# Community forest enterprise success factors

*A literature review of community forest enterprise success factors in tropical countries*

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# Colophon



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First, we thank the IDB Lab and its partners for trusting us to execute this important work under SUSTAME. Second, we express our gratitude to the forest communities in Suriname, especially Bigi Poika, for developing pioneering activities in Surinamese community forests that support long term forest conservation and community development. Finally, we express our appreciation for the constructive and continuous partnership with our project partner Environmental Services and Support (ESS) to jointly develop supply and demand for a conservation timber value chain

# 1 Executive summary

This report was written as part of the Inter-American Development Bank (IDB) Lab SUSTAME (SUStainable Timber in SurinAME) project. Stichting Probos designed a project under the SUSTAME umbrella that aims to implement sustainable forestry systems and practices in Suriname, with a focus on Indigenous and Maroon communities, by implementing a market-based approach to develop community forest operations and find a market for their forest products.

Community Forest Enterprises (CFEs) are organizations that can provide social, economic, and environmental benefits to forest communities and others. With the stimulation of CFE development in Suriname through this project, Probos and its partners aim to support the preservation of these community forests and all the ecosystem services they provide in the long term and facilitate sustainable economic development for forest communities.

However, the success chances of CFEs are dependent on many factors. This report aims to describe these success factors (SFs) by employing a literature review. The literature review is presented in this main report, which describes the most important SFs for CFEs in tropical regions around the world based on existing literature, by combining CFE meta-analyses and case studies.

Twenty-five SFs for CFEs are identified and subsequently grouped into five categories: production, management, regulatory environment, social, and physical (Table 1). Fourteen of these twenty-five factors are flagged as important because of their qualitative and/or quantitative presence in the literature (indicated by an asterix *).

**Production:** technical skills*, marketing*, (access to) capital investment*, diversification*, processing capacity, stable production, long-term business relationships, advance payment, premium price
**Physical:** accessibility of CFE location
**Management:** strong management*, funding*, financial planning and monitoring*, appropriate involvement of supporting organizations*, sustainable forest management*, validate business case, rule enforcement, local leadership
**Social:** social cohesion*, CFE member support and involvement*, strong forest-community link
**Regulatory Environment**: (long-term) user rights*, good laws and policies*, enabling institutional environment*, enabling CFE legal form, certification of SFM and associated Chain-of-Custody (CoC)

# 2 Samenvatting (NL)

Dit rapport is geschreven als onderdeel van het SUSTAME (SUStainable Timber in SurinAME) project van het Inter-Amerikaanse Ontwikkelingsbank (IDB) Lab. Stichting Probos heeft onder de SUSTAME-paraplu een project ontworpen dat als doel heeft om duurzame bosbouwsystemen en -praktijken in Suriname te implementeren, met een focus op inheemse en tribale gemeenschappen, door een marktgerichte aanpak toe te passen om bosbouwactiviteiten in gemeenschappen te ontwikkelen en een markt te vinden voor hun bosproducten.

Community Forest Enterprises (CFEs), oftewel gemeenschapsbosbedrijven, zijn organisaties die sociale, economische en milieu voordelen kunnen bieden aan bosgemeenschappen en anderen. Met het stimuleren van CFE-ontwikkeling in Suriname via dit project, streven Probos en haar partners ernaar de instandhouding van deze gemeenschapsbossen en alle ecosysteemdiensten die zij op de lange termijn bieden te ondersteunen en duurzame economische ontwikkeling in bosgemeenschappen te faciliteren.

De kans op succes voor CFEs hangt af van vele factoren. Dit rapport heeft als doel deze succesfactoren (SFs) te beschrijven doormiddel van een literatuuronderzoek. Het literatuuronderzoek wordt gepresenteerd in dit hoofdrapport, dat de belangrijkste SFs voor CFEs in tropische regio's wereldwijd beschrijft op basis van bestaande literatuur, door meta-analyses en casestudies over CFEs te combineren.

Vijfentwintig SFs voor CFEs zijn geïdentificeerd en vervolgens gegroepeerd in vijf categorieën: productie, beheer, regelgevingsomgeving, sociaal en fysiek (Tabel 1). Veertien van deze vijfentwintig factoren worden als belangrijk gemarkeerd vanwege hun kwalitatieve en/of kwantitatieve aanwezigheid in de literatuur (aangegeven met een asterisk *).

**Productie**: technische vaardigheden*, marketing*, (toegang tot) kapitaalinvestering*, diversificatie*, verwerkingscapaciteit, stabiele productie, lange termijn zakelijke relaties, vooruitbetaling, premiumprijs
**Fysiek**: toegankelijkheid van de CFE-locatie
**Management**: sterk management*, financiering*, financiële planning en monitoring*, passende betrokkenheid van ondersteunende organisaties*, duurzaam bosbeheer*, valideren van business case, handhaving van regels, lokaal leiderschap
**Sociaal**: sociale cohesie*, steun en betrokkenheid van CFE-leden*, sterke bosgemeenschap relatie
**Wet- en regelgeving**: (lange termijn) gebruiksrechten*, goede wet- en regelgeving*, stimulerende institutionele omgeving*, stimulerende CFE-vorm, certificering van duurzaam bosbeheer en Chain-of-Custody (CoC)

# Content

# 3 Introduction

Community Forest Enterprises (CFEs) are legally recognized, community-managed business that combine sustainable forest management with economic development, aimed at generating social, economic, and environmental benefits for local communities[5,9]. CFEs play a critical role in mitigating deforestation, as community-managed forests are often more effective in reducing deforestation rates compared to protected areas[19]. This is particularly relevant given that over half a billion people in developing countries are dependent on community forests, making these forests crucial to human livelihood[1,5,6,19]. A successful CFE can be a vehicle for forest governance, providing economic opportunities while maintaining the environmental health of forest ecosystems. As such, CFEs represent a promising model for promoting both forest conservation and sustainable economic development.

Despite the potential of CFEs to deliver social, economic, and environmental benefits, they often face significant challenges in achieving long-term success[1,6,19]. Factors such as poor management, inadequate access to markets, and regulatory barriers frequently hinder CFEs from realizing their full potential. Moreover, the expansion of community-managed forest areas, which grew substantially in the early 2000s, has slowed since 2008[5]. This stagnation underscores the need for a better understanding of the factors that contribute to the success or failure of CFEs.

Given the diverse and often complex factors that influence CFE success—including production, physical, managerial, social, and regulatory components—it is imperative to identify best practices and lessons learned from global experiences. This report conducts a comprehensive literature review to uncover the most critical success factors (SFs) that can guide the development of CFEs worldwide, with a focus on tropical regions. Drawing on CFE meta-analyses and case studies from countries including Guatemala, Guyana, Myanmar, and Nepal, this review highlights the importance of factors including technical skills, processing capacity, marketing, a good social structure, access to financial resources, and strong management.

In summary, CFEs offer significant promise for balancing forest conservation with economic development. However, ensuring their long-term success requires a detailed understanding of the multifaceted factors that contribute to their performance and success. This report aims to provide such insights, offering a resource for policymakers, NGOs, and community leaders involved in CFE development. The lessons from existing literature can help CFEs and their partners to unlock their full potential as vehicles for sustainable development and forest conservation.

# 4 Method

This literature review examines both scientific and grey literature on the SFs of CFEs. We selected meta-analyses that discussed the SFs of CFEs by comparing the performances of multiple CFEs. We also selected papers discussing specific case studies in more depth, including cases from Guatemala, Guyana, Myanmar, and Nepal to provide concrete examples of CFE implementation

and their effects in practice. Each SF mentioned in the literature was recorded (Table 1), and described (see chapter Findings). Factors referenced in over half of the papers (quantitative analysis) or presented as paramount in four or more papers (qualitative analysis) were classified as important (Table 1).

All SFs can be seen as important learnings from community forest operations globally, and can therefore inform CFEs worldwide. The multidimensional description of CFE success as described by Padgee et al. (2006)[3] was interpreted for this report as follows: 'a successful CFE shows positive economic, social and environmental outcomes, and is able to maintain these results in the long-term'.

The findings are presented in two documents (1) this main report, which describes the most important success factors (SFs) for community forest enterprises (CFEs) worldwide based on existing literature, by combining meta-analyses and case studies, and (2) the implications of the findings for the SUSTAME project team and its actions in relation to Surinamese forest communities. These implications are described in a separate document titled 'Annex 1 – Implications of findings for SUSTAME'.

The findings described in the main report are intended for the global forest sector including NGOs, governments, private companies, and researchers who are working (directly or indirectly) with forest communities and their forest products. The Annex is mainly intended for the Surinamese forest sector, including the SUSTAME project team, local NGOs and government, forestry companies, and forest communities.

# 5 Findings

Twenty-five success factors for CFEs have been identified from the literature and were grouped into five categories: production, physical, management, social, and regulatory environment (Table 1). Based on a quantitative and qualitative analysis, certain factors were flagged as important. Thereafter, each of the twenty-five SFs was described separately based on the literature review.

**Table 1**
**Success factors of community forest enterprises**
*Factors referenced in over half of the papers (quantitative analysis) or presented as paramount in four or more papers (qualitative analysis) are classified as important*

| Category | Success factor | Important (quantitative analysis) | Important (qualitative analysis) | Success factor number |
|---|---|---|---|---|
| Production | Technical skills | X | X | 1 |
| | Capital investment | X | | 2 |
| | Processing capacity | | | 3 |

| | | | | |
|---|---|---|---|---|
| | Stable production | | | 4 |
| | Diversification | | X | 5 |
| | Marketing | X | X | 6 |
| | Long-term business relationships | | | 7 |
| | Advance payment, premium price | | | 8 |
| Physical | Accessibility of CFE location | | | 9 |
| Management | Strong management | X | X | 10 |
| | Validate business case | | | 11 |
| | Funding | X | X | 12 |
| | Financial planning and monitoring | X | | 13 |
| | Local leadership | | | 14 |
| | Appropriate involvement of supporting organizations | | X | 15 |
| | Sustainable forest management | | X | 16 |
| Social | Social cohesion | X | | 17 |
| | CFE member support and involvement | X | | 18 |
| | Strong forest-community link | | | 19 |
| Regulatory environment | Enabling institutional environment | X | X | 20 |
| | Good laws and policies | X | X | 21 |
| | Enabling CFE legal form | | | 22 |
| | Land use rights | X | X | 23 |
| | Rule enforcement | | | 24 |
| | Certification of SFM and associated Chain-of-Custody (CoC) | | | 25 |

## 5.1 Production

The production category entails aspects that directly affect the production activities of the CFE, such as processing capacity and CFE members' technical skills. The SFs related to production jointly determine the production capacity of the CFE. The production SFs can continuously be developed after CFE establishment by joint efforts of CFE members and external partners, to improve the production capacity of the CFE.

### 5.1.1 Technical skills (1)

Improving the technical skills of community members is crucial to the success of CFEs. These skills are necessary to conduct forest inventories, create forest management plans, implement Reduced-Impact Logging (RIL) practices, process wood, and obtain certification[2]. Enhanced technical skills boost CFE productivity, stabilize production, and improve product quality[1,15].

Community members with previous work experience from other organizations can act as knowledge brokers and play a vital role in sharing their expertise and building capacity within the community. To further enhance technical skills present in the community, CFE members can benefit from advice and technical assistance from external partners[9].

External actors can provide direct technical assistance through consultancy or transfer knowledge and skills to community members via courses and training programs[2,11,15]. This assistance should be tailored to the community's needs and implemented in clear, long-term project cycles accompanied by an 'exit strategy' to ensure its long-term effectiveness[8].

A CFE case description in Ethiopia illustrates how external actors can support technical skill development of the CFE: "Through Participatory Forest Management (PFM) programs, local communities have been trained in basic business skills. Specific product development training in Goba funded through Farm Africa has also been undertaken in bamboo furniture, honey, and essential oil production. Forest management training has been included within PFM initiatives" [5]

### 5.1.2 Capital investment (2)

Capital investment encompasses financial, physical, natural, social, and human capital. Such investments ensure that CFE operations remain functional and lead to more robust CFEs[4,12]. Examples of capital investments in CFEs include equipment, machinery, roads, and social projects[1,2,9].

CFEs' access to credit is often limited[11]. Consequently, funding by governments, NGOs, and development agencies is crucial to fostering capital investment, especially in the early stages of CFEs[14]. Additionally, incentives and clear benefits can encourage CFE members to invest (human) capital in their enterprise[1,9]. To avoid constraints on capitalization, CFEs should adopt an appropriate legal form during their initiation phase[1].

An example from Myanmar illustrates how capital can become a constraint for CFEs: "A key issue for enterprise development is the investment environment. Beyond basic artisanal processing, modern commercial production often involves some level of investment in capital equipment, but securing investment requires a reliable and predictable return. Nobody will invest without

assurances over commercial rights; nor will they invest in the absence of a professional business organization and management."[18]

### 5.1.3 Processing capacity (3)

Processing is the transformation of raw materials such as logs into semi-finished or finished products such as sawn timber and furniture. CFEs with sufficient physical and human capital are well-positioned to increase their processing capacities. CFEs could become more robust as they have more processing capacity. They will be able to generate more revenue from their natural resources, as processed products often have higher profit margins than raw materials[1,15]. CFEs with processing capacities can further increase profits by becoming more independent from external service partners such as sawmills. Specifically for Non-Timber Forest Products (NTFPs), increased processing capacity promotes women's inclusion, as women often play a critical role in NTFP processing[1].

Processing requires technical skills, which can be taught by external service providers[1]. The processing technology should be compatible with the CFE's infrastructure and human resources to ensure proper operation, storage, and transport[14].

In the Maya Biosphere Reserve in Guatemala, processing capacity has been a key SF for CFE development[2]. CFE members realized that maintaining ownership of timber through processing could result in significant added value. They initially hired external services for logging, milling, and transport but eventually invested in their own harvesting and processing equipment. Such investments were feasible due to the abundance of mahogany in the forest, a high-value timber species that provided the necessary profit margins[2,9].

### 5.1.4 Stable production (4)

Ensuring stable production contributes significantly to the robustness of CFEs. A stable production volume provides consistent income and long-term employment opportunities for community members. Furthermore, stable production volumes and quality enhance access to credit, offering the CFE more growth and investment opportunities[1,8].

Production volumes can fluctuate due to inaccessibility or unavailability of raw materials, or limited storage capacity[12,14]. To promote stable production, CFEs can focus on product diversification, implement sustainable management plans, and cooperate with other CFEs to combine production volumes.

### 5.1.5 Diversification (5)

Diversification involves expanding the range of products a company sells. This can occur through developing value chains for different raw materials such as non-timber forest products (NTFPs) and lesser-known timber species (LKTS)[2,12,15]. Payment for Ecosystem Services (PES) products are also emerging as a new diversification opportunity for CFEs[8,16]. Diversification enhances the resilience of CFEs by mobilizing multiple revenue streams. CFEs that diversify their production can often employ more people, including marginalized individuals and women, create specialized jobs and increase benefits for employees[1,8]. Moreover, diversification promotes sustainable use of forest resources[9]. By harvesting multiple timber species, the pressure on commercial species can be

reduced. It allows CFEs to maintain income from forest products while allowing resources to replenish[2,11,13].

Diversification is feasible only when communities can harvest, process, and sell these new products. External partners can facilitate this process by researching new species, providing technical training to community members, identifying market outlets, and providing access to these markets[2,9,15].

For example, in the CFE Cooperativa Carmelita R.L in the Maya Biosphere Reserve, mahogany has been the main exploited timber species, along with other commercial timber species. However, the availability of these commercial species is limited in the community forest. To promote CFE resilience and sustainable forest management, Cooperativa Carmelita focused on harvesting and marketing LKTS. FORESCOM, a second-tier community forest enterprise, was a key partner in this project, identifying market outlets for LKTS[2,9]. The sale of mahogany subsidized the extraction and processing of LKTS, whose initial production costs are generally higher, as production processes for these 'new' species may differ from the precious species[2,9].

### 5.1.6 Marketing (6)

Marketing is often cited as a shortcoming of CFEs. The chances of a CFE being successful increase when it can identify market needs and actively offer products to potential buyers, especially when competition is becoming more intense between CFEs[14,15]. Regarding lesser-known timber species (LKTS), marketing efforts are crucial to identify the limited market outlets for these species[6,9]. Marketing can increase CFE benefits from SFM-certified products by reaching markets willing to pay premium prices[2].

To increase CFE visibility on the market, CFEs should have a clear marketing plan and promotional strategy[12]. External actors frequently assist with the marketing of CFE products, and intermediate players can create links between international buyers and CFEs, promoting LKTS and certified products[2,9]

In Guatemala, the case of FORESCOM illustrates this. FORESCOM is an enterprise that functions as a marketing and outreach facility for CFEs in the Selva Maya forest: "FORESCOM has staffed a small marketing office to initiate marketing efforts and provide these services to the communities in return for a small percentage of the sales price. […] The theory behind this office is that by providing improved communication, quality control, and higher volumes through the collective marketing of their wood, the communities will be able to access new markets, especially for lesser-known species, and negotiate better prices and conditions[9]".

### 5.1.7 Long-term business relationships (7)

Establishing long-term business relationships, typically with a select few buyers and investors, enhances the viability of CFEs. CFEs involved in such partnerships experience reduced uncertainty and financial risk, facilitating access to credit[1,8,12]. Long-term buyers can result in business development, technical support, and financial services, thereby enhancing the capacity of CFEs[5]. Additionally, CFEs with long-term buyers benefit from stable demand and lower market identification costs[12].

Successful long-term business partnerships require strong management and a visionary approach. A common mistake is prioritizing buyers offering the highest immediate price over long-term partners. Trust and reciprocity between CFEs and buyers are crucial to nurturing these enduring relationships[5,13]. Most long-term partnerships focus on niche markets, where buyers seek specialized products or raw materials from LKTS that are typically found in low volumes in forests. To ensure an adequate supply to niche markets and foster long-term partnerships, CFEs can collaborate to combine their resources[12].

### 5.1.8 Advance payment, premium price (8)

Advance payments and premium pricing can significantly contribute to the success of CFEs. Financial capital from advance payments and price premiums can fund the next production cycle, reducing the need for CFEs to rely on debt financing[8].

In some cases, advance payments and premium prices can be secured from long-term buyers or for certified products[2]. Therefore, it is crucial for CFEs to establish and maintain long-term business partnerships and to consider certification when the benefits are substantial and outweigh the costs and effort to obtain and maintain certification. Strong management and strategic business plans empower CFEs to negotiate favorable prices for their products[6].

For instance, in the Maya Biosphere Reserve in Guatemala, the Red Lumber Company has been a pivotal partner for the CFE Cooperativa Carmelita R. L. This company pays premium prices for certified mahogany and lesser-known timber species (LKTS), provides advance payments up to three months prior to harvest, and offers loans for equipment purchases[2].

## 5.2 Physical

Physical factors are factors of the physical environment in and surrounding the CFE. Though seldom mentioned in the literature, a constraining environment can impede the existence of CFE, for example by limiting resource exploitation.

### 5.2.1 Accessibility of CFE location (9)

CFEs should be accessible to facilitate the transportation of products to buyers and the provision of support from external actors[3]. When a CFE is accessible, members can more easily form partnerships with other communities, value chain partners, and local organizations[15]. Additionally, they can more effectively build capacity by transporting machines and equipment to the CFE location.

Accessibility encompasses not only physical distance and roads but also internet and communication services[1]. Online presence is important for the market access of the CFE and may result in increased access for potential business partners abroad.

## 5.3 Management

Management entails CFE governance, planning, organizing, networking, and operating by the CFE leadership. Strong management practices can be developed during CFE operations. Management

impacts every step of CFE operations, from obtaining funds to creating links with buyers, therefore management SFs are key to CFE success.

### 5.3.1 Strong management (10)

Strong management is consistently cited as a crucial SF for CFEs in the literature. Management within CFEs often relies on a learning-by-doing approach among community members, with mandatory rotations of managers and board members resulting in a lack of entrepreneurial skills and slower enterprise development[1,12]. Weak management can lead to undercapitalization, inefficiency, and a lack of long-term business strategies[1,2,14,15].

Supporting organizations can facilitate strong management of the CFE by providing training and courses to the CFE leadership, contributing to establishing strong management locally, with a local permanent manager overseeing day-to-day operations and delegating tasks[5,14,15].

Supporting organizations can accelerate the development of strong management in a CFE, particularly in its early stages. Externally funded managers or NGO staff can assist in creating management and business plans, creating visibility on the enterprise's profitability, and promoting sustainable forest management practices[1,5]. Key roles of external managers include securing investments for the CFE's start-up phase and forming partnerships with local institutions and buyers[5,14].

A CFE case from Myanmar describes how external support should be used to enhance CFE management: "a range of training from basic to advanced will be needed to enhance communities' business capacity. Selected villagers should be trained on: organizational design and management; entrepreneurship and business management; budgeting and accounting (balance sheets, profit and loss statements, cash flow analysis); business plan and loan proposal preparation; and market analysis and marketing strategies." [18].

### 5.3.2 Validate business case (11)

A business case is a justification of the profitability of an organization, clearly depicting future costs and revenue streams. It plays a crucial role in fostering the success of CFEs by ensuring the project's viability from the outset[6,9]. Building a valid business case helps secure partnerships with NGOs, investors, and private banks, enabling CFEs to identify when and for which operations they will require funding[14]. Looking at the business case incentivizes to focus at first on the financial viability of the enterprise, paving the way to achieve environmental and social goals thereafter[1].

Creating a business case can be facilitated by external organizations, such as NGOs collaborating with community members, or by community members themselves if they possess prior knowledge of financial structures and processes[5].

An illustrating quote from a Myanmar case study: "CF enterprises could be run in partnership with investors. This requires the development of a credible product-based business plan that can attract investment if necessary. Investors, whether the communities themselves or outside financiers need clear information on the economic potential and revenues that a venture might generate. They also need a predictable business environment." [18]

### 5.3.3 Funding (12)

Funding plays a pivotal role in capitalizing on CFE business opportunities and facilitating their development. Donor and government funding serves diverse purposes such as infrastructure investment, procurement of equipment and logistics, financing management and technical training programs, and hiring technical consultants[1,6,10,11,12]. This funding is particularly crucial during the startup phase of CFEs, as they often have limited access to financing from private banks[8,12]. Funding initiatives should prioritize fostering CFE autonomy, improving efficiency, and promoting economic sustainability to ensure eventual economic independence.

An illustrative example of donor and government funding that supports CFE development, can be found in Papua New Guinea: "In Papua New Guinea, ICCO, together with the DOEN Foundation, NZAID, WWF Pacific and the EU have been financing the Forest Management and Product Certification Service (FORCERT) to facilitate the organization of community forest producers in 7 provinces – linked to Central Marketing Units and ultimately to the Woodage Company in Australia. FORCERT has helped facilitate the PNG Microfinance Initiative to launch a loan facility for its members." [6]

### 5.3.4 Financial planning and monitoring (13)

Financial planning and monitoring ensure that CFEs generate sufficient income, now and in the future, to be able to continue their operations, provide equitable income to their members, and make the needed capital investments[3,8]. Strong planning and monitoring processes also facilitate access to credit, attract investors, and allow for the continuation and improvement of CFE operations[8,9,14]. Financial planning and monitoring include keeping updated financial records of sources and uses of funds, making income statements, and internal auditing[2,9]. Good administration can plan and monitor finances, external service providers can also provide assistance when needed[2,5].

A financial planning example from Guatemala: "In the subsequent three years, donors invested resources to boost financial and business skills within the community enterprises. Most now have reliable accounting systems that provide accurate cost information and generate quarterly financial statements. Most enterprises also use a financial planning system to estimate their upcoming operational costs to ensure cash flow and four have developed business and investment plans while five more are in this process." [9]

### 5.3.5 Local leadership (14)

Local leadership in CFEs refers to capable, local, long-term managers and sufficient human resources to manage the CFE[8]. Leaders should be competent, entrepreneurial, and fair, and implement management plans with long-term strategies[9,12]. They act as knowledge brokers, initiating linkages with organizations and acting on multiple levels[10,13]. A key role of leaders is getting community members to involve themselves in the CFE operations and activities, agree with the CFE business plan, and distribute the different roles and tasks among community members[5,13]. Identifying (future) local leaders is crucial to the success of a CFE. Such key individuals often have acquired knowledge and skills by working in different organizations[10]. Management training programs can help identify and enhance the skills of these individuals.

The following citation illustrates this phenomenon: "One interesting pattern is that key people initiating linkages within an organization often bring their knowledge/skill/memory from their previous work experience in another organization. Several examples may be cited. In Belize, TIDE's Executive Director had previous experience as a consultant for the Belize Centre for Environmental Studies which worked closely with The Nature Conservancy's (TNC) local office. In his new position, he used his previous experience to establish new linkages." [10].

### 5.3.6 Appropriate involvement of supporting organizations (15)

Appropriate involvement of supporting organizations is essential to ensure the success of CFEs. External organizations such as NGOs and development agencies play critical roles in creating business partnerships, supporting certification efforts, enhancing product quality, implementing good CFE management practices, and facilitating export and import procedures[1,2,6]. Buyers and processors contribute by placing products and financing specialized production facilities[1,15]. Long-term support is particularly impactful for CFE success in the face of increasing competition with other CFEs[1,15].

It is crucial that assistance aligns with the evolving needs of CFEs, focusing on capacity building across multiple project cycles and involving organizations at different scales[8,10]. The assistance period should be appropriate to context, until CFEs are able to independently manage all aspects of their operations or engage service providers[1]. This period often extends over long periods of time. Grassroots organizations play a key role in providing stable support to CFEs over the long term[2,8]. When long-term support is uncertain, external groups should prioritize initiatives that expedite CFE development[1].

In the long term, CFEs need to be able to operate independently from external service providers. Therefore, supporting organizations should have clear exit strategies, gradually implemented, to allow CFE members to fulfil the roles that were once taken on by supporting organizations[1,6,10].

That support can be substantial and extend over long periods of time, is illustrated in the Selva Maya: "In the Maya Biosphere Reserve, for example, USAID support alone exceeded $100 million over the last 25 years, and a large number of technical-assistance bodies have worked with the community concessions since their establishment." [8]

### 5.3.7 Sustainable forest management (16)

Sustainable forest management (SFM) not only provides environmental benefits such as biodiversity and ecosystem preservation, but also plays a critical role in the economic and social outcomes of CFEs. By applying SFM practices, CFEs prevent resource depletion and thus conserve the opportunity to generate income from their forest on the long run[15].

One significant advantage of SFM is the possibility to access international markets that value SFM practices, especially to the European market. SFM also opens the door for sustainability certification schemes such as FSC and PEFC. Certification (see "Regulatory environment" chapter 2.5) assures buyers that products originate from responsibly managed forests, enhancing market opportunities for CFEs. While certification can promote SFM practices in CFEs, the stringent requirements associated with certification may sometimes outweigh the benefits derived from

selling certified products. Balancing the pros and cons of certification is essential for CFEs seeking to manage their resources sustainably while maximizing economic returns.

Practically, sustainable resource management involves continuous monitoring of the forest's status, both before and during CFE operations[11,13,14]. Forest management plans should be developed to guide sustainable harvesting practices, eventually preventing resource depletion[14]. Diversification (see "Production" chapter) is an effective strategy to avoid overexploitation by harvesting smaller quantities of multiple tree species and NTFPs[9].

A citation from the Selva Maya case study illustrates the relevance of SFM practices as part of a forest management plan: "Almost certainly, mahogany is not growing back as fast as it is being harvested, nor would forest management based on one or so few species be environmentally, technically, or financially viable. Permanent research plots and other monitoring are gradually providing data on growth rates after harvest. This information must be used to adjust the annual cut to sustainable levels, partly through the inclusion of significant amounts of additional species[9]."

## 5.4 Social

Social SFs are factors closely related to the members of the CFE and community members in general. Social factors are crucial to CFE success because people are at the core of the CFE. Without sufficient member involvement, the CFE cannot operate properly nor increase capacity.

### 5.4.1 Social cohesion (17)

Social cohesion strengthens the long-term viability of CFEs and promotes the involvement of various organizations[9]. This cohesion is reflected in membership growth, member commitment to CFE development, and a strong social structure[1]. Starting a CFE within a homogenous community, where members share similar backgrounds, reduces the risk of CFE conflict.

Social cohesion can be fostered through multi-stakeholder participation and dialogue. Dividing and assigning roles and tasks to members helps avoid conflicts. Equitable distribution of benefits further contributes to social cohesion, along with diversification, which creates employment opportunities for women and minorities, and the strengthening of entrepreneurial skills among both men and women[1,14].

### 5.4.2 CFE member support and involvement (18)

CFE member support and involvement is crucial to the enterprise's development in both size and scope over time, and for achieving eventual independence from external support. Members gradually develop the skills needed to manage and operate the CFE and develop a long-term vision for its future. CFE leadership should integrate members from the inception of the project and implementing collective decision-making promotes member involvement, as they are less likely to view the CFE as just another intermediary exploiting their resources[11,13]. Involvement is usually higher in communities with a tradition of deriving their main income from the forest. Creating incentives for the community and partnerships with local organizations can also guarantee members' interest in the CFE development[18].

A study on CFEs in Myanmar describes how members can be actively involved in CFE activities: "Without secure economic and social incentives, communities are unlikely to participate in CF activities. They must also be mobilized and have their awareness raised about the importance of CF enterprises in stabilizing their environment, improving their incomes and standard of living, and mitigating climate change." [18]

### 5.4.3 Strong forest-community link (19)

Communities with a pre-existing connection to the forest tend to create more successful CFEs than those without such a link[9]. CFEs formed in communities with a strong connection to the forest exhibit greater social cohesion and are more likely to manage the forest sustainably[3]. The meta-study by Padgee et al. (2006) describes a key success of CFM as follows: "When villagers rely on forest resources and give serious consideration to forest sustainability, they are likely to develop effective institutions that facilitate well-designed property rights and rules, and are likely to enforce those rules and regulations all over the community."[3]

## 5.5 Regulatory environment

The regulatory environment of a CFE entails the laws and institutions that regulate its operations. Besides regulating, these can also offer opportunities to the CFE, such as stimulating measures towards sustainable production and certification.

### 5.5.1 Enabling institutional environment (20)

Successful CFEs collaborate with a wide array of organizations, forming a network of positive interactions[8,10,12]. An enabling institutional environment reduces the isolation of CFEs and strengthens them[5,15]. Institutional arrangements with stable, local institutions enable long-term partnerships[6,12,13].

Institutional arrangements at a national level can ensure the legal viability and support of CFEs[6]. Secure land rights, resulting from institutional arrangements, are more robust when institutions collaborate closely with CFEs. Challenges in forming these institutional arrangements include potential conflicts of interest, bureaucratic hurdles, and the need for continuous dialogue among stakeholders. There are mechanisms that facilitate collaboration, like regular stakeholder meetings, transparent communication channels, and inclusive decision-making processes[13].

A Bolivian case demonstrates how institutions can function in favor of CFEs: "The WWF-Bolivia Forest Trade Network (FTN) has facilitated important alliances between forest companies and rural communities [...]. Facilitation has led to mutual benefits, with companies increasing their supply of quality raw material for external markets, and indigenous communities obtaining access to fair forest trade based on sound forest management. The facilitation of public and transparent bidding processes has helped communities to receive a fair price, with greater accommodation of their social production context (WWF-Bolivia 2007)." [6]

### 5.5.2 Good laws and policies (21)

Laws and policies at various levels are critical in enabling CFEs to succeed. Supportive regulations enable rather than hinder the development of CFEs, they include provisions that ensure secure forest rights, reduce tax burdens, and simplify import/export procedures[1,2,6,12,15]. Effective law enforcement also protects CFEs from theft and land-grabbing while promoting good forest management practices[8].

The implementation of supportive laws and policies is most effective when legitimate and qualified representatives of CFEs actively participate in policy-making[6,18]. Local grassroots organizations often serve as crucial advocates for CFE interests, as they often share struggles with CFEs and can legitimately represent their interests in policy-making[2,8]. That being said, the influence of CFEs on shaping laws and policies is often limited and depends largely on the willingness of political actors to collaborate[1,5,18]. CFE's ability to impact policy outcomes relies on forming alliances and effectively communicating the benefits of CFEs to policymakers[5].

An illustrating example from Nepal on how policy can hinder CFE development: "The distance provision, which states that no permanent forest products processing structure can be built within community forests (HMG/N 1995), was a major source of tension. Since most forests near human settlements have been converted into community forests, it is almost impossible to find locations for operating CFEs consistent with the distance standards. As a result, five CFEs were established on community forest in violation of the distance provision. This, in turn, means they cannot be registered." [17]

### 5.5.3 Enabling CFE legal form (22)

CFEs can adopt various legal forms such as cooperatives, associations, incorporated companies, or voluntary agencies[1,2]. Selecting an appropriate legal form that aligns with their specific needs is crucial for CFEs to effectively develop operations and achieve maturity. The chosen legal form should encompass all essential roles necessary to bring products or services to the market[5,8]. It should also create enough opportunities both in space and logistics to maintain social cohesion and satisfy community members[5].

In a global meta-analysis, Stoian et al. (2009)[1] propose a phased approach to legal forms for CFEs, starting as non-profit organizations and transitioning to for-profit organizations as enterprises mature and consolidate. This approach ensures that the legal structure evolves with the needs and capabilities of the CFEs throughout their development stages. Each legal form entails trade-offs in terms of taxes, capitalization, decision-making processes, and member participation[1]. Choosing the optimal legal form during the initiation phase of CFEs requires a long-term business vision from community members and supporting agencies[1].

### 5.5.4 Land use rights (23)

CFEs are more successful when they possess secure land rights, whether through ownership or concessions. These rights should encompass access to forests, exploitation of forest products (timber and non-timber forest products), and management rights[3,5,14]. Importantly, the ability to use forest resources as collateral can facilitate access to credit[15]. In contrast, inadequate or

insecure land rights often result in the underinvestment of the CFE, unsustainable forest management practices, and the informalization of CFE operations[6,15].

Effective lobbying efforts by local grassroots organizations and NGOs, supported by development projects and donor agencies, have proven successful in securing community forest concessions in countries like Guatemala[2,8]. When land tenure is not permanent, sustainable forest management can help communities get their concessions renewed, as functioning, sustainably operating CFEs are less likely to lose their user rights on the forest[2].

A case study from Nepal illustrates what the application for user rights can look like in local context: "In Nepal, for example, 10 recently formed Community Forest User Groups (CFUGs) [...] have attained accessible commercial forest rights (...) through six simple local steps: (1) the sending of a letter of interest from each community to a District Forest Officer (DFO), (2) the democratic formation of the CFUG supported by the DFO, (3) the sending of an application to the DFO to register the CFUG's constitution including forest management responsibilities, (4) the issue of a certificate of registration by the DFO, (5) the development of an operational plan by the CFUG and (6) the issue of a certificate granting the community commercial rights signed by the DFO. Commercial rights are clear, with simple achievable conditions that can be mediated locally." [5]

### 5.5.5 Local rule enforcement & governance (24)

Local rule enforcement is most effective when supported by a strong social organization and when the community is legally responsible for forest management[3]. Local leadership is essential to enforce rules, supported by active community involvement[13]. Non-compliance with rules may result in fines or temporary loss of forest exploitation rights. Clearly defined forest boundaries are critical to enforcing land rights, while a comprehensive forest management plan should establish harvesting quotas and rules for different species to ensure compliance with the law[14] and international conventions.

Informal rule enforcement by community members can be as effective, if not more so, than formal enforcement. In areas where formal monitoring and sanctions are challenging to implement, education and awareness programs can empower communities to enforce rules informally.

For instance, social drivers in North Rupununi, Central Guyana, successfully protected the Arapaima fish species and promoted sustainable harvesting of other fish species[13]. "The education and awareness campaign appears to have influenced social norms, resulting in informal social pressure that has been more effective in enforcing the ban than formal mechanisms." [13]

### 5.5.6 Certification of SFM and associated Chain-of-Custody (CoC) (25)

Certification of SFM and associated Chain-of-Custody (CoC), particularly through schemes like the Forest Stewardship Council (FSC) and Program for Endorsement of Forests Certification schemes (PEFC), can significantly contribute to the success of CFEs. In some cases, certified products can be sold for premium prices and can access certain niche (sustainable) markets, although limited access to these markets and competition with other certified market players may limit such premium pricing potential[7]. Beyond economic benefits, certification boosts CFEs' prestige beyond the local community and improves their relationships with other stakeholders[6,7,12].

The stringent standards required for certification stimulate good governance practices, increase productivity, and enhance the political recognition of CFEs. However, the certification process can be financially burdensome for CFEs, requiring significant investment in both financial and human capital[7,8,15]. This issue is being addressed however by various certification schemes, by developing adapted procedures for communities, including the FSC Continuous Improvement Procedure (CIP), group certification (FSC and PEFC) and other initiatives including Madera Justa and Participatory Guarantee Systems (PGS). Larger CFEs with substantial harvests, resource stocks, and forest areas tend to be more successful in obtaining and benefiting from certification.

External support from governments and NGOs plays a crucial role in financing and guiding CFEs through the certification procedure[2]. Additionally, adapting certification policies to create new standards for CFEs and offering group certification options can enhance CFEs' capacity to achieve and maintain certification over time[7].

A CFE case from Guatemala demonstrates how CFEs can get certified: “The Carmelita concession was first certified by the SmartWood Program on December 15, 1999, and became recertified five years later for the period 2004-2009 […]. The group certification scheme offered through FORESCOM might have been an alternative due to lower costs, but it was initiated only in 2005 […]. The FSC label has helped Carmelita to market certified mahogany and tropical cedar and, to a lesser extent, lesser-known species. […] Price premiums are difficult to be maintained in an environment where competing buyers of non-certified wood match prices in order not to lose access to raw material (Carrera et al. 2006).” [2]

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# 7 Appendix

**Table 2**
CFE success factors identified in the selected papers

| Paper | Success factor |
|---|---|
| 1 | 3,5,6,7,9,10,12,14,20,21,22,23 |
| 2 | 1,2,4,8,9,10,11,13,17,18,19,21,23 |
| 3 | 1,17,9,11,16,10,17,18,19,20,22,23,24,25 |
| 4 | 1,3,9,10,11,21 |
| 5 | 1,2,8,9,10,11,14,16,17,18,19,20,23 |
| 6 | 1,2,3,4,5,9,11,17,18,22,23 |
| 7 | 1,8,13,15,17,18,19,20,22 |
| 8 | 1,4,7,12,13,14,15,18,19,24 |
| 9 | 1,2, 3,4,5,6,7,9,11,15,16,17,19,22,24 |
| 10 | 1,2,3, 9,10,15,16,19,23 |
| 11 | 1,4,9,10,13,15 |
| 12 | 1,2,3,6,7,8,9,10,11,12,15,17,18,19,22 |
| 13 | 1,4,7,10,12,13,15,16,19,22,23,24 |
| 14 | 1,2,3,5,9,11,13,15,17,18,22 |
| 15 | 1,2,3,4,5,6,7,9,10,11,17,18,19,22,23 |
| 16 | 1,2,17,9,10,11,13,14,15,17,19,20,22 |
| 17 | 16,17,18,19 |
| 18 | 1,3,9,11,12,14,17,18,19,20,23 |