



Securing the future

Managing risk and building resilience
within locally controlled forest businesses

Editors: Anna Bolin and Duncan Macqueen



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Contents

Acronyms, initials and abbreviations	iv
Acknowledgements	vii
Executive summary	ix
1. The importance of risk management for locally controlled forest businesses by Anna Bolin and Duncan Macqueen	1
2. Cambodia: Mondulkiri Forest Venture Improving the livelihoods of forest-dwelling communities by Emmanuelle Andaya	19
3. Ecuador: Allpabambu A family bamboo enterprise by Shoana Humphries and Alvaro Cabrera	45
4. Ecuador: Asociación Río 7 Plantation workers become owners of a bamboo enterprise by Shoana Humphries and Alvaro Cabrera	63
5. Guatemala: Fedecovera forestry division (Federación de Cooperativas de las Verapaces) Uniting small-scale producers by Juan José Ochaeta Castellanos	79
6. Guatemala: Impulsores Suchitecos del Desarrollo Integral, Sociedad Civil (Suchitecos) A community forest enterprise in the Maya Biosphere Reserve by Juan José Ochaeta Castellanos	101
7. Kenya: Kisii Tree Planters' Association (KTPA) A youth group association by Cyrus Muthui Kilonzi and Wycliff Omondi Obuola	123
8. Kenya: South Coast Forest Owners Association (SCOFOA) Making forest farmers stronger together by Cyrus Muthui Kilonzi and Wycliff Omondi Obuola	147
9. Vietnam: Association of Quang Tri Smallholder Forest Certification Groups (AQTSFCG) Sharing risks, shaping solutions and sharing benefits by Ton That Minh Khanh and Emmanuelle Andaya	173
10. Conclusions on how to build resilience within locally controlled forest businesses through proactive risk management by Anna Bolin and Duncan Macqueen	197
References	217

List of boxes, figures and tables

Box 1.1 Participatory action research

Box 5.1 Investing in local development initiatives

Box 6.1 Forest conservation in the Maya Biosphere Reserve

Figure 1.1 Indirect and direct influences on the business environment

Figure 2.1 MFV business structure

Figure 2.2 MFV value-chain map for NTFP products

Figure 3.1 Map of the location of Allpabambu's office

Figure 3.2 A diagram of the common commercial sections of a bamboo cane

Figure 3.3 Value chain for Allpabambu for the export of bamboo canes to the US

Figure 4.1 Map of the study area

Figure 4.2 Value chain for the bamboo enterprise to be taken over by Asociación Río 7

Figure 5.1 Fedecovera's business structure

Figure 5.2 Fedecovera's forestry value chain

Figure 6.1 Map of wildlife conservation areas in the Maya Biosphere Reserve

Figure 6.2 Suchiteco's business structure

Figure 6.3 Suchiteco's value-chain map

Figure 7.1 Map of Kisii County showing the sites visited for the study

Figure 7.2 KTPA's business structure

Figure 7.3 KTPA's value-chain map

Figure 8.1 SCOFOA's business structure

Figure 8.2 Map of Kwale County showing the sites visited for the study

Figure 8.3 SCOFOA's value-chain map

Figure 9.1 AQTSCFG business structure

Figure 9.2 AQTSCFG value-chain map for timber products

Table 1.1 Proposed framework for risk self-assessment of locally controlled forest business

Table 1.2 Example of summary table for risk categories and options to reduce risk

Table 1.3 Structure of the case studies

Table 1.4 Summary of case studies presented in this book

Table 2.1 Summary of risks identified by community enterprise members

Table 2.2 Solutions to reduce risk for MFV

Table 3.1 Summary of risks identified by Allpabambu

Table 3.2 Risk-management options for Allpabambu

Table 3.3 Solutions to reduce risk for Allpabambu

Table 4.1 Summary of risks identified by Asociación Río 7

Table 4.2 Risk-management options for Asociación Río 7

Table 4.3 Solutions to reduce risk for Asociación Río 7

Table 5.1 Summary of risks identified by Fedecovera's forestry division

Table 5.2 Risk-management options for Fedecovera's forestry division

Table 5.3 Solutions to reduce risk for Fedecovera's forestry division

Table 6.1 Summary of risks identified by Suchitecos

Table 6.2 Risk-management options for Suchitecos

Table 6.3 Solutions to reduce risk for Suchitecos

Table 7.1 Summary of risks identified by KTPA

Table 7.2 Risk-management options for KTPA

Table 7.3 Solutions to reduce risk for KTPA

Table 8.1 Summary of risks identified by SCOFOA

Table 8.2 Risk-management options for SCOFOA

Table 8.3 Solutions to reduce risk for SCOFOA

Table 9.1 Woodchip and FSC-certified timber: profit and loss analysis (ha/VND)

Table 9.2 Summary of risks identified by AQTSCFG

Table 9.3 Solutions to reduce risk for AQTSCFG

Table 10.1 Summary of main risk and risk-management options

Acronyms, initials and abbreviations

AB	Allpabambu, Ecuador
ACOFOP	Association of Forest Communities of Petén (Asociación de Comunidades Forestales de Petén)
AGEXPORT	Guatemalan Association of Exporters (Asociación Guatemalteca de Exportadores)
Agrocalidad	Agency for Agro Quality Assurance (Agencia Ecuatoriana de Aseguramiento de la Calidad del Agro), Ecuador
Alianza	National Alliance of Forest Communities (Alianza Nacional de Organizaciones Forestales Comunitarias), Guatemala
AmCham	American Chamber of Commerce
Anacafé	Guatemalan National Coffee Association (Asociación Nacional del Café de Guatemala)
APROGUADUA	Bamboo Producers Association (Asociación de Productores de Guadúa), Ecuador
AQTSFCG	Association of Quang Tri Smallholder Forest Certificate Groups, Vietnam
ASSIST	Asia Society for Social Improvement and Sustainable Transformation
Banrural	Rural Development Bank (Banco de Desarrollo Rural), Guatemala
BGV	Bambusa Global Ventures
CATIE	Tropical Agricultural Research and Higher Education Centre (Centro Agronómico Tropical de Investigación y Enseñanza)
CBHE	Cambodia Federation for Bee Conservation and Community-Based Honey Enterprises
CCF	Community conservation forestry area, Cambodia
CEDAC	Center for Study and Development in Agriculture, Cambodia
CF	Community forest/community forestry
CFA	Community forest agreement, Cambodia
CFA's	Community forest associations
CHF	Swiss franc
CoC	Chain of custody
CONAP	National Council of Protected Areas (Consejo Nacional de Áreas Protegidas), Guatemala
CONFECOOP	Confederation of Cooperatives (Confederación de Cooperativas), Guatemala
CPA	Community protected areas, Cambodia
EC	European Commission
EIA	Environmental impact assessment
EII	Earth Innovation Institute
ELC	Economic land concessions, Cambodia
EMCA	Environmental Management and Coordination Act, Kenya
FA	Forestry Administration, Cambodia
FAN	Forest Action Network, Kenya
FAO	Food and Agriculture Organization of the United Nations
Fedecovera	Federation of Cooperatives of the Verapaces (Federación de Cooperativas de las Verapaces), Guatemala
FFF	Forest and Farm Facility
FF-SPAK	Farm Forestry Smallholder Producers Association of Kenya
FLEGT	Forest law enforcement, governance and trade
FSC	Forest Stewardship Council
GAP	Good agricultural practice
GDP	Gross domestic product
ICC	International Cooperation of Cambodia

ICT	Information and communications technology
IIED	International Institute for Environment and Development
IESS	Ecuadorian Institute of Social Security (Instituto Ecuatoriano de Seguridad Social)
INACOP	National Institute of Cooperatives (Instituto Nacional de Cooperativas), Guatemala
INAB	National Institute of Forests (Instituto Nacional de Bosques), Guatemala
INBAR	International Network for Bamboo and Rattan
INE	National Statistical Institute (Instituto Nacional de Estadística), Guatemala
IUCN	International Union for Conservation of Nature
KEBS	Kenya Bureau of Standards
KEFRI	Kenya Forest Research Institute
KES	Kenyan shilling
KFS	Kenya Forest Service
KHR	Cambodian riel
KPLC	Kenya Power and Lighting Company
KTDA	Kenya Tea Development Agency
KTPA	Kisii Tree Planters' Association
KWS	Kenya Wildlife Service
LCFB	Locally controlled forestry business
M&E	Monitoring and evaluation
MA&D	Market analysis and development
MAE	Ministry of Environment (Ministerio del Ambiente), Ecuador
MAFF	Ministry of Agriculture, Forestry and Fisheries, Cambodia
MAGAP	Ministry of Agriculture, Livestock, Aquaculture and Fisheries (Ministerio de Agricultura, Ganadería, Acuacultura y Pesca), Ecuador
MARD	Ministry of Agriculture and Rural Development, Vietnam
MARN	Ministry of Environment and Natural Resources (Ministerio de Ambiente y Recursos Naturales), Guatemala
MBR	Maya Biosphere Reserve
MFV	Mondulkiri Forest Venture, Cambodia
MOA	Ministry of Agriculture, Livestock and Fisheries, Kenya
MOC	Ministry of Commerce, Cambodia
MOE	Ministry of Environment, Cambodia
MOU	Memorandum of understanding
MINECO	Ministry of Economy (Ministerio de Economía), Guatemala
MIPRO	Ministry of Industries and Productivity (Ministerio de Industrias y Productividad), Ecuador
MPF	Mondulkiri Protected Forest, Cambodia
MPWT	Ministry of Public Works and Transport, Cambodia
NEMA	National Environment Management Authority, Kenya
NGO	Non-governmental organisation
NSDP	National Strategic Development Plan, Cambodia
NTFP	Non-timber forest products
NTFP-EP	Non-Timber Forest Products Exchange Programme for South and Southeast Asia
PAR	Participatory action research
PEFC	Programme for the Endorsement of Forest Certification
PPP	Private–public partnership
ProEcuador	Institute for Export and Investment Promotion (Instituto de Promoción de Exportaciones e Inversiones), Ecuador
RECOFTC	The Center for People and Forests
REDD+	Reducing emissions from deforestation and forest degradation

SACCO	Savings and credit cooperative
SAT	Superintendency of Tax Administration (Superintendencia de Administración Tributaria), Guatemala
SCOFOA	South Coast Forest Owners Association, Kenya
SECO	Swiss State Secretariat for Economic Affairs
SLC	Social land concessions, Cambodia
SMEs	Small and medium enterprises
SNV	Foundation of Netherlands Volunteers (Stichting Nederlandse Vrijwilligers)
SOCODEVI	Cooperation Society for International Development (Société de Coopération pour le Développement International), Canada
SRI	Internal Revenue Service (Servicio de Rentas Internas), Ecuador
TREES	Rainforest Alliance's Training, Extension, Enterprises and Sourcing Programme
USA	United States of America
USAID	United States Agency for International Development
VND	Vietnamese dong
VPA	Voluntary partnership agreement
WWF	World Wide Fund for Nature

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Executive summary

Locally controlled forest businesses are, collectively, a vast private sector.¹ Their potential contribution to sustainable development is equally immense. Solid comparative analyses demonstrate their capacity to generate and distribute wealth, provide incentives for forest-landscape restoration that helps adapt to and mitigate climate change, and enhance social equity and food security.² This makes them the key actor in achieving the world's Sustainable Development Goals (SDGs). Yet their organisational complexity, in both ownership and management, across remote operating environments, exacerbates unpredictability in business performance – commonly known as 'risk'. How can we assess and manage this risk, so as to unleash the full potential of locally controlled forest businesses?

In this book, Chapter 1 introduces the importance of risk management for locally controlled forest businesses. With forests inhabited by more than 1.3 billion people worldwide, sustainable and prosperous management of forests by the businesses of those people becomes a critical issue at a planetary level.

Like all enterprises, locally controlled forest businesses share general risks related to operating in a remote environment. They also face specific risks related to the sectoral operating environment. But they also face within-firm risks that require special attention. These include mobilising finance in remote rural areas, competing for natural resources amongst members and non-members, managing the organisational complexity of group enterprises, developing human capacity, accessing decision making, and accommodating the breadth of economic, environmental and social objectives of their members.

Partners in the Forest Connect alliance (which involves more than 1,000 supporters of locally controlled forest businesses from 94 countries) and the Forest and Farm Facility (which provides direct support to forest-farm producer organisations) felt that a more proactive approach to risk management might be of benefit to the locally controlled forest businesses that they serve. A risk self-assessment framework was therefore developed from the literature relating to forest-farm business development and risk management more generally. A set of case studies was then commissioned with eight locally controlled forest businesses to use this risk self-assessment framework, rank different areas of risk and describe risk-management options.

The main body of this book (chapters 2–9) describes in some detail the risk self-assessments made by those eight case-study businesses: Mondulkiri Forest Venture (Cambodia), Allpabambu (Ecuador), Asociación Río 7 (Ecuador), Fedecovera (Federación

1. A locally controlled forest business or LCFB (also sometimes referred to as a locally controlled forest-farm business or enterprise) is defined by the Forest Connect alliance as an entity undertaking commercial exchanges based on sustainably managed forest or tree products or services, overseen by credible representative bodies suited to act as rights holders and which have legitimacy within self-defining 'communities' in terms of people and area, that generate and redistribute profits within those communities (Macqueen 2013b).

2. For a detailed overview of 19 locally controlled forest business models from 14 countries see Macqueen *et al.* (2015).

de Cooperativas de las Verapaces (Guatemala), Suchitecos (Impulsores Suchitecos de Desarrollo Integral Sociedad Civil, Guatemala), Kisii Tree Planters' Association (Kenya), South Coast Forest Owners Association (Kenya) and the Association of Quang Tri Smallholder Forest Certification Groups (Vietnam). Each chapter introduces the business and discusses the perceptions of its members concerning risks, their options for risk management (actual or potential), and ways forward.

Finally, Chapter 10 outlines the main conclusions about risk and risk-management options based on the analysis of the preceding case studies. The main risks are summarised under six headings: revenue flows, natural resources, business relationships, the operating environment, operating capacities and brand recognition.

Formal risk self-assessment was a relatively new concept for the participating businesses in the case studies. However, there did appear to be existing risk-management options being implemented in almost all cases, although to varying degrees. For example, in the risk area of securing revenue flows, options included: investing in financial administration, researching buyers and selling as a group, developing working capital reserves to pay members for their products, attracting microfinance to capitalise such reserves, and developing diversification strategies to reduce cash-flow dependence on single product lines.

In the risk area of natural resource access, risk-management options included: nurturing strategic partnerships with other suppliers, expanding association membership and on-farm production, developing guidelines for sustainable production, securing product transport from members to buyers and protecting natural resources from fire and wildlife damage. In the risk area of developing business relationships, risk-management options included: developing market networks, installing internal procedures and quality standards for members, developing benefit-sharing agreements to ensure reliable supply from members, formalising external sales contracts and negotiating as a group, and developing delivery schedules to accompany required product volumes.

Risk-management options such as these continued to emerge from the other three risk areas. For example, in the risk area of securing the operating environment, risk-management options included: joining or establishing industrial roundtables and other federated representation structures, developing specific policy engagement strategies, implementing a communication plan, and undertaking conflict management in the producer landscape. In the risk area of operational capacity, risk-management options included: installing organisational structures and defining and developing staff roles, staff training and demonstration plots; using staff rotation to broaden the skills base; and establishing technology and energy inventories and ensuring spares and backups. In the risk area of brand recognition, risk-management options included: developing an understanding of why branding matters, developing and exploiting a market niche, implementing third-party certification or internal quality standards, working on logo development, and marketing and participation in trade fairs.

Taken together, the combined portfolio of risk-management options forms a comprehensive framework from which to develop a risk-assessment and management toolkit. Nevertheless, the utility of such a toolkit will depend also on complementary actions by policy and decision makers relating to the forest landscape. Towards this audience, we direct a final set of recommendations:

- Recognise that perceptions of risk associated with the complexity of locally controlled forest businesses are more outweighed by their potential contribution to a sustainable future society.
- Spread understanding of how proactive risk management within locally controlled forest businesses can best secure such a sustainable future.
- Publicise risk-assessment tools that help locally controlled forest businesses to assess risk, prioritise risk, assign responsibility for risk management and implement actions within the business.
- Work with financial institutions to develop a more positive framing of risk management by locally controlled forest businesses – as a sign of business vitality, sustainability and innovation rather than an admission of near failure.
- Support regional associations and national federations of locally controlled forest businesses to develop service capacity in risk self-assessment and management for their membership.
- Ensure that representation by those locally controlled associations and federations plays a major role in shaping policy developments.
- Level the bureaucratic playing field for locally controlled forest businesses with regard to business registration, licensing, taxation, documentation, enforcement modalities and export.

The process of engaging the participating case-study businesses in proactive risk self-assessment was very positively received. In all cases, participants appreciated the insights gained from assessing in a systematic manner the risks to their businesses. Adding to that self-reflection, the insights on options for risk management gleaned from other case studies should be more useful still to locally controlled forest businesses worldwide. We have published this preliminary book of case studies with that hope in mind.



A farmer harvesting snails in Ghana

© Duncan Macqueen

The importance of risk management for locally controlled forest businesses

by Anna Bolin and Duncan Macqueen

Managing risk for locally controlled forest businesses is important on two main counts: the significance that such enterprises have for securing multiple public goods – and the unpredictability that comes from their organisational complexity in remote operating environments. The objective of this book is to help such enterprises to adopt better risk self-assessments and risk-management approaches.

In this chapter, we introduce locally controlled forest businesses and some of the peculiar sources of risk – or unpredictability in business performance – that affect them. It lays out a framework for handling the wide range of generic, industry-specific and within-firm sources of risk. It emphasises that knowing how to handle risk (risk as a hazard) and take risks (risk as an opportunity) is an essential part of business management. Finally, it concludes with some observations on the responses and possibilities that arise from using a risk self-assessment methodology based on eight case-study enterprises.

1.1 Risk management and the significance of locally controlled forest businesses

Forests cover almost one third of the world's land area. They are crucial in helping to mitigate global climate change. But forests are also home to 1.3 billion people (Chao 2012). And forests produce a wide range of goods and services that are critical to the livelihoods of those local people: food, fuel, construction materials, medicines, dyes, resins, clean water, soil conservation and the maintenance of biodiversity. Somehow, the sustainable management of the world's forests must be aligned with the benefits arising from locally controlled forest businesses¹ if we are both to save the planet and reduce poverty at the same time.

Locally controlled forestry (within family smallholdings, community forestry and indigenous people's territories), has risen from approximately 11 per cent in 2002 to 15.5 per cent in 2013. In low- and middle-income countries, the forest area under legal community ownership or control has risen from over 21 per cent in 2002 to over 30 per cent in 2013 (RRI 2014). These figures do not include extensive family smallholdings in rural areas on all continents that are also locally controlled. The sheer scale of forest and farm producers is at once an opportunity and a challenge.

1. A locally controlled forest business is defined by the Forest Connect alliance as an entity undertaking commercial exchanges based on sustainably managed forest or tree products or services, overseen by credible representative bodies suited to act as rights holders and which have legitimacy within self-defining 'communities' in terms of people and area, that generate and redistribute profits within those communities (Macqueen 2013b).

As an opportunity, myriad locally controlled forest businesses constitute a vast forest–farm private sector. Landscape-scale improvements in forest condition are documented where the community subcomponent of locally controlled forestry has been unleashed such as in Mexico, Nepal and Tanzania (Seymour *et al.* 2014). Community-managed forestry has been shown to be at least as effective as state-enforced protected areas as a means of stemming forest loss (Porter-Bolland *et al.* 2012) and generally has positive impacts on forest condition (Bowler *et al.* 2010). Improved forest condition in locally controlled forests has been accompanied by substantial livelihood benefits across a wide range of contexts – including family smallholdings (Ackzell 2009), community forests (Antinori and Bray 2005; Donovan *et al.* 2006; Molnar *et al.* 2007; Charnley and Poe 2007; Bishnu *et al.* 2009; Orozco-Quintero and Berkes 2010; Stevens *et al.* 2014) and indigenous peoples' territories (Nepstad *et al.* 2006; CEESP 2008). Member-owners are well aware of the need to maintain their own livelihoods through community cohesion, income generation, food security, energy provision and so on – referred to as 'social foundations' in the broader analysis of Raworth (2012). They are also well aware of the local need to maintain the integrity of ecosystems upon which their survival depends within the confines of planetary boundaries (see Rockström *et al.* 2009). Multifunctional mosaics of locally controlled forest businesses are therefore much better able to reconcile social and environmental needs than monotypic expanses of large-scale industrial forestry (Macqueen 2013a; Macqueen *et al.* 2014). In the latter, little alignment was found between business and either forest protection or poverty reduction (Mayers 2006).

As a challenge, locally controlled forest businesses represent dramatic complexity. They make multiple products, much of which never enter conventional markets. They offer scattered part-time employment, and owners and managers have to deal with the frequent pressure from extended family and friends for jobs. They have extremely limited access to capital and they often employ rudimentary technology. They are associated with high transaction costs for any formal activities they are engaged in – and they operate in an environment of highly unreliable utilities infrastructure (power and water) (deMarsh *et al.* 2014; Kelly 2013).

Each unit is so small that data collection on the contribution of locally controlled forestry to society and the environment is neglected, despite their huge aggregate significance. Estimates of the large aggregate significance of small and medium forest enterprises, for example, suggest that they make up 80–90 per cent of enterprise numbers and more than 50 per cent of employment in many countries (Mayers 2006; Kozak 2007). Despite numerous studies documenting the importance of this sector for job creation and rural development (*ibid*; de Kok *et al.* 2013; Kelly 2013; Macqueen *et al.* 2015) locally controlled forest and farm businesses are often not given due recognition by government or development agencies. The state tends to give them little attention as the regulation of these types of business often fall between the policy mandates of multiple ministries of agriculture, forestry, trade, industry and commerce, which creates a complex and often costly regulatory environment for these businesses to navigate (Kelly 2013).

1.1.1 The peculiarities of risk for locally controlled forest businesses

Risk affects all business and refers to unpredictability in business performance. It comes from a wide range of generic, industry-specific and within-firm sources. Knowing how to handle risk and take risks is an essential part of business management. Risk can be defined in two ways:

- **Risk as a hazard:** the impact or consequence of currently unknown events on the business (risks to be handled – through avoiding, transferring, reducing or ignoring), and
- **Risk as a challenge:** difficulties that the business must overcome in order to survive and grow (risks to be taken) (see Sadgrove 2015).

Risk **assessment** is about understanding the likely impacts or consequences of certain events and the challenges that face the business. Risk **management** can be seen as a series of activities for dealing with unpredictability and challenges to the business. The objective of risk management is a balance between cautiously handling risks on the one hand, but also being open to risk taking which lies at the core of innovation and entrepreneurialism (ILO 2015; Sadgrove 2015). Risk taking is necessary when a business enters a period of growth and expansion into new markets. This is a particularly challenging stage, where missed – or miscalculated – opportunity can result in significant losses. But there are options and strategies that can be put in place to improve prospects for success for locally controlled forest businesses.

There are many potential sources of risk for locally controlled forest businesses – in part because of the complexity of the sector described above. These sources of risk have to do with general unpredictability in the remote environment; industry-specific unpredictability in the operating environment; and within-firm unpredictability (Miller 1992). General unpredictability in the operating environment such as macro-economic changes, political-legislative upheaval, socio-cultural unrest, natural disasters and technological developments affect all businesses to some degree.

To these general unpredictability factors can be added industry-specific and within-firm unpredictability, to do with local approaches to cash flows, resource access, business relationships, operational capacities, security and brand development. Historically, many risks have been dealt with through 'insurance' but for a variety of reasons the accessibility and cost of insurance deter locally controlled forest business and make alternative direct 'risk-management' approaches a more favoured option (Sadgrove 2015). For locally controlled forest businesses, there are a number of reasons why the ability to manage risk is particularly important. These reasons include the likelihood of higher unpredictability due to:

- **Access to finance:** rural member-owners may struggle to mobilise capital in contexts of poverty where financial services are sparse.
- **Land-use competition:** this is likely to be higher in businesses based on geographically extensive forest-farm resources belonging to multiple individuals.
- **Group ownership:** it is important to build trust between members (to minimise conflicts within organisations) and with business partners (to achieve competitive efficiencies of scale).

- **Knowledge gaps:** in remote rural areas, technical and business education may be restricted while outside buyers and investors may have limited knowledge of businesses in remote areas.
- **Vulnerability:** the fairness, monitoring and enforcement of legislation may vary or be discretionary in remote areas which have poor access to administrative or justice services.
- **Risk aversion within broad objectives:** resource dependence fuels risk aversion, in the sense that the consequences of failure are higher not just for individuals but also for other members of the local community; therefore, member owners may be wary of prioritising social and environmental objectives over economic objectives.

A growing body of evidence shows that developing regulation without taking into account local livelihood strategies or the realities of local businesses can cause considerable risk to enterprises. There can be negative impacts on both livelihoods and resource management (Cerutti *et al.* 2014; Obidzinski *et al.* 2014; Putzel *et al.* 2015; Wynberg *et al.* 2015). Delays which slow down operations and other bureaucracy-related costs not only present a risk to such enterprises but also strongly promote illegality and reduce sustainability of the sector (Cerutti *et al.* 2014; Waldhoff and Vidal 2013). As a result, failure rates are extremely high. Few enterprises reach their potential but lapse back into informality (Elson 2012; Mayers 2006; Osei-Tutu *et al.* 2010; Smit and Watkins 2012).

Although there is an abundance of research documenting the many challenges locally controlled forest businesses face, little is known about how they manage risk. Falkner and Hiebl (2015) carried out a systematic review of 27 case studies examining the evidence for risk management in small and medium enterprises (SMEs) generally. They only found two case studies from non-western countries and noted that regrettably, despite making up the majority of domestic firms, very little research has been carried out on how SMEs in developing countries manage risk. Similar findings were found by Smit and Watkins (2012) who examined risk management among SMEs in South Africa. They found that the majority of SMEs do not have a structured approach to identifying risk. As a result, responses are reactive, using very limited funds, and with disastrous effects on the enterprise. Both reviews concluded that one of the main reasons for why there are such few examples is because of the limited awareness amongst SMEs of different techniques for risk reduction and management.

1.1.2 The importance of assertive risk-mitigation processes

Risk management can either be implemented proactively in anticipation of a potential problem, or reactively to deal with the implications afterwards. Responses to risk are related to how they are perceived. Attitudes to risk vary between individuals and are influenced by a number of factors. Put simply, the way people perceive and respond to risks can be explained by (a) direct or indirect experience of a specific threat/risk, (b) basic values and beliefs, and (c) the social context (Eriksson 2014). Studies have found that financial dependency strongly influences perception of risk among forest-business owners (Blennow *et al.* 2012; Lönnstedt and Svensson 2000). However, the way people respond is also related to tolerance and perceived control over risks. For example, Smit and Watkins (2012) found that SME entrepreneurs assume they have limited ability to do anything about risks and therefore prefer to avoid them. This has a stifling impact on enterprise

growth, market potential, and on poverty reduction. Therefore, by focusing on developing a framework for carrying out risk assessments and risk management at the enterprise level, and from the perspective of entrepreneurs themselves, this study fills an important knowledge gap.

The very first step is to counter the mentality that 'risk is bad' and should therefore be avoided. This is counterproductive on two counts: first, it is often not possible to avoid risk (eg a tropical storm). Secondly, even if a risk exists, it can be an opportunity (eg if the business caters for the effects of the tropical storm by say, moving into timber construction). It is often by putting in place risk management approaches that a locally controlled forest business grows into something more resilient.

Second, it is important to counter the perception that 'risk management is impossible'. Instead, the converse is true. Progress is not possible without risk/unpredictability. Risk is an inherent part of running an enterprise and it is a pre-condition for innovation. Wildavsky (1988) coined it as follows 'Playing it safe, doing nothing, means reducing possible opportunities to benefit from chances taken, and can hurt people'. What if Alexander Graham Bell had refused to design the telephone in 1876 for fear of the electricity it required?

Thirdly, it is important to start by mapping out all the possible risks that exist – undertaking a risk assessment. The best way to do this is to use a framework that adequately covers the ground. In this book we have cross-referenced the five major areas of business development (FAO, 2011) with six key value categories that business owners might wish to improve (financial flows, resource access, business relationships, operational capacities, security and brand development) to generate a fairly comprehensive matrix of possible risk.

Once sources of risk have been identified, it is then possible to look at how to reduce or manage them so as to maintain the health of the locally controlled forest business in question.

1.2 Rationale for this book

1.2.1 The demand for greater information sharing on how to mitigate risk

At the fourth international Forest Connect workshop in Vietnam in 2015, members of the Forest Connect² alliance identified the need for concrete evidence and information on the many practical barriers that are still standing in the way of locally controlled forest businesses.³ Despite numerous examples of viable and even profitable locally controlled forest business (see Macqueen *et al.* 2015) many family, community and indigenous forest enterprises have to manage risks peculiar to their contexts and ownership structure. There are many generic business risk-management guides (eg Global Risk Alliance 2005; CPA Australia 2009), training materials (eg Small Business Administration, undated), risk-

2. Forest Connect is an ad hoc international alliance of more than 1,000 members in 94 countries working to avoid deforestation and reduce poverty by linking sustainable locally controlled forest businesses to each other, to markets, to service providers, and to policy processes. Forest Connect has operated since 2007 and is co-managed by IIED, the Forest and Farm Facility (FFF) and the Center for People and Forests (RECOFTC).

3. The concept of 'local control' is fundamentally about decision-making power, where local entrepreneurs have ownership over their own means of production and a say in how their natural resources are managed (Macqueen *et al.* 2012).

management standards (eg IRM 2002) and advanced risk-management text books (eg Jalilvand and Malliaris 2012; Hopkin 2014). But material specific to the peculiarities of locally controlled forest businesses scarcely exists. Even in comprehensive compilations of training materials on rural finance and investment the materials are limited.⁴ More detailed training materials on risk management are geared to agricultural systems rather than more complex locally controlled forest business (eg Heney 2011). And in the various enterprise-development guides, risk is either integral to the whole design process (FAO, 2011) or treated in a fairly cursory fashion (eg ILO 2015). In short, there seems to be a knowledge gap to do with risk assessment for locally controlled forest businesses or risk-management options that fit their particular profile.

Even when entrepreneurs feel in control of their risks, locally controlled forest businesses are often perceived as high risk for conventional investment programmes (or often also development support). This is due to a lack of understanding of the different realities that come with businesses owned by and responding to the multiple local needs of local people, compared to businesses oriented solely towards profit. It is also due to a lack of ability by entrepreneurs themselves to quantify risks, develop strategies to manage them and present coherent support needs to government and other support agencies.

In support of the knowledge partners within the Forest Connect alliance and the producer organisations supported by the Forest and Farm Facility (FFF)⁵, the Forest Connect alliance management team made plans to develop a risk-management assessment framework for locally controlled forest businesses. Through a literature review and a field assessment of particular case-study enterprises in Cambodia, Ecuador, Guatemala, Kenya and Vietnam the idea was also to document the main sources of risks perceived by the managers of those enterprises. Finally, by interrogating how they managed risk in their context, the intention was to document possible solutions on how to better manage risk.

The collaborative approach used in this research has helped to advance enterprise support activities in each country, by facilitating engagements with different actors in the value chain about the results of the risk self-assessment process. This has also helped improve advocacy messaging about what types of support are needed and why (such as engaging with government agencies about the need to create incentives for finance institutions to provide financial services to smallholder forestry businesses). It has helped to underpin knowledge exchanges between the FFF countries and the Forest Connect network partners. We hope that this resultant book will lead to improved investment in the enabling conditions, business capacity, technical upgrading and organisational strengthening that allows for locally controlled forest businesses to develop and thrive.

4. See eg: www.ruralfinanceandinvestment.org/library/financial-services/risk-management

5. Forest and Farm Facility (FFF) is a multi-donor trust fund initiative co-managed by the Food and Agriculture Organization of the United Nations (FAO), IIED and the International Union for Conservation of Nature (IUCN) steered by a committee of forest and farm producers and indigenous peoples' organisations and networks. The FFF builds the organisational and business capacity of producer organisations in 10 countries in Africa, Asia and Latin America.

1.2.2 The objectives of the book

In late 2015, the three co-management institutions of the Forest Connect alliance, the International Institute for Environment and Development (IIED), the Forest and Farm Facility (FFF) and the Center for People and Forests (RECOFTC) designed a research process that had the following objectives:

- Assess the existing contexts for at least two specific locally controlled forest businesses in each of the following countries: Cambodia, Ecuador, Guatemala, Kenya and Vietnam.
- Undertake an assessment of the risks that managers of those enterprises perceive to be critical and explore mitigation options they have put in place, alongside support options that they feel would help their risk-mitigation strategies.
- Develop a set of key recommendations to address the main risks and barriers to enterprise development and offer viable policy options for improving the operating environment for locally controlled forest businesses in Cambodia, Ecuador, Guatemala, Kenya and Vietnam.
- Develop a conceptual framework for risk self-assessment and management at enterprise level that can be easily understood by all stakeholders and can be used to communicate risk-mitigation strategies and advocate for policy change.

1.2.3 Developing a risk self-assessment framework for broader use

As noted above, the development of a risk-assessment framework was an integral part of this work. It provides a narrative for all the different factors that influence a business's ability to meet its operating targets and objectives. It provides a tool to investigate where to prioritise scarce resources to engage in risky activities that can benefit business development, and where to plan for mitigation or offsetting. Risk management should be integrated into overall business development planning, as unpredictable changes to the business environment can bring serious disruptions and losses that can affect overall performance. These can in turn exacerbate risk assessments by potential external investors or banks. Developing capacity in risk self-assessment will help locally controlled forest businesses quantify risks, develop plans for better managing them, and communicate these effectively. For example, they can be used to develop credit scoring systems which better reflect local business realities, or to engage with regulators on the issue of time-consuming and costly bureaucratic processes which have a negative impact on small businesses. Importantly, they can be used to develop a joint understanding of risks and costs in a way that can improve the operating environment.

The purpose of the framework is to provide Forest Connect partners with a simple narrative framework to communicate with stakeholders about risk for locally controlled forest businesses, in order to advance their in-country enterprise support activities and improve advocacy messaging. The framework can easily be transferred into a quantitative assessment that can be used to engage with government and sector agencies providing extension and financial services effectively. The benefit of using a quantitative assessment is that it shows where the real problems lie and where to focus efforts both in terms of risk management and advocacy.

1.3 Methodology

1.3.1 The approach to data collection

The Forest Connect alliance used a participatory action research (PAR) approach, using a mix of quantitative and qualitative methods (see Box 1.1). Methods for participatory data collection and analysis were derived from existing methodologies and toolkits such as the FAO's Market Analysis and Development participatory training programme (2011), which is tailored to locally controlled forest businesses in a developing country context, but also from more general risk-assessment toolkits tailored to SMEs in developed countries.

Box 1.1 Participatory action research

'It [PAR] is about jointly producing knowledge with others to produce critical interpretations and readings of the world, which are accessible, understandable to all those involved and actionable' (Chatterton *et al.* 2007). PAR has been identified as a framework that acknowledges the heterogeneity of needs among different groups in society, emphasising the building of local problem-solving capacity and ensuring stakeholder participation in planning. One of the benefits of using a participatory approach is that it allows participants to reclaim the benefits of research through participation in the process (Kinson *et al.* 2007).

An extensive desk-based review of existing literature (drawing on studies related to SME risk management for business development and micro-finance more generally and specifically for the forestry sector) was carried out over a period of two months and was complemented with fieldwork in Cambodia, Ecuador, Guatemala, Kenya and Vietnam between September and November 2015. In each country, a consultant was contracted to facilitate and document risk assessments and risk management strategies for two case studies of locally controlled forest businesses (with the exception of Cambodia and Vietnam). To allow for cross-country comparison, the case studies focused on one specific subsector related to the production and/or processing of wood products. However, there are a couple of exceptions. In Cambodia, the case study enterprise focused on three different non-timber forest products (NTFPs) – honey, resin and bamboo – and in Ecuador both enterprises were focused on bamboo. The consultants collected data from PAR interviews and group discussions, key informant interviews and grey literature.

Field-based interviews and discussions were in each case structured according to the five essential steps of risk management as identified by Falkner and Hiebl (2015): identification, analysis, selecting management techniques, implementation and control.

The first step, identification, involved identifying risk together with the entrepreneurs according to key categories that are likely to be of concern to the business. The second step, analysis, involved an assessment of the current or potential impacts on the business and an evaluation of their level of importance (eg low/medium/high) to the business.

Once risks had been identified and prioritised, step three involved looking at existing management strategies, how these can be improved, and where new approaches will need to be developed. This also involved looking at what needs to be mitigated internally versus external interventions from support agencies, government or donor programmes.

Steps four and five focused on the actual implementation and mainstreaming of those strategies into the overall planning and running of the business to allow for better control. The consultants attempted to gather information on all five steps but with particular emphasis on the first four steps, as Step 5 implies quite advanced risk management.

The findings from each case study were then used to draw out answers to the following main questions:

- What are the main risks and barriers for locally controlled forest businesses in the four countries and how do they affect enterprise development?
- What are the main options and solutions that the enterprises use to overcome those risks and barriers?
- How can a joint understanding of risks and barriers inform support activities by investors, governments or other support agencies?
- How can risk self-assessments and management strategies by locally controlled forest businesses be used to inform decision making on natural resource tenure arrangements, financial and business services provision, and technical extension so as to improve the enabling environment?

The concluding chapter develops recommendations for where governments and non-state actors should focus their efforts to change the conditions that stifle enterprise and rural development opportunities and which have negative impacts on sustainable forest management.

1.3.2 The risk self-assessment framework used in the case studies

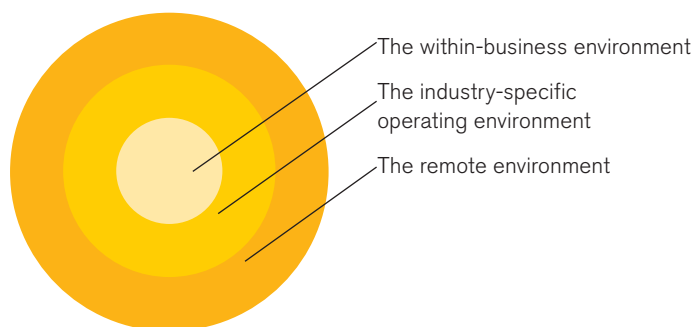
Based on the initial literature review, an initial risk-assessment framework was developed to allow for self-assessment and learning across contexts and countries. At the broadest level, this involved looking at three generic sources of risk (Figure 1.1):

- The remote environment (including unpredictability within the wider macro-economic, legal, natural, socio-cultural and technological context),
- The industry-specific operating environment (including unpredictability among actors that directly interact with the business and its products such as creditors, competitors, suppliers and customers), and
- The within-business environment (including unpredictability of labour, machinery and processes etc).

The FAO MA&D approach identifies five generic areas of enterprise development to assess and screen sustainability of products for small-scale forest enterprises (see the rows in Table 1.1). These categories were identified over three decades of enterprise development training and support that have shaped the design of the MA&D approach (FAO 2011). As categories, they match closely the generic sources of risk identified in the remote environment by leading risk analysts (eg Miller 1992) – the outer circle in Figure 1.1.

But to undertake a comprehensive assessment of risk it is necessary to identify areas that might be of concern for the business in its industry-specific operating environment – the inner two circles of Figure 1.1. Based on an initial literature review of the areas that business are most likely to be concerned about (Macqueen forthcoming), six main areas surface: revenue flows, resource access,

Figure 1.1 Indirect and direct influences on the business environment



business relationships, operational capacities, security and brand development. These areas of business concern are used as the columns in Table 1.1 to explore what specific sources of risk or unpredictability might threaten those areas of business concern. These interrogatory columns are particularly useful for cross learning as they normally contain key within-business and industry-specific factors that impact on business performance and that are common to all business in that specific sector. Examples of issues that might surface are given in Table 1.1. For example, these might include risks associated with business relationships, such as the ability to ensure delivery on time or honour contractual arrangements. Or they might include factors relating to brand development such as ensuring products meet international quality standards. The areas of concern can form the starting point for a discussion around how to mitigate risk.

While identifying risks, entrepreneurs are also likely to identify strategies that they use to mitigate those risks (which were also explicitly explored further later on). For example, the possibility of an export ban on logs might present a timber company with a risk – but associated introduction of tax incentives for log processing could create an opportunity for value addition that could mitigate that risk. The aim was to ensure that the entrepreneurs themselves identified and analysed their own risks, using a simple narrative approach, which could later be quantified in a numerical scoring exercise to evaluate high/low importance areas.

1.3.3 Ranking risks and recording risk-management options

The risk-assessment framework above gives some ideas for both the entrepreneurs and the research consultants about the types of risks that might concern locally controlled forest businesses. The framework was used by the in-country consultants to guide interviews with managers, employees and other relevant actors in the value chain to generate the case studies. When interviewing business managers, however, we advised the in-country consultants not to provide any of the examples shown in Table 1.1, so as to avoid any suggestion of risk that was not actually perceived by the entrepreneurs. We also felt it would be useful for the business managers to rank risks in order of perceived priority – rather than producing a long list, some of which may have been of little concern to the business.

Table 1.1 Proposed framework for risk self-assessment of locally controlled forest businesses

Areas of concern/Factors that influence risk	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity	Importance 1 (low) to 10 (high)
Macro-economic and market context For example: - product supply/quantity - market demand - access to capital - market entry requirements/ barriers	Business competition (including illegal) Limited sales options No collateral or access to credit Inefficiencies in harvesting, transport and processing Limited market information)	Overlapping land uses Competition for resources within the sector Demand focused on particular species or products	Possibilities for or restrictions on collective action Partnerships and networking options Capacity to honour contracts and delivery	Macro-economic fluctuations Theft, civil unrest and war Industrial sabotage	Market standards Certification requirements Ability to tell stories about social or environmental performance	Education standards within labour market Lack of skills to meet required market standards Lack of training opportunities	
Institutional/legal frameworks For example, impacts of rules and regulations on: - access to resources - production - processing - transportation - institutional support	Impact of costs of taxes and fees on production Bureaucratic procedures Corruption and bribery by officials	Resource allocation procedures Licenses (duration and renewal) Burden of law/enforcement processes	Nature of relationship with extension service providers/law enforcement officers Membership of industry groups	Legal/institutional reforms create uncertainty Discretionary law enforcement	Bureaucratic procedures for formal registration Entry barriers to new markets due to regulation/certification requirements	Social requirements too costly Lack of adequate technical assistance/extension services	
Natural resource management/ environment For example, resource: - availability - location - use - management	Poor supply/quality of resource Seasonality of resource access	Over exploitation / degradation Inefficient exploitation Environmental shocks (eg extreme weather, pests etc)	Few opportunities to share management responsibilities and costs with partners	Extreme weather events Seasonal access issues	Ease of ensuring sustainable management within production system Proof of sustainability	Seasonal labour requirements Availability of skilled resource-management expertise	
Socio-cultural issues For example: - indirect benefits for the community - contribution to incomes/benefit sharing - experience/skills - gender impact	Cultural taboos Customary rules governing resource access (including gender) Elite capture and corruption	Conflict over access and rights of use Gendered roles	Nature of relationships within community Culture of business interactions	Local power struggles Elite capture	Capacity of staff to understand the desired business model	Imposition of customary leaders on business positions Lengthy decision-making processes Lack of customary skills in desired business activities	
Technology, research and development For example: - processing requirements (skills, technology, costs and location)	Up-front costs Maintenance requirements Optimal through-flow of product	Availability of resource extraction equipment	Technology cost-sharing with partners Communication infrastructure	Energy supply Infrastructure reliability	Ability and resources available to acquire technology Capacity to maintain market research	Technical capacity to operate machinery Business research and development skills	
Total score (high = risky, low = less risky)							



Fourth International Forest Connect Workshop, Hanoi, Vietnam

A further step in writing the case studies was identifying which high-risk factors also constituted an associated opportunity (ie a market opportunity that comes from conducting business when few others are able to compete). Even where such an opportunity did not exist, the case studies interrogated whether the business already had a strategy to manage those risks. The discussions also explored what support from external actors might be needed to reduce risk in the business environment (the rows in Table 1.2). Here, opportunities associated with certain risks could also be captured and explored in terms of recommendations for policy or changed practice.

1.3.4 Structure of the case studies in the book

For each of the case studies, the lead consultant was commissioned to visit and interview a particular locally controlled forest business. Using the questions outlined in Table 1.3 to structure the research and the case-study reports, they undertook participatory action research with selected business representatives. Management and staff interviews were done either in group discussions or with individuals. In addition, the consultant was expected to work with the entrepreneurs to access documents and sources of data, acquire appropriate figures and photos and conduct an analysis of options/solutions.

Table 1.2. Example of summary table for risk categories and options to reduce risk

Risk categories and options for improving the business environment of locally controlled forest businesses	Practical potential for beneficial impact – in the entrepreneur's opinion (score out of 10)
REVENUE FLOWS (concerns over profit and balancing costs)	
Review taxes and fees in the context of small-scale community-based business eg reducing licence fees, developing differential taxes, providing subsidies for locally controlled forest businesses generating employment, investment and income opportunities at the local level.	7/10
RESOURCE ACCESS (concerns over resource access and stewardship)	
Improving forest resource allocation procedures eg where relevant, introduce preference criteria for locally owned and managed businesses to be given priority.	6/10
BUSINESS RELATIONSHIPS (concerns over conflict-free relationships)	
Encouraging business associations and networking platforms eg best-practice membership groups to improve market efficiencies and dialogue between the private sector and government.	7/10
SECURITY OF OPERATING ENVIRONMENT (concerns over security of operating environment)	
Structuring the pace and content of legislative reform eg developing policy platforms to suit operators with regular consultative processes.	5/10
BRAND DEVELOPMENT (concerns over reputation with customers)	
Support business to affiliate with certification schemes eg national standards of forest certification or independent standards such as the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC).	5/10
OPERATIONAL CAPACITY (concerns over operating efficiencies)	
Setting up targeted business-oriented capacity-building programmes eg review and simplify requirements for forest management plans, provide extension services to improve processing efficiencies, financial accounting etc.	6/10

1.4 Has the risk self-assessment framework worked in practice?

1.4.1 The novelty and utility of structured risk assessments in the case studies

The findings of the case studies point to the novelty of risk management among locally controlled forest businesses, which is similar to that found in previous studies looking at risk management among SMEs (see Falkner and Hiebl 2015; Smit and Watkins 2012). In all of the case studies presented here, the process of risk self-assessment and the concept of risk management were unfamiliar. Although entrepreneurs were quick to identify the challenges they face, they acknowledged that there were no explicit plans for monitoring or managing them. Some mentioned that although they were aware of the problems, they had not made the link as to how this affected their business. Risks were approached in a sporadic and disorganised way. The structured assessment helped identify ways of planning how the business might manage challenges proactively and face them in a more sustainable

Table 1.3 Structure of the case studies**Main headings used to structure the case studies****1. ASSESSING THE EXISTING SITUATION**

- What is the business? When was it founded and by whom? What is its legal status and rights in terms of tenure/licence to operate? What products/services does it offer to whom and which ones are most important to the business? What is the current situation and trend in production, sales and profits?
- What is the context? What is the remote environment (macroeconomic, political and legal, socio-cultural, natural and technological environment) and operating environment (situation in terms of competitors, creditors, labour and suppliers) in which the business is based?
- Which actors influence value? Who are the main direct/indirect actors who may influence the transfer of products in the value chain, or add value, such as business partners and service providers? These should be illustrated with a map and diagram of the value chain – including elements influencing the business from the enabling environment and operating environment (the market system).

2. RISK IDENTIFICATION

- What are the main risks and barriers to the business from the perspective of those running it? In this section, identify risks together with the business entrepreneurs using the risk-assessment table shown in Table 1.1. You may wish to use the examples in Table 1.1 to prompt the business interviewee (but please do not show Table 1.1 to the business until after the interview – to ensure that this does not influence how the business assesses its risk. Using the list of identified risks, discuss with the entrepreneurs how serious they feel those risks are to their business and assess current or potential impacts on the business. Evaluate according to low/medium/high risk with a justification for each scoring.

3. RISK MANAGEMENT

- How do locally controlled forest businesses in these case studies manage risk? How have they overcome challenges in the past, using what tactics, strategies and partnerships?
- Who are the main indirect and direct actors in the value chain with whom partnerships and collaboration could be developed to overcome key challenges?
- Do any of those risks constitute a business opportunity and if so, how?

4. OPTIONS TO REDUCE RISK THROUGH EXTERNAL SUPPORT

- How do external actors such as banks and credit agencies or development support programmes react to such risks?
- How do financial actors themselves evaluate risk of small and medium forest enterprises when making decisions on loans or investment?
- What might those external actors do differently to reduce the risks faced by locally controlled forest businesses?
- Use the risk identification and analysis as a foundation for discussion. What external interventions might provide solutions for overcoming these risks? Interview some external actors in the region to assess how they perceive the risk of the businesses in question.

5. CONCLUSIONS AND WAYS FORWARD

- How might risk self-assessment by locally controlled forest businesses contribute to business development in your context?
- What process of training or facilitation might be used to introduce a better understanding of risk to business and financial service providers and other development support programmes?
- How can a joint understanding of risks and costs be developed between policymakers, investors and locally controlled forest businesses?

6. REFERENCES

Include any background references used in the case study

manner. The findings highlight that although risks vary between businesses and countries, depending on specific contexts, several critical challenges are familiar (or indeed typical) to locally controlled enterprises globally. This suggests that the framework provided enough breadth and depth to capture detail across a number of contexts.

One of the main findings was the value of the participatory risk-assessment process itself in terms of increasing awareness and commitments across the business organisation and among key actors in its value chain. All except for one of the case studies were group businesses. The assessment highlighted the challenges business managers face in convincing their members – who may be quite new to working in a group – of the benefits of the business model. The exercise brought together participants from different levels in the business, such as business members, managers and key actors in the value chain, and enabled them to discuss risk-management strategies together. This provided important insights from different perspectives and provided an opportunity for actors to identify their own role and potential contribution. It helped business members from the local community see that they too have the power to find solutions for their business, creating a sense of ownership and building confidence among the business members and their leaders. It also helped participants to see the value of using their own risk assessments as a tool for communicating with decision makers and/or business partners to get more support for the actions they were proposing to improve the enabling environment.

1.4.2 Developing a risk-management toolkit based on the findings

The discipline of enterprise risk management has emerged in response to major business scandals in the late 1990s and early 2000s in Europe and the USA, prompting regulations that make risk management mandatory to public companies and 'public interest entities' such as banks (Sadgrove 2015). As a result, there is a whole field of expertise dealing with business risk management (eg see Damodaran 2007; Hopkin 2014; Sadgrove 2015). However, these tend to be focussed on the context of developed country corporate or SME sectors. They offer thorough guidance for risk managers, but are less suitable for the types of contexts or the nature of business complexity and diversity that are the focus of this book.

The FAO's MA&D approach and the International Labour Organisation (ILO) guides (eg see ILO 2006 and ILO 2015) for SMEs and business associations are more suitable for the context of locally controlled forest businesses. However, the sections on risk assessment are either integral to the whole approach or overly brief – rather than a stand-alone comprehensive analysis of risk and selection of management options to address risk. Our research suggests this is where most businesses get stuck and need more guidance.

The participatory risk self-assessment carried out for the cases studies in this book have highlighted the need for more guidance on how to integrate a routine of risk assessment and management into overall business planning. However, to take this forward, practical tools will be needed in addition to the overall framework of analysis – particularly tools related to increasing awareness of different options and techniques to manage risks more effectively. This will be the focus of a forthcoming collaborative effort between members of the Forest Connect alliance to develop and test a risk-assessment guide containing tools for developing a proactive approach to risk management for locally controlled forest businesses.

1.4.3 Introducing the case studies

The cases studies in this book were selected by staff of the Forest Connect alliance management team based on their knowledge of partners working with these specific countries and businesses (see Table 1.4). There was a specific emphasis on covering all three main tropical forest regions – Africa, Asia and Latin America – and including a mix of countries involved in the Forest and Farm Facility programme and where Forest Connect members are actively supporting local businesses. While the original intention was to only include wood production/processing businesses, a couple of NTFP businesses were also included, as these were simply too interesting from the perspective of risk management to leave out. For example, the enterprise in the case study from Cambodia is on the verge of expanding into two new product markets and has managed to secure a soft loan from an impact investor to do so. This move exposes the business to new risks but is also a potential opportunity. In the case of Ecuador, the two case-study enterprises focus on another NTFP, bamboo, but provide an interesting insight into how these two businesses in the same value chain are navigating a challenging macro-economic context affecting key decision making over land and resources, with ramifications for locally controlled businesses.

Each of the case studies in this book provide fascinating insights – not just into the many different challenges these entrepreneurs deal with on a daily basis, but also into their intelligent entrepreneurship and ability to seek out new opportunities.

Table 1.4 Summary of case studies presented in this book

Chapter	Country	Name of business	Main product or services
Chapter 2	Cambodia	Mondulkiri Forest Venture (MFV)	Honey, resin and bamboo production and processing
Chapter 3	Ecuador	Allpabambu (AB)	Bamboo production and processing, technical services
Chapter 4	Ecuador	Asociación Río 7	Bamboo production and processing
Chapter 5	Guatemala	Fedecovera forestry division (Federación de Cooperativas de las Verapaces)	FSC-certified timber, forestry management and marketing services
Chapter 6	Guatemala	Impulsores Suchitecos de Desarrollo Integral Sociedad Civil (Suchitecos)	FSC-certified timber production and processing, transport and equipment services
Chapter 7	Kenya	Kisii Tree Planters' Association (KTPA)	Timber
Chapter 8	Kenya	South Coast Forest Owners Association (SCOFOA)	Timber
Chapter 9	Vietnam	Association of Quang Tri Smallholder Forest Certification Groups (AQTSFCG)	FSC-certified timber



Traditional methods for harvesting honey are still used in the Mondulkiri Forest

Cambodia: Mondulkiri Forest Venture

Improving the livelihoods of forest-dwelling communities

by Emmanuelle Andaya

The Mondulkiri Forest Venture (MFV) is a young but growing community-harvested NTFPs business. It aims to improve the livelihoods of forest-dwelling communities and sustainably finance community forest conservation activities. This chapter describes the outcomes of a participatory self-assessment of risk workshop. It enabled MFV and community members to better understand their business and how local and external risks might affect its success. It also engaged with external actors to understand their role in mitigating these risks. Although MFV faces many challenges, its success could lead to greater support for locally controlled forest businesses in Cambodia and ultimately help develop the country's NTFP industry. Knowing the risks and planning how to mitigate them is key to steering MFV's business through a challenging terrain.

2.1 Context in which Mondulkiri Forest Ventures (MFV) operates

2.1.1 About MFV as a business

The Mondulkiri Forest Venture (MFV) is in the very early stages of developing into a full-blown trading and processing business for community-harvested non-timber forest products (NTFPs). The mission of the company is to improve the livelihoods of forest-dwelling communities and to sustainably finance community forest conservation activities, specifically financing forest patrols and monitoring NTFP harvests. It began in 2007 as a community honey enterprise in two villages, as an approach employed by the World Wide Fund for Nature (WWF) to directly engage local communities in biodiversity conservation. In 2014, with the aim to upscale community enterprises to demonstrate greater economic and conservation impacts through NTFP-consolidated marketing, it was expanded to include other communities that have started to form community-based enterprises specialising in oleoresin¹ and bamboo.

MFV is owned by 13 community-based NTFP-collector groups, composed of four honey groups, six resin groups and three bamboo groups found in nine local forest communities, covering over 31,329ha of forests and involving over 550 individuals. The group members used to harvest and sell NTFPs individually but are now consolidating their efforts to supply NTFPs to MFV. The groups purchase and consolidate the products from group members and other collectors, which they then deliver to MFV. Each group functions like a cooperative, with its own by-laws, capital and benefit-sharing systems but are not legally registered entities. Each group, represented by one member, owns at least one share of MFV, issued at a value of US\$100. The community shareholders own a total of 13 shares.

1. Oleoresin is a natural or artificial mixture of essential oils and a resin.

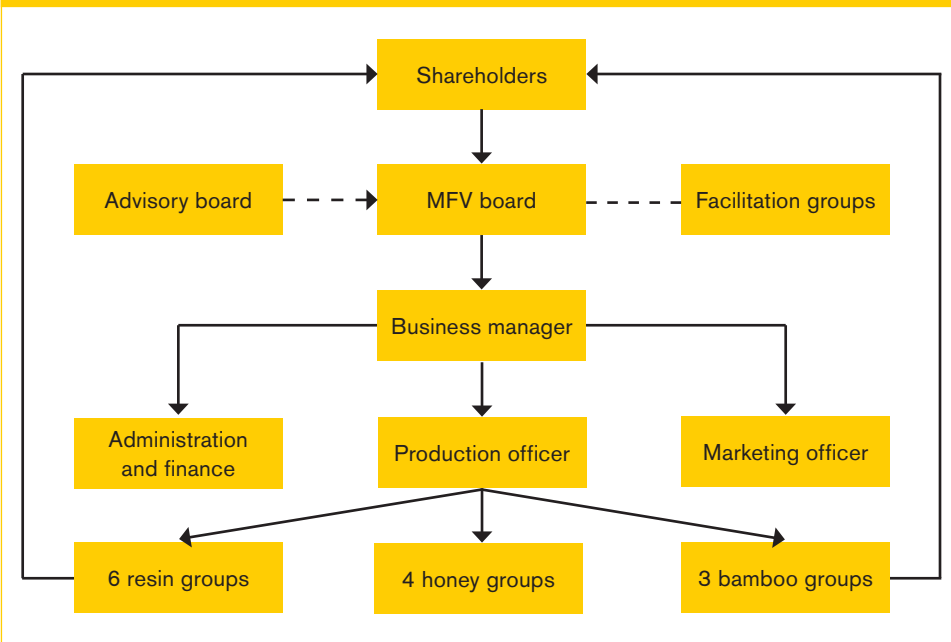
Membership and shares to the MFV are only open to groups. Each group needs to pay a one-time payment of US\$50 to become a member. They submit an application, which is approved by the board of directors, local authority and the community forest (CF) management committee. A benefit-sharing plan has been designed to allocate profits from MFV sales as follows:

- 5 per cent for the CF management committee towards management of the resource base (such as patrolling and managing the community forest);
- 40 per cent as capital to be reinvested in MFV to cover costs and savings;
- 38 per cent to go back to the producer groups' members;
- 10 per cent for operational costs, and
- 7 per cent for expenses related to the board of directors, for meetings and other work.

This allocation has been decided by the 11 directors with the help from NGO partners.

Overall strategic guidance and managerial oversight of MFV is provided by the board of directors who all come from the community member groups, representing the different product groups (bamboo, honey and resin). The MFV board is led by an executive committee, composed of five representatives from the board of directors, who are delegated to address operational issues of the enterprise. An advisory board composed of representatives of partners from NGOs, the private sector and government agencies is still to be convened. Potential members have already been nominated and their acceptance is still pending. The day-to-day operation is currently managed by a marketing officer and full-time salesperson. They are still in the process of hiring a business manager.

Figure 2.1 MFV business structure



In 2015, through the intervention of WWF Cambodia and WWF Switzerland, MFV received a loan from the Swiss State Secretariat for Economic Affairs (SECO) through the WWF Switzerland Impact Investment Programme. The soft loan of CHF90,000 is repayable in three years, with an interest rate of 6 per cent per year. This loan was made to WWF Switzerland who manages the loan on behalf of MFV.

2.1.2 Legal status and license to operate

MFV was registered at the Ministry of Commerce (MoC) in 2014 as a private limited company. This business type was chosen as it allows community members to operate a shop, and to generate and distribute profits among shareholders. It also enables them to trade their products beyond the community vicinity. The permit allows the company to operate in Cambodia but does not allow for direct import/export activities. The registration includes a licence from the MoC and a licence from the taxation department. MFV is obliged to pay taxes on a monthly or yearly basis to the provincial tax office. In Cambodia, there are no laws that recognise social enterprises as a distinct type of business; therefore there are no specific incentives or special policies (eg tax reductions) related to them. Should MFV decide to export, it can upgrade its registration to an 'Option 3' licence.² However, the licence alone does not permit the transportation of products. As MFV is dealing with forest products, it needs a separate permit for transport from the Forest Administration, especially if dealing with high-volume products such as resins and bamboo.

The products traded by MFV are collected by its community shareholders from state forests close to their villages, where they have traditional access rights for subsistence and for livelihoods. However, this traditional right does not include the right to exclude others from using that land and does not secure the resources from other overlapping land uses, such as economic land concessions (ELC) or social land concessions (SLC).³ Community-forest management rights known as community forest agreements (CFAs), under the Community Forestry Programme of the Forest Administration and Ministry of Environment (MoE) give community's the right to manage and protect the designated area just for the community's use.

The sub-Decree on Community Forestry Management of 2013 protects the rights of communities over traditional lands to manage and gain benefits from the forest resources, under conditions of an approved CFA and community forest management plan. This policy is found on Cambodia's National Forest Programme that serves as a roadmap for sustainable forest management, which includes the long-term goal for the forestry sector to provide a significant contribution in advancing the livelihoods of rural people as well as contributing to the nation's over-all economic growth and environmental protection.

Under the CFA, the community members' rights include customary user rights prescribed in Article 40 of the Forestry Law; the right to barter, process, transport and sell NTFPs as described in Article 40(B) in point 5 of the Forestry Law; the right to appeal decisions that impact CFA-community rights; and the rights granted under a CFA within a specific area that

2. Option 3 is a license that also allows the business to import and/or export products.

3. In Cambodia, an economic land concession (ELC) is a long-term lease that allows a concessionaire to clear land to develop industrial-scale agriculture. A social land concession (SLC) is a legal mechanism to transfer private state land for social purposes to the poor who lack land for residential and/or family farming purposes (sub-Decree #19 on Social Land Concessions_030319). Source: www.cambodiainvestment.gov.kh/sub-decree-19-on-social-land-concessions_030319.html

shall ensure the sustainable use of forest resources (Pinto 2014). The agreement provides the community forest management rights for 15 years. The agreement can be renewed or – should the state require the land for other purposes that it deems to provide a higher benefit to the kingdom, as the law states – the land can be appropriated for other uses. For forests located in protected areas or conservation areas, communities have the possibility to establish a community protected area (CPA) or a community conservation forestry area (CCF). The CCF is a model of community forestry within the Forest Administration's protection forests, which are subject to conservation goals. CPA on the other hand is a modality for community forests within protected areas under the control of the MoE, under which local communities may manage specially zoned areas for non-timber forest production.

Through the honey pilot project initiated by WWF Cambodia and the Non-Timber Forest Products Exchange Programme for South and Southeast Asia (NTEP-EP) Cambodia in 2007, local communities were engaged in forest management and provided with some limited user rights. The MFV shareholders currently hold two CPAs, while an application for another CPA and CCF are still awaiting approval from the MoE and Ministry of Agriculture, Forestry and Fisheries (MAFF). Out of the six CPAs and CCFs applied for, two agreements have been signed (Srae Thom and Khnheng CPAs). Two already have approved management plans but are still waiting for the signed agreement (Puhung Putung and Srae Y CPAs). The other two applicants for CPAs are in the process of drafting their management plans. To facilitate community access to the resources, while awaiting the completion and approval of the management plans, WWF Cambodia has proposed an agreement with the Forest Administration to include the final agreement for the CCF in the protection forest as part of the protected forest management plan. The Mondulkiri Protected Forest (MPF) management plan has been drafted and awaiting approval by the FA and MAFF (Maling 2015).

2.1.3 Products/services and markets

The company currently retails and trades wild honey and dipterocarp oleoresin; and soon also bamboo poles, bamboo waste products and finished bamboo products. Wild honey, while it has the smallest volume, is the product whose value chain is already well established. It also has a ready market within the country, where demand is higher than the supply. It is currently the main product that generates income for the enterprise. In 2013, the demand for wild honey was approximately 8000kg in the capital of Phnom Penh alone. MFV signed a contract to supply 3850kg for 2015 to the CBHE (Cambodia Federation for Bee Conservation and Community-Based Honey Enterprises). In 2014, the federation supplied 50 per cent of the demand. There is still an opportunity for the MFV to fill in the market gap. To address this gap, the honey groups have been working to expand their supply base. They have been providing training to other villages that are outside of WWF project areas (eg Pulong and Pou Troum). There are plans to continue expansion to other honey-harvesting villages alongside expanding the MFV membership.

The company manages a retail shop and a honey-packing centre in Sen Monorom, the capital of the province. The shop mainly caters to tourists, local government offices and local partners. Community members used to take turns to sell the products in the shop for a minimal daily fee. Since August 2015, they have a full-time salesperson and a marketing officer in charge of selling.

To access the national honey market, MFV engages in the existing value chain that the Mondulkiri Wild Enterprise was part of before it became MFV. The company sells the honey to the CBHE, which has been consolidating honey for its national marketing partners, the Center for Study and Development in Agriculture, Cambodia (CEDAC) and NatureWild. Both companies are social enterprises based in the capital Phnom Penh. CEDAC sells honey through their 8 retail stores in Phnom Penh and in Siem Reap while NatureWild sells through its shop and to other redistributors and retailers in the country. The two social enterprises are also working to access export markets and have made trial shipments to buyers in Japan and Singapore.

MFV is also to become a marketing conduit for the Dipterocarp oleoresin collected by its members. The oleoresin is used domestically as an ingredient for boat-caulking while the majority of the supplies are transported to neighbouring countries, Thailand and Vietnam, where some are used for paint and coating industries. Most supplies are re-exported or are repackaged for refining to Singapore and re-exported to Germany, France and India. There they are used in various industries, including Ayurvedic medicine, essential oils and fragrances.

The communities were mainly supplying raw, non-filtered oleoresins to traders and consolidators in the province until they entered a contract to supply filtered oleoresin to a company engaged by their support organisations. The resin is collected at the resin groups' buying stations, filtered and packaged per 100kg in plastic bags and sacks. When there is enough stock for a truck load, the company sends a truck to transport the resin to their warehouse in Sen Monorom before transporting it to Vietnam.

The current profit contribution of oleoresin to MFV is marginal as the local buyers are also trading the raw materials, instead of doing any value addition. A market has not yet been found that values the unique selling proposition of the MFV for resin which is collected based on a resource management plan, filtered and quality controlled. But through its support-NGO partners, MFV is trying to connect directly with manufacturing companies abroad. A Swiss cosmetics group is currently doing tests on the essential oil distilled from the oleoresin. If this is successful, MFV will need to a permit to export to Switzerland. Otherwise, it will have to continue collaborating with an existing exporter. Through project support, MFV is also exploring ways to process the oleoresin into finished products like varnish, firelighters and boat sealants, although they will still require technical support to process the oleoresin.

Finally, MFV is preparing to trade bamboo, a resource with no current commercial value for the villagers but with high potential for trading on international markets. In MFV's financial projections, the business's success is highly



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The community uses simple value-addition process such as filtering the resin

dependent on the income generated from bamboo, counting on the high-volume demand on international markets. Up to 48 per cent of its projected gross profit for 2015 is from bamboo and up to 78 per cent in 2017 (MFV 2015).

Through the intervention of the WWF Cambodia, MFV signed a memorandum of understanding for trade and training support with the founder of Bambusa Global Ventures (BGV). BGV has over 20 years of experience in international bamboo trade and manufacture and has just established a research and production centre in Kaoh Nheaek, a town central to many potential bamboo suppliers in the province. In the short term, only poles and slats shall be produced by MFV but the long-term plan is to produce furniture also. BGV has also trained community suppliers to make chopsticks and to collect bamboo waste for biochar (charcoal used as a soil amendment). There is also an opportunity to explore a joint venture with the local government, which indicated some interest in this industry during a consultation meeting. As with oleoresin, bamboo suppliers, the MFV and the buyer still need to agree on the price.

2.1.4 Production, sales and profits

The company is still in the very early stages of development and has not generated profits. Due to the difficulty in finding qualified operational personnel, the company has not achieved full operations and therefore is not yet able to meet the sales targets in its financial projection. The wild honey part of the business is operational but the oleoresin trade is still in transition from directly supplying to traders to consolidating at community level. The bamboo production chain is still in its development and pilot stages.

The company has faced some market and operational blocks in its early operations. The oleoresin buyer recently suspended its contract as it had not received its permit to transport. Another reason for the contract suspension was the inability of the community suppliers to meet volume and quality requirements. The contract was for 60,000kg but they only delivered 10,000kg. Traders are competing for supplies at the community level, providing higher prices. The management of advance payment has also been a problem. The 50-per-cent down payment given by the buyer was not enough to purchase the supplies from the communities. Some local community leaders also breached trust as they used the advance payment for personal purposes.

As MFV's marketing partner, NatureWild is currently looking for other buyers and has received an inquiry from Thailand for Mondulkiri oleoresin, after the product's quality met the potential buyer's requirements. The buyer also signified interest in pure *Dipterocarpus alatus* resin for an additional US\$0.50 per kilogram. However, the collectors found there was not enough economic incentive to separate the collection of resin according to tree species. Furthermore, the community quoted a price 57 per cent higher than the price of supplies of the same quality of product coming from Laos or Vietnam.

MFV's memorandum of understanding with BGV has also progressed slowly due to factors on both sides. The establishment of the bamboo collector's group moved slowly, as the community members had to work around their farming schedules (their traditional livelihood) and there was still the question of the price, and whether it would cover their

labour costs. The buyers also took a long time to process their permits to operate and transport, lessening the pressure on the supplier groups to quickly organise. However, recent news indicates that price negotiations are now progressing and the first bamboo harvest is being coordinated, which will generate the first income from bamboo.

2.2 The enabling and operating environment

The community enterprise is based in the largest province of Cambodia. The population of 67,300 (CDC 2016) is composed of the indigenous community, Bunong (52 per cent), Khmer (35 per cent) and other ethnic groups (13 per cent). Livelihoods are mainly based on agriculture (99 per cent), NTFP collection (90 per cent), livestock (90 per cent) and fisheries (80 per cent) (Meynell 2012). Off-farm labour employment has also become an alternative source of income.⁴ Mondulkiri has been one of the most sparsely populated provinces in Cambodia, but it is now experiencing a steady increase in immigration as the vast natural resource base attracts development activities into the province. Many immigrants come to the province for cheaper land as well as employment opportunities.

The province has become increasingly important to the economic development of Cambodia, and its location in the northeast of the country, bordered by Vietnam, makes it strategic for cross-border trade. Cambodia signed a bilateral agreement with Vietnam on cross-border transport, covering five international checkpoints: Paokor-Mokbay, Prek Chak-Ha Tieng, Phnom Den-Tinh Bien, Tropeang Plong-Smach and Tropeang Srae-Valy. The Ministry of Public Works and Transport (MPWT) has requested the Council of Ministers to add Dakdam-Boprang as an international checkpoint (NSDP 2014). It faces large-scale economic developments, mainly through ELCs, with industries including rice farming, cassava and rubber plantations, mining and hydropower. Ecotourism is also a fast-growing industry in the province. Factories operating large-scale production include a purified drinking-water factory, ice-production factory and a coffee-milling factory. There are also three resin consolidators found in the town centre of the province (CDC 2016). Unfortunately, the vast rich forests of the province and its strategic location make it also a target for illegal logging – many ELCs have also been granted without proper land-use planning (Ledecq 2015).

Much effort is being made to protect this landscape, whose biodiversity is of high importance in Southeast Asia; it is one of the most balanced natural landscapes (WWF Cambodia 2015). Over 65 per cent of the province's forests are designated as protected areas or protected forests, including the Mondulkiri Protected Forest (MPF), Seima Protection Forest and Phnom Prich Wildlife Sanctuary. With a total of approximately 1 million hectares of protected forest, it is one of the largest intact tropical dry-forest ecosystems in Southeast Asia (Maling 2007).

Despite this, Mondulkiri remains one of the poorest provinces in Cambodia with high poverty rates (26.1 per cent poverty rate in 2011) – only slightly behind the highest poverty rates in Oddar Meanchey province (27.9 per cent) and Ratanak Kiri province (at 28.6 per cent) (NSDP 2014). In the National Strategic Development Plan 2014–2018, the northeast

4. 'Off-farm labour' here refers to all work done outside the individual's own farm, such as hired labour.

provinces, one of which is Monduliri, are of particular concern. These provinces are predominantly rural and are to an extent 'un-integrated' in the national mainstream (NSDP 2014). Monduliri is also considered to be one of the provinces in the region vulnerable to flooding and drought (UNDP Cambodia 2011).

The poor economic condition of the local area creates a condition of high competition for both supplies and labour. The need for immediate income by the community NTFP collectors hinders them from committing to supply their harvest to the community consolidation group, which usually lacks capital to immediately and completely purchase their products. Local traders pose an important competition for MFV and local consolidation groups for product supplies. Traders usually only buy a few times during the year, but when they do buy, they buy at very high prices, destroying the regulated prices between the community and their steady buyers. For oleoresins, traders provide an advance payment direct to collectors to ensure that supplies are sold to them. They also threaten collectors with lower prices if they start selling to other buyers. For bamboo, the collectors still need to see whether the benefits to be derived from harvesting bamboo will equal if not exceed the income they derive from their traditional livelihoods or from off-farm labour. Business links and trust have yet to be secured in particular for resin and bamboo production.

Communities collecting NTFPs do not only face threats from illegal loggers, they also have to confront competition for land use and for government support against priority products or industries. NTFPs are not a priority industry and are only seen as benefiting a small part of the country's population and therefore attract minor interest at the national government level. There is a prevailing view that the NTFP industry involves many products that are traded separately and studies are scarce that could provide information on overall NTFP value contributed to the country.

The MVF enterprise also has to face weak, downward-turning industries and domestic markets for resin and bamboo. Most resources are exported raw or semi-processed abroad. In the National Strategy Development Plan 2014–2018, one of the challenges identified was a weak domestic value chain for some priority industries, which does not bode well for non-priority industries like NTFPs. For example, in the priority rubber sector, there is a lack of human resources, budget, material, equipment and transport means for the products. There is also limited infrastructure, marketing and technical support, especially in product development, testing and quality control.

The National Strategic Development Plan identifies the following forestry-sector challenges:

- Lack of regulations; hence, limited law enforcement
- Lack of awareness about the importance of forestry resources among relevant stakeholders
- Shortage of incentives, equipment and human capital/knowhow to perform the tasks in remote areas
- Challenge of illegal logging and land grabbing since offenders constantly change their methods of poaching timber products, transportation and clearing forest land
- Shortage of cooperation and involvement of the local authorities and relevant institutions
- Influx of migrants into protection forests and wildlife conservation areas

Source: NSDP (2014).

Information about the underdeveloped NTFP sector and its market is limited. A lack of manufacturing or processing industries for NTFPs harvested by villagers limits local demand. And even if there were factories for resin and bamboo that could absorb the raw materials, the current inefficient production and high costs of transport would result in uncompetitive prices on the international market (Chey 2015). The main markets are abroad where products are processed into higher-value products. Traders only transport or export them raw or semi-processed. This means that the collector and the country derive the minimum benefit from these resources. Scarce market information also means that value chains are mostly monopolised by a few traders. MFV's private-sector partners have had to contend with the long process of business registration and permit procurement, which has affected the operations of the communities that depend on them.

On the positive side, relevant government agencies have already recognised the opportunities for forests to contribute to livelihoods' development as well as revenue streams for protected areas. The Ministry of Environment created another green buffer zone through the protected area for the communities, a strategy whereby protected forested areas are provided to local communities and ethnic groups for sustainable management and (local) consumption of non-timber forest products (NSDP 2014).

Also, there is an ongoing initiative to develop a landscape approach to land-use planning in the Cambodian Eastern Plains Landscape, of which Monduliri is part. It will help inform land-use planning in the region. It includes mapping natural capital as well as the evaluation of NTFPs in the landscape (Maling and Ledecq 2015).

Impact investing is another movement, this time at the international level, which is addressing scarce financing opportunities for community enterprises. WWF Switzerland piloted its social impact investing programme in 2014, choosing to support innovative enterprises that can create sustainable livelihoods for communities and equally important, generate sustainable financing for forest conservation. The programme is supported by the SECO Start-up Fund, a lending instrument of the Swiss State Secretariat for Economic Affairs (SECO).

2.2.1 The value chain

The value chain that MFV is part of includes very little value addition. It is influenced by network partners and by the very weak resin and bamboo manufacturing industry and market in the country.

- **The suppliers:** the first set of actors in the value chain for MFV are the community collectors: over 550 individuals, mainly indigenous peoples who have traditional rights to harvest NTFPs. They do not realise it yet, but they play an important role in ensuring the supply, the quality and partly in the cost efficiency of the product. As the value of the product is dependent on its quality, and the quality and sustainability of resources are highly affected by the harvesting process, the community plays an important, albeit not acknowledged, role in the value chain.
- **The traders:** local traders have traditionally financed the collection. They pay sums of money in advance, usually used by collectors for gasoline and food for themselves and the family they leave at home in exchange for exclusive access to the harvest. The

traders collect the harvests at the village level and transport them to the town centre to a provincial consolidator/wholesaler/processor. They have some marketing information.

- **Community-based NTFP collectors groups**, formed through livelihoods projects of supporting NGOs, were established to take the place of the trader in consolidating the collection, with the objective of retaining value for the collectors themselves. However, the lack of both capital and clear ownership of the collectors' groups prevents them from securing the supply base, so they still have to compete with the traders.
- **Provincial wholesalers/exporters**: these provide capitalisation, transportation, warehouse storage and in some cases minor processing. Depending on the end market, these wholesalers transport the supplies to the capital or to borders, where importing companies pick them up. MFV can be considered as a wholesaler and must compete with other wholesalers of resin. For honey, it is the provincial wholesaler.
- **Processor/manufacturer**: these are direct buyers from MFV that add value to the raw materials for either domestic or export markets. MFV currently deals with two processors/manufacturers:
 - **Bambusa Global Venture (BGV)** is the main partner for the bamboo enterprise. While the founder has over 20 years' experience in the bamboo industry, their business is newly established in Cambodia. They are still in the process of procuring their permits to operate and to transport. They established a research and production centre in Kaoh Nheak, near the main source of the bamboo. They provide training to community producers and lease some equipment. BGV collects the bamboo directly from the community workshops.
 - **NatureWild** is a social enterprise established to provide marketing support to community enterprises in the national and international markets. It is the main marketing partner of MFV based in Phnom Penh.
- **Export markets**: export markets, specifically in Vietnam and Thailand, are mainly manufacturers of raw or semi-processed materials coming from Cambodia. They drive the demand for forest products.
- **Support services**: the business partners (BGV, NatureWild and CEDAC), finance support provider (WWF Switzerland), government agencies (MoC, MoE and FA) and the NGO partners (WWF and NTFP-EP) provide the important support services. They provide markets and transportation necessary to move the products from the community as well as for cross-border exports. They provide capital necessary to get the business off the ground. They provide technical trainings. The NGO partners provide enterprise management technical support, financial support and market information. The government agencies, Ministry of Commerce and the Forest Administration are responsible for the operating and transport permits. Both require applications for these permits at the national-level offices.

2.3 What does MPV see as the main barriers and risks?

In November 2015, the executive committee of the board of directors (the MFV board), two MFV personnel (ie the marketing officer and the sales and production assistant) and seven collector-group members participated in a participatory risk-assessment and mitigation workshop on two separate days. The executive committee was composed of two representatives from the honey groups, two representatives from the resin groups and one from the bamboo groups. The seven collectors came from different villages representing the honey, bamboo and resin groups. Most of them played roles in the consolidation of products at the community level and in delivery to MFV. The meeting with the executive committee and the MFV personnel was held separately to that of the collector groups in order to allow for perspectives from both management as well as community-based collector groups to be presented. The risks identified by the two groups were closely similar, with slight difference in the importance ratings.

2.3.1 Market risks

From the perspective of the community members, the limited access to markets and the unstable demand for their products pose a high risk to their revenue flow. The lack of capital at the community-consolidation group level to purchase supplies from the community also creates a risk to the access of resources, which is made worse by the presence of traders in the community who compete with them for the forest products. This competition also creates disparity in prices at the community level. On the other hand, having the capital at the MFV level, but not having the appropriate financial management skills can also pose a risk. All these threaten MFV's business relationships and operational capacity. From the perspective of the executive committee, limited market access and instability of prices are seen as high-impact risks, rated at 9 out of ten. They see that unstable sales lead to the weak commitment and declining interest of the community. For the community members, the risk of accessing the market is not immediate, and they rated it at 5 out of 10. According to them, because of MFV's structure, they can now start to access capital and some markets and must build on these improvements. From the supply side, there are times when they have surpluses and shortages. For honey, they see the market as established already. However, they have not fully accessed markets for bamboo and resin, so they feel that they are not yet able to judge the prevailing market conditions.

2.3.2 Internal organisational capacity risks

Being at the very early stage of enterprise development, there are risks posed by MFV's current internal organisational capacity. There is a lack of marketing capacity and high overhead costs (but slow cost-recovery), which all translates to slow revenue flows. The internal system that links the suppliers to MFV is influenced by various factors and is



The Mondulkiri Forest Ventures shop in Sen Monorom, Mondulkiri province

still weak. Factors include the socio-economic conditions of the community members, competition from traders, lack of awareness of MFV, lack of communication systems and lack of capital, to name a few. There is also the risk of limited production control that affects MVF's access to resources and their business relationships. The inability to control production prevents MFV from delivering its contract requirements, endangering the relationship with their regular buyers.

The community members and the board rate this threat as between 8–10, citing that while they have received training, they have not yet put in practice what they have learnt. They also say that not all members are able to understand the MFV business. But from their point of view, while the threat is high, it is still manageable as they believe the board members are able to learn how to monitor the business, especially its finances. The board members mentioned that some of them already have some accounting skills and so have the confidence to learn more skills.

There is also the risk of not finding the right people with the capacity and the commitment to manage the enterprise and promote the products. The community members admit that they do not yet have these skills and that they will rely on supporting agencies to help them in the recruitment of a business management team. Currently, MFV is operated by a marketing officer and a sales person. They have yet to hire a business manager, a production officer and a finance and administration officer for the business to be fully operational. They also need to ensure they find someone who will not dominate the board or take advantage of the lack of enterprise management capacity of the board.

2.3.3 Institutional/legal framework risks

From the community's perspective, the risk posed by the institutional and legal framework is the weak enforcement of forest protection. Some said that they have been made into scapegoats for illegal logging, which they find discouraging.

In relation to procurement of permits necessary for the business operation, the management team says that in theory (or at least on paper) the process is easy. However, in reality, they have to face many obstacles and it could take up to six months before they receive all the required operating permits. For example, in the case of MFV, not all board members have the documents required for the permits, so they will have to wait until all those are completed. Delays also affect their buyers who also have to go through lengthy procedures to acquire operations and transport permits to transport products from the community to the processing facilities and markets. In the case of BGV, there was no precursor for this type of business and therefore, the provincial government does not yet have the protocols or system applicable to it. BGV applied for operations and transport permits in August, although BGV has been in communication with the FA and related government agencies for more than a year.

The community enterprises see themselves as heavily dependent on external support groups as they do not have the capacity to process and procure the necessary permits needed for the business. And when prompted about the impact of the slow procurement of permits on their relationships with buyers, they agree that they are affected by it.

They also see that the slow progress of project and the intermittent meetings with the technical support project staff lead to the slow implementation of plans and contribute to the loss of interest among some community members (although it was not raised by the community members that some project activities had to be rescheduled to accommodate their traditional livelihoods, such as the farming season).

The community members and their board members rate the risks posed by institutional/legal frameworks as 6/10 and 9/10 respectively. Through the help of the WWF, they have been able to secure access to their resources through the CPA agreements. But while they see that there are breakthroughs in land access, there are still some difficulties with operations permit applications. MFV is also registered at the MoC, and has received approval from the FA for now. Through the project facilitation, MFV has received support from technical government agencies. However, it has not yet secured the papers for its bamboo group. Also, it is unclear if the support from the government agencies and external groups will continue in the future. Moreover, if MFV's private sector partners do not obtain their permits to operate or to transport, their businesses will also suffer as they will not be able to sell their products.

2.3.4 Natural resource risks

For the communities, the impact of climate change on their production capacity and the unpredictability of their supplies, specifically for honey, pose a significant risk to their revenues and business relationships. They are also aware of the uncertainty of land access without the support from NGOs. They also cite the problem of resource degradation and illegal logging as major risks to their business. Besides vulnerabilities caused by external factors, they also identified an internal risk, that of not having strong control of their production processes or access to resources. Finally, being a company founded on the principles of sustainable production, they see the risk of missing out on market opportunities due to the need to balance production with sustainability.

While MFV has the potential to target the 'green' market, there is still not enough marketing awareness or expertise among the management staff and the board of directors to take advantage of this positioning. For now, their focus is on finding traders and buyers and to increase sales. However, through the support of WWF Cambodia, on which marketing is still dependent, MFV will be able to find potential 'green' buyers.

They rate the natural resource risks between 6/10 and 10/10. For some members, not having enough supplies simply means that they only sell whatever is available. But for others, they understand the importance of having enough supply to meet the orders they have committed to and also to meet their sales targets to keep the business going. In the past, they have had experience of signing contracts but failing to monitor the supply base, and therefore not meeting their contract requirement and target sales. This led to the buyer imposing a fine (indirectly, by reducing the buying price) which consequently damaged the business relationship. MFV admits that there was a market demand but that they failed to secure the supplies by not managing their members. MFV realises that it needs to secure supplies to meet its revenue targets. The community also understands that if they cannot prevent illegal activities, like illegal logging, MFV will fail as the business depends on these resources.

2.3.5 Technology, research and development

The MFV collector groups who participated in the workshop cited the lack of skills to apply new technologies to meet required market standards and the lack of value-addition skills as having an impact on their revenues. They rate its impact on the business as medium to high, 7/10 to 8/10. They realise the importance of technology to meet the requirements of the market and also to increase the value of their products and therefore increase their revenue. Not having value-addition skills also limits the markets they are able to access.

But citing their current achievements, where they are now able to package honey, the MFV collector groups see the possibility of being able to overcome this risk. According to the producer groups, they already have the technology necessary for resin processing and quality control as they have received both training and equipment for basic filtration. To an extent, they are able to meet the needs of their current buyer. However, there is some resistance among collectors to applying new technology, as they do not see the economic incentive as enough to change their processes. This results in another risk, which is competition from international suppliers that can offer the same quality products at a lower price.

2.3.6 Socio-cultural factors

The community members see the risk posed by socio-cultural factors as low to medium-high, 4/1 to 7/10. First, they see that the lack of basic entrepreneurial skills of members may hinder the operations of their business. Second, while they believe that other community members would like to participate in their groups, their pressing economic needs prevent them from doing so. If the collection groups should not be able to purchase the community members' harvests immediately due to a lack of capital, those individuals will be forced to sell to other traders. The higher prices offered by traders during peak seasons to secure trade or to dissuade them from joining the group, also lure them away from selling to the group. Traditional livelihoods, such as farming and other sources of income (ie off-farm labour) also pose a risk in terms of competition for the labour for NTFP collection. However, for some members, they do not see this as much of a threat, as they see that the strong bonds in the community will be useful in strengthening commitment to their community enterprise.



© MFV

Dehumidified honey ready for bottling

Table 2.1 Summary of risks identified by community enterprise members

Area of concern/ factors that influence risks	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity	Importance score (where high = 10, low = 1)
Market	Limited market access/ unstable market demand	Competition with traders for supplies	Different pricing among supplier groups			Lack of capital to purchase harvests Buyer's down payment not enough	8–9
Internal organisation/ capacity	Lack of marketing capacity High overhead costs (shop etc) but slow cost recovery	Lack of production control and commitment of community suppliers			Lack of promotion/ capacity to promote product	Difficult to find staff with enterprise- management skills Lack of operational systems Lack of enterprise- management skills of key leaders	8–10
Institutional/ legal framework		Weak enforcement of forest protection		Difficulty in procuring permits for transport and/or operations for private sector (MFV's buyers)		Slow progress from project support groups Irregular meetings and one-time trainings (lack of follow-up and mentoring)	9
Natural Resources	Unpredictable supply volume (ie honey) Balance of market opportunity and sustainable supplies	Land access without support from NGO		Climate change Illegal logging Resource degradation Competing land use			6–10
Technology	Lack of skills to meet required market standards Lack of value-addition skills						7
Socio-cultural		Immediate economic needs of collectors	Misuse of capital or advance payment by committee members	Lack of appreciation of the benefit of working as a group by community members Competition for labour of collectors			4–7

2.4 What strategies and options can MFV use to manage risk?

According to the community members, they had not realised that what they recognise already as normal problems within their communities also pose a risk to the success of their business. The following sections outline the community's proposed solutions for the risks that they face.

2.4.1 Hire the right people

The community highlights the importance of having the right people. The board of directors and the personnel of the company is already in the process of hiring:

- A business manager, who will oversee the operations of the business and ensure links to markets,
- An accountant, to ensure that financial reports are up to date and in order,
- A production officer, to ensure that production volume and standards are met and to carry out quality control.

They also highlight the importance of having a competent marketing officer who is able to communicate well with buyers and advertise and promote MFV products well. However, the community members point out the difficulty in finding people with the relevant skills in the region.

2.4.2 Have a business plan and operations system

They recognise the need for a business plan they can understand and an operating system that will guide the business manager and staff. They also mentioned existing practices such as having quarterly meetings and reporting to support groups, and basic checks and balances (eg having two signatories for cheques). However, the board members do admit that they still do not review payment cheques before signing them. This creates the risk of a weak financial control.

2.4.3 Build capacities and apply lessons learnt

The community realise that they could draw on their experiences of their own small businesses or livelihoods to use in monitoring MFV and managing their own supply groups. They see the importance of building the capacity of the board members and the members in marketing, processing, packaging, financial recording and monitoring, and business planning. They admit that they have received training for these skills but that they need to pay attention and to practice what they learn. They also plan to develop capacity/knowledge in processing permits and in negotiating prices and standards on behalf of the community members. They cite their NGO partners as possible providers of capacity-building training.

It is important for MFV to ensure stable prices and increase product value in the future. To achieve this, they see the need for MFV to have the facilities, technology and skills to produce value-added products with the raw materials collected by the members.

2.4.4 Build and manage capital

To create strong commitment from the community collectors, and consequently to manage and control production and target volumes, the community collector groups need capital to meet the economic needs of their fellow villagers. They highlighted the importance of benefit sharing, and especially the actual distribution of benefits.

For the honey group, they have been purchasing regularly from collectors and practicing benefit sharing for two or three years, so they have established the collectors' trust. So, even if they are sometimes late in sharing benefits, the community members understand and are willing to wait, as they are sure there is benefit to be shared.

The chief of the resin group from Krangte village proposed building their own capital at the community level. For example, in his village, he proposed to use the KHR 2 million (US\$500) that they were able to raise from their sales as capital for the group. With increased capital, the resin group proposes that it competes with traders during peak seasons. The group know that traders will only buy once or twice, whereas the resin group will buy throughout the season, not just at peak times.

In addition, the producer groups have come up with a joint plan for raising capital at the community level to address budget constraints during critical periods such as harvesting, but also to ensure that social expectations and benefits are managed as the business grows. This will involve introducing an annual membership fee of US\$5 per member. A similar benefit-sharing plan to that of MFV has also been developed at the producer-group level.

2.4.5 Strengthen internal commitment and cooperation and external relationships

Building community relationships is a solution to address risks relating to supply access. The community members propose to encourage other community members to work together towards protecting forests and to participate in the enterprise. They recommend strengthening relationships within the community, and between MFV and communities. There is a need for the community to feel part and have strong sense of ownership of MFV. During discussions with producer-group members, it became clear that there is still a relatively low level of understanding amongst the collector groups about MFV and their relationship to it, and therefore also of the benefits and responsibilities of being a member. The proposed investment and benefit-sharing plan is meant to help address some of these issues. Having the MFV staff and board of directors visit the community and have direct contact with them can help achieve this. Community members also ask that support groups train them on communication and negotiation skills, which could help them to convince their fellow villagers to join the collector groups.

Beyond monetary benefits, they also understand the need to build trustworthiness of community members and their board, especially before accepting advance payment. They also see the importance of stronger communications within the community, to disseminate information and the benefits of working together and advocating for a community enterprise. They propose to increase price awareness and develop systems for benefit sharing. Beyond this, they also need to demonstrate non-monetary support (ie support in

forest patrolling during cases of illegal logging), to gain trust and show their relevance to the community members. These support mechanisms, they say, are already in their bylaws.

The community members also propose to expand their membership as well as areas of collection to increase their supplies to meet market demand while maintaining sustainable harvest limits. Although not yet in the existing plans, they plan to include expansion plans when faced with the problem.

Finally, they see the need to build strong ties with the government line agencies to protect their forests and facilitate their market access, like MoC, local authorities and the FA. They propose that NGOs train and facilitate them to build strong, direct relationships with these government agencies.

2.4.6 Partnerships and collaboration to overcome key challenges

MFV highlights the importance of the role of their partners. They propose that companies/buyers engage with the enterprise through commitments to purchase. They also look to their NGO partners (WWF, NatureWild, CEDAC, NTFP-EP, USAID and International Cooperation of Cambodia (ICC)) for support on overall capacity building on production and enterprise management.

The community recognises their role in the protection of their natural resources. However, they also see the importance of the intervention of government agencies and facilitation of the WWF in the protection of the natural resources, especially on issues of illegal logging and land concessions that limit the potential for area expansion.

2.5 What risks could also constitute business opportunities?

2.5.1 New community supplier groups

The community members identified the opportunity of expanding the number of their community partners. Existing community groups are still not able to meet the demand of their buyers either in volume or quality. This opens up an opportunity for other community suppliers to supplement the volume required and, if possible, supply the quality of product that the current groups cannot or do not want to provide. The benefit is that MFV would extend to other communities while stabilising the supply or production base of the business. This could also help MFV raise capital through membership fees and shareholders.

2.5.2 Microfinance institutions and financial literacy support programmes

The community collection groups require capital in order to manage their production and supply. They usually do not have enough capital to purchase all of the collectors' supplies, preventing them from having any control over the resources. Microfinance institutions and financing mechanisms involving long-term buyers could address this gap. Together with additional financing, there is also an opportunity for finance literacy groups to provide training and awareness-raising activities. This would help the community to make financial and business decisions when dealing with traders, to understand the benefits of working collectively and even to manage better their household finances.

2.5.3 New manufacturing businesses

The lack of domestic manufacturing industries for resin and bamboo offers an opportunity for investors and entrepreneurs. These raw materials are valued in outside markets for uses in different products. With accessible raw materials, local companies could take advantage of developing new products to be manufactured within the country.

2.5.4 Transport support services

One of the most important threats to the business is the lack of transportation. It affects market accessibility and increases costs. This could be turned into a business opportunity either for MFV or for the community, for example in the form of a transportation services business, where different companies could be serviced and economies of scale achieved.

2.6 How might external support help to overcome risks?

2.6.1 How do external value-chain actors react to MFV's assessment of risk?

External value-chain actors were interviewed to have an understanding of their views on the risks that the MFV faces and their possible role in mitigating them. These included the founder of BGV; the deputy chief of the provincial department of the Ministry of Environment; the ex-CEO and livelihoods adviser of the Eastern Plains Landscape Project of WWF Cambodia; WWF Cambodia's project manager; the representative of the loan provider WWF Switzerland; technical officers providing enterprise development support to MFV; and a Cambodia-based project support group initiating a project on private–public partnership (PPP) on sustainable forests and with ties to the European Chamber of Commerce.

These partners recognise that there are many risks to the community enterprise and that Cambodia is not the easiest country in which to set up a business, particularly a community enterprise. However, they consider these as calculated risks. Many of the risks are beyond the community's and the organisation's control. Yet these partner organisations see the need to support such community initiatives in order to reach the ultimate goal of developing a model that can provide for both livelihoods and forest conservation and generate interest from relevant institutions to support the NTFP industry. Small steps will eventually lead to leaps forward in due course.

BGV (as can be safely assumed for other private-sector actors) recognises the opportunities in having direct access to the community suppliers, and low competition in downward industries or manufacturing industries. However, despite these risks, as an entrepreneurial organisation, BGV finds ways to move forward with its businesses. Relationship building is also one strategy it employs. BGV built its processing facility near the community suppliers, which signifies a long-term commitment to sourcing products from the groups. It also engages regularly with the community council, other community members and women through training and other activities to demonstrate that it is committed to the long-term.

For the government, increasing awareness about the forests' importance and benefits among stakeholders is one solution to addressing many of the risks. In doing so, communities will have a stronger motivation to protect trees from illegal forces. Like the private sector, government presence on the ground and communication with the communities is believed to contribute to lowering the risk of illegal logging and resource degradation. Cooperation among the relevant government offices to provide a streamlined and facilitative operating environment for community-forestry enterprises is also proposed.

To address risks relating to market access and facilitating business operations including accessing capital the support group WWF Cambodia has engaged private sector actors like BGV, NatureWild and Pusethana and relevant government agencies such as the FA and the MoE from the beginning of the project. Government-agency representatives and private-sector representatives were invited to become part of the MFV advisory board. They also engaged in impact investment to secure enough capital for the community start-up. In order to facilitate access to other supporting agencies, WWF Cambodia also engaged other NGO partners to provide technical support in enterprise management training for the board members and the community-based enterprises. WWF Cambodia also commissioned consultants to carry out market research and to explore value-added products that the community could produce.

WWF Switzerland also closely monitors the enterprise's development of MFV and provides support through suggestions and monitoring to mitigate risks that might hinder MFV from meeting their business goals and repaying their loan. WWF Switzerland closely coordinates with WWF Cambodia to address these risks.

2.6.2 How can external value-chain actors support MFV to manage risk?

According to Amy Maling, former livelihoods adviser to WWF Cambodia, if there were anything WWF Cambodia would change, it would be to adopt a style of training that is more hands-on and which offers closer mentoring to the groups. This desire was clearly expressed by the community as well. Partner support groups also need to be able to react fast and address risks. It is here that skilled and committed technical support staff play an important role. However, the difficulty is in finding personnel who are willing to stay for long periods within the communities. Based on the experience of the consultants interviewed, there is an agreement that enterprise development among community groups normally takes longer than with entrepreneurs. An average of five years is needed to establish an enterprise. Support groups, including lenders, will have to consider this in planning project support for capacity building and financing.



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Transporting of harvested bamboo poles during training

Support organisations and WWF Switzerland and WWF Cambodia have hired consultants to conduct risk assessments by reviewing financial statements and projections. They also visit the community enterprise. These are all very useful steps but may not be enough to assess the risks and even plan for mitigation. Partners also admit that there is a limit to human resources and covering costs in order to address all risks in advance, and instead simply deal with risks as they arise. Incorporating a formal participatory risk assessment and mitigation planning in the process of enterprise development would have been helpful to increase the understanding among the community members and the board on enterprise matters.

Another solution employed by WWF Cambodia and partners has been to engage actors in exploring innovative solutions through pilot projects to allow them to realise the potentials and become part of its development, creating a strong ownership and support for the programme. One example of a pilot was the community-based honey enterprise, Mondulkiri Wild Network, which became the precursor of the MFV. Through this initiative, the support organisation was able to demonstrate the possibility of balancing livelihoods and conservation efforts.

Looking to the future, some pilot projects were proposed during the meeting on risk assessment and mitigation with the project manager of Asia Society for Social Improvement and Sustainable Transformation (ASSIST) Mekong, with whom WWF Cambodia has just started to explore a potential partnership:

- A new project on sustainable forests: a PPP programme (supported by KfW-DEG, a German bank) was proposed, which would be anchored to forest-community initiatives to ensure that any developments that result from this partnership are inclusive and secure the place of locally controlled forest businesses.
- A pilot project on value-chain facilitation for bamboo and resin: this initiative will become a vehicle to explore mechanisms to address the risks described above, one of which is to facilitate the processing of permits for entrepreneurs with social goals such as inclusive or green businesses.

Finally, WWF Cambodia uses a programmatic and landscape approach that aims to align all actors to the same vision and to demonstrate the contribution of forestry and conservation to national economic development as well as livelihoods enhancement. They are exploring innovative financing mechanism for SMEs as well as the potential of the global billion-dollar bamboo industry, and particularly of Forest Stewardship Council (FSC)-certified bamboo, to increase investment in the NTFP industry and to capture stronger interest in the sector. However, if the process moves too fast, there is the risk that the communities might be left behind. WWF Cambodia must keep the communities regularly informed of these developments which will require highly effective support for capacity building.

Concerted work is needed from different parts of the value chain, from the community, wholesalers, manufacturers, exporters and importers to consumers, support groups, policy makers, extension service providers and entrepreneurs. Only then can the NTFP sector become a key contributor to the nation's economic development as well as linking the value/supply-chain development to long-term and sustainable landscape development.

Table 2.2 Solutions to reduce risk for MFV

Risk categories and options for improving the business environment of locally controlled forest businesses	Practical potential for beneficial impact – in author's opinion (score out of 10)
REVENUE FLOWS	
Secure market access through relationship-building with the private sector.	6/10
RESOURCE ACCESS	
Provide capital support and management capacity to community groups and MFV. This will help to facilitate the timely purchase of products from collectors and therefore secure access to resources.	8/10
To ensure capturing NTFP supplies for MFV, develop capacity and systems for community relationship strengthening, through eg enforcement and implementation of benefit sharing, raising awareness of collective marketing and strengthening the sense of ownership of MFV.	9/10
BUSINESS RELATIONSHIPS	
Encourage and facilitate formation of networks and associations among the value chain actors (ie provide venues for sector discussions and planning and to establish sector associations).	8/10
SECURITY OF OPERATING ENVIRONMENT	
Pilot project on value-chain facilitation for key products oleoresin and bamboo, to assess potential contribution to livelihoods' enhancement and economic benefits.	10/10
Encourage cooperation among relevant government agencies to establish a one-stop service provider to facilitate the development and operations of locally controlled forest businesses (LCFBs) (eg provincial-based permit-processing points).	7/10
BRAND DEVELOPMENT	
Build MFV staff capacity for market-niche development and marketing.	8/10
OPERATIONAL CAPACITY	
Intensive capacity building and mentoring for MFV management staff, board members and key leaders from community collection groups.	10/10

2.7 Conclusions and ways forward

The MFV board, staff and representatives of the collector groups have acknowledged the importance of the process of the self-assessment of risk. Although they were already aware of the problems they face, they had not linked these risks to their business. Through the process described here, they feel gratified that they have been able to identify solutions. They plan to include the results of the discussions in their action plan.

2.7.1 Self-assessment of risk and its contribution to business development

The participatory risk-assessment and mitigation framework provides community members with an overview and understanding of what an enterprise is. It exercises and builds critical thinking and creative solution-finding among leaders and members and intensifies their involvement in the management of the business. It helps community members to see that

they too have the power to find solutions for their business. It is therefore a useful tool to build a sense of ownership of the business among the members and their leaders.

Second, self-assessment of risk can provide a framework for the review and updating of the business plans and operational plans. It becomes a useful tool to enable community members to examine the different aspects of the business, and plan necessary strategies and actions. And third, it offers an opportunity for the different actors in the value chain to connect and to find mutually beneficial solutions, creating a more conducive operating environment. The exercise also provides an opportunity to engage actors in identifying their own role and potential contribution.

2.7.2 Training and facilitation on risk assessment

Participatory risk-assessment and mitigation planning should be included in community enterprise development planning. Its facilitation should be included in the training modules given to communities. It can also be included in annual or strategic sector network meetings. For support groups, this should become a formal step in project development and for economic development planners, in value-chain or sector/industry planning.

Visual posters as well as other visual communication materials showing the process flow can be easily disseminated to community groups. Facilitators, community leaders, business managers, project managers and government staff should be trained on how to facilitate workshops on participatory risk-assessment and mitigation planning. The tool can be disseminated among technical support providers to be included in their toolbox of techniques.

2.7.3 Building a joint understanding of risks and costs

The communities dependent on forests are seen to be a small percentage of the population and interventions to support them is not seen as having any national economic impact. In order to build a joint understanding of risk there needs to be a joint understanding and appreciation for the benefits of locally controlled forest businesses (LCFBs). The role of LCFBs in livelihoods enhancement and national economic development has to be first acknowledged by relevant government agencies and policymakers or anchored to a national government goal, such as the National Forestry Programme or Sustainable Development Goals etc. Investors have to see economic benefits in engaging with LCFBs as well as engaging in the NTFP sector. Once these are established, there is then a common interest to determine and address risks to success.

Livelihoods and economic impacts of LCFBs should be monitored and studied to provide a statistical basis and evidence for support (this will be a great challenge for the advocates as it becomes a 'chicken and egg' situation wherein support will only be provided if the LCFB is successful, but it can only be successful if support is provided). In the case of Cambodia, this is where innovative and pilot projects come in. Joint pilot projects, wherein different actors are all invested, become important platforms to engage actors in forming a joint understanding and generating willingness to share in the risks and costs. Community enterprises are challenged to become competitive, efficient and cost-effective for investors to see the economic benefit of engaging with them.



A corridor of giant bamboo on Alpabambu's plantation

© Shoana Humphries

Ecuador: Allpabambu – a family bamboo enterprise

by Shoana Humphries and Alvaro Cabrera

Allpabambu (AB) is a new, small family-run company in northwestern Ecuador that sells bamboo products to local and export markets. It currently mostly exports poles to the USA and its goal is to sell legal and sustainably harvested products for use in construction and agriculture. AB has 55 hectares of bamboo and has facilities for sawing, treating and drying bamboo poles. The main risks identified by AB are insufficient raw materials of the necessary quality for its export product and the uncertain political environment in Ecuador exacerbated by an economic crisis. Having a single main buyer in the USA is also a high risk, as the company has made significant investments to meet this client's needs. AB perceives its business has suffered due to depressed demand and discouraged investors and is taking steps to increase its access to raw material, including providing technical assistance to producer associations, and is working on alternative products such as charcoal with collaborators to reduce dependence on its main client.

3.1 Context in which Allpabambu operates

3.1.1 About Allpabambu as a business

Allpabambu (AB) was created by husband and wife team German Villarreal and Nelly Arroyo in February 2015 after a series of endeavours with previous entrepreneurial and associative initiatives, including the Asociación de Productores, Procesadores, Artesanos y Comercializadores de Bambú en el Nor-Occidente de Pichincha (APAC-Bambu)¹ in 2010 and the joint venture GEND Bamboo in 2013 and 2014. These initiatives were created to find commercial solutions for producers of introduced and native bamboo in the north of Pichincha province, Ecuador (Figure 3.1). Allpabambu uses raw materials from its own plantation as well as from several other producers in the country. It has a primary processing facility and sells a variety of bamboo products for local and export markets.

AB is a private enterprise and is authorised to operate in the forestry sector. The enterprise has plantations of giant bamboo (*Dendrocalamus asper*) (50 hectares) and *caña guadua* (*Guadua angustifolia*) (5 hectares). AB also manages a plantation owned by one of its two business associates in the US (50ha of giant bamboo), and provides technical assistance to other producers. All of the plantations it manages are registered with the Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MAGAP) and have approved management plans.

1. APAC-Bambu was an association of bamboo producers, artisans and traders from Pichincha province. It was created in 2010 by 15 people but is no longer functioning.

Figure 3.1 Map of the location of Allpabambu's office



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AB works closely with two business associates in the US who provide finance and market connections and help with the logistics for AB's export business. These associates have promoted the use of bamboo as a sustainable and low-cost material to the construction sector in the US, and have helped to secure an important client there for AB.

Allpabambu's business is divided in three main activities: management, harvesting and processing of bamboo, technical assistance and construction.

Management, harvesting and processing of bamboo: AB sources bamboo from its own plantations, small producers with plantations and native forests, and intermediaries. AB's objective is to use only legal and sustainably managed and harvested bamboo from

known sources. However, to meet demand they also currently depend on intermediaries who sell bamboo from unknown and informal sources, which is likely to be harvested in an unsustainable way.

AB exports laths (3.12-metre segments of bamboo poles cut in half longitudinally) of *caña guadua* to the US for use in construction, which represents 60 per cent of its sales. Other products include 6m poles of *caña guadua* and giant bamboo for use in construction and 4.5m poles for agriculture (used to prop up banana bunches and cacao tree branches). AB is also working with collaborators to develop ways to use the residues from its processing centre, eg to produce bamboo charcoal, handicrafts and other products.

For the export of laths of *caña guadua*, AB needs poles from culms (bamboo stems) that are at least five years old and 9.5–10cm or greater in diameter. Once the culms are harvested they are sorted for quality, cut with a disk saw into laths, preserved in concrete pools in a solution of boric acid and borax, and air dried. When the laths reach a maximum moisture content they are loaded into a container and transported to the seaport of Guayaquil, where the container is shipped to the importer in the US. The *caña guadua* used in this process is a mixture of culms from AB's *caña guadua* plantation and from other sources, including Asociación Río 7 (also the subject of a risk assessment case study – see Chapter 4) and intermediaries. AB processes the *caña guadua* from intermediaries and loads the container at its facility in Pedro Vicente Maldonado, while Asociación Río 7 processes its own *caña guadua* and loads the container at its processing facility. AB worked with another association in Guayas for two containers, but decided not to work with them again after experiencing problems with the quality and quantity of the poles it provided.

In early 2015, AB started exporting two containers of bamboo laths every month, and it expects to do so until June 2016, when it will begin exporting three containers per month. In December 2016 it expects to increase the number of containers to four to eight per month. Every container is filled with 4,500 bamboo laths. The main constraint at the moment is the supply of *caña guadua*. AB sent samples of giant bamboo (which is abundant in the region) to the construction company in the US to see if it could be used for the same purpose as *caña guadua*. Early indications are positive and AB hopes to begin exporting containers of giant bamboo to the same buyer in 2016.

Technical assistance to producers and enterprises: AB provides training and technical assistance as a service to local producers in bamboo-plantation management and the use of bamboo for construction. AB is also working in collaboration with the intergovernmental organisation the International Network for Bamboo and Rattan (INBAR), non-governmental organisations (NGOs), local governments, and international cooperation agencies to prepare a network of bamboo producers in different parts of the country to provide good-quality bamboo for the export of laths to the US. In addition, AB aims to obtain FSC forest management and chain-of-custody certification for itself and its partner associations and enterprises (eg a guitar-manufacturing company, handicraft associations) through a group certificate to be held and managed by AB.

Construction: AB also constructs bamboo homes and is working with architects on innovative designs. It has found a significant market among Quito residents who maintain country homes in northwest Pichincha, and who are interested in bamboo as an alternative and sustainable building material. Hotels have also expressed interest.

According to AB, the demand for construction has been affected by the current poor economic situation in Ecuador. Recently, a contract that had been agreed to by clients and investors was cancelled due to perceived political and economic instability.

3.1.2 Location and regional influences

Allpabambu is operating in northwest Pichincha in Ecuador, and its main office is located in the community of Andoas, in the Pedro Vicente Maldonado district. North-western Pichincha is in an area known as the Chocó Andino region, which is of interest to scientists, researchers, conservationists and tourists due to the presence of forests, rivers and waterfalls and a high diversity of flora and fauna, especially birds. The altitude varies between 1,200 to 4,000m above sea level.

The region is highly influenced by its proximity to Quito, the capital of Ecuador (two to three hours by car). During the 1960s the area received thousands of migrants from southern and northern Ecuador escaping a long drought caused by El Niño (ENSO). Today many city dwellers own farms in the region as weekend retreats; others have decided to become farmers and stay in the countryside, like the owners of Allpabambu. The main economic activities in the area are livestock, agriculture and tourism.

Approximately 400 species of bamboo are native to the region, including caña guadua. Giant bamboo (*Dendrocalamus asper*) was introduced to Ecuador approximately 90 years ago by researchers and development projects (INBAR, 2015). This bamboo species is from South Asia and is bigger (wider and higher) than native bamboo species, which is one of the reasons researchers introduced the plant.

Initially, local people were very interested in the cultivation of giant bamboo. In the 1990s, plants in the nursery typically sold for US\$5–7, and the first culms (mature stems) sold for US\$5 per linear metre. Each culm had a height of 20–25m. The plant became very attractive to both investors and small farmers who planted it largely on degraded pastures where forests had once stood. Bamboo was also used with some tree species by the Pichincha provincial government to reforest approximately 2,000ha of concession areas that had been deforested by logging companies.

In 2010, INBAR and the provincial government of Pichincha studied the availability in Pichincha of giant bamboo in plantations, and *caña guadua* in plantations and natural forests. The results were unexpected, even for the local producers. After mapping the farms with bamboo plantations and/or natural bamboo forest, it was determined that the province held approximately 2,000ha of giant bamboo and around 800ha of *caña guadua* (Alfaro 2010).

Unfortunately, in Pichincha there is much more supply than demand for giant bamboo. This has discouraged plantation owners from managing their plantations, which involves

cutting old stems to encourage the growth of new stems of larger diameter and with thicker stem walls, and marking new stems to indicate their age for future harvests. However, the demand that does exist (for example for construction) requires the larger diameter and thicker-walled stems. Thus, the few plantation owners who implement management are the ones who enjoy access to the small market for giant bamboo.

In order to stimulate demand for the giant bamboo resources in its region the provincial government of Pichincha, at its research centre near Pedro Vicente Maldonado, has developed and produces small volumes of plywood made of giant bamboo, but growth in demand has been slow. AB perceives that if a construction code for bamboo were to be approved by the government, then the demand for giant bamboo could improve substantially.

3.1.3 Legal status and license to operate

Until 2014, bamboo forests and plantations were under the control of the Ministry of Environment (MAE). Producers had difficulty registering their bamboo forests and new bamboo plantations, as bamboo was a non-traditional non-timber forest product (NTFP) and was new to technicians in the ministry. Producers paid the same land tax whether their bamboo was grown in a natural forest or on a plantation. Due to several differences between bamboo plantations and bamboo forests, including management techniques and the paperwork needed for harvesting and transporting bamboo, many actors in the bamboo sector decided it would be best for plantation management to be moved from the purview of MAE to MAGAP. The National Bamboo Roundtable (*Mesa Sectorial Nacional para Bambú*), comprised of a variety of private and public organisations involved in the bamboo sector, has helped to achieve this change.

To harvest bamboo legally, in addition to registering the plantation, a forest-management plan should be submitted to and approved by the respective ministry. Then, when the bamboo poles are transported, the producer should submit an online application for a transportation permit (called a '*guía*') by the respective ministry. Transportation permits are frequently checked along routes. In practice, transportation permits are often issued for bamboo from non-registered plantations. There are currently no controls on the volume of bamboo that can be issued from a specific bamboo forest or plantation. This allows bamboo that does not have a registered origin to be 'legalised' through the transportation process. Regarding harvest techniques, while it is illegal to clear-cut bamboo, this is the most common harvest method, and harvesting techniques are not controlled through remote sensing or field visits. In contrast, AB practices and encourages others to implement management of bamboo plantations and selective harvests based on the age of the stems (five years is usually the minimum for a sufficient thickness of the stem wall).

3.1.4 Market for bamboo

The main market for bamboo in Ecuador is for *caña guadua*, and an estimated 15.5 million bamboo poles are harvested and sold per year (INBAR, 2015). Most giant bamboo in Ecuador is grown in Pichincha and it is used in construction as well as to make bamboo flooring and panels, guitars and other high-value products. However, only 20 per cent of the total giant bamboo available in the region is consumed. More technical information is needed about this species so that it can be better promoted to industry, and training for plantation owners in management practices is also needed.

A *caña guadua* culm is typically divided into four commercial sections. One of the challenges for buying and selling bamboo is that, due to the gradual decrease of the width of the culm towards the tip, different parts of the culm have different uses and markets, and some parts have very little market demand.

In Allpabambu's case, the first segment of 3.12m is sold on the export market for use in construction (depending on the age and length of the pole, two 3.12m segments may be used). The remaining segments are sold on the local market: the 6m segment is difficult to sell, but is sometimes used in construction; the 4.5m and 2.5m segments have a higher market demand and are often used in agriculture (both lengths) or in construction (4.5m segment).

3.1.5 Actors in the Allpabambu value chain

AB has a network of bamboo producers (farmers, associations, small enterprises and intermediaries) in different parts of the country: the associations of Rio 7, Chilintomo and APROGUADUA from Guayas province; and intermediaries from the Guayas, Pichincha and Esmeraldas provinces (Figure 3.3). The undersecretary for forest promotion in MAGAP is in charge of the registry of plantations, and is responsible for approving forest-management plans for plantations, as well as authorising and issuing documentation for transporting bamboo. The forestry department within MAE is in charge of the registration and authorisation for harvesting and transporting bamboo from natural forests. Transportation of products is provided by external service providers as needed.

For the export of *caña guadua*, a host of other actors are involved (Figure 3.3). As containers of *caña guadua* laths are prepared to be shipped from the port of Guayaquil, the Ecuadorian Agency for Agro Quality Assurance (Agrocalidad) reviews the laths to issue certification regarding the presence of pests or diseases. In addition, if the container is chosen for inspection in a random sample, customs officials and narcotics police oversee the unloading of the products, the inspection of the container and laths, and the reloading and sealing of the container. Finally, a broker is used to take care of the export procedures (eg filing paperwork and paying taxes).

AB's main clients include a construction company in the US for treated laths of *caña guadua* (60 per cent of sales) and several domestic construction companies that use giant bamboo. In addition, AB is working with producers and other collaborators to improve the use of residues from the processing process (eg for bamboo charcoal, handicrafts, furniture etc).

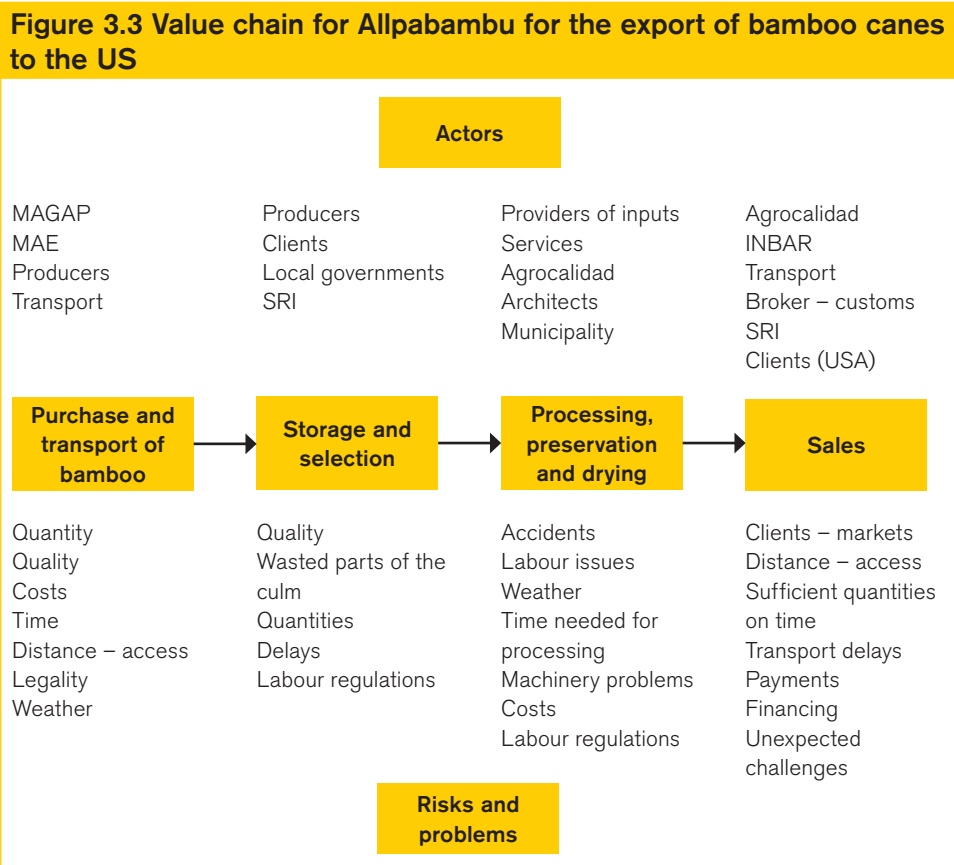
Indirect actors in the value chain include providers of inputs for preserving the bamboo (boric acid and borax) and machinery companies. The provincial and municipal governments of Pichincha, Guayas and Esmeraldas are also involved in the registration of the plantations and natural bamboo forests at the local level.

Other important actors that work with AB are the INBAR Latin American and Caribbean Office, which is located in Quito, Ecuador and the members of the National Bamboo Roundtable. INBAR is an intergovernmental organisation that works for the well-being of the different actors of the bamboo value chain in many parts of the world. The organisation has worked in Ecuador since 2003, and through development projects is

helping bamboo producers and industries to innovate and improve local capacities in order to produce better bamboo products and gain access to new markets. It provides and/or helps facilitate technical assistance, business connections, access to machinery and the organisation of events, such as workshops, symposiums, and commercial fairs.

INBAR helped establish the National Bamboo Roundtable in 2011 to assist producers, industries, governments, universities and individuals organise and develop a common agenda. The roundtable has members from across the country and meets in different provinces every two to three months to discuss common problems and opportunities. At the moment, the roundtable is facilitated by INBAR and led by MAGAP. Most actors with the capacity to help Allpabambu to address risks participate in the roundtable: MAGAP, Ministry of Industries and Productivity (MIPRO), MAE, different companies, universities and individuals, among others.

A notable public-sector member of the roundtable is the provincial government of Pichincha, which, as mentioned, has a research and innovation centre in Pedro Vicente Maldonado for processing bamboo. It was founded in 2009 with the goal of developing new technologies for using bamboo from plantations and natural forests in the region.



3.2 What does Allpabambu see as the main barriers and risks?

Several risks were identified with the two owners of Allpabambu for each of the six categories (Table 3.1). Risks were rated on a one-to-three scale in terms of their potential to threaten the financial viability of the company. The most serious risks (marked with two asterisks) identified by the owners are a lack of volume of appropriate raw materials for the export business (in the resource access category), and a highly unstable political environment (in the security of the operating environment category) (Table 3.1). The authors of this chapter also identified the fact that AB has only one buyer in the export market as a serious risk, given the investments the company has made to meet the needs of this client and that it represents approximately 60 per cent of AB's sales. This was discussed with the owners of AB, and while they agreed it was a risk, they were confident they would continue to work with this client for at least another few years. They are also working with collaborators to develop alternative products, such as handcrafts and charcoal (Ecuador is a net importer of charcoal). Other risks of major concern, but less serious in terms of the viability of the business (marked with one asterisk) include accidents and delays in the delivery of raw materials.

Several factors are responsible for a lack of sufficient volume of raw materials for AB. First, few producers of bamboo in the country (from natural forests or plantations) use management or silvicultural techniques. This lack of management leads to a difficult and dangerous operating environment and stagnant bamboo growth. For both *caña guadua* and giant bamboo, each time bamboo culms are harvested, this stimulates the emergence of new stems, and each generation of stems is larger than the previous generation. To obtain the diameter of stems and the width of stem wall that AB needs, it usually works with fifth generation or older bamboo and lets that generation grow for five or more years to reach a minimum stem wall width. If it is not managed, a bamboo stand will become dense with small-diameter stems (which make harvesting difficult and dangerous) and regeneration levels will be low. While there is abundant technical information on *caña guadua*, small producers are rarely aware of it and there is little technical information on how to manage giant bamboo in Ecuador (as it is an introduced species).

Also, due to this lack of technical information, combined with a lack of access to credit and information on regulations and markets, producers with natural or plantation bamboo usually rely on intermediaries to harvest their bamboo and to take care of all legal documentation. Another benefit of intermediaries is that they often purchase the entire pole for both *caña guadua* and giant bamboo, while other buyers often want only specific sections of the pole. This makes it difficult for AB to compete with intermediaries when purchasing poles from producers, and thus also makes AB dependent on intermediaries for purchasing raw material. On the other hand, a disadvantage of intermediaries is that they often clear-cut harvest bamboo. Apart from the environmental damage this can cause, the cutting of all culms means producers will need to grow their bamboo at least another five years before they can offer commercial-sized stems again.

Finally, some landowners have decided to convert their bamboo stands to other crops or non-agricultural uses (or at least they have tried – it is very difficult to eradicate giant bamboo once it is established). The motivations are often a lack of knowledge regarding how to manage bamboo and the perceived lack of demand for bamboo.



Worker at the giant bamboo plantation managed by Allpabambu

The highly unstable political environment in Ecuador is due to different reasons. In 2007, Ecuador inaugurated a new government with distinct objectives based mainly on meeting the needs of the people and the conservation of nature. This strategy was framed as the national plan for good living (SENPLADES 2013)² and was ratified by a public referendum in 2013. The national plan gave many rights to social groups, including indigenous peoples and minorities, and recognised the rights of nature (in line with the new constitution) (SENPLADES 2013). However, the unexpected drop in oil prices in recent years caused an economic crisis in Ecuador. As oil income accounts for 57 per cent of the Ecuadorian GDP (El Universo 2015), lower prices made it difficult for the government to implement many of its planned activities and resulted in big layoffs of government personnel.

Furthermore, frequent changes in the laws (such as labour, tax and social security) have contributed to a worsening economic situation in the country. It is difficult for small businesses to keep track of changes to laws and to cover the associated increases in operating costs. Some larger companies have closed, and there is a perception that wealthy individuals are sending their money out of the country and are hesitant to invest in new business ventures. AB was directly affected by this recently when investors behind a new hotel that AB was to construct cancelled the project, citing the political and economic instability in the country as the main reason. This situation was reflected in the recent drop of Ecuador in the business environment ranking from 114 to 117 among 183 countries (CORDES 2015).

Regarding credit, banks and rural cooperatives still offer credit with interest rates of 12–13 per cent. However, the interviewees did not know of any small producers who had tried to obtain these loans. AB has obtained credit from its two associates in the US to invest in its processing facility.

2. 'Good living' is defined by the government as a lifestyle that enables happiness and the permanency of cultural and environmental diversity; it is harmony, equality, equity and solidarity. It is not the quest for wealth or infinite economic growth. See: www.buenvivir.gob.ec

Table 3.1 Summary of risks identified by Allpabambu

Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity
<p>International competition. The buyer also plans to establish its own plantations in Central America and/or the US.</p> <p>Local competition. AB's costs are higher and their bamboo more expensive than others because they comply with labour laws.</p> <p>** Dependence on one export buyer. AB has made significant investments to respond to the requirements of this client.</p> <p>Lack of financing: there is an aversion to investment and finance and a lack of government funding in Ecuador due to the current financial crisis.</p>	<p>** Lack of raw materials that complies with export requirements regarding age and thickness of the stem wall:</p> <ul style="list-style-type: none"> ■ Could AB repay the credit their partners provide if it cannot get enough raw materials? ■ Could AB retain its employees if it cannot find enough raw materials to keep production steady? <p>* Delays in delivery of raw material.</p> <p>Producers could decide to sell to other buyers (intermediaries) because AB only wants part of the culm, while intermediaries can often sell all of it.</p> <p>Most small producers sell their bamboo to an intermediary who harvests the whole plant. Then there is no more bamboo for another 5–8 years.</p> <p>Small producers of giant bamboo could decide to dedicate their land to something else or abandon it because the market for this product is not yet developed.</p>	<p>Producers could decide to not supply the agreed-upon product even if paid in advance.</p> <p>Buyers could decide not to pay for product received.</p> <p>Smugglers could hide drugs in the shipping container at any of the points it passes through ports. AB owners could end up in jail, or at the least have the business frozen until the investigation is finished. Fortunately, one of AB's US associates has worked with flower exporters for many years and handles all of the logistics for the container.</p>	<p>** Instability of the laws leads to insecurity. With the current financial crisis, the government is looking for ways to generate revenue. For example, a new law was proposed to put a high tax on inheritance and capital gains, which led to many potential clients sending their money out of the country instead of investing in boutique houses made of bamboo.</p> <p>Lack of laws for construction using bamboo. This makes people wary of using it and suppresses demand.</p> <p>Inadequate transportation paperwork for bamboo (based on timber).</p> <p>Seasonal rains can inundate roads and result in transport delays when obtaining bamboo from producers. On the other hand, it can help those producers who transport bamboo by river to get the product to AB more quickly.</p> <p>(Notes: there are no problems with pests or disease and fertilisers are not needed.)</p>	<p>Lack of information on legal producers in the region (potential supply).</p> <p>Consumer aversion to bamboo due to lack of information and preconceptions (cultural bias).</p> <p>As there is no law stating minimum requirements for the characteristics of bamboo for construction, architects could use low-quality or inappropriate bamboo materials that result in poor-quality construction or accidents. This is a risk for the image of bamboo in general.</p>	<p>* Accidents: high incidence of different types. Difficulty in persuading some workers to use personal safety equipment.</p> <p>Lack of technical information on the physical/mechanical characteristics of giant bamboo.</p> <p>Lack of technical information on the silvicultural applications of giant bamboo.</p> <p>Time required for processing.</p> <p>Defective machinery can affect quality and increase number of accidents.</p> <p>Lack of low-cost financing options limits AB's ability to respond to market changes/opportunities.</p>

Notes: ** most serious risks * risks of major concern, but less serious in terms of the viability of the business

3.3 How can Allpabambu manage risk?

Allpabambu is implementing several measures to ensure its access to *caña guadua* raw materials for its export business. First, it has provided all suppliers of raw materials with a simple metal hand tool to measure the culm diameter, the width of the culm wall when the culm is harvested, and the width of the pole wall when it is delivered to the processing facility or when the processed lath is dry and ready to be loaded in the container. Second, it has made it clear that it will not pay for stems that are rejected by its staff or by the client in the US. Third, AB is working with one association that manages its bamboo in southern Ecuador (Asociación Río 7) to provide technical assistance and financial advances to cover operating costs. AB is also present each time a container is loaded by the association to ensure product quality. Finally, it is working with intermediaries who have the advantages listed in the previous section. The disadvantage of working with intermediaries for AB is that it knows a very high percentage – if not all – of the *caña guadua* raw materials it purchases is illegally and unsustainably harvested.

In the future, AB hopes to be able to increase the volume purchased from Asociación Río 7. In addition, in 2016 it will continue to look for other associations and, once the business is better established, to work with individual small producers interested in managing their bamboo.

There is not much AB or any of its collaborators can do to address the unstable political and economic situation in the country. However, active participation in the bamboo roundtable allows it to directly access representatives of MAGAP and MAE, among others, to discuss specific issues.



Allpabambu bamboo processing facility

© Shoana Humphries

Table 3.2 Risk-management options for Allpabambu

	Revenue flows	Resource access	Business relationships
Threats	<p>International competition.</p> <p>Domestic competition.</p> <p>Dependence on one export buyer.</p> <p>Lack of financing.</p>	<p>** Lack of raw materials that comply with their export buyer's requirements.</p> <p>* Delays in delivery of raw materials.</p> <p>Competition for raw materials.</p> <p>Scarcity of raw materials in the future.</p>	<p>Producers who do not comply with contracts.</p> <p>Buyers who do not comply with contracts.</p> <p>Illegal drugs smuggled in shipping containers.</p>
Opportunities	<i>None identified</i>		
Options for managing risk (business)	<p>AB could look for clients for giant bamboo.</p> <p>AB could explore uses for other parts of the stem (charcoal, crafts).</p> <p>AB already attends commercial fairs with ProEcuador.³</p> <p>AB could purchase materials at bulk prices.</p>	<p>Relies on intermediaries.</p> <p>AB plans to strengthen relationships with associations and small producers.</p> <p>AB is present at the loading of each container (quality control).</p> <p>AB has provided a simple measurement tool to suppliers of raw materials.</p>	<p>AB could provide advances to producers with clear conditions for full payment.</p> <p>Business partners could provide AB with credit.</p> <p>AB is present when the container undergoes customs inspections.</p> <p>AB is an active member in the Bamboo Roundtable.</p>
Options for policy (government/private sector)	<p>AB receives advances and loans from business partners</p> <p>Some partners are experimenting with uses of residues</p> <p>AB needs new lines of low-cost credit.</p>	<p>INBAR and provincial governments could help AB find sources of sustainable bamboo.</p> <p>MAGAP could include bamboo in species eligible for forest incentive programme.</p> <p>AB could work with MAGAP and other members of the Bamboo Roundtable to revise gaps and problems associated with the bamboo value chain.</p>	<p>AB receives to work with the Bamboo Roundtable to develop business relationships.</p> <p>AB could continue to work with ProGuadua to find new clients.</p> <p>AB could continue to work with Bamboo Roundtable members to develop and test new products.</p>

3. ProEcuador: Instituto de Promoción de Exportaciones e Inversiones (Institute for Export and Investment Promotion).

	Security of operating environment	Brand development	Operational capacity
	<p>** Instability of the laws.</p> <p>Lack of laws governing construction with bamboo.</p> <p>Inadequate transportation paperwork for bamboo.</p> <p>Seasonal flooding.</p>	<p>Lack of information on legal producers in the region.</p> <p>Consumer aversion to bamboo due to lack of information and preconceptions (cultural bias).</p> <p>Poor use of bamboo in construction could strengthen consumer bias.</p>	<p>* Accidents.</p> <p>Lack of technical information on the physical/mechanical characteristics of giant bamboo.</p> <p>Lack of technical information on silvicultural applications of giant bamboo.</p> <p>Time required for processing.</p> <p>Defective machinery.</p> <p>Lack of financing options.</p>
	<p>AB is an active member of Bamboo Roundtable.</p>	<p>AB has participated in commercial bamboo fairs to find new clients and promote products.</p> <p>AB could obtain information on producers from MAGAP and MAE.</p> <p>AB is working on a logo with INBAR.</p>	<p>AB implements worker training.</p>
	<p>AB could continue to work with MAGAP to adapt formats to include the different bamboo species and to calculate volumes correctly (bamboo is not a solid product like timber).</p> <p>AB could work with Ministry of Housing to develop a law for construction with bamboo.</p> <p>AB could work with the Bamboo Roundtable and the government to develop a policy for the purchase of sustainable materials, including bamboo.</p>	<p>ProGuadua could continue to help promote AB's products to potential new clients.</p>	<p>AB and collaborators could identify new lines of credit.</p> <p>Members of the Bamboo Roundtable are implementing or supervising research on technical aspects and potential uses of bamboo.</p>

3.4 Options to reduce risk through external support

Non-governmental organisations have been more active in trying to reduce risk for Allpabambu than government agencies. INBAR has been actively working with the owners of AB to find suppliers since 2013, and is currently working on a way to get processing machinery to Asociación Río 7 to help it meet AB's demand. INBAR also recently completed a study on the market for *caña guadua* in Ecuador and Peru, and will be sharing the results with collaborators in the near future. The bamboo roundtable members are engaged in several studies and experiments to support new uses of bamboo and to promote bamboo products.

The director and technical coordinator of the Pichincha regional government's bamboo research centre recognised the risks for AB relating to the limited supply of *caña guadua* in terms of the size, age and quality of raw materials needed, and confirmed there is a lack of managed, legal bamboo in the region. They also confirmed the lack of credit options in the region for small forestry businesses.

Government agencies could do more to support AB and reduce its risks. MAE and MAGAP could help AB identify registered plantations. MAGAP could also include bamboo in the list of species eligible for the Forest Incentives Programme, which reimburses individuals, associations and companies for reforestation and maintenance costs. Other areas of potential assistance include low-cost credit, introducing a construction law with norms for the use of bamboo, a law to stimulate the public procurement of sustainable materials, and promoting bamboo and Allpabambu products in fairs. However, with the current economic crisis, producers and processing companies are unlikely to pursue credit opportunities and changes to laws are unlikely to result in much procurement by the government or new construction by the private sector.

Another issue that came up in the research for this study was that the transportation documents that MAGAP uses have not been adapted fully for bamboo. For example, there is only one species of bamboo listed as an option on the forms, and the calculation of volume of bamboo assumes that the bamboo is solid, rather than hollow. It was decided that INBAR and AB should put this item on the bamboo roundtable's agenda for 2016.

Table 3.3 Solutions to reduce risk for Allpabambu

Risk categories and options for improving the business environment of locally controlled forest businesses	Practical potential for beneficial impact – in author's opinion (score out of 10)
REVENUE FLOWS (concerns over profit and balancing costs)	
Low-cost finance from a government or commercial bank.	1/10 (no one wants to invest in the current economic climate)
RESOURCE ACCESS (concerns over resource access and stewardship)	
Work with INBAR, MAGAP and MAE to identify and prepare additional producers of raw material.	7/10
MAGAP could revise list of species eligible for the Forest Incentives Programme to include bamboo.	7/10
BUSINESS RELATIONSHIPS (concerns over conflict-free relationships)	
Continue to work with ProEcuador to promote bamboo and find new clients.	6/10
Continue to work with Bamboo Roundtable members to develop and test new products.	5/10
SECURITY OF OPERATING ENVIRONMENT (concerns)	
Work with Ministry of Housing to develop a laws governing construction with bamboo.	2/10
Work with MIPRO to develop a law for public procurement of sustainable materials.	3/10
BRAND DEVELOPMENT (concerns over reputation with customers)	
ProEcuador could continue to promote AB's products with a new logo.	6/10
OPERATIONAL CAPACITY (concerns over operating efficiencies)	
None identified	n/a

3.5 Conclusions and ways forward

When asked, the owners of Allpabambu were able to quickly identify their main risks, but they did not have an explicit plan for dealing with them. This has led to a sporadic and disorganised approach to managing risks, and they had no plan for monitoring these approaches over time. They confirmed that self-assessment of risks would help them to plan more explicitly how to obtain more supply for their export activity. They discussed the importance of developing and periodically updating a strategic supply-chain plan. This would allow them to be more proactive and organised in securing supply, which could strengthen the financial viability of the company.

To build capacity in the self-assessment of risk among businesses and their partners, a workshop and training materials are needed in which different types of risks could be explained and an adaptive management model for risk presented. The workshop should include the analysis of real businesses from the region. The leadership committee of the company, as well as promising future leaders, should be the main target. In addition, trusted, close partners should participate in the workshop both so that they contribute to the risk analysis from their perspective and can better understand the business's perceptions of risk. The workshop could be given in two to three parts over the course of six months to one year as follows:

- Part 1: identify risks for two to three businesses, rate them in terms of seriousness, and develop risk management and monitoring plans,
- Part 2 (three to six months later): reconvene to discuss the impacts of risk management, update risk assessments based on monitoring, and update management plan as necessary, and
- Part 3 (six months to one year later): reconvene and repeat activities from Part 2.

To help external direct and indirect actors develop an understanding of risks, meetings could be held with those actors to share some results of the initial and subsequent risk self-assessments. Small meetings could be held with key actors who have more influence over risks to ensure their understanding of their role in causing and/or potential for ameliorating specific risks (eg with MAGAP representatives). Presentations of summary findings could be made in fora such as the bamboo roundtable to create greater awareness of the risks AB faces and to generate new ideas and commitments for helping reduce and/or manage those risks.

To help reach decision makers, partner organisations could help turn the results of the risk self-assessment into policy recommendations. Results could also be shared with academics and funding agencies to help achieve an even broader understanding of the risks faced by Allpabambu and other businesses in the sector.



Removing bamboo poles from the enterprise's plantation using a mule

© Shoana Humphries

Ecuador: Asociación Rio 7

Plantation workers become owners of a bamboo enterprise

by Shoana Humphries and Alvaro Cabrera

Asociación Rio 7 in southern Ecuador recently took over a bamboo enterprise owned and managed for the last decade by an armed forces company. Over the next 10 years, the association must pay the government for the value of the land and the company for the value of the physical assets, including 205 hectares of bamboo. While the enterprise has a great resource base and secure local markets, it still faces some serious risks. The terms of the transfer of land and physical assets are still being defined, and the association has a high dependence on an outside manager and weak organisational capacities. While the Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MAGAP) offices has committed to help with technical capacity building (such as business administration and loan management), the association knows it must also work with its partners to strengthen its organisational and business capacities.

4.1 Assessing the existing situation

4.1.1 About Asociación Rio 7 as a business

This case study is about a bamboo enterprise in southern Ecuador. In January 2016, the ownership of the enterprise was transferred to the business's field workers of Asociación Rio 7. The enterprise was founded in 2005 by a holding company, Hdineagro SA, of which 51 per cent is owned by the armed forces and 49 per cent by a retirement fund for military retirees. The land on which the bamboo plantations were established is federal land held by the Ministry of Defence and is located approximately one hour north of the town of El Guabo in El Oro province (Figure 4.1). Hdineagro SA has several other enterprises including banana, cacao and rice cultivation, as well as livestock and shrimp production. Its other businesses are also being transferred to small producer associations as part of the country's current land reform initiative.

There are 25 full-time field workers in the bamboo enterprise. Other employees include a full-time manager (forestry engineer) and a part-time administrator (economist). Until December 2015, all workers were officially employees of Hdineagro SA. In January 2016, the association assumed total responsibility for all employees, including the manager and administrator.

The enterprise owns 300ha of land, including 200ha planted with *caña guadua* (*Guadua angustifolia*, a species of bamboo native to Ecuador) and 5ha planted with giant bamboo (*Dendrocalamus asper*, a species introduced from Asia in the early 20th century). The plantations were established in 2005 and began being commercially harvested in 2010. The enterprise also has a bamboo processing facility, consisting of a pool for treating bamboo, and several buildings for administration and housing employees.

Figure 4.1 Map of the study area



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The business sells bamboo poles locally to intermediaries and in some cases directly to banana and cacao producers. Additionally, the business sells laths (3.12m segments of bamboo poles cut in half longitudinally) to the enterprise Allpabambu (AB), which is exporting them to the US (see also Chapter 3).

Asociación Río 7 was founded in 2013 by 33 field workers when the proposal to transfer the enterprise to the bamboo plantation workers was made. The association has an internal committee that includes a president and delegates for the different activities of the association. The transfer of the enterprise to the association from Hdineagro

SA officially took place in January 2016. This transfer was organised under the federal government's Plan Tierras Programme for land redistribution.¹

Many members of the association live within the plantation at a field camp with their families, including young children. The housing is offered free of charge, which is a big benefit to workers. However, this situation exposes the children to many risks, as there are trucks and heavy machinery operating in the area.

4.1.2 The main products

The enterprise's main products are *caña guadua* bamboo poles and, to a much lesser extent, giant bamboo poles of different lengths, mainly for the local market. A limitation for the business is that bamboo poles of high commercial value (ie with a large-enough diameter and thick-enough pole wall for construction) need to be at least of the fifth generation of poles from a plant (a plant produces one generation per year, if managed), and need to grow for at least five years. As the plantation was established in 2005, its bamboo is just starting to reach commercial size.

A *caña guadua* culm is typically divided into five commercial segments (or poles), and each segment is used for different purposes:

- Two segments of 3.12 metres each (at the base of the culm) for export and use in construction,
- One 6m pole for the local market (construction, mining, agriculture),
- One 4.5m pole for local banana production (called *cujes*), and
- One 2.5m pole (at the end of the culm, called a *puntas*) for the local production of cacao.

Giant bamboo is typically sold by the enterprise on the local market as follows:

- One 4m pole (at the base of the culm) used to build bridges in banana fields,
- Two 6m commercial culms used in construction,
- Two 3.5m poles to support banana plants in the plantations, and
- One 3.5m pole for to support cacao fruits in plantations.

In 2015, the production capacity of the enterprise was:

- 64,000 poles/year (poles for export), and
- 168,000 poles/year (*cujes*, poles to support banana or cacao plantations).

In 2015, the enterprise began selling laths of 3.12m to Allpabambu, a family business in northwest Ecuador, which exports them to the USA for use in the construction sector. Allpabambu has high standards for the quality of the laths, which requires more work for the enterprise, but they also pay fair prices. Asociación Río 7 also has some other clients in Peru, which has a very large market for bamboo (INBAR 2015), but most production is sold locally for use in agriculture or construction.

1. Plan Tierras aims to redistribute large areas of public land to farmers in the country and to promote sustainable agricultural development and access to public policies of the national government. These goals are within Ecuador's national plan for good living (SENPLADES 2013). MAGAP contracts land-titling brigades in each province to help facilitate the process of tenure transfer and to prepare new landowners to take on related responsibilities.

Bamboo has traditionally been used in agricultural production systems across Latin America. In Ecuador, bamboo is used in large quantities for banana production. Ecuador is the largest banana exporter in the world (FAO 2014). Farmers often use two to three bamboo poles to support each banana bunch, which typically weighs between 30 to 50kg. The poles are from the highest part of the bamboo culm (3.5–4 metres), which is known as a *palanca* or *cuje*. Given that a commercial bamboo pole is 16–20 meters long, farmers are currently exploring alternative uses for the remaining parts of the bamboo pole, which are normally sold to intermediaries for low prices (INBAR 2011).

The construction sector is also an important market for bamboo producers. In Ecuador, there are more than 380,000 homes made of bamboo (INEC, 2010) which house approximately 1.2 million people. There is also a growing trend in coastal areas to use bamboo in the construction of ecotourism facilities (authors' personal observation).

4.1.3 Location and regional influences

The Rio 7 plantation is located on the border of three provinces (Azuay, Guayas and El Oro) in southern Ecuador. Although the plantation is located in Tenguel district in Guayas (Figure 4.1) the plantation was registered in Machala (the capital of El Oro) which is much closer.

Several rivers run through the region, and flooding usually occurs each year for a few weeks to months. In 2008, of the 275ha originally planted with *caña guadua*, 125ha were destroyed by floods after an extreme rainy season. Later, the enterprise worked to restore and maintain affected areas and recuperated approximately 50ha, bringing the new total to 200ha.

The main economic activities in the area are agriculture (banana and cacao production), gold mining, fishing, shrimp production and commerce. Originally, the area was populated by people called '*costeños*' – people from the coastal areas. In recent years, gold mining has had a significant influence on the composition of the population, attracting people to the region from all over Ecuador, as well as from Peru. The important Ponce Enriquez mining area is located nearby.

The gold-mining activities have also affected the quality of life of the people within and around the plantation. Recently, several members of the Asociación Rio 7 were admitted to hospital after eating contaminated fish from the river which runs from the mining areas to the plantation. The company Hdineagro SA asked workers to avoid swimming in or eating fish from the river, and to keep their families from doing so.

Mining has also affected the local economy by driving up prices for services, food and goods etc. This has made it harder for Rio 7 members/workers. Many workers spend most of their wages paying debts to local retailers who provide goods on credit. After an episode where a worker with a family tried to commit suicide for not being able to pay his bills, the workers and management team decided to establish a small market in the field camp with food products at lower prices for workers.

4.1.4 Legal operating context

In 2012, the association, before it was formalised legally, applied to the government for the land title of where the plantation and field camp are located. It is also negotiating with Hdineagro SA the value of the investments the company has made in the land since 2005.

The government transferred the land in January 2016 as an asset to the National Finance Corporation and then to Rio 7, which will buy the land and pay off the debt over 10 years (after a two-year grace period). The debt is estimated at US\$360,000.

The value of the investment is still under discussion. A recent estimate placed the value at US\$1.5 million, but the association has requested another assessment and thinks the value is more likely to be closer to US\$300,000. Once the amount is agreed on, the association will begin payments to Hdineagro SA and its investors (principally an association of military retirees).



© Shoana Humphries

New bamboo stems growing on the bamboo plantation

The process is seen as returning the land to the people. In the 1960s, the Ministry of Defence appropriated large areas of land in the southern provinces which were perceived to be strategic for the security of the country, due to armed conflicts between Ecuador and Peru from 1941 to 1995 (Garcia 2014). Many rural families were displaced.

The Ministry of Defence also received additional lands in the same region two decades later when the company United Fruit closed. The company had begun cultivating bananas for export to Europe and the USA in the 1960s but was asked to leave at the end of Rodríguez Lara's presidency in 1979. The Ministry of Defence decided soon after to actively manage these lands for the production of banana, cacao and pastures for livestock, creating Hdineagro SA to manage these activities.

In 2005, Hdineagro SA decided to plant bamboo to support banana plantations in the Rio 7 plantation. The Rio 7 plantation is located one hour from the Peruvian border and the company was also interested in selling bamboo to the Peruvian market, which consumes an estimated 7.2 million bamboo poles per year (INBAR 2015).

In 2008, the government of Ecuador, through the national Plan Tierras Programme, began the process of transferring Ministry of Defence land to farmers. Farmers are expected to pay for the land over ten years. To date, the government has sold land to 78 associations (Terán 2015).

The bamboo plantation is registered with MAGAP. The same institution issues permits to harvest and transport bamboo products to different destinations, including for export. Asociación Rio 7 assumed these responsibilities in January 2016.

4.1.5 Bamboo market

Despite the importance and traditional use of bamboo in rural and urban areas, the bamboo market is largely informal. An estimated 15.1 million bamboo poles are consumed in Ecuador per year; however, only about 20 per cent of this is officially reported (INBAR 2015). During the last decade several initiatives and development projects helped local organisations and enterprises become formal entities. However, formal companies find it hard to compete in the market with informal enterprises which do not pay taxes or comply with labour and other legal requirements (Aguilar 2015).

4.1.6 Actors in the value chain

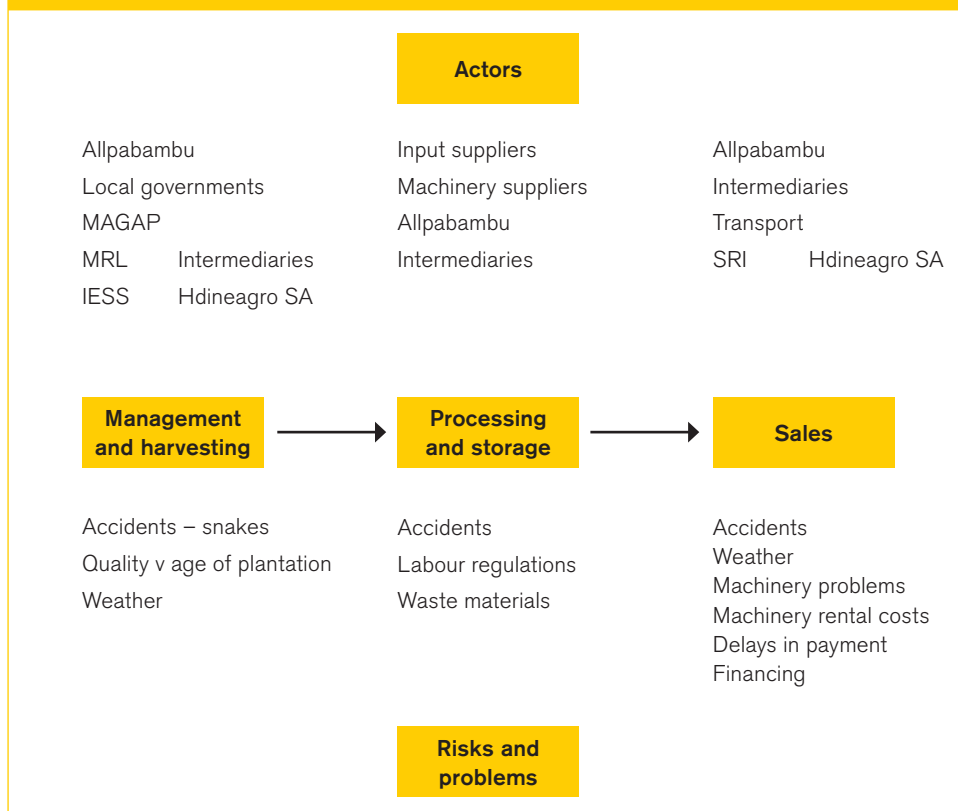
The enterprise sells bamboo to local intermediaries, banana producers and Allpabambu. Since 2010, the main product sold locally has been bamboo poles for banana plantations. In 2015, the enterprise began selling laths to Allpabambu, which has become an important strategic partner for adding value, accessing technical assistance and receiving fair prices.

The federal and local governments are important indirect actors in the supply chain. Local governments are very important to the enterprise as they maintain the roads used to transport bamboo poles. As the Rio 7 plantation is surrounded by three provinces, in some cases more than one local government has helped the association with road and bridge maintenance. At the federal level, MAGAP, which facilitated the transfer of the plantation and enterprise to Asociación Rio 7, will provide technical assistance as the workers transition from being just workers to co-owners. Other indirect actors in the value chain include the providers of inputs for the preservation treatment of the bamboo (boric acid and borax) and machinery companies.

Asociación Rio 7 has several important collaborators not necessarily involved in the value chain. Principal among these are the International Network for Bamboo and Rattan (INBAR) Latin American and Caribbean Office, which is located in Quito, Ecuador, and the members of the National Bamboo Roundtable (*Mesa Sectorial Nacional para Bambú*). INBAR is an intergovernmental organisation that works for the well-being of the different actors of the bamboo value chain in many parts of the world. The organisation has worked in Ecuador since 2003, and through development projects is helping bamboo producers and industries to innovate and improve local capacities to produce better bamboo products and gain access to new markets. It provides and/or helps facilitate technical assistance, business connections, access to machinery and the organisation of events, such as workshops, symposiums and commercial fairs.

INBAR helped establish the bamboo roundtable in 2011 to help producers, industries, governments, universities and individuals to organise and develop a common agenda. The roundtable has members from across Ecuador and meets in different provinces every two to three months to discuss common problems and opportunities. At the moment, the roundtable is facilitated by INBAR and led by MAGAP. Most of the actors who can help Asociación Rio 7 to address risks participate in the roundtable: MAGAP, Ministry of Industries and Productivity (MIPRO), Ministry of Environment (MAE), different companies, universities and individuals, among others.

Figure 4.2 Value chain for the bamboo enterprise to be taken over by Asociación Río 7



Notes: MRL Ministry of Employment; SRI Internal Revenue Service

Asociación Río 7 participates actively in the bamboo roundtable. Through this platform it has the opportunity to talk directly with different governmental agencies, private businesses, universities and international development organisations. Furthermore, representatives of the association were very active in the recent effort to separate the roles and responsibilities for MAGAP and MAE for plantations versus natural forests. The association provided key information for this process on the problems and challenges for producers in the production and harvesting of bamboo in plantations. The technical coordinator for Asociación Río 7 also provided suggestions for a new way to calculate the volume of bamboo to be transported.

There are other governmental institutions that interact directly and frequently with the association, including IESS (Ecuadorian Institute of Social Security), Ministry of Labour, ProEcuador (Institute for Export and Investment Promotion, Ministry of Foreign Affairs) and the Ministry of Defence (for the land transfer process).

4.2 What does Asociación Río 7 see as the main barriers and risks?

The most serious risks for the Asociación Río 7 (marked with two asterisks in Table 4.1) are uncertainty about the transfer of the enterprise, the association's weak organisational capacities and its high dependence on an outside manager. In 2015, the transfer of the enterprise to Asociación Río 7 was very uncertain largely due to delays by the municipal government in transferring the title. Up until December 2015, the association was still uncertain as to when the transfer would happen and what the terms would be. This made it difficult for the enterprise to sign contracts with buyers and to pursue credit. The land and assets were transferred in January 2016, but at the time of this study the exact terms of payment are still being worked out.

Another serious risk is that the manager is under pressure from his family to leave the enterprise and work closer to his family home. In addition to having worked to establish the plantations from 2005 to 2008, since 2014 he has been the technical manager in charge of operations, maintaining legal documentation and sales. While the manager states he would like to continue working with the association, he is considering other options that would allow him to live closer to his family in Quito (6–8 hours away by car).



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Organising the bamboo poles to be transported from the enterprise's plantation

It is difficult to imagine how the association would cope with this loss of capacity and institutional memory. The authors strongly recommended that he take on an assistant in the near future. This risk is related to another risk: the lack of organisational capacity of the association. While the association has defined leadership positions among its members, they have not received much training in decision-making, conflict resolution or transparency. This threatens the ability of the association to deal with risks and challenges.

Other important but less serious risks (marked with one asterisk in Table 4.1) include a lack of market for some parts of the bamboo pole, periodic flooding, dealing with dishonest buyers, and a lack of financing. First, the enterprise's most common products are 3.12m sections of bamboo which are sold to Allpabambu; *cujes* (the last section of the bamboo before the point) and points (long tips used to support cacao trees). The enterprise is having difficulty finding a buyer for the 6m central part of the culm.

In addition, as the plantation is at sea level and a river must be traversed to reach the plantation and field camp, temporary flooding of the river and parts of the plantation are

common in January, February and March. This makes it complicated for anyone to enter and leave the plantation, including workers and trucks that transport the products to buyers. Floods can also kill the bamboo, as happened in 2008.

Due to the highly informal nature of the bamboo market, the manager has been asked several times to provide false receipts to buyers. This unfortunate aspect of the market puts pressure on the enterprise, which is operating legally, to join the informal and illegal market.

Finally, the association does not have access to finance for operating capital or investments. As a result, it depends on advances from buyers to cover some operating costs, and does not have the cash to repair machinery or respond to other emergencies. At the time of the study, the tractor, the main means of removing poles from the forest, was inoperable due to the need for very expensive repairs. The enterprise was completely dependent on using mules for transport, which are much slower.

Table 4.1 Summary of risks identified by Asociación Río 7

Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity
<p>*Informal markets.</p> <p>Lack of market for some parts of the bamboo culm.</p>	<p>*Lack of financing.</p> <p>** Lack of clarity of the final terms of the transfer to the association</p>	<p>*Dishonest business partners.</p>	<p>Periodic flooding.</p> <p>Pests and diseases.</p> <p>Accidents at work.</p> <p>Frequent changes in laws and regulations.</p>	<p>(The enterprise has never promoted itself).</p>	<p>**Limited capacity in administration/ managing accounts/business management.</p> <p>**High dependence on an external manager.</p> <p>**Weak organisation (bylaws, structure etc).</p> <p>Internal conflicts.</p> <p>Lack of infrastructure – Communication (have to leave to issue guidance) – Disaster preparedness/ response.</p> <p>Poor understanding of the debts the association is taking on (for land and investments).</p>

Notes: ** most serious risks * risks of major concern, but less serious in terms of the viability of the business



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Loading bamboo poles for transportation to a buyer

4.3 How can Asociación Río 7 manage risk?

To stay abreast of developments in the transfer of the enterprise (land and assets) to the Asociación Río 7, the manager and association president participated in meetings organised by Plan Tierras and travelled frequently to the capital to talk directly with officials in MAGAP. The participation of the association in the national bamboo roundtable has also helped give it greater access to national authorities.

Regarding the high dependence on an outside manager, the manager created a work team of association members to teach them how the association is administered, including financial management. However, this transfer of knowledge has been difficult for association members given their generally low levels of education and administrative skills.

To improve the weak organisational capacities of the association, INBAR will provide training in financial analysis and micro-finance initiatives in 2016. MAGAP and MIPRO are also expected to provide training in business management as part of Plan Tierras.

The association has been very active in coordinating with the local municipalities for help with maintaining roads and logistics for the sale and transport of bamboo. They have also approached several local governments to request assistance with machinery to clear the canals around the plantation to avoid or lessen the impacts of seasonal flooding.

Finally, the association recently agreed to a plan to provide high-quality bamboo to Allpabambu for export to the US. The plan includes training activities for harvest and post-harvest operations to reduce the harvest volume of unacceptable bamboo poles, which negatively impacts both parties.

Table 4.2 Risk-management options for Asociación Río 7

	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity
Most significant threats	<p>*Informal markets.</p> <p>Lack of market for some parts of the bamboo culm.</p>	<p>*Lack of financing.</p> <p>Lack of clarity of the final terms of the transfer to the association.</p>	<p>*Dishonest business partners.</p>	<p>Periodic flooding.</p> <p>Pests and diseases.</p> <p>Accidents at work.</p> <p>Frequent changes in laws and regulations.</p>	<p>(The enterprise has never promoted itself).</p>	<p>**Limited capacity in administration/managing accounts/business management.</p> <p>**High dependence on an external manager.</p> <p>**Weak organisation (bylaws, structure etc).</p> <p>Internal conflicts.</p> <p>Lack of infrastructure</p> <ul style="list-style-type: none"> – Communication (have to leave to issue guidance) – Disaster preparedness/response. <p>Poor understanding of the debts the association is taking on (for land and investments).</p>
Opportunities	<i>None identified</i>					
Options for managing risk (business)	<p>Asociación Río 7 could:</p> <p>Conduct a market study,</p> <p>Diversify products offered (eg fence posts),</p> <p>Explore potential alliances in Peruvian market, and</p> <p>Provide training in disease prevention (dengue, malaria) and avoiding other hazards (eg snakes).</p>	<p>Asociación Río 7 could:</p> <p>Conduct financial analyses,</p> <p>Follow up with MAGAP to obtain clarity on the final terms of the enterprise-transfer process, and</p> <p>Produce a simple handout for workers about the land-transfer process.</p>		<p>Asociación Río 7 could:</p> <p>Continue to search for new clients, and</p> <p>Diversify products offered.</p>	<p>Asociación Río 7 could promote its products.</p>	<p>Asociación Río 7 could</p> <p>Provide training in administration and organisational capacities,</p> <p>Assign an assistant to the administrator,</p> <p>Promote its products (eg bamboo roundtable, billboards, newspaper, radio),</p> <p>Work with a collaborator to establish a warehouse in a strategic area, and</p> <p>Start a community microcredit fund.</p>
Options for policy (government/private sector)	<p>Regional government could help to clear drainage canals to avoid flooding.</p>	<p>INBAR could offer training in financial analysis.</p> <p>Government could help with low-cost credit.</p> <p>Undersecretary of Land and Agrarian Reform could offer technical assistance with land transfer and loans.</p>		<p>Bamboo roundtable could help with finding buyers.</p>		<p>Municipal government could help with road maintenance.</p> <p>INBAR could offer training in community microcredit funds.</p>

4.4 What are the options to reduce risk through external support?

External actors interviewed included representatives of the Undersecretary of Land and Agrarian Reform and the Undersecretary of Forestry, both within MAGAP, and the owners of Allpabambu, a main client of the association's.

The representative of the Undersecretary of Land and Agrarian Reform was asked about the land-transfer process of the plantation to the association and how his office is supporting the association. The representative described a programme for informing, training and accompanying associations going through the transfer process once a transfer is formally initiated. This assistance is expected to begin in March 2016. In the end, however, he was very pessimistic as to whether associations who receive land transfers would be able to pay their loans. He said that only 2–3 per cent of the 78 associations currently in this process are doing so. In cases where associations default, the land will revert to the bank to be sold, and the association members will carry any remaining debt. He said that in spite of the recognition of this problem, the government is moving forward with the programme.

The representative of the Undersecretary of Forestry was asked about programmes for supporting small and medium forest enterprises. She explained that while there is a programme for incentives for plantations (establishment costs are reimbursed), bamboo is not among the species included. For technical assistance, smallholders must contract a technician, although some community forest enterprises have received assistance from the Rainforest Alliance's Training, Extension, Enterprises and Sourcing Programme (TREES) and other NGOs. In addition, she personally has worked with some communal plantation enterprises. She reported the main risks as not having title to their land (which made legal authorisation and documentation of sales difficult), low capacity in administration and financial management (including internal conflicts over funds), and problems with plant health. Her main recommendations for providing training for associations included: administration, accounting, labour laws, innovation for quality management, and technical skills for plantation management. In the end, she was very doubtful about the capacity of associations to manage land and businesses, based on what she has seen in her career to date working with different types of community businesses in Ecuador.



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Rio 7 administrator at the enterprise's bamboo plantation

The owners of Allpabambu understand the association's need for operating capital, and have set up a payment plan for each order. The association receives 30 per cent of the payment at the signing of the contract, 50 per cent when the container arrives at the company's processing centre, and 20 per cent when the company's client confirms the quality of the laths. This is both to help the association cover its costs, and to reduce Allpabambu's risk of receiving low-quality laths. In addition, to ensure the laths are of the quality Allpabambu needs, it provides technical training for identifying and harvesting the appropriate culms. It has given the association a simple hand tool for measuring culm diameter as well as the thickness of the lath wall, and Allpabambu's owners are present as laths are loaded onto the container for export.

Finally, the INBAR Latin America office in Quito in has committed to running two training programmes with Rio 7. The first is in financial analysis, to ensure the association understands its operating costs (including indirect costs for which they will soon be responsible – paying the manager and administrator). The second is for establishing and running a social savings and credit plan, an area in which INBAR has trained community groups in Ecuador for 12 years. This would be a way to eventually replace the small loans that the company Hdineagro SA used to give workers.

Table 4.3 Solutions to reduce risk for Asociación Rio 7

Risk categories and options for improving the business environment of locally controlled forest businesses	Practical potential for beneficial impact – in author's opinion (score out of 10)
REVENUE FLOWS (concerns over profit and balancing costs)	
INBAR training in financial analysis.	5/10
Government help with low-cost credit.	8/10
Technical assistance on land transfers and loans by Undersecretary of Land and Agrarian Reform.	8/10
RESOURCE ACCESS (concerns over resource access and stewardship)	
Government to help with clearing drainage canals to avoid flooding in plantations.	10/10
BUSINESS RELATIONSHIPS (concerns over conflict-free relationships)	
Members of the bamboo roundtable could help the association to identify/improve new products and buyers.	7/10
SECURITY OF OPERATING ENVIRONMENT (concerns)	
See Resource Access above	
BRAND DEVELOPMENT (concerns over reputation with customers)	
Not currently applicable.	
OPERATIONAL CAPACITY (concerns over operating efficiencies)	
Municipal government could help with road maintenance.	7/10
INBAR could provide training in community microcredit funds.	5/10

4.5 Conclusions and ways forward

When asked, the administrator and several workers were able to quickly identify their main risks, but they did not have an explicit plan for dealing with them. This has led to a sporadic and disorganised way of managing risks (ie only addressing those that seem most urgent) with no plan for monitoring risks over time. The association representatives confirmed that self-assessment of risk would help them more explicitly plan how to meet their main risks. The authors believe self-assessment of risk would specifically help Asociación Río 7 members to:

- Better follow-up on the enterprise transfer process, including assigning specific people to take responsibility for clarifying different aspects of the process.
- Prioritise limited labour resources: identify someone to work with the manager as his assistant, so that if he leaves there is still some institutional memory and administrative capacity.

As with the case of Allpabambu in Chapter 3, a workshop and training materials where different types of risks are explained and an adaptive management model for risk is presented would help to build capacity in the self-assessment of risk for enterprises like Asociación Río 7 and its partners.

Such a workshop should include analyses of real businesses from the region, and target leadership committees, future leaders and trusted partners. Partners have an important contribution to make to the risk analysis – and it would provide them with a better understand of how the enterprise perceives risk.

Over the course of 3 – 6 months, the workshop process could:

- Part 1: help to identify risks for two to three businesses, rate them in terms of seriousness, and develop risk management and monitoring plans,
- Part 2 (three to six months later): reconvene to discuss the impacts of risk management, update risk assessments based on monitoring, and update management plan as necessary, and
- Part 3 (six months to one year later): reconvene and repeat activities from Part 2.

Meetings with external actors to share results of the risk self-assessments would help them to develop an understanding of risks these enterprises face, for example with key actors who have more influence over mitigating risks (such as MAGAP). This would help them to understand their role in causing and/or potential ameliorating specific risks. Summary findings could be presented at the bamboo roundtable and other forums to create greater awareness and to help generate solutions and commitments.

Finally, partner organisations could help turn the results of the self-risk assessment into policy recommendations, targeting decision makers, academics and funding agencies and contributing to a wider understanding of the risks faced by businesses like Asociación Río 7.



Fedecovera has one of the largest tree nurseries in Guatemala

© Fedecovera

Guatemala: Federation of Cooperatives of the Verapaces (Fedecovera)

Uniting small-scale producers

by Juan José Ochaeta Castellanos

Fedecovera unites 36 partner cooperatives and 12 producer organisations producing coffee, cardamom, cocoa, tea, essential oils, allspice and – more recently – FSC-certified timber, which this chapter focuses on. As a key actor in the local forestry value chain, it also takes on most of the roles in that chain. While Fedecovera aims to make each stage of the forestry chain more efficient, which helps to reduce risk, it can also increase it, as Fedecovera must also absorb the risks from each activity. It also faces significant risks such as lack of access to working capital, revenue flows and internal bureaucracy and is highly sensitive to changes in national forestry policy, which could profoundly impact on its business operations. However, over the years, Fedecovera has evolved into a strong organisation and there are key actors with whom it could work to overcome these challenges. Together with its allies, Fedecovera must continue to work to influence government forestry policy to promote a better enabling environment.

5.1 Context in which Fedecovera operates

The Federation of Cooperatives of the Verapaces (Fedecovera) is a second-level organisation founded in 1976. It is composed of 36 partner cooperatives and 12 producers' organisations dedicated to the production of export products such as coffee, cardamom, cocoa, tea, essential oils, allspice and FSC-certified (Forest Stewardship Council) timber from forest plantations. Its main objective since its creation has been to unite these small producers to better access market opportunities. This chapter focuses on the forestry division's business operations of the federation.

Fedecovera has approximately of 25,000 members in the region of the Verapaces (the combined departments of Alta and Baja Verapaz). This region has altitude, weather and precipitation characteristics ideal for farming export products. Fedecovera is located in Alta Verapaz, 219 kilometres from Guatemala City. It is the world's largest exporter of organic cardamom. Its offices and coffee and cardamom industries are located in the City of Cobán. Its forest division operates in the City of El Rancho, in the department of El Progreso, 90km from Guatemala City. Fedecovera's partner cooperatives are located in both Alta Verapaz and nearby Baja Verapaz and most of its producers belong to the Q'eqchi' and Poqomchi' ethnic groups.

5.1.1 About Fedecovera as a business

In 2014, Fedecovera opened its forestry division. It invested in purchasing land and constructing an industrial sawmill, funded with support from the Ministry of Economy of Guatemala (MINECO). The sawmill manufactures timber products, mainly pallets for the national exported fruits industry.

Fedecovera's products are sold to national and international markets. The purchase price for raw materials the federation pays its member producers is based on competitive market prices. Fedecovera negotiates with international markets on its members' behalf to provide them with better sales prices, providing an income that directly benefits its partner cooperatives through social development projects (education, health, infrastructure and cash incentives) (see Box 5.1). Fedecovera is also a shareholder in the country's most widespread rural development bank (Banrural).

Box 5.1 Investing in local development initiatives

Aside from its business, Fedecovera invests in a number of local development initiatives. This includes programmes of preventative health, education and the inclusion of women in production activities and decision making. It also invests in the development and improvement of infrastructure for schools, health and access roads. An estimated 2,000 women participate in 18 cooperatives, receiving training in business, administrative and financial management.

For Fedecovera, traceability throughout the supply chain is a key issue. Since it was founded in 1976, Fedecovera has promoted and implemented traceability processes in each one of the value chains in which it participates. Fedecovera has established procedures to document and control most of its production processes in order to fulfil the quality requirements of each market it exports its products to.

In 1996, through a project managed by the Canadian organisation the Cooperation Society for International Development (SOCODEVI), Fedecovera initiated the promotion of forest plantations to its partner cooperatives (mainly Caribbean pine, *caribaea*). The project began with the establishment of 400 hectares in three cooperatives and there are now 4,500 hectares of plantations located in 29 partner cooperatives (see also Box 5.2).

Fedecovera's forest nursery is Guatemala's largest. It sells seedlings and management services to people, taking advantage of government forest-restoration incentive programmes: the National Institute of Forests (INAB) Incentive Programme for Small-scale Possessors of Forest or Agro-Forest Land (PINPEP) and the Forestry Incentive Programme (PINFOR). Its state-of-the-art sawmill uses the timber to make pallets for the fruit industry.

Box 5.2 Fedecovera's main forestry achievements

- 35 million plants produced
- 4,500 hectares of plantations with FSC certification
- US\$30 million in forestry assets (approximate economic value of the plantations)
- Over 23,000m³ of harvested wood
- Partner cooperatives have earned US\$632,000 gross income from forestry harvests
- 1.5 million working days of wages generated
- Construction and equipping of an industrial sawmill able to process over 25,000m³ of small-diameter wood for the pallets market
- In 2015, approximately 20,000m³ of wood was processed for the manufacturing of pallets
- Fedecovera has established a plant nursery where approximately 4 million plants are produced annually

To encourage the establishment of forest plantations, Fedecovera has relied on funding from PINFOR, through which the partner cooperatives have received approximately US\$ 6.2 million in forestry incentive payments.

Fedecovera's forestry division manages the forest business. It offers services to the associates such as the collection, transportation, transformation and commercialisation of the forest products; as well as regency services; production, organisational and business technical assistance; legal aid; and accounting services.

5.1.2 Socio-economic characteristics of the region

According to the National Institute of Statistics in Guatemala (INE 2013a; INE 2013b) in the Verapaces region in 2014 there were almost 1.47 million inhabitants. Alta Verapaz accounts for 75 per cent of the total of the population in the region. Of the total of population, approximately 48 per cent are men and 52 per cent are women; 89.7 per cent of the population of Alta Verapaz is indigenous as is 55.8 per cent of Baja Verapaz. Literacy rates are 28.4 per cent in Alta Verapaz and 24.2 per cent in Baja Verapaz. The poverty rate is 53.7 per cent; levels of extreme poverty are on average 37.7 per cent in Alta Verapaz and 23.6 per cent in Baja Verapaz (INE 2013a; INE 2013b).

5.1.3 Fedecovera's legal status and organisational structure

Fedecovera is governed by the General Law of Cooperatives and Regulations of the General Law of Cooperatives in Guatemala (Congreso de la República de Guatemala 1978) as well as by its own internal regulations, functions and procedures.

The Inspector General of Cooperatives (Ingecoop) is the authority created by the state to supervise and monitor all cooperatives, federations, confederations and other organisations created under the auspices of the General Law of Cooperatives.

The internal structure of Fedecovera is composed of a general assembly (the highest decision-making body of the cooperative). The general assembly has 36 members who are representative of each of the partner cooperatives. Fedecovera also has a board of directors consisting of a president, vice-president, treasurer, secretary and *vocales*.¹ The administrative structure of Fedecovera includes a hierarchy of directors, management, coordinators, and office and industrial personnel (see Figure 5.1).

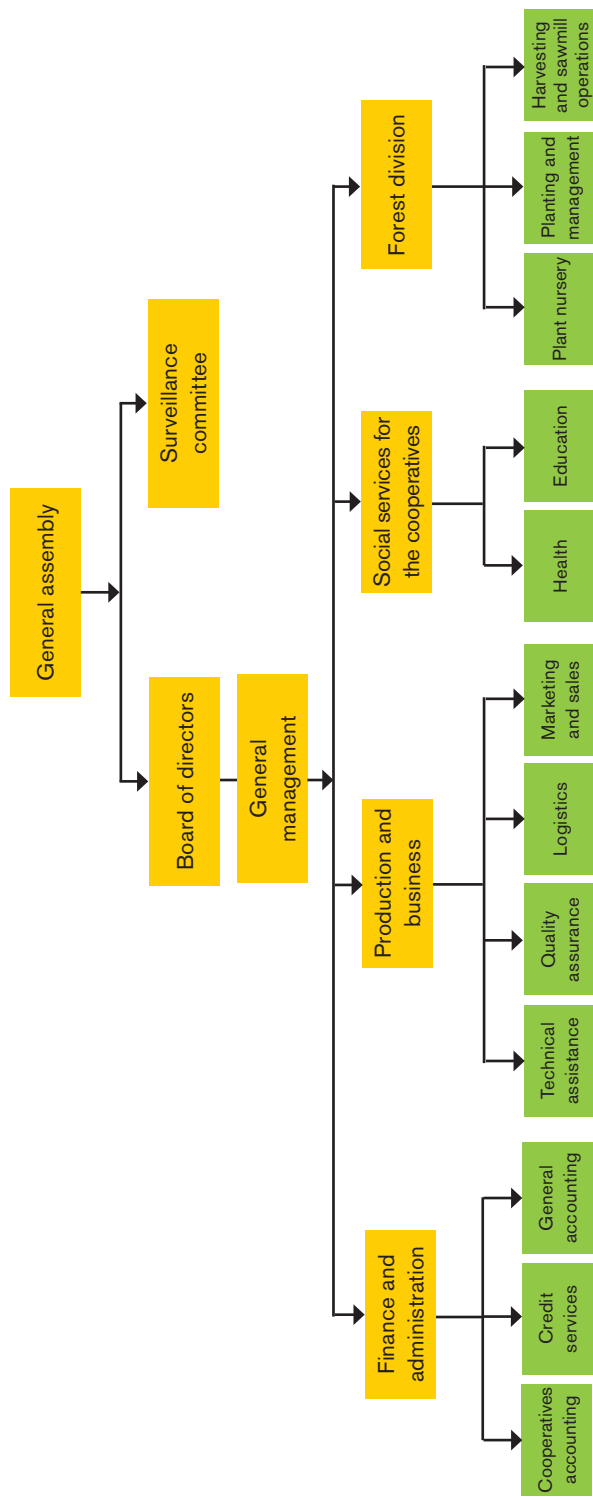
5.1.4 Fedecovera's forestry division's value chain

Fedecovera assumes most roles in the forest business value chain. It collects and transports harvested timber, processes it into products, and conducts marketing and sales. It also assumes a leading role as a service provider: technical assistance, legal aid, forestry regency and accounting. It is a supplier of tree seedlings from its nurseries as well as timber products. This makes Fedecovera the main actor in this forestry value chain.

Other important actors include the organisations that support forestry activities, such as NGOs, third-level organisations of which Fedecovera is a member, regulation entities and the Forest Stewardship Council (Fedecovera plantations are all certified by FSC).

1. *Vocales* (meaning 'vocals') are members of the board of directors involved in activities like communication, public relationships and productions committees etc. They also have voting rights.

Figure 5.1 Fedecovera's business structure



Each actor in the value chain plays an important role. For example, INAB's new Probosque Law² (which supersedes PINFOR) will become an important mechanism to continue encouraging the development of forestry plantations in Guatemala (25 per cent of the total number of forestry plantations implemented through PINFOR are in the Verapaces region). This will have a positive impact on Fedecovera's supply chain.

The Forest Stewardship Council is also an important partner. FSC-certification ensures proper forestry management by the partner cooperatives, resulting in plantations with higher yields and higher incomes for producers.

NGOs continue to provide capacity-building support for Fedecovera and its member cooperatives. For example, the Forest and Farm Facility (FFF) recently signed a memorandum of agreement through which Fedecovera hopes to open a rural business school.

Fedecovera's main market is the pallet market, producing timber pallets for buyers like Imansa (an intermediary who sells pallets to Chiquita, a fruit export company). However, Fedecovera is also exploring other markets such as supplying timber to the construction industry to companies like Samboro (a flooring manufacturer) and Lignum (a timber construction company). Supplying these markets could generate more profit for the company.

5.2 What does Fedecovera see as the main risks and barriers?

There is an important distinction to be made between the work of the partner cooperatives which were established in 1996 and the work of FEDECOVERA'S forestry division, which was established in 2014. This case study risk assessment only relates to challenges facing the newer forestry division.

The risk assessment was done using a participatory process in which the members of the forestry division work team, led by their manager, participated in individual interviews and group sessions, to identify and classify risks in six prioritised areas: revenue flows, resource access, business relationships, operational capacity, security of operating environment and brand development.

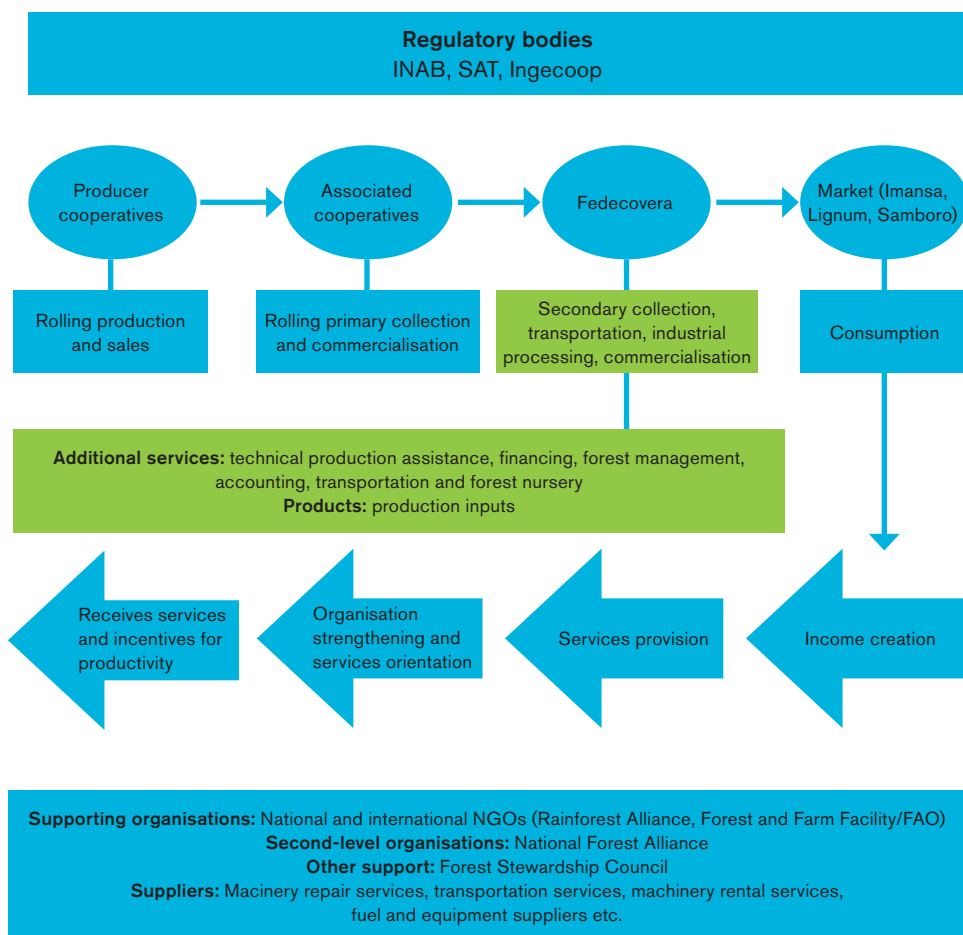
During the process, members of the forestry division expressed their enthusiasm for the risk assessment, since the process helped them to realise the importance of risk assessment and management as a strategic planning tool. Risks were identified and classified according to whether they were high (scored 8–10), medium (5–7) or low (1–4).

The high-risk category included factors directly affecting the efficiency, growth and financial sustainability of the business. Medium risks are those which could damage the business, but not bankrupt it and include external factors which would require third-party intervention. Low-risk factors are those which do not endanger the sustainability of the business and which can be resolved using short-term internal actions.

2. The Law to Promote the Establishment, Recovery, Restoration, Management, Production and Protection of Forests in Guatemala (the Probosque Law) was approved by the Congress of the Republic of Guatemala under Decree 2-2015 in October 2015.

Figure 5.2 Fedecovera's forestry value chain







Fedecovera's new industrial processing facilities

5.3 High-risk factors affecting the business

The following factors were ranked by participants as high risks, directly affecting the efficiency, growth and financial sustainability of the business.

5.3.1 Lack of working capital

Fedecovera requires an increase in its working capital for the business to grow, to maintain its customer relationships and to ensure the financial sustainability of the business.

Fedecovera assumes most roles in its forest business value chain. While this helps to reduce risk from outside the federation, it can also increase risk within it, due to the need to improve capacity in most areas of the business. While the forestry division does have working capital, this is not yet adjusted to the business's needs for industrial processing which were not properly anticipated. Limited working capital causes problems as the enterprise cannot purchase enough raw materials for industrial-scale processing or to meet its customers' requirements. Although the forestry division can request more cash from Fedecovera's general management, internal bureaucracy and administrative procedures mean that this process is slow and inefficient. If Fedecovera cannot fulfil its commercial agreements, suppliers will doubt its capacity to pay for their raw materials and buyers will doubt its capacity to meet their requirements.

5.3.2 Customers failing to pay on time

The flow of resources is also affected by Fedecovera's system for recovering accounts receivable from customers. The existing payment terms mean that payments are delayed sometimes by four weeks or more after purchases are made. But establishing new systems can take time and can be difficult to achieve, considering Fedecovera's limited list of buyers and its dependency on them (Imansa, Lignum and Samboro).

5.3.3 Limited profit margins and changes in demand

The market for the timber pallets that Fedecovera manufactures is characterised by limited profit margins, which means it is difficult to rely on this part of the business to bring in sufficient working capital from sales. Sales are also affected by competition from other suppliers, which affects demand for Fedecovera's products. Often, buyers prefer to buy from manufacturers who do not pay taxes or the minimum wage to their workers, allowing them to sell at lower prices. In this way, brokers can increase their profit margin.

The forestry division's current dependence on the pallets market is a high-risk factor for the business. If the demand was affected by significant changes due to a surplus of supply, this could affect the immediate financial sustainability of the business, since it has no other identified market alternatives that could sustain it in the short term. The forestry division is aware of this and the risk it presents to the business in terms of sustainability of the product and revenue flows.

5.3.4 Bureaucracy in decision making

The forest business requires fast decision-making processes, which can make the difference between successfully negotiating a sale with a supplier for much-needed raw materials or not. For Fedecovera, bureaucracy in decision-making affects the dynamics of its forestry division. Often, the forestry department needs more cash to buy raw materials but the federation fails to make a decision in time. The decision-making process needs to be faster and more responsive to the enterprise's needs.

5.3.5 Poor resource access

Resource access is affected by factors such as distance to the communities where the plantations are located, the poor condition of the access roads, and in extreme cases, the lack of roads. Some plantations can only be accessed via private roads. Negotiations with owners cause delays and can lead to exploitation and more expense.

5.3.6 Corruption and law enforcement

Corruption at highway checkpoints by police authorities generates unnecessary inconveniences. Sometimes, trucks are stopped by the highway police who query whether the cargo being transported or documents are legitimate in an attempt to solicit bribes. Fedecovera then has to send representatives to the checkpoints to clarify that everything is legal and correct, wasting valuable time and money to rectify the situation.

5.3.7 Governance of partner cooperatives

Levels of governance in Fedecovera's partner cooperatives are another important risk factor. Any lack of governance capacity in the board of directors of these cooperatives affects their relationships and negotiations with Fedecovera. For example, a new representative on the board of directors in one of the member cooperatives could influence its members to sell their raw materials to a different buyer. This might be because the individual thinks Fedecovera does not benefit its members enough or due to a lack of understanding of Fedecovera's role in the value chain or how the forestry business works.

5.3.8 Insecurity due to changes in forestry laws

Fedecovera's forestry business is highly sensitive to changes in national forestry policies, which can directly and adversely affect the establishment of new forestry plantations and the costs involved. For example, the Ministry of Environment and Natural Resources (MARN) is hoping to make environmental impact studies a legal requirement before any new forestry plantation can be established, which complicates the process and makes it more expensive, potentially reducing the number of new producers and impacting on Fedecovera's supply chain in the long term.

5.3.9 Lack of operational capacity

Both suppliers and buyers should have a good understanding of the operational capacity of the business, to give them confidence in the business. This which would be an advantage for Fedecovera, as perceptions about operational capacity can affect business relationships in the short, medium and long term. However, a better understanding of Fedecovera's operational capacity could also facilitate agreements between different actors in the value chain that would bring joint benefits. For example, the business faces risks due to a lack of power-generating equipment and an unstable electricity supply where the sawmill is located. There is also insufficient technological capacity for the development of new products. Such agreements could help to improve infrastructure and purchase vital equipment.

5.4 Medium-risk factors affecting the business

Medium risks are those which could damage the sustainability and growth of the business, but would not cause bankruptcy. Some of these factors are external and would require third-party intervention.

5.4.1 Supply of raw materials

Fedecovera's partner cooperatives are still not capable of supplying 100 per cent of its demand for raw materials – 58 per cent comes from third-party plantations. This means that Fedecovera faces competition in accessing enough raw materials that Fedecovera needs for its industry. Fedecovera needs a more efficient purchasing process and enough working capital to compete in the market, ensure its access to sufficient raw materials, and to meet its customers' demands.



© Fedecovera

The reforestation areas of the forestry division

5.4.2 Formalising business agreements

Fedecovera mainly uses agreements with its customers, rather than legal contracts. This situation means that agreed conditions often are not respected. If Fedecovera used legal contracts, agreements would be more likely to be respected and Fedecovera would have recourse to legal action to request missing or late payments.

5.4.3 Delays in issuing forestry licenses

INAB's internal processes (the authority in charge of issuing forestry licenses) generate delays in harvesting operations, directly affecting the operation costs of Fedecovera. Another risk relates to differences in the interpretation of the forestry law by different actors of the value chain and the regulatory authorities. For example, members of the forestry division said that they have experienced problems relating to quantifying timber volumes, guidelines for transportation and management plans.

5.4.4 Informality of the producers

The partner cooperative producers who supply Fedecovera with raw materials are not legally constituted as individual companies with the Superintendency of Tax Administration (SAT). This complicates commercial transactions because of the lack of

invoices which guarantee the purchase of raw material. Fedecovera needs to make legal business transactions, which means that for every purchase it must obtain an invoice to comply with the accounting requirements of the business.

5.4.5 Developing business relationships

Fedecovera's forestry business has particular dynamics that must be understood by its partner and non-partner cooperatives as the business develops. Business relationships must be based on trust, mutual benefit and with a clear understanding of the conditions of the business transaction. It takes time to learn how the business works and this still needs to be developed.

5.4.6 Brand management and operational capacity

Any perception from the market of a lack of capacity regarding the fulfilment of customer orders and requirements will affect the business in direct ways. For example, if buyers perceive that Fedecovera lacks the volume of raw materials to produce their products, they may look for other suppliers. Meeting customers' requirements (in terms of quality, quantity and delivery schedules) affects the brand and the sustainability of the business. With working capital that is sometimes limited, procuring the required volume of raw materials can be difficult and affects production and delivery. Machinery repairs and maintenance and a lack of personnel with the skills to make repairs also affect Fedecovera's operational capacity.

5.5 What strategies and options can Fedecovera use to manage risk?

To understand how Fedecovera manages risk, it is important to distinguish between the forestry plantations run by the partner cooperatives and Fedecovera's forestry division business.

In the first instance – establishing and managing forestry plantations – specific risks were identified such as the lack of a forestry culture in the region, lack of knowledge of the management of plantations, issues relating to financing, and finding markets for products harvested from the first thinning (timber previously harvested from the first thinning was used as firewood but is now used to manufacture pallets, creating a new source of income).

To tackle these challenges, Fedecovera has made strategic alliances with development and government actors, such as SOCODEVI, which have directly supported the implementation of forestry plantations. Likewise, with the support of such agencies and with self-funding, it has run training projects on good forestry management practice to generate support and create a forestry culture in the region, as well as on helping to improve understanding of the economic value of the plantations.

Another key factor has been the INAB forestry incentives which have provided the financial motivation for establishing plantations in the region – Fedecovera's support has led to the inclusion of small-scale producers in these programmes.

Table 5.1 Summary of risks identified by Fedecovera's forestry division

	1 (low) to 10 (high)
REVENUE FLOWS	
Limited working capital	10
Problems recovering accounts receivable from customers	8
Bureaucratic internal processes	8
Legal and illegal competition in the supply chain (raw materials and sale of pallets)	8
Changes in market demands	8
Limited profit margins (sale of pallets)	8
Inability to guarantee supply of raw material	7
Need to formalise business agreements with third parties	7
Delays in issuing forestry licenses	7
Informality in the supply chain (suppliers not registered with SAT)	6
Limited operational capacity	5
Quality of raw materials and finished product	5
RESOURCE ACCESS	
Limited working capital	9
Corruption and law enforcement	9
Right of way issues	8
Poor road access and infrastructure	8
Governance issues (partner cooperatives and other suppliers)	8
Seasonality of demand (summer and winter)	7
Delays in issuing forestry licenses/inefficiency of regulatory bodies	7
Different interpretations of forestry law (by regulatory bodies and forest enterprises)	6
Informality of forestry plantation owners' businesses	6
Criteria needed to determinate the volume of harvest, transportation, industry	6
Problems relating to topography	6
Problems relating to weather conditions	6
Lack of education and knowledge about forestry business; cultural issues	5
BUSINESS RELATIONSHIPS	
Supply issues (ability to fulfil contractual agreements)	8
Working capital issues (ability to fulfil contractual agreements)	7
Lack of understanding of forestry business processes	6
Lack of understanding of the benefits generated by forestry business	5
Lack of reactive capacity (ability to respond to changes in demand)	4

SECURITY OF OPERATING ENVIRONMENT	
New regulations hinder forestry activities, eg environmental impact evaluations which complicate forestry management and make it more expensive	8
Poor governance of the forestry sector	6
Lack of communication and socialisation of forestry activities (on impacts in the region)	5
BRAND DEVELOPMENT	
Lack of communication about operational and supply capacity	7
Ability to meet customer requirements (quantities, quality and on schedule)	6
Lack of quality control and traceability processes	4
OPERATIONAL CAPACITY	
Unstable electricity supply	9
Lack of technological capacity for developing new products	8
Problems with repairs and maintenance of machinery and equipment	7
Loss of experienced staff (personnel rotation)	5

In the second instance – establishing a forestry division for the industrial processing of timber products, which is the object of analysis in this case study – this was initiated by the management team, which obtained funding from MINECO for purchasing equipment for the sawmill. The land required for the construction of the plant was purchased by Fedecovera on behalf of MATRIZ, the parent company.

This section discusses the strategies identified by the risk-assessment process which Fedecovera can use to mitigate risks.

5.5.1 Strengthen brand management and business relationships

To improve its brand, Fedecovera has developed annual harvest and production plans. This should enable it to meet its customers' requirements, and generating trust in the Fedecovera brand. The federation is also strengthening its operational processes, implementing internal controls and developing traceability systems (documentation processes and establishing strict quality controls).

All Fedecovera plantations are also FSC certified. Certification has provided Fedecovera with a good forestry management process, which is important for sustainable resource management. But the market for pallets does not require certified timber, so in commercial terms, FSC certification does not yet add value. One recommendation for FSC could be to promote the use of certified timber in the market to create better sales conditions, although whether this could happen in the future is unclear.

In addition, Fedecovera's field workers have worked with the producer communities for over 10 years, which has been a key factor in building trust and strengthening its relationships with its partner cooperatives and other producers in the region.



Pine is one of the main species promoted among Fedecovera's cooperatives

5.5.2 Increase working capital and delimit profit margins

The forestry division needs to continue its internally lobbying for more efficient decision making within Fedecovera, which will accelerate the approval process for releasing much-needed working capital. Fedecovera should also keep stricter control of its operations and production costs and maximise efficiency by delimiting its profit margins.

5.5.3 Match competitors

Fedecovera faces competition in the market. To ensure customer loyalty, Fedecovera must do more to honour its trade agreements and take steps to improve its business relationships, eg by offering better prices than its competitors as well as offering other benefits such as technical services. This means that Fedecovera may sometimes have to sacrifice some of its profit margin to be more competitive.

5.5.4 Improve the enabling environment

Fedecovera actively participates in local, departmental and regional policy fora such as community development councils (COCODEs), departmental development councils

(CODEDE) and municipal development councils (COMUDEs). It is also strengthening its policy engagement through its affiliation with second- and third-level associations and federations such as the American Chamber of Commerce (AmCham), the Guatemalan Association of Exporters (AGEXPORT), the Guatemalan National Coffee Association (ANACAFE), the National Alliance of Forest Communities (the Alianza), the Confederation of Cooperatives of Guatemala (CONFECOOP), the Guatemalan National Institute of Cooperatives (INACOP), INAB's local-level forestry roundtables and the Forest Trade Union. It also participates in relevant local government and authorities' meetings. Third-level organisations representing forestry activity in Guatemala, such as the Alianza, do advocacy work to improve the enabling environment, including on issues such as tackling regulatory inefficiencies.

5.5.6 Address problems relating to access and infrastructure

Fedecovera must continue its engagement with local authorities to lobby for developing and improving infrastructure by communicating the economic and social benefits of local forestry enterprises. It should also invest in basic timber-processing facilities for use in the field which would improve efficiencies in terms of time and money (due to the topography of the land, sometimes it is easier to process the timber first rather than extract whole logs). Issues relating to access and rights of way can mostly be resolved by negotiating payment agreements with land owners.

5.5.7 Formalise forestry plantation businesses

Fedecovera has been taking steps towards making its business transactions more transparent by formalising contracts with its partners, issuing special invoices to guarantee its supply of raw materials. However, this process comes with additional costs as having registered transactions means that Fedecovera now pays more tax.

5.5.8 Improve governance, training and education

Fedecovera must continue to improve on the training it provides for its board of directors (such as on leadership, negotiation and management skills and on the cooperative movement). Greater effort is needed to improve its members' understanding of the forestry business and its benefits, and the roles and responsibilities of each actor in the value chain. Fedecovera already runs education and training extension programmes for its partner producers on topics such as costs, accounting and management, harvesting and production processes, which are respectful of their partners' cultural characteristics.

5.6 Options to reduce risk through external support

Fedecovera is one of the key actors in the forestry value chain of the Verapaces region, assuming most of the roles in that chain. While this helps to reduce risk, it can also increase it. Fedecovera aims to decrease risk by making each stage of the forestry chain more efficient. But this means that it must also absorb the risks arising from each and every one of these activities. However, there are key actors with whom it could develop alliances and collaborate to overcome these challenges. Over the years, Fedecovera has evolved into a strong organisation and it is now in a position where, together with its third-level organisation allies, it can influence government decisions over forest resources.

Table 5.2 Risk management options for Fedecovera's forestry division

	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity
Threat	Limited working capital Problems recovering accounts receivable from customers Bureaucratic internal processes Legal and illegal competition in the supply chain (raw materials and sale of pallets) Changes in market demands Limited profit margins (sale of pallets)	Limited working capital Corruption and law enforcement Poor road access and infrastructure	Ability to meet customer requirements (quantities, quality and on schedule) Governance issues (partner cooperatives and other suppliers)	New regulations hinder forestry activities	Poor customer perception of operational and supply capacity	Unstable electricity supply Lack of technological capacity for developing new products Problems with repairs and maintenance of machinery and equipment
Opportunities	No specific opportunities were identified during the risk assessment					
Options for managing risk (business)	Increase working capital using resources from Fedecovera or Banrural Formalise commercial processes and the use of legal contracts Submit a clear and reasoned proposal to increase working capital to the directorate-general of Fedecovera, based on growth projections and considering a 100 per cent occupancy rate (maximum capacity of the plant) Develop product diversification to use all qualities of wood	Design an internal proposal to increase the working capital assigned to the forestry division Second- and third-level organisations to continue monitoring and reporting corruption Continue work with local government to lobby for improvements in infrastructure and advocate the benefits of forestry development Form alliances with larger-scale foresters who are not partners of Fedecovera and other plantations in own farms of Fedecovera	Continue implementing internal controls and develop traceability systems (documenting processes and establishing strict quality controls) Continue developing training programmes for board of directors of partner cooperatives	Continue influencing policymakers through Fedecovera and third-level organisations	Take control of how Fedecovera communicates its access to raw materials	Install emergency generators Analyse other power sources for operating the industrial plant Keep an inventory of spare parts Develop internal or local capacity for machinery repairs and maintenance
Options for policy (government/private sector)	Banrural should develop financial products that allow Fedecovera access to working capital for its forestry division	Government ministries and local authorities should improve infrastructure of roads and bridges INAB promotes forestry plantations through its incentive forestry programmes with the new ProBosque law	Establish long-term contracts between Fedecovera, suppliers and customers to plan production and provide security for all stakeholders	The government should analyse impacts of implementing new policies and decide which policies generate more benefits for producers The government should be understand that forestry can generate benefits eg incomes, jobs and food security – and also tax income	Fedecovera should develop a communication strategy publicising its forestry strengths to its customers	Fedecovera should lobby energy service providers to improve the power supply

This is a very strategic position to be in and it should use this to reduce corruption and promote a more enabling environment. It can also use this to seize new opportunities emerging for locally controlled forestry in Guatemala. The recently approved Probosque law (September 2015) is likely to lead to new opportunities for Fedecovera to increase its forestry plantations, whilst guaranteeing the sustainable management of the resource (as it has done under PINFOR and through FSC). And this would also allow for continuous close engagement with the government on the national forest incentive programme, which, together with its allies, it has been working on to improve over the years.

The following key observations can be made for key options to reduce risk through more efficient collaboration with external partners and supporting agencies, followed by a set of recommendations:

- Buyers guarantee the financial sustainability of the business and invigorate the cash flow. Making long-term trade agreements with buyers would help generate stability for the business while ensuring a secure market for Fedecovera's partner producers and building their trust in the federation.
- Banks are necessary to increase Fedecovera's access to working capital. Fedecovera is a shareholder of the Banco de Desarrollo Rural (Banrural). Banrural should create financial products suitable for forestry businesses, which would allow Fedecovera to access working capital loans with better interest rates and payment terms.
- Fedecovera should strengthen its relationship with third-level organisations to continue lobbying for improvements in Guatemala's forestry laws and operational instruments (such as procedures for issuing licences).
- International development organisations should support business and governance capacity building. For example, with the support of the Forest and Farm Facility (FFF), Fedecovera has started an agroforestry business school for its partner cooperative producers.
- Fedecovera plantations are all certified by FSC. Certification helps to guarantee the sustainability of forest resources and improves the quality of the timber through better forestry management. It also provides valuable market alternatives, attracting buyers who recognise the added value that certification provides.

Table 5.3 Solutions to reduce risk for Fedecovera's forestry division

Risk categories and options for improving the business environment of locally controlled forest businesses	Practical potential for beneficial impact – in author's opinion (score out of 10)
RESOURCE ACCESS (concerns over resource access and stewardship)	
Fedecovera should increase its working capital to be more competitive in raw material access (through its own financial resources or Banrural).	10/10
Fedecovera should improve the efficiency of its internal processes for assigning working capital to its forestry division.	10/10
Fedecovera should improve its influence in lobbying for more efficient forestry license-issuing procedures.	7/10

REVENUE FLOWS (concerns over profit and balancing costs)	
Banrural should develop new financial products suited to forestry business to facilitate access to credit.	6/10
Fedecovera should develop new products to reach new markets and invest in new technology and market intelligence.	10/10
Fedecovera should develop more efficient systems for recovering accounts receivable from customers.	7/10
Fedecovera should work with its third-level organisation allies to lobby for improvements in the government's forestry incentive programmes (eg to increase allocated funds and support periods).	8/10
FSC should improve efforts both to promote and increase prices for FSC-certified products. Certification has increased access to markets for Fedecovera. However, it has increased costs but not added commercial value.	6/10
BUSINESS RELATIONSHIPS (concerns over conflict-free relationships)	
Fedecovera should strengthening governance of its partner cooperatives and the board of directors and others through training on skills such as leadership, negotiation, management and cooperative movements which should also strength business relationships between Fedecovera and its associated and supplier cooperatives.	7/10
Fedecovera should develop a communication strategy publicising its forest industry strengths to its customers.	7/10
SECURITY OF OPERATING ENVIRONMENT (concerns over security of operating environment)	
Fedecovera should work with its third-level organisations allies to lobby for improvements forestry laws to reduce corruption and promote a healthy business climate.	8/10
BRAND DEVELOPMENT (concerns over reputation with customers)	
Fedecovera should resolve its working capital problems, as this is the main factor affecting its reputation with customers (ie to ensure sufficient supply of raw materials to meet customer requirements).	10/10
Fedecovera should continue implementing a traceability process to guarantee the quality of its products.	7/10
OPERATIONAL CAPACITY (concerns over operating efficiencies)	
Fedecovera should invest in profits and/or access Ministry of Economy funding to buy equipment for processing larger-diameter timber and produce new product lines.	8/10
Fedecovera should train its industrial staff to produce new products.	10/10
Fedecovera should train its administrative and management staff in skills necessary for expanding the forestry business: strategic planning, financial and administrative planning and forestry operations. It should also explore opportunities for international exchanges.	8/10
Fedecovera should include in their annual planning activities a risk assessment to identify, prioritise and propose management strategies to tackle potential risks relating to its regular operations and business expansion.	10/10

5.7 Conclusions and ways forward

5.7.1 Risk assessments and business development

Risk assessments can be used as a planning tool to develop mitigation strategies in the short, medium and long term. This could help forestry businesses like Fedecovera to minimise the impacts of risks that could affect the sustainability of the business and to face these challenges in a more sustained manner. This includes forming strategic alliances with other actors in the value chain.

Risk management can aid growth too. This is a new concept that must be internalised within the organisation so that Fedecovera's members and management team better understand the benefits of risk assessment and risk-management planning, and what skills and resources are required to implement it.

5.7.2 Training and facilitation to improve external support for LCFBs

A clearer understanding of risk-management processes is needed in the forestry sector in Guatemala. This requires practical and participatory training processes which would enable organisations to develop scenarios to evaluate the potential financial impact of risks on forestry enterprises and how to ensure business sustainability.

5.7.3 Developing a joint understanding of risks and costs

It is important for policymakers, investors and LCFBs to develop a joint understanding of the risks and costs facing the forestry sector in Guatemala and to promote risk management in forestry enterprises. One approach could be to establish forestry roundtables. These should involve multiple stakeholders and be led by second- and third-level organisations. The following topics could be useful in facilitating those discussions and to generate more support for reducing risk in the enabling environment:

- What are the state-level economic benefits of forestry? (eg generating resources through taxes and government services)
- What are the economic and social benefits for rural communities?
- What is the growth potential of the national forestry industry?
- What are the environmental benefits of forestry plantations? (eg restoration of forest landscapes, improvements in biodiversity, water, carbon capture)

If the actors in the forest value chain in Guatemala learn about the benefits of locally controlled forest businesses, they can begin to understand the risks that these LCFBs also face. This should help to generate policy instruments to identify risks and support the development of effective mitigation strategies.

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Impulsores Suchitecos del Desarrollo Integral Sociedad Civil (Suchitecos)

A community forest enterprise in the Maya Biosphere Reserve

by Juan José Ochaeta Castellanos

Impulsores Suchitecos del Desarrollo Integral Sociedad Civil (Drivers of Integrated Development for Civil Society, or 'Suchitecos') is an FSC-certified community forest enterprise operating in the Maya Biosphere Reserve in Petén, Guatemala. It is composed of 21 partners and its main activity is the harvesting, primary processing and commercialisation of timber, mainly mahogany. Despite being in operation since 1998, the business faces significant risks such as the lack of working capital or an overarching business vision. The business is also dependent on mahogany and needs alternative markets for secondary species to generate income and help the business to grow. Meanwhile, its concession contract with the State of Guatemala expires in 2022 – and there is already uncertainty as to whether it will be renewed. Despite this, Suchitecos is taking steps to ensure its sustainability and to renegotiate its concessions contract, such as documenting the important social, environmental and economic impacts of the business.

6.1 Context in which Suchitecos operates

6.1.1 About Suchitecos as a business

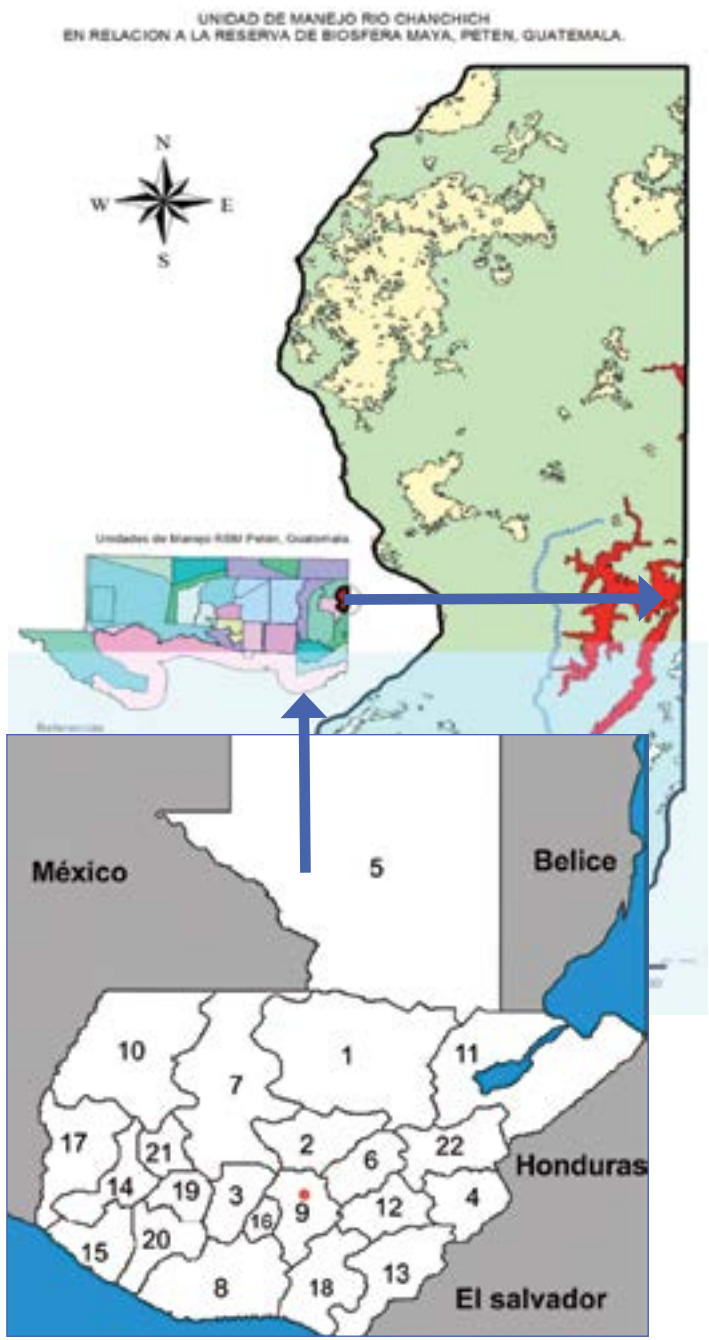
Suchitecos began operating in 1998, as result of the license process of the Maya Biosphere Reserve (see Box 1) and the granting of the Río Chanchich management unit as a forestry concession by the State of Guatemala.

The organisation is composed of 21 partners, and administers an area of over 12,200 hectares of forest. The management agreement is for a period of 25 years and it authorises the community to carry out rational and sustainable exploitation of timber and non-timber forest products. Its concession area and sawmill have been certified since 1999, both with management and chain of custody certifications, under the Forest Stewardship Council (FSC). Suchitecos operations are based on its management plan, which was approved by the National Council of Protected Areas (CONAP) and its annual operating plan.

The company offers the following forest products and services:

- Stress-graded timber for structural purposes: mahogany (*Swietenia mahogany*), cedar (*Cedrela odorata*), pucté or black olive (*Bucida buceras*), manchiche (*Lonchocarpus castillo*), santa maria (*Calophyllum brasiliense*) and danto (*Vatairea lundellii*)
- Custom-made moulding profiles: (tongue and groove, baseboard, stripboard, lumber for housing construction, shiplap)
- Tropical hardwood floors and decking, surface boards, timber for musical instruments
- Rental of heavy equipment
- Transportation services

Figure 6.1 Map of Río Chanchich forestry management unit



Source: Suchitecos

Box 6.1 Forest conservation in the Maya Biosphere Reserve

Guatemala is a country with a wealth of forests, totaling 37 per cent of its whole national territory. Half of this forest area is located in the north of the country in Petén – in the largest tropical forest reserve in Central America, the Maya Biosphere Reserve (MBR). The reserve includes more than 1.615 million hectares which are still covered by tropical forests and has many natural ecosystems and species common to subtropical zones.

Created in 1990 under Decree 5-90 of the Congress of the Republic of Guatemala, the Maya Biosphere Reserve is divided into three areas according to the type of activity that is performed in them: the buffer zone, multiple-uses zone and core zone. In 1994, the government of Guatemala took control of forest activities in the multiple-uses zone. As a result, they granted forest concession contracts to communities and private organisations for resource use of timber and non-timber forest products (NTFPs). The concession contracts are legal mechanisms that allow the co-management of the forest areas with CONAP. There are currently 15 forestry concessions in the Maya Biosphere Reserve, 13 of which are community concessions and 2 are industrial.

During the past three years, an average of 160,000 board feet of mahogany has been harvested (approximately 380m³). Of this, 60 per cent of the timber is Selecta and Best grades,¹ and destined for the export market. Suchitecos sells to a single buyer, the Rex Lumber Company, an American company which is one of the largest wholesale tropical and domestic hardwood distributors and custom moulding manufacturers on the Eastern Seaboard. The company buys all of Suchitecos's milled Selecta and Best mahogany grades.

The remaining 40 per cent is short or common grades of mahogany and is sold to local and national markets along with secondary species timber. For secondary species of timber, 100,000 feet are processed annually and are destined for the local and national market. However, in recent years both national and international demand for this type of wood has decreased.

Annual income from the sale of Selecta- and Best-grade mahogany is approximately US\$425,000. In the past three years, the average mahogany price per board foot for the Selecta to Best grades has been US\$4.40. For common mahogany, the price is US\$1.73 per board foot and for short mahogany it is US\$1.03 per board foot. Secondary species timber has an average price of US\$0.90 per board foot.

6.1.2 The enabling and operating environment

Location: Suchitecos is located in the municipality of Melchor de Mencos, in the department of Petén. This municipality borders with Belize, and is located 90 kilometres from the capital of Petén. The road that connects the municipality with the capital Petén is paved and in good condition. The road to the concession area is a dirt road, as well as the internal roads, although all are in good condition.

The municipality of Melchor de Mencos has a population of 21,822 (INE 2013c). Access to education at primary and secondary levels is broad, both in private and public schools. The

1. 'Selecta' and 'Best' grades are international classifications from the National Hardwood Lumber Association (NHLA) and are the highest-quality grades of timber, mainly obtained from defect-free long pieces of timber.

school-age population also has the option to study in Belize, with the advantage of learning English. At university level, both private and state universities are found mainly in the municipalities of Flores and San Benito, Petén, 90km away. The connection between these municipalities is by road, and there is regular private and public transportation. The economy in Melchor de Mencos is mostly based on agriculture (mainly corn), forest activities (extraction and processing of tropical hardwoods such as mahogany) and livestock (mainly cattle and pigs) as well as formal and informal trade, and tourism.

Melchor de Mencos is located in an area where many illegal immigrants pass through en route to the United States via Guatemala's border with Mexico. This means that the area of forest concession faces risks associated with forest fires and illegal human trafficking and drug trafficking, due to the vast and uninhabited nature of the territory.

Access to markets: in Petén, there are seven active community forest concessions and two industrial or private concessions, whose annual supply of timber species is similar to Suchitecos. Since the beginning of the concessionary process, there has been a group of buyers who have maintained and strengthened their commercial relations with the community forest concessions. Year after year, there have been positive changes in sales conditions. In 2015, for the first time, community forest concessions made the decision to negotiate the price of mahogany as a bloc, which resulted in establishing a minimum price of US\$4.50 per board foot and some managed an increase of US\$0.75 above the base price.

Access to credit: Suchitecos has had a business relationship with the rural development bank Banco de Desarrollo Rural (Banrural) for approximately 10 years. This relationship allows them to access annual credit to finance their operations. In addition to Banrural, credit has also been obtained through the Ficohsa Finance Group. Repayment of the credit is in full annually.

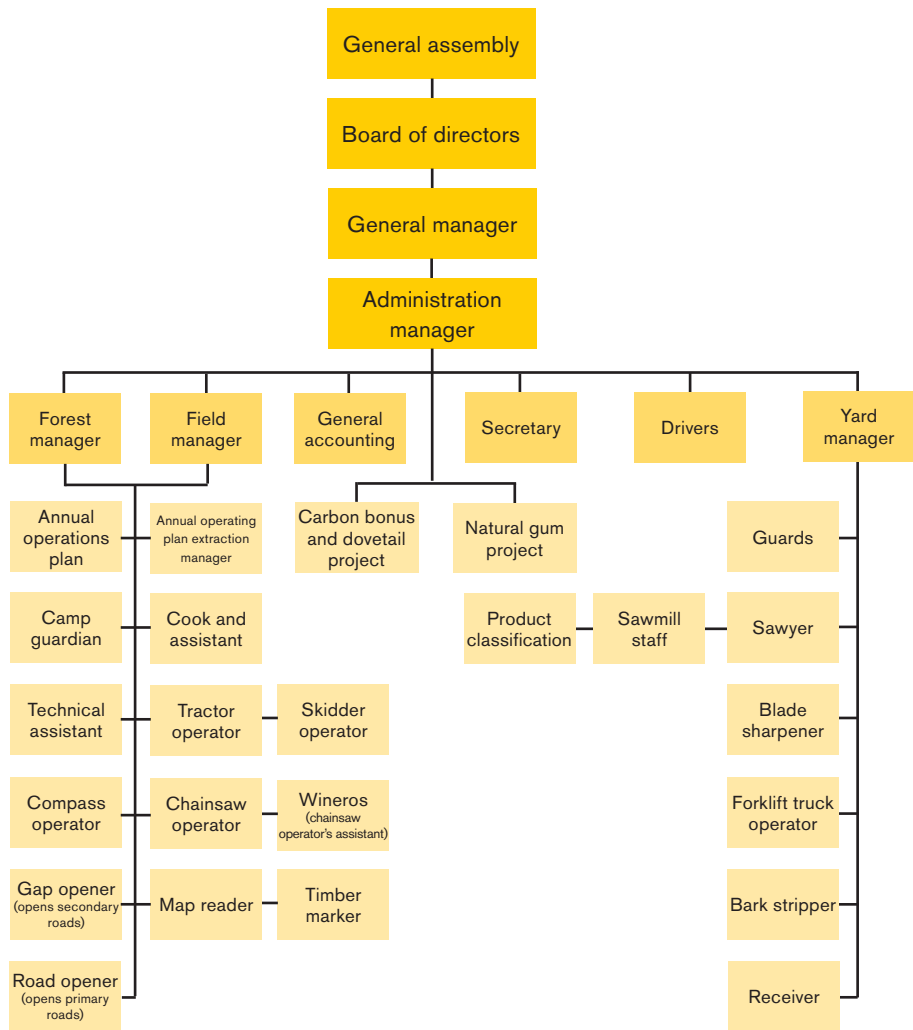
Workforce: most of the staff working in the business are members of the organisation and come from the municipality of Melchor de Mencos. Hiring its workforce locally has built capacity and generated income for the community. After more than 15 years of harvesting and primary processing of timber, the community members employed by Suchitecos have developed the required experience and skills needed for increasing efficiency of production.

Suppliers: Suchitecos has access to a wide network of distributors of supplies, fuels, tools and spare parts. These suppliers are located in Melchor de Mencos and central Petén (municipalities of Flores and San Benito). However, heavy machinery, spare parts and skilled labour must be obtained from outside the department of Petén, which generates delays that could be significant to the operation of the business.

Organisational structure: the company is composed of a general assembly (the highest body of decision making and consultation) and a board of directors (president, vice-president, secretary, treasurer and *vocales*).² The company is operated by the general manager, an administrative manager, and other administrative and operative assistants who deal with the different activities required by the forest operation.

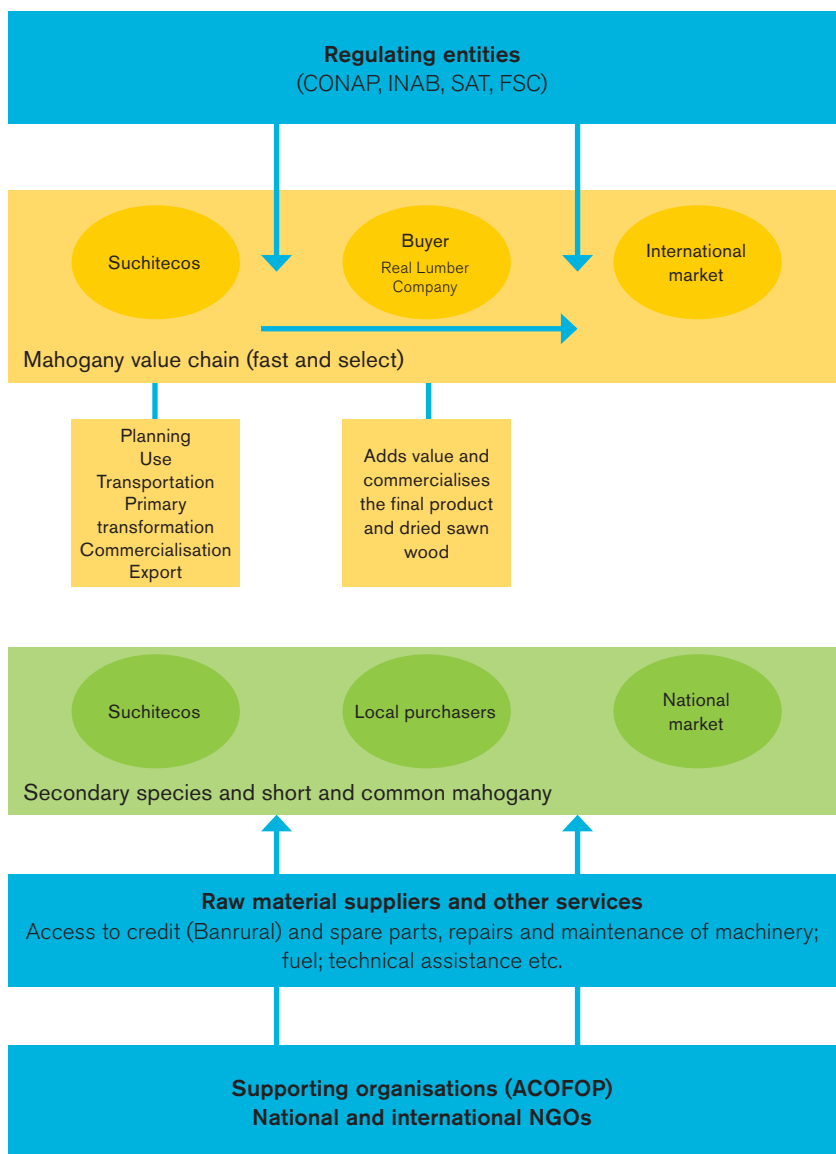
2. *Vocales* (meaning 'vocals') are members of the board of directors involved in activities like communication, public relationships and productions committees etc. They also have voting rights.

Figure 6.2 Suchiteco's business structure



Notes: Natural gum project and the carbon project are not currently income-generating activities for Suchitecos. All the community forestry concessions include in their forestry management plans other products like xate, gum and in this case carbon, as products that could be extracted. This does not mean that they are exploiting them all. However, the natural gum and carbon projects have been identified as potential future opportunities, although Suchitecos is yet to explore this further.

Figure 6.3 Suchiteco's value-chain map



6.1.3 Actors in the Suchitecos value chain

Suchitecos and Rex Lumber Company are the two main actors in the value chain. Suchitecos performs activities from forest planning to primary timber transformation and export processes. Rex Lumber Company is the buyer of the mahogany and it plays a decisive role in advancing working capital. Likewise, Banrural is another key actor, granting loans for working capital.

As a support organisation, the Association of Forest Communities of Petén (ACOFOP) is an active second-level organisation, working to provide a better business climate for businesses in the Maya Biosphere Reserve. ACOFOP uses its political influence to improve forest law and its application. As a result, processes of approval for annual operating plans, forest licenses and transportation guides have become more efficient. Also, in 2015, ACOFOP promoted and secured the bloc price of mahogany for the combined community concessions, strengthening their businesses within the MBR.

NGOs have also had an important role as indirect actors in the value chain, developing and providing technical training in relation to forest planning, good management practice and primary transformation techniques (such as building internal roads, directional tree felling, transporting forest materials, sawmilling and timber measurement and grading). Capacities related to business administration have also been strengthened (such as calculating costs, accountancy, tax payments and inventories, as well as control and documentation of operating processes).

Government entities such as CONAP and the National Institute of Forests (INAB) have played an important role as well in the value chain (such as regulating forestry activities in Guatemala and as issuers of licenses and transportation guides).

6.2 What does Suchitecos see as the main risks and barriers?

A participatory risk self-assessment process brought together the management, commercial and forest personnel of the company. They participated in individual interviews and in group sessions that enabled them to identify and classify risks in six prioritised areas: revenue flows, resource access, business relationships, operational capacity, security of operating environment and brand development.

Risks were classified as high (with a score of 8–10), medium (5–7) or low (0–4). High-risk factors are those which directly affect the efficiency, growth, and financial sustainability of the business. Medium risks are those which could damage the sustainability and growth of the business, but which do not cause bankruptcy. Some of these medium-risk factors are external and would require third-party action to be solved. Minor risks are classified as factors that do not directly endanger the sustainability of the business, even if they are recurrent, and which can be resolved through short-term administrative and operational actions.

The following section provides more detail on high-risk factors identified during the participatory risk self-assessment process. Table 6.1 summarises the risk factors identified, ranked from high to low in each of the six prioritised areas.

6.2.1 Working capital

After 17 years in business, Suchitecos still does not have enough working capital to guarantee its annual operations of forest harvesting and transformation, prompting the company to apply for credit every year, which has a financial cost. It is a huge risk because Suchitecos depends on the conditions that the bank establishes for the loan. Any delay in processing the loan affects the beginning of the harvesting activity. The interest rate is also high, at approximately 18 per cent. This could potentially become a problem in future when renegotiating the concession agreement if the government identifies this risk as a reason for not renewing the contract based on issues of sustainability.

If Suchitecos depends on finance from the bank to operate, it is in effect deferring its decision-making ability related to its forestry activities to third parties. Although credit resolves an immediate need for cash, it reduces the annual profits of the business. The fact that Suchitecos must apply for bank credit means that the business must prioritise focusing on generating enough growth to allow for the creation of a surplus. Another important reason for maintaining a healthy level of working capital is that it will allow the business to be more efficient and competitive, which is key to attracting new investment or business relationships.

6.2.2 Capital reserves for reinvestment

The company does not have a capital fund to invest in the growth of the business. The by-laws of its articles of incorporation established that from its annual income the company must set aside a percentage as a legal reserve that should be destined for the reinvestment. However, this is not being implemented. Instead of setting aside funds for investing in the business and new product lines, the total annual profits are distributed amongst the partners. This situation shows how a focus on short-term gain is limiting the overall vision of the business, its expansion and growth.

6.2.3 Annual budgetary execution

Each year, the general management of the company prepares a budget with expenses clearly established. However, the budget is executed erratically. For example, it is common for board members to take on additional staff beyond what has been budgeted for, often due to pressure from extended family and friends, and this leads to unnecessary expenses. Another example is the mismanagement of machinery, which creates additional expenses for repairs. These factors directly affect the cash flow of the company, and ultimately the annual profits of the business.

6.2.4 Resource access and the business climate

Suchitecos's current concession agreement expires in 2022 and there is some uncertainty as to what this might involve. The participants in the workshop raised their concerns in relation to two possible scenarios. The concession contract might be cancelled – or it may continue, but under new conditions – which creates uncertainty. Both scenarios may represent changes in the management of the forest concession, either in adapting how they manage the concession and do business, or more drastically, in terms of the loss of local livelihoods and resource rights. Currently, more than 1,500 direct members of the



Staff and Board of Directors of Suchitecos

community forestry concessions are benefiting from economic forestry activities and they in turn extend benefits to approximately 7,500 immediate and extended family members. In addition to this, the forest concessions stimulate the local economy and benefit other indirect actors such as input suppliers of products and services. And alongside other forest concessions in the Maya Biosphere Reserve, they are collectively contributing towards reducing deforestation rates, reducing the pressure of the advancing agricultural frontier, and managing forest fires.

6.2.5 Demand limited to a single species (mahogany)

Having demand limited to a single species of wood like mahogany does not allow for economic growth of the business. Mahogany is a protected species under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which limits its use. But due to the lack of markets for other species of hardwoods, it has not been possible to reduce the pressure on mahogany. For several years Suchitecos, with the support of NGOs, has tried to find markets for secondary species at national and international levels, but the results have not been very positive. However, it continues its efforts by trying to identify market opportunities and ways to add value to secondary species. Given that 80 per cent of its annual income comes from the sale of mahogany, this represents a serious risk to the company.

6.2.6 People trafficking and drug trafficking

Two major risks that were identified were people trafficking and drug trafficking. Many illegal immigrants travel through the area where the forest concession is located on their way to the United States and, because of its remote nature, many drug-related activities are conducted here. This means that there is an increased number of people moving in and out of the forest areas, setting up camps and using fires for cooking. Fires sometimes get out of control, causing forest fires.

Table 6.1 Summary of risks identified by Suchitecos

REVENUE FLOWS	Importance 1 (low) to 10 (high)
Working capital	10
Capital reserves for reinvestment (business capitalisation)	10
Annual budgetary execution versus the annual investment plan projected spending	8
Business vision versus personal vision	8
Having a single buyer which uses its own rules to quantify timber	7
Inefficiency in production costs	7
Wages policy (often more staff are employed and salaries are higher than what has been budgeted for).	7
Erratic purchasing policy versus annual investment plan	7
Tax method	7
Policies in the use of machinery and tools from partners	6
Cost of banking credit	6
Law enforcement and corruption	6
Lack of markets for secondary timber species	6
Exchange rates	5
Instruments to formalise the business (ie purchase orders and promise agreements)	5
Guarantee in mahogany supplying, main commercial supply	4
Bureaucracy in internal decision-making processes	4
Costs and legal and illegal competition mean no viable market for secondary species	4
Bureaucracy in the regulatory bodies for the approval for annual operating plans and license issuance	3
RESOURCE ACCESS	
Uncertain if the forest concession contract (expires 2022) will be renewed	10
Demand is mainly for a single species (mahogany)	7
Forest fires	7
Lengthy decision-making processes	5
Weather conditions	4
Fulfilling management plans	3
Delays in approving and issuing operating plans and licenses by the regulatory body	3
BUSINESS RELATIONSHIPS	
Fulfilling the buyer's requirements	3
SECURITY OF OPERATING ENVIRONMENT	
Renewal of the concession contracts	9
People trafficking	7
Drug trafficking	7
Changes in the tax system	6
Changes in environmental and forest laws and in transport regulations	3
BRAND DEVELOPMENT	
Understanding the correct use of resources by the community	6
Researching other product lines	6
Meeting market requirements	2
Managing and contributing to projects that benefit the community	2
OPERATIONAL CAPACITY	
Qualified workforce for the repair of heavy machinery	7
Access to spare parts for the repair of heavy machinery	7
Qualified workforce for timber classification	6
Qualified workforce for operating the sawmill	5
Qualified personal for researching markets for short and common mahogany	5

6.3 How can Suchitecos manage risk?

Since it began, Suchitecos has received support from NGOs like the Nature for Life Foundation (FNPV), the Rainforest Alliance, CATIE and others like AGEXPORT and ACOFOP. These organisations have helped it to identify risks and develop strategies to reduce the impact of these risks on the business. Internally, NGOs have provided support to strengthen governance and business capacities. Externally, they have also been key actors in lobbying the regulating bodies such as CONAP and INAB for the improvement of forest laws and making processes more efficient such as issuing licenses and developing transportation guides. These organisations have also supported FSC certification, which has improved forest management and helps to ensure the sustainability of the resource.

In the same way, regulation entities like CONAP and INAB have become risk planners and managers, as well as issuing and joint performer of the strategies in order to reduce risks in the community forestry business in the MBR. As an example, management plans, annual operational plans, quinquennial plans, certification requirements, forest licenses, legal requirements, the new markets search, are well defined examples of what is mentioned before.

Suchitecos does take action to resolve situations that cause immediate risks for its operation. For example, it applies for credit each year to guarantee its annual operations. However, there is no risk management that allows for planning or taking medium and long-term actions to reduce the risk impact of not having any working capital available for the business.

The non-existence of own working capital is definitely a high risk factor for the business. However, it becomes a clear business tool with the buyer. The buyer can guarantee the supply of Mahogany by delivering advance purchases to the Company, which allows the Company to cover a part of its operations immediately.

The finalisation of the concession contract in 2022 is a situation that generates uncertainty for every actor of the mahogany market system of the MBR. In response to this uncertainty, Suchitecos has proposed a set of strategies, which ACOFOP is using to engage in political lobbying for the renegotiation for the periods of the concession contracts extensions. As part of this, Suchitecos is also working with ACOFOP to document the social, environmental and economic impacts of the community forestry concession (which ACOFOP is doing across Petén).

Being a member of ACOFOP has also been very strategic for Suchitecos, as it has been an efficient way of improving the enabling environment. ACOFOP has been engaging with CONAP and INAB to lobby for better enforcement of forest laws related to efficient authorisation of forest management plans, forest licenses and transport.

The knowledge from the buyer of the initial deficiencies in sawmilling was a positive factor that generated the transfer of technical knowledge between the buyer and the Organisation, which resulted in the specialisation of the process and the obtaining of better results in its operation.

The lack of markets for secondary species is a risk affecting the optimisation of forest operation and economic value (a factor that will surely be questioned in the concession

contract renewal, product of the independency of mahogany). As a result of this risk, Suchitecos and support organisations are searching alternatives for the positioning of secondary species; however, there haven't been great changes.

To reduce the risk of having only one buyer (which can take advantage of this position) Suchitecos is collaborating with ACOFOP (and with the other concessionaires in Petén) to improve its position vis a vis being able to negotiate conditions of the partnership (such as better prices). This is another way of using collective organisation to improve the enabling environment.

Table 6.2 outlines the main risk-management options identified by Suchitecos during the risk self-assessment. Notably, Suchitecos did not identify any opportunities, probably due to the fact that the process of risk self-assessment was a new concept for them. The following are strategy initiatives that Suchitecos has implemented or considers could be implemented, for the main risks identified in the six prioritized areas: revenue flows, resource access, business relationships, operational capacity, security of operating environment and brand development.

6.3.1 Improving revenue flows

The lack of working capital and capital reserves for reinvestment (business capitalisation) are two key areas of risk for the business. Suchitecos has already opened credit lines with national banks (Banrural, Ficohsa), although the company is also vulnerable to changes in the funding conditions for its working capital. As such, Suchitecos should also create a working capital fund through a process of annual capitalisation, as is already established in its by-laws. Of total net income, 50 per cent should be distributed among partners, 25 per cent for capitalisation and the remaining 25 per cent for infrastructure investments.

Having a sole buyer that can monopolise market prices and conditions is another key risk. As of 2015, all of the MBR community forest concessions joined together with the support of ACOFOP and established minimum sales prices based on different timber grades. The minimum price established is US\$4.50 per board foot. There was a difference of US\$0.75 above the minimum price in some cases.

To ensure that the business's purchasing plans match its projected annual investment spending, Suchitecos should establish purchase policies and be more cautious in its expenditure.

A change in the tax regime has increased the business's net profits.

Use of machinery and tools from the partners: Suchitecos should establish a policy for the use and delivery of tools using a system whereby each employee is assigned responsibility for the tools in their care.

The business is currently dependent on mahogany for its main commercial supply. Therefore, guaranteeing its supplying of mahogany is essential to the business. Suchitecos already has a forest management plan focused on the sustainability of mahogany.

Table 6.2 Risk-management options for Suchitecos

	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity
Threat	Lack of working capital Lack of capital reserves for reinvestment (business capitalisation) Short-term personal needs prioritised over long-term business vision Differences between annual budgetary spending and the annual investment plan Only one main buyer	Uncertainty over renewal of forest concession contract (expires in 2022) Demand focused on a single species (mahogany) Forest fires	Fulfilling the buyer's requirements	Corruption in law enforcement Changes in the environment and forest laws Changes in transport regulations	Public perception of the impact of forest concessions on the forest (pro-conservation)	Limited availability of qualified workforce for: the classification of timber, repair of heavy machinery and operating the sawmill Limited access to spare parts for the repair of heavy machinery
Opportunities						
Options for managing risk (business)	Create a working capital and reinvestment fund through a process of annual capitalisation Train members on business sustainability issues, primarily financial Strengthen trade negotiation blocks to generate benefits for all the forest concessions of the MBR Establish purchase policies and policies for the use of tools and machinery (whereby each employee is assigned responsibility for the tools in their care) Train internal employees in measurement techniques	Strengthen influence with government authorities and governing bodies of forest activities by ACOFOP (document environmental, economic and social impacts as a tool for negotiating new contracts) Continue researching new markets for secondary woods with the support of NGOs (focus on adding value to products) Continue with FSC certification as a mechanism to access the resource and maintain sustainability	Develop internal procedures and quality standards Control over the operating processes	Remain an active member of ACOFOP to influence processes and improve policies and legal procedures	Document the positive impacts of the business on forest concessions to help with socialisation locally	Improve training in sawmill operation and timber classification Train business personnel in repairing machinery Identify potential local technical experts in repairing machinery Establish an inventory of spare parts Develop a supplier database
Options for policy (government/private sector)	Policymakers should promote the creation of financial products for forestry activities nationally Buyer should continue to pay advances from as a mechanism to generate working capital Policymakers should promote/improve forestry incentive programmes for conservation in INAB	CONAP should strengthen its policies to ensure access and sustainability of the forest resource	Buyer should transfer technology and improve processes	ACOFOP works to strengthen local governance, and improve forestry policies and implementation procedures	ACOFOP and the National Alliance of Forests Communities develop tools to communicate the positive impacts of the community forestry concessions in the MBR	NGOs should help the business to improve operational capacities focused on secondary transformation processes for secondary species, focusing on developing new product lines

The business also faces both legal and illegal competition for secondary species. In addition, production costs leave secondary species outside of the market. To tackle this risk, Suchitecos and partners are researching new international markets (although more needs to be done). In addition, the business should consider undertaking secondary transformation and adding value to secondary species of timber.

Bureaucracy: Suchitecos has been actively engaged with ACOFOP (directly and indirectly) to lobby regulatory bodies and policymakers to streamline the approval of annual operation plans and issuance of licenses.

6.3.2 Improving access to forest resources

Uncertainty over the renewal of its forest concession contract which expires in 2022 is a key risk. Through ACOFOP, Suchitecos has been lobbying the government authorities and governing bodies of forest activities to approve its renewal. It has been documenting the environmental, economic and social impacts of the community forest concession business as a tool for negotiation.

The business also needs to expand to reduce its dependency on a single species, mahogany. The general management of the business has been appointed responsible for researching new markets for secondary species with the support of international cooperation organisations such as Nature for Life Foundation (FNPV), the Rainforest Alliance and CATIE. Decisions have been made on the control of removal volumes of secondary species, based on the current demand and to reduce the risk of resource loss.

Forest fires are another area of risk which Suchitecos is tackling. It has established management plans for the control and prevention of forest fires (which all of the MBR forest concessions must do). Annual operation plans also specify activities and resources that must be executed annually and assigned for the control and prevention of forest fires. These include mitigation and emergency plans.

As per the concession contract signed with the State of Guatemala, Suchitecos must fulfil its management plan. Although this can be problematic, Suchitecos has undertaken a number of strategies to mitigate this risk. Suchitecos has hired a forest regent (a forestry expert who signs off on forest management plans), which is a requirement of CONAP. FSC forest certification is another tool that reduces the risk of not fulfilling the management plan. Certification has improved forest management and the administration and finances of the forest business. The concession contract clearly indicates that the business must be certified during the whole term of its contract. However, if the certification is lost, the contract is lost.

Delays in the approval and issuance of operation plans and licenses by the regulatory body also affect the business. To mitigate this risk, Suchitecos tried to maximise efficiency by presenting its operation plans a month in advance to avoid delays. The business has also developed its knowledge in the use and management of documents that must be presented for the authorisation of licenses. Certification has been a factor that supports the order, documentation and systematisation of processes.

Managing adverse weather conditions: Suchitecos uses logistical planning as a tool to minimise the risk associated with lack of access during bad weather. Timber extraction activities are planned for during the dry season (summer), between the months of December and May.

6.3.3 Improving business relationships

It is important that the business can fulfil the buyer's requirements. Suchitecos has implemented training in the processes of planning, removal, collection, transportation and sawmilling timber. It has also implemented controls for its operational processes, and monitoring and evaluation.

Processes for transparent negotiations: Suchitecos has a well-established organisational structure, which is a fundamental requirement for the sustainability of the business. For Suchitecos, commercial decisions are presented to the general assembly (its highest authority), which makes all business decisions.

6.3.4 Security of the operating environment

As described above, uncertainty as to whether the forest concession contract will be renewed is a key risk. In addition, changes in the environment and forest laws and in the regulations of transportation are also risks that need to be addressed. Actions that have been implemented include working with ACOFOP and other third-level organisations like the National Alliance of Forest Communities to lobby for greater influence and power of negotiation (eg meetings with government authorities at different levels such as CONAP and INAB).

6.3.5 Improving brand development

It is important for Suchitecos that there is a deeper understanding of the environmental, economic and social impacts that the business has in terms of the appropriate use of its resources. The business needs to be able to better communicate the benefits of its community forest management. It should make better use of documenting and communicating these benefits to generate a more positive understanding of the business with the local population. As part of the FSC-certification requirements of the forest concession management process, the business now keeps a registry of its positive social, economic and environmental impacts.

6.3.6 Improving operational capacity

The business needs a qualified workforce for grading timber, repairing heavy machinery and for the operation of the sawmill. Suchitecos offers ongoing training to improve the efficacy of its operations. Training is offered to specific personnel, as well as capacity building for other members of the team.

Access to spare parts for the repair of heavy machinery is also important. Suchitecos should establish an inventory of spare parts and develop a supplier database.

6.4 Options to reduce risk through external support

In addition to actions that the business can take to mitigate risks, external support organisations can also play a part in risk-management strategies.

6.4.1 Banks

Banks in Guatemala consider forest activities to be a high risk. For this reason, only one bank, Banrural, provides credit to community forest concession businesses like Suchitecos. Credit conditions for community forest concessions do not differ from those offered to regular private businesses; interest rates fluctuate about 18 per cent annually. However, Banrural has modified the type of guarantee from fiduciary to pledgor, taking as guarantee the annual operational plan authorised by CONAP.



© Suchitecos

Processor for tongue and groove, Suchitecos

Banks could develop financial products with proper conditions suited to the characteristics of forest businesses, considering interest rates, terms, amortisations and grace periods.

6.4.2 Supporting organisations

Supporting organisations such as the Nature for Life Foundation (FNPV), the Rainforest Alliance and CATIE are strengthening the productive capacities of the business, although more focus is needed to generate capacities for secondary transformation processes to add value to secondary species. Supporting organisations should also help the business to develop new product lines (within forestry or outside of it).

Another key area of support must include emphasising the importance of improving the vision for the business to the members of the society, and generating interest in sustainability through financial strengthening, capitalisation and reinvestment.

Importantly, supporting organisations should coordinate their efforts to increase the impact of their interventions and to avoid duplicating efforts and wasting economic resources.

6.4.3 Forest Stewardship Council

FSC should promote the consumption of certified forest products. Currently, certification is perceived as a mechanism to guarantee the sustainability of the forest resource and to stay in the market, but not as a mechanism to achieve better prices or to sell greater volumes of timber.

FSC is conscious that the sustainability of the resource also depends on the financial sustainability of the business. As a requirement for recertification, FSC requires the generation of capital funds for investment as well as for working capital. However, this

requirement should not be an imposition, but a voluntary decision from businesses like Suchitecos, built on the understanding that capitalisation and reinvestment are a priority mechanism for its sustainability.

6.4.4 Association of Forest Communities of Petén (ACOFOP)

ACOFOP works to strengthen governance, productive capacities and political influence for community forest concessions like Suchitecos. However, it could develop training processes related to risk management for community forest enterprises, which would support these businesses in understanding business sustainability and to promote the development of their business vision in the short term.

6.4.5 Rex Lumber Company

The buyer should support the improvement of productive capacities of Suchitecos, through the transfer of technology to improve process efficiency and staff skills.

Table 6.3 presents the main strategies than Suchitecos could implement to reduce risk in each of the six prioritised areas and the likely impact of reducing these risks in the author's opinion.



© Suchitecos

Mahogany order, Suchitecos main forest product

Table 6.3 Solutions to reduce risk for Suchitecos

Risk categories and options for improving the business environment of locally controlled forest businesses	Practical potential for beneficial impact in author's opinion (score out of 10)
RESOURCE ACCESS (concerns over resource access and stewardship)	
ACOFOP should continue to lobby government entities to ensure continuity of forest concession contract by demonstrating the positive impact it has had on forest concession management in reducing deforestation, forest fires and the advance of the agricultural frontier. ACOFOP and organisations like Rainforest Alliance and CATIE should document the social, environmental and economic impacts of concessionary process.	10/10
REVENUE FLOWS (concerns over profit and balancing costs)	
■ Suchitecos should create a working capital and reinvestment fund through a process of annual capitalisation	10/10
■ NGOs should help Suchitecos to develop its financial capacity (ie establish budgets and ensure efficient implementation)	10/10
■ NGOs should support strengthening the business vision of partners.	8/10
■ NGOs should improve the business's operational capacities focusing on secondary transformation processes for secondary species and developing new product lines.	10/10
■ Banks should develop financial products with and for forestry businesses (with specific conditions such as documents, financial reports, references, payments periods and interest rates).	8/10
BUSINESS RELATIONSHIPS (concerns over conflict-free relationships)	
■ Suchitecos should establish legal mechanisms for buying and selling timber (ie contracts which specify price, delivery time, quality and quantity).	6/10
■ ACOFOP should strengthen its group-selling strategy (ie working with all of the forest concessions in the Maya Biosphere Reserve to establish minimum sales prices).	10/10
SECURITY OF OPERATING ENVIRONMENT (concerns over security of operating environment)	
■ ACOFOP should lobby to reduce corruption at road checkpoints with law enforcers.	8/10
■ Suchitecos should strengthen its participation in forest policy dialogue platforms through ACOFOP and other third-level organisations.	10/10
BRAND DEVELOPMENT (concerns over reputation with customers)	
■ Suchitecos should maintain FSC certification to ensure access to international markets and sustainability of forest resources.	10/10
■ FSC should promote markets for certificated secondary species timber products	10/10
OPERATIONAL CAPACITY (concerns over operating efficiencies)	
Suchitecos should: ■ Provide its staff with training in repairing machinery. ■ Establish an inventory of spare parts and a supplier database. ■ Establish policies for purchasing and for the use of tools and machinery. ■ NGOs should provide support to strengthen operational capacities and develop staff skills.	8/10 8/10 8/10 10/10

6.5 Conclusions and ways forward

How might self-risk assessment by locally controlled forestry businesses contribute to business development? The adoption and implementation of an analysis, planning, administration and risk-evaluation system would have a direct impact on the sustainability of the forest business for Suchitecos. Risk management seen as a tool for planning and growth in the medium and long terms is a new concept that must be implemented by internalisation of these processes within the organisation. The business must go through a process of understanding the benefits of planning for risks, what resources its implementation would involve, and the professionalisation of the management to the best of its abilities.

6.5.1 Training in risk management

Training and/or facilitation could introduce a better understanding of risk to the business and to financial service providers and other development support programmes. To introduce a clear understanding and to adopt risk-management strategies in forest businesses, **practical and participatory training** should be implemented, in which the organisations can simulate scenarios and evaluate the **financial impact** of each risk to the operation. The conceptual basis must be focused on **sustainability** in the main areas of the business.

FAO'S market analysis and development (MA&D) methodology (FAO 2011) can be an effective tool for carrying out training processes on risk management. This methodology outlines five areas of business sustainability, and provides inputs and tools to evaluate the basic issues and promote sustainability. It facilitates the identification of priority risks in each area, for example: market risks, financial risks, operational risks, supply risks and legal risks. Based on this, training must be carried out on how to develop planning strategies to reduce risk: training should be seen as another key department of the business.



Production staff of Suchitecos

© Suchitecos

Training programmes should be implemented by ACOFOP and others interested in the development and strengthening of the forest sector using their combined resources, with clear scope and goals established, and with monitoring and evaluation to follow up the results.

6.5.2 Developing a joint understanding of risks and costs

It is important that policymakers, investors and businesses have a clear understanding of the economic impact that the activities of community forest enterprises in the MBR have on the economy of Petén and in Guatemala. These businesses not only generate income from sales, jobs and local resources but also income for the state of Guatemala from

export taxes and taxes from profits. Forest activity is also important to the conservation of natural resources and biodiversity in the MBR. It has reduced deforestation, forest fires and the advance of the agricultural border.

After establishing an initial understanding of the benefits of locally controlled forest businesses, Suchitecos must establish a clear analysis of the risks that currently face the business and quantify their economic impact. This process should be facilitated by ACOFOP and involve the main actors in forest value chain, as well as the supporting organisations and governing bodies with the purpose of understanding risks and setting out strategies to reduce their impact.



Kisii tree nursery near Kisii Town

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Kenya: Kisii Tree Planters' Association (KTPA)

A youth group association

by Cyrus Muthui Kilonzi and Wycliff Omondi Obuola

The Kisii Tree Planters' Association (KTPA) was formed in 2006 as a small youth group association to aid forest conservation and to improve livelihoods. Since then, its membership has grown to 1,150. But the project faces serious challenges. Members lack essential training and bureaucracy hinders business operations. Communications and road infrastructure are poor while conflicts over land use and cultural beliefs – which exclude women and discourage tree farming – have led to poor management of woodlots. KTPA also faces risks associated with its members failing to transact their forestry business operations through the association. However, many of these risks could be managed with the right support and resources. For example, the government could support training and the creation of resource centres for KTPA members, helping to raise awareness of gender-related and other issues, and provide farmers with skills in recordkeeping and better forest management. Combined with tax incentives, subsidies for information and communications technology, road network development and maintenance, and simplified bureaucratic procedures, locally controlled forest businesses like KTPA could thrive in Kenya.

7.1 Context in which KTPA operates

This chapter is based on discussions at the participatory action research (PAR) workshop held to assess the main barriers and risks the entrepreneur members of the Kisii Tree Planters' Association (KTPA) face. The three-day workshop was held in Keroka between the 26th and 28th October 2015. It was attended by KTPA members, representatives of their buyers and consumers (the Kenya Tea Development Agency) and administration officers (area chief), as well as representatives from relevant government agencies: the Ministry of Agriculture, Livestock and Fisheries (MOA), Kenya Forest Service (KFS), the National Environment Management Authority (NEMA) and others. The workshop participants were selected because they were believed to be familiar with the business and therefore able to contribute to an assessment of the risks and opportunities which KTPA faces.

7.1.1 About KTPA as a business

KTPA is a locally controlled forest business (LCFB) formed in 2006 by 30 individuals (18 men and 12 women) as a youth group association. It was initially called the Boroma Youth Group and based in Nyaribari Chache sub-county of Kisii County (Figure 7.1). Its main objectives were to conserve the environment through tree planting while enhancing the livelihoods and well-being of its members.

Figure 7.1 Map of Kisii county showing the sites visited for the study

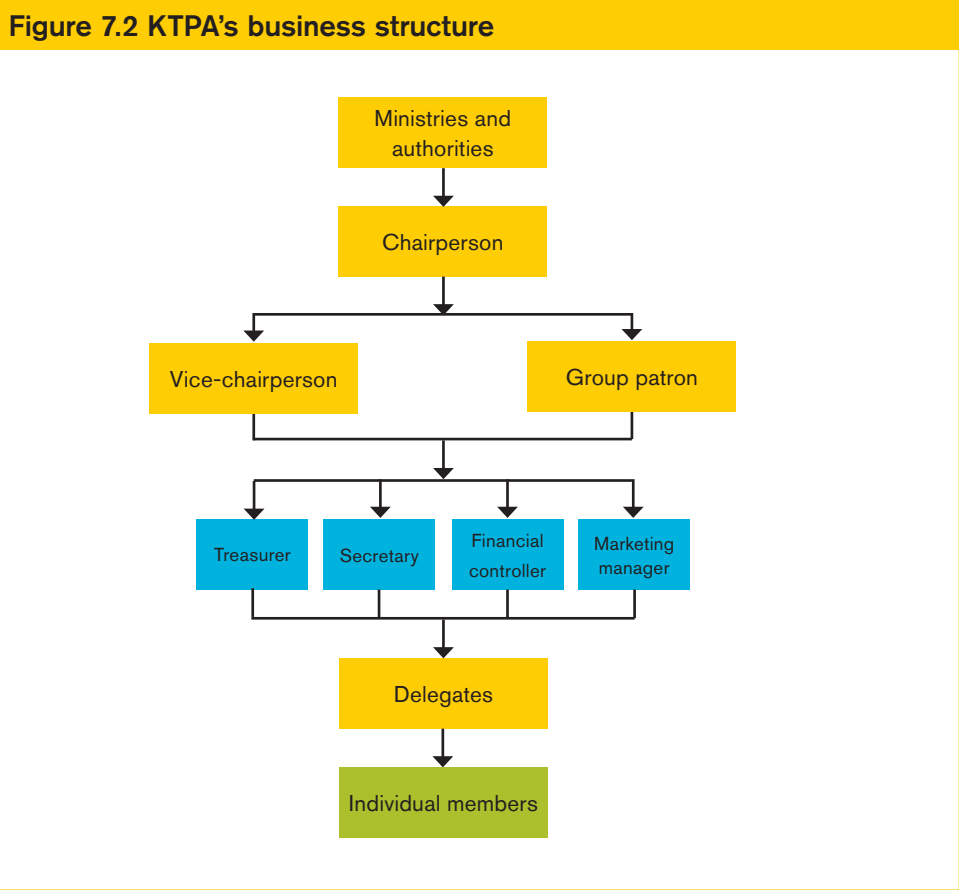
Source: Cyrus Muthui Kilonzi

By 2013, its membership had grown to 571, covering nine sub-counties (Nyaribari Chache, Kitutu Chache North, Bonchari, Bobasi, South Mugirango, Bomachoge Borabu, Nyaribari Masaba, Bomachoge Chache and Kitutu Chache) of Kisii County. The association changed its name from Boroma Youth Group to KTPA. Its objectives underwent a slight amendment to enable KTPA to advocate for the rights of members in addition to improving their social, economic and environmental well-being through the sustainable use of forest resources. As a result, membership has now grown to 1,150 active members (700 women and 450 men).

KTPA is a legally registered association of farmers who grow trees as a business and it is registered with the Registrar of Societies in the office of Attorney General. The project is managed by an executive committee consisting of the chairman, vice-chairman, secretary, assistant secretary, treasurer, field co-ordinator, financial advisor and representatives from those sub-counties not already represented by the elected officials (see Figure 7.2). Committee members carry out their duties voluntarily and serve a three-year term. They are eligible for re-election for only two terms.

KTPA was registered to enable members to conduct their tree-farming businesses as a group through the project. However, this objective has not been achieved. Members continue to transact their business (including marketing their tree products) on an individual basis. Nevertheless, KTPA is currently in the process of being converted into a marketing cooperative.

KTPA members are involved in on-farm forestry, growing different types of tree species. The most commonly grown trees are *Eucalyptus ssp*, *Grevillea ssp*, and *Cyperus ssp*. Most KTPA members and other Kisii farmers who practise on-farm forestry prefer eucalyptus because of its fast growth.



The Kenya Tea Development Agency (KTDA) is the main buyer of wood products in Kisii County and the neighbouring counties of Kericho, Bomet and Narok where wood is used to fuel boilers for processing tea. The tea factories prefer eucalyptus due to its comparatively higher calorific value. KTPA members also sometimes sell wood to Kenya Power and Lighting Company (KPLC) to use as electricity poles or enter into contractual agreements with institutions such as schools for the supply of seedlings and fuelwood, to be used during major events such as the World Environment Day celebrations or the County Environmental Conservation Week. In most cases, these events are marked by tree-planting exercises (tree seedlings are bought from KTPA members).

However, trends in production, sales and profits are not easy to establish because most members still prefer to operate their business as individuals. They also do not keep records of what they produce due to a lack of proper recordkeeping skills. A lack of market information also leads to exploitation, as often members are forced to sell some of their timber to brokers (middlemen). Brokers link farmers to the end users of their products such as the KTDA. They have a strategic advantage over farmers as they own timber yards in urban centres and have access to critical market information. The failure of KTPA to convince its members to transact their on-farm forestry business through the association is one of the main internal challenges facing the project and the reason for many of the risks to business its members are currently facing.



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Nyamacheo eucalyptus woodlots

7.2 The enabling and operating environment

There are many direct and indirect actors that influence the transfer of products in the value chain or add value. These could be grouped as either the operating or enabling environments. The operating environment consists of actors who directly interact with the business and its products such as competitors, creditors, labourers and suppliers. Enabling environment actors include those working in the wider legal, social, economic and political contexts that influence the business (see Figure 7.3).

7.2.1 Political environment

Unlike elsewhere in Kenya, Kisii County is dominated by one tribe. There are no reported cases of inter-ethnic or inter-clan conflicts which could have been politically instigated.

The Kenyan constitution (Republic of Kenya 2010) clearly outlines the principles of land policy including equitable access to land, sustainable and productive management of land resources, gender discrimination, and customs and practices related to land and property on the land. It provides an opportunity for smallholders, women and indigenous people to participate in forest- and farm- related livelihoods and policy engagement. According to Schedule Six of the constitution, all functions identified for devolution to county governments must be transferred within a three-year transition period from March 2013 to March 2016. This devolution provides an opportunity to support forest and farm producer organisations. LCFBs can take advantage of these to tap financial resources and technical expertise that can help them increase production as well as improve linkages to markets. The Kenya Vision 2030 (KNBS 2009) and other development blueprints have established the need for the country to work towards attaining 10 per cent forest/tree cover as per UN requirements by 2030. Both national and county governments must work closely to realise this goal through programme and policy implementation.

7.2.2 Legal environment

There is an array of legal and bureaucratic procedures that indirectly influence how the KTPA members operate their business. Before a business can become operational, it must be legally registered. The project was registered as the Kisii Tree Planters' Association. The law also requires that an entrepreneur intending to plant several acres of eucalyptus trees should carry out an environmental impact assessment (Republic of Kenya 1999), which is assessed by NEMA, the statutory body mandated to safeguard or oversee all activities that are likely to have an impact on the environment as per the Environmental Management and Coordination Act (EMCA) (ibid).

A chief's permit is also required, particularly for harvesting, processing or moving timber products. This permit helps to curb illegal harvesting and stealing of other farmers' products. Without the permit, thefts would be common and encroachment into the protected forest would be rampant, leading to environmental degradation. According to the provision of the Land Registration Act (2012) a certificate of title is needed as proof of land ownership. However, many youths and women lack a title certificate and land-ownership rights – and therefore user rights – which discourages them from venturing into business as tree growers. Without the right to land or ownership of what is grown

on it, they have little security to engage in on-farm forestry business. This justifies their inactiveness in the group.

7.2.3 Socio-economic factors

Social factors that influence how the KTPA members operate their business include land-use conflicts among the family members over user and ownership rights. This in turn affects the availability and accessibility of timber products and often leads to negligence or poor management of woodlots. Conflict due to the improper location of woodlots (where trees cast shade across a neighbour's house or farm) is also another social issue.

Farmers within the Kisii community also feel that tree growing takes a long time to turn a profit, and negative attitudes towards it as a business are very common. There are also cultural beliefs such as that which prohibits women from planting or harvesting some of the trees. For farming families without a male head, this can lead to delayed harvests. Another social issue is the lengthy decision-making process used and failure to reach consensus among on-farm forest business owners and other family members.

High population growth and density (900 people/acre) in Kisii County and other areas where KTPA members operate has caused land to be sub-divided into smaller and smaller parcels that barely support family needs in terms of food, fibre and fuelwood. Little is left for on-farm forestry business. The rural-urban migration of youths in search of 'white-collar jobs' means that mostly older, less-able family members are left to engage in on-farm forestry, which has also impacted on business activities and profit margins (although allowing spouses to become members of KTPA has positively impacted on the business by allowing co-management of the business).

7.2.4 Competitors

The competitors are an important component of the operating environment for KTPA members. The main competitors are those selling fuelwood to KTDA: individual KTPA members and other tree farmers; brokers; and business men who lease hundreds of hectares of natural woodlands in Narok County and harvest and process acacia to sell to KTDA (acacia fuelwood has a comparatively high calorific value).

There is also competition in the market for electricity poles sold to KPLC: again, individual KTPA members, farmers, brokers and established multinational companies with access to government forests or with established plantations on government-owned land. These companies have sufficient resources to not only produce more timber but also efficiently processing it to produce high-quality products which meet consumer specifications. Though uncommon, illegal forest poachers who take timber from government forests to sell at lower prices are also in competition with KTPA members. Finally, there are other economic activities such as farming tea, food crops and livestock competing with on-farm forestry for the available land. It is common to harvest young trees for use as construction poles instead of waiting for them to mature to be used as electricity poles. And, although rare, in some instances, trees are even harvested to make land available for these other economic activities due to the length of time it takes the trees to reach maturity.



This farm near the River Chirchiro is subdivided into different crops: tea at the front; grass and maize in the middle; and a eucalyptus woodlot at the back

In addition, brokers also add value to the logs bought from farmers by converting them into timber. Demand for timber is high, yet farmers (including KTPA members) avoid value-addition activities because they lack the appropriate equipment.

7.2.5 Creditors

Unlike other income-generating activities such as tea, vegetable and banana farming which readily get funding from financial institutions such as commercial banks and enterprise funds for women and youth, there are no credit facilities for on-farm forestry. The main reason cited by the entrepreneurs during the workshop is the longer period it takes for the trees to be ready for harvesting (eg 10–15 years for eucalyptus). This makes the use of trees as collateral to access credit not readily acceptable by financial institutions especially due to the high risks associated with the product such as fire, drought and disease.

7.2.6 Labour

After analysing the age composition of KTPA members, it was established that youths were poorly represented in the project even though they were the founders of the association. Older members dominated the membership. The following reasons were given to explain why the involvement of younger people – who should be the most productive members in society – was inadequate. Lacking land ownership rights and wary of the timescales involved, few young people wish to engage in on-farm forestry. The notion that

farm work is 'heavy and dirty' was another reason: many opt to migrate to nearby towns for employment at the KTDA factory, on tea farms or in the construction industry, jobs which they claim pay better. Finally, on-farm forestry requires skilled labour (such as seedling management like transplanting, pruning and spraying) which is a challenge to unskilled or semi-skilled youths. However, participants also said that the shortage of skilled labour affects other age groups as well.

7.2.7 Buyers and consumers

Buyers and consumers are also critical to the business operating environment. Buyers are those who purchase from members either directly (ie brokers) or indirectly. End users are considered to be consumers of the final products.

As well as brokers, buyers include the county government Ministry of Energy, Environment and Natural Resources (although quantifiable figures were hard to retrieve). Consumers include KTDA, the construction industry, KPLC, schools (for fuelwood), furniture workshops (timber) and individuals (fencing poles and timber). Only KPLC adds value to logs by converting them into round poles and treating them with preservative.

The demand for fuelwood by the Kiamokama tea factory is high. According to the company's production manager (Githinji, 2015) and the factory's general manager the factory consumes 60m³ of wood per day (15,840m³ per year). It offers a lucrative price of KES1,800 (approximately US\$18.00) per cubic metre. However, KTPA members and other tree farmers in Kisii County can only supply a total of 100m³ of wood per year. There are 12 other tea factories the size of Kiamokama in Kisii County and other, much larger factories in the neighbouring counties of Kericho and Bomet which need



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Kiamokama Tea Factory (KTDA) is a major consumer of fuelwood purchased from KTPA members

fuelwood. For Kiamokama to meet its demand it has to buy fuelwood from Transmara sub-county. In Transmara is predominantly inhabited by pastoralists and the land is covered by natural woodlands. Many individuals are currently clearing woodland in Transmara for sugarcane plantations. In addition, the factory has leased 1,200ha of land in Transmara for establishing tree plantations. Currently it is aiming to plant 600ha as part of afforestation and reforestation programmes, and some KTPA members have been given contracts to supply tree seedlings.

The huge market potential means that KTPA members must scale up their fuelwood production capacity if they want to benefit. However, allocating more land to tree farming means that members risk losing out on other economic farming activities on which their livelihoods depend.

7.2.8 Suppliers, service providers and market information

Suppliers are those providing goods and other farm implements such as fertilisers, pesticides and tree seedlings. Service providers mainly offer technical guidance on seedling management, woodlot establishment and management and harvesting among others activities (such as agricultural extension officers and Kenya Forest Service field officers). Market information sources are mainly the farmers themselves, buyers, KTPA's market manager, brokers and consumers. Although brokers exploit farmers, their brokerage service is essential, particularly when a forest farmer lacks market information.

7.3 What do KTPA members see as the main barriers and risks?

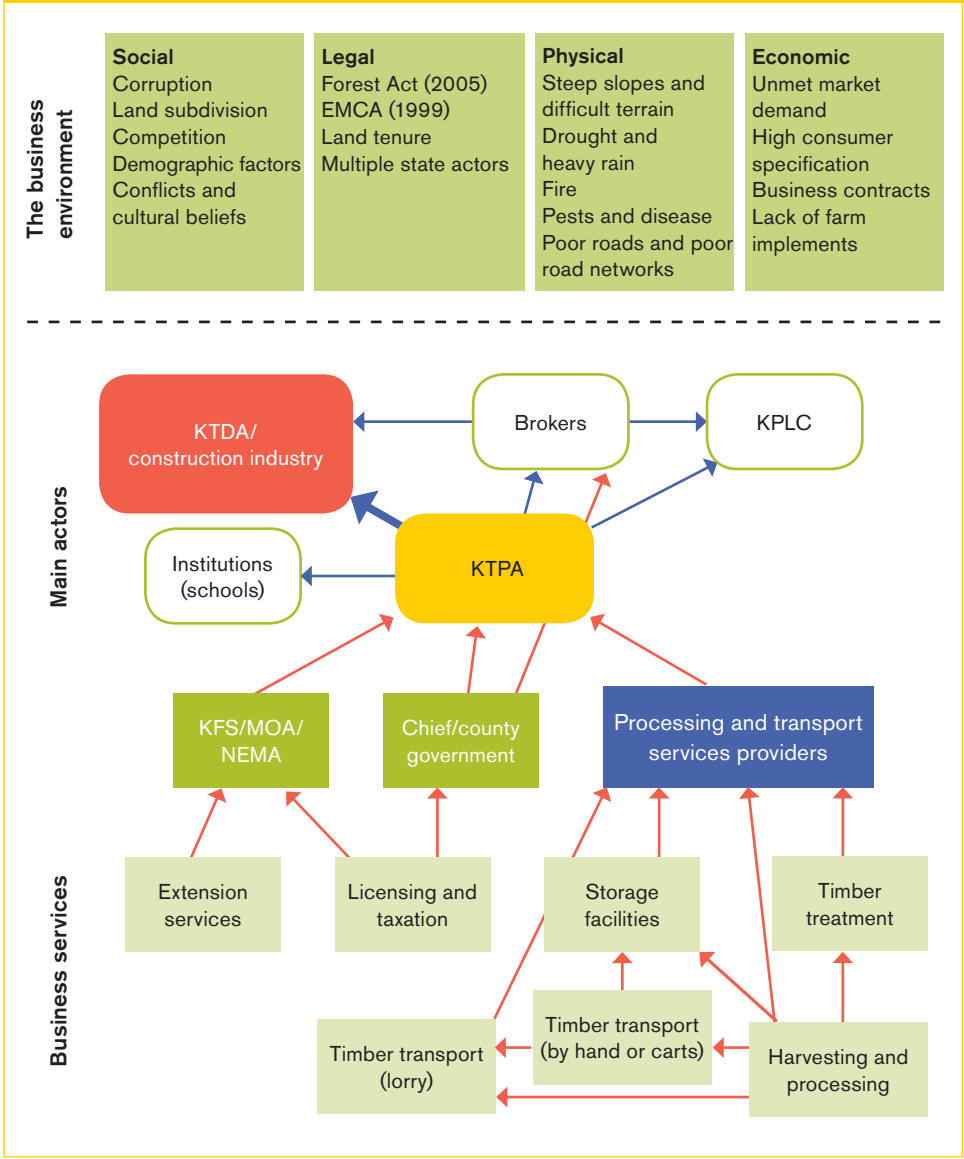
This section explores the main barriers and risks to the business from the point of view of those running it and shows how barriers and risks affect the enterprise's development. It also ranks the risks and illustrates options that KTPA's members can use to overcome them (Table 7.1).

The risks are presented based on the five areas of enterprise development as identified by FAO (2011): the market, institutional/ legal framework, natural resource management, social/cultural issues, and technology/research and development. It also includes six areas of concern to the business: revenue flows, resource access, business relationships, security of the operating environment, brand development and operational capacity (see Tables 7.1 and 7.2).

7.3.1 Market-related risks

Access to markets is a major part of enterprise development. Market-related risks include stiff competition (mainly from non-members producing similar products); KTDA sourcing fuelwood from natural woodlands in Transmara; multinational companies with access to state forests or leased state land and established tree plantations; and poachers of forest products from state forests. The influencing factors include the high product-quality required by consumers such as KTDA (high calorific value, specific log diameter and length); established large-scale enterprises with vast tree plantations, efficient management and processing, and transportation capacity; and the laxity in protection of state forests which encourages illegal poaching. This risk frequently occurs and is of high importance to members (7 out of 10), leading to reduced revenues. There is also

Figure 7.3 KTPA's value-chain map



Notes: Main actors are KTDA (major consumer of fuelwood), KPLC (main consumer of electric poles), KTPA (locally controlled forest business). KFS, MOA and NEMA are service providers. Blue arrows: movement of products. Red arrows: services provided. Processing and transport service providers can be contracted by members or be members themselves.

competition for resources through land use and labour sources, due to rapid population growth. The impacts include less land under tree cover and reduced tree-species diversity leading to reduced forest products.

The lack of capital, credit facilities and collateral and insecure land-ownership rights lead to low business returns and profit fluctuation. Poor recordkeeping (of business transactions, banking, production and upfront costs) and tree species taking too long to mature due to poor farming practices are also main risks for KTPA and were rated 8 out of 10. Impacts include stalled business activities due to lack of funds and reduced income due to loss of economic opportunities – leading to loss of livelihoods and an increase in poverty levels.

Another risk affecting resource access is overlapping land uses and competition for resources. This includes food crops (maize, beans), cash crops (tea, banana, sugarcane) and livestock which affects wood product quality and supply. There are high market entry requirements especially for new tree farmers. Pests and diseases are a frequent risk, rated as a high risk (8 out of 10) and leading to reduced product quality.

Another risk relating to business relationships is related to the lack of collective action by members. This risk is common and ranked highly (8 out of 10). KTPA executive committee has failed to convince its members to operate their business transactions as a group through the project. The risk is further enhanced by competition among individual producers combined with poor management skills, leading to reduced income and exploitation by brokers who take advantage of KTPA members' lack of combined bargaining power.

KTPA members are often unable to deliver on contracts – this risk is rated as high (7 out of 10). This is caused by competing harvesting requirements for tree products such as eucalyptus. There is a ready market for young trees (in construction) compared to electricity poles, which take longer to attain the log diameter required by KPLC. Many members sell their products early instead, breaking their contracts. Failure to honour contractual agreements may also be due to other factors external to the business operating environment such as poor road infrastructure and bad weather that may lead to compromised product quality. This can lead to contracts being cancelled. In addition, many members lack knowledge of how the enterprise operates, which also affects their business operation capacity, livelihoods and incomes.

Low levels of education and experience within the labour market is a relatively high risk (6 out of 10). Most of the on-farm forestry entrepreneurs are retired. They are less productive and enthusiastic about the business and lack the training and skills needed to manage their land and produce products that meet the specifications and product quality demanded by consumers, which has led to low returns.

Fluctuating sources of funds and capital due to inflation and high interest rates when borrowing from informal sources and theft (of tree seedlings, timber and fuelwood) also affects the security of operating environment. Members rate it highly at 7 out of 10. These risks have led to high crime rates, low supply of products, reduced incomes and increased mistrust among community members leading to conflict.

Lack of resources and technical capacity to improve the quality of products combined with the inability to market products effectively were rated as high risks which prevent the entrepreneurs from developing a strong brand (a product that is unique to the business). These risks, coupled with lengthy and costly certification requirements, are rated highly at 7 out of 10. Members can only supply unprocessed products such as poles which are of low quality and could be easily outcompeted by products from established companies. KTPA members are failing to sustain the market and uncertainties about product quality prevents them from developing a brand, which is demoralising.

7.3.2 Institutional and legal risks

Despite the existence of sound rules and regulations in the forestry sector, the same laws have created numerous barriers, mainly bureaucratic procedures. Multiple state departments have conflicting laws based on the sector. Different licences and permits are issued in different county offices instead of being centralised within one point. There are also delays in issuing permits. Farmers must obtain an introductory letter from their chief and also acquire numerous permits from other government agencies such as transport and felling permits.

Members must also cope with high taxes and face corruption when processing and transporting products. They pay bribes to policemen and county-government landing fees (cess) among others. These are ranked as a high risk (8 out of 10), especially when combined with related barriers such as the burden of law enforcement, discretionary law enforcement and legal requirements for formal registration. These not only affect revenue flows but also impact on recourse access, security of the operating environment and brand development. Producers are frequently intimidated by police eg through the confiscation of farm-operating tools. These problems result in delays, loss of income and economic security, and demoralisation.

Another risk which frequently affects business relationships for KTPA members is how they relate to extension officers from KFS, NEMA and county government (7 out of 10). Farmers expressed concern that there are too few extension officers' for the number of farmers. Many extension officers lack the resources and skills to discharge their duties efficiently. They must also travel long distances using poor roads. This greatly affects the provision of extension services leading to reduced product quality and revenue.

The business relationships within the group are also affected by a lack of equitable representation of groups such as youth and women. This risk is rated highly (7 out of 10). Faced with a lack of land ownership rights and disillusionment, many young people are leaving KTPA – hence the declining proportion of youth in the association. It is difficult for them to engage positively in on-farm forestry, which has led to the economic migration of many youths to other areas.

Members also reported that some legal/institutional reforms have created uncertainty among the farmers. The recent requirement by the county government to register and license machinery or tools has greatly affected operational security (ranked 8 out of 10). Farmers must pay multiple fees for marketing their products. Meanwhile, the markets

are dominated by the few influential elites who are able evade these fees and the high taxes required for appliances to process products. This has led to high operational costs, reduced revenues and demoralisation for KTPA farmers.

7.3.3 Natural resource management and environment-related risks

The risks associated with the natural environment such as environmental shocks (drought, pests and disease, and extreme weather events) affect resource access and security of the operating environment. Although external to KTPA operations, these risks frequently occur (ranked 8 out of 10). They are influenced by poor harvesting methods, the inability of farmers to co-manage the business with partners, lack of capital and skilled labour, and inaccessibility of resources (located on hills and in valleys and roads in poor condition). These risks lead to reduced or delayed product supply or compromised product quality, increased production costs and losses to the business.

Challenges related to co-management opportunities between KTPA members and other stakeholders (eg KFS or KTDA) exist due to a lack of policy guidance on co-management of privately owned LCFBs. The way it is provided for in the Forest Act (2005) for the co-management of community forests between Community Forest Associations (CFAs) and KFS is working, despite a lack of resources to enable both parties to effectively manage forest resources. But with other stakeholders such as KTDA, although they are willing to assist KTPA member to manage their woodlots effectively, their efforts are frustrated by a lack of willingness among members to work together or simply just mistrust among the parties concerned. It affects the members' business operations due to costs, low yields and product quality.

7.3.4 Socio-cultural risks

A key risk relates to the unethical business culture which manifested itself through elite capture (brokers) and corruption (ranked 8 out of 10). Brokers exploit farmers' lack of market knowledge which is also due to the fact that members are failing to transact their on-farm forestry business through the project (by not allowing the marketing manager to conduct product marketing and sales on behalf of the members). This causes price fluctuations, reducing profit margins and damaging producer-market linkages.

Other key social issues are due to poor intra-group relations between neighbours and ranked as a high risk (8 out of 10). 'Bad blood' is sometimes triggered when a member's trees cast shade, drop litter or grow across the border to a neighbour's farm or house. Conflicts among members over resource access and user rights illustrate the missing rapport within society, causing disharmony and breakdowns in communications and leading to delays in harvesting. There are power struggles where some in leadership positions end up monopolising the resources at the expense of others. Arson and other criminal acts (destroying woodlots or disregarding boundaries by establishing woodlots close to a neighbour's house) also have an immense impact on the business.

Another risk is an inefficient decision-making process used by the KTPA executive committee. Based on the article of association, the committee cannot make drastic decisions without consulting its members which is possible only during annual general

meetings or special general meetings. In addition, the failure to reach consensus among members combined with differing cultural beliefs means the association lacks the flexibility to resolve its problems.

7.3.5 Technology, research and development risks

Revenue flows are affected by the lack of appropriate tools and technical capacity to operate them. Maintenance (paid labour for repairs and purchasing parts) is also a factor (7 out of 10). Farmers often have limited knowledge of the suitable tools/technology to use or how to perform certain tasks. For example, the use of power saws instead of bandsaws for splitting wood is common and causes increased wastage during processing (eg excess saw dust and other waste). It also lengthens processing time, compromising quality and causing delays in the supply of products and allowing established multinational companies to monopolise the market.

Poor infrastructure and energy supply problems (such as the lack of petroleum or electricity) lead to the inefficient flow of materials (ranked 8 out of 10). Poor energy supply affects the security of the operating environment. In remote areas, members without power are at risk of losing their products through theft or natural damage due to weather. Products can end up over-maturing due to delays in harvesting. Any delays in supply result in a loss of markets and revenues.

7.4 What strategies can KTPA use to manage risks and challenges?

This section shows that despite the risks that KTPA members face, the association has developed strategies which it uses to overcome these challenges.

7.4.1 Raise awareness of good internal organisation and coordination

Competition among tree planters has been addressed through sensitisation and awareness raising activities by KTPA to encourage members to sell their products through the project instead of as individuals. Competition for supplying electricity poles has been overcome by KTPA members selling most their wood as fuelwood to the Kiamokama Tea Factory where the demand for fuel is high. The main strategy is making sure members are aware that Kiamokama is a ready market for KTPA members' fuelwood.

7.4.2 Establish savings and revolving credit funds to raise capital

Risks associated with lack of access to credit have prompted KTPA members to start their own savings arrangements. The workshop revealed that most KTPA members have managed these risks by borrowing money from KTPA's 'merry-go-round' kitty. It was established using membership contributions of KES1,000 (US\$10) per month. Members can borrow money for domestic use and pay it back without interest. They also have a 'table banking' kitty where a member can save KES1,000–5,000 (US\$10–50) to then qualify for a loan payable with interest.

Table 7.1 Summary of risks identified by KTPA							
Areas of concern/ Factors that influence risk	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity	Importance 1 (low) to 10 (high)
The market	Competition among tree planters (7) Lack of collateral/access to credit (8) Inefficiency in harvesting (5) Limited market information (5)	Overlapping land uses (8) Competition for resources through land use and labour (7) Product preference (7)	Possibilities for or restrictions on collective action (8) Partnership and networking options (5) Contract delivery (7)	Fluctuating sources of funds and capital (7) Theft of seedlings and other wood products ie timber (7) Industrial sabotage ie fires, breakdown of contracts (4)	Market standards (8) Ability to market and promote the brand (8) Certification requirements (7)	Education levels within the labour market (6) Skills to meet the required standards (6) Training opportunities (7)	7 (high)
Institutional/legal frameworks	Movement permit acquisition/ cess and fees (6) Bureaucratic procedures (8) Corruption (8)	Burden of law enforcement (7) Resource allocation procedures (3)	Relationships with extension officers (7) Membership of industry groups (7)	Uncertainties due to reforms (8) Discretionary/partial law enforcement (2)	Stringent legal requirements for formal registration (7)	Costly social requirements (7) Level of technical assistance and extension services (7) Seasonal labour requirements (5)	7 (high)
Natural resource management/ environment	Seasonality of resource availability (5) Demand for wood of high calorific value (2)	Poor harvesting methods (7) Environmental shocks ie drought, disease or pests (5)	Co-management opportunity with partners (8)	Extreme weather events (2) Seasonal access issues ie conflict (2)	Procedure for formal registration ie existence of numerous institutions (7) Entry barrier to new markets due to regulations (2)	Availability of skilled human resources and management expertise (8)	5 (moderate)
Socio-cultural issues	Elites purchasing fencing and electricity poles at low prices (8)	Conflicts over resource access and user rights (2) Gender-based division of labour (1)	Lack of good neighbourliness (8) Unethical business culture (8)	Local power struggles (5) Elite capture and corruption especially in licensing (7)	Capacity of staff to understand the desired business model (1)	Lengthy decision- making processes (5)	5 (moderate)
Technology, research and development	Advance payment for lease of land or transport (8) Lack of tools and maintenance requirements (7) Optimal through-flow of product (6)	Not enough or inappropriate equipment (6)	Sharing costs of technology with partners (8) Lack of communication infrastructure (8)	Infrastructure reliability ie need better road network (8) Energy supply ie availability and coverage (2)	Ability of members and resources available to acquire technology (8) Capacity to maintain market research (4)	Technical capacity to operate machinery (7) Research and development skills (7)	7 (moderate)
Total score (high = risky, low = less risky)	6 (moderate)	5 (moderate)	7 (high)	5 (moderate)	6 (moderate)	7 (high)	

7.4.3 Employ a marketing manager

Responding to the failure by members to transact business through the project, KTPA has employed a marketing manager to promote the business and negotiate prices. The tasks include identifying members with products ready to sell and linking them to consumers. This has not only enabled members to have make better deals for their products, but has also minimised exploitation by brokers and law enforcers.

7.4.4 Set up memorandums of understanding

The inability of the members to deliver on their contracts has been managed by signing clear and binding memorandums of understanding (MOUs) between consumers and the project marketing manager (on behalf of members). This ensures both parties honour contractual agreements and raises members' awareness of the importance of honouring contracts.

7.4.5 Engage with supporting agencies for skills development

Most of KTPA's entrepreneurs are older, retired people. KTPA officials and occasionally extension officers from KFS and MOA provide training in basic silvicultural, recordkeeping and financial management skills.

7.4.6 Raise awareness of rights and regulations

Despite the existence of sound rules and regulations, bureaucracy and corruption are common. KTPA members have been creating awareness among members of their rights while at the same time encouraging members to make direct links with the end users of their products, to avoid dealing directly with brokers and to allow the marketing manager to transact business on their behalf and acquire all the required documents in advance to ensure that members comply with the law and register all tools and equipment.

7.4.7 Develop internal systems for knowledge and skills sharing

Extension services offered by KFS, NEMA and county government officials are hampered by insufficient resources and skills. This challenge is managed by members and KTPA officials who have had the opportunity to be trained sharing their experiences with others.

7.4.8 Reserve farmland for growing trees

Risks relating to overlapping land use have been managed by KTPA members setting aside a portion of their farm purposefully for planting woodlots and adopting better agroforestry practices. This helps to ensure that members own trees.

7.4.9 Use early warning systems

The strategy to address environmental shocks is mainly through dissemination of information, providing an early warning such as weather forecasts, disease and pest infestation alerts and encouraging tree-species diversification to counteract losses due to pests and disease.

7.4.10 Encourage informal agreements between members and neighbours

Members are encouraged to manage conflict with neighbours by agreeing on which crops to plant near common boundaries.

7.4.11 Share tools and develop technological knowledge with partners

KTPA's strategy for helping members to obtain the appropriate tools and to train members to use them is to collaborate and network with other actors such as the Kiamokama Tea Factory to share tools; to sub-contract out services; and to train personnel to develop their skills and technical knowledge.

7.5 Which risks could constitute potential business opportunities?

One of the aims of the research was to find out which risks constituted a business opportunity and how those opportunities present themselves. From the business risks faced by KTPA members, there are opportunities that could help to generate an income or mitigate the risk itself.

7.5.1 Value addition

KTPA members have the opportunity to add value to their products, such as processing both electricity and fencing poles and reusing the wood waste (sawdust and offcuts) to manufacture chipboards or charcoal using a modern kiln. These products – if produced as per consumer specifications – would help to generate more income.

7.5.2 Diversification

Where the business faces limited sales, woodlots can have multiple uses. There is an opportunity for members to grow multipurpose trees and shrubs which not only produce wood but also other products such as fruit and fodder. The proceeds could then be reinvested into the business and used to form a revolving credit fund from which members can borrow soft loans.

7.5.3 Establishing storage yards and services

KTPA members suggested that if funds were available, the association could establish storage yards and rent space as a service to members and other farmers. This was also mentioned as a strategy to help control prices by being able to store wood and sell when overall supply is lower and prices are higher. The storage yards could also be used as a space for leasing tools and machinery for processing, which would reduce the running costs for KTPA members if technology maintenance and costs could be shared with others.

7.5.4 Establishing and leasing tree nurseries and services

The Kiamokama Tea Factory currently demands far more fuelwood than KTPA members can supply. There is a strong market opportunity to provide fuel to this and other factories in the county. The market is large enough to absorb supply from both within and outside the KTPA. However, the tea factories demand wood with a high-calorific value. Kiamokama has leased 1,200ha in Transmara to plant trees and KTPA could engage with this business opportunity in two ways. First, by establishing greenhouse facilities to raise the huge quantity of tree seedlings that will be required by the Kiamokama tea factory and secondly, by leasing greenhouse space to non-members at a fee to generate income.

Table 7.2 Risk-management options for KTPA						
	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity
Threat	Bureaucratic procedures and corruption	Overlapping land uses ie crop versus tree farming	Possibilities of/ restrictions on collective action	Uncertainties due to reforms ie licensing of tools/ machinery	Ability of members and resources available to acquire technology	Availability of skilled human resources and management expertise
Opportunity	Advocacy initiatives for SMEs including on-farm forestry business	Growing multipurpose trees and shrubs and carbon trading	Promoting collective action through groups and forming a revolving fund	Creating an advocacy group	Creating a revolving fund within the business and establishing partnerships with potential investors	Establishing demonstration plots
Options for managing risk by the business	Policy harmonisation and awareness creation	Commercialisation and farmers practicing agroforestry	Training and awareness creation for farmers, networking and collaboration with partners	Early license acquisition and promoting advocacy	Personnel training for skills development and contracting for consultancy services	Promote the establishment of mid-level colleges
Options for policy (government/ private sector)	Enacting specific rules governing small-scale tree farmers	Tax relief, trust fund establishment and policy promoting carbon trading	Financial assistance through a subsidy to SMEs Creating common collection centres for products	Policymakers to issue clear guidelines on impending reforms	Allocation of funds for farmer training and technology procurement Donor funding by the private sector	Policies that promote the establishment of mid-level colleges and practical courses

7.6 What external support could provide solutions for overcoming risks?

7.6.1 Fairer subsidies

Policymakers should consider removing subsidies from large-scale multinational businesses (which are one of KTPA's main competitors) and extending them to locally controlled forest businesses instead.

7.6.2 Establish a government-managed revolving fund

The government should create a revolving fund from which KTPA members could access credit at low interest rates. The fund could be operated under similar arrangements like the revolving Women Enterprise Fund and Youth Enterprise Fund. Related to this, KTPA should encourage members to sell their products through the association and contribute a percentage as shares to form a savings and credit cooperative (SACCO) for members, to access business loans at lower interests (which other small and medium enterprises (SMEs) in Kenya also do).

7.6.3 Government-subsidised technology and regional technology-sharing

Inefficiency in harvesting/processing products due to using inappropriate tools could be overcome through a policy change where government provides SMEs like KTPA with incentives by subsidising the cost of machinery and tools and encouraging regional tool-sharing partnerships.

7.6.4 Tax relief, rewards and incentives

Overlapping land uses could be overcome with new policy for tax relief on tree products from LCFBs. This would encourage many farmers to focus their efforts and resources on tree farming. The government should also consider and make it known how on-farm forest farmers could benefit from reducing emissions from deforestation and forest degradation (REDD+) payments or compensation for engaging in conservation, enhancing forest stocks and sustainably managing forest resources.

7.6.5 Technical assistance

Government and donors should provide resources for technical support: for research on fast-growing tree species, bulking of seedlings and distribution, raising awareness of the importance of clear and binding contractual agreements, and providing training (silvicultural, bookkeeping and financial management skills).

7.6.6 Practical training in forest resource management

Policymakers should establish a curriculum of practical training courses in forest resource management in mid-level colleges. The lack of skills and training among farmers could be overcome by improving support provided by KFS and MOA extension officers so as to increase their coverage of tree farmers/members. This could be funded by the government via the 10 per cent budgetary allocation to agriculture which is set out in the African Union's Maputo Protocol.¹

1. At the Second Ordinary Assembly of the African Union in July 2003 in Maputo, African heads of state and government endorsed the Maputo Declaration on Agriculture and Food Security in Africa (Assembly/AU/Decl. 7(II)). The declaration included a 'commitment to the allocation of at least 10 percent of national budgetary resources to agriculture and rural development policy implementation within five years' (African Union 2003).

7.6.7 Focal points for permits

Risks associated with bureaucratic procedures (having to acquire numerous permits from different agencies and locations) could be overcome through the formulation of a policy to allow all permits required by KTPA member to be obtainable at one point.

7.6.8 Corruption and law enforcement

Corruption could be overcome if members transacted their business through the project. This would not only limit members' contact with corrupt officials but also encourage them to start saving as they earn.

7.6.9 Limit disaggregation: guidance on land subdivision

Risks associated with resource allocation procedures eg land ownership rights and land acquisition could be overcome by government with the formulation of land policy guidance particularly on land subdivision and by fast-tracking land succession and registration.

7.6.10 Dissemination of early warning information

Risk of environmental shocks occasioned by drought, heavy rain episodes or disease/pest infestations is bound to increase in frequency and severity due to climate change. This could be overcome by government/donors providing resources to support training and awareness creation among farmers on adaptation and response mechanisms to provide early warnings for environmental shocks. There is a need for collaborative research between KTPA and researchers on tree species that are resistant to environmental shocks and for efficient dissemination of research findings including early warning information.

7.6.11 Improve land-tenure transfers

Conflicts over resource access and user/ownership rights could be overcome by issuing title deeds more efficiently and better enforcing policies related to conflict resolution. Government should provide the resources to support sensitisation and raising awareness of the importance of tree growing and good neighbourliness among community members. Policy guidance is needed about land-use planning, such as limiting the use of narrow strips of land for tree growing, which are less productive and encourage disputes (particularly when trees are planted along a neighbour's boundary).

7.6.12 Tackle socio-cultural issues

Cultural taboos which prohibit women from planting and harvesting some species of trees (and which favours male farmers when it comes to land ownership and tenure) could be overcome by supporting training and raising awareness of gender equality among tree growers as provided for in the constitution of Kenya.

Table 7.3 Solutions to reduce risk for KTPA

Risk categories and options for improving the business environment of locally controlled forest businesses	Practical potential for beneficial impact in author's opinion (score out of 10)
REVENUE FLOWS (concerns over low income to the business)	
<p>KTPA members should conduct all business transactions through the association to reduce loss revenue by:</p> <ul style="list-style-type: none"> ■ Reducing competition between members ■ Guaranteeing members access to credit ('save as you earn' income) ■ Tackling corrupt law enforcers and brokers (middle men) 	8/10
RESOURCE ACCESS (concerns over limitation to resource access)	
<p>Government should provide policy guidance on:</p> <ul style="list-style-type: none"> ■ Licencing of tools/equipment/machinery used by on-farm forestry farmers ■ Procurement of appropriate tools ■ Co-management opportunities with other partners (eg KFS) ■ Land subdivision, sizes and configuration 	8/10
BUSINESS RELATIONSHIPS (concerns over working relationships)	
<p>Relationships between KTPA members could be enhanced by:</p> <ul style="list-style-type: none"> ■ Collaborating with KTDA to scale up capacity to produce fuelwood ■ Signing clear and binding contractual agreements with consumers ■ Increasing budgetary allocation to KFS and MOA extension officers to increase coverage to farmers ■ Providing resources to acquire internet access and resource centre(s) accessible to members 	8/10
SECURITY OF OPERATING ENVIRONMENT (concerns over security of products)	
<p>To improve security of their operating environment, KTPA members at the workshop recommended:</p> <ul style="list-style-type: none"> ■ Raising awareness to promote good neighbourliness and the importance of tree growing in the community ■ Training farmers in firefighting and disaster-management skills ■ Creating a revolving fund where members can access loans at low interest rates ■ Improving infrastructure reliability (ie road networks that are well maintained) 	7/10
BRAND DEVELOPMENT (concerns over ability for brand development)	
<p>To develop the project's brand, KTPA members recommended that:</p> <ul style="list-style-type: none"> ■ The project brand is not currently seen as a priority ■ Members should continue selling their products through the project ■ Financial support is required from government or umbrella organisations for raising awareness of the benefits of developing the project brand in future. 	5/10
OPERATIONAL CAPACITY (concerns over members' capacity to manage the business)	
<p>To build capacity to manage on-farm forestry business, KTPA members at the workshop recommended that:</p> <ul style="list-style-type: none"> ■ Government should implement 10-per-cent budgetary allocation to agriculture for training, including on-farm forestry management skills, bookkeeping and financial management ■ Policy should encourage development of practical curriculums for training resource managers in mid-level colleges ■ Members should use their position to access credit provided for in the Forest Act 2005 to pay for technology and training 	7/10

7.8 Conclusions and ways forward

The research revealed that the most important challenge currently facing KTPA is convincing its members to transact their on-farm forestry businesses through the association. This would solve many of the risks and challenges members face and provide members with additional benefits such as savings and credit facilities. Members would also increase their bargaining power, influence on policy, and their ability to compete with brokers.

The research also revealed that there is a large and unmet demand for fuelwood in KTDA. KTPA members should collaborate with KTDA to close up the demand gap. Meanwhile, KTDA should provide members with technical assistance to enable them to scale up their production capacity.

The joint understanding of risks and costs between and among policymakers, partners (donors and collaborating institutions) and KTPA can be developed by forming a tripartite partnership when conducting risk assessment. This could enable them to effectively implement intervention measures to overcome risks and open up co-management opportunities with partners. This will require not only resources but also policy changes to support specific strategies or options to address each risk and to create an enabling environment for business operations.

7.8.1 Next steps

The research revealed that KTPA require technical assistance and capacity building in many areas including business plan development, bookkeeping and financial management, and silvicultural skills. It also highlighted the need for raising awareness. However, these interventions require resources and therefore, a process of facilitation. The solution would be to hold a stakeholders' workshop in Kisii County to identify the potential financial institutions who could support on-farm forestry. Before this takes place, KTPA should:

- Organise its members into a unified group and start transacting business through the association, and setting up a revolving savings and credit fund.
- The fund should be banked with an institution that understands the needs of associations and has specialised credit products eg Cooperative Bank of Kenya.
- The association should also build its capacity for business management and financial skills.
- KTPA should seek technical support from KFS, MOA, the Farm Forestry Smallholder Producers Association of Kenya (FF-SPAK) among others to identify areas requiring support so that the association can present a stronger case to financial institutions.
- KTPA officials should approach these financial institutions and explain the nature of their business and why they are being invited to a risk-assessment workshop. Other workshop participants/stakeholders will include KTPA members, consumers and service providers.

The workshop would be an opportunity for KTPA to leverage greater support from all external actors. Their combined support will be key to implementing the strategies KTPA has identified to mitigate risks and challenges. The workshop would also enable the financial institutions involved to better understand on-farm forestry business and to make informed decisions about providing suitable credit products to finance the business.



Kenya: South Coast Forest Owners Association (SCOFOA)

Making forest farmers stronger together

by Cyrus Muthui Kilonzi and Wycliff Omondi Obuola

In 2011, 35 forest farmers decided to form the South Coast Forest Owners Association (SCOFOA). Farmers mainly grow casuarina, eucalyptus and mango trees and sell timber to the construction and carving industries, institutions and to individuals. Now with 150 members, there is more need than ever for the association to develop the skills it needs to manage its business effectively. SCOFOA faces a number of risks to its business: convincing its members to transact their on-farm forestry business operations through the association; a lack of land tenure which discourages people from farming; forest destruction caused by human–wildlife conflict; and a lack of training, experience and skills. In addition, many young people are leaving farming, attracted by better wages elsewhere. This means that most farmers work alone, which compromises product quality and affects returns. During the workshop, members outlined how the self-assessment of risk could help mitigate these problems and contribute to business development through a joint understanding of risks and costs with policymakers, investors and locally controlled forest businesses.

8.1 Context in which SCOFOA operates

8.1.1 About SCOFOA as a business

This chapter describes the outcomes of a three-day participatory action research (PAR) risk-assessment workshop conducted in Ukunda, South Coast in November 2015). The 13 participants included members of South Coast Forest Owners Association (SCOFOA), Ministry of Agriculture, Livestock and Fisheries (MOA), Bamburi Cement Factory (Lafarge), Millennium Wood Carvers Cooperative, and representatives of the hotels and hospitality industry. The aim was to assess risk and mitigation options for SCOFOA's locally controlled forest business. It was facilitated by the lead author acting as a consultant on behalf of IIED.

SCOFOA was formed in 2011 by 30 men and 5 women. These forestry farmers came together and registered SCOFOA as an association which would enable them to carry out tree-farming activities as a unified group. The membership has since increased to 150, thanks to the viability, stability and sustainability of its members' on-farm forestry economic activities. But there is a need for better access to information and skills development to improve the association's business.

The most popular commercial tree species grown by members and other community forest owners are casuarina, eucalyptus, mango (*Mangifera indica*) and neem (*Azadirachta indica*). Casuarina is used mainly in the construction industry for roofing because of its straight poles and in hotels for structural repairs and renovations. Eucalyptus is used

mainly for fencing, telephone poles and fuelwood because of its high calorific value. Nymph and mango are hardwoods and are used in the carving industry.

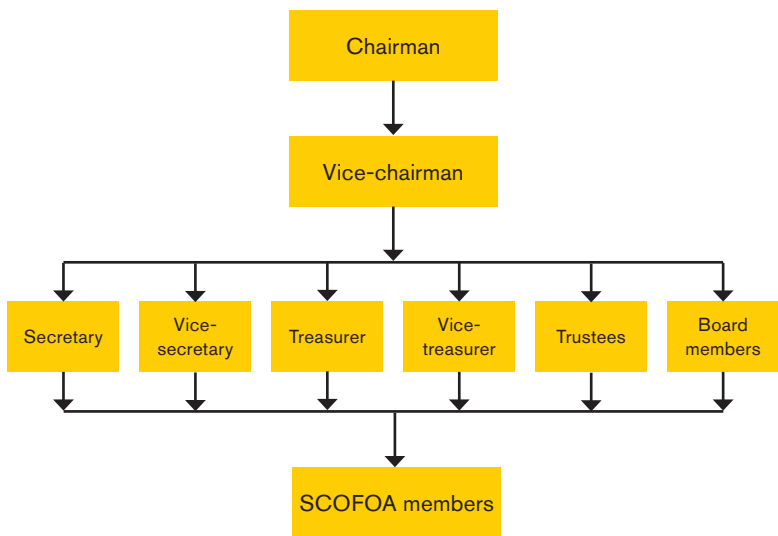
To ensure gender equity, balance and continuity, the association's by-laws require that each member also registers their spouse and one child as members. The by-laws also require that for a tree farmer to qualify to become a member, s/he must have a title deed to the forest land or to land where the farmer intends to establish an on-farm forest. In addition, the farmer must have at least two acres of land under forest cover, whether natural or established.

Chairman Joseph Kibugi (a former forester) is the founder of SCOFOA. The association is legally registered by the Registrar under the Attorney General Office as a tree farmers' association. The objectives of the association include to:

- Sustainably produce forest products through enhanced environmental conservation,
- Tackle market challenges as a group rather than as individuals,
- Lobby/advocate for their rights, and
- Create a forum where members can share information, challenges, experiences, training and networking opportunities.

The association is managed by a management committee elected by its members (see Figure 8.1). The officials' term of service is three years, but management committee members can be re-elected for as many terms as the association members choose. In addition, the management committee has five other members who sit on the management board and include three elected committee members and two trustees.

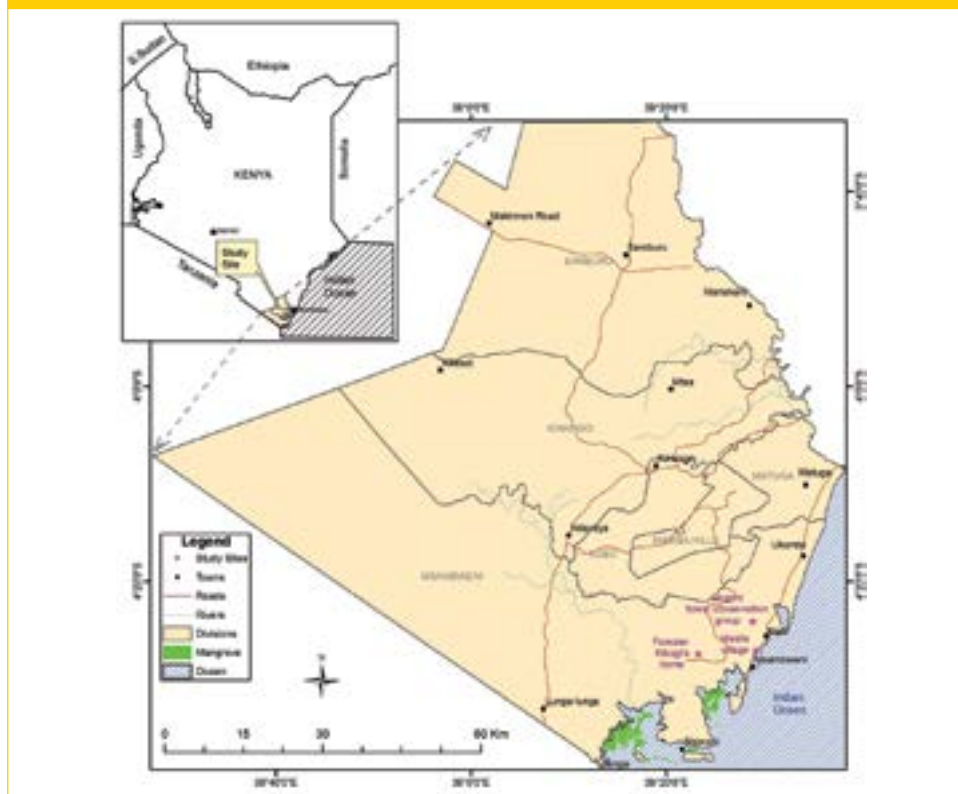
Figure 8.1 SCOFOA's business structure



Official responsibilities are carried out on a voluntary basis. To begin with, gender issues were not considered, but to comply with the Kenya constitution's (Republic of Kenya 2010) requirement of gender representation in both public and private organisations, the positions of vice-secretary and vice-treasurer are reserved for women (although women may stand for any other position also). Management committee functions are mainly to mediate between members and umbrella organisations such as the Farm Forestry Smallholder Producers Association of Kenya (FF-SPAK), Forest Action Network (FAN) and Kenya Forest Service (KFS) among others. According to the associations' chairman, these organisations have been very useful in providing the management committee members with technical support, training and information.

Despite its progress so far, a key internal challenge that the association faces is that it has not been able to convince its members to conduct all of their on-farm forestry business transactions – including marketing of their products – through the association. Members continue to conduct business on an individual basis and at the subsistence level – ie to meet their family's needs. Because of this, there are no records of what each individual member produces, of their current business situation in terms of production, or of sales and profit per member and therefore of the association as a whole. This means that the association and its members are susceptible to multiple risks and challenges.

Figure 8.2 Map of Kwale county showing the sites visited for the study



Source: Cyrus Muthui Kilonzi

8.2 The enabling and operating environment

The SCOFOA on-farm forestry business is influenced by several factors. The enabling environment includes the wider political, legal, social, economic and environmental contexts that influence the business. The operating environment includes actors that directly interact with the business and its operations such as competitors, creditors, consumers, workers and suppliers (see the value-chain map Figure 8.3).

8.2.1 Political and legal context

Chapter 5 of the Kenya constitution (Republic of Kenya 2010) addresses land and environmental issues and clearly spells out land policy principles including equitable access to land, sustainable and productive management of land resources and elimination of gender discrimination in law, customs and practices related to land and property on the land. It provides an opportunity for smallholders, women and indigenous people to participate in forest- and farm-related livelihoods and policy engagement. However, implementing the constitution becomes an issue in relation to societal expectations and gender power relations. According to the SCOFOA chairman, many households have no title deeds to the land they use and therefore lack secure tenure. This severely discourages households from venturing into tree farming business on land with insecure tenure. SCOFOA by-laws do not permit those without land tenure to become a member. The by-laws do allow a member's spouse and one child to become members as most women and youth tend to be disadvantaged in terms of land ownership. For this reason, they often end up losing interest in engaging in the tree-growing business because they feel that they have little security in doing so. This affects the association both in terms of scale (potential members and resources) and the structure of its membership.

According to the constitution (Republic of Kenya 2010) all the functions identified for devolution to county government must be transferred within a three-year transition period (March 2013 to March 2016). The actual devolution of functions to the counties provides an opportunity for support of forest and farm-producer organisations. Locally controlled forest businesses (LCFBs) can take advantage of this to tap into financial resources and technical expertise that can help them increase production as well as linkages to markets. The Kenya Vision 2030 (KNBS 2009) and other development blueprints have established the need for the country to work towards attaining 10 per cent forest/tree cover by the year 2030. This requires that both national and county governments work closely to realise this goal through programme and policy implementation.

Although the political and legal environment are relatively favourable for tree growers' businesses, in Kenya there are a number of legal and bureaucratic procedures potential entrepreneurs are subjected to before they can be allowed to start the business. This can be discouraging. For example, there is a requirement to have official permission from the local chief to fell, process or transport timber products and an environmental impact assessment (EIA) report is required before planting eucalyptus trees (Republic of Kenya 2000).¹

1. The National Environment Management Authority (NEMA) requires an entrepreneur intending to plant several acres of eucalyptus trees to carry out an EIA and produce a report showing how the trees will impact on the environment (Republic of Kenya 2000).

8.2.2 Socio-economic context

Poverty is a major challenge for members. Poor farmers lack the capital to successfully engage in tree farming, only a few people plant trees. But the majority of community and family members access the trees, even without the consent of the owner for basic domestic use like fuelwood. This leads to conflicts among family members over access to resources, user rights, right of ownership and divergent interests on the use of land. In these instances, a lack of consensus among farmers and family members is a major drawback to tree farming business. Such conflicts can lead to negligence and poor farm management, leading to low production and low-quality products.

The lack of land-ownership documents can have other consequences. Some south-coast politicians have incited local Digo² communities to evict migrants from other ethnic groups from the land. The threat of eviction has deterred people from other ethnic groups from engaging in on-farm forestry and some SCOFOA members have been forced to leave their farms and move to urban centres or churches for fear of imminent eviction during presidential and parliamentary elections.

SCOFOA members come from different ethnic groups with varied cultural backgrounds and beliefs. The dominant Digo people believe that trees should not be planted but should grow naturally and only naturally grown trees should be felled. This belief discourages Digo people from planting tree on their farms. As the major source of fuel for cooking in the region is wood, this has led to people stealing wood from those with tree forests on their farms. This can lead to conflict between neighbours and even relatives and is challenge to on-farm forestry businesses. Some also believe that those establishing on-farm forests they are doing so to harbour evil spirits, making the forests a target for arsonists.

Another major challenge is that most youths from the south coast have moved away from rural areas to search for jobs in tourist areas as waiters, tour guides or taxi and motorcycle drivers. However, with declining numbers of tourists in the region due to uncertainties in the hotel and hospitality industry, many youths have been rendered jobless. Yet few are willing to return to work on the farms. Lack of land ownership is one reason but overall the tree-growing business does not attract young people because of the nature of the business which requires experience and technical skills (such as transplanting seedling and pruning). There is also the risk of engaging in a business which requires long-term investment – one that takes 5–10 years to become profitable – compared to the more attractive income possibilities in the hospitality industry. This has had a major negative impact on the production and economic performance of the on-farm forest businesses.

SCOFOA's efforts to educate and raise awareness among its members about equitable access to resources and gender discrimination are starting to take effect as the association by-laws allow family members to engage in on-farm forestry regardless of gender. This has positively impacted on the business because when one or even two family members are away there is always somebody available to engage in business activities. The advantage of this horizontal division of labour is that these family members

2. The Digo are a Bantu tribe grouped together with eight other tribes. Together these tribes make up the Mijikenda, or 'nine tribes'.

have a greater degree of freedom and autonomy. This in itself leads to higher levels of cooperation of family members throughout the lifespan and operations of the business.

8.2.3 Value-chain actors

Competitors: SCOFOA's major competitors include other on-farm forestry farmers in the South Coast region who are not members of SCOFOA; forest poachers who illegally access government-owned or traditional/community forests (kaya forests) and harvest timber to sell to consumers at lower prices; and owners of natural/established mangroves in neighbouring sea wetlands who also sell wood products. There is also competition for available land from other economic activities such as coconut-tree and sugarcane plantations, livestock rearing and food-crop farming.

Creditors: unlike other farm businesses such as sugarcane, coconut and cashew farming which receive ready funding from financial institutions such as banks, women's groups and other financial institutions, it is not easy for on-farm forestry entrepreneurs to benefit from these arrangements. According to these financial institutions, the crop (trees) takes a longer time to mature for harvest; the trees on the farm cannot be used as collateral because of the high risk associated with fire, drought and disease; and SCOFOA entrepreneurs lack the appropriate training in recordkeeping, bookkeeping and financial management.

Consumers: focused discussion and observation of the study area revealed that Casuarina is in high demand in the construction and hospitality industries. Farmers also prefer this species as the tree grows very fast in the saline sandy soils of the South Coast and reach maturity (10cm diameter and 10m long) within five years; it grows straight and almost uniform in diameter, producing the best timber product for roofing and other construction purposes. It has qualities of hard wood, and hence is very durable and resistant to weather changes and insect damage. Casuarina also has a readily available market in the South Coast, Mombasa and North Coast areas. A pole sells at for 600–900 Kenyan shillings (approximately US\$6–9). In addition, farmers normally do not incur cutting, processing and transport costs because the buyers are willing to do this at the farm level.

For eucalyptus, the Kenya Power and Lighting Company (KPLC) and Bamburi Cement Company in Mombasa are the major consumers. Poles are used for supporting electricity cables and as fuel. Bamburi Cement Factory uses coal imported from South Africa as its major source of fuel. However, according to Nathaniel Mwangeka, the Bamburi representative at the PAR workshop, the company is in the process of replacing coal with wood, since the use of coal leads to increased carbon dioxide emissions which is a major air pollutant and contributor



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Casuarina roofing poles being delivered for a house under construction in Ukunda

to global warming and consequently one of the causes of climate change. The factory has acquired 465 hectares of land in the South Coast area which is currently being replanted with both native and exotic plants. Most of the seedlings are being obtained from on-forestry farmers including SCOFOA members.

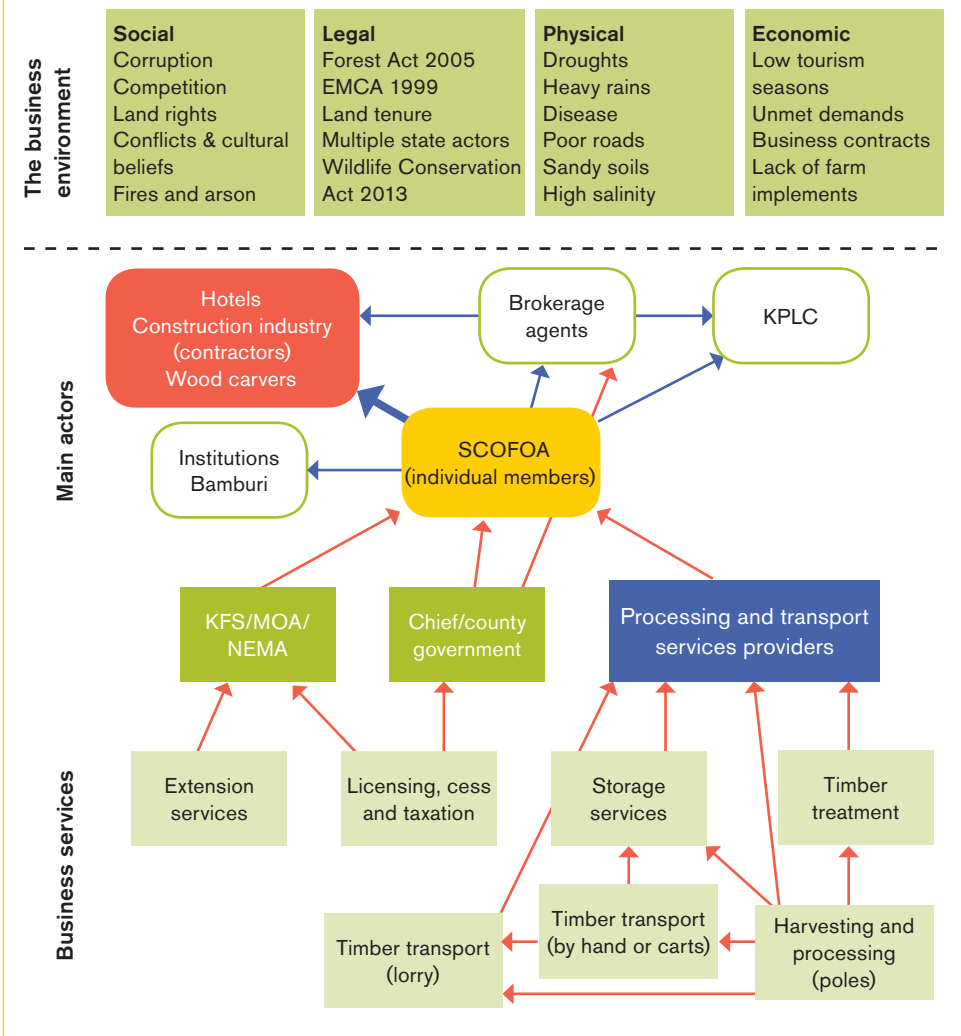


The Gongoni Forest Conservation Group's tree nursery belonging to a SCOFOA member

Other consumers of eucalyptus are institutions and individuals who use it for fencing poles and fuel. Neem trees are mostly used for medicinal purposes, and mango trees for fruit. Being hardwood trees sourced from natural and established forests, wood carvers also use the logs. During the workshop, the wood-carving industry representative Wilson Mulandi from the Millennium Carvers Cooperative claimed that their business is threatened with closure because it has become too difficult to obtain the raw material (logs) to sustain operations. They are forced to import the raw material from Tanzania at a very high cost. This demand presents a business opportunity for SCOFOA members.

Suppliers of farm inputs/information/services: suppliers of goods and services are essential and directly influence how SCOFOA members operate their business. These include Agrovet, who supply forest farmers with inputs such as fertilisers, pesticides and other farm implements and tree-seedling entrepreneurs who raise and supply various tree-seedling species to the farmers. Essential extension service providers include agricultural extension workers and KFS, which provide information and technical support to the businesses regarding good agricultural practices and markets for forest products. These services determine the quality of the timber product. Without information on markets, members are exposed to brokers/middle-men who offer them low prices, affecting overall income.

Figure 8.3 SCOFOA's value-chain map



Notes: EMCA Environmental Management and Coordination Act

Figure 3 shows the main actors involved in the value chain. The blue arrows show the movement of products and the red arrows the service(s) provided. The processing and transport service providers could be those contracted by individual members.

8.3 What do SCOFOA members see as the main barriers and risks?

A participatory approach was used in collecting data for assessing risk and mitigation options for SCOFOA's locally controlled forest business using a mix of quantitative and qualitative data collection and analysis methods.³ SCOFOA members identified risks they perceived to be important to their on-farm forestry business (see Table 8.1). The sections

3. These toolkits are detailed in the FAO Market Analysis and Development Training Programme (see FAO 2011).

below gives detailed account of the identified risks under the five risk categories (markets, institutional/legal framework, natural resource management/environment, socio-cultural issues and technology/research) and the six areas of concern to the business (revenue flows, resource access, business relationships, operational capacity, security of operating environment and brand development).

8.3.1 Market-related risks

According to SCOFOA members competition in the market place was raised as a high risk (8 out of 10) to the businesses' viability. Due to unemployment, many people in the rural South Coast area are involved in illegal commercial activities such as industrial fuel wood collection, commercial pole cutting and charcoal production in *kayas* and other state-protected forests and parks. They sell these illegally sourced products at low

prices, threatening on-farm forest businesses. The situation is compounded by having a weak Forest Act, combined with its uncoordinated implementation, low staff morale, a lack of comprehensive policy on the restoration of indigenous vegetation and inadequate involvement of local communities and the private sector in forest conservation and management programmes. Competition directly affects the revenue flow into the business by reducing income and may eventually lead to demoralisation and many members quitting the on-farm forestry business.



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The participatory research workshop with SCOFOA association members and other stakeholders at the Red Cross resource centre, Ukunda, Kwale

Lack of capital, savings and collateral are also common challenges and were ranked 9 out of 10 in importance. These effect on-farm forestry business operations directly, claim SCOFOA members. The nature of the business is capital intensive. Money is needed for several functions including to buy or lease land, prepare the land for tree planting and manage the trees until they attain the harvesting size. During this period there is no substantial income from the business. It is impossible for the members to raise capital through savings because of their poor economic status. This problem is compounded by the private on-farm forestry business being a new venture in Kenya, which most financial institutions are not aware of nor clearly understand how it operates. This makes it difficult for them to finance operations. Lack of proper business bookkeeping particularly on production, sales and profits by the members makes it even more difficult for financial institutions to understand the business.

On the other hand, the time it takes the trees to mature and the associated environmental risks (fire, droughts, diseases, pests, theft and wild animals) makes it difficult for members to use trees as collateral to access credit. With a lack of capital to invest, farmers borrow money from informal money lending sources which they pay back at high interest rates.

There is poor crop management, production and product quality due to a lack of resources, leading to low returns and ultimately unrealised potential as businesses are unable to invest in any value addition of the product which could increase the flow of income to the business. Many farmers opt for alternative enterprises which require low capital and with a short maturity such as sugarcane, coconut, cashew and citrus.

Failure of members' to honour contractual agreements is a challenge that commonly occurs among SCOFOA members. It is seen as a relatively high risk to business relationships and ranked 7 out of 10. The reasons were mainly seen as being external to the business and caused by natural events (such as crop failure due to weather variations) but also due to price changes in the market leading to low incomes, delays in payment by consumers and brokers exploiting farmers by creating barriers to markets. This has a damaging effect on business relationships as it creates mistrust within existing partnerships and makes it difficult to establish new ones if there is a suspicion contracts will not be honoured. In the past, members have also experienced the effects of this when cancelled contracts have led to court ligations costing them highly both in terms of loss of income and time spent in court rooms.

Lack of appropriate skills (tree nursery management and silvicultural skills): this is seen by the majority of SCOFOA members as a relatively high risk (7 out of 10). It directly effects the operations of the business. Production efficiency and the quality of products are low as a result, affecting the business returns. The lack of skills was seen as due to inadequate training opportunities offered by KFS and MOA extension officers, the lack of sharing of experience between members, and lack of appropriate courses available from higher-learning institutions (perhaps because the Kenyan system of education is more theory than practice oriented). The problem is compounded by the age of the SCOFOA members – the majority are retirees and are reluctant to invest in learning new skills in forest management.

Certification of products such as construction and fencing poles and brand development: although the Kenya Bureau of Standards (KEBS) certification guarantees reliable markets, it is perceived by SCOFOA members as highly challenging (7 out of 10). Although external to business operations for now, certification poses a challenge because it is costly and involves a lengthy procedure. The KEBS management system certification procedure requires SCOFOA members to first express interest in certification; then the KEBS Certification Board (KEBS-CB) determines whether the members are sufficiently prepared for the audit process. When found to be prepared, applicants are requested to complete the initial certification questionnaire and a contract is signed. Certification audits are then carried out and followed by a certification decision. Finally, there are surveillance audits and recertification audit (KEBS-CB 2002). SCOFOA members feel that certification has more drawbacks than benefits: they cannot afford the process (which would also reduce their overall profits), so most members prefer 'business as usual' instead.

According to SCOFOA members seasonality of the market for casuarina poles and other wood products constitutes an internal risk to the business. It is determined by either high- or low-season tourists flow to the South Coast. During the high season, demand for poles



A forest farm plot in Masila village belonging to a SCOFOA member

in the hotels and hospitality industry is low. During the low tourist season, the demand is high: this is when the hotels, villas and restaurants are mostly vacant and the owners carry out repairs, renovations and new extensions and construction. Demand is high and prices are good.

Local people purchase poles for constructing houses and other structures as well. However, they prefer to use poles extracted from mangrove forests owned mostly by the community or state. They claim the mangrove poles are more durable.

The seasonality of the market presents a high risk to the members (7 out of 10). They rely on the hospitality industry and, because of the uncertainties it is experiencing, it exacerbates the risk. All these challenges have forced members to look for alternative markets or to convert poles to other wood products such as charcoal which has a ready market but does not pay as well, hence providing a low-income flow to the business.

8.3.2 Institutional and legal risks

Corruption and misuse of office by law enforcers: though external to SCOFOA's operations this issue poses a high risk (8 out of 10). Many members fall prey to corruption due to their lack an awareness of the laws governing on-farm forestry business. The situation is made worse by the punitive nature of the law provided in the Forest Act (Republic of Kenya 2005). A forest officer may 'demand from any person the production of an authority

licence for any act done or committed by that person in a state forest or in relation to any forest produce for which a licence is required under this act' (ibid). The act also requires 'any person found within a state forest who has in his possession any forest produce to give an account of the manner in which he became possessed thereof and where the account given is not satisfactory arrest and take such person before a magistrate' (ibid). A forest officer may also 'search any vehicle or vessel and seize and detain any forest produce in respect of which there is reason to believe that an offence has been committed, together with any tools, equipment, vessels, vehicles or livestock used in the commission of the offence' (ibid). These laws have been overexploited by law enforcers. For farmers adjacent to state forests and parks, the only viable farm business they can undertake is on-farm forestry as other crops will be destroyed by wild animals. It is in these areas, if one is caught in possession of forest produce or equipment used to extract forest produce, that the law enforcers take advantage. This in turn leads to low revenue flows to the business and demoralisation, especially when tools such as power-saw, axes and machetes are confiscated that members rely on to harvest their products. This can lead to the total collapse of the business.

Bureaucratic procedures, business regulations and multiple landing fees (cess payments): although these risks are external, they can have profound effects on business operations (ranked 8 out of 10). To process their products, members must acquire several permits. However, due to conflicting sectoral laws and mandates (for instance, when a forest farmer intends to harvest and transport products) s/he is required to have several permits which include one issued by the local chief stating that the bearer of the permit is the lawful owner of the forest and the product; a KFS permit stating that harvesting of the trees will not adversely affect the ecosystem or the landscape of the region; and another from MOA stating that the felling of trees (eg mango trees) will not affect the supply of food to families in the region. In each county the product passes through, the member must pay a landing fee (cess) regardless of whether they have already paid it in the county of origin. The impacts are compromised product quality due to delays in harvest. For example, tree diameters may exceed specifications for products such as roofing poles and hence become rejects. There will also be a proliferation of brokers/middle men buying the products at low prices leading to exploitation of members, reduced income, demoralisation and, in some instances according to participants, even a change in livelihood eg to the less-frustrating businesses of cassava-growing or livestock rearing.

8.3.3 Natural resource management and the environment

The risks associated with the natural environment are external to operations. These frequently occur and members rate them highly (8 out of 10 in importance). The risks include damage to trees by wild animals and attack by pests and diseases. Destruction by buffaloes and elephants is very common. Local people – including SCOFOA members – are not allowed to kill any form of wildlife for whatever reason, yet they are expected to bear the cost of damage to tree farms or even loss of life caused by wild animals. This is a major source of conflict between park management and local communities. The damage is worse in the farms bordering the national wildlife natural habitats such as mangrove forests along the saltwater coasts, the forests of the mountain systems and the lowland forest patches which are not secured in any manner. Excision of parts of these forests to provide



Eucalyptus fencing poles harvested from a forest farm belonging to SCOFOA chairman Joseph Kibugi

land to the increasing human population has affected wild animals' migration corridors and fragmented their habitats, which have become too small to sustainably accommodate the increasing animal population. Some members of SCOFOA like Joseph Kibugi rarely harvest fruit from their citrus gardens because baboons frequently invade from the neighbouring government forest. Kibugi also told the consultant team that because of wild animals the only viable business he can undertake successfully is on-farm forestry, which is why he grows different tree species on his 40 acres of land. Impacts has included poor product quality and delays in product maturation, increased cost of production and reduced revenue flows/income, and hence poor livelihoods.

8.3.4 Socio-cultural risks

According to the SCOFOA members the shortage of skilled and unskilled labour is a risk which is highly rated (7 out of 10). It is caused by the nature of activities involved in the business, for instance tree nursery management, transplanting seedlings, applying fertilisers or pesticides, pruning and product processing. All these activities require some training and prior skills which most casual labourers do not have. Tree farmers must also compete for the labour force with other enterprises in the area such citrus fruit, coconut and sugarcane growers. Many workers prefer working in hotels and the transport industry, which pay more competitive wages than on-farm forestry. The impacts have been the high cost of the labour and lack of labour. Many farmers work alone on the farm and sometimes the farm is not adequately attended, leading to low-quality products and low returns to the business.

Social problems: taboos, evictions, arson and theft: although these risks are external to business operations, they frequently occur. SCOFOA members rated them highly (8 out of 10). According to the members, fire incidences are common and very destructive, particularly during dry weather when the grass and litter on the farm forest floor are dry. Fires are either set deliberately or occur accidentally. Accidental fires occur either during farm clearance or the elimination of pests using fire which sometimes gets out of control. Deliberate fires

are set by arsonists who could be neighbours or relatives who have been involved in land ownership disputes or just because of 'bad-blood'. Occasionally, and particularly during electioneering periods, fire is also used as a form of forced eviction by local Digo people.

Some Digo also believe that on-farm forests are created as habitats for evil spirits, and that such forests ought to be destroyed. Rose Mwongela, a SCOFOA member with an on-farm forest from a different ethnic community in the Kenyan uplands, has received warnings from undisclosed sources that her farm will be destroyed. She now has someone on guard with drums of water placed at different point on the farm 24 hours a day during dry weather. Such threats not only increase costs, they deter potential entrepreneurs.

Theft is another problem. Due to poverty levels and those who want to benefit from but cannot conduct an on-farm forestry business due to their beliefs, theft of forest products is rife. It is compounded by youth unemployment and a belief that fencing property (seen as a means to keep neighbours, relatives and wider community members away from homestead) and anti-social.

8.3.5 Technology research and development risks

According to SCOFOA members, a lot of research on forest resource management has been done by government institutions such as KFS, Kenya Wildlife Service (KWS), Kenya Forest Research Institute (KEFRI), the National Museum of Kenya and the National Environment Management Authority (NEMA). Other international environmental and conservation NGOs working in or contributing to forest management in the region include the African Wildlife Foundation, African Conservation Centre, BirdLife International, Care International, Environmental Liaison Centre International, IUCN East Africa Regional Office (IUCN-EARO) and the Worldwide Fund for Nature (WWF) East African Coastal Forest Programme. However, these research findings are external to SCOFOA members' business operating environment.

Members felt that access to research findings could assist in improving the management of their on-farm forestry business – for example, research findings geared towards the development of fast-maturing eucalyptus species to produce electricity poles or species that produce fuelwood of high calorific value. Members claim that such research findings could be of great help to them, particularly now when Bamburi Cement is in the process of changing from coal to wood as its main source of energy. This presents a business opportunity but members need research information regarding the trees which provide the required calorific value.

A participant also gave an example of some research findings:

Unlike unsustainable logging, charcoal burning is a serious threat to Coastal Forests because of the high demands for charcoal in urban centres and for the illegal but lucrative export market. In Kwale, it has been estimated from District Forest Officer permit records that 45,000 bags of charcoal were legally transported from Kwale to Mombasa every month in 2001. Illegal movements are estimated to be more than three times as high. The charcoal mainly comes from Trustland forests, forests on private farms and ranches, and some illegally from gazetted forests (Matiku, 2014).

Access to such research information could help SCOFOA members to focus products that are in high demand. However, poor information dissemination by the association officials is also rated as a relatively high risk (8 out of 10) to business performance. The poor access to research information means that members are growing inferior plant species which take longer to mature or wood fuels of low calorific value.

Inability of SCOFOA members to mobilise resources to acquire or purchase appropriate technology: this is rated highly (8 out of 10). Kwale County is one of the poorest counties in Kenya with relative poverty indices: food poor (31.77 per cent), absolute poor (40.23 per cent) and hard-core poor (26.17 per cent). Members cannot afford farm inputs such as high-quality fast-growing tree seedlings, fertilisers and pesticides. These challenges are made worse by the use of inappropriate tools for product processing. Members mostly use machetes and axes rather than power-saws for cutting and processing, compromising product quality. Products are transported either by hand or using donkeys to where they can be loaded onto trucks or motorcycles to be taken to market. The consequences are excessive waste generated during processing, delays in products reaching the market, low production and the deterioration of product quality.

Infrastructure unreliability, particularly roads: although external to SCOFOA, problems with infrastructure adversely effect the flow of material from farms to markets (risk ranked 7 out of 10). The problem is caused by a lack of road maintenance, particularly access roads serving the farms. Conditions become worse in wet weather when the majority are impassable. This forces some members to postpone processing or transporting their products until there is better weather and roads become passable. Sometimes the weather does not change for nine months or more particularly during El Niño episodes. Delaying harvesting may lead to oversized trees, loss of income and demoralisation.

8.4 What strategies can SCOFOA use to manage risks and challenges?

8.4.1 Competition in the market place

SCOFOA members have several strategies they could use for managing the risk associated with competition in the market place. They could postpone harvesting or hold the product in the farmyard until supply from other sources goes down and prices go up. They could convert timber from one product to another when its demand is higher, for example by converting electricity or construction poles into either fencing poles or charcoal. They could also sell in the neighbouring counties of Mombasa and Kilifi if prices for their products are higher there. Finally, by establishing memorandums of understanding (MOUs) with consumers so that the product markets are guaranteed.

8.4.2 Managing financial risk

Financial risk has been managed in several ways: members already borrow money from informal money lending sources (although they pay high interest rates). They do have other small-scale side businesses such as citrus-fruit growing, beekeeping, livestock keeping (cows, goats, and chicken).

Table 8.1 Summary of risks identified by SCOFOA

Areas of concern/ Factors that influence risk	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity	Importance 1 (low) to 10 (high)
The market	Competition from other forest operators (8) Seasonality of market (7) Lack of savings and collateral (9) Inefficiency in product processing (6) Limited market information (6)	Competing land uses (8) Labour availability (5) Climatic conditions (2) Fire (8) Shortage of inputs (5)	Failure to honour contractual agreements (7) Competition among producers (8) No partnerships among producers and institutions (5)	Political tensions/violence (2) Theft of forest products (8) Elite capture (5) Seasonality of the market (6)	Challenge in certification of products (8)	Lack of knowledge/education on product quality, market demand (6) Lack of appropriate skills (7) Lack of training opportunities (6)	6 (moderate)
Institutional/legal frameworks	Corruption and misuse of office by law enforcers (8) Bureaucratic procedures and business regulations (7)	High cost of acquiring documentation (8) Bureaucratic procedures (8) Use of certain species legally prohibited (5)	Conflicting policies (7) Conflict among community members (2)	Conflicting regulations (7) Misuse of office by law enforcers (7) Uncertainty in production (5)	Procedure for formal registration (stringent legal requirements) (7)	Low level of members' interaction with extension services (4) Conflicting institutional mandates (7)	6 (moderate)
Natural resource management/environment	Product quality (5) Seasonality of resource access (4)	Fire outbreaks (8) Wildlife-human conflict (8)	Poor management of resources (7)	Damage of trees by wild animals (8) Overprotection of certain indigenous species e.g. ebony (7)	Entry barrier to new markets due to regulation/certification requirements (2)	Shortage of skilled and unskilled labour (7)	5 (moderate)
Social/cultural issues	Corruption (7) Cultural beliefs/taboo (7)	Species-specific cultural limitation (3)	Poor relationships between communities (5)	Lack of respect for property boundaries (5) Species-specific forest infestations by pests/diseases (5) Arson activities (5)	Theft of products (7)	Poor leadership in association/delays in decision making (5)	6 (moderate)
Technology/research and development	Poor transportation (7) Lack of appropriate tools and appliances to process products (7)	Little exposure to technology (6) Lack of appropriate business management skills among members (8)	Lack of or poor dissemination of information (8)	Poor roads (4) Use of specialised technology to defraud producers/market destabilised by brokers (2)	Lack of information dissemination (8) Inability of members to acquire technology (7) Lack of capacity to maintain market technology (8)	Inadequate technical capacity to operate value-addition machinery (6) Inadequate on-farm research skills on tree species (6)	6 (high)
Total score	7 (high risk)	6 (moderate risk)	6 (moderate risk)	5 (moderate risk)	7 (moderate risk)	6 (moderate risk)	

8.4.3 Honouring contractual agreements

The main strategies are to have clear and binding MOUs and for members to uphold professional ethics, but there is need for awareness-raising about the business code of conduct on the side of members.

8.4.4 Dealing with corruption

SCOFOA members have managed these issues by acquiring the necessary documentation for the equipment and tools used on the farms and by acquiring the necessary permits for the areas where they intend to harvest, process or move products. They also share their experiences of dealing with corrupt officers with other members to reduce the level of exploitation.

8.4.5 Dealing with bureaucracy

Bureaucratic procedures, regulations and conflicting institutional mandates directly affect the business operations of SCOFOA members. Members have managed these risks by acquiring all necessary documents and permits well in advance, which include those from the local chief, KFS and from the MOA.

8.4.6 Managing environmental risks

Strategies for dealing with risks associated with the natural environment, human–wildlife conflict, pests and diseases include fencing farms with barbed wire and chain-link fencing, digging trenches around the farms, using bonfires at night to scare away wild animals, and having someone guard the farm day and night until the timber is harvested. Using biocides or other methods to treat or prevent attacks by pests and disease.

8.4.7 Tackling labour and skills shortages

According to the SCOFOA members a shortage of skilled and unskilled labour is a key risk. Strategies to tackle this risk include members sharing silvicultural skills and experiences; registering other family members with the association as business members; seeking advice on technical management issues such appropriate treatments for pests/diseases from KFS or MOA extension officers; and engaging casual labour when skilled labour is not required (such as weeding or carrying logs by hand).

8.4.8 Managing social issues

Social issues relating to arson and theft have been managed by creating fire breaks (clearing vegetation or creating fallow areas) around the forest farm to prevent fires spreading to farms during dry season and having somebody to guard the farm throughout the day and night during dry weather. Members avoid the use of fire when clearing vegetation or when eliminating pests and disease-causing vectors such as ticks and fleas and invasive plant species. Finally, members ensure they have phone numbers for the fire services and the county disaster-management office in case of fire.

8.4.9 Managing access to information issues

Members access to relevant on-farm forest management, market and support information from executive committee or umbrella organisations through various ways, eg SMS, radio, regular meetings and from delegates

8.4.10 Mobilising resources

SCOFOA members mobilised the capital to start on-farm forestry business different ways, for example some used a portion of their retirement benefits to buy the land, some sold ancestral land upcountry and bought land in South Coast and others used bank loans. After acquiring the land some members sold some of the native tree to get the capital for on-farm forestry business and others borrowed money from friends and informal money lending sources to start the business. For the processing of the products they use either simple tools or the consumer comes with equipment and transport to the farms.

8.4.11 Dealing with infrastructure issues

Members have overcome the challenges of poor infrastructure by postponing harvesting, processing and transporting of products during wet weather until roads are passable again. If timber becomes oversized for its intended purpose due to prolonged wet weather conditions, members should consider converting the timber into other products such as fencing poles or charcoal which are always in high demand in the region.

8.5 How can partnerships in the value chain help overcome key challenges?

8.5.1 Managing financial problems through the association

Regarding the lack of capital, savings or collateral to access credit Nicholas Mwongela, an extension officer of the MOA who attended the workshop, advised SCOFOA members to make their association stronger by recruiting more members. Members should be asked to pay an annual subscription fee and be expected to fully participate in association functions. Also, SCOFOA should make sure that members transact their on-farm forestry business through the association. Finally, by strengthening the association, members should have a stronger voice to demand more financial support from the government consolidated fund provided for in the Forest Act 2005. Registered owners of private forest are entitled to receive technical advice regarding appropriate forestry practices and conservation; and, subject to availability of funds, access to loans from the fund for the development of the forest, provided that the funds are obtained and used in accordance with the procedures set out by the act. He further advised SCOFOA members to develop a business plan before approaching any organisation for funding.

8.5.2 Entering into clear and binding MOUs with customers

Failure to honour contractual agreements has adversely affected business relationships between some members and their buyers. The hotel and hospitality representative at the workshop, Abraham Mwasatu, cautioned the members against renegeing on contractual agreements. In his experience, some farmers/members had signed contracts to supply charcoal or other forest products and then failed to deliver the promised goods without

notifying the hotel management. He advised members to always enter into a binding and clear MOU with their consumers and to transact their business through the association.

8.5.3 Support for training

MOA extension officer Nicholas Mwangela said the lack of skills and training could be overcome through improving levels of support from KFS and MOA extension officers so as to increase their coverage of tree farmers/members. This could be achieved by fully implementing the Maputo Declaration⁴ which states that 10 per cent of budgetary allocation for agriculture should be put towards training farmers in appropriate skills and improving extension services (African Union 2003). In addition, government should formulate and enforce a policy to establish new training courses in the existing mid-level colleges with practical courses in forest resource management.

8.5.5 Raising awareness about corruption

It was suggested in the PAR workshop that risks relating to corruption could be overcome through awareness-raising and sensitisation of members about the existing legal documentation required for conducting forestry business. Law enforcers should be made to uphold professional ethics in the course of their duties and SCFOA members should transact all business through the association. And the KFS officers should not subject the punitive forest act on the members because it will lead to corrupt deals.

8.5.6 Lobbying for better bureaucratic processes

Overly bureaucratic procedures could be overcome through entities such as KFS and MOA engaging and consulting with the relevant stakeholders, and lobbying relevant departments to allow all permits/licences to be issued at one point.

8.5.7 Better external environmental management

Challenges associated with natural environment such as human–wildlife conflict could be managed by policy change. For example, KFS or KWS should be provided with resources to put up electric fences around state forests and game parks in the South Coast area, the same way KWS have put an electric fence around Lake Nakuru National Park and Aberdare's forest. To minimise human–wildlife conflict, the government should stop excision of wildlife corridors and allocate to people for settlement.

8.5.8 Support for managing social issues

Social problems such as arson attacks could be overcome by government or donor support programmes on education and awareness-raising about the importance of tree growing as an economic activity among the communities living in the South Coast area and on the importance of peaceful coexistence between different communities and good neighbourliness. Training SCFOA members and other tree farmers with the skills for good agricultural practice and firefighting would also be beneficial.

4. At the Second Ordinary Assembly of the African Union in July 2003 in Maputo, African heads of state and government endorsed the Maputo Declaration on Agriculture and Food Security in Africa (Assembly/AU/Decl. 7(II)). The declaration included a 'commitment to the allocation of at least 10 percent of national budgetary resources to agriculture and rural development policy implementation within five years' (NEPAD 2016).

8.5.9 Promoting collaborative research and better communication

SCOFOA could be involved in collaborative research with institutions such as the Kenya Forest Service and Kenya Wildlife Service when conducting forest-related research in the area. These institutions could also provide the infrastructure for information dissemination such as radio broadcasts and resource centres with internet for both the public and members of SCOFOA to use.

8.5.10 Providing better financial support

Members' inability to mobilise resources could be overcome through financial support by the KFS as provided for in the Forest Act or willing donor (FF-SPAK). This could be made to the association to acquire appropriate technology and also to train members in use of the technology.

8.6 Which risks could constitute potential business opportunities?

In terms of risk associated with competition and demand, in addition to the strategies outlined previously, SCOFOA could establish a central holding yard, where products from members could be collected, treated and stored to wait for supply in the market to go down and prices to go up. This would also encourage SCOFOA members to sell their products through the association, thus opening an opportunity for proper recordkeeping on what each member produces and sells. Members could also contribute a small percentage of their income to a savings and credit cooperative (SACCO) from which they could borrow at low interest rates and which would be an income-generating project for the association.

Although illegal logging has decimated forests in Kwale County, the Kenya Vision 2030 requires that the county achieves a minimum of 10 per cent forest cover by the year 2030. The county will have afforestation and reforestation programmes which will present a business opportunity to SCOFOA members to establish more tree nurseries for native and exotic tree species including endangered indigenous species.

8.7 Recommendations for reducing risks and challenges

It is highly recommended that SCOFOA members start transacting their business through the association. By strengthening the association and acting as a unified group, the risks/challenges could be mitigated:

8.7.1 Strengthening the association

- **Reduce competition between members** as all products would be sold through the association.
- **Provide access to capital, savings and collateral:** members would save a percentage of their income as shares in the association which could act as collateral for offering members loans at low interest rates.
- **Stabilise the market:** the association should store products in centralised yards until market demand is high and prices are better.

Table 8.2 Risk-management options for SCOFOA

	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity
Threat	Competition in the marketplace from other operators	Destruction of on-farm trees by wild animals	Members breaking contractual agreements	Theft of products and arson by neighbours		Shortage of skilled and unskilled labour
Opportunity	Create central collection point for treating and storage for members and non-members (for a fee)	Increased sales of fencing poles to secure farms and facilities from wild animals	Form SACCOs by members (to reduce pressure to sell to middlemen to access funds)	Sell poles for fencing forest farm, storage yards and pole-treatment facilities		Training youth in silvicultural skills will not only create employment but improve availability of skilled labour in the business
Options for managing risk	Store products in yards until prices increase Add value by converting poles into other products	Build fencing or dig trenches around the farms Deter animals with bonfires at different points on the farm and employing a guard	Form on-farm forestry-farmer cooperatives Establish MOUs between farmers and consumers	Encourage neighbours to grow trees for fuelwood Raise aware of 'good neighbourhoods'		Build local capacity from existing the labour force at the farm level
Options for policy (government/private sector)	Fast-track the operationalisation of consolidated funds available under the Forest Act 2005 to enable SCOFOA to acquire value-addition facilities	Formulate policies to compel KWS and KFS to install electric fences around state forests and game parks adjacent to human settlements like Lake Nakuru National Park	Government to formulate policy to encourage forestry farmers to form associations to access credit facilities and donor support	National government to issue farmers with title deeds Efficient law enforcement		Formulate policy that promotes establishment of new training courses with practical curriculum in middle-level colleges

- **Help to mobilise resources to acquire technology:** the association could use its member shares as collateral to borrow money from financial institutions to purchase/ acquire technology and train members how to use it.
- **Minimise the effect of corruption** by members transacting their business through the association. This should minimise individual contact with corrupt law enforcers, thus minimising members' exploitation.

8.7.2 Mitigating risks relating to the natural environment

- **Prevent destruction of trees by wild animals:** KWS and KFS should play a proactive role in confining wild animals in state forests and game parks.
- **Prevent destruction of trees by pests and diseases:** members should uphold good agricultural practice (GAP) by sharing experiences and through training opportunities and frequent visits by extension officers from the KFS and MOA.

8.7.3 Mitigating risks relating to socio-cultural challenges

- **Improve human resources – skills and labour:** government should enforce the Maputo Declaration including the establishment of new training courses within mid-level colleges offering practical training courses on forest resource management.
- **Tackle cultural beliefs** which result in social conflicts such as arson. This requires an urgent collaborative awareness-raising campaign by SCOFOA, local chiefs, KFS and MOA to encourage more people to venture into the business.
- **Prevent political incitement:** the politician of the area in particular should be stopped by the relevant authorities, who should take necessary measures against any politicians who incite community conflict.
- **Tackle theft** by encouraging neighbours to plant trees not just for commercial but also for domestic purposes such as fuelwood.

8.7.4 Mitigating risks association with legal and institutional frameworks

- **Improve bureaucratic procedures** through formal engagement and consultation with relevant stakeholders; lobby government to have all documents, permits and licences issued at one point.
- **Improve the land tenure process:** without individual tenure few people will be willing to engage in on-farm forestry. The government should speed up the process of issuing title deeds so that more people can engage in the business.
- **Improve access to information:** funds which are provided through the Forest Act 2005 or by supporting organisations should be used to develop infrastructure for information dissemination, such as establishing a radio station broadcasting in the local language and a resource centre.

8.8 Conclusions and ways forward

The workshop revealed that the most important internal challenge currently facing SCOFOA is to convince its members to transact all of their on-farm forestry businesses operations through it. Failure to do so has exposed members to multiple risks and challenges which would have easily been managed by the association. Nevertheless, the PAR workshop revealed that the self-assessment of risk by these locally controlled forestry businesses can contribute towards business development. SCOFOA members (entrepreneurs) can individually or collectively identify and quantify the risks they perceive to be important to their business and develop appropriate mitigation measures to avoid, eliminate or reduce their impacts on the business. The PAR workshop helped to identify relevant organisations or institutions which SCOFOA could approach for technical assistance or financial support that could further help to overcome risks or challenges and to promote better on-farm forestry business operations.

8.8.1 What next? Recommendations for ways forward

The PAR workshop revealed a need for capacity building for SCOFOA members in business plan development, bookkeeping and financial management and appropriate on-farm forestry management skills. It also highlighted the need for awareness-raising. However, these interventions require resources and therefore, a process of facilitation. One solution is to hold a stakeholders' workshop in the South Coast area to identify potential financial organisations who could be pursued to support on-farm forestry business:

- Invite potential financiers to the workshop together with SCOFOA members and relevant resource persons from different organisations to give their views.
- Present the barriers, threats, risks and challenges already identified by members together with the strategies which members can or do use to manage them.
- Advocate for external support to overcome some of the challenges.

SCOFOA members would need to organise themselves into a unified group and start transacting business through it; members should contribute a certain percentage of the income from the sales to build up individual shares (to establish the saving cooperative) which should be banked with institution that recognises the needs of associations and have special credit products them eg Cooperative Bank of Kenya, beforehand the association should build capacity to manage business and finances. The association would engage with the technical support from KFS, MOA, FF-SPAK among others to identify where support can be provided and agreed, in order to present a stronger case to financial institutions. Then SCOFOA officials could approach the identified financial institutions and explain the business they are involved in managing and the reason why they are inviting them to the workshop that will be attended by stakeholders (members, consumers, service providers). The workshop would an opportunity for the SCOFOA to leverage greater combined support from all external actors in implementing the strategies it has identified. The workshop would enable the financial institutions involved to better understand the on-farm forestry business and to make informed decisions on suitable credit product suitable for the association to finance the business.

A joint understanding of risks and costs between and among policymakers, investors and LCFBs could be developed by forming a tripartite partnership – advocating for policy change and more resources to support interventions to overcome risks and challenges, thus creating an enabling environment for business operations.

Table 8.3 Solutions to reduce risk for SCOFOA

Risk categories and options for improving the business environment of locally controlled forest businesses	Practical potential for beneficial impact in author's opinion (score out of 10)
REVENUE FLOWS (concerns over low income)	
SCOFOA members should conduct all business transactions through the association.	8/10
RESOURCE ACCESS (concerns over resource access)	
Kenyan government should improve the process for issuing title deeds and other land lease documents.	8/10
BUSINESS RELATIONSHIPS (concerns over conflict-free relationships)	
SCOFOA members should: Conduct all business transactions through the association, and Enter into a binding and clear MOU with consumers. The association should have an appropriate mechanism for disseminating research and market information to members. Kenyan government should allow all on-farm forestry business permits/licences/documents to be issued at one point.	8/10
SECURITY OF OPERATING ENVIRONMENT (concerns over security of products)	
KWS and KFS should proactively confine wild animals within state forests and parks to avoid human–wildlife conflict. SCOFOA members should uphold good agricultural practice (GAP) and encourage KFS and MOA to help them to overcome technical challenges. SCOFOA members should encourage neighbours to grow trees on their own farms to reduce theft/conflict. Government should have a policy option to encourage peaceful coexistence between different communities. SCOFOA members should continue fire prevention and fighting strategies.	7/10
BRAND DEVELOPMENT (concerns over product certification procedure)	
SCOFOA members should be trained by KEBS-CB in the preliminary steps for certification SCOFOA officials should be trained first and then train other members on product-certification audit procedures. Partners, donors and government should provide financial support for the certification process.	8/10
OPERATIONAL CAPACITY (concerns over operating efficiencies and technology)	
Kenyan government should implement 10 per cent budgetary allocation to agriculture for training, including on-farm forestry management skills. Policy should encourage practical college curriculums for training resource managers. SCOFOA members should use their position as association members to access credit to pay for technology and training.	7/10



FSC-certified acacia timber that has been harvested by association members

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Vietnam: Association of Quang Tri Smallholder Forest Certification Groups (AQTSEFCG)

Sharing risks, shaping solutions and sharing benefits

by Ton That Minh Khanh and Emmanuelle Andaya

Formed in 2014, the Association of Quang Tri Smallholder Forest Certification Groups (AQTSEFCG) is a business association of over 30 groups of smallholder acacia tree growers in Quang Tri province, Vietnam. Despite high demand for FSC-certified timber from international buyers and support from national government forestry policies, the association still faces considerable risks to its business such as the threat of fluctuating timber prices and a lack of internal capacity. Yet the experience of AQTSEFCG demonstrates that strong cooperation among actors in the supply chain is important to mitigate risks for locally controlled forest businesses. The power of the market to push for and create conditions to support such enterprises is demonstrated here – as is the need for active support from extension services to provide enabling conditions.

9.1 Context in which AQTSEFCG operates

9.1.1 About AQTSEFCG as a business

The Association of Quang Tri Smallholder Forest Certification Groups (AQTSEFCG) is a business association of acacia plantation smallholders in the Quang Tri province in North Central Vietnam. Co-founded in 2014 by the Provincial Department of Forestry and the growers of acacia, through the support of WWF Vietnam, its main business is FSC-certified acacia smallholder forest plantations. The association is a registered organisation, with its own bank account and seal. It provides technical support services to its members to meet FSC requirements, and acts as a broker and marketing arm for the members. It also oversees all contracts between members and buyers to ensure compliance and timely execution.

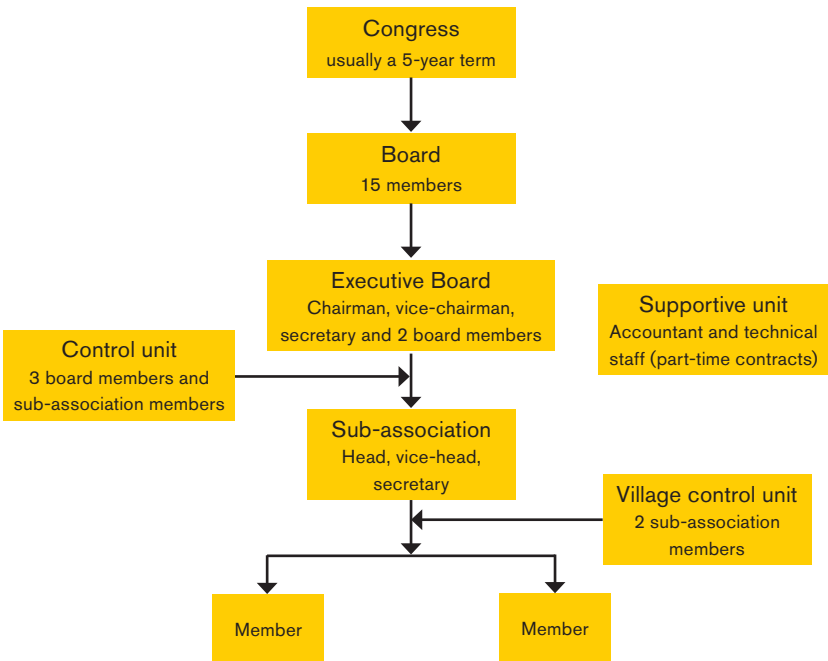
The association has a membership of 517 households. Each member manages its own plantation ranging from 2 to 3 hectares and sells FSC-timber products direct to buyers. All of the members have been granted the right to use the land for 50 years by the Vietnamese government (Government of Vietnam 2004; 2014). At the village level, members receive technical and business support and coordination from 30 sub-associations led by 30 group leaders, under the general coordination of AQTSEFCG.

The association is directed by a chairman (currently the director of the Provincial Department of Forestry), a vice-chairman (also from the Department of Forestry), and three executive committee members (a representative from the Department of Forestry,

a community group leader and a vice-chairman of the communal People's Committee). In addition, there are 15 selected group leaders as part of the standing committee. The executive board of the association was elected by the members for a five-year term at the association's congress held in 2014.

The Department of Forestry, being co-founders of the association, has committed to supporting its development while it is still in the initial stage of development. The tree growers, recognising their current lack of management capacity, elected the government officials as chairman and vice-chairman for this term. The association's executive board with advisory support from WWF is currently working to identify the most appropriate actor at the provincial level to take the leading role, whether from the Cooperative Alliance¹ or from the members of the association itself, whom they hope to elect at the next congress in 2019. If a member of the provincial Cooperative Alliance was elected as AQTSCG's next chairman, the alliance could provide some funding and support to the association's members in obtaining FSC certification. The alliance also includes nearly 300 cooperatives. Each cooperative has hundreds of household members, many of whom may own large areas of forest that could join the association in the future.

Figure 9.1 AQTSCG business structure



1. In Vietnam a cooperative is a type of 'interest group' that has existed for a long time. It is a legal entity recognised by the government. The sub-associations of AQTSCG whose members are farmers/smallholders can be considered to be cooperatives. There are cooperatives for any type of business such as forestry, agricultural, animal husbandry, aquacultural and services. The provincial Cooperative Alliance is the representative organisation for all cooperatives in the province.

9.1.2 Legal status and license to operate

The association started as a group of smallholders. In 2009, through WWF Vietnam's support, the group came together to apply for FSC certification. In 2010 the group applied for a group FSC certification for a total of 900 hectares of combined acacia plantations. Initial financial support was provided by the Swiss Secretariat for State Economic Affairs (SECO), facilitated through WWF Vietnam. However, at that time, the association had not yet been established and so there was no legal entity in place to act as a certificate holder on behalf of the smallholders. WWF Vietnam stepped in to act as certificate holder from 2010 to 2012–2013. After a transition period, in which the Department of Forestry's capacity on FSC management was developed, the certificate was transferred to the Provincial Department of Forestry. The association was still in development at that time. AQTSCFG was finally established in 2014 and when the FSC group certificate expired in September 2015 the association successfully renewed the group certificate under its own name for to cover 1,393 hectares of forest. The current certificate is valid until 2020 (Le Viet Tam 2015; Nguyen Vu 2015).

A sustainable financing plan was developed for the association to ensure that it can carry out its mandate. Funds will come from a membership fee of US\$2.20/member/year, and a fixed amount paid by the member depending on the size of their plantation of US\$1.30/ha/year (Nguyen Vu 2015). The association also expects to receive up to 7 per cent of the premium price for acacia timber from each plantation, which is the difference between the prices of FSC- and non-FSC-certified timber. Therefore, this share will not constitute a cost to the plantation owners as it will be taken from the 17 per cent premium price committed by the partner company, Scansia Pacific Company for FSC-certified timber (Le Viet Tam 2015).

The association has already received membership fees and some percentage of income from sales from some smallholders. However, for the association to break even, it needs to cover at least 2,500 hectares of FSC-certified acacia plantations. The association's five-year strategic plan already projects that it expects to achieve 2,500 ha of FSC-certified forests (with about 950 members) in 2017. If this target is achieved, the association will be able to operate without external financial support. In the meantime, the FSC-certification cost has been covered by its partner the Scansia Pacific Company for 2015–2020.

9.1.3 Production, sales and profits

The main product of the association is FSC-certified log timber. There is a high demand for FSC-certified timber in Vietnam, with many furniture exporters targeting lucrative US and European markets.

Farmers normally have 2–3 hectares of plantations. A tree will grow to approximately 11cm in diameter by its fifth year and 14cm in its ninth or tenth year. For timber to be accepted for use as furniture, the diameter of the tree has to be equal to or above 14cm. However, one potential benefit of FSC certification is that it also provides a market for smaller-diameter timber that falls short of traditional timber markets. Buyers of nine- or ten-year-old FSC-certified timber will also accept FSC-certified logs that are less than 14cm in diameter. For non-FSC timber, anything smaller than 14cm has to be sold to woodchip producers at a cheaper price (Le Viet Tam 2015).

Table 9.1 below shows the projected breakdown of profit and loss for one hectare of acacia forest. It compares the potential costs and profits of AGTSFCG's two value chains: woodchip and FSC-certified timber.² For a hectare of FSC-certified acacia forest, on average a forest grower can earn up to US\$7,200 net per harvest during the ninth or tenth year. Forest growers can choose to sell their trees for woodchip before this, for example if they need to liquidate their assets before the trees have reached maturity, and have two harvests during the fifth and tenth years. However, timber sold for woodchip will earn them less total profit – on average a total of US\$5,162.

The sale prices given in the table are 'at the forest gate' prices. As the table shows, the profit difference of producing woodchip instead of FSC timber amounts to approximately US\$2,100 over a 10-year period (the difference in costs is VND 46 million = US\$2,100 or US\$210/ha/year). The main benefit of the woodchip market is that it allows farmers to liquidate their farms immediately if they are in need of money. However, in the long run, farmers will benefit more from selling their trees as timber (rather than woodchip) with FSC certification, due to higher prices and increasing market demand. Farmers can also get a better price for smaller-

Table 9.1 Woodchip and FSC-certified timber: profit and loss analysis (ha/VND)

	Activity	WOODCHIP		FSC TIMBER	
		Costs	Profit	Costs	Profit
Year 1	Forest plantation investments (seedlings, fertilisers, labour etc)	VND 15 million		VND 15 million	
Year 2	Additional costs for fertilisers, thinning tree branches			VND 3.5 million ³	
Year 3	Thinning tree branches			VND 1.5 million	
Year 4	Forest protection activities by forest owners (not the association)				
Year 5	Selling standing trees for woodchip production		VND 73 million		
	Forest plantation investments (planting new seedlings)	VND 15 million			
	Thinning trees and selling as timber				VND 30 million
Years 6 to 9 ⁴	Forest protection				
Year 10	Harvesting and sales		VND 73 million		VND 152 million
	Net profit	VND 116 million		VND 162 million	

2. The actual benefits could vary from one forest SME to another, depending on the quality of the forest soil as well as the experience and applied techniques of the individual forest grower.

3. VND 3.5 million is the labour cost for thinning tree branches. However, income from selling tree branches is very small. Therefore no profit is calculated.

4. There are other costs associated with forest protection but these are covered by the forest owners and not by AGTSFCG. The cost for FSC certification/audit is currently paid for by WWF project and/or Scansia Pacific. Therefore, these costs are not included in this profit and loss analysis.

diameter FSC-certified logs (ie even before the end of the ten-year period) than they would for harvesting timber for woodchip twice over a ten-year period. So to compete with this ready woodchip market, the association must find an alternative product or incentive as well as alternative sources of income during the financial gap for its members in order to secure a supply of FSC-certified timber.

For additional income, WWF Vietnam is supporting the association by exploring the potential for value addition through premium prices even for smaller-diameter FSC-certified wood to provide more incentive for communities to follow FSC standards. WWF Vietnam has suggested that the Quang Tri Trading Company, also a timber supplier to the Scansia Pacific Company, has the potential to become a business partner. The company invested in a factory that can both process timber for furniture as well as manufacture acacia charcoal by using small acacia logs of <11cm and acacia waste using Korean technology. The technology allows for smaller-diameter timber to be converted into barbecue pellets for export to Japan and Korea. This company targets to sell FSC-certified acacia charcoal that can provide additional economic value for FSC-certified acacia smallholders. Quang Tri Trading would commit to increasing the price for FSC-certified charcoal if they can secure a market for the products (Le Viet Tam 2015).

The forecast for the business is positive as the association sees potential market demand for FSC-certified acacia timber products from domestic manufacturers which cater to export markets that have strict laws on legal and traceable timber. Currently, AQTSCG supplies only meet 10 per cent of the demand from these companies. Therefore there is still an opportunity for growth.

The association at present has secured its market. It has a contract with two companies: Thanh Hoa Trading Company, a company that supplies timber to different furniture factories throughout Vietnam, and Forexco Quang Nam, a furniture manufacturer and exporter. Recently, it also signed a contract with Scansia Pacific Company, a furniture supplier for Ikea. The contract is executed by the company's Quang Tri purchasing branch, Scanviwood Thua Thien Hue, which from here on shall just be referred to as Scansia Pacific Co. The agreement with the company stipulates the following:

- The contract is for five years to source FSC-certified acacia from the association (2015–2020).
- Based on the market price in Vietnam, the price of FSC-certified acacia is 10–25 per cent higher than non-FSC-certified acacia depending on the diameter and quality of the timber. Scansia Pacific Co has agreed to pay smallholders a premium price for FSC-certified timber 15–20 per cent higher than non-FSC-certified timber to cover additional input costs as well as to provide a price incentive for growers. Within the contract, AQTSCG has committed to prioritising selling its certified timber to Scansia Pacific Co, while Scansia Pacific Co has committed to buying certified timber from the association irrespective of circumstances.
- Scansia Pacific Co has committed to pay the costs of the FSC audit as well as the annual audit for five years. In August 2015, Scansia Pacific Co funded €7,650 to pay for the FSC audit.
- Scansia Pacific will provide a loan to those who need cash to maintain their forests for longer to grow FSC-certified timber (instead of harvesting after five years). Compared to bank loans, the annual interest rate is lower by 2 per cent.

9.2 The enabling and operating environment

The Quang Tri province is sparsely populated compared to other provinces in the country. However, this is rapidly changing. The total population has increased by 6.8 per cent over eight years, from 585,000 people in 2002 to 625,000 in 2010. More than half of the population is of working age and this is increasing by an estimated 3000–4000 people annually. However, the majority of labour is unskilled and only a fifth of the population has any form of technical training or expertise. There are three main ethnic groups in the province (Kinh, Van Kieu and Pa Co) accounting for 9 per cent of the provincial population. (Quang Tri Province Website accessed in November 2015)

9.2.1 Economic situation in the region and in Vietnam

In the last decade, Quang Tri province has experienced rapid economic growth. In the period 2005 to 2009 the province's economy grew at 11 per cent annually. However, the average income per capita in 2014 was still just over half of the national average (US\$1,320 compared to US\$2000 per capita). Forestry is the third largest sector and accounts for nearly a third of economic contribution in the province (Quang Tri Province 2016).

9.2.2 Environmental context

Nearly two thirds of Quang Tri province is forested (300,000 hectares) and out of this about 59 per cent is natural forest and 41 per cent plantation forest. Before the Quang Tri provincial forestry plan, forestry production was characterised by low-value rough wooden products extracted from natural forests. The plantation forest was of low value, for various reasons including:

- No proper land-use planning. From 1990 to 2000, there were several forest plantation programmes in Vietnam but these were only for reforestation and not oriented towards commercial production.
- Poor-quality seedlings and poor control of seedling management.
- The woodchip supply chain was easy for tree growers to access and was therefore preferred.
- There were no incentives to promote timber growing.

These factors led to poor forestry practices such as planting high-density acacia to maximise volume for the woodchip industry. Faced with this situation, the Quang Tri provincial government developed a scheme to restructure and modernise its forestry sector towards sustainable forest management to promote the potential of land resources as well as local labour resources (Nguyen Vu 2015; Le Viet Tam 2015).

9.2.3 Political context

As elsewhere in the country, there was strong support for forestry development, specifically for sustainable forest management, timber plantations and FSC-certified plantations. The following policies were passed and each province is mandated to develop its specific plans for implementing these policies.

- Decision No.1565/2013/QĐ-BNN-TCLN of 8 July 2013 by the Ministry of Agricultural and Rural Development (MARD) on forestry sector restructuring plans.
- Decision No.774//2014/QĐ-BNN-TCLN of 18 April 2014 by MARD on action plan for strengthening the production, quality and value of plantation forest, 2014–2020.

- Circular No.38/2014/TT-BNNPTNT of 3 November 2014 by MARD on guidelines on sustainable forest management planning (Nguyen Vu 2015).

Another policy relevant to landholders is the programme on land consolidation (Decision No. 800/QĐ-TTg of 4th June 2010). It allows landowners with fragmented plots to exchange land with other landholders to encourage larger individual plot areas and more efficient land management (Wells-Dang *et al.* 2015).

Despite a strong political commitment towards forestry, competition from other sectors, mainly agriculture, could affect the way land is used in the future. Currently, there are more than 14,000ha of rubber, 4,200ha of coffee and 2,200ha of pepper plantations in the province and these acreages are increasing. Demands from a growing population and investment in other sectors can influence the government's land-use programme. And should there be fluctuations in the demand for acacia wood then there is always the possibility that tree-growers will shift cultivation to other crops or even to other sources of income such as working in any of the other growing industries.

But thanks to policies that grant a 50-year allocation to smallholders, the promotion of FSC-certified timber and sustainable plantation management, and the investments in the timber industry in the province, timber-growing smallholders at least have security of tenure and a secure market for their wood. The forestry industry can also offer an opportunity for the non-skilled working-age population, expanding the timber production capacity of the province. With two thirds of the province forested, Quang Tri can position itself as a forestry industry capital, attracting industries focused on wood, furniture and others, much of which is already happening, and which could lead to the strengthening of timber industry-based extension services to farmers and association. The growing development and population in the region could also contribute to the improvement of infrastructure and improving/providing social services.

With conditions mentioned above, the association finds itself in the middle of a generally enabling environment for FSC-certified timber businesses. Currently, there is a strong domestic downstream wood industry, providing a ready market for timber suppliers, especially for FSC-certified timber. There is a strong interest from government agencies and international development organisations in promoting sustainable forest management and certified products.

9.2.4 Business and operations environment

There are currently three major players in the FSC-certified timber industry in the Quang Tri province. The association, assisted by WWF Vietnam, has made business linkages with them, either with contracts or initial discussions about potential partnerships. These are Thanh Hoa Trading Company, Forexco Quang Nam and Scansia Pacific Company (through Scanviwood in Thua Thien Hue and Quang Tri Trading Co in Quang Tri).

Vietnam uses a lot of sustainable woods in its outdoor furniture industries, largely because of consumer awareness in its main export markets. Nearly if not all of Vietnam's furniture production is intended for export markets, with USA and Europe as its main markets. In

2012, Vietnam signed a forest law enforcement, governance and trade (FLEGT) voluntary partnership agreement (VPA) with the European Commission (EC) in accordance with the EU's FLEGT action plan (Quang and Xuan 2012). In the USA, there is the Lacey Act, a federal conservation act that also requires traceable wood. At present, there are over 170 FSC chains of custody (CoC) certifications in Vietnam awarded to wood distributors, manufacturers and retailers. This is considered a high number given the size of the country. These CoCs will therefore require FSC-certified wood, offering a market for the FSC-certified timber suppliers. Currently, Vietnam has mainly been importing FSC-certified wood.

The national forestry development strategy of Vietnam has a target to achieve 30 per cent certified forests of the total forest area in 2020. In November 2015, the total certified forest area in Vietnam was about 169,530ha, of which 102,250ha is natural forest and 67,280ha plantation forest (DARD 2015; WWF 2015).

9.2.5 Competitors

The potential competitors for AQTSCFG and its FSC-certified timber buyers are buyers of timber for woodchip (local woodchip-processing factories and traders) (Putzel *et al.* 2012). They provide a ready market for some forest growers whose economic conditions prevent them from waiting for over five years until the trees are mature enough to sell for furniture timber. As these woodchips buyers understand well, the current challenge for smallholder forest growers who are poor and have limited support from external actors is to maintain their forests for a long period (9–10 years). Woodchip buyers offer good prices and many forest growers sell their timber after 4–5 years to woodchip-processing factories instead. Some association members, due to immediate monetary household needs, have sold some of their timber to the woodchip factories, and therefore have had their association membership cancelled.

Besides the furniture industry, woodchip is an important export-oriented industry in the country (New Forests 2010). By 2014, Vietnam had 130 woodchip-processing factories with a total designed capacity of 8.8 million tonnes of woodchip/year. As only 15–20 per cent of harvested trees are over 12cm in diameter, 80–85 per cent of locally planted forests are used for woodchip (To Xuan Phuc *et al.* 2013). This intensifies competition for the timber supplies coming from the tree growers.

The growing market for FSC-certified woodchip can also intensify competition for timber. But it can also offer an opportunity for shareholders who are unable to wait 10 years to liquidate their forests.

However, the drive to expand FSC-certified forests in Vietnam needs further research. The potential impact on forest-growing smallholders and associations could pose a significant risk. The volume of supply would increase, affecting the price of FSC-certified timber. FSC certification would no longer be the unique selling proposition of the association, which would instead have to be based on the quality of their products and reliability of their service.



A member of the association marking harvested acacia trees

9.2.6 Creditors/investors

The government has issued several policies⁵ to promote the development of the forestry sector in general. For example, banks are asked to facilitate loans for forest growers, but very few banks have done so and very few households in Quang Tri province have secured bank loans for their businesses. Nobody from the association has received a loan from local banks. Banks do not consider the land certificate (leasehold) for 50 years a valid form of collateral. The land still belongs to the government and therefore the banks could not claim these lands to liquidate them should a farmer default on his/her loan.

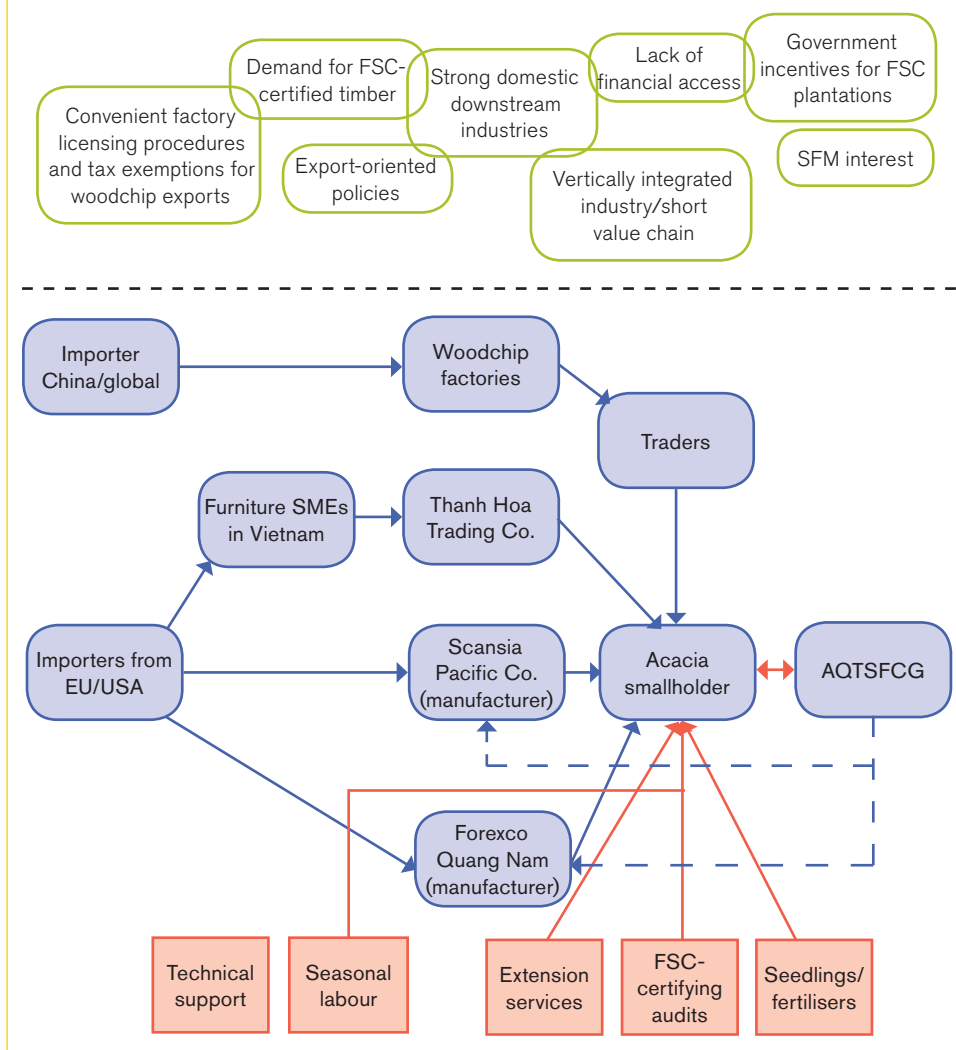
While the value of the trees in the forest can be considered as collateral, banks remain uninterested as forests are in remote and scattered areas. It is difficult for the bank to monitor the forests and if a forest farmer were not able to repay the loan, the banks would not have the capacity to harvest and sell the trees. One opportunity might be a tri-partite partnership between the bank, a timber-processing company and the smallholder, where the timber-processing company would take on the role of harvesting and purchasing the timber from the bank, should the bank claim the trees in the case of any loans are not paid.

9.2.7 The value chain

The value chain that AOTSFCG is part of is fortunately short. Below is an overview of the actors in the value chain, the business-support providers and how they influence the business. These actors play a vital role in expanding the reach of the association as their links to manufacturers and markets extend beyond the province.

5. For example: Decision No.18/2007/QĐ-TTg on forestry sector development strategy 2006–2020, Decision No. 1565/QĐ-BNN-TCLN of 18 July 2013 by MARD on restructuring plans for the forestry sector.

Figure 9.2 AQTSCFG value-chain map for timber products



- **Suppliers:** forest smallholders who are members of AQTSCFG supply FSC-certified acacia timber as their key product. They play an important role in planting forests and supplying and ensuring quality FSC-certified timber to manufacturers.
- **Buyers:** Scansia Pacific Company (85km from Quang Tri) and Forexco Quang Nam Company (240km) are furniture manufacturers and exporters and are the association's main buyers. While dependent on AQTSCFG members' resources, these buyers also have great bargaining powers as they can absorb large volumes of supply. Scansia Pacific Company, for example focuses on markets that demand sustainable wood, which is an important driver for AQTSCFG. The buyers' direct relationship with the timber suppliers can make for a more efficient and mutually beneficial supply chain.

- **Consolidator:** Thanh Hoa Trading Company (180km from Quang Tri) is also a major buyer that provides purchased FSC-certified timber to many other wood-processing and exporting companies in the southern region of the country.
- **Importers:** importers of FSC-certified wooden furniture products from the EU, USA and elsewhere also drive demand for sustainable or FSC-certified wood. Demand is driven either by consumers and/or by retailers' codes of conduct.
- **Support service providers:** these include
 - The FSC international certifying body that carries out audit services.
 - Local seedling and fertiliser suppliers which play an important part in ensuring quality products are available to the tree growers. The National Academy of Forest Sciences is an important supplier of quality seedlings.
 - Seasonal labourers who also provide support to the tree growers.
 - Banks and microfinance institutions, which should provide necessary financial services (but currently do not).
 - Transportation service providers who assist members and buyers in transporting harvested acacia timber products.
 - Provincial infrastructure services which connect remote farmers to markets. However, the present infrastructure is still in need of improvement.
 - Governmental technical agencies such as the Department of Forestry, which plays a leading role in this initiative, creating links with potential business partners and with national and international support organisations.
 - WWF and the Dutch NGO SNV – international organisations that provide technical support to help AQTSEFCG meet requirements for FSC certification; market information and links; and financial support and links to businesses and to other potential sources of finance. They also play an important role in helping the association with business development and capacity building.
 - The association itself, which is part of the support group and plays an important role in ensuring that there is available FSC-certified timber by working with farmers to comply with FSC's requirements. It also provides support by brokering links between companies and smallholders.

9.3 What does AQTSEFCG see as the main barriers and risks?

The risk assessment and mitigation workshop was carried out with representatives from the executive board (both government and smallholder board members) and representatives of the group leaders (the chairman, vice-chairman and four members of the committee who are smallholders). The discussion was mainly led by the members who had more of an understanding of the operations, while the chairman and vice-chairman were there to share inputs as well.

The association had previously done some risk assessment for their strategic and business planning (2015–2019), in which they indicated risks such as potentially lower prices of FSC-certified timber products in the future, the reacquisition of forest land by the government for other land-use purposes as well as the potential switch to growing other crops, such as rubber, by members if the price of acacia became too low. It should be noted, however, that the risk of land reacquisition by the government is low (whether for national security, infrastructure or for national plantations) and should it happen, the land leaseholder would be duly compensated.

Through the self-assessment of risk process, according to association members, they were able to investigate many aspects of risk that they were not aware of before. The members identified risks grouped around five factors: markets, internal organisational capacity, natural resources, institutional/legal framework and technology.

9.3.1 Market risks: medium to high impact

Risks associated with markets were seen as having a medium to high impact on the business:

- **Inaccessible bank credit (scored 9):** a tree grower needs to maintain his forest for up to 10 years to reach the diameter that is required for furniture manufacturing, and to sell the timber at its highest value. At Year 5, the tree has reached a size that can be sold to the woodchip market. The inaccessibility of credit during the financial gap between years 5 and 10 increases the risk that forest SMEs liquidate their forests to feed their families and invest in other activities (eg repairing their homes; buying a motorbike or spending on their children's education), resulting in withdrawals of membership from the FSC-certified association, which affects access to resources for AQTSCFG as well as their business relationships.
- **Low and/or fluctuating future prices for FSC-certified timber (scored 7):** currently, the forest SMEs could earn reasonable profits from selling their FSC-certified timber to several potential buyers with a 15–20 per cent higher price compared to that of similar non-FSC-certified timber. Yet, as discussed above, prices are dependent on wood quality and diameter. Given the future expansion of FSC-certified forest areas in the country, beyond the project support provided by WWF, the price of FSC-certified timber is uncertain. Should the price be reduced, it would negatively impact on revenues.
- **Competition with woodchip producers (scored 6):** given the strong demand for woodchip for producing paper, local woodchip-processing factories are offering a good price to forest SMEs that could result in withdrawals of membership from AQTSCFG, which would affect its access to resources as well as its business relationships.

9.3.2 Internal organisational capacity risks: medium to high impact

Risks associated with internal organisational capacity were as seen having a medium impact on the business:

- **Change in leadership at sub-association level (scored 7):** sub-association leaders appointed by members are often from successful forest SMEs with strong leadership skills. There is always the possibility that a group leader might resign from the position, thus causing instability in the management and operations of the sub-association. In the structure of AQTSCFG, the group leaders play an important role in linking the association to its members and keeping communication channels open. Therefore, a sudden change in leadership could affect the operations of the association and its members.
- **Capacity and resources to conduct market research (scored 5):** at present, the association often obtains market information (price of timber, potential buyers, requirements for quality standards etc) through reports shared by WWF or major buyers. Both the association's budget and capacity for conducting market research to meet market demands are currently limited.
- **Financial sustainability (scored 5):** the association often receives technical support such as extension services, audit costs and forest preparation for FSC audits from



Post-harvesting review: a benefit of FSC certification is that it provides a market for smaller-diameter acacia timber

external support organisations or business partners at no cost. Yet for its operations to be sustainable in the future, the association must find ways to cover or share these costs with business partners. It realises the risk that it may struggle to maintain its own budget for such technical services. AQTSFCG still needs to increase its membership to expand its coverage of FSC-certified plantation to 2,500ha in order to break even and cover future certification costs.

9.3.3 Natural resource risks

Risks associated with natural resources were seen as having a medium impact on the business:

- **Inefficient harvest (scored 5):** the average forest area owned by members is often small in scale (2–3ha per household) and scattered across many locations. This affects both the quality and the harvest volume of the timber as well as increasing related harvesting costs, affecting their revenues.
- **Natural disasters (scored 5):** although natural disasters such as storms and forest fires do not happen often in much of Vietnam, they are more frequent in the North Central Region, including Quang Tri province. When the forest age is over five years, the resilience of the trees during harsh storms is considerable. However, young forests aged less than four years are often seriously damaged by such storms.

9.3.4 Infrastructural risks

Risks associated with infrastructure are seen having a medium impact on the business:

- **Infrastructure (scored 5):** forests owned by members are usually located in remote and mountainous areas. Roads accessing the forests are in poor condition and difficult to use. Members face higher transportation and harvesting costs, which affects their revenues. Due to the sparse and scattered nature of the population, the infrastructure does not reach all of the province, especially communities in mountainous and forested areas.

9.3.5 Technology, research and development

Risks associated with technology, research and development were seen having a medium impact on the business:

- **Seedlings (scored 6):** the use of seedlings from the same stock over a long period of time has resulted in seed degeneration resulting in low forest yield and quality of timber. Access to new and quality seedlings is quite difficult due to the unavailability of good suppliers in the Quang Tri province. Also, the cost of imported seedlings is expensive and has prevented poorer members from investing in quality seedlings.

9.4 What strategies and options can AQTSEFCG use to manage risk?

The community enterprise works closely with their support groups to address the risks that the association and its members face. While they were able to identify and include potential and existing risks in their strategic business plan, they did not plan out concrete mitigation strategies for all. They are currently rolling out some potential solutions that have been discussed before this risk assessment. However, these are still in the early discussion stages. Through the workshop exercise, they were able to identify solutions to the other risks identified. These still need to be incorporated into their plan.

The solutions from the perspective of the association that are discussed below still show the need for support and actions from external actors and is discussed further in the next section. But it should be highlighted that the association has identified strategies that rely on their own capacity. The strategies they discussed are summarised here.

9.4.1 Mitigate market and financial risks

One strategy is to secure markets, including prices, on behalf of members through partnerships and strong relationships with other actors of the value chain, such as Scancia Pacific Co and supporting agencies such as WWF Vietnam and the Department of Forestry. Maintaining strong relationships with the latter two will help the association and its members to negotiate access to credit, advocate for enabling policies, procure quality seedlings, and support towards the financing of FSC certification costs, securing markets and extension services.

Another strategy is to focus on improving the quality of the association's timber products. By focusing on quality, AQTSEFCG is likely to address risks related to decreasing prices of FSC-certified timber in Vietnam, improve competitiveness, and reduce reliance on the woodchip market so that members can start developing other added-value products.

Table 9.2 Summary of risks identified by AQTSFCG							
Area of concern	Revenue flows	Resource access	Business relationships	Security of operating environment	Brand development	Operational capacity	Importance score (where high = 10, low = 1) ⁷
Market	Inaccessibility of bank credit (9) Uncertain prices of FSC timber in future (7) Low price of acacia trees	Supply gap of members for FSC timber (no. of hectares) Competition with other woodchip producers (6)	Non-compliance with contract (ie selling timber to woodchip producers instead of timber company) Maintaining business partnerships for accessing credit		Covering cost of FSC certification in the future		6, 7 and 9
Institutional/legal framework						Ability to pay for technical assistance services (5)	5
Natural resource management	Ability to meet quality requirements and remain competitive in FSC market	Scattered plots = inefficient harvest (5) Natural disasters (storms and fires) (5) Smallholders switching to other marketable products (rubber, farming etc) Increased fragmentation of land plots (due to exchanges with non-members)		Competition for land use with other industries			5, 5
Socio-cultural			Ability to maintain long-term business relationships with FSC buyers		Ability and resources to conduct market research (5) Ability of members to commit to FSC business model	Changes in leadership (7) Lack of management skills among members	5, 7, 5
Technology, research and development	Use of poor-quality seedlings (5) Lack of success stories of new planting techniques/better plantation designs			Poor infrastructure development (6)	Capacity to maintain market research		6

7. Not all of the risks identified during the workshop are scored in this table.

It was also seen as important to improve members' reliability in complying with contracts by establishing a strong commitment to the association, to contract supply volumes and deadlines, and to produce quality products. The association plans to achieve this through improved communication with members, and finding mechanisms that can address their needs, such as access to credit during the financial gap years or finding better-quality seedlings for them, and making better use of the strong network that they have been establishing.

Better use of partnerships to access credit: According to members, they should 'Make use of the opportunity of our partnership with Scansia Pacific Company to facilitate the member forest SMEs to have access to credit offered by this company. While the provision of credits is still under discussion, the associations have organised several meetings with both Scansia Pacific and members to discuss how to roll out this credit model. We have not yet succeeded in convincing the banks to provide credit to our members as they have their own lending policies and forest SMEs are not considered to be their potential clients.'

Contracts to counteract low and/or fluctuating timber prices: Members said that 'We know that we cannot do much about the sales price for our timber products because it all depends on the market price. However, we as the association could sign business contracts with potential business partners to provide larger volumes at scheduled time as we have an annual scheduled harvesting volume. This helps to reduce costs for our partners associated with purchasing raw materials from many suppliers. In addition, we encourage our members to focus on providing better timber (besides FSC certification) by searching for new seedlings that could bring about higher yields with better-quality timber products.'

Contracts to counteract competition with woodchips producers: In addition, members felt that 'Entering into a business contract with Scansia Pacific could ensure regular sales of our FSC-certified timber thus ensuring stable revenues for our members. This business cooperation could prevent our members from withdrawing from FSC-certified sub-association groups. We will need to convince our members to commit themselves to complying with the signed business contracts with this potential business partner [Scansia Pacific].'

9.4.2 Strengthen internal organisational capacity

Discussions revealed a need to use internal fundraising mechanisms to raise money and to invest part of the budget in capacity building, build skills in marketing, financial sustainability and leadership skills.

Appoint vice-heads in sub-associations to manage leadership transitions: in relation to the risk of leadership changes at sub-association level, according to members, 'Being aware of this potential risk, we always have a reserve, the so-called "back-up" individuals who are sub-association vice-heads working closely with the groups' leaders. This person must be approved by group's members. When there are changes to a group's head position, we could appoint this back-up person to take over the work.'

Invest in market research: 'At present, we do not think we have the ability to carry out market research ourselves, given our limited expertise and skills. But we think we must spend some of our limited budget on capacity building for our key members in this area.'

9.4.3 Improve natural resource management

Mitigate natural disasters: 'We cannot do much about this risk except for introducing new seedlings that with better resilience to natural disasters. In addition, we could try to advocate for the government to reserve a budget to support association members to buy seedlings and fertilisers when their forests are damaged by natural disasters.'

9.4.4 Invest in technology, research and development

Invest in seedling development: Members are aware of the need to invest in better-quality seedlings: 'We try as much as we can to convince our members to invest in new seedlings through the introduction of some successful new breeds of seedlings planted by some members. Currently, due to the unavailability of new seedlings in our province and as the price of new seedlings is quite expensive, only richer members are able to use them in their forests. Yet demands from buyers for better-quality timber may cause certain pressure on them to use the new seedlings in the future. We will try to discover new and quality seedlings to introduce to our members as well as promote their use through success stories of other members using new, better-quality seedlings on their farms to increase their yields.'

Share the cost of technology with partners: 'We are in the process of "building" the budget for covering the costs of FSC certification through member contributions coming from a percentage of their sales of harvested FSC timber. The fee is calculated based on the "value difference" between FSC timber and non-FSC products [15 to 20 per cent]. We charge 7 per cent of the total value [...] and use it as budget for various activities of our association. This strategy could help us in having some budget for necessary technology cost-sharing with our partners. This mechanism is already in the association's regulations and is already implemented. One sub-association, the Phu Hung group, has already contributed to the association after harvesting from their FSC-certified acacia plantation.'

9.4.6 Partnerships and collaboration to overcome key challenges

Workshop participants recognised the need to develop the association's financial sustainability in managing future costs of FSC certification by raising funds from its members and by developing models for sharing costs with business partners.

The association highlighted its limited financial and human resource capacity to raise the need for external actors' support, specifically the private sector and international organisations in risk mitigation. For example, they look to Scansia Pacific Company for support in financing mechanisms and ensuring stability of prices and helping to ensure favourable prices for the forestry entrepreneurs while securing to an extent the supply base for the company. Scansia Pacific offers a 'business cooperation' mechanism, lending money at a favourable rate to interested association members who are committed to selling their harvested FSC-certified timber to this company. The annual interest rate offered by this company will be 2 per cent lower than rates offered by commercial banks. The value of each loan is only VND 4 million per hectare (approximately equivalent to US\$180) for a period of four to five years. The payment will be made when forests are harvested and sold to this company at an agreed price.

Communities also look to international organisations, in this case WWF Vietnam and SNV, to provide solutions to technological skills gaps in forest planning, including ensuring seedling quality as well as conducting market research. They also see the external actors' role as important in providing advice and capacity-building support which will allow them to implement solutions that the association and its members have come up with.

WWF Vietnam continues to link up with financial institutions to find ways to address financial access issues, expanding FSC-certification coverage and involving government and other relevant actors, and strengthening the relationship among the actors of the value chain.

The Provincial Department of Forestry sees its role is to find possible financial sources for the association members to use and to advocate for and propose necessary support to help members when facing natural disasters such as storms and forest fires. For example, when members' forests were damaged recently in 2013, the department intervened by advocating that government supported members with seedlings and fertilisers to replant their forests.

9.5 What risks could also constitute business opportunities?

Some risks also offer opportunities for value chain actors to work together. Direct relationships and contracts with mutually beneficial conditions will help secure better positions for both the buyer and seller. For example, the association sees the inaccessibility of bank credit to smallholders and the uncertainty of prices as offering an opportunity for the association and the partner company to further strengthen their long-term relationship.

Regarding the risk of inefficient harvests due to the members' scattered plots and difficulty in sourcing high-quality seedlings, the association sees an opportunity to easily encourage their members to use new seedlings as well as to explore the policy on land consolidation (Government of Vietnam 1993). This policy allows landowners with fragmented plots to exchange land with others, which can be used by the association and its members to discuss land exchanges among members instead of with outside parties. This will hopefully provide fairer conditions for the members.

To address the risk of changing leadership, the association is thinking of organising regular capacity-building training on group management for potential leaders, thus ensuring a pool of potential leaders and promoting better leadership in the future.

From the perspective of the authors of this chapter, these risks also offer an opportunity for the association to increase its relevance and internal cooperation among members. The need for high-quality and fast-growing seedlings offer a business opportunity for the association itself and its members to develop a nursery for quality seedlings, as well as piloting plantation models or designs that could increase yields and sustainable harvesting periods for the members, and that could also be a supplemental source of revenue for individual members or for the association as a whole. For microfinance institutions, this is also a business opportunity that they have not yet taken advantage of. With the association in place, which provides constant communication and a mechanism of coordination, quarterly meetings could be used as an existing mechanism to monitor and collect loan payments.

Finally, there are also opportunities for training organisations or livelihoods development technical groups to provide trainings on supplemental livelihood sources for the tree growers or their household members, to mitigate the financial gaps in the years between harvests. Financial literacy training from these organisations would also help to increase awareness of smallholders on benefits and provide them with the skills for sound decision-making on financial matters and savings. Better financial decisions should also help to prepare members for the next planting cycle.

9.6 How might external support help to overcome risks?

9.6.1 How do external value-chain actors react to AQTSCFG's assessment of risk?

Representatives from different sectors were interviewed to determine which risks they perceive and to identify options to reduce risk. The following external actors were interviewed:

- Nguyen Thi Thu, Scansia Pacific Company's Thien Hue provincial representative, Scanviwood Thua Thien Hue (AQTSCFG's main buyer, investor and creditor)
- Hoang Duc Doanh, Director, Provincial Department of Forestry, Quang Tri province, (government support organisation)
- Thibault Ledecq, regional forest coordinator and Le Viet Tam, regional Rattan, Bamboo And Acacia Project manager, WWF Greater Mekong (technical support organisation)
- Nguyen Vu, project manager, Sustainable Acacia Project under WWF Vietnam (technical support organisation).

Private sector partner Scanviwood Thua Thien Hue (Nguyen Thi Thu 2015) sees the relationship with AQTSCFG as mutually beneficial. It addresses risks by forging relationships with supplier groups. By building its company's brand name as a reliable and fair buyer/creditor that offers favourable conditions such as buying products at fair price and by volunteering to provide basic loans to the community, it is also demonstrating a willingness to help with solutions to the risks the smallholders face. While the loan amount is not enough to cover all costs, the smallholders see this as a step forward, and better than having nothing at all. The company has also invested in building warehouses and buying premises nearer to the supplier groups. This minimises the costs on both sides of transport and facilitates, and constant communication signifies a long-term commitment to cooperating with the smallholders. Seeing also that they benefit from the FSC certificate, the company is committing to pay for the costs of the FSC audit for the association as well as to pay a premium price for timber, enabling and incentivising the smallholder groups to invest in the plantation of FSC-certified forests. And ensuring to some extent a good harvest from the smallholders, the company is also planning to work with the provincial government to access high-quality seedlings for the association members.

According to Hoang Duc Doanh (2015), Director of Provincial Department of Forestry, Quang Tri province, the provincial government see the success of the association and its members as a model to promote and expand its forestry programme and FSC certification in the province. It is also important to securing the availability of FSC-certified timber to supply manufacturers and exporters in the province and in the country as a whole. Therefore, there is also a clear benefit to them to work jointly with the association to address risks.

The provincial government also sees its role as addressing risks associated with inaccessible financing, for example by finding ways to implement policies that encourage financial institutions to support forest growers (Government of Vietnam 2007). The forestry department, as a government agency, sees its role as a mobiliser and facilitator to link the business with relevant support services through policies and network building and to advocate for financial support from the national government in the event of natural disasters.

The provincial forestry department is also exploring how to integrate national policies with development projects regarding payments for forest environmental services to help increase incomes for forest growers. It sees an opportunity for the association to cooperate with the Provincial Cooperative Alliance, which already has a management structure and members, as well as with WWF to expand the number of AQTSCFG's members to expand the current FSC-certified forest area. In this way, time and effort could be reduced during the expansion process. The association could increase its funds and help mitigate risks associated with paying in part or in full the costs for the FSC audit.

According to interviews with WWF Vietnam (Nguyen Vu 2015) and WWF Greater Mekong (Ledecq 2015) representatives, these NGOs are also trying to secure synergies with governmental programmes as well as with the other value chain actors to address and mitigate the above-mentioned risks. WWF Vietnam sees that its role is to promote innovation mechanisms to address these risks, which includes exploring suitable financing mechanisms to ensure that members of the association will have better access to credits, as well as exploring insurance services for forest plantation businesses as members of this association. They are also proposing that instead of the subsidy of US\$5/ha, a tax deduction may be operationally feasible and economically viable for the association. Thibault Ledecq of WWF Greater Mekong also considers the possibility of introducing the concepts of contract farming or of having investors or companies with limited shareholders to the locally controlled enterprise, as a means to strengthen ties between the stakeholders, to spread risks and to establish a closer relationship and foster greater mutual commitment.

WWF Greater Mekong also recognises the need to work with like-minded organisations, donors and investors to support the business operations of the association member groups in the future. For WWF Greater Mekong, the sustainability of the business is based on the capacity of the association. Therefore, it sees its role as working towards sustainability through capacity building and through forging sustainable links with the other actors in the value chain. This includes improving and transforming the association's structure, connecting/setting up an effective business linkage/model for the association. For example, by securing investment from buyers, other investors and banks and engaging the government to make sure that this type of business (forest plantations) is recognised and becomes one of the important strategies of local government in its strategic plan for forestry sector development.

A strong relationship among the external actors is also a key factor to help mitigate the risks identified. The strength of the WWF brand also permits it to get major private-sector actors on board, like Ikea. Having a commercial giant or market actor helps to open up discussions and create a more conducive operating environment for businesses. Scansia Pacific Company in Thua Thien Hue province relies on partnerships with local authorities and associations to enforce contracts with smallholders. It also points to the possibility of cooperating with the provincial department of agriculture and rural development to introduce new strains of better-quality seedlings to forest SMEs for obtaining high-quality timber in terms of higher volumes as well as resilience to severe weather conditions.

Table 9.3 Solutions to reduce risk for AQTSCFG

Risk categories and options for improving the business environment of locally controlled forest businesses	Practical potential for beneficial impact – in the author's opinion (score out of 10)
REVENUE FLOWS	
Strengthen technical extension services for smallholders that can improve plantation design and provide quality seedlings in order to maximise plantation production and generate optimum income for tree growers.	8/10
Provide support to establish supplemental household-income sources during financial gap years, besides facilitating access to credit.	10/10
RESOURCE ACCESS	
Design a fair and mutually beneficial land consolidation plan for members of the association under Decree No. 64-CP (Government of Vietnam 1993).	8/10
BUSINESS RELATIONSHIPS	
Encourage and facilitate the formation of networks and associations among FSC value-chain actors in the region and at national level.	8/10
SECURITY OF OPERATING ENVIRONMENT	
Promote policies to provide incentives for FSC-certified plantations and manufacturers to become more competitive with other wood industries (ie woodchip industries). Incentives could include tax breaks, subsidised seedlings or technical services.	6/10
BRAND DEVELOPMENT	
Shared cost of FSC audits between buyers and suppliers.	8/10
OPERATIONAL CAPACITY	
Capacity building for association group leaders including eg the FSC Standard concept, group management skills, monitoring and evaluation (M&E), administration skills, reporting skill, forest management planning, (simple) forest inventory techniques, silviculture techniques.	9/10

9.7 Conclusions and ways forward

For the association representatives and its members, the risk assessment process that was proposed for this case study enabled them to explore many aspects of the business that they were not aware of before. They found the process very participatory and appreciated the opportunity for deeper levels of thinking and discussion among the key members of the association. The association plans to conduct another risk-assessment process by the end of this year during their year-end meeting by sharing the outcomes of the risk-assessment workshop activity with all members.

9.7.1 Self-assessment of risk and its contribution to business development

As locally controlled forestry businesses are usually initiated by support groups and usually built by key leaders of the group, the participatory process of self-assessment of risk increases the consciousness, understanding and ownership of the business among the community members. The association perceives that it will be useful for their members to be more aware of the current and potential risks that the association is facing. The process would also provide an opportunity to map out solutions and identify the right partners.

9.7.2 Training and facilitation on risk assessment

In order to avoid bias, the association proposes that it would be better for external people to facilitate this assessment, as they see their limitations in facilitation skills. Some found it a time-consuming process and felt that facilitating discussions involving the different points of view among the members might prevent them from recognising and identifying risks.

The following capacity-building activities were proposed:

- Training of trainers/facilitators of risk-assessment workshops and mitigation planning
- To better recognise what constitutes a risk, the association leaders and members will need to understand the indicators of business success. Business development and monitoring training are needed for both smallholders and their group leaders.

9.7.3 Building a joint understanding of risks and costs

This case study has demonstrated a good example of how different actors are willing to jointly address and share risks for shared benefits. To develop a joint understanding of risks and costs among policymakers, investors and LCFBs, there has to be common understanding of the benefits derived from the success of locally controlled forest businesses.

Support groups for LCFBs such as government, NGOs and private-sector actors can provide opportunities for continued communication and collaboration as well as provide support to innovate and test new mechanisms proposed to address and share risks. Scansia Pacific has proposed a business cooperation mechanism as one way of sharing risks. The forestry department and partner NGOs are willing to explore various mechanisms to address risks that the community faces, which also demonstrates their commitment to support locally controlled forest businesses.

Understanding how each partner will benefit from these partnerships and finding ways to anchor solutions to the success of the locally controlled forest business will benefit many stakeholders and not just the community itself.



FEDECOVERA timber and coffee plantations

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Conclusions on how to build resilience within locally controlled forest businesses through proactive risk management

by Anna Bolin and Duncan Macqueen

The case studies of locally controlled forest businesses (LCFBs) in the preceding chapters have shown how new the concept is risk self-assessment is to such businesses. For most, risk management has involved a reactive attempt to deal with unpredictability in the business environment or within the business itself. Nevertheless, over time these same businesses have learnt lessons and developed ways of dealing with risk, albeit rarely captured in a formal risk-management system. In this chapter, we outline some of the benefits that were expressed by those participating in the risk self-assessment case studies. We also note the main areas of risk which these businesses face. Finally, we draw out some of the main ways that LCFBs manage risk (also summarised in Table 10.1).

These approaches to risk management could readily form a practical guide for those wishing to develop more proactive approaches to risk self-assessment and risk management.

10.1 Conclusions about the process of risk self-assessment

10.1.1 Benefits of risk self-assessment and management

Within developed economies, risk management is an established part of business management – and numerous text books lay out the main principles (Sadgrove 2005; Damodaran 2007; Hopkin 2014). But for emerging LCFBs (including the participating case-study businesses in this book) risk management is a new concept. Findings from the case studies show that for LCFBs, risks are managed to varying degrees, but this tends to be reactive and mostly ad hoc. Some such businesses treat risk as a part of day-to-day problems without really considering how it could affect the sustainability of their business. Although a number of risk-coping mechanisms and strategies were identified, these were the result of years of growth and reactive learning rather than a formal proactive system for managing risk. In some cases, more proactive risk-management systems had been used, but these had often been developed as part of an external partner's risk-management strategy (eg Forest Stewardship Council (FSC) certification). None of the businesses that were surveyed (and which were chosen because of their successful performance) had formally developed their own strategy for proactively managing risks.

10.1.2 Timely – when the business is looking to enter new uncertainties

When is risk management most needed? Risks are dynamic and need to be regularly

reassessed. There are times, however, when it is particularly important to help guide the business through new uncertainties, for example when the business is undergoing a period of change, such as growth and expansion into new markets, or restructuring from being a state-owned business to being locally owned and managed.

Regardless of their size or level of complexity, all of the businesses in this study recognised the benefit of carrying out risk self-assessments and risk management – especially to improve planning and strategy. It triggers a new way of looking at usual problems and helps to proactively manage them – or turn them into opportunities. The case of the Federación de Cooperativas de las Verapaces (Fedecovera) in Guatemala is an interesting example of a business that has characteristics similar to a complex corporation with multiple entities, suppliers, products and services to manage across the value chain. However, at this particular point in time, Fedecovera is entering a new market with a new product (timber pallets). And this is unveiling a whole new set of challenges that it has not had to consider before. The risk self-assessment process was seen as particularly helpful in thinking of new ways of planning ahead to address these challenges in a more proactive manner.

The situation is also similar for Mondulkiri Forest Venture (MFV) in Cambodia, which is entering a period of growth and expansion into new markets. It is adding two new products to its portfolio (bamboo and resin) and incorporating more communities into the business. In the case of the Association of Quang Tri Smallholder Forest Certification Groups (AQTSFCG) in Vietnam, the risk self-assessment process brought out a whole new set of sustainability challenges that had not been thought of before. It revealed a high level of dependency on a number of key individuals and support agencies. The business managers agreed that this dependency would need to be reduced gradually to increase the organisation's capacity to manage the business and its finances independently. These challenges are now being approached from a new perspective to reduce vulnerability against sudden changes in leadership or support.

10.1.3 Positive – driving business development and innovation

The concept of risk is often associated with negative consequences, and this was also evident in the case studies. However, risk assessment can also be a driver for business development and innovation. Some found it easier than others to identify such opportunities. For example in Kenya, Kisii Tree Planters' Association (KTPA) identified the risks of illegal extraction of forest products in nearby forest reserves and destruction of tree and food crops caused by wildlife as an opportunity for promoting a new product – fencing. They also identified another opportunity. Instead of just supplying its buyer, the Kiamokama Tea Factory Company Limited, with the fuelwood it needs for its tea-processing factory, KTPA also plans to provide Kiamokama with the seedlings it will need to establish its own tree plantations on recently acquired land.

In many of our case studies, the line was blurred between what constitutes a new business opportunity as opposed to a strategy to reduce one risk by turning it into something more positive (eg diversification). But overall the participatory process and brainstorming about risk and management options was a positive driver for thinking of new ways of diversifying or adding value to the business.

10.1.4 Credible – building trust with finance organisations, buyers and government actors

One of the objectives of this risk self-assessment study was to come up with a way for LCFBs to engage with external actors such as financial service providers, buyers and government agencies. The idea was that by presenting their own risk assessment and identified risk-management options, businesses would be better placed to get concrete commitments and actions that would help them reduce these risks. Although it is too early to mention any particular outcomes, the process of engaging with these external actors was positive. It provided an opportunity to bring these issues to their attention, and to subsequently follow up. For example, in follow-up consultations in Vietnam, AQTSCFG's main buyer expressed his commitment to assisting the association in overcoming some of the financial barriers it is facing. He is providing a loan below the market rate and paying for the audit cost of the FSC certification. The provincial government officer also expressed his support for assisting the association in looking at options for improving access to rural finance, as he recognised this as a real barrier to forest businesses. In the case of Cambodia, loan providers, government and supporting agencies saw most of MFV's risks as beyond the communities' control, but that these were calculated and merited further support. Similarly to the case in Vietnam they all recognised their role in helping to reduce some of those risks.

10.1.5 Scaling up the benefits: developing a risk self-assessment toolkit

Risk assessment is part of managing a robust business. The above experiences suggest that both locally controlled businesses and other actors in the business environment see the value of having a structured approach to risk management. The risk-assessment framework developed for this study could be useful if shared more widely and, in particular, for addressing common bottlenecks and providing practical guidance on how to deal with a number of challenges that are typical for the type of business models and environments that are inherent to LCFBs. This book has shown that risks vary by context and level of threat – but there are significant similarities in potential responses. While a broad risk-assessment framework is useful, it can be broken into smaller practical modules or tools. Beyond assessment, it is useful to draw on case-study work to include sections on how to analyse priorities, assign responsibilities and action appropriate options.

In March 2016, members of the Forest Connect alliance including the Center for People and Forests (RECOFTC), the Earth Innovation Institute (EII) and IIED gathered in Edinburgh to brainstorm on main findings and experiences from the research for this book. The result was the development of a risk self-assessment toolkit to be tested by the main Forest Connect partners and the Forest and Farm Facility (FFF) in Latin America, Asia and Africa. The toolkit was designed with input from leading partners with experience in developing and delivering trainings on similar tools for LCFBs, such as EII's Green Value Tool, the Food and Agriculture Organization's (FAO) market analysis and development (MA&D) training, and RECOFTC's numerous manuals and tools for community forestry. The toolkit will be tested throughout 2016 to come up with an approach that provides enough depth (but without being too complex) to be easily integrated by LCFBs into their annual reviews of business plans.

10.2 Conclusions about the main risks faced by locally controlled forest businesses

10.2.1 Why should LCFBs pay particular attention to risk management?

The case studies in this book exhibit different levels of experience and success. However, they all face similar challenges related to unpredictability in the business environment and within the business itself. All but one of the case studies (Allpabambu) are group enterprises, which, as highlighted in this book, has both its strengths and challenges. In this context 'success' is demonstrated by a business's ability to balance multiple priorities and survive (see Macqueen *et al.* 2015). Many of the risks these businesses face are caused by external factors and deeper structural issues of poverty, inequality and lack of power. And at times, these may seem overwhelming. The case of Asociación Río 7 in Ecuador provides a good example of this. The combination of high uncertainty over the financial terms of their contract with the government, and the latter's apparent lack of care about the consequences, shows how difficult these circumstances can be. Furthermore, it illustrates a situation where for a number of reasons there is limited support for reducing risk in the enabling environment. The case studies in this book all provide examples of at least some of the reasons why for LCFBs the ability to undertake risk management is particularly important. These reasons include the likelihood of higher unpredictability due to:

- **Access to finance:** rural member-owners may struggle to mobilise capital in contexts of poverty where financial services are sparse.
- **Land-use competition:** land-use competition is likely to be higher in businesses based on geographically extensive forest-farm resources belonging to multiple individuals.
- **Group ownership:** trust building is required between members to develop conflict-free, within-firm organisation and with business partners to achieve competitive scale efficiencies.
- **Knowledge gaps:** technical and business education may be restricted in remote rural locations, and knowledge of remote business is limited for outside buyers and investors.
- **Vulnerability:** the fairness, monitoring and enforcement of legislation may vary or be discretionary in remote areas with poor access to required administration or justice services.
- **Risk aversion within broad objectives:** resource dependence fuels risk aversion, especially in putting economic objectives above social and environmental objectives of member-owners.

The following sections highlight how these particular realities and contexts of LCFBs influence risks in the six main areas of concern (revenue flows, natural resource access, business relationships, security of the operating environment, operational capacity and brand recognition).

10.2.2 What are the main risks that locally controlled forest businesses face? Revenue flows

Ensuring the financial health of a business is key to its sustainability. Access to finance to make new investments is often mentioned as a key constraint for LCFBs and can restrict growth and development. However, establishing a healthy reserve of working capital is also a key challenge and an indication of the financial sustainability of the business.

The multiplying effects of having insufficient working capital: all of the LCFBs in the studies struggle to marshal sufficient working capital to deal with the many uncertainties they face. Shortcomings in financial management may exacerbate genuine shortages of working capital. The issue is that the core business needs to purchase product from its members before it can sell aggregated volumes of product to buyers. This is not just inherent to the business but also to the supply chain in which it operates. For example, in Cambodia MFV struggles to pay its honey-collector groups in time because its working capital is dependent on its main buyer for honey, (the national honey federation), which often delays in making payments on time. The inability to guarantee payment is affecting MFV's ability to convince its members to sell to the business instead of to its competitors, which in turn affects its ability to raise working capital from sales. In Guatemala, Fedecovera's forestry division is coming to realise that the amount of capital they need to purchase enough wood to meet the industrial processing side of their business is much greater than expected. Constraints relating to the money available to complete the orders required is proving a real concern as it affects the entire chain of production, sourcing and delivery. These multiplier effects make raising working capital a key priority for ensuring business sustainability in a number of areas.

Access to finance and the difficulty in balancing short-term income needs with a long-term business vision: the farm-forestry business poses challenges to smallholder farmers because of the time it takes to generate a return on investments compared to other crops. In the absence of alternative income sources and with a ready available market for lower-value timber products, smallholder farm-forestry associations struggle to convince members to hold off harvesting until the trees have matured enough for their particular market niche (eg FSC certification). In Vietnam, for AQTSFCG to meet the requirements of FSC-certification standards, members need to leave their trees to mature for 10 years. However, the problem is that after five years, the trees can be harvested for the relatively profitable but lower added-value woodchip market. While the association's long-term business vision and plan is based on securing a market share and enough supply for the FSC market (which is also how certification costs will be covered), this is at odds with the economic objectives of its members who have more immediate income needs. If AQTSFCG cannot find a way to bridge the supply gap it is currently facing, it could threaten its ability to maintain the FSC certification on which the business vision is built, not to mention important business relationships and market share, which in Vietnam is likely to get increasingly competitive.

Natural resource access

Securing a reliable supply of natural resources to meet customer orders is a major issue for most of the case-study businesses. Convincing members to join a collective business or association and to sell through that business association can be a struggle due to competing demands from intermediary buyers. Although intermediaries may only raise prices in the short term, the effects on business relationships, if contracts are broken, may be long term.

Competition from intermediary buyers: securing access to natural resource supply from members can be challenging for a group business. This is often due to competition from intermediaries who have access to transport and can easily move between different suppliers

in a way that an association sometimes cannot. For MFV in Cambodia, local competition is a real challenge for the business to meet its order commitments and sales targets. Intermediary buyers raise their prices at certain times of the year which causes competition both internally (within the community collector groups) as well as externally in the local area (over supply from other community groups). In the past, this has had a negative impact on the business's ability to meet contractual agreements. In the future, this will be even more important as the business is expanding and is therefore expecting to be able to produce and sell more.

Insecurity over resource access affecting investment decisions: not knowing whether in a few years from now you will have access to the land and natural resources that your business depends on significantly affects overall business morale and ability to make investments. Tenure is a political issue, often with vested interests involved, and government authorities can be frustratingly slow in clarifying tenure rights – and in particular, for smallholder producers and forest communities. In Ecuador, Asociación Río 7 is in a difficult situation negotiating the financial terms of a tenure transfer with the government. If not carefully considered, it could place the business in a debt trap which would result in the business losing access to the bamboo plantations it depends on. This uncertainty has prevented Asociación Río 7 from signing contracts with buyers or applying for credit.

In Guatemala, Impulsores Suchitecos del Desarrollo Integral Sociedad Civil (Suchitecos) fear that political changes might involve a change in attitude towards community forestry that could threaten the renewal of their concession agreement, or lead to a change in the conditions that would be unfavourable to the LCFB business model. This is affecting investment decisions as the majority of profits are now redistributed among members rather than being reinvested in the business.

Dealing with unpredictable events such as fire and wildlife conflict: external threats such as fires or wildlife damage can be significant in some regions and are often difficult to control. In Kenya where the South Coast Forest Owners Association (SCOFOA) operates, members' farms are located in a landscape of forest reserves, wildlife corridors and shifting cultivation. Wildfires are common but the use of fire is also deeply rooted in the socio-cultural norms and beliefs of the local area. Fire is used to clear farms and eliminate pests and can easily get out of control. Sometimes it is a deliberate act of sabotage. For example, fire is used in land ownership disputes or during political elections to force people off the land. It is also used by the local dominant tribe to destroy trees grown on farms as these are seen as habitats for evil spirits. These complex environmental and social factors pose serious threats to the farm-forestry activities of the business. It makes it more difficult to recruit new members, access credit, or negotiate any deal with the bank that could involve using trees as collateral.

Business relationships

Meeting the demands of buyers to ensure repeat business is a challenge for any business – and more so when that business involves the coordinated activities of multiple individual members. The clarity with which orders are expressed and captured is one major area of risk. The capacity to supply the desired quantities and qualities of product on time is an additional challenge.

Dependence on single buyer and market: relying on only one buyer or product exacerbates the risk of sudden changes to revenue flows – for example, if the buyer switches suppliers, goes bankrupt or if a product rapidly loses its competitiveness in the market. A good example is the case of Allpabambu in Ecuador. The business relies on one buyer in the USA for the export side of its business that accounts for 60 per cent of its revenue in sales. Although the business relationship is well established and working well, it leaves Allpabambu vulnerable to sudden changes in the situation of this one buyer, which would be outside of its own control. Similarly in Guatemala, Suchitecos is dependent on one tree species, mahogany, for the majority of its products – representing 80 per cent of its annual sales revenue. About 60 per cent of its annual revenue is from the export of mahogany products to one buyer alone. Even if business relations are good, this type of dependency can create high risks to the financial viability of the business.

Ensuring quantity and quality of products within dispersed producer groups: related to the issue of securing natural resource access and supply is the ability to deliver business contracts. The consequences can be serious. For example, SCOFOA have experienced costly legal consequences when contracts have been cancelled. In Cambodia, MFV have experienced the challenge of substantially underestimating its capacity to supply a new product (oleoresin) at the scale and quality required. It ended up only being able to meet a sixth of the expected order and as a consequence the buyer decided to take its business elsewhere and is imposing a fine for failure to meet the agreed order (MFV had to make up for some of the losses by lowering the price of the product). Securing supply is critical to maintaining confidence among buyers that the expected orders will be met.

Security of operating environment

The overall security of the operating environment is highly affected by political changes that can lead to changes in government regulations and macroeconomic stability. The administrative burden of compliance with laws and regulations can pose a major risk to LCFBs. This may relate to licensing, transport, labour and taxes among other things, but also to the institutional arrangements for enforcing them.

Macroeconomic instability affecting the overall business environment: economic crises and political turmoil are outside of any business manager's control. Frequent changes in laws also contribute to worsening economic stability, as businesses find it hard to keep track of changes and associated increases to operating costs. In Ecuador, the government has enacted a number of new laws to promote the rights of nature and local community and minority groups. However, the crash in the global price for oil has had a big impact on the Ecuadorian economy and new laws that were meant to be implemented have stalled due to cuts in public expenditure. For businesses like Allpabambu and Asociación Río 7, the economic crisis and political uncertainty has had many consequences. For example, it has resulted in a weakening of domestic market demand as individuals and businesses are holding off making investments in housing and construction. Although Asociación Río 7 has directly benefitted from the government's new land redistribution programme (as part of the national Buen Vivir plan), the surrounding economic uncertainty is affecting its implementation and this is causing uncertainty not only for the association but also for its main buyer, Allpabambu.

Bureaucratic procedures, business regulations and multiple landing fees: the activities of LCFBs often span both the forest and agriculture sectors, which means that they often have to deal with multiple institutions and legal frameworks. This easily creates a situation of overlapping legal mandates and a proliferation of legal requirements, which can cause costly delays and facilitates corruption. The case studies from Kenya (SCOFOA and KTPA) provide good examples of this dilemma. In order to maintain their licence to operate, members need to acquire several permits from different locations, including one issued by the local chief stating that the bearer of the permit is the lawful owner of the forest and the product; a Kenya Forest Service permit stating that harvesting of the trees will not adversely affect the ecosystem or the landscape of the region; and another from the Ministry of Agriculture, Livestock and Fisheries (MOA) stating that the felling of trees will not affect the supply of food to families in the region. In practice, this means that members frequently end up paying additional fees and taxes to various institutions, including to government officers who take advantage of the situation to extract bribes from farmers. This is not just overtaxing the business but it is also undermining business morale.

Brand recognition and reputation

For many LCFBs the idea of a 'brand' is new. But these businesses usually understand the importance of having a good 'reputation' with their customers. Failure to deliver can seriously harm that reputation or brand and is a major source of risk.

Inability to deliver according to contract or pay on time: developing a brand and establishing a good reputation among buyers, government, creditors and the public is vital. Trust is important for any relationship. It can take a long time to build but can be instantly broken. Fedecovera knows this very well. Among the case studies in this report, it is the one with the longest experience. The business spans multiple supply chains and is investing a lot in its relationships with the local public and suppliers, building trust and a sense of mutual benefit, to ensure their loyalty to Fedecovera rather than to its competitors. This puts Fedecovera in a particularly sensitive situation when revealing any challenges related to its ability to pay or deliver on time (eg risks related to working capital).

Illegal and or unsustainable sourcing of supply: another important risk to reputation is the sourcing of illegal or unsustainably harvested raw materials. In Ecuador, Asociación Rio 7 and Allpabambu frequently have to deal with this challenge as the bamboo market is still unregulated and characterised by a high level of informality. Ensuring that bamboo is not sourced from an area that has been clear cut or that business documentation is legal and authentic is difficult. This is particularly problematic because the business still has to rely on intermediaries, who are less concerned about the interest that Allpabambu or Asociación Rio 7 have in preserving their reputations as being legal and sustainable.

Potential trade-offs between sustainability, vision of the brand and economic objectives: many LCFBs have been established with initial support from NGOs and with specific conservation objectives in mind. Developing a brand for a niche market such as sustainability or fair trade has its advantages as it enables LCFBs to distinguish themselves in a competitive market. However, maintaining requirements for sustainability can be difficult if the economic incentives for producing for the 'normal' market are greater.

In the case of MFV in Cambodia, the management team stated that – being a company founded on the principles of sustainable production – they see a real risk of missing out on market opportunities due to the need to balance production with sustainability. In the case of Suchitecos in Guatemala, it was highlighted that the costs of FSC certification now are seen to outweigh the benefits, which could have implications on the overall reputation and brand of the business. The trade-off between sustainability and profitability is a problem that is often not openly recognised, especially if the business is also partially steered by external objectives, and it can become a risk if not carefully considered.

Operational capacity

A business never stands still. Constant competition drives the need for constant improvements. Staff capacities to innovate with new processes or technologies may be a major source of risk that needs to be addressed.

Leadership capacity concentrated amongst a few or dependent on one external manager: having a strong leadership can make or break an organisation. However, this is not something that can be developed overnight or that is necessarily in place at the start of a business venture. Finding a good business manager in remote rural areas can be difficult – especially before you have the capital required to pay for someone with the necessary skills. In a couple of the case studies represented in this book, this initial constraint has been overcome through the help of supporting agencies. For example in Vietnam, AQTSFCG has appointed high-ranking officials from the Provincial Department of Forestry to help steer the business during its initial years, and at the sub-association level they have appointed leaders with strong forest small-and-medium enterprise (SME) experience.

However, there is little involvement of the association members themselves in these leadership roles. In Ecuador, members of Asociación Río 7 have chosen to maintain the same business manager as before when the business was state owned. As a result, until recently, they have made few efforts to train other potential management staff despite its new ownership and structure. Relying too much on external management staff or a few individuals can become a problem if there is a sudden change in leadership. At the same time, this is often the case because there are few other options available. This might require longer-term solutions such as linking up with training institutions, developing internal systems for skill sharing, and training deputy managers.

Lack of capacity to manage accounts, marketing and technology: finding staff with the right knowledge and skills to manage the financial health, marketing and technology components of the business can be challenging in remote rural environments. Without proper market research, a business could find itself facing the most basic of all risks – finding out that what they are offering is no longer wanted by their customers. In Vietnam, AQTSFCG identified their dependence on external supporting agencies to carry out their market research and financial management as a potential risk to the sustainability of their business. In Kenya, KTPA is finding that their members' use of power saws instead of bandsaws when splitting wood is not just increasing waste and compromising quality – it is also a much more time-consuming process, which is affecting KTPA's ability to compete with other more established players in the market. For Suchitecos in Guatemala, the

lack of proper machinery handling and maintenance is eating into an already limited and expensive working capital budget (based on credit). This is not just a problem of technical capacity but also financial management as this is affecting the business assets and revenue flows and therefore needs to be taken seriously.

10.3 Conclusions about the main risk-management options adopted

For each of the following areas, there were examples of proactive risk management by LCFBs. Here, we provide one or two examples of each risk-management option.

10.3.1 Risk-management options to secure revenue flows

As noted above, all of the case studies highlighted risks to do with working capital – and critically the need to purchase natural resources from business members before selling on to customers. Common situations exacerbate these risks – such as having a limited numbers of buyers (where payment delays have a major cash-flow impact) or offering a limited number of products (where there are no alternative sources of revenue in the event of payment delays). In the case studies, several risk-management options were being used informally to address these risks.

Investing in financial administration: a core element for managing risk in revenue flows is basic bookkeeping. Only when a business masters basic cash-flow analyses can it ascertain what working capital it requires and when. But once this is known, it can quickly become possible to organise mechanisms to address any cash-flow shortages. For example, with MFV in Cambodia, the need to hire a professional accountant alongside the business manager, production officer and marketing manager was prioritised. In another example, the financial managers of Allpabambu in Ecuador understand the association's need for operating capital and so have set up a payment plan for each order. The buyer settles 30 per cent of the payment when signing the contract, 50 per cent when the container arrives at the company's processing centre, and 20 per cent when the customer's client confirms the quality of the product. Ensuring that such systems work requires good financial administration.

Researching buyers and selling as a group: another core element of managing revenues in a locally controlled forest business is to ensure that buyers are researched and engaged by the group as a whole. Nothing erodes profitability as fast as the buyer being able to play producer members off against one another to lower prices. The answer lies in group organisation. For example, SCOFOA in Kenya have recognised the competition it faces from other producers. Its strategy is to develop a holding yard for timber products (eg electricity poles, fencing poles, charcoal) which will enable it to sell in volumes at times of peak market demand or transport to locations with higher prices. SCOFOA is also developing strategies to switch production from one product to another depending on the profitability of the respective markets at any one time.

Developing working capital to pay members for their product: maintaining group cohesion within LCFBs requires a great deal of trust. One way to manage such risk is to develop an internal group savings fund (either through membership fees or deducting a small percentage of each sales transaction through the business). By having internal

working capital, it is possible to pay members for their product on delivery and thereby secure the trust of those members. Several of the case-study businesses are establishing internal working capital funds for precisely that reason (eg MFV in Cambodia, Fedecovera and Suchitecos in Guatemala, KTPA in Kenya and AQTSCFG in Vietnam). For example, Suchitecos by-laws provide the basis for establishing a capitalisation fund. Of the total profit, 50 per cent is distributed among associates, 25 per cent is reinvested in infrastructure, and 25 per cent is used to capitalise the internal fund (although the capitalisation fund is yet to be implemented). In another example in Vietnam, AQTSCFG is making efforts to secure access to longer-term credit for its members so that they will not harvest timber at five years for the woodchip market, but at 10 years when the trees will have grown to the size required for FSC-certified construction timber, which is the higher-value market the association is targeting.

Attracting microfinance to capitalise such reserves: once internal working capital is built up, it can often be easier to attract additional external finance. For example, the Fedecovera forest division applies for working capital from the larger Fedecovera headquarters – which in turn is a founding shareholder of one of the five largest banks in Guatemala (Banrural – Banco de Desarrollo Rural). The availability of working capital has allowed the forest division to buy in supplies of timber for processing in its sawmill even as the members' own forest plantations mature.

Developing diversification strategies to reduce cash-flow dependence on single product lines: one way to avoid market unpredictability is to diversify into several product lines. For example, in Cambodia, MFV identified a new opportunity in bamboo for diversification of its business products beyond honey and resin. The expectation is that this will help boost revenue flows and reduce dependency on the honey market, while also allowing time for the resin production business to develop and meet customer quality requirements.

10.3.2 Risk-management options to secure natural resource access

Managing to secure access to sufficient natural resource inputs to meet customer requirements is an area of significant risk in the face of competition from other buyers and illegal offtake. Especially in the early stages of group enterprise development, it takes some time to establish some form of inventory of what individual members are able to sell and when, and to encourage them to commit to sell through the LCFB. Again, several strategies were being employed in the case studies to manage such risks.

Nurturing strategic partnerships with other suppliers: in the early stages of developing a LCFB, members may not have the volumes of product desired by buyers. One option is to ensure that the business can meet customer requirements by buying in additional supply from external businesses. For example, with Fedecovera in Guatemala, the supply of timber for its new sawmill could not immediately be met by association members (who had only recently established plantation areas). To meet the shortfall in supply, Fedecovera developed supply agreements involving special invoices with external suppliers – who initially made up 60 per cent of the input to the sawmill.

Expanding association membership and on-farm production: as new LCFB opportunities emerge, there are frequently very varied capacities between forest farmers in terms of knowledge relating to cultivation, management and harvesting of desired products. One way to improve the efficiency with which natural resources are used is to provide training to members in cultivation techniques, management and harvesting. For example, in Ecuador the parent company Allpabambu provides training in harvest and post-harvest operations to its supplier association Asociación Río 7's plantation workers. It also passed on simple equipment for measuring bamboo culm diameter in order to meet customer quality requirements.

Developing guidelines for sustainable production: secure resource access is a major source of risk for land-extensive forest-farm businesses – both from itinerant illegality or larger-scale land transfers. One of the ways of managing such risks is to explore external certification of sustainable forest management, which can help to formalise the business in the eyes of both neighbouring communities and the government. For example, Suchitecos have opted to pursue certification by the FSC. This has formalised processes of documentation within the business which has in turn improved the issuance of operative plans by the relevant government agency.

Securing product transport from members to buyers: accessing sufficient volumes of natural resources can often be impeded by inadequate transport. One of the ways of managing such a risk is to see the transportation sector as a key business opportunity, both for members of the forest-farm business in question, but also for other adjacent businesses on a for-profit basis. For example, MFV in Cambodia sees its transportation of rural products as a key area for business development.

Protecting from fire and wildlife damage: there are a number of natural risks to natural resource access in remote areas – including damage caused by fire and wildlife. Managing such risks needs to be proactive. For example, the business run by Suchitecos organises management plans that establish commitments and responsibilities under community forestry concessions for the prevention and control of fire. Annual operative plans establish specific activities and resources that must be executed for the control and prevention of forest fires. In Kenya, members of SCOFOA use a range of risk-reduction methods beyond the creation of firebreaks that includes fencing farms with barbed wire and chain-link fencing, digging trenches around the farms, using bonfires at night to scare away wild animals, and having someone guard the farm day and night until the timber is harvested.

10.3.3 Risk-management options to secure business relationships

For LCFBs, often in remote locations, finding and developing business relationships is a challenge and a significant area of risk. But it is not just about looking outward – the quality of the business relationship is often a reflection of how good the internal organisation on each side of the relationship is. And assigning the right people to oversee the relationships is crucial. The case studies highlighted some of the possible options for reducing risk in business relationships.

Developing market networks and business relationships: as noted above, business relationships include both internal and external actors. For example in Kenya, KTPA has recognised the challenge of getting its members to sell through the group – and thereby have stronger negotiating power with buyers. KTPA is addressing this risk by establishing a cooperative and setting up a savings and credit cooperative (SACCO) for its members such that they can get loans for forest establishment at lower rates than finance providers – thereby encouraging loyalty within the new cooperative. In Vietnam, AQTSCFG has been working hard to establish good working relationships with larger buyers such as Ikea and Scanviwood Thua Thien Hue (a branch of Scansia Pacific Company Limited). This business relationship will ensure the regular sales of FSC-certified timber products in the market thus ensuring stable revenues for group members, which will prevent members from withdrawing from joining FSC groups.

Developing internal procedures and quality standards for members: relationships with buyers depend on reliable delivery of specified product quantities and qualities on time. For example, KTPA in Kenya has struggled to encourage members to sell through the group and reach required standards for its buyers, such as the Kiamokama Tea Factory. The intention is to have an agreement with members to use the correct cutting and processing equipment so as to comply with buyers' needs.

Developing benefit-sharing agreements to ensure reliable supply from members: one risk is that inequitable sharing of benefits can undermine trust within a business group. A strategy to reduce such risks is to develop a clear and transparent benefit-sharing mechanism. For example, MFV in Cambodia only opens its membership to group businesses. Each group needs to pay a one-time payment of US\$50 to become a member. They submit an application, which is approved by the board of directors, local authority and the community forest (CF) management committee. A benefit-sharing plan has been designed to allocate profits from MFV sales as follows:

- 5 per cent for the CF management committee towards management of the resource base (such as patrolling and managing the community forest),
- 40 per cent as capital to be reinvested in MFV to cover costs and savings,
- 38 per cent to go back to the producer groups' members,
- 10 per cent for operational costs, and
- 7 per cent for expenses related to the board of directors, for meetings and other work.

The clarity of these arrangements helps to build trust within the business group.

Formalising external sales contracts and negotiating as a group: to build trust between business partners, some business groups have chosen to formalise sales contracts. For example, Suchitecos in Guatemala now has a formal contract to supply Rex Lumber Company. And as of 2015, all the community forest concessions in the region where Suchitecos is based have joined the same group, with the support of the Association of Forest Communities of Petén (ACOFOP), to establish minimum sale prices based on quality for the key timber species. This avoids one community concession undercutting another.

Accompanying delivery schedules of required product volumes: a major risk to business relationships is the control on qualities, quantities and timeliness of delivery. For this reason, Allpabambu staff in Ecuador check the loading of each shipment of bamboo, to avoid any subsequent complaints from the buyer.

10.3.4 Risk-management options to secure the operating environment

In almost all the case studies, the administrative bureaucracy associated with legal land tenure, forest rights, obtaining licences, transport permits and a host of other business issues is a significant source of risk for LCFBs. Governments rarely recognise the importance of favouring such enterprises which are in competition with large-scale industrial business models. So engagement with the government becomes important – and is greatly strengthened by federations at the national level. Some of the risk-management associations demonstrated in the case studies are outlined below.

Joining or establishing industrial roundtables and other federated representation structures: one of the main risks for small businesses is that they may have no representation with policy and decision makers who determine their operating environment. One of the ways to reduce such risks is to join an association or federation that has a stronger voice with decision makers. For example in Ecuador, Asociación Río 7 joined the National Bamboo Roundtable, which has strong links to the ministries of agriculture, industries and productivity, and the environment. Other examples include Fedecovera's and Suchitecos's membership of the National Alliance of Forest Communities (the Alianza) that represents more than 250 local enterprise groups and 388,000 direct and indirect beneficiaries.

Developing specific policy engagement strategies: the risk that administrative processes, legislative provisions, supporting investments and enforcement activities will let down or impede the success of LCFBs is high. It is here that it helps to work with other similar groups and present a united set of messages to policy and decision makers. This might cover a range of potential areas to do with licensing, supporting infrastructure development, tax levels or transport inspections. To manage the risk of inappropriate policy provisions, group businesses such as Suchitecos in Guatemala have developed data on how delays in licensing and corruption in control entities affect their business. Disclosure of such information helps them to negotiate improvements to the policy environment. As noted above, Suchitecos also works through its umbrella association ACOFOP and the nationally federated Alianza to push for change – along with partners such as certification agencies and regional NGOs.

Implementing a communication plan: risks that come with a disabling policy environment can also be addressed by using a well-thought-out communication strategy to ensure coherent messaging. This strategy might target not only policy and decision makers but also the media, which might in turn shape public opinion. A good example of such a risk-management strategy comes from Fedecovera, which has a communication plan to disclose the economic, social and environmental impacts of its activities – as well as the constraints it faces. Fedecovera works hard to keep its representation in a wide range of fora that are either product or sector based such as the American Chamber of Commerce

(AmCham), the Guatemalan Association of Exporters (AGEXPORT), the Guatemalan National Coffee Association (Anacafé), the National Alliance of Forest Communities (the Alianza), the Confederation of Cooperatives of Guatemala (CONFECOOP), the Guatemalan National Institute of Cooperatives (INACOP), National Institute of Forests (INAB), the Forest Trade Union and others.

Undertaking conflict management in producer landscapes: one source of risk in the enabling environment that is particularly pertinent to LCFBs is conflict between members. For example, Kenyan farmers have not historically had a cultural practice of growing trees for commercial ends – and the practice sometimes causes conflicts between neighbours which can lead to arson or other damage. For this reason, SCOFOA in Kenya has a policy of developing active conflict management amongst its members – part of which involves demonstrating to neighbouring farms the benefits of, and best practices for, on-farm tree planting.

10.3.5 Risk-management options to secure brand recognition

LCFBs often have an unfair reputation for economic irrelevance or causing environmental degradation – when in fact the very opposite is often true. Innate biases against scale in certification schemes which require payment per certification audit do nothing to help local businesses make their case. Some of the strategies used in the case studies to address this area of risk are given below.

Understanding why branding matters: for LCFBs that produce a simple, unprocessed product (such as poles), branding may seem irrelevant. The risk, however, is that the reputation of the business may be undermined, not because of a lack of a marketing strategy or fancy logo, but because the quality, quantities and timely delivery of the product are not met. This undermines the trust placed in the business and devalues its 'brand'. KTPA in Kenya has faced exactly this issue – with members failing to understand how weakness in the activity of any one member might translate into a poor brand for the group business. As a result, KTPA has determined to explore further how to develop its brand – either through internal processes or through external certification. Developing a reliable brand is particularly important when approaching financial institutions, for example.

Developing and exploiting a market niche: many LCFBs operate in easy-entry markets – where there is a high risk of competition. In such contexts, it becomes particularly important to develop a market niche (a reason why a customer might prefer your product to that of your competitors). To manage this area of risk, MFV in Cambodia is deliberately developing a market niche that both encompasses reliable quality but also makes much of their status as a community-owned enterprise that creates an incentive for forest restoration.

Implementing third-party certification or internal quality standards: in some markets there is a risk that a product will not be accepted unless it is accompanied by a third-party certification process. This can be particularly onerous for LCFBs because audit costs are often independent of scale, and it is difficult to ensure compliance with standards with multiple smallholder members. Despite the inherent biases of most certification schemes to large-scale industrial businesses, many LCFBs have also managed risks by

turning to certification. For example, AQTSCG in Vietnam was specially set up to assist member-farmer groups with certification and the marketing of their acacia tree products. This was made possible through significant external support to acquire the initial FSC group certification, which now needs to be maintained. There are various well-rehearsed arguments too about how the pursuit of forest certification can improve business procedures and the sustainability of production (Humphries and Kainer 2006; Humphries *et al.* 2012; Wiersum *et al.* 2013).

Working on logo development: whether a locally controlled forest business opts for third-party certification or not for its own marketing purposes, developing a brand/logo that is synonymous with the qualities the business is trying to pursue is an important aspect of managing risk in highly competitive markets. MFV in Cambodia, for example, has worked hard to brand its honey with an appropriate logo both for the national and export market.

Marketing and participation in trade fairs: market access can be a major source of risk to LCFBs. Reaching out to new customers through participation in trade fairs is one way to manage such risks. For example in Ecuador, Allpabambu continues to participate in commercial bamboo products fairs, not only to learn about the buyers and competitors but also to promote its own products in the marketplace.

10.3.6 Risk-management options to secure operating capacities

A final area of risk for LCFBs is the educational and technological capacity of staff to run the business. Remote rural areas are often disadvantaged in terms of access to education and this can create real problems for business management. Some of the options for risk management in this area that emerged from the case study are outlined here.

Defining organisational structures and staff roles: in LCFBs, the availability of people with the right skill sets to manage different parts of the business can be a major area of risk. One way to help manage such risks is to define from the outset a clear organisational structure within which required staff roles are identified. For example in Cambodia, MFV have established a clear organogram that defines key staff roles (eg business manager, production manager, group leaders for three product categories, administration and finance, and marketing). Some of these positions were yet to be filled – but had been identified as areas that needed strengthening, especially in the areas of production management (getting the right quantities and qualities of product on time) and in administration and finance.

Staff training and demonstration plots: once the types of skill sets required by the business have been identified, an additional way to manage risk is to find trainers for specific areas of need. For example, Asociación Río 7 in Ecuador has received training in financial administration and management by the international NGO International Network for Bamboo and Rattan (INBAR) and bamboo-harvesting groups were trained in harvest and post-harvest operations by Allpabambu. Similarly for KTPA in Kenya, training from the Kenya Forest Service in tree planting and management has been helpful, if not yet at a scale required by the association.

Using staff rotation to broaden the skills base: having only one person with the skill set necessary to manage an element of a business is clearly risky. One way to manage such risk is to have a deliberate policy of rotating staff through several areas of the business so that they build their experience and can act as cover in the event of a person leaving or falling sick. For example, Fedecovera in Guatemala operates a staff rotation policy while maintaining legal requirements in terms of pay and conditions. Staff rotation at the level of leadership means that there are several people who can be called on to oversee the business should any difficulties affect one member.

Setting up technology and energy inventories, spare parts and backups: as well as having backups in terms of staff, there are risks associated with any technology that a business might manage. One way of managing such risks is by ensuring that any technology used is sourced locally such that servicing and spare parts are readily available. Additional risk management can be achieved by maintaining an inventory of the most frequently needed spares to ensure minimal losses during machinery break down. For example, Suchitecos in Guatemala not only maintains a spare parts inventory for emergency repairs on site, but has also developed a database with information on spare parts suppliers for all aspects of the business.

Table 10.1 Summary of main risk and risk-management options

Areas of concern to the business	Main risks	Risk-management options
Revenue flows	<ul style="list-style-type: none"> ▪ Insufficient working capital ▪ Access to finance 	<ul style="list-style-type: none"> ▪ Investing in financial administration ▪ Researching buyers and selling as a group ▪ Developing working capital reserves ▪ Attracting microfinance ▪ Developing diversification strategies to reduce cashflow dependence on single product lines
Natural resource access	<ul style="list-style-type: none"> ▪ Competition from intermediary buyers ▪ Insecurity over resource access ▪ Fire and wildlife conflicts 	<ul style="list-style-type: none"> ▪ Nurturing strategic partnerships with other suppliers ▪ Expanding association membership and on-farm production ▪ Developing guidelines for sustainable production ▪ Securing product transport from members to buyers ▪ Protecting natural resources from fire and wildlife damage
Business relationships	<ul style="list-style-type: none"> ▪ Dependence on single buyer and market ▪ Ensuring quantity and quality of products 	<ul style="list-style-type: none"> ▪ Developing market networks ▪ Installing internal procedures and quality standards for members ▪ Developing benefit-sharing agreements to ensure reliable supply from members ▪ Formalising external sales contracts and negotiating as a group ▪ Developing delivery schedules to accompany required product volumes
Security of the operating environment	<ul style="list-style-type: none"> ▪ Macroeconomic instability ▪ Bureaucratic procedures 	<ul style="list-style-type: none"> ▪ Joining or establishing industrial roundtables ▪ Developing policy engagement strategies ▪ Implementing a communication plan ▪ Undertaking conflict management in the producer landscape
Brand recognition and reputation	<ul style="list-style-type: none"> ▪ Inability to deliver according to contract or pay on time ▪ Illegal and or unsustainable sourcing of supply ▪ Trade-offs between sustainability, vision of the brand and economic objectives 	<ul style="list-style-type: none"> ▪ Developing an understanding of why branding matters ▪ Developing and exploiting a market niche ▪ Implementing third-party certification or internal quality standards ▪ Working on logo development, marketing and participation in trade fairs
Operating capacities	<ul style="list-style-type: none"> ▪ Dependency on few key staff/manager ▪ Lack of capacity to manage accounts, marketing and technology 	<ul style="list-style-type: none"> ▪ Installing organisational structures, defining and developing staff roles ▪ Staff training and demonstration plots ▪ Using staff rotation to broaden the skills base ▪ Establishing technology inventories, spare parts and backups

10.4 Recommendations

The process of commissioning and analysing the case studies within this book has led to a number of insights that might be of use more broadly than in risk self-assessment of particular enterprises. For example, there are implications for forest governance in some of the main conclusions outlined above. We rephrase some of these as policy recommendations for decision makers in charge of forest land use and for practitioners and second- or third-level producer organisations working on, or with, locally controlled forest businesses below:

Recommendations for decision makers

- 1. Recognise that perceptions of risk associated with the complexity of locally controlled forest businesses are more outweighed by their potential contribution to a sustainable future.** Such businesses reduce financial poverty across multiple smallholder members, create a strong incentive for forest restoration among those living on the land, and equitably strengthen the fabric of society. This research report (among others see also Macqueen et al. 2015) has shown examples of how LCFBs invest scarce resources in local schools, healthcare and infrastructure (Fedecovera) and in sustainable forest management through FSC certification (AQTSCFG, Fedecovera and Suchitecos).
- 2. Ensure that representation by those locally controlled associations and federations plays a major role in shaping policy developments.** To understand how policy implementation affects risks for LCFBs, decision-making processes should routinely invite representatives from regional or national associations of those businesses. It is particularly important that the businesses controlled by local citizens (rather than foreign capital) are afforded access to decision making in order to foster local development.
- 3. Level the bureaucratic playing field for LCFBs with regard to business registration, licensing, taxation, documentation, enforcement modalities and export.** Large-scale industrial models of business often receive preferential treatment due to their perceived importance and access to decision making. Conversely, LCFBs often face a bureaucratic struggle to operate in policy environments that are often unsupportive towards such businesses. Perceptions of risk are higher when there is no strong government policy promoting LCFBs – and can quickly be lowered with a proactive and supportive stance from government.

Recommendations for practitioners and producer organisations:

- 4. Spread understanding of how proactive risk management within locally controlled forest businesses can best secure such a sustainable future.** There is a need for more proactive and widespread actions to reduce risk for such businesses among policy makers, investors, and LCFBs themselves. Negative perceptions of risk amongst LCFBs must be replaced by positive assertions of how such enterprises can secure a sustainable economic, environmental and social future – through proactive risk management. The aggregate value and contribution of LCFBs as a sector (as opposed to individually) needs to be better documented and recognised in national policy and decision making.

- 5. Publicise risk-assessment tools that help locally controlled forest businesses assess risk, prioritise risk, assign responsibility for risk management and implement actions within the business.** The findings above form the basis of an approach to risk management that deserves wider distribution – and will be developed into a specific toolkit for risk management by IIED and partners of Forest Connect. Making such tools available to government technical services can help in spreading the use of such tools more widely.
- 6. Work with financial institutions to develop a more positive framing of risk management by LCFBs – as a sign of business vitality, sustainability and innovation rather than an admission of near failure.** Financial institutions rarely develop financial services targeting the LCFB sector on account of perceptions of high risk. Decision makers can help to spread understanding of risk-management approaches that can be applied by such businesses, and work to incentivise the provision of financial services to those that adopt them – through the provision of credit support mechanisms and extension support.
- 7. Support regional associations and national federations of LCFBs to develop service capacity in risk self-assessment and management for their membership.** Once the economic, socio-political and environmental value of LCFBs are understood (eg taxes, political votes, agency for environmental restoration) it should be possible to incentivise the association and federation of such businesses. Second- and third-tier organisations can assist in risk management, by developing training materials for risk assessment and management as tools for securing a more sustainable future.

The process of engaging the specific companies of each of the case studies in proactive risk self-assessment was very positively received. In all cases, participants appreciated the insights gained from assessing in a systematic manner the risks to their businesses. Adding to that self-reflection, the insights on options for risk management gleaned from other case studies should be more useful still to locally controlled forest businesses worldwide. We have published this preliminary book of case studies with that hope in mind.

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Find out more about IIED's work on small and medium forest enterprises

The small and medium forest enterprise sector is of major significance for livelihoods and yet these are largely invisible economies. Raising the sector's visibility such that its impacts can be better assessed, and then going on to explore how the positive links to sustainability, livelihoods and poverty reduction can be enhanced, is a major challenge.

IIED has been working with partners to understand how best to build the capacity and organisation of locally-controlled forest enterprises. We have documented the nature and scale of such enterprises, identifying opportunities, constraints and critical intervention points.

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Almost 1.3 billion people inhabit, and are decisive to the fate of, the world's remaining forests. When organised into forest-farm producer organisations around secure resource rights, they can appreciate, reconcile trade-offs between, and deliver multiple goods and services that local and global publics need (from local food security and wood energy to global carbon storage and biodiversity conservation).

Evidence affirms that the democratisation inherent to locally controlled forest-farm business reduces the social and environmental impoverishment that is typical of profit-driven industrial business models. But maintaining the profitability of locally controlled forest-farm enterprises with their complex triple bottom-line of social, environmental and economic aims is no small task.

Collective ownership spread across remote areas introduces unpredictabilities for locally controlled forest-farm enterprises in: accessing finance, competing for natural resources, securing fair treatment under law, managing a group business organisation, developing human capacity, and building a brand based on broad business objectives. These factors compound general unpredictabilities arising from macro-economic change, political-legislative upheaval, socio-cultural unrest, natural disasters and technological developments. And this builds a perception of high risk.

This book develops a framework for proactive risk self-assessment and management for locally controlled forest-farm enterprises. It then showcases eight case studies where a participatory approach was used to identify both 'bad' and 'good' risks to guide development of options for risk management and innovation. The book concludes with an analysis of some of the main transferable approaches used by such enterprises to manage risk. Use of such approaches can help locally controlled forest-farm enterprises manage risks better and grow stronger so that they can attract buyers and investors with greater confidence.



Knowledge
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