

TECHNICAL NOTE



COMMUNITY AGROBIODIVERSITY MANAGEMENT: TECHNICAL NOTE FOR BUSINESS DEVELOPMENT

Community Agrobiodiversity Management: Technical Note for Business Development was prepared by Eleonora De Falcis (Associate Scientist at the Alliance Bioversity International and CIAT), Gauchan Devendra (Honorary Research Fellow at the Alliance Bioversity International and CIAT), Rose Nankya (National Project Manager of Uganda at the Alliance Bioversity International and CIAT) and Paola De Santis (Research Assistant at the Alliance Bioversity International and CIAT). Devra Jarvis provided guidance as Principal Scientist at the Alliance Bioversity International and CIAT and PAR Coordinator. Layout assistance was provided by Lindsey Hook (Head of Marketing and Communications, PAR).

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Cover photo: Nakaseke, Uganda - Evolutionary breeding trial and groundnuts, cassava, yams diversity restoration gardens. (October 2019) - Credit: Eleonora De Falcis, The Alliance of Bioversity International and CIAT.

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INTRODUCTION



INTRODUCTION

Conservation programs often promote community-level initiatives to increase on-farm agrobiodiversity. In these initiatives, community of farmers conserve and make accessible local varieties, often better suited to the local production conditions, and that the market does not provide or underprovides.

Community agrobiodiversity management initiatives (CAMIs hereon) include community seed banks, custodians' farmers, and mother orchards among others. Those are local level institutions managed by farmers which collect, store, multiply and make accessible seeds and planting materials to local farmers.

CAMIs are examples of on-farm conservation. Farmers conserve and reintroduce in the production processes varieties that are part of traditional systems but that because of the pressure of economic development were no longer cultivated and guarantee their regeneration and continuous adaptability.

The important role of CAMI is recognized and promoted globally as a tool to achieve sustainable development objectives. On one hand CAMIs strengthen food security, which is guaranteed by greater access to different varieties of seeds and more suitable to local conditions, ensuring production stability and lower production risk. On the other hand, CAMI also increase the participation of farmers in the selection of new genetic resources, increase the adaptability of cultivated species to climate change and promote the sharing of the benefits of the diversity of plant genetic resources (Shrestha et al., 2013; Gauchan et al., 2018).

The ITPGRFA¹ has recently stressed the importance of these local institutions in relation to Article 9 on Farmers' Rights and the continuous conservation of varieties not supplied by the market and to make them available to farmers who have had and continue to have a central role in the selection of genetic material (Andersen et al., 2017).

Business development can support these initiatives and create further incentives to preserve them, thereby increasing the long-term impacts on conservation while improving livelihoods. Indeed, an important aspect to guarantee the long-term viability of the CAMIs model is often to create economic incentives. Some may come from an enabling policy environment but other can come from developing a business on the services or products managed by the community. This approach aims to create a stronger market opportunity, value addition and increase margins for farmers.

¹ International Treaty on Plant Genetic Resources for Food and Agriculture.

However, the ability of CAMI to develop a business while delivering conservation outcomes, is not on an easy path. Challenges include production side barriers such as skills and access to credit and saving mechanisms, while, on the market side, a low demand for local products could fail to remunerate farmers sufficiently of their costs of production and product are not competitive on the marketplace. Despite its potential, business development it will be dependent on a careful forehand analysis aimed at planning ad hoc strategies and reduce risk failure.

This technical note aims to identify a framework for this strategy, providing the project team with tools and concepts to help planning a market development for local product of the CAMIs and the development of the CAMIs themselves as a business.

Three chapters compose these set of guidelines. In Chapter one are presented the concepts behind the development of a strategy. This chapter recalls what are the main aspects to consider and identifies a procedure for the project itself that looks at developing a business and measuring the results. In chapter two are explained the procedural steps, including tools for undertaking participatory diagnosis, and tools for data collection and framework of analysis. Finally, chapter three looks at how to use the information collected to produce a business plan. In the appendix, further examples on business development ideas are provided.

CHAPTER 1: STEPS FOR BUSINESS DEVELOPMENT PROCESS



CHAPTER 1: STEPS FOR BUSINESS DEVELOPMENT PROCESS

STEP 1: ASSESS CAMIS INTERNAL PERFORMANCE

The basis for introducing a business development plan starts by reviewing initial potential and, particularly, the business' internal performance. "Business development" is defined in terms of organization, technical and economic perspectives, and the ability of farms to produce, embedding biodiversity in their production systems. Often CAMIs lack detailed information and record systems in this respect. For example, some communities may have clear records on varieties available, but they may lack economic records of their operations and participation in market activities. The lack of this information is one of the main challenges to understanding their economic and social importance, and it is equally important in developing a business strategy.

The process to undertake is complex as it not only involves a wide variety of information to be collected and organized, but it also requires adequate technical and educational support to prepare some of the material needed. In fact, the objective shouldn't be only to collect information, but rather to introduce and transfer a knowledge culture about the importance of record-keeping in performance management. This will enable measurement indicators to track further business development processes and help farmers to acquire business skills and possibly stimulate new business ideas.

In terms of information to collect, chapter two provides the three frameworks—organizational, technical, and economic—for the assessment. If possible, the information, whether qualitative or quantitative, should be collected and saved in an online format to facilitate the review process, consultation with experts, and analysis. Database construction is an advisable procedure. This would allow the comparison of different experiences, the identification of best practices, and, in general, the promotion of scale-up models to increase conservation activity.

During this process, it is important to understand not only the economics of the CAMI but also the governance and social role it provides. In fact, while CAMI business development can be a scale-up model for the whole community, it can also create opportunities for women and young people in that community. This makes it important to understand different roles at the beginning of the discussion and to have precise indicators at hand that can define what would be the possible impact of different development options.

STEP 2: ASSESS CAMI'S COMPETITIVE POSITION AND PREPARE THE PRELIMINARY STRATEGY

Another important aspect to consider is the CAMI external environment, the setting in which it does operate. This step will look at the external factors that may impact its business development and opportunities on the market. In this context, information from market and consumer perspectives should be collected and analyzed recognizing the important role that they will have in the development of the strategy. On the other hand, information on the products or services of the CAMI should be collected too with the objective to understand their competitive position from a market perspective. The difference with the first step, is that in this step information are focused on market rather than technical perspective and are aimed to provide a projection of what could be possible product for markets, thereby a list of potential options. This last part should be performed focusing on the factors that may impact the potential demand for the product or service and it is usually discussed in a participatory setting.

On data collection side, means of assessing the information are the farmers' records and a survey of farmers, existing buyers, including consumers and wholesalers in the local market. On the other hand, the project manager should support this information with extensive research on the national and international markets and looking at potential buyers and stakeholders that may be interested in collaborations.

As mentioned, a review of the existing markets and products should be used to identify the options for business development, guiding the CAMI to narrow down a preliminary market strategy that will be refined in a participatory framework. It can be useful to conceptualize the results of the analysis, with a SWOT table discussing it with farmers to collect new ideas and experiences. Strategies for business development may look at reinforcing existing systems—such as improving organizational abilities to help farmers to increase the level of sales along existing markets—as well as entering in new markets - such as starting new channels of sales or selling new products or services. Options are not excludable, while the CAMI may want to identify priority areas and define a market strategy with short-term and long-term goals.

It is important that the CAMI business development strategy include incentives for conserving agrobiodiversity. Examples from other projects show that commercialization may not always be sufficient and that project interventions need to use multiple strategies (Bhandari et al. 2012, Sthapit et al, 2012). This is because a substantial part of agricultural biodiversity has limited market

value, while usually few varieties within a species attract demand from large consumer groups and generate revenues for many farmers. In this scenario, the promotion of a single underutilized species or variety could lead to the so called “crowding out effect”, namely the reduction of agrobiodiversity in favor of the successful varieties on the market. In this regard, the strategy should look also at multiple strategies that beyond market, embed the awareness that agrobiodiversity can be lost as a result of market development.

Finally, and very important, the process of business development will require efforts on the demand side as much as the one on the producer side. This will require understanding consumer’s needs, increase awareness of consumers toward the sustainable process implied by the CAMI production processes and try to place the product with a premium price reflecting its higher market value. The marketing mix definition (product, price, distribution, and promotion) should define efforts to reach the desired market segment.

VARIETY REGISTRATION

One of the main issues to consider in this context is the applicable laws to commercialize the varieties in the country and elsewhere. In some countries, seeds and reproductive material for multiplication should be registered for being commercialized. To be registered they have to meet criterion of distinctiveness, uniformity, and stability (DUS). Few farmers' varieties satisfy these registration requirements, but some countries have introduced flexibility on the requirements only for farmers' varieties or introduced exemptions of applications of these requirements for farmer's varieties. In a recent review of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture (2018), which looked at 95 countries' laws on seed policies, it was noted that in 44% of the countries seed registration in the exporting country is a prerequisite for another country to import; 7 percent of countries required variety registration only for seeds of a specific set of crops; and 16 percent of the countries did not require variety registration for imported seeds. However, most laws required that import of seeds must be "authorized"—with no additional specification on the criteria for a variety to be "authorized." Finally, 33 percent the seed laws of a third of the countries studied were silent on variety registration for imported seeds. The legislation also varies in terms of rules for commercialization as well, with different cost of compliance requirements and different rules about who is entitled to register the variety in their own name (i.e., farmers, farmers' organizations, NGOs, etc). These considerations will have an important impact on the market for CAMI's strategy (for local, national, and international markets), the organizational structure of the CAMI, and therefore, any return that derives from the variety protection.

To date, complete information on the varieties selected and registered by the CAMIs is not yet available, but it is known that few farmers' varieties meet the criteria for registration. Indeed, the issue of intellectual property should be accounted for in the business' development as this constitutes a further incentive for the members of the CAMI to continue in their important roles of researching and conserving biodiversity and the enrichment of the genetic resources available without compromising accessibility in the long term and ensuring that a greater margin share is retained locally.

STEP 3: ASSESS THE ECONOMICS OF THE BUSINESS DEVELOPMENT PLAN

The business model adopted by the CAMI will need to improve farmers' profits to sustain the livelihood of the community and to create incentives for conserving biodiversity. Therefore, project managers will need a basic projection about the economics on how the business development will impact their profitability and their need for resources.

In this step, the project manager will need projections on the production plan, an economic plan, and, will determine if any investment is needed (and which financial institutions might be a source of credit, noting their requirements). The projections will give a better understanding of the business model and support to refine the strategy.

It is important to notice, that a profit improvement does not mean only an increase. Indeed, other means of improving profit figures and measure the potential success of the business plan include the ability of the plan to produce a more stable income throughout the year. This will create less uncertainty on the income sources and reduce the risk of failure and issues in managing the finance. For the same reason, a more diversified selling channels is another important strategy (Bovarnick and Gupta, 2003).

STEP 4: REVIEW AGRIBUSINESS CAPACITY AND ESTABLISH PARTNERSHIPS AND NETWORKS

The step 4 and 5 are cross cutting steps of business development. Most rural communities lack agribusiness skills more than technical skills, and this is usually the main barrier in market development. Capacity may be limited in a number of areas and capacity-building activities should be incorporated into project activities as appropriate (Bovarnick and Gupta, 2003).

Some of the functional areas in which skills may be needed are:

- Business management;
- Entrepreneurial leadership;
- Financial planning;
- Bookkeeping, accounting, and auditing;
- Working with financial institutions (for credit and savings);
- Sales and marketing;
- Partnership and contract negotiations;
- Labour and community relations; and

- Technical expertise in production and processing

Bovarnick and Gupta (2003) underline that “*developing capacity should be viewed as a long-term process throughout the lifetime of a project and beyond*”. Capacity can be developed through a mixture of direct training, bringing in expertise from outside the community. Collaboration with educational and research centers, private and public, and sharing the knowledge and the challenges of the CAMIs can help communities find solutions together through collaboration and support. The organization of events where information and knowledge are shared with a broader community is one way of creating and fostering skills. In addition, creating the opportunity of networks with other industry professionals can help farmers ground the general knowledge coming from educational partners into actionable initiatives. Events where entrepreneurs are invited to share their case stories can help farmers generate new ideas while they also create opportunities for networking and information sharing.

In particular, the establishment of a strong partnership is critical to the ability of the CAMIs to grow and attract resources and support. The CAMIs needs to identify possible partnerships with the public and private sectors. Agreements and partnerships should come in the form of formal and written engagements to ensure transparency and guarantee commitments. In some countries, the CAMIs are not registered and operate as farmers’ organizations and cooperatives; this may not fully empower communities to have access to funds and *ad hoc* policies (Joshi et al., 2018). One preliminary action to empower the CAMIs can be to obtain legal status. A tailor-made mechanism should be developed to realize this status, and a policy framework should be initiated. It is necessary to define the minimum standard for defining a CAMIs so that every organization can follow it (Joshi et al., 2018). Once an organization obtains legal status and develops a strategic partnership with the public sector, it can establish a gene bank for the search, conservation, selection, and regeneration of local varieties. This service can be institutionalized and rewarded as a service for the community, and it can provide a structured type of partnership. Also, collaborations with public Research Institutions can develop research that better characterizes the varieties of CAMIs for market products and uses. These are examples of strategic partnerships for added value to the community. Other opportunities for partnerships may arise from identifying and analyzing financing opportunities along the value chain, which can provide valuable inputs in building a local, national, or international supply chain. Organizing awareness-raising events and training or workshops on financing opportunities and engaging with banks and financial institutions can help develop possible approaches to secure finance.

STEP 5: MONITORING

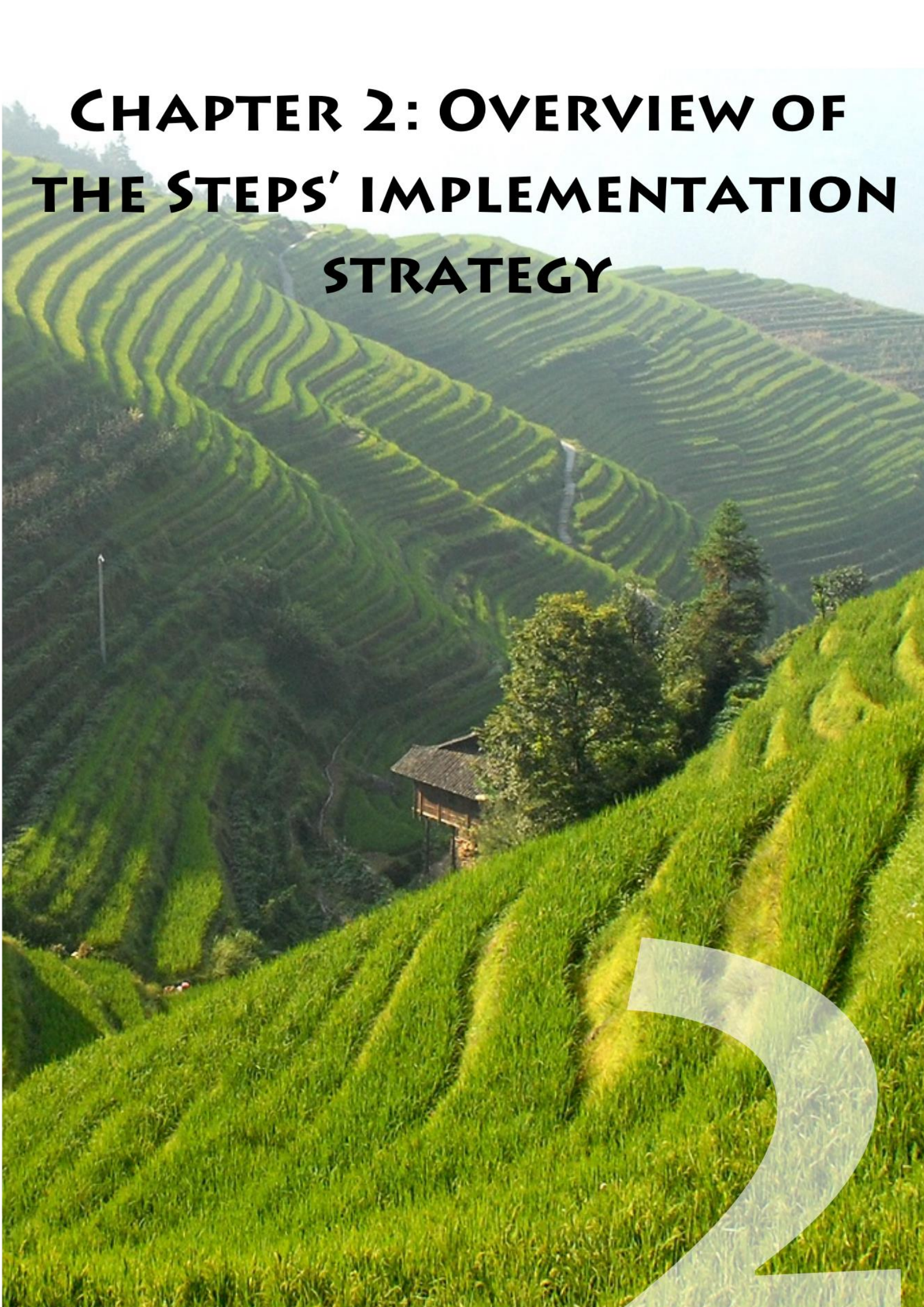
The monitoring element is a cross cutting and key point of the business development process, and should take place continuously through the project lifespan. Monitoring activities contribute to:

- Assessing whether conservation objectives are achieved over time; namely that the CAM will continue to grow the local varieties and support biodiversity conservation;
- Allowing an estimate of the economic advantage of maintaining diversity within the community (farm conservation); and
- Establishing corrective actions to the plan.

The information collected during the business development process is essential to identifying the baseline that will constitute the reference for a comparison over time of several indicators, not only economic but also social and environmental. The indicators will track the direct and indirect impacts of the business idea. A monitoring process can follow these guidelines:

- Take note, identify and save, from the beginning of the business development process, all data on internal and external performance (companies that maintain local variety, seed reproduction techniques, morphological characteristics, etc.) relating to local varieties (information collected in step 1 and 2);
- Indicate the business development strategy and the product or services for the market;
- Repeat the collection of information relating to the internal performance and competitive position at successive time intervals;
- Compare the initial data with the data collected after the start of the business development plan; and
- Quantify the differences and identify the causes.

CHAPTER 2: OVERVIEW OF THE STEPS' IMPLEMENTATION STRATEGY



2

OVERVIEW OF THE STEPS' IMPLEMENTATION STRATEGY

STEP 1: CAMIS INTERNAL PERFORMANCE

CAMIS ORGANIZATION AND GOVERNANCE

TECHNICAL MANAGEMENT

ECONOMIC MANAGEMENT

STEP 2: CAMIS EXTERNAL COMPETITIVE POSITION AND PRELIMINARY MARKET STRATEGY

ANALYSIS OF THE MARKET CONTEXT

ANALYSIS OF THE PRODUCT AND SERVICES OFFERED BY THE CAMIS

RULES FOR THE INSTITUTION ARE ESTABLISHED

BUSINESS IDEA AND PRELIMINARY MARKET STRATEGY

MARKETING PLAN

STEP 3: ASSESS THE ECONOMICS OF THE BUSINESS DEVELOPMENT PLAN

REVIEW REVENUES, COSTS PROFIT AND NEED FOR INVESTMENTS

REVIEW ACCESS AND MANAGEMENT OF FINANCE

STEP 1: CAMIS INTERNAL PERFORMANCE

CAMIS ORGANIZATION AND GOVERNANCE

TECHNICAL MANAGEMENT

ECONOMIC MANAGEMENT

2.1 CAMIS ORGANIZATION AND GOVERNANCE

Community-based agricultural management systems take different forms. There is tremendous diversity in the type and structure of both governance and organization, as well as in the main functions for which the community system is established (Vernooy et al., 2014; Vernooy et al., 2015). For the purpose of supporting a more systematic and comprehensive analysis of the current system in which the community operates, organizational and structural information are to be gathered at the beginning of the process.

In order to generate information over these aspects, general information about the conservation strategy, management, governance, and services provided at the community level should be collected. In addition, reasons behind the CAMIs establishment and current purposes should be collected, too, in order to ground further development on the priority functions of the community.

The organizational structure and structural information support decisions that will guide the market development work plan, starting from the existing structure and model. This should ensure that further developments are coherent and are embedded with the identity of the community.

2.1.1 DATA COLLECTION

Data collection relies on multiple sources of information, including primary and secondary sources. Primary sources are based on first-hand observation of the organization of the community. Moreover, they are used to obtain direct observations and insights about the cohesiveness of the community and to identify groups and cultural dynamics. In addition to primary sources, secondary data are useful to get initial information and the history of the institution and support the primary data collection, either in its preparatory phase or to further confirm the information.

1. Secondary data source

Secondary data about the CAM organization can be derived from past reports, either technical or baseline assessments. Secondary data can provide an initial idea of how the community is structured, as well as the history of the organization. At the same time, some of the information may already be put into context, which can facilitate explaining and analyzing the reasons behind the organizational structure and the cultural context that drive the development of the CAMIs. The information collected should be organized according to criteria that make it easy to identify the area. An example is provided in table 1.

Table 2. 1 Secondary data source for area of analysis, an example.

AREA OF ANALYSIS	SOURCE OF INFORMATION
Main functions, reasons for the establishment	Project reports n. and date of the assessment
Governance and management	Technical report n. and date of the assessment
Mechanisms of conservation	Baseline assessment and date of observation
Mechanisms of access, exchange, and distribution of seeds	Project reports n. and date of the assessment
Management approach for finance	No information available
Seed production, sales, and income generation	Project reports n. and date of the assessment

2. Primary data source

Focus group discussion (FGD)

Focus groups are group interviews usually involving a group of key informants who come together to discuss a topic in an open manner. The focus group takes place under the guidance of moderator using guiding questions or topics to lead the discussion. A focus group is an effective tool for a rapid appraisal of the organization of the CAMIs as it provides an opportunity for engaging with the community and establishing a participatory process in the development of further business opportunities. Furthermore, discussion allows for confronting different views and testing satisfaction.

By construction, the format of the data collected in the focus group discussion is mostly qualitative, but quantitative information can be collected too. The information can be summarized through notes on paper or online or recorded and saved. In any case, the main outcomes should be summarized by main themes.

The FGD discussion is an opportunity to explore a thematic area. Therefore, FG questions are not static, but they evolve during the process itself. For this reason, three blocks can be defined during the preparatory phase. They involve:

Guiding questions: Main points to include and start the conversation. They set up the ground for the discussion and define the outline of the conversation.

Probes for discussion: More specific topics related to the guiding questions that the discussion should explore.

List of potential follow up questions: Specific questions divided by thematic areas where the interviewer can refer to during the discussion. They aim to provide some additional ideas for the conversation. One can check to see if during the conversation some parts are uncovered or need additional clarification.

Below is presented the procedure implemented in the focus group discussion held in Nepal in two communities' seed banks in the Terai Region and Dolhaka. The list of questions was developed with the support and review of the national project coordinator. The FGD was carried out in the local language with the support of a local project coordinator. During FGD questions, were asked in the local language. The FGD was preceded by informing the community to seek availability and to encourage high participation. No preliminary information was requested to be brought during the discussion.

Guiding Questions:

1. Could you please explain to us how your CSB works?
2. Which market activities are carried out by the CSB, and how are they organized?
3. Are there any other enterprises engaged in the market activities of this CSB?
4. If yes, what is their role?
5. Do you also involve the collection and marketing of local crop products and other business activities?
6. If not, could you please explain why?
7. If yes, what local products and activities presently you are engaged with?
8. Which type of crop varieties are most in demand on the market?
9. Could you please explain how the CSB's work is financed?
10. What suggestions do you have to improve the activities and market?

Probes for discussion:

1. CSB organization and governance, including information by gender and age
2. Types of seeds that farmers are demanding
3. Reasons why farmers choose particular seed (the seed's attributes for self-consumption or the market)
4. The frequency with which farmers purchase/borrow the seeds
5. Reasons why farmer continue or discontinue growing landraces
6. Existing seed and product market linkages of the CSB
7. Structure of the market and prices offered to farmers
8. Sources of cost and income of the CSB
9. Potential diversity based local enterprises (seed or product based)
10. Impact of the market on community decision-making
11. Knowledge of market information and value chain structure
12. Potential market activities to be developed
13. Training needs assessment

List of potential follow up questions by themes:

Mechanisms of conservation, access, exchange, and distribution of seeds within and outside locations:

1. What are the rules and procedures for accessing and exchanging seeds?
2. What types of seed do you borrow from the CSB (example: local, also improved and imported)?
3. How many varieties do you normally cultivate?
4. Which of them are used for self-consumption, and which of them are sold?
5. What is the difference between varieties for self-consumption and for the market?
6. Which type of seeds are most demanded by farmers?
7. Which are the seed/variety characteristics that you demand most?
8. Does this seed bank sell the seeds in the market (other than to its members)?
9. If yes, does it do so through a cooperative or other institutional form?
10. Does this seed bank sell final local crop products?
11. Do you sell final local crop products?
12. What type of crops are other farmers cultivating in the area?

Management approach for the Community Based Management (CBM) trust fund.

1. What are the objectives of the CBM trust fund?
2. How is the CBM fund managed?
3. Who are the beneficiaries of the CBM trust fund?
4. Have you ever benefited from the CBM trust fund?
5. What investments and activities have been enabled thanks to the fund?
6. What do you consider to be the main advantage of having a CBM fund?
7. What are the key constraints in fund management and disbursement?
8. What are potential suggestions for the further improvement and sustainability of CSB?
9. What are other sources of financing for farmers in the area?

Seed Production, marketing and income generation.

1. Which crop seeds are produced for marketing and income generation?
2. How many seeds are produced and marketed?
3. Which local crop products does the CSB sell on the market?
4. What are the main difficulties in marketing these products?
5. If this CSB sells the seeds, where are the seeds?
6. Where are local crop products of this CSB sold on the market?
7. Are there different prices for each market?
8. What types of seeds and local products do they demand?
9. Has the product from this CSB ever been rejected by the buyers? If yes, why?
10. What are the main costs of the CSB?
11. How is the income generated used?
12. Are the seeds produced exported to the international market?
13. How much of what you consume is bought from the market, and how much comes from what you produce?

Key Informant Interviews

The purpose of key informant interviews is to discuss and validate the key findings from the FGD sessions. This elicits additional explanatory data from informants who are recognized in the community for their knowledge of the crop and its local context. Individual members of the assessment group comprise these key informants. For the first appraisal on the community operations and management, CAMIs leaders and project experts are envisaged as the main addressors of the interview.

The key informant interview is based on a preliminary analysis of the FGD outputs, which allows one to prepare a checklist of discussion points and guiding questions. This checklist consists of specific findings from the FGD, which the team selected because it considers these as requiring further probing. It may address data gaps, inconsistencies, or inadequate documentation. Similarly, to the FGD, the checklist is expected to consist of questions that are generally of the open-ended type.

Examples:

1. The research team has found the following findings to be inconsistent/contradictory (identify these findings). Could you explain these further to help the team better understand these findings?
2. The research team considers the following findings to be especially interesting/significant, but we were not able to ask FGD participants to explain them to us (identify the findings). Could you provide more details to help the team better understand these findings?

2.2 THE TECHNICAL AND ECONOMIC MANAGEMENT

The internal indicators appraisal concerns the economic and production results obtained by the farms in the reference period. The variables selected are necessary for accounting estimates and allow insights into the microeconomic reality of the CAMIs. They are important to register information about factors of production and utilization, income, sources of costs, and other economic indicators. The structure of the information to be collected can be divided into two categories, defined as technical and economic management. During this phase, the data collected can be further suitably organized into categories and saved in a computerized version to better manage the information collected. The following strategies are suggested for the collection of technical and economic data.

2.2.1 DATA ON TECHNICAL MANAGEMENT

The data on technical management consists of a detailed exercise that revolves around the technical structure of the CAMIs and is oriented at identifying major production and inputs. The technical assessment can be performed through a survey by the enumerator, who will interview CAMIs representative/s. The proposed structure of the questionnaire is articulated in six types of information:

1. Information indicative of distribution, production, and product availability;
2. Employment information;
3. Information indicative of equipment available;
4. Type of cultivation methods;
5. Certifications; and
6. Other activities.

The information should be collected at CAMIs level and variety level. Table 2 shows in detail the list of topics to be covered.

Table 2. 2 Topics to be covered during the technical management assessment.

CAMI GENERAL INFORMATION			
GENERAL INFORMATION			
Number of species/varieties conserved			
Number of members of the CAMI			
EMPLOYMENT			
Family labour			
- By gender and age			
External labour			
- By gender and age			
Number of employees by time of the year	January		
- By gender and age	February		
	March		
	April		
	May		
	June		
	July		
	August		
	September		
	October		
	November		
	December		
Type of resources	Technical		
- By gender and age	Managerial		
Total worked hours in a year	Men		
	Women		
EQUIPMENT			
Technical instrument for cultivation	Description		
	Unit		
	Purchase price		
	Remaining operational years		
	Annual cost of maintainance		
	Tenure status	Proprietors†	1
		Payed Rent	2
		Free Rent	3
Instruments for harvesting	Description		
	Unit		
	Purchase price		
	Remaining operational years		
	Annual cost of maintainance		
	Tenure status	Proprietors†	1
		Payed Rent	2
		Free Rent	3
Tools for conservation of seeds	Description		
	Unit		
	Purchase price		
	Remaining operational years		
	Annual cost of maintainance		
	Tenure status	Proprietors†	1
		Payed Rent	2
		Free Rent	3
Tools for processing or value added activity	Description		
	Unit		
	Purchase price		
	Remaining operational years		
	Annual cost of maintainance		
	Tenure status	Proprietors†	1
		Payed Rent	2
		Free Rent	3
Infrastructure	Description		
	Unit		
	Tenure status	Proprietors†	1
		Payed Rent	2
		Free Rent	3
CULTIVATION			
Type of cultivation method	Organic		1
	Integrated Pest management		2
	Traditional		3
	Conventional		4
CERTIFICATIONS			
Certifications at the CAM level (not variety/produ	Nationally recognized		1
	Internationally recognized		2
	Name of the certification		
	Main scope of the certification		
OTHER ACTIVITIES			
Other income generating activities	Agro-eco tourism		
	School/aducational activity		
	Community Seed Bank Fund		
	Other (specify)		

VARIETY SPECIFIC

GENERAL INFORMATION

Crop's name
 Variety's name
 Registered for commercialization
 Hechares available for production

PRODUCTION MANAGEMENT

Time of sowing/transplanting		
Harvest time		
Harvest type	Mechanic Manual Mixed	
Quintals of production	Direct (from land owned by the CAM) From the CAM members Exchanged or bought from other CSB Exchanged or bought from other entities Other	
Post-harvest lost	No lost Very low Low Average High Very High	1 2 3 4 5 6
Pre harvest lost	No lost Very low Low Average High Very High	1 2 3 4 5 6

DISTRIBUTION MANAGEMENT

Distribution	Sold Exchanged Stock Intra-unit consumption Auto-consumption	1 2 3 4 5
Form of distribution	Processed Unprocessed	1 2
Parts of the plant sold	Stem/culm Branches Leaves Bark Roots Rizhome Tubers Flowers Fruits Seeds Sap/resin All plant	1 2 3 4 5 6 7 8 9 10 11 12

WORK MANAGEMENT

Cultivation	Mainly women Mainly male Mixed	1 2 3
Harvest	Mainly women Mainly male Mixed	1 2 3
Seed conservation	Mainly women Mainly male Mixed	1 2 3
Conservation of the product	Mainly women Mainly male Mixed	1 2 3

CERTIFICATIONS

Certifications at the variety/product level	Nationally recognized Internationally recognized Name of the certification Main scope of the certification	1 2
---------------------------------------------	---------------------------------------------------------------------------------------------------------------------	--------

2.2.2 DATA ON ECONOMIC MANAGEMENT

Among the main elements for economic development and growth is the spread of the culture of accounting and the acknowledgment of its importance to support business management. Accounting system is important for farmers to track their economic results and to increase their agribusiness management skills and overall efficiency. In addition, it is usually the basis for the request of credits and the evaluation of eligibility, and therefore represent an essential element for the realization of the business development plan.

However, this leads to an inevitable increase in the number and complexity of information to register and the result is a call for an increase in the support in the ability of farmers to record them. Accounting should be part of the training activities and capacity building which can be performed by extensionists and partnership with universities. Trainings on accounting system should consider three (interrelated documents): the balance sheet, the income statement, and the cash flow statement.

THE BALANCE SHEET

The balance sheet is the document which lists the assets, liabilities, and equity of the business. The value of the assets in the balance sheet is represented by its purchase price and its presented “net of accumulated depreciation.”² Assets and liabilities are classified in the balance sheet in current and non-current. Current assets are those items that can be turned into cash rapidly, usually with a rule of thumb of twelve months; similarly current liabilities are debts that do not come due within the next twelve months.

Current assets include items such as checking accounts, seed inventories, feeder livestock, or raised crop inventories, among others. While, **current liabilities** include accounts payable, such as a fertilizer bill at the farm store. On another note, **non-current assets** include breeding seeds, machinery and equipment, infrastructures, and real estate among others. Finally, **non-current liabilities** include mortgages and machinery payments.

The difference between assets and liabilities determine farms’ net equity which reflects growth earned through operations.

² Depreciation is a method for a business to gradually account for the costs of the equipment or machinery that the farm has purchased over the period of utilization. There are different methods to account for depreciation, the most common is to divide the cost of the equipment over the operational life of the item and record the resulting cost each year for the length of its life usage.

Table 2. 3 Example of a balance sheet.

ASSETS			LIABILITIES/EQUITY		
Line num.	Current Assets	Amount	Line num.	Current Liabilities	Amount
1	Cash & Checking		19	Accounts Payable	
2	Savings & Time Deposits		20	Accrued Leases	
3	Investment – Bonds & Securities		21	Accrued Interest	
4	Paid expenses		22	Credit Card, Operating Loan, Current Notes Payable	
5	Accounts Receivable		23	Accrued Taxes	
6	Inventory: i.e marketable seeds and products		24	Current Portion of Deferred Taxes	
7	Investment in Growing Crops		25	Accrued Employee Payroll Expenses	
8	Other current assets		26	Income & Self Employment	
9	TOTAL CURRENT ASSETS		27	Other current liability	
10	Non-Current Assets (sum line 1 through 9)		28	Total current liabilities (sum line 19 through line 27)	
11	Vehicles, Machinery & Equipment		29	Principal Balance	
12	Buildings		30	Non-Real Estate Loans and Notes	
13	Investment in capital assets		31	Real Estate Loans	
14	Capital assets		32	Non-Current Portion of Deferred Taxes	
15	Real Estate		33	Deferred taxes	
16	Other Non-Current Assets		34	Other Non-Current Liabilities	
17	Total non current assets (sum line 11 through line 16)		35	Total non-current liabilities (sum line 29 through 34)	
18	TOTAL ASSETS (sum line 10 + line 17)		36	TOTAL LIABILITIES (sum line 28 + line 35)	
			37	TOTAL EQUITY (line 18-line 36)	
			38	TOTAL LIABILITIES AND OWNER EQUITY (line 36 + line 38)	

INCOME STATEMENT

The income statement is a summary of revenue and business expenses incurred during a defined period, usually one year (twelve months). The income statement provides the farm with a statement of profit (or loss) derived from the business. Comparing income statements over time gives the producer an indication of whether the business is profiting over time. Much of the information on the income statement, particularly the net income figure, can be used to calculate the economic ratios.

Revenues are presented first on the income statement. Revenue can be from the sale of crops, agricultural program payments, custom work, dividends, etc.

Expenses are presented below the revenues. These include the cost of labor, seed, fertilizer, etc. The income statement also includes expenses that are not paid in cash, such as the cost of depreciation.

The income should also include accrual adjustments. For example, temporary changes in crop inventories, accounts payable, and/or accounts receivable from the beginning of the period to the end of the period. The same approach is applied to the expense side of the income statement. Changes in accounts payable from the beginning period to the end of the period need to be entered as an expense on the income statement.

Table 2. 4 Example of an income statement.

Line number	CAMI Revenue	Amount
1	<i>Crop cash sales</i>	
2	<i>Other CAM income</i>	
3	Total income (sume lines 1 and 2)	
4	CAMI Expenses	
5	<i>Inputs and materials:</i>	
6	· Seed	
7	· Fertilizer	
8	· Pesticides	
9	<i>Labour</i>	
10	<i>Repairs</i>	
11	<i>Seed/crop expenses</i>	
12	<i>Machinary hire/lease</i>	
13	<i>Processing expenses</i>	
14	<i>Rent</i>	
15	<i>Utilities</i>	
16	<i>Field operations</i>	
17	Total operating expenses (sum lines 5 through	
18	- interests	
19	Total expenses (line 17 - line 18)	
20	Profit/loss (line 3 - line 19)	

MAIN INDICATORS FROM THE INCOME STATEMENT

1. Value of Production (VP)

The main items that comprise the value of production are represented by the revenues from the sales of products and services of the business, by public aid, and by any revenues deriving from other ancillary activities.

2. Current Costs (CC)

The current costs are given by the sum of the costs incurred for the purchase of extra-company consumption factors (seeds, seedlings, fertilizers, pesticides, feed, mechanization, etc.), other expenses (transformation, marketing, and general expenses), and third-party services (subcontracting, healthcare costs, expenses for related activities, and insurance).

3. Value Added (VA)

Value Added (VA) is given by the difference between VP and CC and summarizes the gross result of management of production processes without considering structural and labor costs.

4. Operating Income (OI)

The operating income includes costs and revenues originating from production processes and services related to agricultural activities. It is calculated as the difference between the gross income and wages, depreciation and all costs related to the production activity.

5. Net Income (NI)

The net income (profit or loss) is the economic result after all costs, including interest expense for outstanding debt, taxes, and any one-off items, such as the sale of an asset or division have been deducted. Net income is calculated as revenues minus cost of goods sold, general and administrative expenses, operating expenses, depreciation, interest, taxes, and other expenses.

CASH FLOW RECORD

Another useful component of the economic and financial record is the cash flow calendar record.

The cash flow is a document that reports the actual transactions in terms of cash in and the cash out. This type of information, when reported for a given production or time frame, is useful to examine financial resources available throughout the year.

An examination of cash flow timing enables management to prepare for periods when expenses are expected to accrue before revenues are realized. It also allows management to project how alternative enterprises or changes to the production plan might affect the timing of revenues and expenses. The document can be constructed for any preferred time frame; however, a monthly production calendar is usually preferred to identify key periods of critical business activity.

The “net cash flow” computed as the difference between cash in and cash out, allows to assesses the financial requirements or cash needed. If the cash-out is higher than the amount available (cash-in), farmers will need to make a plan to get the money they will need during the season.

Table 2. 5 Example of a monthly cash flow statement.

		J	F	M	A	M	J	J	A	S	O	N	D
Line number	Cash in												
1	Item 1												
2	Item 2												
3	.												
4	Total cash-in (sum line 1 + line 2 + ..)												
5	Cash out												
6	Item 1												
7	Item 2												
8	.												
9	Total cash-out (sum line 6 + line 7 +...)												
10	Net cash flow (line 4- line 9)												

STEP 2: CAMIS EXTERNAL COMPETITIVE POSITION AND PRELIMINARY MARKET STRATEGY

ANALYSIS OF THE MARKET CONTEXT

ANALYSIS OF THE PRODUCT AND SERVICES OFFERED BY THE CAMIS

RULES FOR THE INSTITUTION ARE ESTABLISHED

BUSINESS IDEA AND PRELIMINARY MARKET STRATEGY

MARKETING PLAN

2.3 COLLECTING INFORMATION ON THE CAMIS COMPETITIVE POSITION AND IDENTIFYING THE MARKET STRATEGY

2.3.1 CRITERIA FOR THE ANALYSIS OF THE MARKET CONTEXT

When designing value chain development activities as part of agricultural biodiversity conservation programs, it will be useful to gather multi-dimensional insights into how the market is structured. In this context, one needs to identify different types of barriers (and opportunities) to entry at present. In this context, an analysis should include the need to increase sales volumes; the difficulty in accessing distribution channels; the level of processing of the product to be market ready; access to funding; and possible competitors and cooperative forces.

The analysis of the market is performed to capture these characteristics and trends on the demand side, as well as to identify the threats and opportunities (e.g. the opening of new markets, the economy of scale, niche markets and price premiums etc.) in the market. This analysis looks at the main factors that are outside the control of the business and that can have an impact on its business development.

PERFORM A MARKET ANALYSIS

Depending on the information to be collected, market research will involve the use of primary and secondary research methods and a combination of market research tools. Table 6 outlines the areas of research, the key research questions to address, and the research methods or tools to use.

The collected data need to be placed in relation to the community highlighting the strengths (technical knowledge of the product, production capabilities, etc.) and weakness (problems among members, poor customer information, and the market potential). This analysis will provide ideas for the development strategy and, if necessary, will provide the tools necessary to modify and improve it (such as the hiring of new staff, the strengthening of research and development, etc.). After this information has been collected, we can analyze the products and services offered to the community from a market perspective.

Table 2. 6 Area of research, research questions and source of information for market analysis.

AREA OF RESEARCH	RESEARCH QUESTION	SOURCE OF INFORMATION
Assess market demand	Who currently buys the potential products? Where are the products bought? Who are the eventual consumers of each product? What quantity of the product has been bought in the local and national market (monthly, seasonally, annually over the past three years)? Does demand fluctuate during the year? What is the long-term trend in the market? What factors could decrease or increase demand at a local and national level? Is there a strong international demand for the product?	Focus group at community level, Key Informant Survey, community level, trader, wholesales, retailers
Assess competition	Are the same products commonly available in the local or national markets? Is the market supplied by a few large companies or a multitude of smaller ones? What are the strengths and weaknesses of the competition? Why would customers buy CAM product or services instead of a similar product from a competitor? What factors could lead to an increase in competition? What is the evidence that a market opportunity exists in spite of competition?	Focus groups and questionnaire survey of community leaders or existing buyers and wholesalers. Secondary data can be obtained from trade publications and industry organizations.
Assess political factors	What are the quality standards at local and national levels? There are any the trade restrictions or barriers for the product conserved by the CAM? What are the health and safety requirements for entering in the market? What are the taxation regulations applied for different forms of organizations? Are there any mandatory certifications needed for the market?	Secondary data
Assess Infrastructure requirements	Where are potential customers located? What infrastructure does the business need to deliver its products? Will transportation to the potential customers be timely and affordable? Will the provision of vehicles be sufficient to ensure delivery capabilities?	Focus groups and questionnaire survey of community leaders or existing buyers and wholesalers. Secondary data can be obtained from trade publications and industry organizations.
Assess means of cooperation	Are there other communities willing to cooperate in the promotion of the same or similar products? Where other community sell their products? What strategies do they adopt for selling their products?	Focus groups and questionnaire survey of community leaders or existing buyers and wholesalers.
Assessing past and current levels of product sales	What is the overall volume of product sales per season or year? What is the rate of growth of seed sales in different regions or market segments? What is the rate of growth in product or services sales per customer (especially major ones)?	Questionnaire survey community level, Key Informant Survey traders and sector experts
Examining the available product (seeds/varieties)	What seeds/varieties are out there now? What are your competitors offering? Are there new or improved varieties, types of seed or accompanying services?	Focus group at community level Key informant interview community leaders, traders, wholesalers and retailers

Note: adapted from Bovarnick and Gupta (2003) and FAO (2018).

2.3.2 CRITERIA FOR THE ANALYSIS OF THE PRODUCT AND SERVICES OFFERED BY THE CAMIS

This is the analysis of the supply side of the product and services of the CAMIs. Different from the technical management information, this analysis is more focused on market level information. In order to generate an overview of the production, general information about the traits (particularly market traits, like unique characteristics, production timing, shelf-life, taste and other data) should be collected. Other information about the management, production strategy, cooperation with other CAMIs, buyers, and clients will give an overview of the product and the competitiveness of these products as a result of the market management mix. In detail, the information to collect, and to reflect upon, are presented in Table 4.

Table 2. 7 Area of research, research questions and source of information for the analysis of the product and services offered by the CAMIs.

AREA OF RESEARCH	RESEARCH QUESTION	SOURCE OF INFORMATION
Product and services characteristics	What are the traits of the crops and tree varieties conserved by the CAMIs in terms of its usage, nutritional content, shelf life, storability, marketability, and organoleptic quality? What is the traditional knowledge associated to the crops and tree varieties of the CAMIs? What is the relevance of the crops and tree varieties in the socio-economic, cultural and geographic context? What are the main reasons for the CAMIs to grow these varieties?	Focus group with community, secondary data variety catalogues
Market management	What is the target market of the products? Why do buyers buy this product? What are the trends of sales in the past years? What were the main factors driving the changes?	Focus group with community, questionnaire survey at community, and key informant interviews to distribution channel used by the community
Suppliers	Who are the current suppliers of the CAMIs? How important are they? What types of product do they supply? Which suppliers will the CAMIs need or rely on to effectively produce and market the product or services?	Focus group with community, questionnaire survey
Selling strategy	Where does the CAMIs sell its products? Who is the customer of the CAMIs right now? Is it the farmers, final consumers, private sector, cooperative, public sector, etc? What value added activities are performed by the CAMIs (labelling, packaging, processing, services associated to the product)? What are the prices of product or services sold by the CAM? Do they vary among markets? What is the method used to set the price? Why do customers buy the CAMIs product?	Focus group with community, questionnaire survey

Note: adapted from FAO (2018).

The above information can be gathered with a combination of secondary and primary sources. For primary data, a participatory discussion and mapping of the market is particularly suitable for generating new business ideas. Moreover, in this process farmers' knowledge of their specific market environment and management skills can be assessed, so this is a valuable process to support farmers in understanding and overcoming additional market-knowledge and related barriers.

2.3.3 ENSURE RULES FOR THE INSTITUTION ARE ESTABLISHED

The CAMIs development plan should foresee additional resource needs for the community to be established at conservation activities. In this direction, it is important to identify rules and mechanisms that will need to be embraced in the development plan. Factors to be considered are as follows:

1) Resources for the institution

As the CAMIs involves the creation of an institution which may conserve varieties for a long term conservation strategy, economic incentives should be created for the institution as well as for the farmers. For instance, farmers will need to establish a profit system that addresses some resources to the institution itself and takes care also of the varieties less demanded by the market. Options in this direction are systems for which a part of the profit generated by selling the products is set aside to administer the institution. These “overhead costs” are needed to carry out the basic operations of the institution and will include equipment, cost of maintenance of seeds and labor costs of the staff dedicated to these activities.

The CAMIs may also opt to require a membership fee or may provide specific services on demand for non-members. For instance, the CAMIs institution may be equipped with particular machinery and require members to pay for its usage. The CAMIs institution may also provide assistance for intangible activities, such as promotion and marketing. The idea is that some activities may be developed not alone by the farmer, but in a collective manner and in a more effective way. The CAMIs may find in these services an opportunity to increase the resources available, which will benefit all farmers. Economic incentives at this level should come in the form of a blueprint document in the business plan to make it clear how further development objectives move along the maintenance of this community conservation model.

2) Access to seeds and seedlings to all farmers or also to other communities

CAMIs provides material that is usually accessible not only to the local community but often serves a much larger scope in providing these materials to all interested farmers. The question that arises is how to guarantee the availability and sustainability of the model. For instance, seed storage material rules will need to be defined, particularly in terms of how farmers can return seeds after the harvest. Rules for access in this case should consider if only members of the community have access or also other members. Also, it will be important to consider seasonality in the access requirements. Strategies that can be applied include the establishment of a minimum quantity of seeds available at the CAMIs, the establishment of regeneration plots, and a stronger connection with the gene bank.

3) Other strategies for varieties for long term conservation

The CAMIs may include the conservation of seeds and seedlings that is not actively used by farmers, and thus, the community may have less incentive to regenerate. In this case, the cooperation with the gene bank in terms of technical support may be an integral part of the CAMIs operation. The CAMIs may also seek further financial and technical support through a multi-lateral system. In support, the CAMIs can set up a system of financing (funds) that act as a credit provider for farmers. The farmers can ask in exchange to regenerate some of these varieties (see Appendix about Opportunities for business development: The Community Seed Bank Fund Model).

2.3.4 IDENTIFY THE BUSINESS IDEA

Once the key elements of the organization, production, economic efficiency, and market for a product and service offer, as well as data regarding the market environment, have been collected, they can be used to elaborate the development strategy. The target goal will depend on the priority target, the resources available, their assumptions on implementation, and the interest of the community and stakeholders involved in the process. Goals may be expressed in specific actions, such as a higher contribution on the value chain, introducing a certification scheme, diversifying business with collateral activities, or others. Some examples are reported in the appendix.

It is important to notice that the market context, as well as the needs of the community, may be affected by substantial changes over time. For instance, access to resources, capital, and status of the conservation of varieties may be subject to continuous change that can depend on political, economic, and biological factors as well as access to technology. It is foreseeable that the benefits and costs for the CAMIs change in their structure, suggesting different strategies compared to the ones that is preferred today. Thinking of an unchangeable strategy over time is therefore impossible, but this process will provide the basis to look systematically at the factors of interest and, eventually, identify possible alternatives.

WHAT TO DO WITH THE INFORMATION COLLECTED

There are many peculiarities concerning the structure of the CAMIs, the actual and potential markets, which at this point, we hope to have captured. Given the complex nature of the objectives of the development and possible target of interest, it is difficult to provide a scheme of actions that may directly suggest the interventions needed. These will largely depend on the priority of the community as well as on the other possible stakeholders involved, as well as the policy setting that one may wish to play a role in the conservation efforts of the CAMIs. Nevertheless, it is important to try to trace the framework that will help not only in choosing the target but also stimulating further discussions. It can also help one consider potential strategies for the future.

Suggested actions for developing the business idea include:

1. Organize and evaluate the data collected. Summarize the information collected, answering questions such as:
How is the community organized?
What are the main strength and weaknesses of technical management?
How is the CAM performing in economic terms?
What are the most promising varieties for the market?
What markets are most promising for the varieties offered by the CAM?
2. Determine the key priority based on the main objective of business development. Consider the market strategy most suitable for achieving the main objective, and make sure that the incentives for long-term conservation and access are included.
3. Consider how best to present the data. Look critically at the information collected not only in terms of strong elements of competitiveness but also on the market obstacles that may arise and how these can be removed before the start. A schematization like the SWOT analysis is a widely used tool that provides a framework for having a complete picture, and it may be used as a cross-cutting tool to discuss different alternatives.
4. Draw conclusions. Identify the business idea and proceed to the marketing plan.

2.3.5 MARKETING PLAN

An essential element of the business development plan is the marketing plan. This is a further step toward the concrete realization of the business plan as it identifies the specific strategies of actions that may be adopted to ensure the success of the target goal. A marketing plan essentially outlines how to reach the target consumers or potential buyers of the product or services of the community, and it is based on a process of a deep understanding of their needs. The analysis of the needs allows one to refine the offer with a more targeted strategies to meet actual or new potential consumers.

MARKET SEGMENTATION

Market segmentation is a useful exercise to identify customer and learn about their characteristics. Segmentation is carried out by dividing the market into homogeneous groups that have different buying habits or common characteristics. The purpose is that by identifying groups, it is possible to develop marketing strategies with a customized product offer, thereby making efficient use of marketing resources (Bovarnick, and Gupta, 2003). The segments identified are then used to explore the competition or possible collaborations. This is done by looking at the other main companies

targeting the specific segment, or even identifying companies that may be interested in developing a joint strategy to sell the product.

The discussion about the types of market segmentation would be very broad. The market segmentation type depends on the target strategy and the identified position on the value chain that the CAMIs aim to explore. However, regardless of the step of the value chain positioning, it is useful to better understand the main drivers on the market in terms of the final consumers because this will be the driving demand. In this context, a possible consumer demand can be performed by looking at four main variables, which will allow us to create a profile of consumers who may be interested in the products:

DEMOGRAPHIC VARIABLES: Age, gender, income, ethnicity, marital status, education, occupation, household size, length of residence, type of residence, etc.

GEOGRAPHIC VARIABLES: City, state, region, metropolitan or rural location, population density, climate, etc.

PSYCHOGRAPHIC VARIABLES: Attitudes, lifestyle, hobbies, risk aversion, personality traits, leadership traits, magazines read, etc.

BEHAVIORAL VARIABLES: Brand loyalty, usage level, benefits sought, distribution channels used, reaction to marketing factors, etc.

Source: Bovarnick, and Gupta (2003)

A market segmentation can be performed with the goal of knowing more about the current customers; for example, consider the area of the city they come from, what other products they buy, if they are satisfied with the product or service, or if they want other products or services. Alternatively, a market segmentation can help to identify new customers. Therefore, to know their preferences and then to structure the offer accordingly.

Possible data sources for market segmentation include the following:

1. **Consumer survey at the target point of sale.** As per the objective of the market segmentation, the questionnaire will need to include some information on the consumer respondent (such as demographic and geographical characteristics), which will be used to divide responses by distinct groups. One can then understand if there are specific needs of a particular group. In fact, once the surveys have been collected, it will be possible to count the number of answers selected for each question, divide the answers by gender, by age group, by area of residence, etc., and then evaluate the results.

2. **Research previous socio-economic studies.** This allows the possibly to gather more data, for example, from already available consumer statistics, which would allow one to have a more representative sample. However, in this case, information may be less tailored to the needs of the intended market segmentation.



Nakasongola, Uganda. Seed exposition at diversity fair (October 2019) - Credit: Eleonora De Falcis, The Alliance of Bioversity International and CIAT.

COMPETITION AND COLLABORATIONS

The purpose of the analysis of competition and collaboration is to obtain information on the products offered by other companies, which are similar to or the same as the one the CAMIs is planning to offer. The information pertains to quality, price, point of sale, and other services offered. The aim of this analysis is to identify strengths and weaknesses of the CAMIs position, how other companies are operating, and if there is the possibility of collaboration that may be advantageous to the CAMIs and other companies.

Companies that offer the same or similar products are analyzed in terms of the number, dimensions, location, organizational structure (cooperatives, firms, consortiums, international firms, etc.), and strengths and weakness of their model compared to the one the CAMIs plans to adopt, including prices at the sale channels.

Depending on the structure of the market and the level of detail of the information available, the competition and collaboration analysis can be performed through research, key informant surveys of industry experts, and direct interviews of companies and other stakeholders.

MARKETING MIX

After the market segment has been defined and the market aspects have been analyzed, it is possible to identify the strategy for reaching the market and for ensuring excellent positioning with respect to the competition. This means finding out the factors to focus on based on the type of product or service that is offered, which will focus on defining the price, the promotion strategy, the distribution, and the product strategy of the CAMIs.

PRICE

The price setting is an important decision that should be based on how to place the product on the market. This decision will not only impact future revenues and, therefore, the profit derived from the chosen business model, but it will also define the consumer's target. Consumers may be associate a low price product with poor quality and skills. Moreover, to apply a policy of low pricing, it will require an increase in production in order to leverage economies of scale. This is not always possible, especially considering small scale farm products. Instead, one may set a product strategy based on quality, traditional heritage, uniqueness, and exclusivity of the product. In these cases, the price level is usually higher, and the target consumer, by definition, will be less sensitive to price.

The price setting should result from evaluations of the CAMIs economics, objectives, and reference market. Elements to consider are the following:

1. Production and marketing costs of the product (break-even price)
2. Quality of the product,
3. Type of customers,
4. Profit objectives,
5. Competitor price strategies,
6. Seasonal phenomena.

BREAK-EVEN PRICE

The break-even price embraces the idea that operating costs should be covered by the operating revenue. Therefore the break-even price represents the minimum acceptable price that will, if nothing else, cover the cost of production.

The break-even price can be calculated from the information in the enterprise budget, using the following formula:

Break-even Price = Total Variable Costs per ha/yield per ha

In addition to the break-even price, it could be useful to compute the break-even yield as the minimum level of production that you can produce to cover the costs of production. This is calculated using the following formula:

Break-even Yield = Total variable costs per ha/unit price of product

The break-even price and break-even yield can help set the price and be used as a benchmark to compare the competitiveness of product.

Source: FAO (2011)

DISTRIBUTION

The distribution policy will define how the consumer will be reached. This will include the choice of distribution channels. CAMIs distribution channels may be through a form of direct sales (schools canteen, restaurants, farmer's markets) or through retail stores, for instance. Some CAMIs may be oriented to serving the seed value chain. In this case, customers will be intermediary agents, such as other cooperative or public or private enterprises, for instance. The choice is guided by the type of product offered, the step on the value chain, and the type of customers one wishes to reach.

Within the choice of the distribution channels, several factors come into play. The costs of distribution, the quantity required for the business being profitable, and location. These are all elements that should be considered to orient the strategy to reach potential customers.

PROMOTION

Advertising and promotion are tools to be used systematically once the product is on the market but they are particularly important for the launch phase, especially if the product is new to the market or for the targeted consumers. In this delicate phase, promotion will serve to communicate about the product and CAMIs identity and highlight its strengths compared to the competition.

Advertising and promotion can be of two types, which can be also used in conjunction:

- Collective: which focus on the image of the community, the organization, and the brand; and
- Product oriented: which concerns the product itself.

Conduct promotional activities to raise awareness to use local crops and crop-based products among consumers and obtain feedback it will be extremely important for the success of the product. Tools such as radio, food fair/festivals, information flyers, websites, TV adds, workshops/seminars, etc., could be used to reach large groups of consumers to increase demand and awareness of the conservation of biodiversity (Bhandari et al., 2012). Moreover, the model should facilitate collaboration among CAMIs institutions to develop joint approaches to promote their systems. An example of these collaborations could be an association among CAMIs at the regional or national levels. Promotional activities, when organized in collaboration, are important opportunities to better understand each other's offers and complementarities. At the level of farmers and community, more collaboration can also facilitate joint study tours to identify and learn from industry best practices.

PRODUCT/SERVICE OFFER

The product offer refers to the type of product to satisfy the consumers' target needs. This is linked to the characteristics of the product that are identified as important, which help to differentiate the product. The product offer can be a combination of a product's intrinsic and extrinsic characteristics. Intrinsic characteristics can be the choice of the level of quality and the type of packaging or processing. On the other hand, the product offer can be enriched by communicating social, extrinsic characteristics that are not appreciable by the product itself. In this case, voluntary certification, collective marks, or brand can provide additional means of product offer differentiation.

The choice of product offer will also depend on:

1. The distribution channels
2. The market segments
3. The capability of the CAMIs to acquire value-added activity
4. The organizational capability of the CAM

STEP 3: ASSESS THE ECONOMICS OF THE BUSINESS DEVELOPMENT PLAN

REVIEW REVENUES, COSTS PROFIT AND NEED FOR INVESTMENTS

REVIEW ACCESS AND MANAGEMENT OF FINANCE

2.4 PREPARE PROJECTIONS ON THE ECONOMIC IMPACT

REVENUES

The revenue estimation should be computed with the production potential that the CAMIs aim to sell and the projected prices. The production potential should be estimated to take into account both production and consumers demand. Revenue projections should be based on solid assumptions, as factual as possible. For example assumptions about prices for the product maybe based on the historical performance (prices for which the product has already been sold by the farm or by similar farms), the market, the level of competition, and the quality of the product or services. For production and productivity this is based on the available facilities, labor and skills which will enable a certain level of production and with certain characteristics. Finally, for the consumers demand on the analysis of market trends identified also in the market analysis.

COSTS

To produce a profit figure, the revenue forecasts should be compared with costs that the CAMIs will incur. There will be two types of costs to consider: variable and fixed. Variable costs need to be considered as the additional costs associated to any new units of a product or service. Variable costs will probably include seeds, labor, irrigation fuel, or harvesting costs, for instance and information can be drawn from existing records of production, as well as from market surveys and talking to vendors for the additional marketing costs. Another source of costs is fixed costs, which do not depend on the level of production, instead they are constant throughout time, even when the farm does not produce or sell. They include rent, administrative costs or salaries of the permanent staff. The development of a business may require new investments in fixed assets, such as new equipment and capital. If this is the case, the business projection should also reflect on the need for investment and account for the additional fixed costs. As already mentioned in the module 2.2, for fixed assets,

like equipment and machinery, a fixed portion of their costs will be deducted from yearly revenues over a number of years.

PROFIT

Profit is usually computed on an annual basis and corresponds to the difference between the revenues and costs. Indeed, strategies may take years to achieve their full operational form, and the profit forecast should reflect this transition. It is recommended that the profit forecast is computed for a minimum of three years to a maximum of five years, as after that, the estimate would be too unreliable (Bovarnick and Gupta, 2003). The profit analysis should be complemented by a risk management plan where farmers identify the most important risks for their business and the strategies to effectively minimize the negative effects.

An important aspect to consider is that many farms have fluctuations in their cash availability over the production year. This process is related to the seasonality of the agricultural products they sell, but also, for instance, to the times of payments for the product sold, which usually comes later with respect to the time in which the product is sold. For this reason, an estimate of the cash flow throughout the year should be performed. This will enable to assess the financial requirements or cash needed.

ACCESS AND MANAGEMENT OF FINANCE

Once the financial position is estimated, a business development strategy needs to assess which financial institutions might be a source of credit and what the requirements are. Borrowing money will constitute additional costs for the CAMIs; thus, in order to decide whether or not to take the

INTEREST RATES. Interest is the cost of borrowing money. It is usually given as a percentage. Interest rates may vary depending on where you get your loan. There are usually government laws that limit the interest rate to protect you from dishonest lenders.

BANK CHARGES. In addition to interest rates, some lenders may also charge a certain fixed amount for processing the loan. This may be charged separately, or it may be made part of the interest rate.

LOAN REPAYMENT PERIOD. This is the time over which you have to repay the loan. The period may also vary depending on where you get your loan. You should choose a repayment period that is most appropriate for your enterprise.

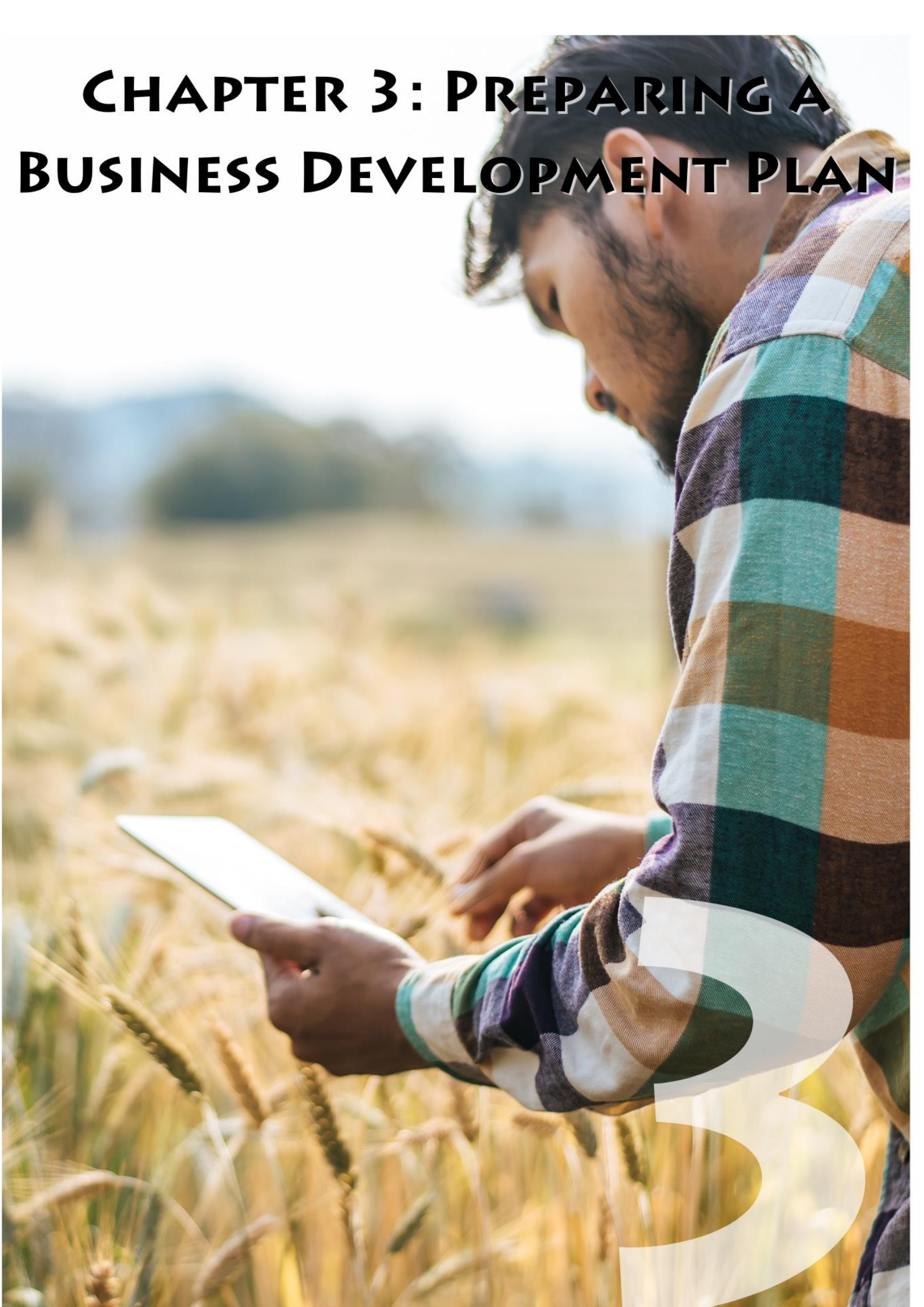
GRACE PERIOD. This refers to the period of time between getting the loan and when you have to start repaying it. Lenders usually understand that some enterprises may need a longer period of investment before realizing profits. You should choose a grace period that is most appropriate for your enterprise.

loan and from which institution, the following conditions or terms should be analyzed:

Source: FAO, 2011.

The costs of loans will have to be repaid along with the borrowed capital. Therefore, subsequent revenues must be sufficient to repay these costs and other ongoing costs.

CHAPTER 3: PREPARING A BUSINESS DEVELOPMENT PLAN



CHAPTER 3: PREPARING A BUSINESS DEVELOPMENT PLAN

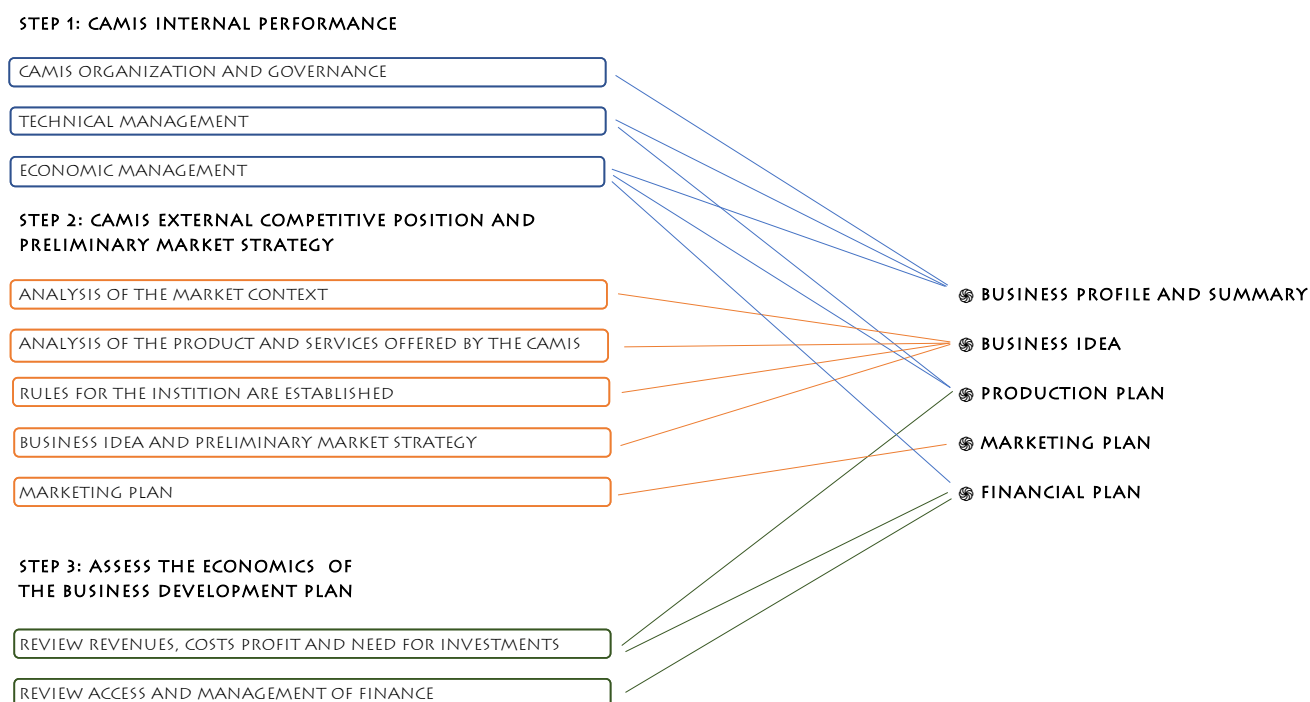
The business plan is the document that synthesizes and organizes coherently the information collected to explain what the target goals for the CAMIs are and how these will be achieved. The business plan is the only document that combines the information on the present status of the farm and the pathway for its development under the farm's chosen strategy. As such, the business plan is very important for the business organization, providing the reference document for the objectives underlying their activities. Moreover, it will be needed for external communication. In fact, the business plan is the document that normally, lenders or investors require; therefore it may be necessary to seek funding sources for the business.

In terms of content, the business plan builds upon the elements and analysis explained in the sections above. The organizational structure of the document it will be comprised of four sections:

1. Business / Industry Overview
2. Production Plan
3. Marketing Plan
4. Financial Plan

Each individual section contributes to the resulting overall business plan, giving you a document to access the progress of the business and therefore of the conservation programs through business development.

Figure 3. 1 The construction of a business plan



BUSINESS PROFILE AND SUMMARY

The business profile and summary are linked to the first step of the business development process. It compiles information about the history of the CAMIs, its organization, and scope. It gives the reader an introductory overview of how the business operates, including governance and linkages with other institutions and entities. The business profile content is not limited to the structural information, but rather also includes information on the main products or services of the CAMIs, including its social role. It includes information about the number of seeds conserved, the number of seeds commercialized, and if it provides training and assistance to farmers (for instance, good cultivation practices). In effect, the business profile section should reflect the image and views of the CAMIs, combined with how this is reflected in the current product or services offered.

BUSINESS IDEA

The business idea section is about what the CAMIs aims to develop, its target, and its goals. It describes the business idea and introduces how it intends to make it operational. The business idea could be to increase CAMIs commerce for a certain crop by at least 10%, and the strategy involves acquiring a processing machine to increase the value added for the product to sell on the local market. This section builds upon the second step of the business development process and takes into account the consideration of the third step, namely, how the social role of the institution will be

embraced in the development strategy. The SWOT table prepared during the second step can also be included in the business idea section. This discussion will argue how the strategy reflects and builds upon a preliminary analysis of the market/sector situation and internal capacity. Finally, to recall what was underlined in step 2, the business idea can include short-term and long-term objectives and a related operational plan.

PRODUCTION PLAN

The production plan is the projection of the product and services that the CAMIs plans to achieve. This section draws from the information on the characteristics of the CAMIs (first step) and makes production projections based on the process and resources it will need to achieve the target goals. A thorough production plan should detail the technical and economic management so that the scheduling of resources needs can be easily examined. The production plan will detail both the historical performance and show the production target of the business. Crop production plans should include the estimated acreage and output for each crop, including different products which might be obtained by the same crop. Estimated production for the market can then be combined with the anticipated price and cost of production (step 4) to generate some of the figures needed for the financial component.

MARKETING PLAN

The marketing plan draws directly from the second step in its dedicated operational section. The business plan will include the market that the CAMIs is planning to serve, why the CAMIs intends to sell a particular product, and the elements of the marketing mix: the product (in terms of quality, services, branding, etc., as indicated in Section 2), the price, the distribution, and the promotional strategy. As this section underlines the market characteristics more specific to the business environment that the CAMIs wants to explore, the section also introduces the elements of competition, including the main competitors and their products, as well as the positioning of the CAMIs strategy with respect to these elements.

FINANCIAL PLAN

The financial plan draws from Step 1 & 4. It will show past economic performance and projections of the financial records. Three projections are to be made: income statement, balance sheet, and cash flow. The three projections are used to appraise the earned income relative to the investments.

The **income statement projections** will set out the expectations for revenues, expenses, and profits. It will specify the quantities and costs (variable and fixed) of all inputs and outputs and provide explanatory assumptions behind the figure. If the business development plan of the CAMIs is to

commercialize more than one crop or product, then it should also include a dedicated income statement for each.

The **balance sheet projections** include assets and liabilities that the CAMIs foresees and considers all business activity (not crop-specific). The information collected in the technical section and economic section will make it easy to account for the CAMI's asset available, their value and update the figures of the balance sheet.

The **cash flow projections** are essential to ensure that the CAMIs will have the necessary cash flow available throughout the year to meet the daily needs of the business. Usually, the primary products will have seasonal fluctuations while processed products a less pronounced variation.

The financial plan will also include loan positions, i.e., loans already acquired and new loans required. The information are examined in step 4 in the access and management section and will indicate the condition of the loan and the remaining period for payment repayment. This is important to managing credit risk, debt structure, and interest costs.

Finally, a business plan it will account for possible changes within the business and in the market conditions. A risk management plan will comprise the most important risks for their business and the strategies to effectively minimize the negative effects. Setting measurable targets will help identifying the success of reaching those targets or apply any of the corrective measures. It is important to spell out the indicators of success , how will they be measured, and even at what time they will be evaluated toward the target.

APPENDIX



APPENDIX

OPPORTUNITIES FOR BUSINESS DEVELOPMENT

HORIZONTAL AND VERTICAL INTEGRATION

One of the most common market strategies to enhance the competitiveness of local crop diversity is the creation of forms of the integration of supply. Many CAMIs have created or collaborated with cooperatives to jointly sell or buy products and acquire a greater market weight to debate better prices and increase profit margins. Cooperatives or other forms of horizontal integration—like farmers' groups or consortiums—generate greater external empowerment and are better positioned to access funding, which may be used to invest in technologies and growth. Moreover, by developing infrastructure together, the costs are shared with a lower impact on individual producers.

Horizontal integration can be followed by vertical integration, i.e., the acquisition of further steps or processes along the value chain, either downstream or upstream of production. Farmers often sell or exchange primary products that are processed elsewhere and are eventually sold for many times more than the initial sale price. Forms of vertical integration can contribute to recapture additional value per unit to perform more activities along the value chain. Additionally, value-added products like processed products may have a longer shelf life and storability; furthermore, value-added products usually have more stable prices on the market.

Requirements. For the establishment of aggregation forms, community cohesiveness and commitment to jointly face the market must be strong. Rules for the management of the integrated activities will need to be shared identified and commonly agreed upon. For instance, at the establishment of a cooperative, the production delivery method and standards for the production itself will need to be defined and agreed upon by all members. In the same way, the cooperative will need an organizational management structure and control bodies to ensure compliance with internally defined standards. In terms of facilities, selling the production jointly will mean disposing of production storage structures, which may require further investments and resources that everybody should agree to and commit to providing. Finally, both horizontal and vertical integration, by increasing the complexity of the operations, require additional management skills and new technical competences to address the new functions and roles.

VALUE ADDITION IN THE SHORT-VALUE CHAIN

Short-value chain and local food systems can help increase the demand for the product with more direct communication and engagement with final consumers. This business model is characterized by the important element that the consumer can clearly associate the product with a type of production that embraces social, economic, and environmental values (Marsden et al., 2000). The fact of recognizing values such as a local production, respect of the social conditions of workers, and the conservation of agrobiodiversity, are elements of differentiation and value addition. The consumer may be willing to pay a price premium.

Table A 1 Examples of short-value chain strategies.

CSA (COMMUNITY SUPPORTED AGRICULTURE)
Subscribers receive a share of the harvest in return for money and labour.
OFF FARM SALES – COMMERCIAL SECTOR
<ul style="list-style-type: none"> - Farmers’ markets and other markets - Farmer owned retail outlet - Food Festivals / tourism events - Sales directly to consumer co-operatives / buying groups - Sales to retailers who source from local farmers and who make clear the identity of the farmers.
OFF FARM SALES – CATERING SECTOR
<ul style="list-style-type: none"> - Farmers’ markets and other markets - Farmer owned retail outlet - Food Festivals / tourism events - Sales directly to consumer co-operatives / buying groups - Sales to retailers who source from local farmers and who make clear the identity of the farmers.
OFF FARM SALES – CATERING SECTOR
- Sales to hospitals, schools etc. The catering sector institution in this case is understood as the ‘consumer.’
FARM DIRECT DELIVERIES
<ul style="list-style-type: none"> - Delivery schemes (e.g. veg box) - Internet sales - Speciality retailers

Source: Joint Research Center, European Union (2013).

In addition, CAMIs can find market opportunities in creating food hubs (Manikas et al., 2019), thereby establishing collaboration with other actors along the local value chain to gather and share information and create a sustainable food system. Agro-food hubs are agreements between producers, wholesalers, retailers, transport carriers, and even consumers, based on the idea to create a cluster for continuous collaboration among the agro-food supply chain partners. This can also involve the tourism sector and research institutions.

Requirements. This strategy aims more specifically to increase the value of the product. It is important to understand the market channels that can better valorize the product and the channels where the product can really meet the consumers who would be interested and willing to pay more for the characteristics borne by the product. The short-value chain provides opportunities through direct communication with the consumer, so it is of paramount importance to convey a clear product valorization strategy. This implies understanding that values matter most for the target

consumers and how the product that is offered meets these values. There are several forms of developing a short-value chain. Table 1 reports some examples.

DIVERSIFY BUSINESSES

The diversification of the activities and products offered by the CAMI is certainly another enhancement strategy. Educational activities developed to draw attention and share local knowledge on what the CAM does maybe linked with collaboration with public and private institutions. Activities of this kind include, for instance, the possibility of developing CAMIs as educational centers, where farmers play a key role in spreading knowledge and awareness regarding the conservation of natural resources and biodiversity. An example may be to sign agreements with the local university or other educational centers with which to activate internships at the CAMIs and follow their activities for some time. Establishing these services and collaboration with the university, the CAMI may benefit from technical and production assistance to produce positive effects, as well as to cultivate a local network between producers and educational centers. Additionally, farmers of the community may provide services for farmers regarding the skills and knowledge developed about cultivation methods, seed savings, and ensuring quality in seed production.

Requirements. This strategy requires the development of skills and abilities to professionalize farmers in different roles and capacities. Moreover, to design the CAMI with the role of a knowledge hub would require specific infrastructures in support, including rooms or outdoor areas for meetings, training sessions or other events, demonstration plots where different conservation techniques are tried and showcased, and resource centers or libraries to hold information.

VOLUNTARY CERTIFICATIONS

Certifications often represent a key market tool to communicate the respect of some standards on the production or process methodology. Certifications usually involve a third party who guarantees compliance. The certifications reduce the so-called information asymmetry, i.e., they allow communication to the consumer or the buyer, especially regarding characteristics that are not visible in the product or easily accessible.

An example for the protection of local products is the geographical indications of origin. This type of certification guarantees to the consumer the purchase of a product from a specific place of production that gives it particular intrinsic characteristics; moreover, this communicates social values such as the protection of traditional and typical production methods of that place.

Other voluntary certification options are those produced by the International Federation of Organic Agriculture Movements (IFOAM), Organic International, in line with the standards of the Rainforest Alliance's Sustainable Agriculture program, UTZ Certified, or the Fairtrade Labeling Organizations (FLO). Moreover, distribution chains often require the adoption of their standards in order to sell through their channels.

Requirements. Certifications can provide a means for a higher value of the product on the market when consumers are willing to pay a premium price for the characteristics it communicates. In the context of typical and traditional production, the certifications of origin are protected under different legal forms, depending on the countries; however, in some developing countries a regulation has not yet been developed. Certification processes require the availability and accessibility of institutions for product certification. Moreover, a certification process may be costly, and the compliance requirements may require a long time to be embraced in the farm system, as a cost-benefit analysis might be necessary.

THE COMMUNITY SEED BANK FUND MODEL

The model adopted by Nepal is a model that encourages conservation and self-generates financial resources for the operational activities of the CAMI. In this model, the CAMI functions as a small credit bank that provides loans free of collateral to guarantee credit to its members.

In the establishment of the fund, an initial part is financed by the members of the community (ranging from 10 to 25% of the total anticipated amount), while it can be subsequently integrated with a part that is added by the project-related donor, including funding and contributions. The fund is used to finance income-related activities both on-farm and off-farm.

Within this system, members of the community have access to small amounts of credit to stimulate small investments and increase financial resources and income within the community. Credit is given with priority to the poorest farmers; a small interest rate is asked in return for the credit, and it can be used to cover staff salaries and other operational expenses. This way of operating also reinforces the important social role of the community seed bank.

The fund also plays a fundamental role in the conservation of local varieties. The farmers who receive funds in return agree to cultivate some local varieties, which are not as much in demand by the market. In this way they help the CAMIs to regenerate rare local species by contributing to the ex-situ conservation activities of the seed bank community.

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Other useful website

Small Business Resource Guide, U.S. Small Business Administration
www.sbaonline.sba.gov/starting/startup.pdf

The Business Plan, U.S. Small Business Administration
www.sbaonline.sba.gov/classroom/pblan914.html.

Business and Biodiversity <https://www.iucn.org/theme/business-and-biodiversity>

Centre for the Promotion of Imports from developing countries <https://www.cbi.eu/>

Agribusiness planning, U.S. Extension Agricultural Economist of Texas A&M University System.
<https://agrilife.org/texaslocalproduce-2/business-planning/>

The background image shows several woven baskets filled with different agricultural products. In the top left, a basket contains dark, round tubers. To its right, a basket is filled with a bright yellow powder. In the middle left, a basket contains finely shredded green leafy material. To its right, a basket contains a mixture of light-colored, shredded plant material with some green and purple flecks. In the bottom left, a basket is filled with a vibrant orange powder. In the bottom right, a basket is filled with a bright yellow powder. The text is overlaid on the top half of the image.

**COMMUNITY AGROBIODIVERSITY
MANAGEMENT:
TECHNICAL NOTE FOR
BUSINESS DEVELOPMENT**