

The intervention has improved women's lives, as well as had an overall positive impact on vulnerable people in general (mainly through its income-generating component). Some FAs have indicated that artisans were able to send their children to school, even during the adverse period of COVID. The increased income at the hands of women have enhanced their say in decision making in family. Many a women feel empowered through the cash flows they are able to generate through enhanced business activity.

Three of the nine states are matrilineal (Meghalaya, Mizoram and Arunachal Pradesh) of, where property such as land and business ownership is traditionally in women's' hands. In the other states, male-biased dynamics is more pronounced. Yet the improving cash flows are beginning to change the dynamics.

In all the states, it appears that there is a traditional division of labour within the artisanal household, with males typically engaging in outdoor activities (harvesting) and pre-processing, while women conduct the design and assembly. Income levels plays a greater role in the non-tribal states, where bamboo work is traditionally associated with low-income groups. Here, the intervention makes a valuable contribution through vocational training and by bringing artisans into the economic fold through linkages with banks and the wider supply chain. In most places women can make better and newer products getting them access to better cash flows.

In many a place, local facilitating agencies shared that domestic violence stopped when women started earning. Earlier they were financially dependent on husband. Now even husband also sough cash from time to time from their wives. Overall say of women in family affairs saw an uptick.

Chapter 4

4. Performance of Partners (FMC)

There were 4 key partners to the project, the Terms of Reference required the Evaluation Team to comment on the performance of the lead partner, i.e., FMC.

The TOR clearly defines role of the Lead partner. As the lead, FMC was supposed to conceive the project, develop the basic design and coordinate the entire project with its partners. FMC was directly responsible for coordinated implementation of Work Packages 2, 3 and 5. In addition, FMC had to also provide programme management advisory services under WP1 and WP4 to SIDBI. FMC had earlier successfully provided similar support services to SIDBI in the past for other projects, therefore there was already a certain level of rapport between the two organisations. Although there was some delay in starting the project due to understandable constraints at SIDBI's end, overall FMC and SIDBI coordinated very well.

FMC provided overall coordination support for the entire Action to other stakeholders as well, ensuring collaboration among various partners across all work packages, undertaking specific activities under each work package, documenting financial and non-financial records, monitoring the overall progress and reporting to the EU.

The underlying logic of the whole intervention as envisioned by FMC was clear and reasonable as also adequately expressed in the Log-frame. It was also understood by the relevant stakeholders well. The structure of the implementation mechanism was appropriate and based on a strongly collaborative model. The roles of stakeholders were clearly defined and detailed organograms were framed.

This section evaluates the performance of the Lead partner FMC across all the work packages for which it was responsible or contributed to.

4.1 Quantitative

Work Package 1

WP1 was focussed on promoting enterprises for sustainable production with specific objective to promote enterprise development for sustainable supply of bamboo products and generate improved livelihoods. After SIDBI selected 9 Facilitating Agencies (FAs) through a well-defined bidding process, FMC was supposed to complement the efforts by providing programme management support to SIDBI and undertake the responsibility of capacity building of appointed FAs to help locally design and implement activities. The first key activity upon the start of Action to be undertaken by FMC was to help SIDBI draw up & finalize the terms of reference, selection methodology and manage the entire bidding process for selection of the FAs. The teams deployed by the selected FAs were to be placed in the clusters for the entire duration of the Action. Thereafter, as the second key activity, the FMC had to provide training

to all the 9 selected FAs to familiarise them about the Action and help undertake diagnostic study of every cluster in the selected districts. Another key activity under this WP was to provide training to the master artisans and other local key trainers for upgrading the bamboo based products that could fetch increased margins. The implications of this upgradation in terms of changes required in technology, designs, material inputs, skills, knowledge and OHS were to be explained through Training of Trainer (ToT) programmes. This was to be undertaken as a part of the pre-training activity through display of upgraded products and exposure visits to the neighbouring markets leading to another activity viz. 'providing technical, managerial & financial inputs' to 2250 primary processors in the 9 clusters.

Comments on Performance

a) Meeting or Exceeding Expectations

The FAs for all the 9 clusters were efficiently selected after the finalisation of the terms of reference, selection methodology. FMC worked on developing the ToRs in discussion with SIDBI defining scope of work, roles and responsibilities of FAs, selection of states for project implementation on the basis of secondary literature, mapping of districts and clusters and creation of checklist on the basis of feasibility of actions to be performed by FAs, along with this, FMC also worked on developing the technical and financial scoring for selection of the FAs in discussion with SIDBI. The suitable bidders were selected on the basis of their technical and financial proposals by a committee comprising FMC (2) and SIDBI(1) staff. 5 FAs were selected in the last quarter of 2018 and the remaining 4 were selected in January 2019. The entire bidding process for selection of the FAs was conducted smoothly.

One training programme was done for all the FAs and the TAs of the project physically in early 2019 for about a week where all the experts were invited to come over, make their presentations and clear the doubts of the project team on technical, financial, managerial and cluster development approach matters. The project itself was explained in detail along with what were their roles and how the admin issues will be handled.

Against the target of 2250, the number of enterprises that received technical, managerial and financial inputs was much higher at 3764. Harvesters trained were 456 against the target of 450. Overall Market Generated (Euro Million) was 3.53 mn Euros as against a target of 3.50 mn Euros.

In the last year 2022/23, several (about 5-7) workshops were organised for the FAs/TAs, where about 10-12 FAs/TAs got the opportunity to visit IIT Mumbai/ NID Bangalore/ IPIRTI Bangalore/ KONBAC Kudal/ A Plantation institute in MP/ Several private stores selling bamboo products of high end etc.

One key achievement under WP1 was the process that was followed while supporting the enterprises. The unit owners were initially trained with basics that led to their capacity building and later they were supported in bank linkages and/or self-investments.

Trainings done initially created a sense of trust that helped in achieving the desired results.

b) Deficient

FMC could not achieve the target of providing OHS inputs and social security linkages to 10,000 workers. The achievement at 3,512 was a mere 35%. The Evaluation Team tried to explore the reason or such low achievement. During interaction, the FAs informed that there was a hesitation among women artisans who did not share their ergonomic and health or safety related problems with them. As a result, their wholehearted participation in the OHS programmes could not be ensured. This was a handicap FMC had to live with.

Work Package 2

This work package focussed on creating market opportunities for high potential products with the specific objective of promoting select new bamboo products among high potential buyers. The first key activity was to undertake a market assessment study to identify high potential timber substituting products for public and private procurement. The specific bamboo products, their buying volumes and the frequency of buying by public institutions was to be assessed and matched with the suppliers' capacities in the targeted states to identify scope for enhancing procurement of bamboo products in line with the sustainable public procurement policy of buyers. This study was to be undertaken by one of the subcontracted national agencies that had prior experience and techno commercial understanding of the variety of bamboo products that could be made in a cluster specific context. This was required for the Action to channelize its resources to foster enterprise development among the select high potential opportunities.

The second key activity was to prepare a market need assessment study to assess the scope for public & private procurement for select products, along with their relevant technical standards, highlighting gaps in current production and public procurement requirements. If there were no product standards for any high market potential product like bamboo pallets, the Bureau of Indian Standards (BIS) was to be approached to help draft an appropriate standard (under WP5).

The third key activity was to setup 9 physical incubators to demonstrate high potential products in 9 clusters. These incubators were expected to help fuel the imagination of potential entrepreneurs and select the option most suitable for them. It was expected to also help create demand for strategic services from the BDSPPs and FAs to take them forward by creating promotional fliers around these products. The fourth key activity was to identify and incubate 20 start-ups in new areas, thus creating options so as to ensure long-term growth. The incubation support required intensive handholding by the mentors and linkages with

institutions that could provide them with necessary technical designs and trouble-shooting support. Partnerships was to be forged with relevant institutions for sustainability. The fifth key activity was to organise linkages with 20 potential public & private buyers. Every cluster was to be linked with several regular buyers as well, by organising exposure field visits of buyers and also facilitating their interaction in buyer seller meets (BSMs) to be undertaken along with 9 regional learning meetings. The Action was thus required to support commercialisation of high potential bamboo products in the buildings, furniture and other lifestyle sectors.

Comments on Performance

a) Meeting or Exceeding Expectations

Building on its sectoral experience in bamboo and competence to bridge externally sourced technical knowledge with local demand, FMC was able to create sustainable supply chain linkages with potential buyers. FMC also coordinated innovation promotion, mentoring and supporting linkages, drawing from its prior experience in managing innovation in clusters.

Under WP2, FMC got 7 market assessment studies conducted in line with the target. It also arranged setting up of 9 physical incubators, indicating 100% achievement of target. 70 Start-ups were incubated against the target of 20. FMC also created linkages with 61 potential public and private buyers against the target of 20. Overall, 44 New buyers undertook sourcing of high potential products through start-ups as against the target of 20.

Bamboo related standards

As regards standards, FMC came out with a detailed document “An Analysis of Bamboo Standards Situation in India”, which provides a comprehensive analysis of bamboo standards available in India, in three broader sets of commercial activities – Pre-Processing Operations (Plantation, Harvest and Post-Harvest Treatment); Processing to Manufacture of Final Goods and, Marketing processed and final goods in external markets. The document mentions a list of about 15 major BIS standards around Bamboo. The document also mentions good practices from other countries such as China and Vietnam and lessons for India.

At CSIR-IHBT, highly efficient micro-propagation protocols were developed from nodal segments of important bamboos such as *B. balcooa*, *B. bambos*, *B. tulda*, *B. nutans*, *D. asper*, *D. Hamiltonian*, *D. membranous*, *D. giganteus*, *Guadua angustifolia* and *Phyllostachys pubescens*. But a detailed and comprehensive BIS standard for micro propagation published by BIS could not be found, however there are a few developed by Department of Biotechnology’s National Certification System for Tissue Culture Raised Plants (NCS-TCP), by INBAR.

There's an urgent need to setup a study which would work on the aspect of selection of the right species based on agro-climatic regions to prepare a standard detailed guide for plantation

of Bamboos as per agro-climatic regions. Such a standard could be seen developed by Jamaica.

Some of the challenges mentioned in the FMC document are (a) Not many are aware of bamboo standards (b) standards are not being demanded by domestic consumers (c) domestic consumer is cost sensitive and standards will increase the cost (d) Standards will be useful for US/Europe export but India is yet to reach to that stage.

b) Deficient

None. There were no areas under WPs where FMC fell short of achievement of targets.

c) Special efforts

FMC had engaged the services of a senior public procurement expert for exploring the public procurement route. Evaluation Team's interactions with the Expert revealed that policy advocacy with State / Central Govt had to be a continuous process. If govt policy framework changes, it has huge impact in promoting procurement. In view of the elaborate set of requirements for registration on the Govt of India's official procurement portal known as GeM, literacy and awareness levels of artisans, availability of necessary information and documents with them, lack of standard specifications with the Government for bamboo, inadequate capacities of individual artisans to supply in bulk etc., not much success could be achieved in making use of the public procurement route. Also, the Expert could be engaged at a late stage in the programme, after the impact of Covid had subsided. Nevertheless, this highlighted a key area for more planned and concerted efforts during the next potential phases of the intervention.

Work Package 3

The third Work Package was aimed at strengthening local governance systems and intermediaries with a specific objective of sustaining and upscaling local initiatives through community-led multi-stakeholder development models. The key governance stakeholders were the 9 local Facilitating Agencies (FAs) hired under the project, 140 local & national BDSPs, 50 Producer networks (PNs) and 30 equipment/input suppliers. The key activities were accordingly designed to strengthen these 4 stakeholder groups. The facilitation of local action required a small team to be set up by the appointed FA and stationed for the entire duration of the Action to continuously engage with stakeholders to build capacities, promote collaborations for a strong governance system and also become a part of it. The capacity building and provision of ongoing hand-holding technical support of the FA teams was to be managed by FMC through a locally stationed technical advisor in every district along with senior team from the head office.

The first key activity was to organise 4 structured training programmes for FAs. These programmes were to be designed to help them a) undertake participatory cluster diagnosis,

draw up action plans and undertake pilot initiatives for trust building b) implement activities effectively for achievement of short term and long term goals c) stock taking in the mid-term, drawing lessons from mutual experiences among FAs to start building foundations for sustainability and finally d) to draw up an exit strategy for the project and designing customised activities required during the last year of the Action.

Box 17

Giogi Yachung / Papum Pare, Arunachal Pradesh

Levering the Power of Online Marketplaces: Giogi's Story of Taking Bamboo Murhas to the World

Giogi Yachung, a Murha artisan was earning a meagre income from selling Murhas to the local traders. Giogi has established a sustainable revenue stream through online markets – selling to domestic and foreign customers.

She was of hardworking nature, skill, and adaptability. FMC's team imparted them with training especially in modern method of bamboo processing and treatment, and contemporary design techniques. FMC assisted Giogi Yachung to form a firm, further helping them avail a micro-finance credit for working capital requirement.

Giogi soon reinvented the age-old Murha into a contemporary product, producing stools, centre tables and furniture sets for the modern household. With FMC's support, Giogi enlisted her products to the online marketplace. FMC further linked her with markets in Itanagar, Naharlagun, Ziro, Palin, Koloriang, and even to neighboring states like Assam and Meghalaya. Her income increased from INR 144000 to INR 360000, together with improved profitability due to better designs.

The second key activity was to identify 40 strategic BDS providers and create linkages for providing services to MSMEs & create a pool of 100 local BDSPs. 40 individual and institutional BDSPs, were important for bringing in new knowledge into the clusters in a sustainable manner. Development of new product designs and technology inputs was to be provided by select institutions. The third key activity was to organise 50 PNs and provide techno managerial support to setup/revive and manage 9 CFCs. Several of the BDS inputs can best be harnessed economically and effectively through aggregation of the final beneficiaries to meet the requirements of high-end markets in groups and/or commercial integrators. The Action intended to create and/or strengthen 50 PNs with hand-holding support from locally based TAs of FMC and the FAs. At least one such PN in every cluster was to be supported to help it become a formally registered bigger membership-based organisation – termed as Off Farm Producers Organisation (OFPO) – which could invest into setting up or strengthening of CFCs owned & managed by them on self-sustainable basis. The fourth key activity was to identify and build capacities of 30 equipment/ inputs suppliers.

Comments on Performance

a) Meeting or Exceeding Expectations

For the WP3 activities, FMC drew upon its leading in-house national and global expertise across 20 countries. FMC stationed a technical advisor in every district along with senior team from the head office. Besides the initial programme, there were several bilateral meetings between the FAs/ TAs on the field wherein a number of inputs were provided. This was an ongoing process throughout the project duration. Then there were at least 7-8 virtual sessions held between the SIDBI/FMC team (from the HO) and the FAs in the field to identify the significant issues left out (e.g., too much focus on financing by the banks and leaving out the MFIs and therefore the need to make corrections), and to address various operational issues with FAs.

FMC also identified and linked 84 Strategic BDSPs against the target of 40. Besides, 12 Local FAs were capacitated by FMC against the target of 9. FMC identified and capacitated 34 equipment and input suppliers against the target of 30. Further, FMC also created a pool of 136 local BDSPs against the target of 100 and organised 68 Producer Networks (PNs) and provided inputs to them against the target of 50. The Evaluation Team interacted with one such PN at Barpeta, Assam viz. Raypur Cane and Bamboo Co-operative Society Limited, wherein it was observed that the society is engaged in manufacture of high end bamboo products such as furniture, trays, cups, lamp sheds, decorative pieces, etc. The entire village was engaged in bamboo activity and was supported by the PN in raw material supply, design and marketing of products. The PN plans to engage more villages in its ambit.

Regarding exit strategy, FMC indicated that key activity was to build capacities of FAs so that they continue to serve the bamboo sector and entrepreneurs even after the project is over. Further, the project has collaborated with state level / national level institutions such as NRLM, Bamboo Mission etc. who would continue to support bamboo artisans / entrepreneurs. NRLM has indicated that they propose to work in about 100 bamboo clusters. The project has also sensitised / motivated other players. Transforming Rural India foundation (TRIF), who were taken for an exposure visit, have indicated that they are planning to take up bamboo on a large scale in Chhatisgarh.

b) Deficient

None.

Work Package 4

WP 4 aimed at creating suitable 20 model business plans for MSMEs in 9 clusters; sensitise and train 150 local bankers from 10 FIs on Bamboo MSME financing; Create financial linkages for 2250 MSMEs with FIs and public schemes; explore and seek international banks' credit lines for enabling offtake of SCP financial products.

SIDBI is the lead partner for WP 4 with RGVN as associate. However, RGVN could not actively participate in the project as reported by FMC, as they were preoccupied with conversion into a small finance bank and the gap was filled by FMC.

The Action will select 20 most likely businesses to be chosen by the targeted 2250 businesses. These plans will help FAs and other financial BDS providers to use these model plans to customise it in the context of individual borrower requirements. It also enables an informed connect between the borrower and FI by facilitating common information about the production process, equipment requirements, working capital needs and a section on market analysis, thus proving techno-economic viability.

The institutional credit will be provided either by regular banks or recently created Small Finance Banks (SFBs) or NBFCs. While the regular banks have necessary competence for appraisal, the NBFCs/SFBs require to be trained for using relevant software. The Action therefore, secondly envisages to undertake orientation programme for the bankers and training of 150 officials from at least 10 NBFCs/SFBs to help them familiarise about the bamboo sector, its business opportunities, financing options, government's credit linked schemes and appraisal mechanisms. RGVN bank (NE Small Finance Bank), targets micro enterprises for financing. The RGVN will provide insights into the capacity building requirements of its staff, guide the preparation of the training modules and will also be one of the ten beneficiary FIs of technical inputs under the Action for further replication in other FIs.

The total credit requirements of the targeted enterprises is aggregated at 1.88 million Euros (reduced from 9 million euros estimated originally) by the end of the project. The FAs will leverage upon their direct connect with the local community, 30 equipment/inputs suppliers and 140 BDSPs to identify eligible borrower enterprises as a part of the third main activity. The identified entrepreneurs will then be assisted in finalizing their customised business plans, building on the existing model plans wherever feasible. Thereafter the FAs will provide the borrowers with liasoning support to respond to the queries by the banks/NBFCs. The FAs will provide this assistance as a part of their total remuneration where an additional financial incentive of about Euros 70 is provided for facilitating every matured linkage that leads to loan disbursement and enterprise creation. The linkage with credit linked public subsidies will help make the credit facilitation easier for the enterprise to borrow. Fourthly, SIDBI will identify and explore the possibilities of linking up with national and international SCP lines of credit on commercial terms to scale up similar financing options in other sectors.

Comments on Performance

a) Meeting or Exceeding Expectations

The action was able to prepare suitable 22 model business plans (target 20) for MSMEs; sensitise and train 832 (target 150) local bankers from 54 FIs (target 10); Create financial linkages for 1981 MSMEs (target 2250) with FIs and public schemes; facilitated credit linkages

for 3.43 mn euros (target 1.88 mn euros) and explored international banks' credit lines for enabling offtake of SCP financial products.

b) Deficient

The action could link 1981 units out of targeted 2250 units. Initially, banks were not comfortable in entertaining loan requests of bamboo artisans. Lending process was also not very smooth. Multiple interaction with banks and support from industries department by the FAs and FMC team helped in engaging the bankers better. The FA helped in preparing Project Reports and also helped banks in recovery of past loans. This brought down the bad debt level and turned the bankers around.

Further, the focus of the project was pro-poor and primarily women several of them having no bank history and were unbankable for various reasons. They moved ahead by making self investments. As per details provided by FMC on Self investment made by units, about INR 49.76 mn was self investment made which is about 20.46% of total investments made. The share of self investment to total investment was lowest in Assam at 5.81% and highest in Arunachal Pradesh at 79.24% followed by Odisha at 70.17%.

Further, the project also started off late, as during 2018, implementation partners were working out their exact roles and deployment of local teams. Project actually started in 2019. 2020 and half of 2021 was lost to COVID.

SCP line of credit

FMC's job was to explore this possibility. FMC and SIDBI however felt that there was no need for any international line of credit from Europe as Indian banks were having high liquidity and were flush with money then. There was very limited bilateral trade in bamboo necessitating the possibility of bilateral bank linkages, the international credit lines were carrying high interest rates where Indian banks were not interested as the Indian rates were then reasonable and the line would have had the additional risk of foreign currency fluctuations, etc.

Work Package 5

The final work package WP5 aimed at strengthening policy dialogue and dissemination of proven development models relevant for bamboo sector, more particularly at the state, national and international level. There were 4 main activities planned (i) organising 12 regional multi-stakeholder consultation workshops (ii) organising 2 national workshops (to be done by FMC) and 1 international workshop (By CBS) to disseminate policy learnings and one training programme for SAARC countries (by CEMCA) (iii) preparing 4 learning papers for policy uptake on financing, gender, governance & value chains and skills and (iv) Participation in various national and international fora for dissemination of learnings.

Comments on Performance

a) Meeting or Exceeding Expectations

Under WP5 (strengthening policy dialogue and dissemination), FMC's successful track record and experience in effecting policy level work in India came in very handy, complemented by similar work in the recently completed EU Switch Asia funded project in partnership with SIDBI (2012-16), where it also successfully led the engagement and partnership of all the institutions bilaterally and multilaterally for over a year from conception stage to formulating of the project. Under WP 5, FMC organised 18 regional workshops (target 12), 2 national workshops (target 2), One international workshop (target 1) and 8 learning documents (target 4). It also disseminated the learnings through 34 events (target 20) and created one two-way learning platform (target 1), as also organised 2 capacity building events for SAARC countries (target 1).

The End-term Project Evaluation was started timely in September 2022.

b) Deficient

FMC fell short to some extent in getting Mid-term Project Evaluations done – It conducted 6 evaluations against a target of 10. The force majeure events like two strong waves of Covid and somewhat delayed start of the bidding process for engagement of FAs played a role in falling short of target. However, this did not affect the quality of implementation.

The above was a work package wise account of the extent to which the intended goals could be achieved. The evaluation team also looked into several other aspects, which are enumerated below :

4.2 Qualitative

Technical support provided to IAs in SAARC Countries

In order to assess the technical support and knowledge sharing provided by FMC to SAARC countries, the evaluation team visited Bangladesh, Nepal and Bhutan and held discussions with local IAs.

Tarayana – which was the implementing agency of SDF project for Bhutan - expressed immense satisfaction for the support coming from FMC. Right from day 1 – from making the proposal to SDF FMC was very helpful. Also helped in CFC manual preparation. The IA in Bhutan (Tarayana) acknowledged support from FMC in key areas like income assessment survey of artisans, E-pathshala learning document, identification of machinery suppliers, and in building and managing the project logframe. They attended online sessions on E-pathshala, found it very useful and shared with others too. Mr. Passang – a senior field functionary of Tarayana said “we are fortunate to have worked with FMC with the kind of expertise they have

in developmental action, MSME in general and bamboo in particular”. IA Bhutan’s exposure visit to North Eastern Region (NER) in India was much appreciated. IAs visit to Dumka Bamboo Conclave was also reported by them as very helpful. FMC heled the IAs with frequent meetings which was very helpful in share learnings and ideation for future activities.

In Nepal, the Evaluation Team had a very encouraging feedback from Mr Nripal Adhikary, promoter of ABARI, IA, Nepal (the implementing agency of SDF project). On the linkage with EU Switch Asia bamboo project and the role played by FMC as a TA agency, ABARI informed that received good support from FMC in several areas including : (i) feedback and guidance on Abari’s annual plan (ii) orientation programme organised by FMC (iii) organising 5 days trip for them to India – including 3 days exposure visit to Kudal, Maharashtra, India (iv) webinar / teleconferencing organised by FMC (v) Manual on CFC shared (vi) FMC conducted lot of trainings (around 300 people trained), etc. On the quality of E-Pathshala document shared by FMC – the feedback was very good. However, the artisans were not in a position to make use of the document themselves, as it was meat for the FAs/IAs to understand, upgrade their knowledge and then share the learnings with the artisans. It was also reported that artisans mostly wanted hands-on training.

In Bangladesh, the Evaluation Team had interaction with Mr Shah Ahsan Habib, promoter of Bangladesh Rural Industries Foundation (BRIF), IA, Bangladesh (the implementing agency of SDF project). On the linkage with EU Switch Asia bamboo project and the role played by FMC as a TA agency, BRIF informed that they had a very close interaction with FMC and received good support from FMC in several areas including : (i) orientation programme and webinars organised by FMC (ii) organising exposure visit for their 3 staff members to Kudal, Maharashtra, India as well as Delhi meeting with Government (iii) organising visit to Dumka bamboo conclave (iv) proposal making, planning and monitoring (v) webinar / teleconferencing organised by FMC (v) Manual on CFC shared which they used to prepare their own manual in Bangla (vi) E-Pathshala document shared by FMC – the feedback was very good.

Arranging services of National/International Experts

FMC very successful in arranging the services of various experts in the area of policy, value chain, procurement, bamboo, waste management etc. The Evaluation team as well as its interactions with FAs / State offices of FMC, observed that the quality of these experts was very good. FAs have generally appreciated quality of training provided and deliberations at orientation workshop. The quality of papers produced under the project has been good. They are written by eminent experts. The EV team during the interaction with these experts have received valuable inputs on the project as well as for future endeavours. One such bamboo expert – Mr Sanjeev Karpe has built bamboo Pod at Tera restaurant (among top water front restaurant in the globe) for a Hilton group facility (Waldorf Astoria - Ithafushi) in Maldives. The facility has won the Forbes Travel guide “Hotel Instagram of the year Award”.

Overall, 8 National/International Experts were engaged by the project, as listed hereunder:

#	Name of the expert	Area of expertise
1	Mr. Sudhir Rana	Public Procurement Expert for bamboo sector
2	Prof K. R. Chari	Technical expert on use of bamboo as a fuel
3	Ms. Rachel Ruth Alexander	international Research Expert
4	Dr. Tilman Altenburg	Expert - Quality Assurance, GDI
5	Mr Sanjeev Karpe	Bamboo Expert, KONBAC, CFC, Kudal
6	Ms Deepa Subramaniam	Expert, Bamboo Supply Chain
7	Ms Priya Kenkre	Communication Expert Co-Founder & Director, UVW Consultants LLP
8	Prof. A G Rao,	Bamboo Studio, IIT Mumbai – Training on Bamboo moulds, jigs and fixtures.

Each of the experts provided good insights into the project and guided the implementation team with regular inputs, suggestions and way forward. In addition, quality feedback was received from Ms Sangeeta Agasty, Regional Director (South Asia), INBAR, who herself was the Project Manager, FMC in this EU Switch Asia Bamboo project, till August 2020.

Documents and tools produced

The quality and content of various documents produced under the intervention were appreciable. The Diagnostic Study Reports, the policy papers, the Conclave meeting reports and other documentation – all exhibited high standards of content, quality and coverage. Particular mention can be made of the “E Pathshala document - a manual covering each and every aspect of bamboo, created with the help of prominent bamboo experts. This was found to be very comprehensive and rich in content. The quality of this document was world class and indicative of the huge effort that had gone to research and preparation of this.

The quality of audio visual material produced in local languages was also very good and worth mentioning. The Community Radio Station contents developed by CEMCA, the case study on Flying Tiger, the Success Stories on bamboo artisans, etc. – all exhibited good quality and rich content, driving home the point well.

Quality Assurance

The project kept a keen eye on ensuring quality of outputs and results. This was done continuously by sector specialists and the FMC's "Technical Advisors" in the nine states as they reviewed monitoring data collected by both their own staff and the Facilitating Agencies' field staff. During interaction with FAs/IAs and during visits to the field, it was found that FAs and FMC staff worked closely, seamlessly and with a sense of ownership. This helped maximise the results.

The IAs / FAs met regularly and kept in touch with the state level and district level bodies. Monitoring and Evaluation aspects are covered separately in section 5.1.

Cost control and efficiency

While this report is being written, the project had spent about 98% of the allocated budget. In the assessment of the Evaluation Team, there was no extravagance observed. The utilisation of different parts of budget or shifting from one head to another was within the permitted guidelines. FMC maintains a lean office structure which is simple yet fully functional.

Procurement

The procurement in Foundation for MSME Clusters is governed by provisions as contained in FMC Staff Handbook Procurement Policy.

While this report was being written, FMC is getting a scrutiny carried out of its “General Procurement” by a veteran procurement expert.

Overall, FMC’s performance has been excellent except for certain rare instances as brought out under the evaluation of work packages above, where it fell short of targets, mostly because of certain uncontrollable factors.

Gender issues

There was no gender bias against women observed in the entire functioning of FMC – neither in project design and implementation nor at the field level handling of issues. The project achievements in fact indicate a superior involvement of the feminine gender.

Chapter 5

5. Factors facilitating or limiting the achievement of results

Based on the feedback gathered by the Evaluation Team from discussions with FAs/State Heads of FMC and various experts engaged by the project, the following supporting and hindering factors came to light:

A. Facilitating/Contributing factors

a. Overall concept and design – well conceived

In the assessment of the evaluation team, the project was well conceived and the 5 work packages were designed after careful consideration and research. These work packages were focussed on specific objectives, viz. promoting enterprise development for sustainable supply of bamboo products and generate improved livelihoods, promoting several new bamboo products among high potential buyers, finding ways to sustain and upscale local initiatives through community-led multi-stakeholder development models, create sustainable linkages between financial institutions and local enterprises and strengthening policy dialogue for bamboo sector, more particularly at the state, national and international level. The structure worked well. It also facilitated a meticulous project implementation. The roadmap leading to the intended targets was clear and unambiguous.

b. Competent project partners

FMC

- Over the years, FMC has built strong capabilities, inter alia, in cluster centric initiatives and sustainability oriented action and is known as a world class not-for-profit organisation. With its rich repertoire of experience in 20 counties and domestically across the entire country, covering a variety of industrial sectors, geographies and stakeholders, FMC could conceive the project well and create a practical implementation plan. As the overall coordinator and a major implementer of the Action, FMC's primary role was in implementation. It had to help create sustainable supply chain of bamboo products to the construction, furniture and lifestyle sector as buyers (WP2). FMC was not only leading the implementation of WP2 (Promote select new bamboo products among high potential buyers) but also WP3 (Sustain and upscale local initiatives through community-led multi-stakeholder development models) and WP5 (Strengthen policy dialogue and dissemination of proven development models relevant for bamboo sector). FMC also effectively engaged with SIDBI under WP1 in the support role to provide technical inputs to the grass root implementing agencies called Facilitating Agencies (FAs). It also provided overall coordination support for the entire Action, ensuring collaboration among

various partners across all work packages, documenting financial and non-financial records, monitoring progress and reporting to EU.

- The interactions with FAs indicated that intense monitoring by FMC, quality of training arranged by them, quality of experts engaged have helped achieving the results.

CEMCA

- CEMCA's experience & knowledge of development of multimedia based learning materials to develop self-learning modules customised for the final beneficiaries with low levels of literacy, came in very handy. For the project, CEMCA contributed E learning modules created on entrepreneurship development, financial literacy, post-harvest technologies and OHS. Besides, 29 CR stations were also developed.

CBS

- As a premier European business school, CBS contributed effectively to the development of policy focused learning documents and policy briefs on the role of gender in economic development. For the project, CBS worked on two papers – one on Gender issues (completed) and the other on “How Women can be connected to market”. The second one is still a work in progress.
- With its focus on policy based research with academic rigour, CBS has expertise in designing course curriculum in a scientific manner. With its network of international linkages for exchange of knowledge through top level journals, it was expected that CBS will be able to disseminate the translated knowledge effectively. During interaction with CBS, it came to light that due to their international outreach – the project outcomes will be available to many more students, academia, etc. through journals, course material, etc.
- CBS also has an international outreach among business schools to familiarise business managers and existing practitioners on how to tackle social and environmental challenges. This is likely to provide linkages for market study for bamboo products in future, targeting sustainable consumption. For the project, CBS prepared case study based on bamboo for teaching in business schools which was focussed on sustainable sourcing and women's entrepreneurship in bamboo industry of India which was shared with 50 institutes in Europe.

SIDBI

- SIDBI has a huge experience and a strong competence in promoting entrepreneurship and undertaking promotional and developmental activities spread across the length and breadth of India. SIDBI was a major implementation partner in the project along

with FMC, for promoting MSMEs based on bamboo through micro entrepreneurship promotion programme (MEPP) scheme and providing access to finance to enterprises. SIDBI's role was mainly in coordinating the implementation of work package 1 (support enterprise development for sustainable supply of bamboo products and generate improved livelihoods) and work package 4 (promote sustainable linkages between financial institutions and local enterprises), but it also contributed effectively in terms of knowledge sharing, ideating and supporting initiatives across the entire action comprising all the 5 work packages.

- SIDBI played its role effectively and contributed to overall success of the project. It helped build a strong foundation for the activities to be undertaken in the project in respective work packages and monitored the progress effectively.

c. Experienced FAs with good local connect

- The project had a good mix of agencies having rich experience in 9 clusters in the bamboo sector / cluster development/ financial linkages and/or enterprise development. There were certain FAs which had good experience in enterprise promotion (like SPMN) but had no prior knowledge or experience in the bamboo sector, and on the other hand there were agencies like ESAF which had say 13 years of experience in Bamboo sector but were not known for grounding of enterprises. The project was able to achieve success with both kinds of FAs. Besides, some agencies already had good local connect with banks and MFIs in the area which came in handy for credit linkages. ESAF for example itself had a parent as a small finance bank which helped in financial linkages of bamboo entrepreneurs. Overall, the FAs selected were rich in experience and had a good ground connect.

d. Conducive policy environment

- The Indian Forest Act, 1927 considered Bamboo as tree, even though scientifically speaking, bamboo should be classified as a grass. Due to this, cutting bamboo from outside forests and transporting it was made unlawful in India. As a result, farmers in the bamboo-growing states, particularly the North East, had to face harassment quite often because they could neither cut it nor transport it.
- The Government of India in 2017 promulgated an ordinance removing bamboo from the definition of tree. Later, the Lok Sabha (Lower House of Indian Parliament) passed the Indian Forest (Amendment) Bill, 2017 to bring bamboo outside the definition of tree. Consequent to the change brought in by the amended Act, felling or transportation of bamboos grown in non-forest areas

will not require such permits. The amended law also enables farmers to cut and transport bamboo grown on their land outside forest.

- Further, the National and State Bamboo missions set up by the Government are helpful in promotion of Bamboo as a sustainable replacement of other non-sustainable items like wood, plastic, iron and steel, etc.
- Besides, the MSME policy of the govt of India also has given a conducive policy environment for setting up and growth of MSMEs in general.

e. State Govt Support

Many FAs coordinated well with state level agencies and found the role of state govts very support worthy. For example, the Office of Mukhya Mantri Kutir Udyog Vikas Board, Govt of Jharkhand helped / supported in sensitisation of Bankers and also organised a Sensitisation Meet in 2019. In Chhatisgarh, good support came from the Handicrafts Board. Generally, FAs maintained a good relationship with State Rural Livelihood Missions (SRLM), local state level offices and were able to ensure some buy in from them.

f. Bamboo conclave at Dumka

A two day Bamboo Artisans Conclave was organized in Dumka, Jharkhand on September 18 and 19, 2019 to mark the International Bamboo Day. Many Union and State ministers, artisans from Jharkhand, other States and also foreign countries, visitors, investors and representatives of corporate world participated in this mega event. This brought lot of attention to bamboo sector as such and helped the FAs leverage it for promoting the events planned under the project.

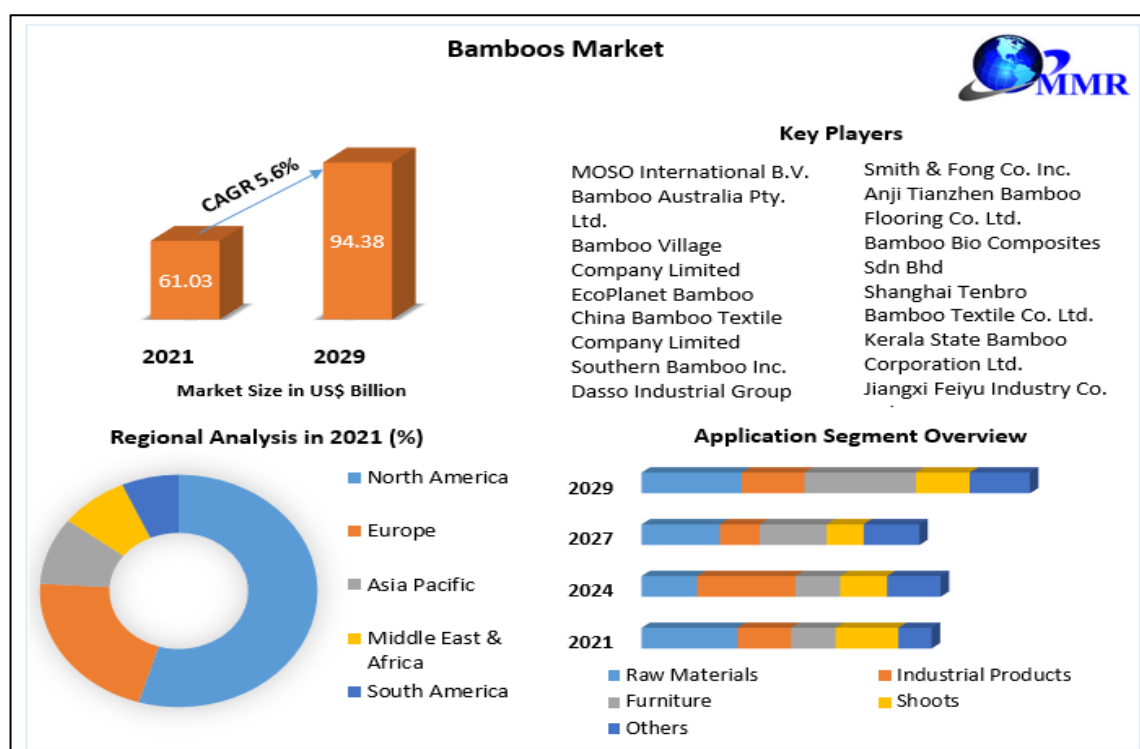
g. Large natural resource base of bamboo

India is the second largest bamboo producing country in the world, covering an area of four million hectare with over 100 species of bamboo and involving over 3 million persons, mostly from scheduled tribe and scheduled cast population. Over 50 per cent of these artisans and home-based producers are women. It is estimated that there are around 375 bamboo clusters in India.

In 18 states out of the 29 states of India, abundant quantity of bamboo is available as a resource for the livelihoods of bamboo artisans. This large natural resource base was very crucial in conceptualising and taking forward the project plan and activities. Sourcing of raw material was therefore never a problem in the project, as bamboo was abundantly available in all the areas covered under the project.

h. Market potential for Bamboo

The huge market potential of bamboo - domestic as well as international – kept attracting the stakeholders and helped them work towards a better state of the Bamboo sector. Size-wise, the bamboo market was valued at US\$ 61.03 Bn in 2021 and the total revenue is expected to grow at 5.6% through 2029, reaching nearly US\$ 94.38 Bn. The Asia Pacific has the highest revenue share of nearly 75 % and is predicted to expand at the fastest rate during the projection period. China is the world's leading producer and exporter of bamboo and rattan products with an industry valued at USD 39 billion, accounting for 68% of worldwide exports.



Source:<https://www.maximizemarketresearch.com/market-report/bamboos-market/126098/>

B. Limiting Factors

Even though the project was extremely successful in terms of achievement of targets, its impact was somewhat subdued due to certain limiting factors, which are explained below.

1. Time loss due to Force Majeure events

There was considerable time Loss due to Force Majeure conditions in 2020. Besides, 2021 was also an extremely difficult year, full of Force Majeure incidents. The events and their impact are summarised below.

- **Citizenship Amendment Act:** At the end of Year 2 (2019), the North Eastern states witnessed significant political unrest after the announcement of the Citizenship Amendment Act, resulting in even Government imposed restrictions on movements by imposing Section 144.
- **COVID19 Phase 1:** The outbreak of Corona Virus (COVID-19) was declared as a global emergency by the World Health Organization (WHO). Government of India had imposed a complete nationwide lock down in two phases (Lockdown 1.0 and 2.0) till June 2020. Even though the central government initiated unlock proceeding in June 2020 (Unlock 1.0 and 2.0), several states continued with complete lockdown in specific COVID19 hotbed districts way until the end of July 2020. Also in many states, there were strict travel guidelines and movement restrictions, especially in Containment Zones, which prevented our teams to move freely even as late as November 2020. There were differences in restrictions among the states and those used to change in either direction. The uncertainties of changing restrictions, with restrictions becoming tighter or getting eased over time in different states differently, also led to slow down due to precautions taken so as to not to disobey any law unknowingly. For example, Arunachal Pradesh and Mizoram remained under more or less a complete lockdown, while Odisha and Jharkhand were not. Most importantly, there was widespread restriction to gatherings which hugely affected FMC's training programmes and market promotion activities that were fundamental to promote the enterprises. FMC's team members also suffered from the exposure to COVID virus. FMC office got closed twice during the period 18th Oct 2020 to 2nd Nov 2020 and 14th Dec 2020 to 25th Dec 2020, as many of FMC staff members/colleagues were infected with COVID19.
- **COVID 19 Phase 2:** Incidentally the situation which got slightly improved towards the end of 2020, also saw a deadly second wave that also restricted activities in the year 2021 from April to June 2021. Several travel restriction and weekend curfew (movement disallowed) in several North Eastern States even till the month of August 2021.
- **FCRA Act:** The Indian FCRA Act was amended in September 2020 and putting in a restriction on transfer of fund to partner organizations. This led to slowing down of activities as vendors could not be paid and payments from EU to partners also got stopped. FMC could get the fund in January 2021 for request made in August 2020.
- Overall, the project lost around 12 months and also the momentum that was created in 2019. This affected the project and delayed and subdued its success to quiet an extent.

2. Other limiting Factors

- a) **Staff attrition** – This kept hindering the pace of implementation and delayed/subdued the achievements to some extent as there was continuity loss every time a critical

resource moved out. It is commendable that despite the occasional loss of continuity, the project management team was able to find quick replacements and achieve a success rate of 164% of targets, exceeding the targets in 30 out of 35 outcomes/outputs. In the assessment of the evaluation team, the intervention would have been able to achieve much more and maximise the results further, had there been lesser instances of attrition.

- b) **Lack of a formal coordination mechanism among stakeholders** – actions/achievements and insights coming from one FA/expert could not be shared with other FAs or experts. There was no continuous common forum where learnings could be shared.
- c) **Lack of knowledge** – Most FAs lacked knowledge of international scenario on bamboo, potential in bamboo exports, type of products exported, standardisation needs to cater to bulk demand. They needed to be given international exposure to help them see for themselves how the Chinese, Vietnamese and Taiwan bamboo artisans were doing.
- d) **Satisfaction with producing mostly Low Value items** - Bamboo is mostly sourced from own or common land in the forests the artisans have access to. With limited investment in raw materials therefore, most artisans want quick realisation by investing their labour into making of low value-added products that they are accustomed to, with little or no access to contemporary products that have a potential for higher value realization in urban markets. Low value-added items get sold locally at ease, with low returns upto 10 per cent. This reflects a stationary mindset. The artisans were found to be hesitant to try new products unless they get new design products backed up by orders. Most entrepreneurs/households were happy with a small income good enough to survive and lacked the ambition to go to the next level.
- e) **Lack of Market Linkages for High Value Items** - High value items include furniture, utility and designer items like bamboo bottles, decorative pieces, toothbrush, straw, cutlery, crockery and even intermediary products like bamboo sliver. Most of these items have potential to garner much higher returns (40 to 50 per cent). However, artisans lacked the expertise and knowledge for :
- Preparing the raw material appropriately through scientific harvesting, treatment and preservation.
 - Designs that sell and fetch better price realisation.
 - Linkages with appropriate buyers to expand the outreach and maximise the returns.
- f) **Lack of aggregation** - This made individual small quantity producers a non-attractive business proposition for the big buyers. This came out to be a major problem in

marketing as there was no network of aggregators who could aggregate demands, take orders, ensure quality products and supply the items uninterruptedly.

- g) **Lack of quality suppliers of tools and machinery** - To make sophisticated / modern/high end bamboo products, high quality tools and equipment were required but it was noticed that there was dearth of suppliers of such items. Most of the household level enterprises worked with outdated tools, approximations in measurement, did not use moulds and therefore lacked in standardisation.
- h) **Late engagement of project experts** – The intervention engaged around 10 national experts on various aspects related to Bamboo and design/marketing. This was not a project requirement, but proved to be an important part of the intervention strategy. However, the engagement appeared to be late, when the project was in its final stages, which gave the experts little time to make a huge difference. Nevertheless, the work done by experts held lot of promise for future.
- i) **General lack of interest among unemployed youth** - Due to low remunerative nature of traditional artisanal activities, the newer generation did not seem very keen to take up the activity. This often led to unemployed youth diversifying into areas other than traditional family businesses based on bamboo. With the help of improved efficiencies in production processes, design and marketing, the returns can be improved significantly and this might attract the youth to join the profession and become entrepreneurs rather than job seekers. Promotion of innovative products also draws youth participation. At some places, the youth were attracted to newer designs and were willing to take up bamboo as a means of livelihood. Also, it was witnessed that wherever alternative livelihood opportunities existed, bamboo as a means of livelihood took a back seat and did not pick up much.

5.1. Monitoring & Evaluation

One of the reasons why the project met with such a resounding success, was its efficient and well laid out monitoring system. This helped in not only tracking every parameter but also the efforts that were going into it. The intervention operated an excellent intense internal monitoring system. This has been unanimously mentioned by all the FAs, during interaction with the Evaluation Team. The Lead IA provided overall coordination support for the entire project, ensuring collaboration among various partners across all work packages, documenting financial and non-financial records, monitoring progress, and reporting to the EU. Roles and responsibilities were clearly defined between partner IAs.

The following were the highlights of the monitoring strategy adopted by the project:

A. FMC's "Lead Management System"

To start with, detailed baselines, including micro-data on businesses, were fed into FMC's "Lead Management System" (internal monitoring system) and were based on cluster mapping that resulted in "Diagnostic Study Reports". Monitoring data generated were fed into an Excel based "Lead Management System" and were continuously updated. The data categories included Baselines, Grounding of Enterprises Made, Support from/to Stakeholders, Programs/Events, Producer Networks, and Policy Linkages.

B. Fortnightly Monitoring

FMC had developed a robust monitoring format to track efforts going into achievement of intended results. A snapshot of the format is given below :

EU Switch Asia Project Fortnightly Progress Report : As on (Reporting date)				
1	Name of the Agency			
2	Name of the state (Hub/spoke)			
3	Status of grounding of units	Details of banks/ institutions approached for financial linkages and		
		Target for grounding of units (as at the end of year)	198	
		Credit linkages Indicator	As on Last Fortnight	As on This Fortnight
		No. Entrepreneurs selected for base line		
		No. Business plans are ready		
		No. Loan applications prepared		
		No. Loan applications lodged with Banks		
		Loan applications sanctioned (no of cases/ amount)		
		Loan applications disbursed (No. of cases/ amount)		
		No. Units set up		
		Units set up were verified by FAs/TAs		
		Comments on delay in sanction		
		Comment upon number of potential entrepreneurs met during the period		
4	Activities undertaken till date as per action plan			
5	Activities proposed next week			
6	Brief of discussions held with stakeholders/ Bankers approached during the week			
7	Follow-ups on previous meetings/ discussion			
8	Issues/ Concerns (if any)			
9	Others (if any)			

Note: Report to be submitted by 2nd and 17th of each month.

C. Periodic Reviews

FMC conducted Quarterly Review Meetings as well as a semi-annual data collection exercise. Monitoring data generated were fed into an Excel based "Lead Management System" and were continuously updated. There are also annual meetings of all the IAs' directors, monthly meetings of the Technical Advisors and Facilitating Agencies, and half-yearly meetings of all partner staff.

(take a one pager note from Saksham on monitoring)

D. SIDBI's verification visits

Apart from FMC, SIDBI also conducted verification visits to the clusters, to assess the claims regarding performance fee in respect of bank financed or self-financed enterprises set up. A sample of SIDBI's format is given here. The format was crisp and captured necessary details.

S N o.	Name of the chief promoter, unit address	Nature of activity/ product	Bank name & Branch	Amount of loan sanctioned (₹)	Date of sanction of loan	Own funds per annum(₹)	Cost of project Bamboo, Fevikwik, Fevicol nails etc Per annum (₹)	Sales/Income Per annum((₹))	Perf - fee eligible (₹)	Em ploy ment Gen erated
1	Kosmera Ronsang, Mawkasain	Handicraft Items	NA	NA	NA	26000	26000	36000	-	1
2	Manding Iawrod Mawkasain	Bamboo Cones baskets for gift hampers	NA	NA	NA	30000	30000	48000	-	1
3	Judisha Myrthong Mawkasain	Bamboo Cones, bottle holders lamp shades	NA	NA	NA	28000	28000	54000	-	1
4	Larka Myrthong Mawkasain	Cone	NA	NA	NA	43000	43000	58000	-	1
5	Wontis Iawrod Mawkasain	Bamboo Cones,	NA	NA	NA	43000	43000	50000	-	1

E. Mobile based app for Monitoring

The intervention has also developed an innovative, mobile-based monitoring application for its field staff called "Bamboo4SD" [for Sustainable Development] which included profiles of all enterprises with key accounting headlines, progress data with filters, photos of Sources of Verification (e.g. bank statements, loan agreements) and the option to generate automated business reports. The app was developed pro bono by an IT firm which frequently collaborates with FMC. However, as informed by field functionaries during interactions with Evaluation team, the App did not work satisfactorily and was not used much.

Quality assurance was carried out continuously by sector specialists and the FMC's "Technical Advisors" in the nine states as they review monitoring data collected by both their own staff and the Facilitating Agencies' field staff.

F. Project Steering Committee

There was no Project Steering Committee or any other formalized coordination structure in place. However, there were frequent and productive communications among IAs, FAs and the technical advisors.

G. Annual Reports to EU

There were annual report submissions to the EU on the progress of the project. The annual reports were clearly laid out, were readable, responded to the Logframe indicators and targets, and highlighted difficulties and delays encountered.

H. Cluster Coordination Committee

The project did not constitute any cluster coordination committee (CCC). It was not considered necessary as the stakeholders involved in each cluster were well connected and communicated adequately. It was also felt by the IAs that this would add additional, unnecessary administrative work. The project could do well even without a formal CCC structure.

5.2. Results-Based Management

The tool of Results-based management (RBM) is used for monitoring and managing the implementation of strategy. The project followed a Logical Framework approach towards this. The Logframe was maintained systematically at all points of time, which gave a clear understanding of the progress made under various project parameters and kept a close watch on achievements vs targets.

5.3. Other factors

Coordination with State Level agencies

While the evaluation team was informed that there is no formal bamboo sector coordination platform in India, the IAs / FAs met regularly and kept in touch with the State Bamboo Missions, National Bamboo Mission offices, State Rural Livelihood Missions, Forest Department of GoI, the MSME Departments of Govt of India and banks and MFIs operating in the area. At district level, the partners coordinated with the District Industry Centres to assist MSMEs for getting subsidies as per govt schemes. There was also frequent interaction with NABARD (the National Bank for Agriculture and Rural Development) as the district level NABARD officer monitored all agricultural loans extended by local banks. This helped closer monitoring of results and encouraged banks/FIs to consider extending loans to bamboo-based artisans/enterprises.

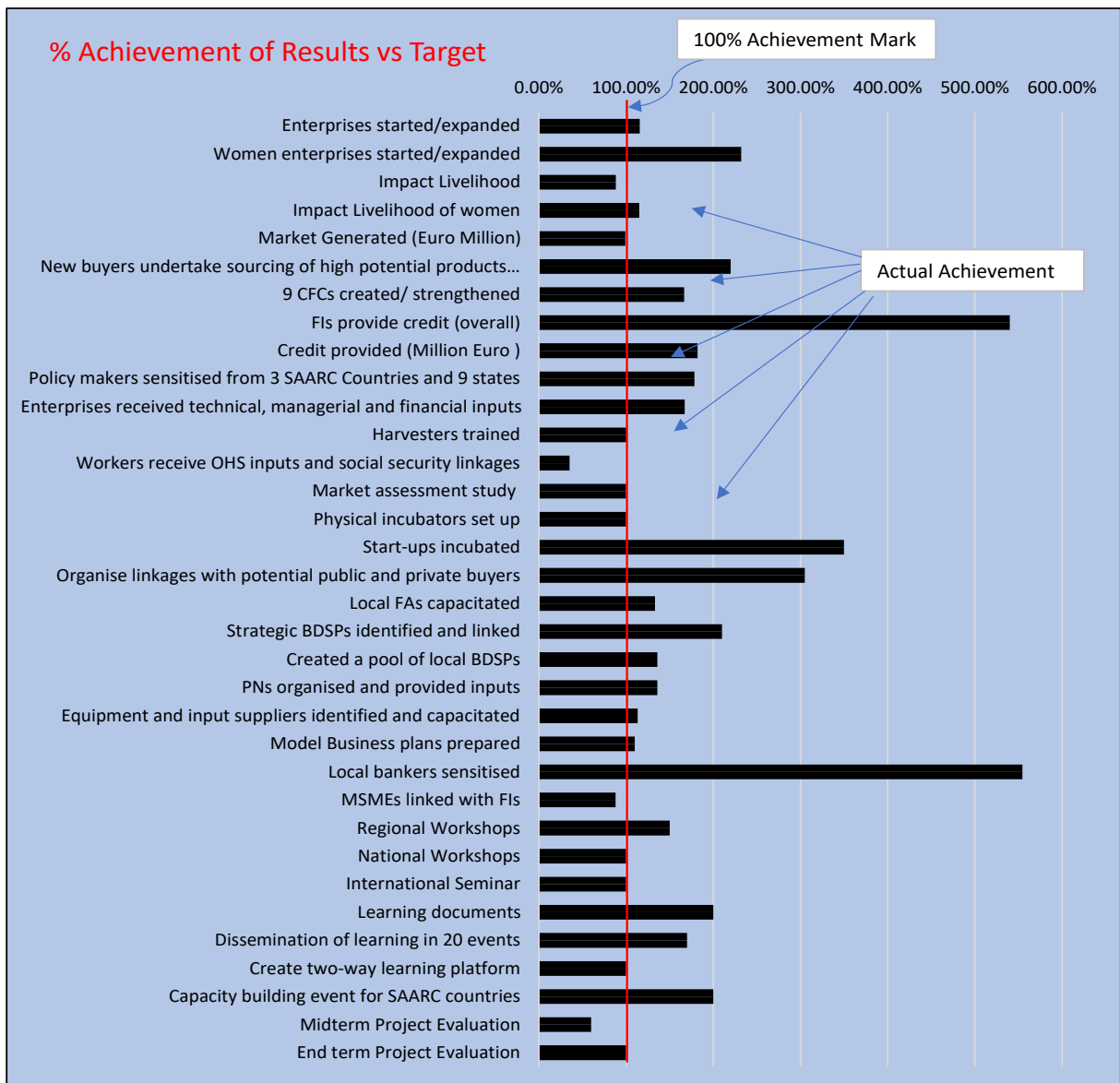
5.4. Overarching assessment and rating table

A. Overarching Assessment

The project seems to have done exceedingly well as compared to numerical targets assigned, as most of the project parameters saw more than 100% achievement. On an average, the achievement of targets was 169%. In the assessment if the evaluation team, 85% of project parameters received an “excellent” rating, with a perfect score of

6. As such the overall project rating is also found to be “excellent”. The average score of project parameters was 5.76 out of 6.

Mean Achievement	169.33%
Median achievement	134.50%
Maximum achievement	554.67%
Minimum achievement	35.12%
Mean Score	5.76/6.00
Rating as assessed by E. Team	Excellent



A graphical representation of the targets and their status of achievements in percentage terms is given below. The red line indicates *100% achievement mark*, whereas the black bars indicate actual achievements in percentage terms.

B. Rating table

The evaluation team assigned ratings to various outputs and outcomes as detailed in the log-frame of the project, on the basis of rating rationale given below under 'Rating Rationale'. All the project parameters having targets were rated numerically as shown in 'Ratings Assigned'.

1. Rating Rationale

In line with the directions given in the Terms of Reference, the following rating rationale was used while assessing various project parameters:

Score	Basis	Rating
6	Level of achievement presents no shortcomings (90% - 100% achievement rate of planned expectations and targets).	Excellent
5	Level of achievement presents minor shortcomings (70% - 89% achievement rate of planned expectations and targets).	Good
4	Level of achievement presents moderate shortcomings (65% - 69% achievement rate of planned expectations and targets).	Satisfactory
3	Level of achievement presents some significant shortcomings (30% - 64% achievement rate of planned expectations and targets).	Unsatisfactory
2	Level of achievement presents major shortcomings (10% - 29% achievement rate of planned expectations and targets).	
1	Level of achievement presents severe shortcomings (0% - 9% achievement rate of planned expectations and targets).	

2. Ratings Assigned

a. Ratings assigned to logframe parameters :

Based on the rating rationale, the following ratings were assigned to achievements against each project parameter :

OC/OP	#	Output/Outcome	% Achievement	Rating Assigned	Score Assigned
Oc 1.11	1	Enterprises started/expanded	115.73%	Excellent	6
Oc 1.12	2	Women enterprises started/expanded	232.11%	Excellent	6
Oc 1.21	3	Impact Livelihood	88.26%	Good	5
Oc 1.22	4	Impact Livelihood of women	114.99%	Excellent	6
Oc 1.3	5	Market Generated (Euro Million)	99.15%	Excellent	6
Oc 2.1	6	New buyers undertake sourcing of high potential products...	220.00%	Excellent	6
Oc 3	7	9 CFCs created/ strengthened	166.67%	Excellent	6
Oc 4.1	8	FIs provide credit (overall)	540.00%	Excellent	6
Oc 4.2	9	Credit provided (Million Euro)	182.00%	Excellent	6
Oc 5	10	Policy makers sensitised from 3 SAARC Countries and 9 states	178.50%	Excellent	6
Op 1.1	11	Enterprises received technical, managerial and financial inputs	167.29%	Excellent	6
Op 1.2	12	Harvesters trained	101.33%	Excellent	6
Op 1.3	13	Workers receive OHS inputs and social security linkages	35.12%	Unsatisfactory	3
Op 2.1	14	Market assessment study	100.00%	Excellent	6
Op 2.2	15	Physical incubators set up	100.00%	Excellent	6
Op 2.3	16	Start-ups incubated	350.00%	Excellent	6
Op 2.4	17	Organise linkages with potential public and private buyers	305.00%	Excellent	6
Op 3.1	18	Local FAs capacitated	133.00%	Excellent	6
Op 3.2	19	Strategic BDSPs identified and linked	210.00%	Excellent	6
Op 3.3	20	Created a pool of local BDSPs	136.00%	Excellent	6
Op 3.4	21	PNs organised and provided inputs	136.00%	Excellent	6
Op 3.5	22	Equipment and input suppliers identified and capacitated	113.33%	Excellent	6
Op 4.1	23	Model Business plans prepared	110.00%	Excellent	6
Op 4.2	24	Local bankers sensitised	554.67%	Excellent	6
Op 4.3	25	MSMEs linked with FIs	88.00%	Good	5
Op 5.1	26	Regional Workshops	150.00%	Excellent	6
Op 5.21	27	National Workshops	100.00%	Excellent	6
Op 5.22	28	International Seminar	100.00%	Excellent	6
Op 5.3	29	Learning documents	200.00%	Excellent	6
Op 5.4	30	Dissemination of learning in 20 events	170.00%	Excellent	6
Op 5.5	31	Create two-way learning platform	100.00%	Excellent	6
Op 5.6	32	Capacity building event for SAARC countries	200.00%	Excellent	6
Op 5.7	33	Midterm Project Evaluation	60.00%	Unsatisfactory	3
Op 5.8	34	End term Project Evaluation	100.00%	Excellent	6
		Average Achievement	169.33%	Average Score	5.76

b. Rating assigned to the project as a whole :

Overall, the project as whole was rated as explained below, based on the mandatory scoring matrix shared along with the ToR.

#	Evaluation criteria	Rating Assigned (out of 100)	Key Rating Drivers
A	Impact	90.83	
1	Behavioural change	95.00	
a	Economically competitive - Advancing economic competitiveness	90.00	The artisans / entrepreneurs are able to sell their product at market rates, no sops required like trade fairs etc to help them sell somehow, product quality improved, margins improved substantially.
b	Environmentally sound – Safeguarding environment	100.00	The intervention was 100% environmentally sound and no action threatened environmental safety.
c	Socially inclusive – Creating shared prosperity	95.00	Excellent level of social inclusiveness. Artisans kept engaging with more workers as their own sales grew, moved from individual growth to community growth.
2	Broader adoption	86.67	
a	Mainstreaming	90.00	Many centres now have bamboo as a thriving business, no longer a sideline activity. In some centres upto 95% of households got involved in bamboo activity. Capacities of FAs built. Some centres fell short.
b	Replication	80.00	Good level of replication in non-project centres and also among stakeholders outside the project. Some centres lagged behind.
c	Scaling up	90.00	Incomes increased, volumes increased, market expanded, bank linkages increased, policy makers picked up the project learnings, significant indirect benefits.
B	Project design	97.50	
1	Overall design	95.00	Well-designed project. Diagnostic Study Reports could have been done earlier. Mostly household enterprises existed, not MSMEs, as known later. FAs felt trainings were shorter than required.
2	Log-frame	100.00	Well-designed logframe. The underlying logic of this intervention was clear , logical and well laid out in the Log-frame.
C	Project performance	95.00	

1	Relevance	100.00	Activities were 100% relevant to target group, stakeholders and project objectives
2	Effectiveness	95.00	Income of artisans increased, social change, etc - Despite Covid etc. Market promotion at a decent level, design interventions still needed, all parts of bamboo need to be utilised effectively to minimise wastage.
3	Efficiency	95.00	No wastage of resources, maintained cost efficiency, no extravagance.
4	Sustainability of benefits	90.00	Most areas sustainable, impacted well, in centres like Ri-Bhoi - impact was not much, some handholding still required, many local BDSPs developed. Market linkages need to be continuously worked on to improve long term sustainability.
D	Cross-cutting performance criteria	94.26	
1	Gender mainstreaming	100.00	Women were central to the whole intervention. The tilt, if any, was towards women.
2	M&E	97.50	
	o M&E design	100.00	All FAs appreciated FMC's tight monitoring framework
	o M&E implementation	95.00	Well implemented project, quality of monitoring formats, verification focus by SIDBI
3	Results-based Management (RBM)	85.29	The project achieved 100% or more in 29 out of 34 logframe targets.
E	Performance of partners	92.50	
	FMC	92.50	
1	Quality of Implementation	95.00	Extent to which the agency delivered effectively was commendable, focus on elements that were controllable, risks were identified and managed well e. g. attrition.
2	Quality of Execution	90.00	Appropriate use of funds, procurement and contracting of goods and services was efficiently done.
F	Overall assessment	94.02	

The project achievements could have been higher but for the force majeure events, which were beyond the control of the project management team/stakeholders.

Chapter 6

6. Conclusions, recommendations and lessons learned

6.1. Conclusions

Despite a difficult time, due to covid restrictions and other force majeure events, the project achieved its targets and intended objectives. Project has been able to infuse momentum and enthusiasm into most of the clusters it picked up. In most of the places, the implementing agency on the ground will continue to support the Bamboo cluster ushering in sustainability for the developmental efforts made.

The project has been able to improve livelihood of the artisans through infusion of credit, skill upgradation, design inputs and through creating new market linkages. In most clusters, the focus has been on women artisans. The interventions has led to gender empowerment and increased participation of women into income generating activities, flow of cash into their hands and improved bargaining position in the household decision making framework.

The women folk took the centre stage in the whole intervention. Successful artisans engaged more workers to meet the increased demand and in some places as much as 95% of the village was involved in the activity. Order aggregation and distribution among artisans brought in more collaborative ways of working and individual growth shifted to community growth.

The project has been able to motivate many a developmental agency to mainstream Bamboo developmental initiatives, policies and programmes. A phase II of the programme with design focus on unfinished agenda would go a long way in realising the target of high contribution from Bamboo sector in country's GDP but also ensuring and economic and social empowerment of tribals, women and other disadvantaged groups that are involved in Bamboo sector.

6.2. Recommendations

With a view to enhance the scale, completeness of Bamboo, on the lines of what China has achieved, India needs a long-term strategy and an integrated approach at the State and National level. The 3 important pillars of Policy, R&D and Connect with industry need integration. There is a need for much more formalisation in Bamboo sector.

The evaluation team received many a suggestion from various quarters and also brainstormed the issues within themselves and with experts. Many suggestions were received as to what Govt of India should do about Bamboo sector so that it has a higher share in country's GDP and many a poor tribal families can be brought out of poverty line using Bamboo work as a livelihood opportunity. The Evaluation team also went through the paper prepared by FMC giving certain recommendations for bamboo sector growth. All these recommendations have

been grouped into two categories –recommendations related to policy advocacy by FMC and project level recommendations, which are listed below:

The project not only was able to significantly enhance the perception of Bamboo as a means of livelihood among artisans, but also as a means to prosperity. Experience at some places demonstrated that the bamboo artisans/workers started from producers of low cost low returns items like baskets/supri daliya moved to high value items like lamp shades, trays, bottles, and furniture etc. and moved up in economic prosperity value chain.

A. Recommendations related to Policy Advocacy by FMC

During the course of evaluation , the evaluation team found areas for policy advocacy at the national level that could help usher in further growth and development of Bamboo sector. A few of these are as follows

1. Keeping in mind that Bamboo has potential of creating 10 Million jobs in next 5 years, a National Bamboo Expert Group may be set up that would have Bamboo entrepreneurs, a few implementing agencies (FMC, INBAR ETC), key officials from State Bamboo Missions and development experts. The group should be tasked with mandate of suggesting a road map for development of Bamboo clusters in key states. The group may visit and study the Bamboo industry in China, Vietnam and Taiwan and also suggest key policy changes to be made in India, including financing schemes and products, tax / subsidy incentives, and suggest a road map for development of bamboo industry in India to make it globally competitive.
2. In China, institutional arrangements related to bamboo cover almost every aspect such as land allocation for bamboo production, management of bamboo land, extension activities for promotion of bamboo cultivation, promotion of bamboo-based industrial units, training of bamboo workers, creation of infrastructure for marketing of bamboo products, and export promotion of bamboo products . India lacks bamboo related institutions around cultivation, distribution of bamboo to local people and to industrial units. There are no well-established institutional arrangements for establishment of bamboo-based local enterprises, promotion of bamboo products, marketing of bamboo products, training of bamboo workers or any other aspect of bamboo. At best, there are only a few scattered and localised attempts by some non-government organisations. A Bamboo Development authority (talked above at 18) can help address some of these issues.
3. The Bamboo Development Authority can consult "National Bamboo Industry Development Plan (2013-2020)" of China released by The State Forestry and Grassland Administrative (NFGA) in 2012 and renewed in 2020 for 2021-30 to firm up its agenda as it moves ahead.
4. A national level promotional campaign could be launched promoting use of bamboo as a sustainable material in replacement of other material such as timber, plastic etc. This

could be on the lines of campaign launched by the Hon'ble Prime Minister to discard single use plastic.

5. Raw material supply chain for bamboo is underdeveloped. This should be developed on the lines of China with due focus on bamboo species required for making high end bamboo products, housing and construction industry.
6. Central and State Governments may promote use of bamboo furniture by using bamboo furniture in all the Government Departments particularly in waiting rooms in offices, in tourism industry, at airports, hotels, public parks, railway stations, bus stands etc.
7. A high powered inter-ministerial Coordination Committee may be set up for all bamboo related schemes operated by various ministries.
8. Launch of a Bamboo Start up scheme / Production Linked Incentive Scheme with an objective to create 100 odd modern bamboo enterprises by technically/managerially qualified/experienced entrepreneur with higher investments in the range of 5-7 cr to enable them to have all the necessary modern equipment and tools to make high end bamboo products for life style, construction industry and furniture industry. The start-up assistance , in form of a loan or a combination of loan and subsidy, should also be available for suppliers / manufacturers of tools and equipment's for bamboo manufacturing units as also for providers of infrastructure such as storage facility for bamboo. A subsidy component to the extent of about 30% of total project cost could be thought of.
9. A Bamboo Challenge Fund could be launched to experiment / explore new innovative ideas on bamboo, including research for 100 projects . This fund may also be used for research on Indian Bamboo by National / international researchers.
10. FMC has prepared a note on "Bamboo Sector's 10-Year Growth Plan for India" as a first attempt to assess the bamboo sector as at the end of the FY 2020-21 and where we should focus for the sector's growth in the next 10 years. This framework provides a good estimation for the various ministries of the Government of India, various bamboo growing States, academia, technical institutions, bankers, farmer groups, bamboo based existing & potential entrepreneurs, machinery suppliers and business development service providers to plan out a more robust exercise for refining the framework and the information contained therein according to the priorities and mandate with them. The note, inter-alia, contains policy level suggestions. The recommendations as given in the note are given at **Appendix**.

B. Project level recommendations

1. Whenever such a project is launched there should be a phase of diagnostic study before submitting an action plan. The initial project was based upon working with formal enterprises but was later modified and approved for Household enterprises as not many formal enterprises could be found at the ground level.
2. FMC can explore collaboration with INBAR, an intergovernmental development organization that promotes environmentally sustainable development using bamboo and rattan. It has 49 Member States. In addition to its Secretariat headquarters in China, INBAR has Regional Offices in Cameroon, Ecuador, Ethiopia, Ghana, and India. 49 countries, including India are members of INBAR. It is engaged in Policy and research, Implementation of projects, skilling, market linkages, R&D, Task force (engineered bamboo products); sustainable consumption standards, working with ISO; training and exposure. INBAR has reviewed about 500 abstracts of research papers on bamboo, of which 80% are by Chinese.
3. A central marketing agency / expert could be associated with such a project, since beginning of the project, to help artisans understand market needs/ demands/ trends/ requirement etc. and produce accordingly. Big buyers - domestic and international should be onboarded from beginning to have their inputs.
4. The duration of training on bamboo for new / emerging entrepreneurs should be reasonably long for 1-6 months depending on the type of skills to be imparted or the skill set of entrepreneurs. For existing entrepreneurs, it should be about 3-6 months and for basic course for new entrepreneurs it could be 1-3 months. The training programme should include contemporary needs and demands of market, their preferences, specifications and safety and environmental requirements etc.
5. The project has made attempts at creating new artisans – moving people into Bamboo work where they were not doing any such work. For such upgradations, a more sustained training effort may be required focusing on baseline, basic skills, advanced skills, product development, market exposure , exposure to tools and machines etc.
6. Implementing partner/agency must strive to constantly develop new products and designs. A set of 5-10 new designs should be developed every 3-6 months. All products / designs must be duly catalogued and displayed on e-commerce sites and be promoted for sales. Partner/agency must regularly visit clusters and make efforts to keep developing their strength in terms of technology, practices, team strength, training programs, etc.
7. Promotion of marketing through public procurement route should be a stronger component of next such project.

8. Students of MBAs/engineering colleges could be attracted to become bamboo entrepreneurs. For the purpose suitable course material could be developed for them and they may also be provided with on the desk training or a suitable short-term course on bamboo in vocational schools.
9. At the beginning of next programme, a group of Programme Managers at State level/Centre level should be given intensive orientation cum exposure visit covering all aspects of bamboo and exposure to international market of China, Taiwan and Vietnam, so that they are fully aware about the potential of bamboo products, technical aspects of bamboo, etc. and can properly guide the artisans / entrepreneurs, producer organisations/CFCs etc.
10. The "E-Pathshala document (a Manual on each aspect of bamboo with the help of prominent bamboo experts), prepared under the project, has been found to be very comprehensive document. Efforts need to be made to house this document under a suitable national agency where it could be continuously used for providing training to Master Craftsmen, Project staff of facilitating agencies at Cluster level / State levels.
11. Bamboo Industry has a waste of about 60% of raw material. Proper usage of this waste should be built into any Bamboo developmental plan.

6.3. Lessons Learned

In the assessment of the Evaluation Team, the key lessons learnt during the interventions are:

1. Bamboo has huge potential in ushering sustainability, improved income for poor households and helping women improve their relative position in the social matrix.
2. Sustained efforts on skill upgradation, credit infusion and market linkages can help usher in higher incomes for households dependent upon Bamboo as a livelihood.
3. A more detailed diagnostic study at the time of submission of the project can help design a more realistic project implementation plan.
4. Trainings need to be customised to local requirements as much as possible.
5. The project deployed very good experts albeit late in the project. This was obviously due to accumulated understanding as and when it happened. However, deployment of experts can be planned right from the beginning in such and similar projects in future.
6. The IAs could not get enough opportunities to learn from each other. A better coordination mechanism can be thought of in such projects so that there is mutual learning among agencies working on the ground.

7. A formal arrangement with State level bamboo missions and National level Bamboo institutions could have been planned as part of the project.
8. The focus on exposures for artisans, staff of IAs could have been much more, though covid related challenges exacerbated the problem. Future projects can take care of this aspect.
9. Future interventions should have had a WP on creating about 100 modern bamboo enterprises having end to end facility for making high end export quality bamboo products to set a demonstration effect.

6.4. Good practices

- The project made attempts to identify experts in Bamboo and linked them to various actors in the cluster. This practice came in late but provided some interesting new directions to the project such as waste management, using bamboo as fuel, Large Bamboo manufacturing units etc. which can hopefully be taken up in phase II of the programme.
- Local networking with state Bamboo missions, other State and national agencies has led to increased interest from the stakeholders. Many a state government are considering investing into Bamboo clusters through CFCs.
- Some of the agencies picked up as IAs had no prior experience of promoting enterprises. Post the project they have acquired skills of doing so and have an intention to continue to work on promoting enterprises not only in Bamboo but other sectors as well. This has enriched the ecosystem of promoting entrepreneurs.
- FAs such as SPMN, Assam have won trust of bankers by helping them in recovery of loans also. They even arranged a visit by RBI official to the cluster, which sensitised other bankers too. This has helped in creating financial linkages in a big way.
- Aggregators have been formed in Jharkhand, by artisans on their own, this has facilitated in marketing.

a. Broad Contours of next phase design

- Based on the interactions with FAs, IAs, the domestic and international literature on bamboo the Evaluation Team has gone through, as also the experience of the evaluation team in previous developmental programmes, the conclusions, recommendations, lessons learned and best practices are given above. The Evaluation Team would like to suggest broad contours of design for the future interventions on bamboo, as listed below.

• Focus areas	• Sub areas
• Privately owned plantation	• Identifying the right species
	• Nursery
	• Cultivation
	• Harvesting
	• Treatment and preservation
• Production	• Product Designs
	• Skilling
	• International exposure / participation in international training programmes
	• Tools and equipments / machinery
	• CFCs
	• Producer organisations
	• Formal MSMEs
	• Start-ups / Incubators
• Sustainability	• Zero wastage
	• Growing suitable species
	• Replacing non sustainable material
• Marketing	• Mass market needs
	• High end market needs
	• High growth sectors
	• Public procurement
	• Supply chain development / Linkage to buyers
	• Import substitution
	• Exports promotion
• Finance	• Financial products for bamboo sector
	• Capacity building of stakeholders (producer networks /IAs and FAs/Marketing agencies and input suppliers, training institutes, lenders, etc)
	• Equity investment support in PNs/formal MSEs
	• Capital subsidies /Production Linked Incentives
	• Lender engagement/sensitisation
	• Credit Line for bamboo enterprises
• Policy advocacy	• Inputs to national policy
	• Bamboo Challenge Fund
	• Inclusion of bamboo as a priority sector (RBI/Govt)
	• Using bamboo as biomass fuel
	• Bamboo products in govt purchases
	• Policy for waste management

Appendix

Recommendations given in the “Bamboo Sector’s 10-Year Growth Plan for India”.

A note on “**Bamboo Sector’s 10-Year Growth Plan for India**” was prepared by Mr. Mukesh Gulati, Executive Director, FMC and Mr. Sanjeev Karpe, renowned Bamboo Expert. The note was an attempt to assess the current state of the bamboo sector (2021) and identify the focus areas for the sector’s growth in the next 10 years. A total of about 15 small group meetings were undertaken by FMC with 32 leading national experts over a period of 3 months that helped in preparing this growth plan. This framework provides a good estimation for the various ministries of the Government of India, various bamboo growing states, academia, technical institutions, bankers, farmer groups, bamboo based existing & potential entrepreneurs, machinery suppliers and business development service providers to plan out a more robust exercise for refining the framework and the information contained therein according to the priorities and mandate with them. The Evaluation Team has reviewed the growth plan document. The 22 recommendations made under the Growth Plan are shown below:

- Improve the existing forest bamboo stock management practices through proper management & planning, for de-cluttering & cleaning of bamboo clumps.
- Initiate a daily bamboo selling System at bamboo forest depots in 50 bamboo rich districts with rate fixation for selective bamboo (age, species, size) and demand driven lot size.
- Ensure provision of 2-year-old bamboo to artisans for handicraft products that requires change in the policy of not supplying less than 3-year-old.
- Set up treatment facilities and sell treated bamboo in the top 50 bamboo rich districts.
- Outsource the management of all Govt. owned CFCs on long term lease basis (10-15 years) to commercial private players and NGOs with clear business models & outcome assessment for output, employment & environment numbers. Through the existing CFCs (Govt. & private) ensure provision of small power tools to small groups of artisans in their villages as micro facilities
- Develop demand driven technologies for various bamboo applications through co-resource sharing with private sector contributing to kind mainly. (Through open global tendering system & international partnerships along with inter-governmental organisation & UN agencies e.g., INBAR; IFAD; UNIDO; UNDP; FAO)
- Identify gaps in existing codes/ standards and undertake improvement therein and create new codes/ standards in the non- timber wood category including codes/ standards for fire retardancy.
- Develop & run a self-sustainable national web-portal on bamboo sector to bring together all stakeholders and share knowledge ensuring its active usage among 1 lac users.

- Provide outcome driven financial & regulatory incentives for stimulating quick investment growth in high nascent sub-sectors.
- Support creation of iconic pure/mixed bamboo buildings & high- end furniture in 50 metros/tier one cities/ eco-tourism spots/ state capitals/ Primary Health Centres/ Schools particularly in high seismic zones by supporting private sector investment by providing 10-20% subsidy.
- Organise a series of exposure visits to architects and interior designers.
- Assess the requirements of skilling the persons for every category; compile existing level of courses, institutions & skilling capacity and identify the ways to ensure skilling through online learning modules; classroom teachings; mentoring etc.
- Assess the feasibility for using bamboo leaf as fodder; develop technology and make it available for commercial investments.
- Undertake a national baseline survey to re-assess all the national figures for bamboo sector broken down at district level and thereafter update it every 3 years for stocktaking & corrective action.
- Prepare model techno-economic feasibility studies (50 numbers) for various bamboo applications and make them available to banks/ Fis and investors with 2-year updates & potential impact on output; employment; environment for every application with thrust on mutual complementary enterprises to ensure complete bamboo utilization.
- Identify 50 most potential districts/ clusters and develop these clusters through project-based development programmes for significant outcomes through call for proposals with open outcomes, outputs, methodologies, and activities, at enterprise level and local eco-system level.
- Target 1000 enterprises (new & existing) and provide them with handholding & mentoring assistance to support their growth at especially high rates.
- Support demand side offtake through public procurement especially for Railways, Defence, Hospitals, Schools, Offices etc. with outcomes-based goals (Included & Integrated with S.No. 14, 15) Reserve bamboo-based products (say 5-10%) by assessing supply capacities and demand requirements.
- Create a bamboo development authority under MoC&I with a special cell (with strong private sector representatives) or hire an agency for supporting & monitoring implementation of NBM driven activities, coordinating with other ministries & states along with other stakeholders from private sector and international agencies). It will create synergies & ensure convergence. (Details to be worked out)
- Organise regular Buyer Seller Meets for actors across the entire value chain at district, state and national level; along with yearly summits at national level and every two years at international level.
- Incentivize the private sector to adopt bamboo in modern construction to giving them a rebate in property tax, increased FAR and advising banks to reduce interest by 1%
- The open terraces on the buildings may be permitted to build single storied bamboo structures only without any need for special permission from authorities provided that these structures are adhering to IS Codes (Treatment, structural design etc)

to create market for bamboo construction, resulting in multiple players in the sector & higher competitiveness. It will further boost the setting up of a required ecosystem resulting in helping in reducing the cost of bamboo construction and making it commercially competitive with conventional construction material. This will also have positive impact for engineered bamboo, treatment of bamboo with positive synergies.

- Carrying out survey of bamboo export potential through EXIM, FIEO etc. identifying sectors suitable for Indian bamboo and India bamboo products and sharing it with the Indian market. Increasing the duty drawback to the highest permissible category to incentivize the exporters to source Indian bamboo products and promote it globally.

Annexure 1

Terms of Reference
Independent End Line Assessment of Project
Attached for the reference



TERMS OF REFERENCE

Independent End Line Assessment of Project

BL 5.4.1 Mid- term and end-term evaluation study of the Action

Promote Bamboo MSME Clusters for Sustainable Development

Proposal Number: ACA/2017/154338/106

Tender No. FMC/EU/22-23/006

July 2022



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I. Project Background and Context

1. Project Factsheet

Project title	Promote Bamboo MSME Clusters for Sustainable Development
Proposal Number	ACA/2017/154338/106
Country(ies)	India
Project donor(s)	EU
Project implementation startdate	1 st January 2018
Expected duration	58 months
Expected implementation end date	October 2022
Lead Partner (Implementing Agency)	Foundation for MSME Clusters
Other Partners	Small Industries Development Bank of India (SIDBI), Commonwealth Media Educational Centre for Asia (CEMCA), Copenhagen Business School (CBS)
Donor funding	Euro 24,99,824
Co-financing by Implementing Agencies	Euro 6,24,956
Total project cost	Euro 31,24,780
Mid-term review date	September – October 2020
Planned terminal evaluationdate	August 2022– November 2022
Selection Methodology	FMC will follow the QCBS method of evaluation with 80% weightage to technical strength of the CVS and 20% for the financial quote.
How to Apply	<p>The Tender is available at https://fmc.org.in/tender/ Please apply by 25th July, 2022 (till 5.30 PM). Please note that the financial quote (password protected) and technical quote (password protected) must be electronically submitted at euprocurement@msmefoundation.org and in original with signature and seal in a separate envelope clearly mentioning "For appointing Consultants for Independent End Line Assessment of Project" at the below mentioned address. FMC shall open the financial quote, once the technical evaluation stage is completed. The Technical Bid will provide (i) Credentials of the bidder consultant (Brochures, website link, Testimonials by the client(s) of similar work done, (ii) Undertakings and Supporting documents as per the requirements explicitly mentioned in this ToR.</p> <p>Please refer to "Annex 7 – Selection Criteria for Hiring of Consultants" carefully before submitting your application.</p> <p>For any query, please email at euprocurement@msmefoundation.org with a copy to manmeet-hr@msmefoundation.org</p>

	<p>Date of Publication: 20th July 2022</p> <p>Last Date of Application: 09th August 2022</p> <p>Award of Contract: 12th August 2022</p> <p>Please send your bids in hard copy to:</p> <p>Ms. Manmeet Narang Human Resource Foundation for MSME Clusters (FMC) USO House, 2nd Floor, USO Road, Off Shaheed Jeet Singh Marg,6, Special Institutional Area, New Delhi – 110067 Tel No. 011-40563323-24</p>
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2. Project Context

There are more than 5 million people, half of them being women in the tribal regions across 18 states out of the 29 states of India where abundant quantity of bamboo is available as a resource for their livelihoods. However, in the bamboo processing and product manufacturing segment, the number is likely to be around 3 million only. While this bamboo resource has been augmented by a range of public initiatives but not sufficiently harnessed in terms of its market applications. There is a huge scope for replacement of less sustainable resources and for creation of green jobs by effectively harnessing bamboo by upgrading existing products and introducing new products duly linked with markets. However, despite several public support initiatives, this scope is not realised due to lack of customised, coordinated and converged local action that integrates a package of inputs through a strong self-sustainable local eco-system. There is need to demonstrate the efficacy of local multi-stakeholder governance systems with integrated development models for further replication. The Action therefore targets 9 districts among 9 bamboo resource-rich states wherein geographically contiguous clusters of enterprises will be identified for targeted action. These states have been selected because they hold sufficient critical mass of very small enterprises that can be upgraded and new ones created to help generate 10,000 green jobs directly and positively impact the environment by substituting less sustainable materials such as timber, cement, plastic and steel. The Action also targets sustainability with high replication potential through multi-stakeholder initiatives, creating linkages with banks & financial institutions, strengthening local governance systems, building supply chain partnerships and creating a cadre of local business development service providers (BDSPs).

3. Project Objective And Expected Outcomes

The overall objective of the Action is to promote bamboo as sustainable resource and generate green jobs. The Action is designed to help local community and other private sector stakeholders collaborate for the promotion of green economy, sustainable growth, economic prosperity and poverty reduction in India along with mitigation of climate change.

There are **5 work inter-related packages in the design of the Action** synchronised to produce results for 5 specific objectives respectively. The **first** key guiding principle for design of the Action is to follow **integrated approach** around multi-stakeholder groups. The **second** principle to follow

LCA approach that ensures (i) Full bamboo **resource utilisation** through multiple applications (ii) **improved efficiency** in the production system, and (iii) offtake of bamboo products through **consumer education & awareness** creation, by aligning to **product & production standards**. The **third principle** is to ensure **sustainability** through replication of knowledge at various levels in the private sector and policy makers. **Fourth principle** is to **align and support business activities**. **Fifth principle** has been to build on **existing competencies, institutional structures and public support systems** to ensure value for money.

Work Package 1: Promote enterprises for sustainable production	
Specific Objective: To promote enterprise development for sustainable supply of bamboo products and generate improved livelihoods	Role of Partners: SIDBI (Lead) , FMC, CEMCA
<p>Description: This work package will be coordinated by Small Industries Development Bank of India (SIDBI) in line with its competence and experience to support rural industrialisation through a more integrated model of development that builds on Micro Enterprise Promotion Programme (MEPP). This WP will be strongly complemented by FMC and supported by CEMCA. First of all, SIDBI will deploy 9 Facilitating Agencies (FAs), one in each cluster to not only ensure local coordination during and beyond the Action. FMC will complement by providing programme management support to SIDBI and undertake the responsibility of capacity building of appointed FAs to help locally design and implement activities. FMC has a significant experience in supporting local action and has previously supported SIDBI for similar initiatives in 2009-12 and an ongoing one in 2016-18.</p> <p>Prior to initiating the Action, selection of clusters will have been undertaken by SIDBI in consultation with the respective 9 state governments. The first key activity upon the start of Action will be undertaken by FMC to help SIDBI draw up & finalize the terms of reference, selection system and manage entire bidding system for selection of the FAs. The teams deployed by the selected FAs will be placed in the clusters for the entire duration of the Action. Thereafter, as a second key activity, the FMC will provide training to all the 9 selected FAs to familiarise them about the Action and help undertake diagnostic study of every cluster in the district. This diagnostic study will be undertaken by the FAs to assess the current status of the cluster in detail, map the value chains of key cluster products, identify the relevant stakeholders and draw up a detailed cluster action plan through a participatory method with local stakeholders, duly validated by them. The third key activity will then be simultaneously undertaken along with the second one by CEMCA with its strength in the area of skill development for coordinating the preparation of e-learning modules targeting trainers and micro enterprises in four areas of 'entrepreneurship', 'production methods of bamboo products', 'financial literacy' and 'Occupation, Health & Safety' (OHS) & social security' with gender sensitivity. The designing of these modules is critical for contextualisation of the recipients with low level of literacy & numeracy along with effective delivery channels (text, audio-visual, animations etc.) for outreach and absorption in their local language. An IEC platform (Information, Education & Communication) for dissemination of these modules will be created. These modules will be aligned to National Skill Qualification Framework and thus also serve as a part of the lifelong learning system where these input materials will be used for self-learning not only for MEs but also other stake-holders and not just the targeted clusters but also for wider replication. The fourth key activity will ensure awareness creation and delivery of the modules through innovative delivery channels such as community radio and Bluetooth technology depending on the extent of availability of internet connectivity and smart phones (WP1) for an effective outreach to the local community of harvesters and MEs. Formal class room based teaching will not be undertaken for outreach of these modules.</p> <p>The fifth key activity under this WP is to provide training to the master artisans and other local key trainers for upgrading the bamboo based products that can fetch increased margins for MEs. The implications of this</p>	

upgradation in terms of changes required in technology, designs, material inputs, skills, knowledge and OHS will be explained through ToTs. This will be undertaken as a part of the pre-training activities through display of upgraded products and exposure visits to the neighbouring markets leading to the **sixth activity** titled **‘Provide technical, managerial & financial inputs’ to 2250 primary processors in the 9 clusters**. The FAs will facilitate identification and aggregation of potential entrepreneurs. This activity targets provision of inputs for scientific harvesting techniques to 450 bamboo harvesters thus helping them enhance their income levels by selection of bamboo poles to be cut, better grading of bamboo and undertaking treatment required for specific bamboo product applications. These inputs will enable new enterprises to be created and existing ones to be expanded, thus creating an average of about 4 livelihoods per enterprise and new/additional business activity worth **Euros 11,244 p.a. by the end of Action. It is envisaged that the outcomes in terms of enterprises created will cumulatively reach 337, 900, 1575 and 2250 and employment generated will be 1500, 4000, 7000 and 10000 at the end of years 1 to 4 respectively**. Most of these results will come from among the MEs. The **seventh main activity** targets provision of OHS inputs to 10,000 workers in collaboration with local primary health centres for continuity and with support from OHS practitioners. All the three type of skill based trainings for bamboo community will be undertaken with support from certified training partners of National Skill Development Council using innovative system of ‘Recognition of Prior Learning’ (RPL) that helps build on existing skills of the beneficiaries. The FAs will enable linkages with national systems for social security set up by the Prime Minister for informal workers. **The success of this WP will be key in advancing the overall objective of scaling up in other districts and states (specific objective 5). WP1 draws synergy with WP2 by linking up entrepreneurs with more demanding markets, from WP3 for provision of BDS and with WP4 by linking up with the financial institutions. These activities help upgrade the capacities of the targeted potential beneficiaries and create new enterprises.**

Results :2250 MSMEs start/expand bamboo product supply worth 25.3 million Euros to existing/new markets, impacting 10,000 livelihoods through new income to the tune of 13 million Euros, improved occupational health & safety (OHS) and social security

Publications, Tools and Reports:R1: 9 diagnostic study reports including OHS practices and social security status of MSMEs, T1:4 Training modules; T2: 1 IEC platform

Work Package 2: Create Market Opportunities for high potential products

Specific Objective: Promote select new bamboo products among high potential buyers

Role of Partners: FMC (Lead)

Description: There are 4 key activities under this package.

The **first key activity is to undertake a market assessment study** to identify high potential timber substituting products for public and private procurement. The specific bamboo products, their buying volumes and the frequency of the said public institutions shall be assessed and matched with the suppliers’ capacities in the targeted states to identify scope for enhancing procurement of bamboo products in line with their **sustainable public procurement policy**. This study, to be undertaken by one of the subcontractor national agencies that has prior experience and techno commercial understanding of the variety of bamboo products that can be made in a cluster context, is required for the Action to channelize its resources to foster enterprise development among the select high potential opportunities. **The second key activity will be to prepare a market need assessment study** to assess the scope for public & private procurement for select products, along with their relevant technical standards during H1 and H2, highlighting gaps in current production and public procurement requirements. Select technical institutions viz. Forest Research Institute (FRI), IIT-Guwahati, Building Materials and Technology Promotion Council (BMTPC), Indian Plywood Industries Research & Training Institute (IPIRTI) may be engaged to undertake this study. If there are currently no product standards for any high market potential product like bamboo pallets, Bureau of Indian Standards (BIS) will be approached to help draft an appropriate standard (under WP5). **The third key activity is to setup 9 physical incubators** to demonstrate high potential products in 9 clusters. An incubator is a physical facility for

stimulating entrepreneurial idea generation with higher end bamboo products on display and provides information package about where technical assistance, equipment, venture capital and other financing can be sourced. Relevant business plans and information about potential market linkages will also be made available. It will also help potential entrepreneurs undertake design and prototype development. This facility will be housed and run by the FA where equipment will be made available on user charges basis with reduced charges in the beginning but on cost recovery or commercially profitable basis thereafter by and beyond the Action. These incubators will help fuel the imagination of potential entrepreneurs and select the option most suitable for them. It will also help create demand for strategic services from the BDSPs and FAs to take them forward by creating promotional fliers around these products. **The fourth key activity is to identify and incubate 20 start-ups in new areas, thus creating options** so as to ensure long-term growth. The incubation support will require intensive handholding by the mentors and linkages with institutions that can provide them with necessary technical designs and trouble-shooting support. Partnerships will be forged with relevant institutions for sustainability. **The fifth key activity is to organise linkages with 20 potential public & private buyers.** Every cluster will be linked with at least regular buyers as well, by organising exposure field visits of buyers and also facilitating their interaction in buyer seller meets (BSMs) to be undertaken along with 9 regional learning meetings.

The Action will thus support commercialisation of high potential bamboo products in the buildings, furniture and other lifestyle sectors. This will help provide market linkages for such products for MSMEs (WP1) that can be financed (WP4). A sub-contracted agency with domain expertise, such as FRI or BMTPC, besides a few others will prepare a research based report on life cycle assessment for a select range of bamboo products during H2 of the first year. The research based identification of new products to be promoted will help to identify the environmentally and socially most sustainable options. **All these activities under this WP will be coordinated by FMC.**

Results :New buyers undertake sourcing of 5 high potential bamboo products in targeted clusters through 20 successful business start-ups

Publications, Tools and Reports:P1: **Market assessment study to identify high potential timber and other unsustainable product substitutes** T1: **Learning app for e-modules** T2:**Self-learning AV modules on OHS and social security measures** T3:**Modules on a) Post harvesting techniques; b) Seasoning, storage, grading and sorting;**T4: **Promotional videos on ‘Benefits of using bamboo products’;**

Work Package 3: Strengthen local governance systems and intermediaries

Specific Objective: To sustain and upscale local initiatives through community-led multi-stakeholder development models	Role of Partners: FMC (Lead). CEMCA
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Description: **The key relevant governance stakeholders are the 9 local Facilitating agencies (FAs), 140 local & national BDSPs, 50 Producer networks (PNs)and 30 equipment/input suppliers. This WP draws from the learnings in WP1, WP2 and WP4 while it feeds into WP5. The key activities are accordingly designed to strengthen these 4 stakeholder groups and are explained as under.**

The facilitation of local action requires a small team to be set up by the appointed FA and stationed for Action duration to continuously engage with stakeholders to build capacities, promote collaborations for a strong governance system and also become a part of it. The capacity building and provision of ongoing hand-holding technical support of the FA teams will be managed by FMC through a locally stationed technical advisor in every district along with senior team from the head office. **The first key activity is to organise 4 structured training programmes for FAs.** These programmes will be designed to help them **a) undertake participatory cluster diagnosis, draw up action plans and undertake pilot initiatives for trust building b) implement activities effectively for achievement of short term and long term goals c) stock taking in the mid-term, drawing lessons from mutual experiences among FAs to start building foundations for sustainability and finally d) to draw up an exit strategy for the project and designing customised activities required during the last year of the Action.** The key inputs will be provided on enterprise development & bank linkage creation through MEPP

scheme, clusters & value chain development methodology, market linkage creation, product & process standards, BDS mapping, assessing need for CFCs and preparation of detailed project reports, public schemes of assistance for action, skill development, high value added designs, application of better tools/ equipment & supplies for productivity & safety needs, incubation of start-ups and finally on institutional sustainability.

The second key activity is to identify 40 strategic BDS providers and create linkages for providing services to MSMEs & create a pool of 100 local BDSPs. 40 individual and institutional BDSPs, mostly from national but also from neighbouring countries are important for bringing in new knowledge into the clusters in a sustainable manner. The identification of 40 strategic BDSPs will be undertaken by a bamboo expert with familiarity about the sector, understanding of the Action requirements and engagement with the service providers. The FAs will identify 100 local BDSPs for their engagement in Action during and beyond the delivery of strategic BDS as also for their capacity building. To illustrate, FRI, BMTPC and ABARI, an NGO in Nepal have developed strong expertise and delivery modules on bamboo treatment. Similarly, development of new product designs and technology inputs can be provided by select institutions. The locally identified 100 BDSPs will be engaged selectively with the strategic BDSPs while providing inputs to the MSMEs through a range of training initiatives designed in Action. This will enable local capacities to be built for harnessing them sustainably by the beneficiaries, thus strengthening local governance system.

The third key activity is to organise 50 PNs and provide techno managerial support to setup/revive and manage 9 CFCs. Several of the BDS inputs can best be harnessed economically and effectively through aggregation of the final beneficiaries to meet the requirements of high end markets in groups and/or commercial integrators. In the targeted clusters, there are already several self-help groups (SHGs) especially among women for micro finance linkages. Some of these SHGs in the bamboo application areas also double up as production networks (PNs) for joint production and marketing. The Action intends to create and/or strengthen 50 PNs with hand-holding support from locally based TAs of FMC and the FAs. These PNs may also undertake common raw material buying, sharing of information, equipment, common brand/ trademark to scale up their production of furniture, construction materials, handicrafts etc. At least one such PN in every cluster will be supported to help it become a formally registered bigger membership based organisation and called Off Farm Producers Organisation (OFPO) to invest into setting up or strengthening of CFCs owned & managed by them on self-sustainable basis. These investments will be made with significant support from multiple public schemes of assistance available. The Action will support this through sharing examples of best practices, identification of common needs, assisting them in drawing up their plans of action, linking up with BDSPs as also equipment suppliers, facilitating linkages with public schemes of assistance wherever required by drawing up their detailed project reports and finally developing operating systems for managing the facilities effectively.

The fourth key activity is to identify and build capacities of 30 equipment/ inputs suppliers. Based on the diagnostic study and value chain mapping, identification of such equipment and other inputs will be made that can help upgrade the products and processes significantly as per market requirements. A mapping of the providers of these equipment and inputs will be undertaken with the assistance of a bamboo experts and technical institutions so as to help enhance the offerings of these suppliers. Several of these suppliers can also simultaneously develop as embedded service providers, thus enhancing the scope of their businesses and integrate in their commercial offerings. The identified 30 equipment suppliers will be provided opportunity to engage with 40 strategic BDSPs through exposure visits, participation in training of trainers' programmes, reflected in the model business plans for credit provision by FIs and bilaterally linked for institutional support. The equipment & input suppliers will also be invited to set up their stalls as a part of the 12 regional events where the same platform will double up for buyer seller meets as well. They will display their tools and equipment on commercial basis.

Results: 9 local Facilitating agencies (FAs) provide services beyond Action, 50 Producer networks (PNs) created are vibrant, 9 CFCs created/strengthened with local ownership & management, 30 equipment/inputs suppliers and 140 BDSPs provide strategic products and services sustainably

<p>Publications, Tools and Reports:R1: Curriculum of 4 training programmes for FAs R2: Detailed Project Reports for 9 CFCs; R3: 9 Detailed Project Reports for CFCs R4:List of 40 strategic and 100 local BDS providers R5: List of 30 Potential equipment and inputs supplier</p>	
<p>Work Package 4: Facilitate financial linkages</p>	
<p>Specific Objective: To promote sustainable linkages between financial institutions and local enterprises.</p>	<p>Role of Partners: SIDBI (Lead), RGVN</p>
<p>Description: The main activities of the WP are (i) Create suitable 20 model business plans for MSMEs in 9 clusters (ii) Sensitise and train 150 local bankers from 10 FIs on Bamboo MSME financing (iii) Create financial linkages for 2250 MSMEs with FIs and public schemes (iv) Explore and seek international banks' credit lines for enabling offtake of SCP financial products. These are elaborated as under.</p> <p>The first main activity is to create suitable 20 model business plans for MSMEs in 9 clusters. The FIs require credible business plans to be submitted by the potential borrowers. The Action will select 20 most likely businesses to be chosen by the targeted 2250 businesses. These plans, available in the public domain will help FAs and other financial BDS providers to use these model plans to customise it in the context of individual borrower requirements. It also enables an informed connect between the borrower and FI by facilitating common information about the production process, equipment requirements, working capital needs and a section on market analysis, thus proving techno-economic viability. The institutional credit will be provided either by regular banks or recently created Small Finance Banks (SFBs) or NBFCs. While the regular banks have necessary competence for appraisal, the NBFCs/SFBs require to be trained for using relevant software. The Action therefore, secondly envisages to undertake orientation programme for the bankers and training of 150 officials from at least 10 NBFCs/SFBs to help them familiarise about the bamboo sector, its business opportunities, financing options, government's credit linked schemes and appraisal mechanisms. It is envisaged that these officials will be sufficient to undertake appraisal of bamboo based proposals. RGVN bank, an Associate in the Action, is a new small bank that targets micro enterprises for financing. The RGVN will provide insights into the capacity building requirements of its staff, guide the preparation of the training modules and will also be one of the ten beneficiary FIs of technical inputs under the Action for further replication in other FIs.</p> <p>The average credit requirements of the targeted enterprises is pegged at 4000 Euros aggregated at 9 million Euros by the end of the project. The credit offtake is likely to cumulatively reach in mn Euros 1.35, 3.6, 6.3 and 9 respectively over 4 years of the Action in line with new enterprise creation. The FAs will leverage upon their direct connect with the local community, 30 equipment/inputs suppliers and 140 BDSPs to identify eligible borrower enterprises as a part of the third main activity. The identified entrepreneurs will then be assisted in finalizing their customised business plans, building on the existing model plans wherever feasible. Thereafter the FAs will provide the borrowers with liasoning support to respond to the queries by the banks/NBFCs. The FAs will provide this assistance as a part of their total remuneration where an additional financial incentive of about Euros 70 is provided for facilitating every matured linkage that leads to loan disbursement and enterprise creation. The linkage with credit linked public subsidies will help make the credit facilitation easier for the enterprise to borrow. Fourthly, SIDBI will identify and explore the possibilities of linking up with national and international SCP lines of credit on commercial terms to scale up similar financing options in other sectors.</p>	
<p>Results:10 FIs provide credit through cluster financing instruments to 2250 MSMEs worth 9 million Euros</p>	
<p>Publications, Tools and Reports:R1: Model business plans (20) for bamboo based businesses among MSMEs R2: Identification and mapping of SCP credit lines</p>	
<p>Work Package 5: Strengthen policy dialogue and dissemination of proven development models relevant for bamboo sector</p>	

<p>Specific Objective: To strengthen policy dialogue and disseminate proven development models relevant for bamboo sector, more particularly at the state, national and international level.</p>	<p>Role of Partners: FMC (Lead), SIDBI, CEMCA, CBS, DIE, RGVN</p>
<p>Description: There are 4 main sets of activities elaborated as under viz. (i) 12 Regional multi-stakeholder consultation workshops (ii) Organise 2 national, 1 international workshops to disseminate policy learnings and one training programme for SAARC countries (iii) Prepare 4 learning papers for policy uptake on financing, gender, governance & value chains and skills (iv) Participation in various national and international fora for dissemination of learnings.</p> <p>(i) 12 Regional multi-stakeholder consultation events: Nine of the events will follow one standard framework while the other three, specific to business themes will promote high potential new market applications for bamboo products at commercial and policy levels. The nine events will have workshops focussing common policy dimensions on financing, gender, governance & value chains and skills will help compare, build on and cumulate learnings. All 9 events will be organised from Year 2 onwards and will have 3 essential components viz. a) Policy learning workshops among stakeholders b) Buyer-seller meets to facilitate public & private procurement and display cum sales of bamboo products and c) Facilitation of linkages with upgraded equipment, BDS, public schemes of the Govt. and NBFCs/Banks for credit financing. The 9 regional events will be organised in collaboration with at least one of the state institutions such as state bamboo mission, state entrepreneurship development institute or state livelihood mission to ensure sustainability of the events during and beyond the project duration. International participants from neighbouring countries will also be invited for them to present their products, equipment, input materials, machinery, technology etc. Tie-ups will also be explored for collaborations with other relevant regular exhibitions in India.</p> <p>(ii) Organise 2 National, 1 International workshop and 1 Training programme for SAARC countries: The two national policy level workshops will be organised building on the existing knowledge base available including with the EU Networking Facility and Asian Centre of SCP, supplemented with lessons drawn from the Action. While one of these national workshops will have focus on 3 themes together on gender, governance & value chains and skills, the other one will be focussed on credit financing for potential upscaling with participation from the states as well. The one international workshop will be organised by CBS to disseminate the case studies and teaching curriculum among business schools and management practitioners. A training programme for SAARC countries will be organised by CEMCA in Bangladesh to share training modules and their efficacy. The Action will thus contribute to another ongoing SAARC wide bamboo sector initiative (2017-20) being implemented by the lead applicant in India with financial support drawn from SAARC Development Fund and NABARD.</p> <p>(iii) Prepare 4 learning papers for policy uptake: These will be prepared along with at least 2 policy briefs each on 4 areas based on learnings captured in 12 regional events complementing and supplementing existing knowledge base at regional, national and international level. These papers are elaborated as hereafter.</p> <p>The first paper will be focus on SCP Financing building on experiences of WP4 and a previous work http://fmc.org.in/wp-content/uploads/2012/10/Learning-Paper-Financial-Linkages.pdf under a successfully concluded EU Switch Asia funded project (2012-16). There are five key differentiating elements from the previous experience viz. a) informality of the sector leading to larger number of smaller sized loans, b) bamboo sector instead of industrial sector of foundries c) training & engagement of NBFCs instead of only banks previously d) engagement of FAs for linkages and e) finally targeting 9 states instead of 3 previously. This paper will feed into policy briefs and consultations with MFIs that are interested in upgrading to become NBFCs/SFBs and Government of India where the credit plus model provides scope for integration. It will also contribute to Asian Cleantech MSME Financing Network (ACMFN) with value added elements of integration with SCP credit lines and credit delivery mechanisms.</p> <p>The second paper will be on Women's economic empowerment in Indian bamboo clusters. More than half of the 5 million employed in Bamboo sector, are women in the tribal regions of the country. This learning paper will</p>	

investigate how the project affects the economic and social empowerment of otherwise marginalized tribal women entrepreneurs/workers in the bamboo harvesting and processing clusters of India by investigating the following issues: a) what is the motivation of tribal women for becoming micro-entrepreneurs? b) how do their enterprises fare in terms of profitability and survival rate vis-à-vis those of male headed MSMEs? c) what are the opportunities and barriers for women-headed MSMEs to grow and prosper in the Bamboo clusters of India? d) what are their conditions at work compared to those of men and e) how does the project affect women's and economic empowerment in the bamboo clusters of India, both in the workplace and within intra-house dynamics and family networks. This paper to be steered by CBS will also draw up 2 case studies and teaching curriculum for students in the business schools and business practitioners including that of the TERI university's Masters programme in India. Its dissemination will be undertaken through an international workshop, blog, short videos and a short pamphlet in 3 languages viz. English, Hindi and one local language.

The third learning paper will be on Governance Structure & Value chain development, to be coordinated by DIE, Germany and will highlight the role of governance in green job creation through the informal sector that is not connected with national and international value chains. We are still at the beginning of the knowledge in policy circles about how different stakeholders can work independently and yet in a participatory system towards commonly negotiated goals. It thus addresses the problem of jobless growth that we are witnessing in several developing economies. The paper will contribute to the literature on promotion of Producer groups and help assess capacity building requirements to strengthen local governance systems for future development interventions. This understanding helps the policy makers and society at large to make changes in their value chains, rules and systems of dialogue & participation to create diverse sustainable socio-economic local systems.

The fourth learning paper will be on skill development for green jobs in the informal sector. The natural resource based informal economies targeting tucked far away from the more modern life infrastructure are likely to be as deeply affected as others. Recent literature suggests the need for 'life-long learning systems' rather than standard class room teaching systems, as one of the ways to adapt to fast changing requirements of learning. This can be better done by using extensive audio visual media that enables the informal sector stakeholders to learn on the tap in modules. The Government of India has set up ambitious target to skill 500 million people by 2022 through a range of initiatives that have had limited outreach in the informal sector due to issues of curriculum, media content and channels of delivery. The Action provides scope for learning by targeting innovations in content and curricula that help effect positive outreach among final beneficiaries using community radio, mobiles and applications with impact. The policy briefs drawn from the paper will try to address the main question – 'How the skill development initiatives be designed alternatively and in the informal sector context?'

(iv) Undertake dissemination of learnings through participation in various national and international fora. All the Partners and Associates have a history of undertaking development initiatives and have built a strong network of partnerships with several state, national and international institutions through online and physical participations. The Action will leverage on these linkages, partnerships and platforms to propagate SCP principles by way of engagement and participation. Some of these options are the initiatives by UNIDO including through its RECPnet, European Commission through Switch Asia Networking Facility, UN Global Compact, the World Bank through its GEF programme, SAARC Development Fund, JICA, KfW, Association of development Financial Institutions in Asia and the Pacific, Bureau of Energy Efficiency and Govt. of India through various national institutions. The ongoing electronic platforms of the Partners including Udyamimitra of SIDBI, Cluster Observatory by FMC, learning & media center by CEMCA, the knowledge platform of CBS and the green growth knowledge platform of DIE Germany will be used to effectively disseminate the learnings and experiences. Various in-built strategies along with 2 evaluations designed in Action will add significance to the learnings.

Results: 200 Policy makers from India and the SAARC countries sensitised and 9 Indian states initiate replication of similar intervention models

Publications, Tools& Reports: P1-4:One policy learning document and 2 policy briefs each on (i) SCP

Financing (ii) Gender dimensions in bamboo Value Chains (iii) Local Governance and Bamboo value chains (iv) Skill development
T1: Learning platform for project stakeholders using cluster observatory R1-12: 'Learnings from Regional Policy Event' R13-14: National workshops one on financing and another one on gender, governance & value chains; R15: International workshop on replication potential of bamboo based development in SAARC countries R16: Capacity building on skill development (Bangladesh) R17: Mid-term project evaluation R18: End-term project evaluation

4. Project Implementation Arrangements

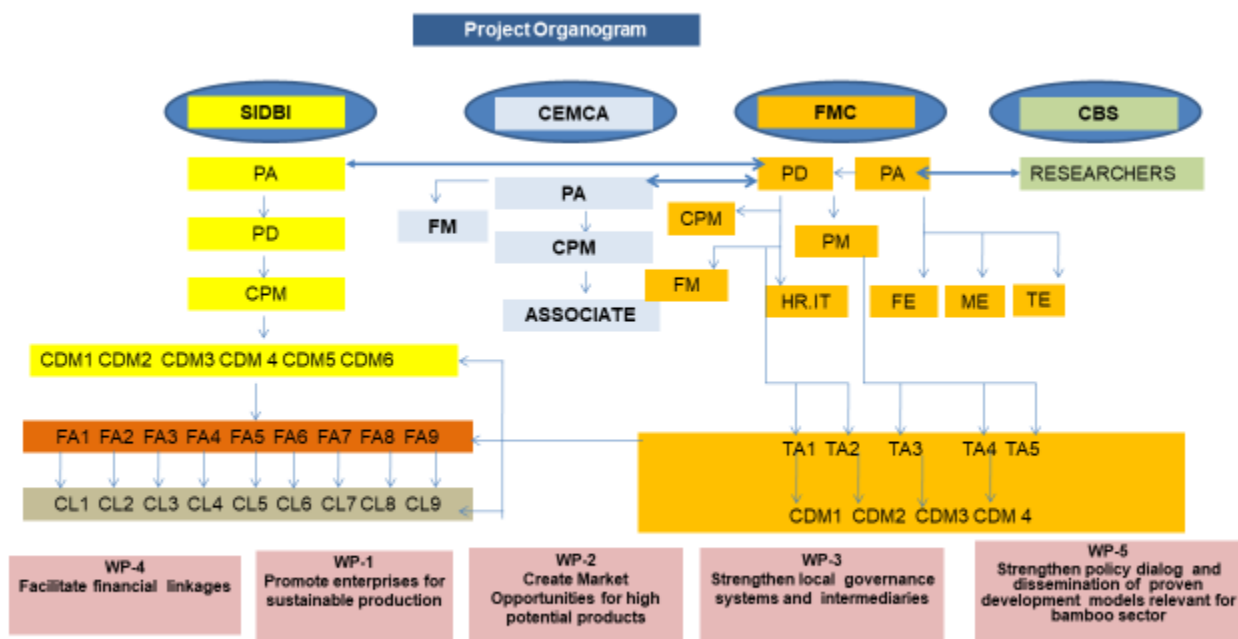
Role of FMC and SIDBI: FMC as lead applicant has conceived, provided the basic design and will coordinate the entire project with its partners. It will directly coordinate implementation of WP2, WP3 & WP5. Building on its sectoral experience in bamboo and competence to bridge externally sourced technical knowledge with local demand, it will create sustainable supply chain with potential buyers (WP2). It also coordinates innovation promotion, mentoring and supporting linkages drawing from its prior experience in managing innovation in clusters (2007-12). For the WP3 activities, FMC draws upon its leading in-house national and global expertise across 15 countries. Under WP5, strengthening policy dialogue and dissemination, draws upon its successful experience in effecting policy level work in India, complemented by similar work in the recently completed EU Switch Asia funded project in partnership with SIDBI (2012-16) where it also successfully led the engagement and partnership of all the institutions bilaterally and multilaterally for over a year from conception stage to formulating of the project. In addition, FMC will provide programme management advisory services (WP1, WP4) to SIDBI, the lead public finance institution for MSMEs that will lead provision of techno managerial inputs to MSMEs (WP1) and SCP financing (WP4) through its established network of other banks & non-banking financing companies. FMC has successfully provided similar support services to SIDBI for BDS development in 19 clusters (2009-12) and currently for development of MSMEs in 5 clusters (2016-19). SIDBI has through its own public initiative of Micro enterprise promotion programme (MEPP) undertaken rural industrialisation since 1995. SIDBI will building upon its experience in developing similar paper under EU Switch Asia project (2012-16), coordinate the development of learning paper on SCP financing in line with its mandate for dissemination among MFI community, select states, Ministry of Finance, Reserve Bank of India and association of development financial institutions in the Asia and the Pacific.

Role of CEMCA and CBS: With its mandate, experience & knowledge of development of multi-media based learning materials will develop self-learning modules customised for the final beneficiaries with low levels of literacy and numeracy. With access to its proprietary technologies, CEMCA will engage with and use Community based media like radio and video programmes, develop mobile applications and IVR for effective outreach (WP1). CEMCA will build on its existing engagement & dialogue with National Skill Development Corporation (NSDC), state counterparts and their training partners will ensure institutionalisation of the training modules & their innovative delivery systems for replication in the targeted 9 states as also in Bangladesh and Pakistan in line with its mandate (WP5). CEMCA will prepare learning document on skill up-gradation as well as

related policy briefs that build on its 'Flexible and Blended' (FaB) model of learning and create a Community of Practice (CoP). CBS, a premier European business school, contributes to the development of a policy focused learning document and prepare policy briefs on the role of gender in economic development. It has expertise in policy based research with academic rigour. CBS has expertise in designing of course curriculum in a scientific peer review system which is academically and scientifically validated. With its network of international linkages for exchange of knowledge through top level journals, it will be able to disseminate the translated knowledge effectively. CBS also has an international outreach among business schools to familiarise business managers and existing practitioners on how to tackle social and environmental challenges. CBS will provide linkages for market study for bamboo products targeting sustainable consumption, thus enabling a strong connect with EU.

Role of target groups: The existing and potential MSMEs will actively participate in seeking techno managerial inputs under the Action, building on their awareness about available market opportunities. These MSMEs will also be willing to collaborate among themselves and with their value chain partners to form groups and production networks (PNs) for supply chain engagement with potential buyers for their commercial benefit. Nine of these groups will be willing to collectively invest into setting up of physical common facilities (CFCs) by creating formal & legally registered producers' organisations (POs) be willing to seek contribution from the public schemes of assistance for provision of fee based services to the community. The equipment suppliers and BDSPs will be willing to participate for seeking capacity building inputs and linkages with potential buyers of their products & services. The financial institutions will be willing to provide institutional credit to capacitated MSMEs with lower risk of default. They will also be the willing to participate in training and awareness programmes to gain knowledge about the bamboo sector, its potential business applications, the stakeholders and learning about appraisal skills to assess techno economic business viability. The contracted Facilitating Agencies (FAs) will participate in training programmes required to help them complete their deliverables effectively and continue their engagement in clusters for sustainability of their own business operations.

The project management structure as designed is provided below.



PA: Project Advisor, PD: Project Director, CPM: Component Project Manager, CDM: Cluster Development Manager, FM: Finance Manager, HR.IT: Human Resource, Information Technology, FE: Financial Expert, ME: Marketing Expert, TE: Technical Expert, TA: Technical Advisor, FA: Facilitating Agency, CL: Cluster, WP: Work Package

5. Main Findings of the Mid-Term Review (termed as ROM – Result Oriented Monitoring)

Following are the key findings of the MTR:

The intervention to “Promote Bamboo Micro Small and Medium Enterprises (MSME) clusters for Sustainable Development” fully addresses a range of pertinent needs of the target groups and end beneficiaries and contributes to the attainment of some of their rights. Moreover, fostering bamboo products as a sustainable substitute of less renewable resources like timber and promoting economic prosperity of the tribal communities including women in less developed regions of India, remains highly relevant to the planned target groups of the intervention.

The capacities of the target groups are being continuously assessed as new artisans and business are being included. The Activities and Outputs of the intervention were explained to the target groups (including Government) by the Implementing Partners (IPs) in detail through a range of workshops, trainings, meetings, and written communications, as applicable. The ROM Review interviews showed that they were fully understood.

The IPs’ skills, experience and familiarisation with the implementation environment and their respective tasks are fully adequate.

As a SWITCH-Asia intervention, it has a dual logic, which is economic and environmental. In both respects, the Overall Objective (Impact) and Outcomes are fully in line with Government priorities. However, there is an increasing falling-out as regards Government policy on the role of CSOs, who are key players in this intervention.

There are currently no other donor-funded interventions (EU or non-EU) in the bamboo sector taking place in India, but the intervention seeks to build a common platform for learning and dissemination of a multitude of state-led bamboo initiatives.

The underlying logic of this intervention is clear and reasonable and is expressed in the Logframe. It is also understood by the relevant stakeholders.

The intervention operates an excellent internal monitoring system. The Lead IP provides overall coordination support for the entire project, ensuring collaboration among various partners across all work packages, documenting financial and non-financial records, monitoring progress, and reporting to the EUD. Roles and responsibilities are clearly defined between IP partners.

The structure of the implementation mechanism is appropriate and based on a strongly collaborative model of multiple actors. Their roles are clearly defined, and detailed organigrams exist.

the IP submitted a detailed "Justification of the Budget for the Action" at proposal stage, and the rationale laid out there for the budgeting is clear, appropriate and was approved by EUD. The IPs reported that resource planning was based on their intimate knowledge of the sector and the local operating environment. Salaries are in line with other similar organisations, and there are no "extravagant" budget lines or allocations for excessive travel or expensive vehicles. The office facilities as viewed through the Webex camera are simple and chosen on the basis of functionality considerations only.

The intervention has encountered some serious delays and is now seven to eight months behind schedule. A detailed monthly or quarterly tabulation of delays per Output and Outcome at the time of ROM review (October 2020) is not available but will be submitted with the next Interim Report (December 2020).

At the time of the ROM review, the intervention is approximately 37% underspent (this is an informal estimate provided by FMC).

During the ROM Reviews, the entrepreneurs and start-ups interviewed (Assam, Mizoram, Chhattisgarh, Madhya Pradesh and Odisha) as well as existing proprietors (Meghalaya and Tripura) were able to explain that the innovative technical ideas, new business plans and links

with banks and subsidies have created new business opportunities for them. Similarly, the artisanal households (Jharkhand) were able to show physical evidence of what looked like high-quality bamboo products, although they also said they are facing continuous difficulties accessing loans...

By December 2019 (Annual Report), the intervention had already achieved progress in the attainment of the Outcomes but will need a No Cost Extension to reach all the targets..... Further developments surrounding COVID-19 are the key determinants of success but are hard to evaluate at present.

By continuously engaging with a multitude of state and district level bamboo-related Government, private sector and civil society groups, the intervention is well placed to have an impact on sector policies in the medium-term.

The technical and business skills of the artisans, small firms and innovative start-ups have definitely improved through this intervention, for example, training sessions on design, preparation and optimized transport modalities (for example, stacking), which suggests the notion that they will be able to convert this new knowledge into continuing increases in jobs and incomes if the context is right. The Case Studies provided by the intervention so far show that there have already been successful examples of artisanal households and small firms. One female artisan showcased in the Case Studies is now able to produce not only simple baskets but also high-end value-added lifestyle products such as dustbins, laundry bags, flowerpots, and light balls.

The intervention aims at contributing to promoting a Green Economy and economic prosperity of tribal India. Through the course of the intervention's implementation, the planned targets groups have participated in the intervention activities at no additional cost. However, the onset of COVID-19 does not bode well for the medium-term future of the bamboo economy, as market demand has dropped, transport networks are cut off, and especially the poorer and more vulnerable artisanal households interviewed were struggling to repay their loans.

The intervention was deliberately designed to support private sector development. In addition, it also has strong links with the public sector. The current split on the demand side of the bamboo Value Chain is 33% government buyers, 33% corporate buyers (mainly retailers selling directly to consumers), and 33% productive factories, so 66% private sector.

Regarding the overall economic vulnerability of the poorest artisanal households (includes low castes), the intervention is certainly increasing their resilience through a combination of skills transfer and integration in the bamboo Value Chain (linkages with suppliers, banks, consultants etc.).

The OECD DAC policy marker on gender equality as per the intervention's implementation assessment, promotes gender equality by addressing, e.g. women in supporting enterprises started/expanded and assessing the Impact Livelihood of women.

The intervention is supportive of the attainment of rights under the International Covenant on Economic, Social and Cultural Rights (ICESCR), such as the Right to Work and the Right to an Adequate Standard of Living. It pursues a Rights-Based Approach because target groups are consulted in the technical design of the Activities and Outputs that affect them.

The intervention can be considered supportive of the EU's climate change commitments.

6. Budget Information

Table 1. Financing plan summary

Funding	Total (Euros)
EU Funding	24,99,824
Co-financing (Cash and In-kind)	6,24,956
Total	31,24,780

Table 2. Budget Summary

Project components	Total (Euros)
Human Resources	13,69,560
Travel	2,01,800
Equipment and Supplies	73,643
Local Office	1,05,840
Other Costs, Services	6,33,678
Other	5,35,834
Indirect Costs	2,04,425
Total (Euros)	31,24,780

Table 3. Co-Financing source breakdown

	Amount EUR
Expected sources of funding	
FMC	1,33,407
SIDBI	3,39,437
CEMCA	1,35,211
CBS	16,901
FMC through FNF	-
Total contributions	6,24,956

Table 4. Budget Utilization by FMC (To be filled by Finance)

Items of expenditure	2018	2019	2020	2021	2022	Total expend.	%
Human Resources							
Travel							
Equipment and Supplies							
Local Office							
Other Costs, Services							
Other							
Indirect Costs							
Grand Total							

II. Scope and Purpose of the Evaluation

The purpose of the evaluation is to independently assess the project to help FMC improve performance and results of ongoing and future programmes and projects. The independent end term assessment (EA) will cover the whole duration of the project from its starting date in January 2018 to the estimated completion date in October 2022.

The evaluation has three specific objectives:

- (i) Assess the project performance in terms of design, relevance, effectiveness, efficiency, sustainability and progress to impact;
- (ii) Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by FMC and disseminate them globally with other potential organisations.
- (iii) The senior lead expert will be responsible for identification of suitable institutions or international organisations in SAARC, working on upliftment and development of bamboo sector in the country. The expert will also be responsible for initial interactions with the organisations and planning and organising events for the cross learning of the achievements of our project with the organisations.

III. Evaluation Approach and Methodology

The evaluation will be carried out as an independent in-depth evaluation using a participatory approach whereby all key parties associated with the project will be informed and consulted throughout the evaluation. The evaluation team leader will liaise with the FMC Project Management Team on the conduct of the evaluation and methodological issues.

The evaluation will use a theory of change approach and mixed methods to collect data and information from a range of sources and informants. It will pay attention to triangulating the data and information collected before forming its assessment. This is essential to ensure an evidence-based and credible evaluation, with robust analytical underpinning.

The theory of change will identify causal and transformational pathways from the project outputs to outcomes and longer-term impacts, and drivers as well as barriers to achieve them. The learning from this analysis will be useful to feed into the design of the future projects so that the management team can effectively manage them based on results.

The project necessarily needs to be evaluated in the following domains. FMC will hire specialist in different domains separately who will be led by a senior evaluator who will be responsible for stitching the report together.

1. Design and marketing
2. Skills (including plantation) and technology
3. Financing
4. Policy regulation and policy promotion (to be done by the Lead Senior Evaluator)

Data Collection Methods

Following are the main instruments for data collection:

- (a) Desk and literature review of documents related to the project, including but not limited to:
 - The original project document, monitoring reports (such as progress and financial reports, mid-term review report, output reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
 - Notes from the meetings of committees involved in the project.
- (b) Stakeholder consultations will be conducted through structured and semi-structured interviews and focus group discussion. Key stakeholders to be interviewed include:
 - FMC Management and staff involved in the project; and
 - Representatives of donors, counterparts and stakeholders.
- (c) Field visit to project sites in India.
- (d) On-site observation of results achieved by the project, including interviews of actual and potential beneficiaries of improved technologies
- (e) Interviews with the relevant FMC State Office(s) representative to the extent that he/she

was involved in the project, and the project's management members and the various national [and sub- regional] authorities dealing with project activities as necessary.

Evaluation key questions and criteria

The key evaluation questions are the following:

- (a) What are the key drivers and barriers to achieve the long term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long term objectives?
- (b) How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?
- (c) What have been the project's key results (outputs, outcome and impact)? To what extent have the expected results been achieved or are likely to be achieved? To what extent the achieved results will sustain after the completion of the project?
- (d) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

The evaluation will assess the likelihood of sustainability of the project results after the project completion. The assessment will identify key risks (e.g. in terms of financial, socio-political, institutional and environmental risks) and explain how these risks may affect the continuation of results after the project ends. Table 5 below provides the key evaluation criteria to be assessed by the evaluation. The details questions to assess each evaluation criterion are in annex 2.

Table 5. Project evaluation criteria

#	Evaluation criteria	Mandatory rating
A	Impact	Yes
B	Project design	Yes
1	Overall design	Yes
2	Logframe	Yes
C	Project performance	Yes
1	Relevance	Yes
2	Effectiveness	Yes
3	Efficiency	Yes
4	Sustainability of benefits	Yes
D	Cross-cutting performance criteria	
1	Gender mainstreaming	Yes
2	M&E: M&E design M&E implementation	Yes
3	Results-based Management (RBM)	Yes
E	Performance of partners	
1	FMC	Yes
F	Overall assessment	Yes

Performance of Lead Partner

The assessment of performance of lead partner will *include* the quality of implementation and execution of FMC in discharging their expected roles and responsibilities. The assessment will take into account the following:

- Quality of Implementation, e.g. the extent to which the agency delivered effectively, with focus on elements that were controllable and how well risks were identified and managed.
- Quality of Execution, e.g. the appropriate use of funds, procurement and contracting of goods and services.

Other Assessments Required

The terminal evaluation will assess the following topics, for which *ratings are not required*:

- Need for follow-up: e.g. in instances financial mismanagement, unintended negative impacts or risks.
- Materialization of co-financing: e.g. the extent to which the expected co-financing materialized, whether co-financing was administered by the project management or by some other organization; whether and how shortfall or excess in co-financing affected project results.
- Environmental and Social Safeguards: appropriate environmental and social safeguards were addressed in the project's design and implementation, e.g. preventive or mitigation measures for any foreseeable adverse effects and/or harm to environment or to any stakeholder.

Rating System

Table 6. Project rating criteria

Score		Definition	Category
6	Highly satisfactory	Level of achievement presents no shortcomings (90% - 100% achievement rate of planned expectations and targets).	Excellent
5	Satisfactory	Level of achievement presents minor shortcomings (70% - 89% achievement rate of planned expectations and targets).	Good
4	Moderately satisfactory	Level of achievement presents moderate shortcomings (65% - 69% achievement rate of planned expectations and targets).	Satisfactory
3	Moderately unsatisfactory	Level of achievement presents some significant shortcomings (30% - 64% achievement rate of planned expectations and targets).	Unsatisfactory
2	Unsatisfactory	Level of achievement presents major shortcomings (10% - 29% achievement rate of planned expectations and targets).	
1	Highly unsatisfactory	Level of achievement presents severe shortcomings (0% - 9% achievement rate of planned expectations and targets).	

IV. Evaluation Process

The evaluation will be conducted from August 2022 to November 2022. The evaluation will be implemented in five phases which are not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

- i. Inception phase: The evaluation team will prepare the inception report providing details on the methodology for the evaluation and include an evaluation matrix with specific issues for the evaluation; the specific site visits will be determined during the inception phase (could be done later on mutual agreement), taking into consideration the findings and recommendations of the mid-term review.
- ii. Desk review and data analysis;
- iii. Interviews, survey and literature review;
- iv. Field visit;
- v. Data analysis and report writing.

V. Time schedule and deliverables

The evaluation is scheduled to take place from August 2022 to November 2022. Each team member will be engaged for 15 days spread across 4 months from August 2022 to November 2022 and the Lead Senior Expert will be engaged for 33 days spread across 4 months from August 2022 to November 2022.

The evaluation team leader will give an online debriefing and presentation of the preliminary findings of the terminal evaluation to the relevant stakeholders. The draft TE report is to be shared with the FMC Project Management Team for receipt of comments. The ET leader is expected to revise the draft TE report based on the comments received, edit the language and form and submit the final version of the TE report.

Table 7. Tentative timelines

Timelines	Tasks
End of July and early August 2022	Recruitment of the evaluation team
August 2022	Desk Review, Writing of inception report and briefing with FMC project Management Team and the project team based in different states
September 2022	Interviews, surveys and literature review
October 2022 and 1 st week of November	Preparation of first draft evaluation report, Online debriefing Internal peer review of the report, FMC and other stakeholder comments to draft evaluation report, Field visit
November 2022	Final evaluation report

VI. Evaluation Team Composition

The evaluation team will be composed of one senior consultant acting as the team leader and 3 national evaluation consultant. The evaluation team members will possess relevant strong experience and skills on evaluation management and conduct together with expertise and experience in domains mentioned above in III. All the consultants will be contracted by FMC directly.

The tasks of each team member are specified in the job descriptions annexed to these terms of reference. The ET is required to provide information relevant for follow-up studies, including terminal evaluation verification on request to FMC up to three years after completion of the terminal evaluation.

Members of the evaluation team must not have been directly involved in the design and/or implementation of the project under evaluation.

The FMC Lead Project Manager and the project team in different states will support the evaluation team.

VII. Reporting Inception Report

This Terms of Reference (ToR) provides some information on the evaluation methodology, but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the Team Leader will prepare, in collaboration with the national consultants, a short inception report that will operationalize the ToR relating to the evaluation questions and provide information on what type of and how the evidence will be collected (methodology). It will be discussed with and approved by the FMC Project Management.

The Inception Report will focus on the following elements: preliminary project theory model(s); elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework (“evaluation matrix”); division of work between the International Evaluation Consultant and national consultant; people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable⁷.

VIII. Evaluation Report Format and Review Procedures

The draft report will be delivered to FMC for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders will be sent to the project evaluation team with a copy to Lead Project Manager who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the terminal evaluation report.

The ET will present its preliminary findings to the local stakeholders and take into account their feed-back in preparing the evaluation report. A presentation of preliminary findings will take place on a remote basis.

The TE report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, exactly what was evaluated, and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the evaluation took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The evaluation report shall be written in English and follow the outline given in annex 4.

IX. Quality Assurance

The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality, attached as Annex 5. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback.

Annex 1: Project Logical Framework

	Results chain	Indicators	Baseline (2018-reference year)	Current value Reference date	Targets (incl. reference year)	Sources and means of verification	Assumptions
Overall objective: Impact	Contribute to promoting green economy and economic prosperity of the tribal India	-Increased turnover of bamboo based MSME economy -New green & sustainable jobs of which women are in % -Increased use of bamboo as substitute of unsustainable resources (e.g. timber, steel, cement, plastic) from its current base	-Estimated turnover: 300 million Euro -Estimated jobs in bamboo processing MSMEs in India is 3 million of which women are more than 50% -Estimated substitutable market of unsustainable resources with bamboo in India is 2 billion Euro	NA (This will be filled during the annual report submission for all 4 years)	-Increased turnover by 300% by 2028 leading to additional institutional credit offtake of 300 million Euros in more than 100 such existing clusters -Increased green & sustainable jobs by 100% by 2028 of which more than 50% will be women -25% of the unsustainable product market in India replaced with bamboo products	Policy documents, technical papers, sector reports by ministries of Govt. of India, National Mission for Bamboo Applications (NMBA), National Bamboo Mission (NMB)	-State & National institutions promoting bamboo based development adopt integrated multi-stakeholders, locally customised development initiatives -National economy will continue to grow consistently with continued policy focus on MSME development
Specific objective outcome(s)	Promote bamboo as sustainable resource and generate green jobs	Oc 1) No. of MSMEs (with % of women ownership) start/expand bamboo based production in monetary terms with no. of additional sustainable livelihoods (% of	-Diagnostics Studies and baselines in all 9 clusters will be done to capture the pre-project situation with respect to socio-economic status of the		Oc 1) 2250 MSMEs [337, 563, 675 & 675 in Yr1-4] of which 40% are women owned, start/expand bamboo product supply worth 25.3 million Euros [by Yr-4] to existing/new markets, impacting 10,000 livelihoods [1500,2500,3000,3000 in	Oc-1 -Records in terms of basic fact sheets of the beneficiary MSMEs with gender breakup, Lists of persons (with gender %) received OHS and social security	-The fundamentals of Indian economy in general and relevant sectors do not undergo significant negative changes -The policy

		<p>women) with additional income in monetary terms, Oc 2) No of new buyers undertake sourcing of no. of high potential bamboo products through no. of successful business start-ups Oc 3) No. of local Facilitating agencies (FAs) provide services beyond Action, No. of Producer networks (PNs) created/ strengthened, No. of equipment/inputs suppliers and no. of BDSPs provide strategic products and services sustainably Oc 4) No. of FIs provide credit through cluster financing instruments to no. of MSMEs in monetary terms Oc 5) No. of Policy makers sensitised & initiate similar</p>	<p>artisans/ MSMEs</p>		<p>Yr1-4] (more than 50% women) through new income to the tune of 13 millionEuros[by Yr4], improved OHS and social security Oc 2) At least 20 new buyers [4,6,6,4 in Yr1-4] undertake sourcing of 5 high potential bamboo products in each of the targeted clusters through 20 successful business start-ups Oc 3) 9 local Facilitating agencies (FAs) provide services beyond Action, 50 Producer networks (PNs) created are vibrant,9 CFCs created/ strengthened, 20 equipment/inputs suppliers and 140 BDSPs provide strategic services sustainably [by Yr4] Oc 4) At least 10 FIs provide credit through cluster financing instruments to 2250 MSMEs worth 9 mn Euros [1.35, 2.25, 2.7 and 2.7 mn Euros in Yr1-4] Oc 5) 200 Policy makers from atleast 3 SAARC countries sensitised and 9</p>	<p>inputs Oc-2-Copies of the orders received with product names for Oc-4: - List of MSMEs that received loans and accessed public schemes with sanction/ disbursement letters for Oc-5: Minutes of meetings with senior government officials/ feedback reports All Oc(s) -Annual reports of the project for -Midterm & end-term evaluation report for all Oc(s)</p>	<p>frameworkremains positive towards bamboo MSME Development -The law & order status remains stable in the targeted states and districts in particular</p>
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		intervention models in no. of states			Indian states initiate replication of similar intervention models[50,50,75,75 in Yr1-4]		
outputs	<p>Op 1.1) Provide technical, managerial & financial inputs to 2250 MSMEs through training/ capacity building activities</p> <p>Op 1.2) Provide scientific harvesting techniques to 450 harvesters</p> <p>Op 1.3) Provide OHS inputs & social security linkages to 10000 workers</p> <p>Op 2.1) Undertake Market assessment study to identify high potential timber and other unsustainable product substitutes for public & private procurement</p> <p>Op 2.2) Setup 9 physical incubators to demonstrate high potential products in 9 clusters</p> <p>Op 2.3) Identify and incubate 20 start-ups through the 9 incubators</p>	<p>For Op1.1-1.4</p> <p>-No. of MSMEs trained on technical, managerial and financial aspects to start bamboo enterprising activities</p> <p>-No. of harvesters trained on harvesting techniques</p> <p>-No. of workers received inputs on OHS and Social security measures</p> <p>For Op2.1-2.4</p> <p>-No. of market assessment study conducted to identify unsustainable resource substitutes with bamboo products</p> <p>-No. of physical incubators to demonstrate high potential products in no. of clusters</p> <p>-No. of start-ups</p>	-Diagnostics Studies and baselines in all 9 clusters will be done to capture the pre-project situation with respect to socio-economic status of the artisans/ MSMEs		<p>Op 1.1) 2250 MSMEs received technical, managerial & financial inputs to start/scale up bamboo based enterprising activities [337, 563, 675 & 675 – cumulatively in Yr1-4]</p> <p>Op 1.2) 450 harvesters trained on scientific harvesting techniquesactivities [150,100, 100 & 100 in Yr1-4]</p> <p>Op 1.3) 10000 workers received OHS inputs & social security linkages [1500,2500,3000,3000 in Yr1-4]</p> <p>Op 2.1) One Market assessment study to identify high potential timber and other unsustainable product substitutes for public & private procurement conducted [Yr1]</p> <p>Op 2.2) 9 physical incubators to demonstrate high potential products in 9 clusters set-up[Yr1]</p>	<p>-Reports of training/ seminar/ workshops, agenda and invitations of the event, list of participants, audio/ video recordings, feedback reports</p> <p>(For Op-1.1,1.2,1.3, 3.1,4.2, 5.1,5.2,5.3,5.4,5.6)</p> <p>-List of BDSPs, PNs with their membership and equipment providers with a compiled report on each one</p> <p>-Op-3.2, 3.3& 3.4</p> <p>- List of MSMEs that received loans and accessed public schemes</p> <p>(For Op-4.3)</p> <p>-Annual reports of the project</p> <p>(For all Op (s))</p> <p>-Midterm & end-term evaluation</p>	<p>-The officials of the state and district departments are willing to support the initiative and participate in the events</p> <p>-There are no untoward political and social problems in all 9 cluster locations</p> <p>-Bamboo availability remains ensured through enabling policy support by forestry department and other relevant stakeholders</p> <p>-No significant flowering of bamboo takes place that adversely affect the supply of bamboo</p> <p>-Project approval;</p>

	<p>Op 2.4) Organise linkages with 20 potential public & private buyers</p> <p>Op 3.1) Capacitate 9 local FAs</p> <p>Op 3.2) Identify 40 strategic BDS providers and create linkages for providing services to MSMEs & create a pool of 100 local BDSPs</p> <p>Op 3.3) Organise 50 PNs and provide techno managerial support to setup/strengthen 9 community run Common Facility Centres (CFCs)</p> <p>Op 3.4) Identify and build capacities of 30 equipment/ inputs suppliers</p> <p>Op 4.1) Create suitable model business plans for MSMEs in 9 cluster districts</p> <p>Op 4.2) Sensitise and train 150 local bankers from 10 FIs on Bamboo MSME financing</p> <p>Op 4.3) Create</p>	<p>incubated</p> <p>-No. of public and private buyers linkages established with</p> <p>For Op 3.1-3.3</p> <p>-No. of FAs capacitated</p> <p>-No. of strategic BDSPs linked to create no. of local BDSPs</p> <p>-No. of PNs organised and no. of CFCs supported through techno-managerial inputs</p> <p>-No. of equipment & inputs suppliers capacitated for bamboo industry</p> <p>For Op 4.1-4.4</p> <p>-No. of model Business plans created</p> <p>-No. of local bankers sensitised and trained on Bamboo based MSME financing</p> <p>-No. of MSMEs linked with FIs and public schemes</p> <p>-No. of international credit lines for offtake of SCP</p>			<p>Op 2.3) 20 start-ups incubated through 9 incubators [4,6,6,4 in Yr1-4]</p> <p>Op 2.4) 20 potential public & private buyers linked with MSMEs in 9 bamboo clusters [4,6,6,4 in Yr1-4]</p> <p>Op 3.1) 9 local FAs capacitated [Yr1]</p> <p>Op 3.2) 40 strategic BDS providers identified [Yr-1]and linked for providing services to MSMEs & created a pool of 100 local BDSPs[20,40,40 in Yr1-3]</p> <p>Op 3.3) 50 PNs organised and provided with techno managerial support to setup 9 community run CFCs[10,20,10,10 in Yr1-4]</p> <p>Op 3.4) 30 equipment/ inputs suppliers identified and capacitated for bamboo inputs supplies [5,10,10,5 in Yr1-4]</p> <p>Op 4.1)20 model business plans for MSMEs in 9 cluster districts created [Yr-1]</p> <p>Op 4.2) 150 local bankers from 10 FIs sensitised and trained on Bamboo MSME</p>	<p>report (For all Op (s))</p> <p>-Copy of the market need assessment report for Op-2.1</p> <p>-Copies of the model Business Plans for Op-4.1</p> <p>-Report and physical verification of the two-way lifelong learning platform and feedback from at least 20 users for Op-5.5</p>	<p>contract signed on time</p>
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	<p>financial linkages for 2250 MSMEs with FIs and public schemes</p> <p>Op 4.4) Explore and seek international banks' credit lines for enabling offtake of SCP financial products</p> <p>Op 5.1) Organise 12 regional multi-stakeholder events to capture best practices and draw policy lessons</p> <p>Op 5.2) Organise 2 national and 1 international seminar to disseminate diverse development models for replication</p> <p>Op 5.3) Prepare 4 learning documents for policy uptake to promote sustainable production</p> <p>Op 5.4) Undertake dissemination of learnings through participation in various national and international fora</p> <p>Op 5.5) Develop a two-way lifelong learning platform to provide assistance and guidance to Bamboo</p>	<p>financial products identified & explored</p> <p>For Op5.1-5.8</p> <p>-No. of regional multi-stakeholder events organised to capture best practices and draw policy lessons</p> <p>-No. of national and international seminars organised to disseminate diverse development models for replication</p> <p>-No. of learning papers created for policy uptake to promote sustainable production</p> <p>-No. of events attended in national & international to disseminate learnings from the project</p> <p>-No. of two-way lifelong learning platform created to provide assistance and guidance to</p>			<p>financing[50,50,25,25 in Yr1-4]</p> <p>Op 4.3) 2250 MSMEs linked with FIs and public schemes and received finds/ credits[337, 563, 675 & 675 –cumulatively in Yr1-4]</p> <p>Op 4.4) One international banks' credit line for enabling offtake of SCP financial products identified [by Yr-4]</p> <p>Op 5.1) 12 regional multi-stakeholder events organised to capture best practices and draw policy lessons[4,4,4 in Yr2-4]</p> <p>Op 5.2) 2 national [1,1 in yr3-4]and 1[in Yr-3] international seminar to disseminate diverse development models for replication organised</p> <p>Op 5.3) 4 learning documents for policy uptake to promote sustainable production prepared[by Yr4]</p> <p>Op 5.4) Dissemination of learnings organised through participation in atleast 20 national and international events[5,5,5,5 in Yr1-4]</p> <p>Op 5.5) A two-way lifelong</p>		
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	<p>suppliers, workers, consumers and other stakeholders</p> <p>Op 5.6) Organise Capacity building and mutual learning event for SAARC countries in Bangladesh</p> <p>Op 5.7) Mid-term project evaluation</p> <p>Op 5.8) End-term project evaluation</p>	<p>Bamboo suppliers, workers, consumers and other stakeholders</p> <p>- No. of Capacity building and mutual learning events for SAARC countries organised for no. of participants</p> <p>-No. of mid-term evaluation conducted</p> <p>-No. of end-term evaluation conducted</p>			<p>learning platform developed to provide assistance and guidance to Bamboo suppliers, workers, consumers and other stakeholders[by Yr4]</p> <p>Op 5.6) One Capacity building and mutual learning event for SAARC countries in Bangladesh organised for 12 policy stakeholders and development practitioners[Yr3]</p> <p>Op 5.7) One Mid-term project evaluation conducted through a third party and report received [Yr3]</p> <p>Op 5.8) End-term project evaluation through a third party and report received[Yr4]</p>		
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">activities</p>	<p>A 1.1.1 Selection of 9 Facilitating Agencies (FAs) through competitive bidding process</p> <p>A 1.1.2 Team deployment by the FAs</p> <p>A 1.1.3 Diagnostic Study of the identified clusters in 9 states</p> <p>A 1.1.4 Conduct 9 cluster-level validation workshops for diagnostic study and draft action plans</p> <p>A 1.1.5 Finalize 9 cluster level action plans</p> <p>A 1.1.6 Organise Project Kick off meetings in all 9 clusters</p> <p>A 1.1.7 Identification & select 2250 target beneficiaries(Bamboo product manufacturing MSMEs)</p> <p>A 1.1.8.1 Training of Trainers (TOT) for 27 participants each on furniture,</p>				<p>Means:</p> <p>The main focus of Action is on coordination and convergence of pre-existing resources through capacity building and creation/strengthening of missing/weak linkages among the stakeholders. This calls for catalysts who can facilitate organisation of beneficiaries, build capacities through trainings and facilitate learnings by creating linkages along the value chain and in the clusters. Material resources therefore</p>		<p>Project approval; contract signed on time, political and economic and social stability in India.</p>

<p>lifestyle products, Housing & Construction material and other craft product designs by Technical and Design institutes of International repute</p> <p>A 1.1.8.2 Organise Trainings for at least 450 artisans each on design and product development of furniture, lifestyle products, Housing & Construction material and for at least 900 artisans on other crafts</p> <p>A 1.1.8.3 Organize technology demonstration and technical training on use of pre-processing and processing technologies</p> <p>A 1.1.8.4 Organise international exposure visit (China & Vietnam) for 30 participants to learn new designs, technology & practices</p> <p>A 1.1.9.1 Develop/customise training modules on Entrepreneurship Development</p> <p>A 1.1.9.2 Provide Entrepreneurship inputs to 2250 beneficiaries Develop self-learning tools/ modules on financial literacy</p> <p>A 1.1.11 Create IEC Dissemination Platform and disseminate technical, managerial and financial inputs</p> <p>A 1.1.11.1 Create linkage with Community Radios and use them as a channel of communication where a series of episodes will be produced and broadcasted on technical, managerial and financial practices for Bamboo MSMEs</p> <p>A 1.1.11.2 Deploy Bluetooth Technology known as "Bultoo Radio" where IVR technology is used to disseminate knowledge related to the technical and non-technical areas</p> <p>A 1.1.11.3 Develop a learning app through which learning modules will be made available for areas where there are no Community Radios and no VLEs, but internet connectivity is there</p> <p>A 1.2.1 Modules development on Technical Topics : a) Post harvesting techniques; b) Seasoning, storage, grading and sorting</p> <p>A 1.2.2 Organise training for 450 harvesters on scientific and sustainable harvesting and post harvesting practices</p> <p>A 1.3.1 Conduct base line survey to capture existing OHS practices of MSMEs and their social security status</p> <p>A 1.3.2 Develop self-learning audio-visual modules on OHS and social security measures</p> <p>A 1.3.3 Organize awareness workshops (at-least 50) on OHS and social safety nets to improve workplace environment and social security</p> <p>A 2.1 Undertake Market assessment study to identify high potential timber and other unsustainable product substitutes for public & private procurement</p>	<p>constitute less than 3% of the budget, largely to be used for creating 9 local 'Incubation Centres' (ICs), a new concept that does not currently match with eligibility requirements of any of the existing public support schemes. Other far more resource intensive Common Facility Centres (CFCs) are likely to get access to the public support schemes directly to the local stakeholders when they organise themselves as per the public scheme requirements. These ICs will be run in locally rented premises and will house basic equipment, advanced hand-tools and select materials that may be used by local entrepreneurs for making prototypes of more advanced and better designed products. The studies are either undertaken by the project staff (diagnostic studies under WP1 and select policy focussed learning papers under WP5) or by external experts (market study under WP2 & select learning papers) to facilitate decision making and contributing to policy changes through dialogue & dissemination</p> <p>Costs</p> <p>Human Resources: 1,085,123 Euros (Technical) & 135,662 Euros (Admin/support staff); Per diem 149,210 Euros;</p> <p>Travel: 201,000 Euros;</p> <p>Equipment & Supplies: 73,643;</p> <p>Local offices: 105,840 Euros;</p> <p>Other cost (Services): 623,795 Euros;</p> <p>Other: 546,082 Euros;</p> <p>Indirect cost: 204,424 Euros</p> <p>Total Eligible Cost: 3124780 Euros</p>	
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<p>A 2.3 Identify and incubate 20 start-ups through the 9 incubators</p> <p>A 2.3.1 Identify the potential entrepreneurs (to create start-ups) through competency assessment</p> <p>A 2.3.2 Select 20 high potential products for incubating the start-ups</p> <p>A 2.3.2 Incubate 20 start-ups through technical and managerial inputs</p> <p>A 2.4.1 Create linkages of the start-ups & MSMEs with at-least 20 public & private buyers for the incubated products</p> <p>A 2.5 Develop promotional videos to raise awareness about the benefits of using bamboo products (based on LCA) and their standards amongst consumers and promote them on social media platforms</p> <p>A 3.1.1 Organise training for the FAs on Enterprise Development through MEPP scheme & Cluster Development Methodology</p> <p>A 3.2.1 Identify and mapping of service portfolio of 40 strategic BDSPs (in the area of technology, product & design development, marketing, etc.)</p> <p>A 3.2.2 Identify 100 local potential BDSPs and organise training programmes (class room, exposure & on the job) on BDS development through strategic BDS providers</p> <p>A 3.3.1 Create 50 Producer Networks (PNs) and handhold them on technical and management practices</p> <p>A 3.3.2 Conduct need assessment and prepare Detailed Project Reports (DPRs) for CFCs</p> <p>A 3.3.3 Create/strengthen 9 CFCs in 9 cluster locations</p> <p>A 3.4.1 Identify potential equipment and inputs supplier (at least 30)</p> <p>A 3.4.2 Expose them to advance equipments & inputs and link them with cluster stakeholders</p> <p>A 4.1.1 Prepare business plans for MSMEs in 9 states (20 models)</p> <p>A 4.2.1 Organize short term capacity building of field level bank/ NBFC / MFI officials</p> <p>A 4.2.2 Organize Bankers orientation programme for Branch Managers level (including NBFC, MFI functionaries.)</p> <p>A 4.3.1 Guide the prospective entrepreneurs in establishing linkages with the banks, local agencies, state government agencies and other promotional organizations</p> <p>A 4.3.2 Filling in of loan application forms</p> <p>A 4.3.3 Assist the entrepreneurs in securing initial finance from banks, financial institutions and other possible sources</p>		
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<p>A 4.4.1 Identification and mapping of credit lines</p> <p>A 4.4.2 Explore and seek international banks credit lines.</p> <p>A 5.1 Organise 12 regional multi-stakeholder events to capture best practices and draw policy lessons</p> <p>A 5.2 Organise 2 national and 1 international seminar to disseminate diverse development models for replication</p> <p>A 5.3.1 Learning documents for policy uptake to promote sustainable production on SCP Financing and 2 policy briefs</p> <p>A 5.3.2 Develop a learning paper on Local Governance and Bamboo value chains and 2 policy briefs</p> <p>A 5.3.3 Develop a learning paper on skill development and 2 policy briefs</p> <p>A 5.3.4 Develop a learning paper on Gender in Bamboo Value Chains and 2 policy briefs</p> <p>A 5.4 Undertake dissemination of learnings through participation in various national and international fora</p> <p>A 5.5 Develop a two-way lifelong learning platform to provide assistance and guidance to Bamboo suppliers, workers, consumers and other stakeholders</p> <p>A 5.6 Organise Capacity building and mutual learning event for SAARC countries in Bangladesh</p> <p>A 5.7 Mid-term project evaluation</p> <p>A 5.8 End-term project evaluation</p>		
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Annex 2: Financial Quote

FMC will follow the QCBS method of evaluation with 80% weightage to technical strength of the CVS and 20% for the financial quote. Please submit your financial quote in the following format

Name of Consultant:

Position: National Domain Specific evaluation consultant (Please specify Domain) / Senior Evaluation Consultant

Person Day charges: Rupees _____ per day (Rs. _____ per day).

This quote is valid for six months from the date of submission.

Name and Signature of Expert

Date: _____

Please note that any extra costs like travel etc. will be paid by FMC on actuals as per FMC travel policy. Kindly do not include it in the costs.

Annex 3: Job Descriptions

1. TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	Senior evaluation consultant, team leader
Main Duty Station and Location:	Home-based / Field
Start of Contract (EOD):	1 st August 2022
End of Contract (COB):	30 November 2022
Number of Working Days:	33 days spread over the above mentioned period

PROJECT CONTEXT

Detailed background information of the project can be found the terms of reference (TOR) for the terminal evaluation.

Main Duties of the Senior Evaluation Consultant	Concrete/ Measurable Outputs to be achieved	Working Days	Location
1. Review project documentation and relevant country background information (national policies and strategies, EU strategies and general economic data); determine key data to collect in the field and adjust the key data collection instrument if needed; Define technical issues and questions to be addressed prior to the field visit.	Adjust table of evaluation questions, depending on country specific context; Prepare a map of stakeholdersto interview during the field missions;	3	Home-based
2. Determine key data to collect in the field and adjust the key data collection instrument if needed. In coordination with the project manager, the project management team and the technical evaluators, determine the suitable sites to be visited and stakeholders to be interviewed.			

Main Duties of the Senior Evaluation Consultant	Concrete/ Measurable Outputs to be achieved	Working Days	Location
<p>3. Briefing with FMC Management, project managers and other key stakeholders to prepare for the evaluation inception workshop online.</p> <p>Prepare materials, tools and method to collect data in the field visits by the national consultant, detailed evaluation methodology confirmed, draft theory of change, and tentative agenda for field work.</p> <p>Provide training to national evaluator on the evaluation method to assess project impacts.</p>	<p>The inception report. Submitted FMC.</p> <p>Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning; Division of evaluation tasks with the team members.</p> <p>Online survey questionnaire</p>	4	Home-based, online
<p>4. Provide technical support to the evaluation team member while conducting field mission.</p> <p>Participate in interviews, as agreed with the team member online, when possible</p> <p>Take part as a resources person to answer questions and provide clarification to the stakeholder workshops/ focus group meetings on identifying conditions necessary for transformational changes to take place</p> <p>Review meeting and workshop notes prepared by the evaluation team member during field work; provide the team technical advice to collect appropriate data and information in a real time manner; and to keep abreast with feedback from the stakeholders from the field.</p>	<p>Agreement with the team members on the structure and content of the evaluation report and the distribution of writing tasks;</p>	9	Home-based/ Field Visit
<p>5. Prepare the evaluation report, with inputs from the team member, according to the TOR;</p> <p>Coordinate the inputs from the team member and combine with her/his own inputs into the draft evaluation report;</p> <p>Share the evaluation report with FMC and national stakeholders for feedback and comments.</p>	<p>Draft evaluation report/ and a report on field visit.</p>	13	Home-based/ Field
<p>6. Prepare and present overall findings and recommendations to the stakeholders online.</p>	<p>After field mission(s): Presentation slides, feedback from stakeholders obtained and discussed</p>	2	Home-based, online
<p>7. Revise the draft project evaluation report based on comments from FMC and stakeholders and edit the language and form of the final version.</p>	<p>Final evaluation report.</p>	2	Home-based

In addition to the above, the Lead Expert will also undertake the following:

1. **Creation of database of organisations:** The expert will be responsible for creation of a database of organisations working on bamboo in SAARC and African Countries including work they are doing, contact person of the organisation, capacities etc.
2. **Organising of Cross Learning Meetings:** The expert will be responsible for organising cross learning meetings with the organisations collated in the data base.
3. **Documentation of Event:** The expert will be responsible for all the documentation related to the events and learnings from the events which will be shared with FMC post every event.
4. **Report:** The expert will be sharing a final detailed report at the end of his term as per the guidelines of FMC.
5. **Perform any other relevant task as assigned by FMC.**

Deliverables for the above additional responsibilities

1. Creation of a selection framework of organisations working in SAARC and African Countries working on bamboo.
2. Report on initial interactions and meetings with respect to cross learning.
3. Report highlighting the specific information related to the organisation with respect to the selection criteria of the framework and rationale for selection.
4. Finalisation of organisations on the basis of their capacities and experience where the learning of the BSSD projects could be replicated.
5. Final Database of at-least 50 organisations shortlisted as per the selection framework.
6. A report of every cross learning event conducted with the selected organisations.

REQUIRED COMPETENCIES

Core values:

1. Integrity
2. Professionalism
3. Respect for diversity

Core competencies:

1. Results orientation and accountability
2. Planning and organizing
3. Communication and trust
4. Team orientation
5. Client orientation
6. Organizational development and innovation

Managerial competencies (as applicable):

1. Strategy and direction
2. Managing people and performance
3. Judgement and decision making
4. Conflict resolution

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:

Advanced degree in business management, value-chain, environment, energy, engineering, development studies or related areas.

Technical and functional experience:

- Minimum of 15 years' experience in implementation/monitoring/evaluation of development projects and programmes
- Good working knowledge in environmental management
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of projects and knowledge of Bamboo Sector and Cluster Development an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Working experience in developing countries

Languages: Fluency in written and spoken English is required.

All reports and related documents must be in English and presented in electronic format.

Absence of conflict of interest:

The consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract.

2. TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	National Domain Specific evaluation consultant for Domains 1.Design and Marketing 2. Skills (Including plantation) and Technology
Main Duty Station and Location:	Home-based / Field
Start of Contract:	1 st August 2022
End of Contract:	30 November 2022
Number of Working Days:	15 days each spread over the above mentioned period

PROJECT CONTEXT

The national domain specific evaluation consultant will evaluate the projects according to the terms of reference (TOR) under the leadership of the team leader (international evaluation consultant). S/he will perform the following tasks:

Main Duties of the National Domain Specific evaluation Consultant	Concrete/measurable outputs to be achieved	Expected Duration	Location
Desk review Review and analyze project documentation and relevant country background information; in cooperation with the team leader, determine key data to collect in the field and prepare key instruments in English (questionnaires, logic models);	Evaluation questions, questionnaires/interview guide, logic models adjusted to ensure understanding in the national context; A stakeholder mapping, in coordination with the project team.	2 days	Home-based
Adjust the evaluation framework and Theory of Change in order to ensure their understanding in the local context.			
Carry out preliminary analysis of pertaining technical issues determined with the Team Leader. In close coordination with the project staff team verify the extent of achievement of project outputs prior to field visits.	Report addressing technical issues and question previously identified with the Team leader Tables that present extent of achievement of project outputs Brief analysis of conditions relevant to the project	2 days	Home-based

Main Duties of the National Domain Specific evaluation Consultant	Concrete/measurable outputs to be achieved	Expected Duration	Location
Develop a brief analysis of key contextual conditions relevant to the project			
<p>Support the Team Leader in prepare materials, tools and method to collect data in the field.</p> <p>Coordinate the evaluation mission agenda, ensuring and setting up the required meetings with project partners and government counterparts, and organize and lead site visits, in close cooperation with project staff in the field.</p>	<p>Key tools and materials</p> <p>Detailed evaluation schedule.</p> <p>List of stakeholders to interview during the field missions.</p>	2 days	Home-based, online
<p>Conduct the field mission to meet and discuss with project key-stakeholders and beneficiaries, to the extent possible these meetings should be organized so that the Team Leader could participate online.</p> <p>Consult with the Team Leader on the meeting/interview protocol and guide to collect data and information in the format agreed in advance with the team leader.</p> <p>Design, administer, and analyze open-ended interviews and focus groups to gather qualitative information</p> <p>Facilitate stakeholder workshops</p> <p>Prepare meeting notes and data based on the format requested by the team leader.</p> <p>Close exchange and discussion with the team leader on data and information collected from the field</p>	<p>Agreement with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks.</p> <p>Systematic data and information from the field</p>	6 days (including travel days)	Project States (the sites to be identified later)

Main Duties of the National Domain Specific evaluation Consultant	Concrete/measurable outputs to be achieved	Expected Duration	Location
<p>Follow up with stakeholders regarding additional information promised during interviews</p> <p>Prepare inputs to help fill in information and analysis gaps (mostly related to technical issues) and to prepare of tables to be included in the evaluation report as agreed with the Team Leader.</p> <p>Revise the draft project evaluation report based on comments from FMC and stakeholders and proof read the final version.</p>	<p>Part of draft evaluation report prepared.</p>	<p>3 days</p>	<p>Home-based</p>

REQUIRED COMPETENCIES

Core values:

1. Integrity
2. Professionalism
3. Respect for diversity

Core competencies:

- Results orientation and accountability
- Planning and organizing
- Communication and trust
- Team orientation
- Client orientation
- Organizational development and innovation

Managerial competencies (as applicable):

- Strategy and direction
- Managing people and performance
- Judgement and decision making
- Conflict resolution

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Degree in business management, economics, agriculture, environmental science, engineering, design or other relevant discipline like developmental studies or social work.

Technical and functional experience:

- Excellent knowledge and competency in the relevant field for which the application is made.
- Evaluation experience, including evaluation of development cooperation in developing countries is an asset.
- Exposure to the needs, conditions and problems in developing countries.
- Familiarity with the institutional context of the project is desirable.

Languages: Fluency in written and spoken English and is required.

Absence of conflict of interest: The consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with FMC.

3. TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	National Domain Specific evaluation consultant for Domain 1.Finance
Main Duty Station and Location:	Home-based / Field
Start of Contract:	1 st August 2022
End of Contract:	30 November 2022
Number of Working Days:	33 days spread over the above mentioned period

PROJECT CONTEXT

The national domain specific evaluation consultant will evaluate the projects according to the terms of reference (TOR) under the leadership of the team leader (international evaluation consultant). S/he will perform the following tasks:

Main Duties of the National Consultant (Finance)	Concrete/measurable outputs to be achieved	Expected Duration (Days)	Location
Desk review Review and analyze project documentation and relevant country background information; in cooperation with the team leader, determine key data to collect in the field and prepare key instruments in English (questionnaires, logic models);	Evaluation questions, questionnaires/interview guide, logic models adjusted to ensure understanding in the national context; A stakeholder mapping, in coordination with the project team.	3	Home-based
Adjust the evaluation framework and Theory of Change in order to ensure their understanding in the local context.			
Carry out preliminary analysis of pertaining technical issues determined with the Team Leader. In close coordination with the project staff team verify the extent of achievement of project outputs prior to field visits.	Report addressing technical issues and question previously identified with the Team leader Tables that present extent of achievement of project outputs Brief analysis of conditions relevant to the project	4	Home-based

<p>Develop a brief analysis of key contextual conditions relevant to the project</p>			
<p>Support the Team Leader in prepare materials, tools and method to collect data in the field.</p> <p>Coordinate the evaluation mission agenda, ensuring and setting up the required meetings with project partners and government counterparts, and organize and lead site visits, inclose cooperation with project staff in the field.</p>	<p>Key tools and materials</p> <p>Detailed evaluation schedule.</p> <p>List of stakeholders to interview during the field missions.</p>	<p>9</p>	<p>Home-based, online</p>
<p>Conduct the field mission to meet and discuss with project key-stakeholders and beneficiaries, to the extent possible these meetings should be organized so that the Team Leader could participate online.</p> <p>Consult with the Team Leader on the meeting/interview protocol and guide to collect data and information in the format agreed in advance with the team leader.</p> <p>Design, administer, and analyze open-ended interviews and focus groups to gather qualitative information</p> <p>Facilitate stakeholder workshops</p> <p>Prepare meeting notes and data based on the format requested by the team leader.</p> <p>Close exchange and discussion with the team leader on data and information collected from the field</p>	<p>Agreement with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks.</p> <p>Systematic data and information from the field</p>	<p>13</p>	<p>Project States (the sites to be identified later)</p>
<p>Follow up with stakeholders regarding additional information promised during interviews</p> <p>Prepare inputs to help fill in information and analysis gaps (mostly related to technical issues) and to prepare of tables to be included in the evaluation report as agreed with the Team Leader.</p> <p>Revise the draft project evaluation report based on comments from FMC and stakeholders and proof read the final version.</p>	<p>Part of draft evaluation report prepared.</p>	<p>2</p>	<p>Home-based</p>

REQUIRED COMPETENCIES

Core values:

4. Integrity
5. Professionalism
6. Respect for diversity

Core competencies:

1. Results orientation and accountability
2. Planning and organizing
3. Communication and trust
4. Team orientation
5. Client orientation
6. Organizational development and innovation

Managerial competencies (as applicable):

- Strategy and direction
- Managing people and performance
- Judgement and decision making
- Conflict resolution

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Degree in business management, economics, agriculture, environmental science, engineering, design or other relevant discipline like developmental studies or social work.

Technical and functional experience:

- Excellent knowledge and competency in the relevant field for which the application is made.
- Evaluation experience, including evaluation of development cooperation in developing countries is an asset.
- Exposure to the needs, conditions and problems in developing countries.
- Familiarity with the institutional context of the project is desirable.

Languages: Fluency in written and spoken English and is required.

Absence of conflict of interest: The consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with FMC.

Annex 4- Outline of an in-depth Project Evaluation Report

- Executive Summary (maximum 5 pages)
- Evaluation purpose and methodology
- Key findings
- Conclusions and recommendations
- Project ratings
- Tabular overview of key findings – conclusions – recommendations

1. Introduction

- 1.1. Evaluation objectives and scope
- 1.2. Overview of the Project Context
- 1.3. Overview of the Project
- 1.4. Theory of Change
- 1.5. Evaluation Methodology
- 1.6. Limitations of the Evaluation

2. Project's contribution to Development Results - Effectiveness and Impact

- 2.1 Project's achieved results and overall effectiveness
- 2.2 Progress towards impact
 - 2.2.1. Behavioral change
 - 2.2.1.1 Economically competitive - Advancing economic competitiveness
 - 2.2.1.2 Environmentally sound – Safeguarding environment
 - 2.2.1.3 Socially inclusive – Creating shared prosperity
 - 2.2.2 Broader adoption
 - 2.2.2.1 Mainstreaming
 - 2.2.2.2 Replication
 - 2.2.2.3 Scaling-up

3. Project's quality and performance

- 3.1. Design
- 3.2. Relevance
- 3.3. Efficiency
- 3.4. Sustainability
- 3.5. Gender mainstreaming

4. Performance of Partners

5. Factors facilitating or limiting the achievement of results

- 5.1. Monitoring & evaluation
- 5.2. Results-Based Management
- 5.3. Other factors
- 5.4. Overarching assessment and rating table

6. Conclusions, recommendations and lessons learned

- 6.1. Conclusions
- 6.2. Recommendations
- 6.3. Lessons learned
- 6.4. Good practices

Annexes

Evaluation Terms of Reference

- Evaluation framework
- List of documentation reviewed
- List of stakeholders consulted
- Project logframe/Theory of Change
- Primary data collection instruments: evaluation survey/questionnaire
- Statistical data from evaluation survey/questionnaire analysis

Annex 5: Checklist on Evaluation Report Quality

Project Title:

Project ID:

Evaluation team:

Quality review done by:

Date:

Report quality criteria	Assessment notes	Rating
Was the report well-structured and properly written? (Clear language, correct grammar, clear and logical structure)		
Was the evaluation objective clearly stated and the methodology appropriately defined?		
Did the report present an assessment of relevant outcomes and achievement of project objectives?		
Was the report consistent with the ToR and was the evidence complete and convincing?		
Did the report present a sound assessment of sustainability of outcomes or did it explain why this is not (yet) possible? (Including assessment of assumptions, risks and impact drivers)		
Did the evidence presented support the lessons and recommendations? Are these directly based on findings?		
Did the report include the actual project costs (total, per activity, per source)?		
Did the report include an assessment of the quality of both the M&E plan at entry and the system used during the implementation? Was the M&E sufficiently budgeted for during preparation and properly funded during implementation?		
Quality of the lessons: were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
Quality of the recommendations: did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can these be immediately implemented with current resources?		
Are the main cross-cutting issues, such as gender, human rights and environment, appropriately covered?		
Was the report delivered in a timely manner? (Observance of deadlines)		

Rating system for quality of evaluation reports

A rating scale of 1-6 is used for each criterion: Highly satisfactory = 6, Satisfactory = 5, Moderately satisfactory = 4, Moderately unsatisfactory = 3, Unsatisfactory = 2, Highly unsatisfactory = 1, and unable to assess = 0.

Annex 6: Guidance on Integrating Gender in Evaluations of the Project

A. Introduction

Gender equality is internationally recognized as a goal of development and is fundamental to sustainable growth and poverty reduction.

Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not suggest that women and men become ‘the same’ but that women’s and men’s rights, responsibilities and opportunities do not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. It is therefore not a ‘women’s issues’. On the contrary, it concerns and should fully engage both men and women and is a precondition for, and an indicator of sustainable people-centered development.

Empowerment of women signifies women gaining power and control over their own lives. It involves awareness-raising, building of self-confidence, expansion of choices, increased access to and control over resources and actions to transform the structures and institutions which reinforce and perpetuate gender discriminations and inequality.

Gender parity signifies equal numbers of men and women at all levels of an institution or organization, particularly at senior and decision-making levels.

Projects can be divided into two categories: 1) those where promotion of gender equality is one of the key aspects of the project/project; and 2) those where there is limited or no attempted integration of gender. Evaluation managers/evaluators should select relevant questions depending on the type of interventions.

B. Gender responsive evaluation questions

The questions below will help evaluation managers/evaluators to mainstream gender issues in their evaluations.

B.1 Design

- Is the project/project in line with the EU and national policies on gender equality and the empowerment of women?
- Were gender issues identified at the design stage?
- Did the project/project design adequately consider the gender dimensions in its interventions? If so, how?
- Were adequate resources (e.g., funds, staff time, methodology, experts) allocated to address gender concerns?

- To what extent were the needs and priorities of women, girls, boys and men reflected in the design?
- Was a gender analysis included in a baseline study or needs assessment (if any)?
- If the project/project is people-centered, were target beneficiaries clearly identified and disaggregated by sex, age, race, ethnicity and socio-economic group?
- If the project/project promotes gender equality and/or women's empowerment, was gender equality reflected in its objective/s? To what extent are output/outcome indicators gender disaggregated?

B.2 Implementation management

- Did project monitoring and self-evaluation collect and analyse gender disaggregated data?
- Were decisions and recommendations based on the analyses? If so, how?
- Were gender concerns reflected in the criteria to select beneficiaries? If so, how?
- How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries?
- If the project/project promotes gender equality and/or women's empowerment, did the project/project monitor, assess and report on its gender related objective/s?

B.3 Results

- Have women and men benefited equally from the project's interventions? Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision making authority)?
- In the case of a project/project with gender related objective/s, to what extent has the project/project achieved the objective/s? To what extent has the project/project reduced gender disparities and enhanced women's empowerment?

Annex 7: Selection Criteria for Hiring of Consultants

FMC will follow the QCBS method of evaluation with 80% weightage to technical strength of the CVs and 20% for the financial quote. Consultants are expected to highlight the technical strength at the end of the CV based on parameters mentioned below.

S. No	Name	Experience of working in clusters/Cluster related work (5)	Experience in Evaluation of Projects or Experience of handling developmental/ CSR projects (15)	Total Budget of Projects Evaluated or Total funding amount of developmental /CSR projects handled (20)	Total number of Projects Evaluated or Total years of exp. In handling developmental/ CSR projects (10)	Experience in the Domain specified / Exp. Related to the MSME sector(20)	Understanding of the needs, conditions and problems in developing countries and Familiarity with the institutional context of the project (10)	Total (80)	Financials (Amount)	Financial Score (20)	Total Score
1	Abc										
2	Xyz										
3	...										

Annexure 2

Evaluation Framework

A. Scoring criteria for log frame items

Score	Definition	Basis	Rating
6	Highly satisfactory	Level of achievement presents no shortcomings (90% - 100% achievement rate of planned expectations and targets).	Excellent
5	Satisfactory	Level of achievement presents minor shortcomings (70% - 89% achievement rate of planned expectations and targets).	Good
4	Moderately satisfactory	Level of achievement presents moderate shortcomings (65% - 69% achievement rate of planned expectations and targets).	Satisfactory
3	Moderately unsatisfactory	Level of achievement presents some significant shortcomings (30% - 64% achievement rate of planned expectations and targets).	Unsatisfactory
2	Unsatisfactory	Level of achievement presents major shortcomings (10% - 29% achievement rate of planned expectations and targets).	
1	Highly unsatisfactory	Level of achievement presents severe shortcomings (0% - 9% achievement rate of planned expectations and targets).	

B. Project Evaluation criteria

The evaluation team has used the following framework specified in the ToR to form an overall assessment of the project achievements and conducted a rating of the project accordingly.

#	Evaluation criteria	Rating Assigned (out of 100)	Key Rating Drivers
A	Impact		
1	Behavioural change		
a	Economically competitive - Advancing economic competitiveness		
b	Environmentally sound – Safeguarding environment		
c	Socially inclusive – Creating shared prosperity		
2	Broader adoption		
a	Mainstreaming		
b	Replication		
c	Scaling up		
B	Project design		
1	Overall design		

#	Evaluation criteria	Rating Assigned (out of 100)	Key Rating Drivers
2	Log-frame		
C	Project performance		
1	Relevance		
2	Effectiveness		
3	Efficiency		
4	Sustainability of benefits		
D	Cross-cutting performance criteria		
1	Gender mainstreaming		
2	M&E		
	o M&E design		
	o M&E implementation		
3	Results-based Management (RBM)		
E	Performance of partners		
	FMC		
1	Quality of Implementation		
2	Quality of Execution		
F	Overall assessment		

Annexure 3

List of Documentation Reviewed

Report of the Evaluation Team on
Endline Assessment of EU Switch Asia Project
“Promote Bamboo MSME Clusters for Sustainable Development in India”

Sr No	Name of Document Reviewed
1	B4SD-Project-Evaluation-ToR-2022-V2-F-1
2	Video Films on Bamboo Sector Development
3	EU 2019 INTERIM REPORT_Final
4	C-393200 ROM Report
5	Final interim report-Bamboo4SD-2018
6	EU 2020 INTERIM REPORT_Final
7	EU INTERIM REPORT 2021 Final
8	Business Plans (Old and New Combined as on 15-05-2022)
9	Latur PPT FMC 21-09-2022-F3
10	Policy Paper on Promoting Own Account Enterprises (OAEs)
11	IMPACT OF COVID-19 ON BORROWER MSMES -ISSUES AND POINTERS FOR WAY FORWARD
12	Gender Policy Paper_Bamboo_WP_2021_Final
13	FINAL CBS-Enterprising Bamboo Case Study Series 1 flying tiger
14	EU-FMC-Bamboo-Case-Studies
15	E-Pathshala Document Book-21-09-2022
16	National Bamboo Innovation Challenge 2022
17	SDF agreement
18	TA Report 2 Summery Report of the Technical Advisory Support by FMC as TA Year 2020, Year 2021 and Jan-Mar, 2022
19	Revised Schedule V(i) - Combined budget
20	EU Signed Grant Contract with all partners
21	EU Grant agreement Signed All Annexes
22	LFT upto 2022
23	LFT End Line Assessment Team 28-11-2022 state wise
24	Note by Shri Tamal Sarkar, ED, FMC on bamboo project
25	FMC- A Note on Methodology Used for developing Bamboo Sector's 10 Year Growth Plan
26	Mr. Tilman Contract MSME Foundation Altenburg
27	Ms. Rachel Ruth_FMC EU003_Revised_signed
28	Case study: Bamboo value chain in China by Ms Sangeeta Agasty, INBAR, New Delhi

Sr No	Name of Document Reviewed
29	Institutions and Bamboo Production to Consumption System, (A Comparative Study of China and India)- Part II: India By Dr. Shashi Kant, Faculty of Forestry, University of Toronto
30	Trade-Overview-2019-China——final-1, INBAR
31	Producer Collaboration and the Development of Artisanal Value Chains- FMC November 2022
32	Promoting Green Job Creation by Improving Governance for Artisanal Bamboo Production in India - FMC November 2022
33	FMC_Bamboo Learning paper_Alexander_Nov2022_FINAL - Governance Needs for Promoting Green Employment in India's Artisanal Bamboo Industry
34	An Analysis of Bamboo Standards Situation-
35	STUDY on CFCs in Clusters - Learning from National Case studies and Way Forward- FMC
36	Business Cases for Financing Sustainable Consumption and Production Practices – EU Switch Asia Programme Report
37	Procurement scrutiny under the FMC EU Project - General Comments
38	Occupational Health Safety Training for the Bamboo Artisan Community in India- OHS report on the project EU Switch Asia Project <u>“Promote Bamboo MSME Clusters for Sustainable Development in India”</u> by “Movement Matters”

Annexure 4

List of Stakeholders Consulted

A. Project Partners

#	Organisation/Designation	Discussion held with
1	FMC	Mr Mukesh Gulati, ED Dr Tamal Sarkar, Senior Advisor Mr Iqbal, GM/Project Manager
2	SIDBI	Dr S S Acharya, CGM Ms Jaba Chakrabarty, Branch Head, Shillong
3	CEMCA	Mr Basheerhamad Shadrach, Director Mr Saurabh Mishra, Programme Officer
4	CBS	Mr Peter Lund Ms Uzma Rehman

B. Facilitating Agencies

#	Name of the agency / Geographical Location covered	Name of FA Head
1	SPMN (Assam)	Mr Sanjay Sharma
2	TRIBAC (Tripura, Meghalaya)	Mr Harun
3	Aide-et-Action (Chhattisgarh)	Mr Binujeeth Ramakrishnan Ms. Aarti Likhitkar
4	Aide-et-Action (MP)	Ms. Aarti Likhitkar / Mr. Ayush
5	Aide-et-Action (Orissa)	Mr Saroj
6	Aide-et-Action (Arunachal Pradesh)	Ms. Kankana Borah
7	ESAF (Jharkhand)	Mr Ajithsen
6	Darwin Society (Mizoram)	Mr Emmanuel Lailung (Mizo name : Mr Zoremsanga)

C. FMC State Heads

#	Name of the officer	Geographical Location covered
1	Mr Vijaya	FMC State Head, Orissa
2	Mr Jitendra	FMC State Head, MP
3	Mr Bhupendra	FMC State Head, Chhattisgarh
4	Mr Ashutosh Samal	State Head, FMC, Jharkhand
5	Mr Saksham Pal	FMC Coordinator, Assam, Mizoram, Tripura, Arunachal Pradesh
6	Mr Samuel Magar	FMC State Head, Meghalaya

D. National/International Experts

#	Name of the expert	Area of expertise
1	Mr. Sudhir Rana	Public Procurement Expert for bamboo sector
2	Prof Chari	Technical expert on use of bamboo as a fuel
3	Ms. Rachel Ruth Alexander	International Research Expert
4	Dr. Tilman	Expert - Quality Assurance, GDI
5	Mr Sanjeev Karpe	Bamboo Expert, Konbac, CFC, Kudal
6	Ms Deepa Subramaniam	Expert, Bamboo Supply Chain
7	Ms Sangeeta Agasty	Regional Director, INBAR, ex-PM, FMC

E. Others

#	Name of the person	Relationship to Project
1	Mr. Anowar Hussain	Raypur Cane & Bamboo, Producer Organisation

Annexure 5

		Log Fra me Tar get 201 8	Achiev ement 2018	Lo g Fra me Tar get 201 9	Achiev ement 2019	Lo g Fra me Tar get 202 0	Achiev ement 2020	Lo g Fra me Tar get 202 1	Achiev ement 2021	% Achiev ement 2021	Lo g Fra me Tar get 202 2	Achiev ement 2022	Log Fra me Tar get Ove rall	Total Achiev ement	% Achiev ement Overall	To be Achi eved
Oc1 .11	Enterprises started/expanded	337	0	563	613	675	521	500	652	130%	464	816	225 0	2602	116%	0
Oc1 .12	Women enterprises started/expanded	135	0	225	538	270	414	200	512	256%	0	454	900	1918	213%	0
Oc1 .21	Impact Livelihood	150 0	0	250 0	2149	300 0	1067	300 0	1057.6	35%	272 6.4	1874.4	700 0	6148	88%	852
Oc1 .22	Impact Livelihood of women	750	0	125 0	1714	150 0	637	150 0	529.46	35%	719 .54	1244	360 0	4124.4 6	115%	0
Oc1 .3	Market Generated (Euro Million)	NA	0	NA	1.06	NA	0.47	1	0.535	54%	1.4 65	1.395	3.5 3	3.46	98%	0.16 5
Op 1.1	Enterprises received technical, managerial and financial inputs	337	180	563	1111	675	706	500	632	126%	0	1045	225 0	3674	163%	0
Op 1.2	Harvesters trained	150	0	100	0	100	229	150	165	110%	56	62	450	456	101%	0
Op 1.3	Workers receive OHS inputs and social security linkages	150 0	180	250 0	699	300 0	628	400 0	908	23%	758 5	1522	100 00	3937	39%	6680
Oc2 .1	New buyers undertake sourcing of high potential products through start-ups	4	0	6	6	6	6	8	32	400%	0	0	20	44	220%	0
Op 2.1	Market assessment study	1	0	0	0	0	1	3	0	0%	6	6	7	7	100%	0

		Log Fra me Tar get 201 8	Achiev ement 2018	Lo g Fra me Tar get 201 9	Achiev ement 2019	Lo g Fra me Tar get 202 0	Achiev ement 2020	Lo g Fra me Tar get 202 1	Achiev ement 2021	% Achiev ement 2021	Lo g Fra me Tar get 202 2	Achiev ement 2022	Log Fra me Tar get Ove rall	Total Achiev ement	% Achiev ement Overall	To be Achi eved
Op 2.2	Physical incubators set up	9	1	0	8	0	0	0	0	-	0	0	9	9	100%	0
Op 2.3	Start-ups incubated	4	0	6	2	6	6	4	14	350%	0	3	20	25	125%	0
Op 2.4	Organise linkages with potential public and private buyers	4	0	6	28	6	12	4	4	100%	0	16	20	60	300%	0
Oc3	9 CFCs created/ strengthened	NA	0	NA	0	NA	8	1	2	200%	0	6	9	16	178%	0
Op 3.1	Local FAs capacitated	9	0	0	9	0	0	0	0	-	0	0	9	9	100%	0
Op 3.2	Strategic BDSPs identified and linked	40	16	0	27	0	13	0	28	-	0	0	40	84	210%	0
Op 3.3	Created a pool of local BDSPs	20	44	40	6	40	23	10	57	570%	0	5	100	135	135%	0
Op 3.4	PNs organised and provided inputs	10	0	20	15	10	8	10	22	220%	5	23	50	68	136%	0
Op 3.5	Equipment and input suppliers identified and capacitated	5	0	10	13	10	16	5	4	80%	0	1	30	34	113%	0
Oc4 .1	FIs provide credit (overall)	10	0	0	27	0	13	0	9	-	0	5	10	54	540%	0
Oc4 .2	Credit provided (Million Euro)	1.3 5	0	2.2 5	0.68	2.7	0.29	0.5 5	0.51	93%	0.4	1.15	1.8 8	2.63	140%	0
Op 4.1	Model Business plans prepared	20	0	0	15	0	1	5	3	60%	1	3	20	22	110%	1
Op 4.2	Local bankers sensitised	50	0	50	138	25	36	70	582	831%	0	76	150	832	555%	0
Op 4.3	MSMEs linked with FIs	337	0	563	779	675	373	500	348	70%	0	427	225 0	1927	86%	323

		Log Frame Target 2018	Achievement 2018	Log Frame Target 2019	Achievement 2019	Log Frame Target 2020	Achievement 2020	Log Frame Target 2021	Achievement 2021	% Achievement 2021	Log Frame Target 2022	Achievement 2022	Log Frame Target Overall	Total Achievement	% Achievement Overall	To be Achieved
Op 4.4	Explore and link International bank credit line	0	0	0	0	0	0	0	0	-	5	0	0	1	-	0
Oc5	Policy makers sensitised from 3 SAARC Countries and 9 states	50	57	50	165	75	53	20	48	240%	2	34	200	357	179%	0
Op 5.1	Regional Workshops	0	0	4	3	4	0	2	2	100%	1	5	12	10	83%	2
Op 5.2 1	National Workshops	0	0	0	1	1	1	0	0	-	0	0	2	2	100%	0
Op 5.2 2	International Seminar	0	0	0	0	1	0	0	0	-	3	0	1	0	0%	1
Op 5.3	Learning documents	0	0	0	0	0	0	1	3	300%	0	5	4	8	200%	0
Op 5.4	Dissemination of learning in 20 events	5	3	5	4	5	0	5	17	340%	0	10	20	34	170%	0
Op 5.5	Create two-way learning platform	0	0	0	0	1	0	0	0	-	1	1	1	1	100%	0
Op 5.6	Capacity building event for SAARC countries	0	0	0	0	0	0	0	1	-	3	1	1	2	200%	0
Op 5.7	Midterm Project Evaluation	0	0	0	0	1	1	6	2	33%	1	3	10	6	60%	4
Op 5.8	End term Project Evaluation	0	0	0	0	0	0	0	0	-	0	1	1	1	100%	0

Annexure 6

Interview Questionnaires

1. Questions for FAs/FMC State Heads

Name of Respondent	
Category	
Date of discussion	
Questions	Response
1. Did we achieve the project objectives ? How far?	
2. Where did we leave the clusters at the end of programme?	
3. What is needed now ?	
4. Where we fell short?	
5. Project monitoring – was it adequate ?	
6. Did the project spend too much time, energy or resources on some items where it got too little results ?	
7. Were there some areas where we could have focussed more ?	
8. Any touching story	
9. Most exciting part	
10. In areas we did not get desired results, what were the barriers ?	
11. In areas where we achieved great results, what were the drivers ?	
12. What are the key project achievements which are replicable ?	
13. If we had to do a similar project now, what changes in approach, design, or implementation strategy shall we recommend?	
14. Are the results of the project sustainable in the long run or will wither away with time ? How to keep the momentum going ?	
15. Performance of different partners in the project - quality of contribution/implementation/execution	
16. Unintended / unexpected/ allied results achieved by the project and lessons learnt.	

17. Which locations/project states/clusters did exceedingly well and why ? Which ones lagged behind substantially and why ?	
18. What is the unfinished agenda?	
19. What should come as phase II of the project?	

Questions for FMC

Performance of different partners in the project - quality of contribution/implementation/execution

Quality of Implementation

To what extent FMC was able to deliver effectively, with focus on controllable elements.

What were the identified risks and how well risks were managed?

Quality of Execution

How appropriate was the use of funds?

Was the procurement of goods and services, as per procurement guidelines. How was it ensured?

Questions for SIDBI

In additions to 12 above questions:

1. How can the programme be made to focus more on credit linkages?
2. Any learnings from other programmes that can be incorporated in the design of such a programme?

Questions for CEMCA

1. How effective were the training modules? How effective was outreach?
2. What could have been done differently?
3. How strong were linkages created with NSDC? What more could have been done?
4. How could we possibly use the existing state infrastructure on training , capacity building etc?
5. Any best practices learnt from other projects that could be included in phase II of the programme ?

Questions for CBS

1. How effective was the policy intervention? What is their international experience on such similar projects? What learnings can be incorporated in phase II of the programme?
2. What could have been done differently
3. Unfinished agenda ?

Questions for Project Experts

Name of Respondent	
Category	
Date of discussion	
Discussion points	Response
1. Your background	
2. Introduction/background to project – context in which you were hired	
3. What was your role envisaged when FMC hired you as an expert / any quantifiable targets thought of ?	
4. Key achievements - How far we could achieve what we wanted	
5. Barriers/challenges faced	
6. Any exciting feature of the project which you enjoyed most?	
7. If had to do this again, what changes in approach, design or methodology you will do.	
8. Any unfinished agenda ? What should come as a Phase 2	
9. Any Other issues	
