



USAID
FROM THE AMERICAN PEOPLE



EnterpriseWorks/VITA

Fighting Poverty With Profit



The Conservation Marketing Equation

**A manual for conservation and
development professionals**





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EnterpriseWorks/VITA combats poverty by helping small producers and other entrepreneurs build sustainable businesses that create jobs and increase productivity, market opportunities and incomes. EWV achieves this by expanding access to appropriate technologies, technical assistance, knowledge and finance.

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Written by Ann Koontz

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Preface

The Conservation Marketing Equation manual is designed as a decision support tool to be used by an individual or project team whose goal is to better understand product development and marketing that promotes conservation and social equity. While going through this manual, you most likely will not be able to answer all the questions. That is OK. There are worksheets and questions intended to highlight the different aspects that you need more information on in order to move to the next step - the completion of a business plan for your product and enterprise.

As a decision support tool, the manual is intended to assist conservation and development professionals in choosing business opportunities (products or services) that conserve biodiversity while reducing poverty for marginalized rural people. The assumption is that the proposed opportunity needs to be financially sustainable and this tool provides specific information and product worksheets to assess product market readiness.

The manual allows you to prioritize your product development efforts in the areas in which you lack information, and aims to provide valuable insight on where to find this information. The examples used throughout the text incorporate actual product development and marketing lessons from a decade of field work by EnterpriseWorks/VITA and its partners in Asia, Africa, and Latin America.

Introduction

There is growing interest among companies and consumers to purchase fair trade and environmentally friendly products, but a huge divide still exists in integrating conservation, socio-economic equity, and business principles. Conservation marketing has to address three principles, which in their simplest terms can be expressed as:

- **Conservation - Protect and conserve biodiversity**
- **Socio-economic equity - Promote equitable livelihoods for people**
- **Business - Maximize profits**

The win-win-win scenario is the goal, but market forces (business) have yet to integrate the true costs of environmental degradation and poverty into business models. By the same token, many conservationists and social scientists struggle to integrate business principles when marketing products. There are win-win-win products and services opportunities, but many products will have lose-win-win, win-lose-lose, etc. equations. The trick is to determine the difference early in product exploration.



Does conservation or business development take a higher priority? This manual argues that if you use product development and marketing as a strategy to achieve conservation and social equity then you need to satisfy business principles first. If after satisfying business principles, the product does not meet your other objectives, then choose another product or strategy rather than ignore market forces. For example, if planned timber harvesting (lumber as a product) is not viable because the market requires a minimum volume that is not biologically sustainable, STOP - do not pursue lumber as a product. It may be that the project has to invest in forest protection as a strategy combined with afforestation first, before lumber is a viable product.

Marketing in a Conservation Setting

The development of a business that sells a product or service in a setting where conservation and social equity are priorities means:

- **All traditional business principles apply (meeting target customers needs better than competitors).**
- **The product quantity and timing of when you have the product to sell is dependent on sustainable harvesting practices and product seasonality.**
- **Conservation and social equity messages are part of the product's "unique selling points", but CANNOT make up for poor quality and/or non competitive pricing.**

If after satisfying business principles, the product does not meet your other objectives, then choose another product or strategy rather than ignore market forces.

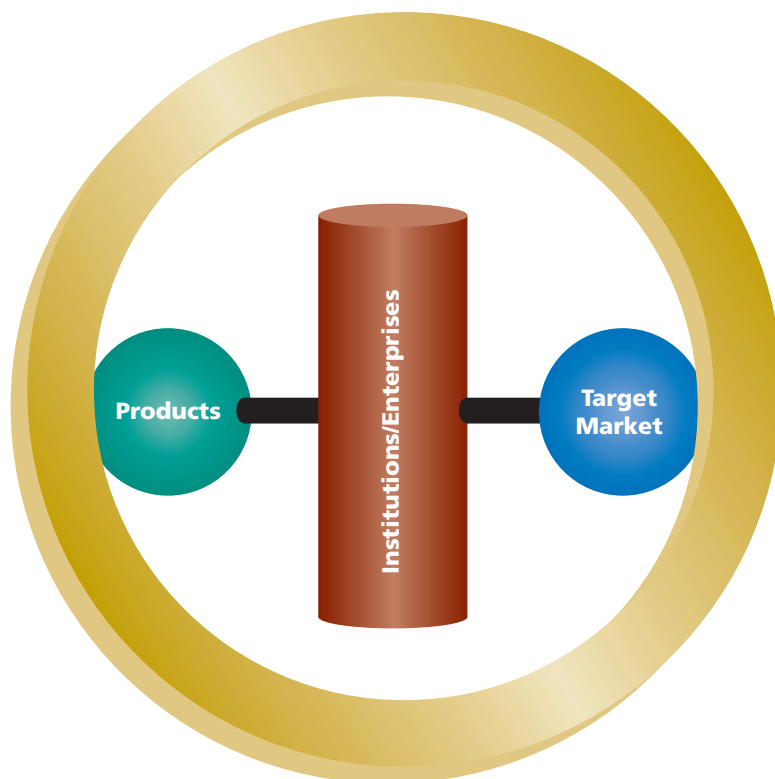
Conservation marketing entails many functions from sustainable production and harvesting of products to the processing and marketing of final products. These functions are accomplished at different places and by a variety of firms. Conservation marketing efforts need to identify and define what kinds of institutions/intermediaries are and will be involved to undertake these functions in an effective, efficient and sustainable way. Many times, existing institutions/intermediaries need to be strengthened to meet conservation goals.

Often times, there is a need to develop new organizations (community based groups, enterprises, networks) to undertake the required functions to achieve conservation results. If conservation marketing is appropriately planned, local communities can work to preserve the integrity of their surrounding natural environments while simultaneously bolstering their own economy.

As Figure 1a depicts, conservation marketing is embedded in and influenced by broad level context factors (social/political, economic/market, technology, and biological/ecological). Conservation marketing therefore has to incorporate compatible strategies on product, institution/enterprise, and market in relation to context factors to be effective and sustainable.

The steps involved in assessing and bringing a product to market can be overwhelming. The conservation marketing equation breaks down the steps (Figure 1b) and leads the user through simple worksheets to make an informed decision on product market readiness. Steps one through four are structured so that non-promising products or services can be eliminated at each step - no need to go through all four steps to reach a product elimination decision. Table 1 provides an overview of the steps and worksheets. Take out the worksheets from the hard copy packet now, or if you are using an electronic version of this manual, click on the links to access the worksheets.

Figure 1a: Overall Context for Conservation Marketing



[C:\Worksheet 1-quick sort method.xls](#)

[C:\Worksheet 2-product context.doc](#)

[C:\Worksheet 3-product costing.xls](#)

[C:\Worksheet 4-subsector matrix.xls](#)

[C:\Worksheet 5-SummarySheet.doc](#)

Figure 1b: The Conservation Marketing Equation



Table 1: Overview of Steps for Conservation Marketing Equation

	Sub-Steps	Summary Guidance
1. Select and define your products and market(s) in relation to context factors Pages 4-7	<ol style="list-style-type: none"> List products Identify target markets and demand for each product Understand INITIAL product feasibility and attractiveness Select the most promising products Define six attributes of each promising product 	<ol style="list-style-type: none"> Organize meetings and discussions with local communities, traders, and resource persons to generate product ideas Contact trade associations, chambers of commerce, government offices, market research companies to obtain market information. Useful site: www.intracen.org Use "Quick Sort Method" Product selection criteria sheet found in this tool. Identify product conservation marketing criteria (see Box 1 and use Worksheet 1) Eliminate products that don't meet criteria; continue to define the six attributes of remaining promising products Use Worksheet 2 to define six attributes
2. Define product quality, quantity and price Pages 8-13	<ol style="list-style-type: none"> Understand quality levels for your product and define your product's quality Identify your production capacity (quantity) and relate with target market demand Understand your product's cost, revenue and price structure 	<ol style="list-style-type: none"> Search for international "grading" systems on line - consult www.sgs.com for specialty products Start with biologically determined sustainable harvesting/use levels and promise no more than 50% to 75% to the market. Use Worksheet 3 to define product costs and revenues
3. Define regulations/certification Pages 14-16	<ol style="list-style-type: none"> Identify relevant local, regional, national and international regulatory requirements Identify useful certification systems Identify gaps in meeting regulations or qualifying for certification and identify if any existing intermediaries can help fill the gaps 	<ol style="list-style-type: none"> Investigate local laws and review export regulations for target markets (see list of websites on page 15) Visit http://www.greenerchoices.org/eco-labels/reportLabelSearch and www.isealalliance.org to get an overview of the range of certification systems that might apply to your product Identify what participants are already active in regulations and certification (see subsector matrix, Worksheet 4) to identify participants
4. Define institution/enterprise and value chain intermediaries Pages 17-19	<ol style="list-style-type: none"> Identify the existing participants, functions and resources Define your institution/enterprise point(s) in the value chain Explore how your institution/enterprise can interact with other value chain intermediaries 	<ol style="list-style-type: none"> Use subsector matrix sheet (Worksheet 4) to identify participants, functions and resources for your product Be sure to include your institution/enterprise in the matrix exercise Use a field manual for subsector practitioners (www.microlinks.org) to understand subsector and value chain analysis. Within website look under "resources" for "Gemini funded" and then "A Field Manual for Subsector Practitioners"

Step 1: *Select and Define Your Product and Market*

It is strongly recommended that even for groups that have their products defined that they use the quick sort methodology (see box 1) to confirm the products meet conservation marketing criteria.

Ready to jump right in? Take out *Worksheet 1 – Quick Sort Method* and list the products and services you are considering. Eliminate products that fail on the product screening table of the worksheet and transfer the most promising products and services to *Worksheet 2 – Product Context*. There are two examples – honey and cardamom that have been pre-filled for the Product Context Worksheet. Review these first before completing the worksheet for your product(s).

The worksheets can be done by an individual, but work best if you assemble a few people to allow for greater input and discussion. Some groups will already have a short list of products, while other groups need help to identify promising products.

These worksheets can also be used with wider stakeholder groups to help them understand the pros and cons of product and service ideas and have a systematic objective framework to evaluate choices.

The worksheet reviews the following items to define the product.

- **List the products you want to market**
- **Identify target markets for each product**
 - Where is the market (local, regional, national, international)?
 - Who are your buyers (final consumers, retailers, wholesalers, traders, processors, etc.)?
 - What do the buyers want - product attributes and marketing logistics (when, where, what quantity, what shipping method, what sales terms)?
 - How do you access the market (through intermediary, direct contact – email, phone, visit)?
- **Understand product feasibility and attractiveness (use Worksheet 1 – Quick Sort Method)**
- **Select the most promising products**
- **List assumptions for each promising product using six attributes:**
 - a) Level of product processing (raw material, semi-processed, processed, final packaged to consumer)
 - b) Type of product – commodity or specialty
 - c) Type of product in local context (established marketing chains or product with no locally established marketing chains)
 - d) Who will produce the product; is it a new or existing product for them to produce (explains how existing skills can be used, or level of training needed)?

BOX 1

Conservation marketing criteria for product/service selection (Quick Sort Method)

Economic/Market

- Market demand (local and export)
- Profitability (considering product price)
- Access to market/competition
- Investment climate

Biological/Ecological

- Potential to address threats to biodiversity
- Ecological functions/services
- Product supply
- Sustainable harvesting/use potential

Social/Political

- Impact to local economy and livelihoods (product considering price)
- Compatibility with local interests, knowledge, and skills
- Regulatory compatibility (local, national, and international)

Technology

- Access to appropriate technology
- Required market infrastructure (transport, storage, packaging, etc.)
- Technical expertise and quality control capacity

- e) In producing the product, how will threat(s) to biodiversity conservation be abated (your hypothesis on this)?
- f) Are there other socio-economic or conservation objectives you want the product to meet (common objectives are increase women's or youth employment; expand micro enterprises, etc.)?

Review the discussion for each attribute (see items a – f below) and the two examples pre-filled in the worksheet before starting your own *Worksheet 2 – Product Context*.

a) Level of product processing (raw material, semi-processed, processed, final packaged to consumer)

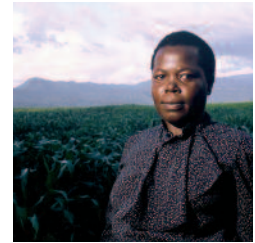
Specify if you plan to sell the product in raw, semi-processed, processed, or “*packaged for final consumer*” form. “*Packaged for final consumer*” means you will need appropriate packaging and labeling for target markets. Typically, there are opportunities to increase value at each level and/or to create a specialty product with additional processing, obtaining certifications, and specific packaging.

b) Type of product – commodity or specialty

Make sure you understand if you have a commodity or specialty product. A commodity is a good which is interchangeable with another product of the same type and quality level – examples include coffee, oil, nuts, essential oils, cotton, grains, and many other foods.

Commodities can be sold in raw, semi processed, or processed forms and often have grading systems (e.g. Grade A, Grade B, whole cashews, cashew halves, cashew pieces, etc.). Commodities coming from different sources can be combined to supply a customer. Commodities frequently have price information publicly available from futures markets (examples: coffee beans, cashew raw nuts, some essential oils).

Specialty products are distinguished by country of origin, production and processing methods, and social and environmental attributes. **Specialty products can also be sold in raw, semi processed or processed forms and frequently include only the highest quality products.** It is more difficult to combine specialty products to supply a customer. It is harder to get price information on specialty products, as their unique selling points can give them access to a variety of niche markets. Start by looking for comparable products that are classified as a commodity to get an idea of price levels.



What is a value chain?

A value chain is a network of firms that supplies raw materials or services, transforms them, and distributes finished goods and services to a particular consumer market.

ADVICE: *If you are marketing in a conservation setting, strive to move products from commodity to specialty in local markets and definitely into the specialty category for export products. Only a specialty product can carry the environmentally and socially unique selling attributes through to the final consumers. If your product is a true commodity then to achieve your conservation goals, there will need to be enforced sustainable production/extraction in place. True commodity markets will not be making purchases based on conservation and fair trade.*



**c) Type of product in local context
(established value chains or product has
no locally established value chains)**

Does the product have locally established value chains or not? In other words, are there people collecting or producing the product and do local traders and industry buy, process and/or export the product? Products can be well established in global markets, but new to a local market and have no value chains established for the product.

ADVICE: *Creating a value chain is a substantial investment. If you choose a product that does not have a local value chain, be prepared to make a greater investment and to intervene or recruit existing private sector firms to invest in the value chain. This can take years to develop. By contrast, working with a product that has an existing product value chain can often yield results faster and with a lower investment. Developing or modifying value chains to support conservation and social equity objectives is still relatively new, but very much needed. It will require patience and a long-term vision and commitment.*

**d) Who will produce the product? Is it a
new or existing product for the
producers? Explain how existing skills
can be used, how activity fits into
existing livelihood strategies, and level
of training needed**

Is the product new or existing to the target producers? A product may have locally established value chains, but it can still be a new activity for your target community or producers. How a new product complements or competes with other income generating strategies in the community has its pros and cons for producing high quality products that meet market demand and abate

threats to biodiversity conservation. For example, a new product that can be made when alternative income generating options are low often will entice people to take greater risk. The same activity that competes head-to-head with a main seasonal livelihood will not be as attractive. Understanding of full opportunity costs and skills of the target communities is required for product selection and marketing intervention design.

Building on existing community skills makes it easier for producers to try a new business opportunity. For example, building on traditional non-timber forest products harvesting in Nepal generated broad-scale support for value-added processing interventions. It was a known and comfortable product area for the communities. By contrast, when silk production was newly introduced into an area, uptake was slower as silk production had to be integrated with existing agriculture and livestock activities. While both products are now successful, the training needs and value chain development for the silk products were greater.

ADVICE: *Draw a simple livelihoods' "high and low season" calendar. For example, the calendar could include when major crops are planted and harvested, high and low peak fishing seasons, etc. Then list major months when cash is needed (usually for school fees and festivals and holidays). This will give you a quick snapshot of when additional income will be most needed and therefore act as a greater incentive to try a new product and follow conservation controls.*

e) In producing the product, how will threat(s) to biodiversity conservation be addressed (your hypothesis on this)?

When marketing a product in a conservation setting, the assumption is that the product will somehow address a threat(s) to biodiversity. Ideally, you should have a conceptual model that has identified the threats to the target area. Conceptual modeling is a common tool in conservation. To conserve a given target area, a conceptual model identifies the major threats to the biodiversity and the logic behind the interventions (activities) implemented to address the threats. In this context, if a project chooses an economic intervention (development of a product or service) then it needs to clearly link the product to abating a significant threat to biodiversity. (See living landscape website, Bulletin 5: http://wclsivinglandscapes.com/media/file/LLP_Bulletin5_ConceptualModels_EN.pdf for more information on conceptual modeling.)

You should be able to clearly articulate how the product, *in combination with other interventions*, will help address a threat in a simple hypothesis form. If you cannot do this, then it will be hard to translate into a marketing attribute and will most likely not convince the local people to conserve. The product or service cannot be the only intervention that lessens the threat. At a minimum the product-based intervention must be complemented by:

- **Conservation research to understand sustainable harvesting levels, use impact, etc.**
- **Biological monitoring to determine what impact the product extraction or resource use is having on the overall biodiversity on an ongoing year-to-year basis**

- **A system of enforced controls to limit resource use to match hypothesized sustainable use rates or when required enforce outright ban of use in specific areas or “harvesting” of specific species**

A product-based intervention to achieve conservation will only work if it is combined with ongoing enforcement and monitoring. When EnterpriseWorks/VITA and its partners promote products that conserve biodiversity and reduce poverty, the sustainable use rates were mandated not for conservation’s sake alone. Rather, the long term viability of the enterprise’s products required mechanisms (field research to determine best practices in managed regeneration, harvesting controls, and ongoing monitoring) to maintain enterprise profitability.



- f) Are there other socio-economic or conservation objectives you want the product to meet (common ones are increased women or youth employment, and the expansion of micro enterprises, etc.)?** Most products being promoted in a conservation setting have some “donor” or special interest financing. Donor and special interest financing often require that products serve other criteria that have little to do with markets. Common examples include: must employ women or youth, must support micro enterprises, etc. When developing a product or service list all the criteria the product must meet. The more criteria, the harder it is to offer a cost competitive, quality product to the market. You can have fair returns going to producers who are protecting the natural resources, but size and scale of the enterprise and composition of work force may require flexibility.

A product-based intervention to achieve conservation will only work if it is combined with ongoing enforcement and monitoring.

Step 2: Define Product Quality, Quantity, and Price

After working at numerous trade shows over the last decade, the following sums up what EnterpriseWorks/VITA and its partners who have exhibited products hear REPEATEDLY from wholesale and retail customers.



- **Wow, I love this product, great conservation and human interest story, my customers would love this!**
- **What is your minimum order size and how much can you supply on a monthly basis?**
- **How much is the product, are there volume discounts, what are the shipping arrangements, can you do containers?**
- **Do you have a local distributor in the country?**
- **Does it have organic or Fair Trade certification?**

Notice that the conservation/social equity attributes of the product **capture** the buyers' attention, but then the buyers quickly move on to basic business questions that they expect to be answered. Buyers, as the name implies, want to buy. That means they need hard facts on what you can sell when, in what quantities, quality, and price. You therefore need to determine or get an independent opinion of your product's quality level; determine how much you can supply and when; understand how much it costs to make; and get your product to the market so you can set an informed price in conjunction with competitors' pricing structures.

Product Quality

Many agriculture and natural products have established grading systems for quality. With the advent of *Google*, it is very easy to find the grading system for many products. Simply put in the type of product with "grading" in your Google search and within minutes you can educate yourself on the internationally accepted grading system for your product. For example, "coffee grading"; "tea grading"; "wool grading"; "essential oils grading"; "beef grading", "honey grading", etc. Often the grading system will even specify the way in which the product must be packaged for transport. These types of grading systems are mostly for raw materials and semi-processed single material goods.

Internationally accepted grading systems for assembled and composite products usually do not exist. Examples of such goods include: handicrafts, jewelry, hand knitted goods, personal care products made from herbs, etc. Instead buyers assess samples prior to making orders and apply more subjective criteria (workmanship quality, uniformity of size and color, durability). For example, a buyer may be interested in ordering rattan baskets. The buyer would assess samples for workmanship, quality of finishes used, defects in raw materials used to weave baskets (e.g. insect or mold damage, durability, and consistency of size and color).

Whether your product has a grading system or not, it is prudent to get feedback on product samples from established buyers. For some products, independent lab tests may be required to establish product quality and ensure that it meets acceptable levels of various contaminants, moisture, etc. If this is a new area for you, it can be overwhelming. One web source to start with is www.sgs.com. SGS has regional offices and labs that offer grading analysis for smaller companies.



Once you know what the quality standards are for your product and have an idea of your product's quality, then determine where you are in the product's value chain and how product grading and quality control are maintained between your enterprise and the final market. A high quality product can quickly become a low quality product if it is dependent on a value chain that does not support maintenance of quality (proper storage, grading, etc.)

For example, high quality rattan poles in the Philippines that do not receive post harvest treatments and proper storage grow black mold that stains the canes and makes them unusable for premium furniture (a high value market). While in South Asia, dried plants used in perfumes are mixed with foreign material and adulterated, making the processed essential oil of poor quality. To better determine if there are issues in maintaining product quality explore the following questions for your product.

- **Is there access to technology that will make grading and/or sorting feasible?**
- **Is there infrastructure to implement some form of sorting system or do the intermediaries you sell to practice grading and quality control?**
- **Does the value chain support the grading of the product?**

ADVICE: *If you do not know your product's quality and are asking potential buyers to give quality assessment (not independent assessment firms), leave out the social equity and conservation message in initial contacts. Buyers will request the price when assessing quality, and this is fair since we all make price/quality tradeoffs in our buying decisions. In several actual cases, when a social equity and conservation message was shared, the buyers rejected the product noting it did not meet quality. Many buyers will not be specific on why the product failed quality. It was later learned after the groups got more product feedback, that the product quality was excellent, but their price point was too high. The initial companies did not want to be accused of paying low prices to bolster their bottom line at the expense of poor people and it was easier for them to claim vague "does not meet our quality standards" than admit the price was too high.*



Product Quantity

In a conservation setting, product quantity has to be governed first by sustainable harvesting and natural resource management principles, not the market. For most natural products harvested from the wild, sustainable harvest rates are not known. Even when scientific studies have been done for a given area, overall ecosystem dynamics can change over time and affect what was once considered a sustainable extraction rate. Disease, loss of key species in an ecosystem, prolonged drought, and climate change can all have an impact on sustainable yield calculations. Studies done in one area are not easily applied to a new area when micro climate dynamics may influence your target species' health.

When your product is cultivated or raised (plants and domesticated animals) you still have to consider the carrying capacity of your target area and its impact on the biodiversity. You also need to determine the seasonality of the products. For example, with some essential oils, there is a best season biologically to harvest the plants so that healthy regeneration takes place. More supply may be available, but harvesting during other seasons will harm the plant and also does not produce as high a quality product.

High quality products are consistent and good, and conform to agreed upon grading standards for a given product. Grading determines the quality of a product and associates a certain price with it. Highest quality, or top grade products may require more work and therefore can be more costly to produce. High quality products require supply chains that maintain grading and quality control standards. Too often various grades or quality products are mixed or can be adulterated as they move to the final markets. This results in uneven product quality and lowest common denominator pricing.

Buyers that pay premiums for supporting conservation and socio-economic goals (often referred to as "Fair Trade" in marketing terms) demand high quality products. Traditional market chains combine supplies from many areas, so the end buyer cannot tell if supply came from "sustainably managed areas" that were giving fair returns to producers. Your product will therefore need to link up with intermediaries that have the ability to keep your products separate from "non conservation" products. This is referred to as traceability or chain of custody. The regulation and certification section (step 3) discusses this further.

Often providing a smaller quantity of high quality products (rather than a larger quantity of low quality) is the best long-term solution for balancing environment, product marketing, and social issues.

Whether wild harvested, cultivated, raised, or even the number of tourists visiting a site, products in a conservation setting have to set quantity limits and know the seasonality of their products and make these limits and timing constraints clear to buyers.

The biologically sustainable harvesting levels will be one of the most difficult things to determine. Some of the factors that need to be considered are:

- **Time of harvesting (month and year, and for some plants, time of day)**
- **Part of plant taken**
- **Size of species taken**
- **How plant is harvested**
– **types of tools used**
- **Tolerance to drought and flooding**
- **What other species the products depends on for its life cycle (for example rattan regeneration fell sharply in parts of the Philippines where monkeys and birds had been hunted to local extinction – they are rattan’s seed disperser).**

Biological monitoring and trial plots need to be set up and monitored over the long term to assess impact of extraction and use of land.

EnterpriseWorks/VITA has found that the monitoring and corresponding corrective actions are most sustainable when integrated as part of the enterprise. The culture of the enterprise activity and the product it markets need to treat biodiversity conservation as a key product attribute. Unfortunately sustainable use in relationship to overall biodiversity conservation will be the most difficult product attribute to understand, since the science is not developed enough to provide solid information on sustainable use.

For this reason, EnterpriseWorks/VITA recommends that once you have your best hypothesis on a sustainable use/yield level, decrease that number by half. Other organizations use a less conservative 25 percent reduction, but it is not recommended to go below 25 percent. The reduced use/yield level should be the maximum amount that can be offered to the market.

Whether wild harvested, cultivated, raised, or even the number of tourists visiting a site, products in a conservation setting have to set quantity limits and know the seasonality of their products and make these limits and timing constraints clear to buyers.

From the market and profitability side, it is important to note that buyers often have a minimum order size that needs to be fulfilled and there must be a certain level of demand in the market for any venture to be profitable. Analysis of the match between market demand and production capacity is the first place to start when evaluating a product’s prospect. However, social and technological factors immensely influence the production, marketing costs, and capacity.



Focus on making sure the core business functions are covered by product sales. Strive to get “project” based work (biological research and monitoring, community capacity building, etc.) up and running with social investment or grants, but with the long term goal of making the entire process sustainable.

Product Price in the Conservation Setting

Including conservation and socio-economic equity in your product attributes can help in market positioning, but it does not mean the product’s price can cover the costs of conservation and poverty alleviation projects. Consumers will use comparable products to get a price reference and in some cases pay a premium for conservation and social equity attributes. This premium cannot be expected to cover robust biological and social monitoring activities, capacity building of communities and enterprises, and research activities.

Conversely, product production and marketing costs should not be absorbed by grant funded project activities. It is common for development and conservation groups to subsidize marketing costs, transport of products to buyers, business accounting and administration services, etc. Unfortunately, when a project ends or grant funding is discontinued, then the enterprise also fails. Focus on making sure the core business functions are covered by product sales. Strive to get “project” based work (biological research and monitoring, community capacity building, etc.) up and running with social investment or grants, but with the long term goal of making the entire process sustainable.

The steps below and the attached Worksheet 3 (Product Costing) will allow you to do some simple product cost and revenue calculations. The spreadsheets have formulas entered and fields locked, except where your product specific inputs are needed. You must first determine your

product’s cost and projected revenue structure. This information is then used to explore product pricing and determine if the price charged allows a reasonable profit and is acceptable to the market. Keep in mind that:

- **The market will set an upper limit on product price**
- **Product price can vary depending on the season, the year, and competition in the market**
- **Details of your product’s cost must be well understood so you can judge if you make a profit at different product price and volume levels**

To get started:

- **List the basic costs associated with your product using actual costs or best estimates. Common costs are:**

Variable Costs

- Harvesting costs associated with the raw material (raw honey, roots or leaves that will be distilled into essential oil, rattan poles)
- Post harvesting costs (labor and materials)
- Other processing costs (labor and materials)
- Storage costs
- Packaging costs
- Transportation
- Taxes, royalties charged on a per product basis (e.g. value added tax – VAT)



Fixed Costs (some will need to be depreciated or amortized)

- Cost of equipment (use depreciated amount)
- Marketing costs
- Management and administration costs
- Office or factory facility (if owned, need to be amortized/depreciated)
- Financing costs (use amortized amount)
- Business fees, some taxes that are charged at a flat rate for the enterprise and not dependent on the number of products sold (e.g. registration fees)

What is the difference between a variable cost and a fixed cost?

- A variable cost “varies” with each unit of production (for example a bottle for each jar of honey).
- A fixed cost does not “vary” with each unit of production. The cost has to be paid if you produce 10 or 1000 products (for example, a piece of equipment or your loan repayment to a bank).

ADVICE: First list your variable costs and add them together. How much does your product cost if you only total the variable costs? Is the cost already very high and way above known product prices? If so, the product may not be worth pursuing (product cost structure in your local context may not be viable), OR you need to go back and revisit if any of the variable costs can be reduced. Common variable costs that make products uncompetitive are: 1) high transportation costs; 2) unrealistic local wage rates because local cooperative is paying too much above competitive wage rates; 3) overly generous payments for raw materials that the market will not pay; and 4) use of inappropriate technologies and practices resulting in higher production cost (material waste and labor inefficiency).



Step 3: Define Product Regulations and Certification

Understand the difference between required “regulations” and “certification” programs (eco labels, fair trade, organic, etc.). As defined in this document, regulation is mandated by law and certification is voluntary. Various “regulations” and “certification” programs aim to provide a set of standards for health, safety, environment, and social standards.

“Regulations”

While there are multiple definitions, for the purposes of this manual, “regulations” refer to product requirements that are enforced by government(s). Terms such as rules, laws, guidelines, bans, requirements, restrictions, measures, etc. may be used to refer to “regulations”. Failure to follow the regulations can result in product being seized within the country of production or rejection at the border of the importing country, thus not being allowed into the market.

Products must meet mandatory rules and regulatory standards (usually health and safety driven) to be allowed into certain markets (importing country regulations). Sanitary and Phytosanitary (SPS) measures are a common category of mandatory standards (see Box 2).

In addition, local and national authorities often have laws, rules, and guidelines in order to regulate harvesting, processing, transport, and export of products. These regulations range from complete bans to restrictions on harvesting to restrictions on forms the product can be exported in (raw material, semi-processed, end product). Permits may be required to collect, transport, and export products. There are also international

treaties (e.g. CITES Convention) to protect and regulate trade on endangered species that are enforced by governments.

It is very important to fully understand all the regulations and paperwork requirements that must be fulfilled within country and in the importing country to avoid rejection or seizure of products. Your product may need to undergo a variety of lab testing and it may be necessary to complete paperwork and various registrations in order to demonstrate compliance with regulatory standards.

The United States warning on importation of goods is typical of how governments approach enforcement of product regulations.

“FINAL IMPORT APPROVAL OF ANY PRODUCT IS ALWAYS SUBJECT TO THE RULES AND REGULATIONS AS INTERPRETED BY THE COUNTRY OF IMPORT AT THE TIME OF PRODUCT ENTRY.”

Translation – Even when you think you have met every requirement, a government official has the right to reject or seize a product shipment. Even experienced exporters and importers have their horror stories of working to get natural products and agriculture shipments out of the United States or European Union Customs, and in the worst case losing all their money on a rejected shipment.

Do not confuse product regulations and certification with product quality requirements. A product can meet all regulations and have environmental and fair trade certification, but still be of poor quality and rejected by high end markets. Certified products are now synonymous with high quality products (this was not always the case). It is therefore not recommended to pursue certification, if your product quality is low.

ADVICE: *If you are new to exporting and importing, linking up with an experienced exporter and importer can be well worth it if they absorb the customs rejection risk. For example, a tea producer in Nepal partnered with an importer that absorbed this risk. Yes, the price received in Nepal was lower, but the enterprise did not suffer 100 percent loss on a shipment that was rejected by European Customs. As the enterprise builds up experience, it can assess if it wants to take on the exporting function directly.*

BOX 2

Sanitary & Phytosanitary (SPS) Regulations Basics

- Sanitary and Phytosanitary measures are legislation, regulation, and official procedures that are in place to prevent the introduction or spread of plant and animal disease between countries.
- The primary rules and regulations are determined by standards set by the World Trade Organization (WTO) Members in the Application of Sanitary and Phytosanitary (SPS) Measures Agreement.

If you are dealing with any natural product, check what SPS measures the product must meet in target market.

For information on Sanitary and Phytosanitary Measures check out the following websites:

U.S. Government

<http://www.fas.usda.gov/itp/ofsts/us.html>

World Trade Organization

http://www.wto.org/English/tratop_e/sps_e/sps_e.htm

FAO Site for Glossary of SPS terms

<http://www.fao.org/docrep/W3587E/w3587e01.htm>

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“Certification”

“Certification”, in contrast to “regulations”, is voluntary and may or may not help in accessing higher value markets. In this document “certification” refers to voluntary programs for product standards. Do not confuse product regulations and certification with product quality requirements. A product can meet all regulations and have environmental and fair trade certification, but still be of poor quality and rejected by high end markets. Certified products are now synonymous with high quality products (this was not always the case). It is therefore not recommended to pursue certification, if your product quality is low.

Organic, Fair Trade, Forest Stewardship Council (FSC), Bird Friendly, and other Eco-labels are examples of certification programs. Organic is by far the most demanded by buyers and has translated into the most reliable premium. But respected certification programs all have a cost and should be considered carefully, as certification does not guarantee market access or premiums for all products. Before pursuing certification find out if there is a specified buyer who is requesting certification, or whether the enterprise has conducted research to ensure a higher price or better market access for a certified product.

For information and ratings on eco labels, go to Greenerchoices a division of *Consumer Reports*. <http://www.greenerchoices.org/eco-labels/reportLabelSearch> and www.isealliance.org

From these sites you can easily survey a variety of certification programs and contact individual certifiers that match your products.

For some subsectors, specific certification programs have become so well established that while still technically “voluntary”, in practice they have become mandatory to be able to access export markets. Examples of these include: GLOBALGAP, KenyaGAP, and ChileGAP for specialty vegetables, fruits, and flowers subsectors.

“GLOBALGAP is a private sector body that sets voluntary standards for the certification of agricultural products around the globe. The GLOBALGAP standard is primarily designed to reassure consumers about how food is produced on the farm by minimizing detrimental environmental impacts of farming operations, reducing the use of chemical inputs and ensuring a responsible approach to worker health and safety as well as animal welfare. GLOBALGAP serves as a practical manual for Good Agricultural Practice (G.A.P.) anywhere in the world. The basis is an equal partnership of agricultural producers and retailers who wish to establish efficient certification standards and procedures.”

The GLOBALGAP Web site is a comprehensive knowledge base for all interested parties: producers, suppliers, retailers, and consumers. www.globalgap.org

Certification depends on marketing objectives and will be product specific. For individual certification traits, see Box 3. Certified products that offer organic, fair trade, and environmental/conservation features are gaining market share and the market projections are that consumers will increasingly seek and pay premiums for high quality certified products. The most respected and sought after are third party certification, but most small-scale groups still have difficulty meeting all of the requirements and covering the annual audit costs.

BOX 3

First, Second, and Third Party Certification

Third Party Certification

(Most stringent): says that a product has met established environmental leadership criteria from an outside regulating body. This is the most accepted certification in international markets. Third party audits and inspections are typically conducted.

Examples: Organic, Forest Stewardship Council (FSC), Transfair

Second Party Certification

(Moderately stringent): refers to a network or membership-type body that evaluates the validity of defined product claims (social, environmental), but the terms may be inconsistent and annual third party audit is not required. *Examples:* various Fair Trade labels, Dolphin Safe

First Party Certification

(Least stringent): Is a self-certification - level of certification proclaimed by individual who is associated with the enterprise.

Step 4: Define Institutions/Enterprise and their Subsector and Value Chain Intermediaries

A subsector is a network of firms that supplies raw materials, transforms them, and distributes finished goods to a range of end markets. For example the honey subsector may sell raw honey in local markets and processed honey to an export market.

A value chain illustrates the transformation a product goes through from production to processing to reach a specific market (e.g. export vs. local). Therefore a subsector will have more than one value chain. Value chain analysis is an implicit part of subsector analysis. Throughout this manual, the term value chain will be used for simplicity.

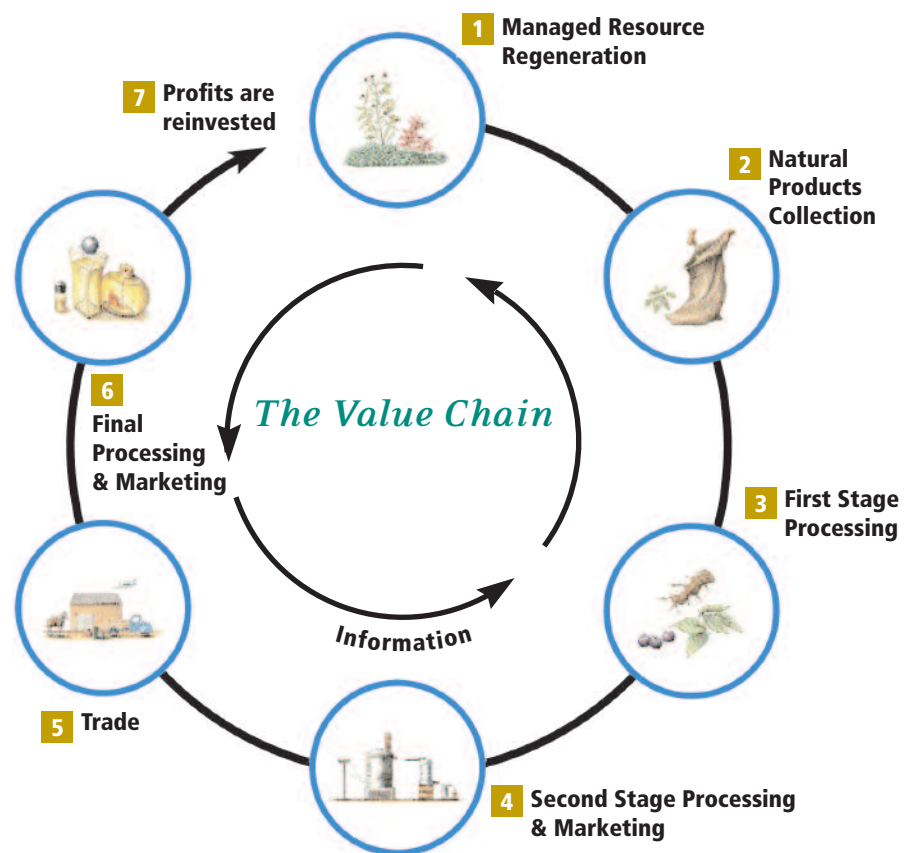
Value chain analysis is used in identifying the major steps a product goes through to reach its target market and the firms involved in each step. The firms that buy the raw materials and then trade, transport, store, process, finance, consolidate, and get finished products to the final market are referred to as *intermediaries*. A full value chain analysis will look at the political, social, and environmental context the chain operates within; overall market trends for the subsector; and the power relationships among the intermediaries and how they interact.

Traditionally value chains are depicted in a linear fashion, but even in the business environment, information flows back from the customers to improve and refine the product.

In a conservation setting, value chains need to consider how resource management information is shared with the end markets and how products'

revenues are reinvested back into natural resource management. This means final markets need to understand and be educated on the biological limits of product supplies (e.g. sustainable harvesting) as well as fair trade returns to the stewards of the resources and makers of the products. Information needs to be flowing in both directions and the value chain needs to be thought of as circular not linear. (Figure 2).

Figure 2: The Value Chain for Essential Oil in Nepal



A complete value chain analysis needs at least one to three months to complete. For resources on value chain and subsector analysis go to www.microlinks.org

Identifying the major functions, participants, and resources in a value chain is an initial step in value chain analysis and can be done in a few hours. This step is extremely helpful in identifying intermediaries. This manual will lead you through a simple matrix exercise to identify intermediaries associated with your product and how your enterprise fits in with the intermediaries. Use Worksheet 4 (subsector matrix) to identify the intermediaries for your product.



The steps in identifying the intermediaries are as follows:

1. Define your subsector – specify product and geographic areas (e.g. essential oils in Nepal)
2. Indicate your target market(s) – e.g. foreign cosmetic companies in Europe
3. List all the functions needed to produce/harvest, transport, finance, store, process, fulfill regulations (see step 3) and market the product.
4. List all the participants that are associated with each function.
5. Add notes on what technologies, equipment, skills, and resources are needed to do each function.
6. Place the functions, participants, and notes on the matrix sheet as shown in the example, Figure 3.
7. Make sure you include your enterprise in the matrix and highlight what functions your enterprise does and how it relates to other actors.

Completing the matrix will help you to identify the other intermediaries your enterprise needs to interact with to get its product to market. The matrix will also help you to better understand where your enterprise and product fit with relationship to the entire value chain. Keep in mind that most product value chains do not inherently include conservation goals. Many times, existing institutions/intermediaries need to be strengthened to meet conservation goals and/or, there is a need to develop new organizations (community based groups, enterprises, networks) to undertake the required functions to achieve conservation results. In the essential oil example from Nepal (figure 2), managed regeneration was a new function that did not exist in the value chain prior to a conservation emphasis. Value chain analysis can help identify strategic points in the chain to intervene.

The Difference between Value Chain Analysis and a Business Plan

Value chain analysis helps you understand all the participants, functions, and resource dynamics that affect your product and enterprise. A business plan is enterprise specific. Each firm operating within a value chain would have its own business plan. If after completing this manual, your product shows good promise, then it is the time to invest in completing a business plan.

EWV field experience indicates that one of the most challenging aspects of conservation marketing is to develop appropriate grassroots institutions and their capacity to undertake business functions. Basic elements of business management should be embraced by the

Figure 3: Example Matrix

		Subsector Matrix for Essential Oils in Nepal - Target Market Foreign Cosmetic Companies in EU																	
		Participants																	
Functions		Government	International Bodies	Universities	Researchers	Community Enterprise	District Trader	Domestic Airlines	City Trader	Storage Firms	Trucking Firms	Indian Wholesaler	Distiller	Domestic Cosmetic Companies	Exporters	Importers	Foreign Cosmetic companies	Technologies, Skills, Resources	
Sales to consumers																		x	Marketing
Blending of oil into consumer product																		x	Formulas, containers
Sale of oil to cosmetic companies																			Market contacts, variety, meet regulations
Sale of oil to export market																		x	Market contacts, variety
Export permits		x											x	x	x				Knowledge of rules and paperwork requirements
Blending of oil into consumer product																			Formulas, containers
Sale of oil to domestic Indian Market														x	x				Market contacts, variety
Product testing for purity																		x	Lab, government clearance
Distillation of plant to essential oil														x	x			x	Steam distillation
Sale to essential oil distiller								x				x							Market contacts, variety
Consolidation of supply/offers variety																			Storage working capital
Sale to wholesale market								x	x			x							Storage working capital
Transport to India								x		x	x								Trucks
City level trade								x				x							Horse cart, storage
Transport to city							x	x	x										Financing to purchase airfreight; planes
Payment of forest royalties		x					x												Working capital
District level trade							x			x									Working capital, storage
Sorting and cleaning						x	x												Sacks, hand sort
Transport						x	x												Carry, animals
Trade finance						x	x												Working capital
Plant harvesting						x													Hand tools
Managed regeneration						x													Ongoing monitoring, enforcement capacity
Resource management						x													Plans, monitoring, technical skills
Research		x	x	x	x														Studies, research funds, technical skill
Policy		x	x																Advocacy, policy analysis, power relationships

enterprises (see Box 4). Entrepreneurship and business skills as well as operational skills of the entrepreneurs very often need to be developed through capacity building programs, market visit and exposure, and feedback mechanisms.

Institutions and enterprises supported by conservation marketing programs have to work with value chain intermediaries in producing and marketing their products and services to the ultimate consumers. For existing products, while there can be multiple layers of intermediaries seemingly absorbing high profit margins, these intermediaries often play crucial roles, especially in financing and investment, maintaining inventory, product processing, and marketing. Before your

BOX 4

Define who and how these functions will be done at an enterprise level?

- Procurement (sourcing of raw materials/supplies)
- Production
- Marketing/selling
- Accounting/finance
- Employee management
- General management
- Stakeholder relations

enterprise considers taking on more functions to bypass existing intermediaries, it is important to understand their functions, the risks they take and the support they provide to the value chain.

EWV experience shows that developing strong partnerships with responsible market leaders helps immensely in developing reliable and efficient market linkages for community based conservation products.

Conclusion

Investing in product development and marketing with the marginalized producers who are the stewards of our remaining natural areas is vital in the effort to increase market share for products that support conservation and fair trade.

Most likely after completing this manual, you will still have gaps in what you know about your product and the markets, but you should have a much better idea on where to focus your product development and marketing efforts. Use Worksheet 5 (Summarizing Product Market Readiness) to pull what you have learned about your product together.

Next, complete a full business plan for your enterprise and product(s) and try to attend appropriate product trade and industry shows. Trade shows are an excellent way to see what your competition is offering and meet potential buyers. Targeted industry conferences can provide a crash course on the latest product and marketing trends and put you in contact with industry representatives more receptive to conservation and fair trade products. Several trade shows and conferences to consider attending, which cover a wide range of products are:

Natural Product Expos – Held at the Anaheim Convention Center in Southern California typically each March and at the Baltimore Convention Center, typically in September/October timeframe; organized by New Hope. There are also shows in Europe and Asia. The Natural Product Expo series are the largest natural and organic trade shows and have also added an emphasis on sustainability and fair trade.

<http://www.newhope.com>



Sustainable Brands Conference – Held annually, typically in May/June timeframe. Sustainable Brands is where top brand leaders meet to discuss sustainability as the new frontier for driving revenue growth and enhancing brand value. Many well known companies that source a wide variety of agricultural, forest, and marine ingredients and processed products attend this conference.

<http://www.sustainablelifemedia.com/events>

Green Festivals – Green Festivals, the joint project of Global Exchange and Co-op America and the nation's largest green consumer show, hold "festivals" that are part trade show and part conference. Check out their website for locations and dates, which typically include Washington DC, Seattle, San Francisco, and Chicago on an annual basis.

<http://www.greenfestivals.org>

These are some of the trade shows and conferences that feature products that promote conservation, sustainability, and fair trade. There are also dozens of more targeted trade shows for fresh fruits and vegetables, teas, and coffees, handicrafts, flowers, etc., and increasingly these shows are featuring sustainable products. For conservation products to become mainstreamed in the markets, changes in the value chain will need to happen at the producer level through to the final market. Investing in product development and marketing with the marginalized producers who are the stewards of our remaining natural areas is vital in the effort to increase market share for products that support conservation and fair trade.

Addendum: Some Parting Advice

Market Dynamics are Constantly Changing, and so is the Environment and People's Economic Status

Predicting long-term market trends is very difficult. There are lots of highly paid market research firms that concentrate on trying to predict what markets for various products will do. Still they predict incorrectly a significant percentage of the time. Information you gather on markets for a given product is a snapshot in time. Marketing information needs to be updated on a regular basis. As this manual goes to print, the author has some advice on several market dynamics that warrant extra attention, based on the best information available.

Understand Transportation Cost Trends: In recent years, the price of oil has been going up dramatically. The best economic predictions do not forecast declines in oil prices. Rising oil prices impact land and sea transport; almost all products have been affected worldwide. Globally, analysts are predicting trade shifts as increased transport costs change a product's competitiveness.

ADVICE: *A product's transportation cost per kilo and/or cubic meter basis to a target market should be determined early in your market exploration process. Heavy, low value products that are transported long distances (or via costly transport options) will not be competitive. Also, with the increasing concern about "food miles", carbon credits, and taxes, the transportation issues for products will become more prominent and have the potential to offset a product's other environmental conservation distinctions.*

Reevaluate Value-Adding Processing: Low shipping costs used to make it more attractive to ship heavy, low value products to distant processing centers. Examples include: unshelled cashews that were shelled and roasted overseas, raw avocados that were exported overseas to extract cosmetic grade avocado oil, and wild harvested aromatic plants that were exported to have their oil distilled. It used to be cheaper to pay the shipping than invest in local processing capacity. This dynamic is rapidly changing.

ADVICE: *Processing options need to be revisited given the potential opportunity to save on transport costs. Keep in mind that not all processing options will reduce the weight and volume of the product. First determine the type of processing that is possible for your product and if the processing significantly decreases the weight and/or volume of the product.*

Look Out for Future Attractive Markets:

It used to be developing countries mostly looked to the developed world for attractive markets. This dynamic is rapidly changing as domestic and regional markets within Africa, Asia, and Latin America have expanded their middle classes and overall consumer demand. These domestic and regional markets are often more accessible and have less regulatory requirements compared to U.S., European, and Japanese markets.

ADVICE: *Do Not Overlook Local and Regional Markets. In almost every country it is well known which cities and towns serve as the major trade hubs. A visit to these trade hubs and a day at the markets talking with vendors and local traders will give you a snapshot of where product is being sold. Also, check with local chambers of commerce for domestic and regional product trade shows and data on trade trends.*

In the conservation marketing context, the downside to local and regional markets is that they have little or no demand for products that are conservation or fair trade branded, but this is changing. Keep in mind, the “conservation marketing” message may not be appreciated as an attribute of the product in these markets. In this case, to achieve the conservation and social equity objectives, there will need to be increased enforcement at the product production areas, capacity building for the firms, and education campaigns to address conservation and social equity and link these issues to the markets.



Invest in Monitoring: It is not only marketing information that needs to be updated regularly. Ongoing environmental, and social monitoring is needed. Many environmental, and social indicators will have a direct impact on the enterprise; other indicators will not, but still need to be tracked if the project effort is to achieve its conservation and social equity goals. Market and business indicators should be the responsibility of the enterprise and budgeted into the costs of doing business. For good or bad, in the near future, most existing business models will not be able to absorb the costs associated with robust environmental and social monitoring. These will need leadership from the non-governmental organizations and government sectors of society.



Worksheet 1 - Quick Sort Method Step 1: Product Screening

Screening Criteria	Market demand	Attractive product price and profitability	Product supply	Sustainable harvesting/use potential	Regulatory compatibility (local, national, international)	Access to appropriate technology	Required market infrastructure (transport, storage, packaging)	Specify context specific criteria
Products								
Product 1								
Product 2								
Product 3								
Product 4								
Product 5								
Product 6								
Product 7								
Product 8								
Product 9								
Product 10								
Product 11								
Product 12								
Product 13								
Product 14								
Product 15								
Product 16								
Product 17								
Product 18								
Product 19								
Product 20								
Product 21								
Product 22								

Evaluate the products against each criterion. If there are conditions too difficult to overcome or a product stands very poorly against the criteria, mark X. An X against any of these criteria means the product is not feasible for the time being, and triggers elimination of the product from the subsequent step. This worksheet should take no more than one hour.



Worksheet 1 - Quick Sort Method Step 2: Product Selection

Products	Example	Product 2	Product 3	Product 4	Product 5	Product 6	Product 7	Product 8	Product 9	Product 10
Criteria										
Economic/Market										
Market demand	4									
Profitability (considering price)	3									
Access to market/competition	1									
Investment (climate)	2									
....										
....										
Biological/Ecological										
Potential to address threats to biodiversity	5									
Product supply	3									
Sustainable harvesting/use potential	2									
Ecological functions/services	5									
....										
Social/Political										
Impact to local economy and livelihoods (considering price)	4									
Compatibility with local interests, knowledge and skills	4									
Regulatory compatibility (local, national, international)	2									
....										
....										
Technology										
Access to appropriate technology	4									
Required market infrastructure (transport, storage, packaging, etc.)	1									
Technical expertise and quality control capacity	2									
....										
....										
Total score (add above)	42	0	0	0	0	0	0	0	0	0

Rate the products against each criterion on a 1-5 scale, with 5 being the most favorable and 1 being the least favorable situation. In the example, a maximum score would be 70, and the example product scored 42 out of 70. You will need more information in most cases to arrive at definitive answers for criteria. For now, use the best information you have to score the products. This sheet should take no more than one hour and is intended to help prioritize products and where you need to focus your efforts to gather more information.



Worksheet 2 Product Context Worksheet

Transfer the most promising products from the Quick Sort Method and list their target markets. Indicate if your enterprise is already selling to the target market or considering.

Product	Target Market	Considering or Already Selling

Example

Product	Target Market	Considering or Already Selling
Honey	Local to capital and export to Europe	Selling honey in local market, considering export to Europe
Wild Cardamom Spice	Export to Europe	Considering
Rattan	Local manufacturers	Already selling but only sell to traders, not directly to manufacturers
Eco-tourism	Foreign tourists from Japan and Europe	Considering
Dairy products (cows)	Local markets	Already selling



Next use the worksheet below to answer the six context questions. Use one table for each product you listed on worksheet 2. Examples follow on how the sheet should be completed and how the information is used to critique a product and marketing opportunities.

Product:**Target Market:**

Item	Answer	Critique
1. Level of product processing (raw material, semi-processed, processed, final packaged to consumer)		
2. Type of product – commodity or specialty		
3. Type of product in local context (established marketing chains or product has no locally established marketing chains)		
4. Who will produce the product and is it a new or existing product for the producers?		
5. In producing the product how will threat(s) to biodiversity conservation be abated (your hypothesis on this)		
6. Are there other socio-economic or conservation objectives you want the product to meet (e.g. increase women's or youth employment; expand micro enterprises, etc.)?		



Example

Product: Honey

Target Market: local and considering export

Item	Answer	Critique
1. Level of product processing (raw material, semi-processed, processed, final packaged to consumer)	Raw	Raw is OK for local markets, but will get grouped in with low quality adulterated honey, will need to do further processing to consider export market
2. Type of product – commodity or specialty	Commodity	In raw form with no other selling attributes except its story, still a commodity. Certification (organic, forest sustainability) would move it to a specialty good.
3. Type of product in local context (established marketing chains or product has no locally established marketing chains)	Established	A positive that there are established market chains. Can explore these for potential help in accessing export markets, but will need to make sure honey is of good quality first.
4. Who will produce the product and is it a new or existing product for the producers?	Existing	Good, people already familiar with activity, but may also need to break bad habits (product adulteration, unsustainable harvesting methods). Investigate technical interventions to improve honey productivity and quality that will yield higher selling price and access to higher value markets.
5. In producing the product how will threat(s) to biodiversity conservation be abated (your hypothesis on this)	Create value for forest conservation Honey collection comes when other income sources are low	Local markets may not consider conservation in making a honey purchase. Exceptions are when there are larger, progressive capitals and towns and/or tourist facilities that would demand products with conservation aspects. Export markets more receptive to conservation products and place value on this “unique selling point”.
6. Are there other socio-economic or conservation objectives you want the product to meet (e.g. increase women’s or youth employment; expand micro enterprises, etc.)?	Donor wants micro enterprises for women in honey processing	This might be feasible for a local market, but for export market more uniform processing, quality control and packaging in a central facility needed. Be careful, project requirements can become roadblocks to doing what makes sense for the business.
Overall Critique – There are enough “pros” to keep moving forward in investigating and promoting this product. Move to next assessment steps.		



Example

Product: Wild Cardamom Spice

Target Market: Export to Europe

Item	Answer	Critique
1. Level of product processing (raw material, semi-processed, processed, final packaged to consumer)	Raw	Raw is OK for export market but will need to meet phytosanitary requirements to import into European Union.
2. Type of product – commodity or specialty	Commodity	In raw form with no other selling attributes except its story, still a commodity. Certification (organic, forest sustainability) would move it to a specialty good.
3. Type of product in local context (established marketing chains or product has no locally established marketing chains)	Not established	This product is not harvested and used in the country and there are no existing spice marketing chains within the country. There would be a need to create all the marketing chain functions to reach the export market (grading, sorting, quality control, documentation, export and import licenses, transport, storage, financing).
4. Who will produce the product and is it a new or existing product for the producers?	New product for collectors and producers	Target producers would have to be trained on proper collection and post harvest handling. Need to check how collection of Wild Cardamom fits in with other livelihood activities of the communities.
5. In producing the product how will threat(s) to biodiversity conservation be abated (your hypothesis on this)	Create additional value for forest conservation Alternative to timber harvesting	Wild Cardamom may be in low quantities and would need sustainable harvesting protocols. Most natural products do not have good scientific information to guide on sustainable harvesting levels. It is one thing to try to curb over-exploitation of natural products that are already commercially traded from an area, but it is riskier to introduce harvesting when it has not been done before.
6. Are there other socio-economic or conservation objectives you want to the product to meet (e.g. increase women's or youth employment; expand micro enterprises, etc.)?	Donor wants products that promote women's employment	This might be feasible but be careful if project requirements become roadblocks to doing what makes sense for the business and your target market.
Overall Critique – This product is higher risk since it is new to the community, there are no established market chains to support Cardamom and get it to an export market, and sustainable harvesting levels are not known. Critical next step: determine how much Cardamom is available, if in large quantities it could be worth pursuing. If in small quantities best to look at other products.		



Worksheet 3 - Product Costing

Honey Example

Variable costs

Item	Cost	Unit	Amount per kg
Harvested raw honey (includes harvester's labor)	\$0.75	1 kg of honey	\$0.75
Post harvesting cleaning, straining, etc.	\$0.15	1 kg of honey	\$0.15
Bottling cost (sterilizing, etc.)	\$0.10	1 kg of honey	\$0.10
Bottle and labels	\$0.15	1 kg of honey	\$0.15
Transportation	\$0.15	1 kg of honey	\$0.15
Taxes and royalties	\$0.05	1 kg of honey	\$0.05
Other costs	\$0.00	1 kg of honey	\$0.00
Variable costs per kg of honey:			\$1.35

Fixed costs

Item	Cost	Period of time	Annual total
Marketing ads	\$500	Annual	\$500
Management and administration	\$3,000	Annual	\$3,000
Business registration, fixed tax	\$150	Annual	\$150

Items you would need to depreciate	Cost	Useful life in years*	Annual depreciation*
Bottling machine	\$1,500	10	\$150
Factory building	\$4,000	20	\$200

Items you would need to amortize	Cost	Payback period in years	Annual amount due
loan @7% interest	\$5,000	3	\$1,853

Total fixed costs: \$5,853.00

There are now many accessible websites that allow you to calculate amortization on any loan amount, interest rate, and payback period - try the one below
<http://www.hsh.com/calc-amort.html>

Useful life = how long it will last before you need to replace it
 Annual depreciation is done using "straight line" method.
 This means all you do is divide the item's cost by its useful life.
 For simplicity, this presentation does not consider tax code definitions of useful life

Have to make an assumption on how many kg of honey per year you can produce and sell

		If fixed costs	=	\$5,853.00	
If you sell	1,000	kg then per kg fixed cost =		\$5.85	
If you sell	2,500	kg then per kg fixed cost =		\$2.34	
If you sell	5,000	kg then per kg fixed cost =		\$1.17	Most likely sales quantity
If you sell	10,000	kg then per kg fixed cost =		\$0.59	

Cost per kg of honey (at 5,000 kg volume) = variable plus fixed costs: \$2.52



Example Worksheet for Product Pricing and Break Even Point

Above example shows per kg of honey costs \$2.52 when you sell 5000 kg

It means the honey must be priced above \$2.52 per kg to be profitable at this level.

Total variable cost varies with level of production and sales, while **per unit variable** cost stays the same.

Total fixed cost remains fixed for level of production and sales, while **per unit fixed cost** varies with quantity of production and sales. Depending on sales volume, you can adjust the pricing. But you should not sell product below cost.

When you subtract variable cost from the selling price, you get the margin (contribution margin), which contributes to the recovery of your fixed costs and profit. You will have to sell a certain volume of honey before you can start making profits. At one point (called the break even point or BEP), your total income equals total costs, and you make no gain and no loss. This volume level, BEP, gives you the amount of honey you must exceed in production and sales to start earning a profit.

Variable costs per kg of honey = \$1.35

Total fixed costs = \$5,853.00

		Contribution margin, BEP, and profit at variable selling prices				
Selling price per kg of honey->		\$2.00	\$3.00	\$4.00	\$5.00	
Contribution margin per kg of honey ->		\$0.65	\$1.65	\$2.65	\$3.65	
Break even point (kg of honey)->		9,005	3,547	2,209	1,604	
If you sell	1,000	kg then your profit =	(\$5,203)	(\$4,203)	(\$3,203)	(\$2,203)
If you sell	2,000	kg then your profit =	(\$4,553)	(\$2,553)	(\$553)	\$1,447
If you sell	3,000	kg then your profit =	(\$3,903)	(\$903)	\$2,097	\$5,097
If you sell	4,000	kg then your profit =	(\$3,253)	\$747	\$4,747	\$8,747
If you sell	5,000	kg then your profit =	(\$2,603)	\$2,397	\$7,397	\$12,397
If you sell	6,000	kg then your profit =	(\$1,953)	\$4,047	\$10,047	\$16,047
If you sell	7,000	kg then your profit =	(\$1,303)	\$5,697	\$12,697	\$19,697
If you sell	8,000	kg then your profit =	(\$653)	\$7,347	\$15,347	\$23,347
If you sell	9,000	kg then your profit =	(\$3)	\$8,997	\$17,997	\$26,997
If you sell	10,000	kg then your profit =	\$647	\$10,647	\$20,647	\$30,647
If you sell	11,000	kg then your profit =	\$1,297	\$12,297	\$23,297	\$34,297
If you sell	12,000	kg then your profit =	\$1,947	\$13,947	\$25,947	\$37,947



Template Worksheet for Product Costing

Variable costs			
Item	Cost	Unit	Amount per unit
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
Variable costs per unit:			\$0.00

Fixed costs			
Item	Cost	Period of time	Annual total
		Annual	\$0
		Annual	\$0
		Annual	\$0
		Annual	\$0
		Annual	\$0
		Annual	\$0

Items you would need to depreciate	Cost	Useful life in years*	Annual depreciation*
			\$0
			0
			0
			0

Loan you need to amortize	Loan amount	Interest	Payback period in years	Number of payment in a year	Annual amount due
					\$0.00
					\$0.00

Items you would need to amortize	Cost	Useful life in years*	Annual depreciation*
			0
			0

Total fixed costs: \$0.00

Alternatively, there are now many easy to access websites that allow you to calculate amortization on any loan amount, interest rate, and payback period - try the one below
<http://www.hsh.com/calc-amort.html>

Useful life = how long it will last before you need to replace it
 Annual depreciation is done using "straight line" method.
 This means all you do is divide the item's cost by its useful life.
 For simplicity, this presentation does not consider tax code definitions of useful life

To calculate per unit fixed cost, make an assumption on how many unit per year you can produce and sell

	If fixed costs	=	\$0.00	
If you sell		units then per unit fixed cost =	\$0.00	
If you sell		units then per unit fixed cost =	\$0.00	
If you sell		units then per unit fixed cost =	\$0.00	Most likely sales quantity
If you sell		units then per unit fixed cost =	\$0.00	

Cost per unit (at \$ units) = variable plus fixed costs: \$0.00

Template Worksheet for Product Pricing and Break Even Point

Above example shows per unit costs \$0.00 when you sell 0 units
 It means the product must be priced above \$0.00 per unit to be profitable at this level.

Total variable cost varies with level of production and sales, while **per unit variable** cost stays the same.

Total fixed cost remains fixed for level of production and sales, while **per unit fixed cost** varies with quantity of production and sales. Depending on sales volume, you can adjust the pricing. But you should not sell product below cost.

When you subtract variable cost from the selling price, you get the margin (contribution margin), which contributes to the recovery of your fixed costs and profit. You will have to sell a certain volume of products before you can start making profits. At one point (called the break even point or BEP), your total income equals total costs, and you make no gain and no loss. This volume level, BEP, gives you the amount of honey you must exceed in production and sales to start earning a profit.

Variable costs per unit of product =	\$0.00
Total fixed costs =	\$0.00

Contribution margin, BEP, and profit at variable selling prices						
		Most likely				
Selling price per unit->						
Contribution margin per unit ->		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Break even point (units of product)->		0	0	0	0	0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0
If you sell	units then your profit =	\$0	\$0	\$0	\$0	\$0

Worksheet 4 - Subsector Matrix

		Subsector Matrix											
		Participants											
Functions	Government	International Bodies	Universities	Researchers									Technologies, Skills, Resources
Resource Management													Plans, monitoring, technical skills
Research													Studies, research funds, technical Advocacy, policy analysis, power relationships
Policy													



Worksheet 4 Example Subsector Matrix

Subsector Matrix for Essential Oils in Nepal - Target Market Foreign Cosmetic Companies in EU		Participants														Technologies, Skills, Resources	
Functions	Government	International Bodies	Universities	Researchers	Community Enterprise	District Trader	Domestic Airlines	City Trader	Storage Firms	Trucking Firms	Indian Wholesaler	Distiller	Domestic Cosmetic Companies	Exporters	Importers	Foreign Cosmetic companies	
Sales to consumers																	Marketing
Blending of oil into consumer product																	Formulas, containers
Sale of oil to cosmetic companies																	Market contacts, variety, meet regulations
Sale of oil to export market																	Market contacts, variety
Export permits	X																Knowledge of rules and paperwork requirements
Blending of oil into consumer product																	Formulas, containers
Sale of oil to domestic Indian Market																	Market contacts, variety
Product testing for purity																	Lab. government clearance
Distillation of plant to essential oil																	Steam distillation
Sale to essential oil distiller																	Market contacts, variety
Consolidation of supply/offers variety																	Storage working capital
Sale to wholesale market																	Storage working capital
Transport to India																	Trucks
City level trade																	Horse cart, storage
Transport to city																	Financing to purchase airfreight, planes
Payment of forest royalties	X																Working capital
District level trade																	Working capital, storage
Sorting and cleaning																	Sacks, hand sort
Transport																	Carry, animals
Trade finance																	Working capital
Plant harvesting																	Hand tools
Managed regeneration																	Ongoing monitoring, enforcement capacity
Resource management	X																Plans, monitoring, technical skills
Research	X	X	X	X	X												Studies, research funds, technical skill
Policy	X	X															Advocacy, policy analysis, power relationships



Worksheet 5 Summarizing Product Market Readiness

Transfer the three most promising products and their strong and weak areas from Worksheet 1, Step 2 (scores indicate strong and weak areas of the products).

Product name	Strong areas	Weak areas (to be improved before marketing)
Product 1		
Product 2		
Product 3		

Transfer from Worksheet 2.

Product name	Target market	Who will produce?	How conservation threats addressed?	Socio-economic and other benefits
Product 1				
Product 2				
Product 3				

Transfer the following from Worksheet 3 (based on most likely scenario).

	Product 1	Product 2	Product 3
Variable cost per unit			
Total annual fixed costs			
Annual production and sales (units)			
Cost per unit (both variable and fixed)			
Expected sales price (per unit)			
Expected contributed margin (per unit)			
Expected annual profits			
Break Even Point (BEP)			

Transfer from Worksheet 4.

	Product 1	Product 2	Product 3
Coordination and linkages to be developed for improving production and marketing (name of key participants)			
Skills, technologies, and resources to be developed and managed for conservation marketing			



Notes:





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