

# **International Development Enterprises (IDE)**

## **Poverty Reduction through Irrigation and Smallholder Markets (PRISM)**

### **A Manual**

**Draft  
September 5, 2003**

## Table of Contents

<b>Poverty Reduction through Irrigation and Smallholder Markets (PRISM).....</b>	<b>3</b>
<b>Characteristics and Principles of PRISM.....</b>	<b>4</b>
<b>Overview of the PRISM Methodology .....</b>	<b>5</b>
<b>Purpose of this Manual .....</b>	<b>8</b>
<b>Initial Rapid Assessment .....</b>	<b>9</b>
<b>Boundary Definition .....</b>	<b>10</b>
<b>Market Opportunities .....</b>	<b>13</b>
<b>Smallholder Opportunity and Constraints.....</b>	<b>15</b>
<b>Water Strategy.....</b>	<b>22</b>
<b>Environmental Strategy .....</b>	<b>24</b>
<b>Gender Strategy .....</b>	<b>26</b>
<b>Partnership Development .....</b>	<b>28</b>
<b>Intervention Design.....</b>	<b>31</b>
<b>Monitoring, Evaluation and Revision.....</b>	<b>32</b>
<b>PRISM Program Management.....</b>	<b>33</b>
<b>Annex A: Tools for Boundary Definition.....</b>	<b>34</b>
<b>Annex B: Tools for Market Opportunities .....</b>	<b>42</b>
<b>Annex C: Tools for Smallholder Opportunities and Constraints .....</b>	<b>45</b>
<b>Annex D: Tools for Monitoring and Evaluation.....</b>	<b>11</b>

## **Poverty Reduction through Irrigation and Smallholder Markets (PRISM)**

Today, more than 1.2 billion people live in “extreme consumption poverty,”<sup>1</sup> which the international community defines as the equivalent of living on less than one dollar per day. Seventy-five percent of those in extreme poverty reside in rural areas, have very small landholdings and depend directly on agriculture for their livelihood<sup>2</sup>. Projections suggest that the locus of poverty will continue to remain in rural, agricultural areas for the foreseeable future. In addition, economic growth in non-farm sectors depends in large part on a vibrant and prosperous agricultural sector. Practical solutions to rural poverty must therefore focus on increasing income and productivity of the rural poor through smallholder-focused agricultural growth. For these reasons, policymakers, donor agencies, research institutions, and the development community at large are actively searching for new and more effective agricultural development strategies as a key pillar in the struggle against poverty.

Since 1981, International Development Enterprises (IDE) has worked to reduce poverty in Asia and Africa by helping the rural poor increase their agricultural productivity and income. Over the past two decades, IDE’s interventions in creating a network of sustainable supply chain enterprises has resulted in job creation for significant numbers of micro-irrigation manufacturers, assemblers, retailers, and on-farm installation agents. The end beneficiaries - rural small-scale farmers - have increased their net income through entering the field of high value agricultural production and gaining access to stable markets for their produce.

Over the past two years, IDE has taken stock of its accomplishments with a vision to achieve a more profound impact on alleviating rural farm poverty and to expand its mission on a larger scale. IDE has determined that this will require developing a broader, more comprehensive market-based poverty alleviation vision and approach in order to address the multifaceted, complex set of constraints and opportunities faced by agricultural smallholders. IDE’s initial emphasis on supply side irrigation technology dissemination via private sector marketing has been strengthened and broadened to include processes for understanding and addressing the broad spectrum of constraints and opportunities faced by poor smallholders. This new vision and approach, termed Poverty Reduction through Irrigation and Smallholder Markets (PRISM), establishes a framework to operationalize integrated market systems for the rural poor, to organize smallholders to be competitive with larger-scale industries, and to incorporate sustainable natural resource management and gender equity goals, while continuing to emphasize smallholder access to and control over water for crop irrigation.

The PRISM model derives from a thorough understanding of the subsector value chain and an accompanying array of Business Development Services that are needed to catalyze both demand and supply side market forces. Subsector analysis and Business Development Services market assessment tools and research methods serve as the methodological cornerstone of the PRISM model, driving the process of program design and implementation. The PRISM approach also seeks to make the smallholder competitive in the marketplace through vertical integration of production, inputs, and outputs and concentrating on high value crops where smallholders have an advantage. In addition, the PRISM model views smallholders as potentially competitive with larger-scale agro-industrial producers through introducing and linking capital, credit, training, post harvest technologies, and information systems that are appropriate to smallholder needs, and organizing the smallholder sector to be competitive in terms of quantity and quality of production.

Experience has demonstrated that sustaining pro-poor market systems, improving food security and providing income and livelihood for present and future generations depends on continued natural resource flows from a healthy natural resource base, including land and water, and maintaining or improving broader long-term biological and ecological processes that are critical for agricultural productivity.

---

<sup>1</sup> Rural Poverty Report 2001, International Fund for Agricultural Development, Oxford University Press Inc., New York, NY, 2001.

<sup>2</sup> Reaching the Rural Poor: A Strategy for Rural Development, World Bank 2001.

PRISM objectives include promoting sustainable agriculture through economically viable and cost-effective sustainable agricultural management systems, practices and policies, encouraging pro-active stewardship of land and water resources, research/information collection and program development and implementation.

The PRISM methodology also incorporates gender analysis and measures to promote gender equality. Recognizing that women frequently constitute the poorest of a population, the PRISM model seeks to address constraints faced by women in order to ensure that the basic human needs of the entire community are met. This approach treats female entrepreneurs as market segments with growth potential and with particular needs due to unique constraints to business survival and growth. PRISM seeks to address these constraints in order to enable women to participate fully in the market and to benefit from such participation.

Although the PRISM model has evolved with experience, water control remains a central tenet of the model because water access and control is frequently the most critical limiting factor for farm productivity. Therefore, IDE places a high priority on identifying strategies that enable smallholders to access, store and control water for crop irrigation through low-cost, household level, micro-irrigation systems. Such systems optimize water-use efficiency, minimize labor burdens and maximize economic returns to the poor.

The PRISM approach set forth in this manual is not a proscriptive methodology. Each component described in this manual is intended to provide ideas to guide in the decision-making process of developing and implementing appropriate interventions. Each component can be modified and implemented according to local needs, constraints and opportunities.

The PRISM approach has evolved over more than 20 years of experience and will continue to evolve with additional knowledge and experience. IDE is now engaged in a process of defining, testing and validating the PRISM smallholder market intervention model. It will be especially important to review, field-test, and further develop the newer components of PRISM, e.g. the Environmental Strategy and the Gender Strategy, as well as the linkages between these and other components. It will be helpful to develop and incorporate case studies of successful and unsuccessful approaches in different contexts in order to build a knowledge base for future interventions. In addition, it is expected that effective implementation of PRISM may require review of organizational and management needs, including program management, staffing, development of complementary partnerships, etc.

### **Characteristics and Principles of PRISM**

The following are the fundamental characteristics of the PRISM framework:

1. The PRISM methodology focuses on smallholders - farmers cultivating between 20 square meters and two hectares of land – because they constitute the majority of the world's poor. The term “smallholder” denotes a rural household operating in the context of at least rudimentary market systems, with highly restricted access to land, water, and capital, whose family labor is its principle asset. The methodology analyzes the smallholder context and addresses the unique needs and opportunities of smallholders through market creation and through the development of new or modified technologies, mechanisms for delivering credit and capital, training and other context-specific approaches that enable smallholders to transition to increased market participation and asset creation.
2. The PRISM model derives from a thorough understanding of the subsector value chain and an accompanying array of business development services that are needed to catalyze both demand and supply side market forces. The model utilizes subsector analysis to describe and explain the structure of the subsector under consideration, to analyze current and potential economic performance of the subsector, likely forces of change acting on the subsector, the dynamics of demand that pulls goods and services through the subsector, and competition among market channels. Subsector analysis

ultimately seeks to identify key nodes where intervention measures can positively affect a large number of smallholders at the same time.

3. The PRISM framework aggregates and integrates smallholder production so that it is sustainable and competitive with agro-industrial and other market participants.
4. PRISM supports smallholders in the cultivation of high-value crops for which expanding market opportunities exist and for which they have a comparative advantage. Smallholder family labor can be applied to the small landholding with little or no cost for supervision, which creates an important advantage over larger farms in developing a comparative advantage in labor-intensive farming systems where the factors of production must be closely managed. Comparative advantage is most readily developed in the production of certain high-value crops, such as fruits, nuts, and spices.
5. Understanding water technology and access constraints and addressing these constraints through appropriate technology and other measures. Accessing and controlling water is a critical basis for commercial agricultural production as it reduces risk of crop failure due to lack of water, thereby encouraging investment in high-value crops.
6. Incorporating gender analysis to identify the different needs, roles, opportunities and constraints of women and men and integrating gender-specific programming elements to enhance women's opportunities to participate fully in the market.

The principles outlined below guide the development, implementation, review, revision and monitoring of the PRISM approach.

Principle 1: Support Market-Driven Solutions. Based on a belief in the market economy to provide goods and benefits efficiently, PRISM supports the development of market-driven approaches and methods that benefit smallholders. For this reason, the PRISM approach avoids direct service provision and concentrates instead on facilitating development of sustainable, private sector, pro-poor markets that continue to benefit smallholders over the long-term.

Principle 2: Value Chain Approach. PRISM utilizes a value chain approach in order to analyze the market system and to develop appropriate interventions that vertically integrate smallholder inputs, production, and outputs for maximum efficiency and profit to the smallholders.

Principle 3: Environmental Sustainability. The PRISM approach seeks to ensure that market-based poverty solutions improve food security and provide income and livelihood for present and future generations while preserving the natural resource base and biological and environmental support systems upon which smallholders and the market depend. This is achieved through analyzing potential impacts of subsector development, implementing specific strategies to protect the natural resource base, promoting sustainable agricultural management systems, practices and policies and effective, collaborative land use planning. PRISM concentrates on natural resource management practices that are economically viable and cost-effective, with a specific focus on soil, land and water resources.

Principle 4: Support Solutions that Benefit Women. Recognizing that women frequently constitute the poorest of a population, that reducing poverty necessitates increased market participation of both women and men, and that the well-being of families and the effectiveness of development assistance is enhanced by the empowerment of women, the PRISM model seeks to address constraints faced by women in order to ensure that the basic human needs of the entire community are met. This approach treats female entrepreneurs as market segments with growth potential and with particular needs due to unique social and economic constraints to business survival and growth. PRISM seeks to address these constraints in order to enable women to participate fully in the market and to benefit from such participation.

Principle 5: Intervention is Temporary. The PRISM approach supports development of markets that benefit smallholders and withdraws when the market becomes self-sustaining.

## **Overview of the PRISM Methodology**

The first part of this manual sets forth the conceptual framework of PRISM. The framework is not intended as a rigid step-by-step template for program development. Instead, it provides adaptable guidelines for analyzing the context of the intervention and for the decision-making process of developing a coherent, flexible intervention appropriate to that context. The second part of the manual, the annexes,

provides tools to guide in the development and implementation of the framework. These tools are indicative and can be modified and used as needed.

The PRISM conceptual framework is presented below in *Figure 1: Poverty Reduction through Irrigation and Smallholder Markets (PRISM) Approach*. The framework is divided into five phases:

### **Phase 1: Assessment**

Phase 1 is an assessment of potential sub-sectors, market opportunities and constraints, gender roles, environmental issues, and potential partnerships to appraise areas with program potential and define areas for further investigation.

### **Phase 2: Project Formulation**

Phase 2 is comprised of seven integrated components, each one an important constituent of the PRISM intervention:

Boundary Definition: Define geographic program area(s) where there is potential for market development based on PRISM principles and defined program criteria.

Market Opportunities: In-depth information gathering and analysis of sub-sector dynamics in order to identify three to six market opportunities that have potential to provide significant income for smallholders.

Smallholder Opportunity and Constraints: In-depth information gathering, identification of constraints that hinder smallholders' ability to participate effectively in the subsectors identified in the "Market Opportunities" component and opportunities for facilitating private sector market-driven solutions to these constraints.

Water Strategy: In-depth information gathering and analysis of water access and utilization constraints. Identification of a strategy that will enable smallholders to gain control over available water resources for crop irrigation through the use of low-cost, appropriate technologies.

Environmental Strategy: Information gathering and analysis on environmental impacts of current practices and prospective interventions. Development of strategies to protect the natural resource base and environmental systems.

Gender Strategy: Identification of the different needs, roles, opportunities and constraints, and differential impact of potential interventions on women and men and development of appropriate strategies that take advantage of opportunities and address constraints to enable women to participate fully in the market and to benefit from such participation.

Partnership Development: Identification of partnerships that contribute complementary expertise, provide necessary services, and/or strengthen prospective interventions and development of strategies to establish partnerships.

### **Phase 3: Intervention Design**

Phase 3 analyzes potential interventions based on PRISM objectives and principles, costs and other criteria. Development of an intervention design that incorporates the above PRISM components (e.g. Market Opportunities, Smallholder Opportunities and Constraints, Water Strategy, etc.) and that organizes the smallholder sector to compete effectively with the agro-industrial sector and other market competitors. The Intervention Design also includes specific objectives, a budget, timetable, and monitoring and evaluation measures.

### **Phase 4: Implementation**

Phase 4 focuses on implementing the intervention as detailed in Phase 3.

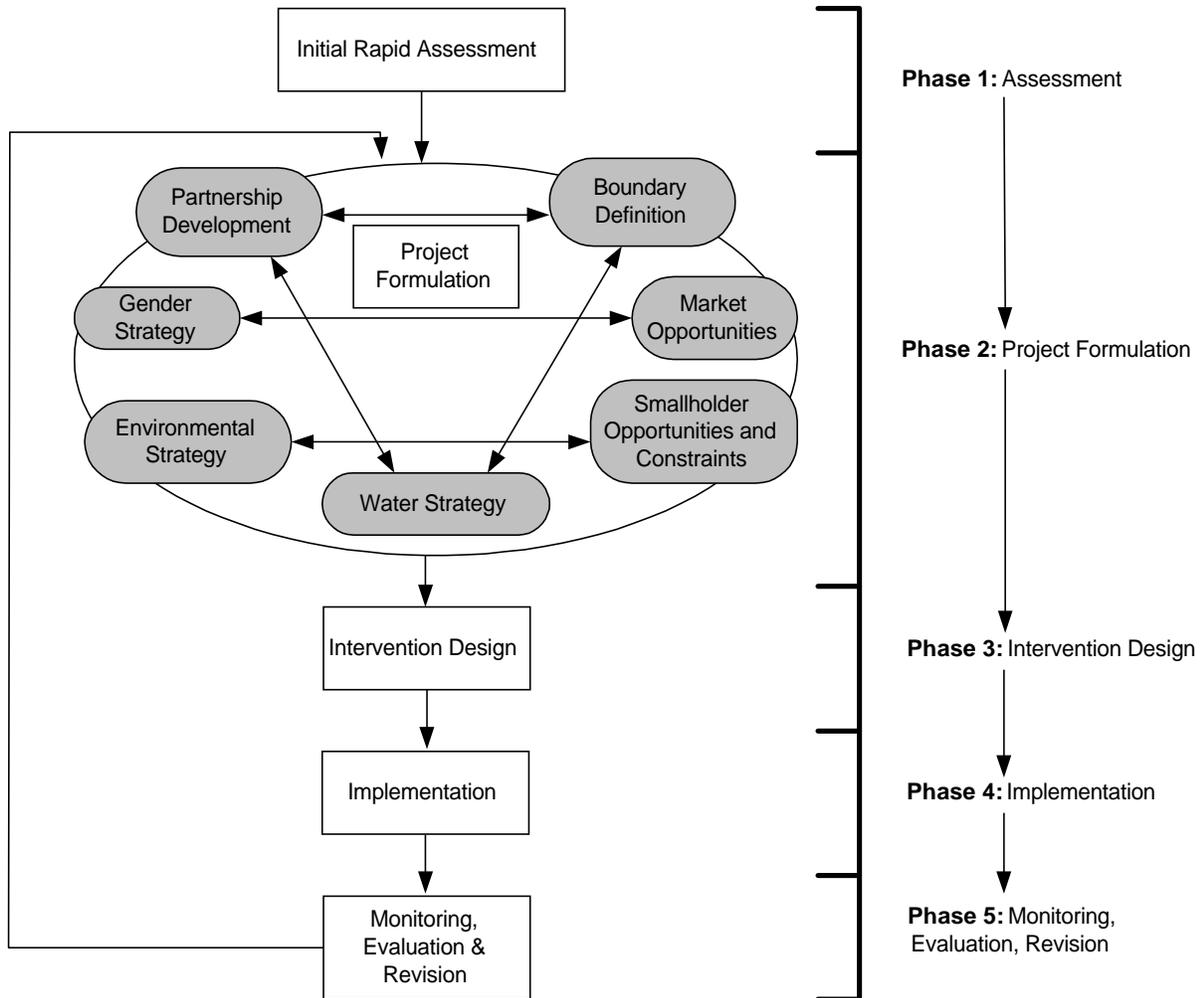
### **Phase 5: Monitoring, Evaluation and Revision**

Phase 5 focuses on monitoring, evaluating and revising the intervention to ensure that market system is functioning as envisioned. Monitoring involves regular updates regarding whether the intervention is implemented in accordance with the objectives, timetable and budget established

in the Intervention Design component. Evaluation is used as a tool for project learning and revising the PRISM methodology. It requires in-depth, regular assessments of the short- and longer-term impacts of the intervention, whether the methodology is a cost-effective means to reach PRISM's poverty alleviation goal, and whether the methodology should be revised based on new learning.

While Phase 1 through Phase 5 are implemented successively, within Phase 2: Project Formulation, the components are not implemented in a step-by-step, linear method. Among these components, the starting point and sequence of execution are not fixed, but will vary depending on the level of prior knowledge, the existence of pre-selected partners, and other location-specific parameters. In addition, each component of Phase 2 does not stand alone, but is interrelated with all other components. Collectively, the components provide a framework for understanding the program context and developing possible interventions. As a result, the program development team determines what information is required for each component and utilizes the PRISM guidelines as needed to gather and analyze this information. The program development team may re-arrange the components, utilize components simultaneously or employ one component for rapid initial information gathering and return to that component later for additional, in-depth data collection. This requires that the program development team prioritize information needs while balancing time, cost and benefits of further investigative work at each stage of program analysis and development.

**Figure 1: Poverty Reduction through Irrigation and Smallholder Markets (PRISM) Approach**



## **Purpose of this Manual**

IDE is currently defining, testing, validating and refining the PRISM smallholder market intervention model. Producing this manual is part of this process. This manual provides the PRISM philosophical approach and rationale, the conceptual framework for implementing PRISM and a set of implementation tools for facilitating the development of market systems that serve the needs of the rural poor. It is expected that the PRISM framework and corresponding tools will be revised as the manual is applied and tested in the field. In particular, as PRISM has expanded to incorporate gender equity, natural resource management, vertical integration and competition with the agro-industrial sector, new methodologies will need to be developed to effectively integrate these components with the PRISM market development approach.

This manual is intended to be utilized by IDE, other NGOs, local organizations, partner organizations, governments and others interested in learning about and/or applying the methodology. The long-term objective of developing this manual is to integrate the largest number of households into smallholder markets in order to reduce rural poverty worldwide while addressing the needs of women and protecting the natural environment. The shorter-term objectives of this manual are to:

- Ensure consistent understanding of the PRISM approach and guidance in developing and implementing the PRISM methodology.
- Inform decision-makers and raise awareness of PRISM approach to micro-irrigation and smallholder market development and its benefits.
- Educate and develop the capacity of other organizations to apply and promote the PRISM methodology.
- Establish a starting point to further refine and develop the PRISM model.

## **Initial Rapid Assessment**

### **Objective**

To conduct a rapid assessment of potential sub-sectors, market opportunities and constraints, gender roles, environmental issues, and potential partnerships. The assessment is used to delineate potential geographic areas and sub-sectors for intervention and to define issues, priorities and questions for further investigation.

### **Methodology for Initial Rapid Assessment**

Conducting an Initial Rapid Assessment requires a thorough understanding of the objectives, principles and components of the PRISM methodology. The assessment involves preliminary information gathering related to the components of the Project Formulation phase: Boundary Definition, Market Opportunities, Smallholder Opportunity and Constraints, Water Strategy, Environmental Strategy, Gender Strategy and Partnership Development. This information is gathered through literature reviews, collecting and analyzing secondary data from government agencies, research institutes, business associations, local universities, donor agencies, other knowledgeable sources and, where necessary, field reconnaissance.

The project development team reviews the information and highlights key issues and opportunities, e.g.:

- Potential subsectors, performance issues related to those subsectors, opportunities and constraints for smallholders within those subsectors and current/potential business development services needed to catalyze demand and supply side market forces
- Potential geographic regions for intervention
- Potential gender implications of the subsectors under review
- Potential environmental implications of the subsectors under review
- Priorities and questions for further investigation

The team utilizes these key issues to develop a preliminary strategy for Phase 2: Project Formulation.

The strategy outlines the process for collecting additional data and information, for investigating identified questions and for making strategic decisions regarding program intervention. This strategy is used to guide the process of formulating the intervention and is modified as needed during this process.

Following the Initial Rapid Assessment, the project development team may organize a workshop with interested organizations to present the PRISM approach, explore synergies, and gauge potential interest and commitment to partnership development.

## Boundary Definition

### Objective

Boundary Definition is the process of progressively defining a geographic area in which an intervention has the potential for success in achieving PRISM goals. The area defined may include several thousand to several hundred thousand smallholder households that share a degree of uniformity in hydrology, agro-ecology, socio-cultural characteristics, and potential market opportunities.

### Summary of Boundary Definition Methodology

1. Establish criteria for Boundary Definition.
2. Collect key data needed for area selection.
3. Eliminate unacceptable areas.
4. Compare and rank remaining areas.
5. Collect additional data for selected areas, as necessary

### Boundary Definition Methodology

As with other components of the project formulation phase, Boundary Definition is an iterative process, requiring information derived from the other components in order to progressively define program areas. Determining an appropriate area for an intervention becomes more clear as more is learned about local needs, opportunities, constraints, the availability of suitable partners, and gender and environmental issues in potential areas. For example, following an initial selection of potential program areas, it may be useful to conduct a subsector analysis or review environmental considerations within those potential areas and then return to the Boundary Definition component to further define the program area. The boundary definition process starts with the Initial Rapid Assessment to select potential broad regions (macro-level boundary definition) and progressively defines smaller areas within those broad regions (micro-level boundary definition) for an intervention. The final determination of exact intervention boundaries may be made as part of the Intervention Design. The project development team ensures that each step of this iterative process contributes to the larger goal of program development for poverty alleviation.

The Boundary Definition methodology outlined below is a flexible guide in the process of selecting potential areas for intervention. The project development team may alter the process as needed, in accordance with the context, information collected through other PRISM components or local priorities.

1. Establish criteria for Boundary Definition.

The potential number of geographic areas where the PRISM methodology could be implemented to address poverty is overwhelming. Defining a few, key criteria for project area selection assists in focusing attention on areas that have the potential to meet PRISM goals and principles. For example, focusing on three decision variables, such as socio-economic factors (e.g. poverty), agricultural potential for smallholders and market opportunities, defines potential project areas on that basis. Possible criteria for project area selection are listed below in *Table 1: Potential Criteria for Boundary Definition*.

**Table 1: Potential Criteria for Boundary Definition**

Potential Criteria for Boundary Definition	Details of Potential Criteria
Agricultural Potential for Smallholders	<ul style="list-style-type: none"><li>• Sufficient water availability, access and quality</li><li>• Sufficient land availability, access and quality</li><li>• Physical environment (soils, temperature) can support high value crops without environmental degradation</li></ul>
Market Opportunities	<ul style="list-style-type: none"><li>• Sufficient linkages to larger markets</li><li>• Sufficient market size/number</li><li>• Adequate infrastructure linking markets</li><li>• Sufficient market sector for agriculture</li></ul>

Socio-Economic / Demographic Factors	<ul style="list-style-type: none"> <li>• Average household income in the marketshed not too high or too low</li> <li>• Sufficient household literacy rates</li> <li>• Sufficient average landholding size</li> <li>• Sufficient number of farming households in the marketshed</li> <li>• Ethnic/caste/religious groups accept and succeed with market-based interventions</li> <li>• Potential to positively benefit women</li> <li>• Sufficient human labor potential</li> </ul>
Enabling Environment	<ul style="list-style-type: none"> <li>• Host government priorities, policies, support project intervention</li> <li>• National, regional and local political processes enable project intervention</li> <li>• Donor priorities and policies agreeable to project intervention</li> <li>• National and local security stable</li> </ul>
Other	<ul style="list-style-type: none"> <li>• Potential for collaboration</li> <li>• Logistics of project implementation feasible</li> </ul>

## 2. Collect Key Data Needed for Area Selection

To simplify the immense task of data collection, the project development team collects only key data for each criterion selected. *Annex A: Tools for Boundary Definition, A1: Data Collection Needs for Boundary Definition* provides guidance as to the key data associated with each criterion listed in the table above. While Annex A offers suggestions, the project development team determines what process and tools are most suitable and efficient in accordance with the context. At each step of the data collection process, the team weighs the costs and benefits of gathering different types of data, determining which details or sources should be investigated later. In any given situation, specific data may not be available for some or all of the candidate areas. The project development team therefore collects data that are available for the selected criteria and uses those data to inform the area selection process. It may be useful for the team to develop tables to organize data and to list questions and prioritize issues to be explored later.

## 3. Eliminate Unacceptable Areas

Potential project areas are evaluated on the basis of the criteria selected earlier. Areas where there is limited chance of a successful intervention are eliminated. In addition, areas deemed incompatible with PRISM principles are eliminated. For example, areas are eliminated from consideration if project intervention will inevitably lead to large-scale environmental damage or exacerbate gender inequities.

## 4. Compare and Rank Remaining Areas

After eliminating unacceptable areas from consideration, the project development team evaluates the remaining areas as possible candidates for intervention. There are many possible evaluation methods, including:

- Defining and refining issues, priorities and questions and evaluating intervention opportunities through a process of assessment and discussion.
- Mapping areas that satisfy the selected key criteria and overlaying the maps to visualize where an intervention would match all of the selected key criteria. For example, if the criteria selected were socio-economic factors (e.g. poverty), agricultural potential for smallholders and market opportunities, areas on the map where those three overlapped would be selected for an intervention.
- Comparing and ranking remaining areas by determining the relative importance of each selected criterion and then determining how well each candidate area satisfies that factor. These

determinations use a simple method to numerically trade-off and assess the results as detailed in *Annex A: Tools for Boundary Definition, A3: Weighted Ranking Methodology* and *A2: Attractiveness Matrix*.

#### 5. Additional Data Collection for Selected Areas

In the preliminary data collection phase, only key data needed to select the project intervention area were collected. Once the project area has been selected, project staff identify additional information needs, appropriate methods to collect the information and relevant stakeholders at the local, regional and national levels to involve in data collection.

# Market Opportunities

## Objective

To identify three to six market opportunities that have the potential to provide significant income for smallholders through cost-effective intervention and leveraged impact. In addition, the process of researching market opportunities minimizes potential market distortions produced by the project intervention through improved knowledge of market dynamics.

## Summary of Market Opportunities Methodology

1. Defining the subsector review process
2. Information gathering on potential subsectors
3. Shortlist subsector options

## Methodology for Market Opportunities

The Market Opportunities component of the project formulation phase is a process of identifying three to six market opportunities that have the potential to provide significant income for smallholders through cost-effective intervention and leveraged impact. These opportunities will normally correspond to specific subsectors of the rural economy (e.g. mushrooms, papaya or specialty vegetables for export). Ideal subsectors will have large and growing demand, high income potential for smallholders, low start-up costs, rapid return on investment, will benefit women, make use of smallholders' existing agricultural asset base and family labor advantage, and will sustain the natural resource base. The search for market opportunities focuses on high-value crops for which the smallholder has or can develop a comparative advantage and for which smallholders collectively can be organized and assisted to compete effectively with industry.

Identification of market opportunities that have the potential to provide significant income for smallholders is an iterative process that requires information derived from other components in the project formulation phase in order to progressively define potential market opportunities. This analysis is not conducted in isolation from other components; rather all components are intrinsically interrelated. For example, identification of market opportunities requires an examination of potential subsectors in relation to gender roles and opportunities and constraints for women to ensure that the subsectors selected are consistent with PRISM principles of benefiting women.

In addition, identification of market opportunities involves progressive implementation, review and reflection on the methodology proposed below. The Market Opportunities methodology outlined below is a flexible guide to the process of selecting potential areas for intervention. The project development team may alter the process as needed, in accordance with the context, information collected through other components or local priorities. The project development team ensures that each phase of the Market Opportunities component progresses toward a more precise definition of a program intervention that is consistent with PRISM goals and principles.

The Market Opportunities methodology derives from a thorough understanding of the subsector value chain and an accompanying array of business development services that are needed to catalyze both demand and supply side market forces. Subsector analysis and business development services market assessment tools and research methods are the basis for defining market opportunities.

### 1. Defining the Subsector Review Process

The scope of a subsector review is potentially vast. Drawing a preliminary subsector map for each subsector under consideration may be useful to guide the process of subsector analysis because the map visually represents different stages of the subsector, as well as product, financial and information flows (*Annex C: Tools for Market Opportunities* provides a subsector mapping form). The preliminary subsector map can assist the project development team to identify key areas of investigation and

information collection needs for the subsectors under review. The team can then develop a plan for investigating these key areas.

Another method to refine the scope of subsector review is to establish criteria to assist in evaluating which subsectors meet PRISM goals and principles. Examples of subsector criteria include potential income, number of market participants and market growth potential, family labor advantage, crop manageability, farmers' previous experience, prevalence of existing market channels, benefits to women, and environmental sustainability. Emphasis is placed on those subsectors where the smallholder sector can organize to compete effectively with agro-industry, such as in high-value crops where the smallholder has an advantage.

*Annex B, B1: Possible Criteria for Subsector Selection* provides possible criteria for subsector selection, a description of each criterion and information needs for each criterion.

## 2. Information Gathering on Potential Subsectors

Information gathering on potential subsectors progressively defines particular subsectors that meet PRISM goals and refines the inquiry to determine which subsectors will be investigated in greater depth. The process must balance the need to collect sufficient information to develop an understanding of the subsectors under consideration with an awareness of time and cost constraints and the desire for efficiency.

Preliminary information for subsector analysis can be obtained through literature or study reviews, available secondary data and information from other organizations, donor agencies, business associations, local universities, research institutes, and knowledgeable observers. As needed, the project development team identifies relevant stakeholders, including women, to participate in more in-depth information gathering through:

- Smallholder interviews/focus group discussions
- Market surveys
- Formal/informal discussions/workshops with key informants in government, civil society and the private sector
- Small samples of key informants from each stage of the subsector
- Conducting studies

## 3. Shortlist Subsector Options

The project development team shortlists subsectors that best fulfill program needs and that meet PRISM goals and principles. The development of a shortlist also relies on input gathered through other PRISM components. For example, input from the Gender Strategy component assists in identifying subsectors that provide the greatest benefits to women.

Annex A2 and A3 provide tools to evaluate and choose subsectors.

## **Smallholder Opportunity and Constraints**

### **Objective**

To analyze market opportunities and constraints within each subsector identified in the “Market Opportunities” component, to identify constraints that hinder smallholders’ ability to participate effectively in those subsectors, and to identify opportunities for facilitating private sector market-driven solutions to these constraints. Specifically, the objectives are to:

- 1) Gather information on the sub-sector, market channels and trends, primary actors, their roles and interrelationships
- 2) Evaluate the needs and dynamics of smallholders in the subsector
- 3) Identify key constraints that inhibit greater productivity at input, on-farm and output levels and/or competitiveness with the industrial sector
- 4) Identify cost-effective interventions that can alleviate the constraints. By identifying constraints that affect many smallholders within the subsector, it is possible to identify opportunities for cost-effective “leveraged interventions” that impact large numbers of smallholders
- 5) Prepare a subsector map that describes the links between firms operating in the same industry, but in different market channels.
- 6) Assess and select Business Services that meet the needs of smallholders and identify opportunities to increase the capacity of Business Services.

### **Summary of Smallholder Opportunities and Constraints Methodology**

1. Involve key partners
2. Information gathering
3. Prepare subsector map
4. Identify where smallholders can compete
5. Identify key constraints
6. Identify opportunities
7. Select a Business Services Intervention

### **Methodology for Smallholder Opportunities and Constraints**

#### **1. Involve Key Partners**

Key partners and stakeholders have probably been identified through the Initial Rapid Assessment or through shaping other components of the project formulation phase of PRISM. The project development team develops a strategy to involve key partners and stakeholders effectively in the “Smallholder Opportunities and Constraints” component, ensuring the involvement of women.

#### **2. Information Gathering**

Together with key partners and appropriate stakeholders, the project development team gathers information on sub-sector structure, operation, constraints, and opportunities. Based on field experience, the results of preliminary investigations and the Initial Rapid Assessment, an initial opportunities and constraints analysis has probably identified the principal obstacles that smallholders face in producing and marketing the selected crops. This analysis will be confirmed and refined through the Smallholders Opportunities and Constraints component, which focuses on Subsector Analysis and Business Development Services (BDS) Market Assessments. The Subsector Analysis confirms what the smallholders needs are and the BDS Market Assessment defines how those needs can be met through market-driven, private sector initiatives.

Information collection focuses on:

- Understanding the primary actors, including the current and potential role of women, operating in the input-production-output chain of the subsector (producers, manufacturers, input suppliers, wholesalers, retailers, etc.). Understanding their roles and inter-relationships and the rules that govern those relationships.

- Understanding the entire vertical chain of subsector, because one stage of a subsector affects other stages. Understanding the implications of subsector structure for current and future economic performance of the subsector.
- Understanding forces of change affecting the subsector, such as changes in technologies and supplies of competing products, and the implications of those changes on subsector performance.
- Understanding current and potential environmental impacts of the subsector.
- Understanding the dynamics of national and international demand, which pulls goods and services through the vertical chain.
- Understanding market channels and how well those coordinate activities of actors in the subsector, the incentives to improve productivity, competition between/among channels and how it might be modified to achieve better economic performance.

Information can be gathered from key informants in government, civil society and the private sector using:

- rapid rural appraisal
- key informant interviews
- focus groups
- validation workshops with smallholders, small enterprises, government and civil society organizations

*Annex C* provides indicative tools that can be used or modified for Smallholder Opportunity and Constraints analysis, including questionnaires for BDS Market Assessment, Demand Side of BDS, Supply Side of BDS and a Key Informants Interview Guide.

Selective visits to production and marketplace facilities and to important infrastructure may be useful to verify information gathered from subsector participants and to provide additional information if good data are unavailable.

### 3. Prepare Sub-sector Map

Preparation of a subsector map can provide a graphic representation of the major actors and their interrelationships and facilitate identification of participants to interview. *Annex C: Figure 1: Subsector Mapping Conventions* provides a tool for mapping subsector information.

### 4. Identify Where Smallholders Can Compete

Identify where smallholders can compete. What channels? What market intermediaries are key in connecting smallholders to those opportunities?

- Quantify which channels are growing and which are waning.
- Measure relative profitability (returns to labor or land) of principal alternatives to see where smallholder incentives lie.
- Quality, grades and standards: who imposes these? Can smallholders meet these requirements?
- Can the smallholder sector compete effectively with the agro-industrial sector through organizing smallholders, identifying agricultural products where smallholders have an advantage, and developing integrating services designed specifically to meet smallholder needs (e.g. capital, credit, technology, training, information systems)?

*Annex C: Worksheet 1. Evaluating Subsector Dynamics and Potential Interventions* provides a worksheet that can be used or modified as appropriate to present the information collected through this process.

### 5. Identify Key Constraints

What prevents smallholders from accessing those growing channels? Use the subsector map to identify key linkages in input, on-farm and output markets. Constraints may occur at one of three levels in the vertical value chains within which smallholders operate:

- The input market - the enterprises and organizations that provide the goods, services, and information required for agricultural production.
- The small farm - the household production unit that consumes inputs to cultivate crops for self-consumption and for sale to output markets.
- The output market - the enterprises and organizations that provide the goods, services and information required to move the small farm production from field to consumers at economically rewarding prices.

Constraints faced by smallholders typically fall into one or more of the following categories: technology/product development, market access, input supply, finance, policy, management/organization, infrastructure, information, and large-farm competition. *Table 2: Potential Smallholder Constraints* below lists these common constraints with examples of each at the three levels in the value chain.

When identifying constraints within the value chain, each constraint listed should be detailed enough to facilitate a specific solution and should state who specifically is affected by the constraint.

**Table 2: Potential Smallholder Constraints**

<b>Constraints Faced by Smallholders</b>	<b>Input Market</b>	<b>Small Farm</b>	<b>Output Market</b>
1. Technology / product development	Inappropriate or nonexistent tools/ machinery/ technologies	Lack of access to technologies  Lack of technical skills to produce to buyer specification	Lack of information on product demand
2. Market access	High transportation costs	Inability of smallholder to produce or supply to buyer specifications  Lack of marketing techniques/methods	Lack of market  High transportation costs  Lack of marketing organizations or brokers
3. Input supply	High prices  Poor quality raw materials  Lack of suppliers  Existing suppliers have limited outreach  High transportation costs for suppliers	High transportation costs for smallholders	
3. Finance	Lack of supplier credit	Lack of access to commercial funding  Inability to provide adequate collateral  No alternatives to traditional bank lending	
4. Policy	Artificial price subsidies  Lack of regulations	Import taxes that penalize local producers  Lack of government contracting procedures	Artificial price subsidies  Lack of regulations

		that favor smallholders	
5. Management and organization	Poor organization of large suppliers  Lack of communication and/or cooperation between different actors	Inability of smallholder producers to organize for economies of scale  Lack of smallholder actors with training in specific areas (financial management, production skills, marketing)	Poor organization of large buyers
6. Infrastructure	Poor road, electricity, refrigeration facilities, etc.	Poor road, electricity, refrigeration facilities, etc.	Poor road, electricity, refrigeration facilities, etc.
7. Information	Lack of information on product demand  Lack of information on financing	Lack of information on product demand  Lack of information on financing	Lack of information on potential markets
8. Large-firm competition		Larger firms have more knowledge, skills and information than smallholders	Larger firms able to produce at lower cost
9. Social, cultural and legal constraints for women		Women unable to access credit  Women unable to own land or other productive resources  Women unable to market product	

## 6. Identify opportunities

A thorough analysis of constraints at each market level and in each constraint category normally produces a long and daunting list of market constraints. In order to limit and focus the potential areas of intervention, constraints are prioritized to identify “key logs and in the logjam” that, when addressed can cost-efficiently unleash growth potential for large numbers of smallholders. Such leverage points may be found by identifying nodes in the value chain where a small number of firms act as intermediaries for a large numbers of smallholders or by taking advantage of geographic clustering of similar enterprises or production systems or by identifying policy levers that will remove constraints for many market actors at once.

*Annex C: Subsector Mapping, Figure 2. Diagnostic Procedures for Identifying Leveraged Interventions* can guide the process of understanding the dynamics of the system and identifying leveraged interventions. The following questions can also assist in this process:

- Sources of leverage: large firm intermediaries, geographic clustering, and policy levers
- How many smallholders will benefit? By how much?
- What is the least costly means of addressing their needs?
- Will the envisaged intervention be cost-effective? Will it generate more benefits than costs?

## 7. Select a Business Services Intervention

Business Services are enterprises that provide services to members of the input-production-output chain to help them manage and expand their operations. The section below outlines a process for recognizing,

assessing and selecting Business Services that meet the needs of smallholders and for identifying opportunities to increase the capacity of Business Services.

**Identify Business Services**

Identify Business Services that respond to the key leveraging constraints pinpointed in the “Smallholder Opportunity and Constraints Analysis” phase. Business services should increase the production/marketing capacity of smallholders directly or through enterprises that serve smallholder needs. It is important to identify commercial business services that respond to subsector constraints rather than to address the constraint directly. This ensures sustainable solutions to constraints; avoids market distortions; expands outreach through a number of providers; and generates in-depth analysis and knowledge of private sector services available.

Examples of constraints and business services that address those constraints are provided in *Annex C: Examples of Business Services that Address Key Constraints*. Business services identified typically begin with the words: “access to...”, “provision of...”, and/or “training in...”

**Establish Selection Criteria**

Determine selection criteria for comparing and selecting the business services that will be addressed by the project. Possible criteria include:

- Number of small and medium-sized enterprises (SMEs) that will benefit
- Increase in income/efficiency/effectiveness of SMEs
- Number of smallholders that will benefit
- Increase in smallholders’ income
- Positive or neutral environmental/social impacts

**Collect Information for Criteria**

Collect information and data for each of the selection criteria relative to each Business Services option.

**Select Business Services**

Select Business Services using *Annex A: Weighted Ranking Method* if there are more than two criteria or *Annex A: Attractiveness Matrix* if there are only two important criteria.

**Assess Business Services**

Assess the selected Business Services to understand demand, identify potential providers, and determine feasibility. The table below summarizes information required for the assessment, methods for collecting the information and examples of Business Service providers.

**Information Gathering on Business Services**

<b><u>Information Required for Business Service Assessment</u></b>	<b><u>Methods of Collecting Business Service Information</u></b>	<b><u>Examples of Business Service Providers</u></b>
<ul style="list-style-type: none"> <li>• Existing providers</li> <li>• Market size and penetration</li> <li>• Frequency of use</li> <li>• Constraints and opportunities on the demand side (Business Service users)</li> <li>• Constraints and opportunities on the supply side (Business Service providers)</li> <li>• Awareness of the business service among potential users</li> <li>• Satisfaction with the business</li> </ul>	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Surveys/questionnaires of Business Service users</li> <li>• Surveys/questionnaires of Business Service providers</li> <li>• Business plans or pilot testing to determine feasibility</li> </ul>	<ul style="list-style-type: none"> <li>• Input suppliers</li> <li>• Produce buyers</li> <li>• Brokers/traders</li> <li>• Exporters</li> <li>• Transporters</li> <li>• Associations</li> <li>• Training organizations</li> </ul>

service among users <ul style="list-style-type: none"> <li>• How costs are covered (fee for service or embedded)</li> <li>• Proposed providers to target for intervention</li> </ul>		
--	--	--

Identify Interventions to Improve Business Services

In coordination with stakeholders (through workshops, focus groups, interviews, etc.), identify potential interventions to improve the Business Services selected in previous steps. The objectives of coordinating with stakeholders are to:

- Validate major subsector constraints and related Business Services within the targeted subsector
- Validate Business Services assessment information, including supply and demand side constraints of targeted services
- Discuss and review actual interventions needed to develop the targeted Business Services

The following guidelines may assist in identifying potential interventions:

- Facilitate business service development rather than providing services directly, which can lead to market distortions and inefficient use of resources. At times, particularly in very underdeveloped markets, it may be necessary to support a particular business development service provider or launch a new service or model to demonstrate its potential, but as the provider or service becomes viable, it is important to switch to the role of facilitator.
- Identify interventions that address constraints identified in the Business Services assessment.
- Target interventions at pre- and post-service delivery (avoid direct service delivery). Examples of pre-delivery activities include development of service products, test marketing, capacity building, raising awareness. An example of a post-delivery activity is gathering consumer feedback.
- Work toward sustainability. Sustainability is the “long-term availability of a category of services in a particular business service market through unsubsidized, commercial channels”<sup>3</sup>. To encourage sustainability, it is important to have an exit strategy, which is defined as a strategy whereby time-bound interventions undertaken by a facilitator help ensure that Business Services are sustainable through market forces once the interventions end. The exit strategy should be linked to achievement of the intervention’s market development objectives. The challenge is to assess the market objectively to determine when it has reached a sustainable level.
- Separate the role of the Business Services provider and facilitator. Because facilitators usually have a development agenda and suppliers a commercial agenda, mixing the roles often leads to ineffective programs and inefficient use of funds. If facilitators are publicly funded, they should disappear as the market develops and suppliers or other permanent market actors take over their functions<sup>4</sup>.
- Promote competition, efficiency, and innovation in the provision of Business Services.
- Maintain a commercial orientation with smallholders and small and medium sized enterprises. Examples of techniques to ensure commercial orientation are cost-sharing mechanisms, which ensure the service providers’ commitment and investment in the service, as well as written agreements that define the roles and responsibilities of the provider and facilitator for each activity.
- Remain flexible and responsive to opportunities. This is important because subsectors are dynamic and constantly changing because learning takes place with market actors as the program progresses. Facilitators should take advantage of opportunities and change strategies as appropriate in response to these changes.
- Coordinate efforts of donors, government, and other stakeholders in order to avoid conflicting messages.

<sup>3</sup> Turin, p. 50

<sup>4</sup> Turin, p. 31

### Determine Selection Criteria for Selecting Business Services Interventions

Determine selection criteria for comparing and selecting the business service interventions. Possible criteria include:

- Number of SMEs (including smallholders) that will benefit
- Increase in income/efficiency/effectiveness of SMEs
- Cost-effectiveness of intervention
- Chances of intervention resulting is sustainable business service
- Capacity of existing facilitators to implement/manage the intervention
- Synergy of interventions among various business services
- Feasibility of intervention (time frame, resource availability, donor interest)

### Select Business Services Intervention

Select the Business Services intervention by using the Weighted Ranking method (Annex A2) if there are more than two criteria or the Attractiveness Matrix (Annex A3) if there are only two important criteria.

# Water Strategy

## Objective

Information gathering and analysis of water access and utilization constraints in order to identify a strategy that enables smallholders to access, store, and control available water resources for crop irrigation. Emphasis is placed on low-cost, appropriate, household-level micro-irrigation systems that optimize water-use efficiency, minimize labor burdens and social transaction costs to the users, and maximize economic returns to the poor. Employing a water strategy that enables smallholders access to and control over water for crop irrigation is a high priority because water is a critical variable central to farm productivity and is often the most limiting factor for smallholder production.

## Summary of the Water Strategy Methodology

1. Define stakeholders and partners.
2. Define the process for information collection and analysis.
3. Collect information.
4. Analyze the information and develop a water strategy.

## Methodology for Water Strategy

Similar to other components in the project formulation phase of PRISM, developing a water strategy is an iterative process, requiring information derived from the other components in order to progressively define a water strategy appropriate to the local context and consistent with PRISM principles. A water strategy becomes more clear as more is learned about local needs, opportunities, constraints, the availability of suitable partners, and gender and environmental issues in potential areas. The Initial Rapid Assessment highlights broad issues related to water access, use and storage, as well as potential strategies to address these issues. Progressive project formulation provides further details needed to define a water strategy, including women's role in water use and control, water needs, and constraints related to identified potential smallholder market development interventions. Developing an effective, appropriate water strategy requires integrating these details derived from other components with information specific to water access, storage, use, and control, including water policy at the national, regional and local levels, customary water-use tenure arrangement, community and household decision-making over water (including intra-household gender relations in regards to water access and use), natural resource endowments, and potential water-use conflicts.

1. Define stakeholders to be involved in the process and how they will be involved.
2. Define in general terms how information and data are to be collected, measured, and interpreted.
3. Collect information

Possible information needed to develop a water strategy includes:

- Water source(s) (rivers, perennial streams, intermittent streams, groundwater, reservoirs, piped water, waste water)
- Attributes of water (price, quality, variability in time and space)
- Availability of water for cultivation (without intervention, with TP's, rope and washer, or other means)
- Water management unit (catchment, reservoir, village)
- Water management techniques known to farmers, separated by gender
- Annual precipitation, variability in precipitation, and climate trends
- ET during the year to make a dynamic water balance
- Water policy, laws and institutional context at the national, regional and local levels
- Customary water-use tenure arrangements
- Community and household decision-making over water
- Potential water-use conflicts (at household, catchment and regional levels)
- Environmental trends relating to quality and quantity of water resources (e.g. pollution, over-use) at local and regional levels

- Risk and options to cope with it (financial, family, bulk water sources), including risks to health

#### 4. Develop a water strategy

To evaluate potential water strategies, take into account the spatial parameters affected by the intervention, as well as information collected through the water strategy and other program components, and the other considerations listed below.

Spatial parameters to consider are:

- On-farm level, where decisions are made regarding water use, investments and waste
- Catchment level, to ensure equitable water balance among water users
- Regional level or river basin, to determine possibilities and impacts of program expansion

Considerations related to developing a water strategy include:

- How crop selection and cropping patterns impact on water use, availability, and quality
- Environmental implications of potential water strategies (e.g. impacts on soil, water quality and quantity)
- Gender implications of potential water strategies, with the goals of reducing women's workloads and increasing income
- Efficiency, in terms of reducing labor and reducing water use
- Low cost
- Appropriate technology to meet farmers' needs
- Customary, legal and institutional constraints and opportunities relating to potential strategies

# Environmental Strategy

## Objective

Information gathering and analysis on environmental impacts of current practices and prospective interventions. Development of cost-effective, sustainable strategies, agricultural management systems, practices and policies that improve food security and provide income and livelihood for present and future generations while protecting the natural resource base and environmental systems.

## Summary of the Environmental Strategy Methodology

1. Develop a plan
2. Information collection and analysis
3. Review and select options

## Methodology for the Environmental Strategy

The Environmental Strategy is integrated within the smallholder market development plan to ensure that this plan protects the natural resource base and biological and support systems upon which smallholders and the market depend. As such, the Environmental Strategy does not stand alone, but results from an examination of the potential impacts of other components and is integrated within other components of the intervention. The Environmental Strategy examines potential smallholder market development strategies to determine probable impacts of those strategies on land, soil, and water; to identify those interventions that have a positive impact or minimal negative impact; and to mitigate any unavoidable negative impacts. For example, integrating the Environmental Strategy within the Smallholder Opportunity and Constraints component ensures that opportunities for program intervention include access to high value environmentally concerned international markets.

Specific methodologies for the Environmental Strategy and for effectively integrating the strategy with other PRISM components need to be developed and tested. Outlined below is a framework for the Strategy and suggestions for consideration in this process. These will be modified and detailed as the Strategy is developed and tested.

1. Develop a plan

The process of conducting the Initial Rapid Assessment and shaping other components of Phase 2: Project Formulation identified potential environmental implications of the subsectors under review and priorities and questions for further investigation. On this basis, it is useful to develop a preliminary plan for the Environmental Strategy component of PRISM that includes what information is needed, how it will be collected and analyzed and how to involve relevant stakeholders.

2. Information Collection and Analysis

The information collection and analysis phase seeks to understand current environmental practices and environmental impacts of potential interventions. This will help to identify interventions that will have a positive impact, to identify mitigation measures for potential negative impacts and to establish a baseline of information for comparative purposes.

Initially, the information collection and analysis should be general, with a focus on potential broad interactions between development of a subsector and the natural resource environment. As other PRISM components are more clearly defined, the focus shifts to information collection and analysis that is more detailed and focused on specific interactions between development of the subsector and the environment. For example, initial information collection may reveal that agricultural development in one location could lead to significant land clearing of important wilderness areas, but the process of delineating intervention possibilities through the PRISM methodology may disclose alternative land use arrangements to be investigated in greater detail.

When collecting and analyzing information relating to natural resources, it is important to consider:

- The entire value chain (input, on-farm, output), the scale (project, local, regional, landscape processes) and direct as well as indirect impacts. This is important because some environmental impacts, such as chemical pesticide use may be negligible on a small scale, but may be significant if thousands of smallholders employ similar practices.
- Current practices and future trends. This enables the project development team to assess how practices may impact on potential interventions and what will change in the future.
- Customs, including traditional natural resource management practices and indigenous agricultural knowledge. This facilitates building on current knowledge and practices.
- Socio-cultural patterns in relation to natural resource management (e.g. gender, age, ethnicity, religion, caste roles and decision-making over land, including potential conflicts over land/water/other resources). This assists in developing appropriate interventions without creating resource conflicts.
- Relevant policy, legal and institutional aspects of natural resource management (e.g. land ownership and use policies at the national, regional and local levels and customary land-use tenure arrangements). These may impact on smallholders' willingness to invest natural resource management.
- Extent and quality of data, information deficiencies and uncertainties.

### 3. Review and select options

Review and discuss strategies to protect the natural resource base, with a focus on land, soil and water resources. It may be helpful to estimate and rank positive and negative impacts in terms of magnitude and significance, linking impacts to specific geographic areas or social groups and evaluating which impacts are amenable to project intervention. Discussion of strategies should address the economic and practical feasibility to implement the strategies under consideration. While strategies developed will be context-specific, possible strategies include:

- Development/promotion of appropriate technologies (e.g. drip irrigation to reduce water consumption)
- Education/training regarding sustainable agricultural practices (e.g. pesticide alternatives, alternative post-harvest processing to reduce chemical applications)
- Partnership development to change policies/laws that promote degradation or depletion of resources (e.g. resolve land tenure issues that discourage investment in sustainable agricultural practices)
- Supporting research and development for sustainable agriculture and linking farmers to researchers
- Supporting effective, collaborative land use planning.
- Organizing smallholders to compete with industry while utilizing sustainable agricultural techniques and processes. For example, smallholders may be organized to utilize industrial by-products or in develop products from recycled materials and waste to reduce raw material, increase value and increase income.
- Understanding barriers to effective natural resource management of land and water (e.g. lack of knowledge, lack of technology, external pressures in the form of population pressure and sanitation) and developing measures to address specific barriers.
- Product and market development of environmentally sustainable products and services. Consumer interest in the environment develops new market segments, such as eco-tourism, and creates demand for new, environmentally sustainable products, packaging and services, and the use of natural ingredients, non-use of GMOs, etc.

## Gender Strategy

### Objective

Identification of the different needs, roles, opportunities and constraints, and differential impact of potential interventions on women and men and development of appropriate strategies that take advantage of opportunities and address the social and economic constraints to enable women to participate fully in the market and to benefit from such participation.

### Methodology for Gender Strategy

The gender strategy has three main elements:

- Gender analysis
- Gender awareness integrated within all other PRISM component
- Specific gender programming

Specific methodologies need to be developed for each of the above in order to meet PRISM gender objectives.

### Gender Analysis

It is important to conduct gender analysis as a pre-cursor to defining and implementing an intervention. Information gathered through gender analysis is used to identify objectives, constraints, and opportunities for integrating women into market systems development programming. This ensures that the intervention developed benefits women and respects cultural norms and attitudes in relation to gender roles and relations. The information can also be utilized to establish a baseline and gender indicators against which to monitor, analyze and measure gender equality results achieved over time. Specifically, gender analysis seeks to understand:

- The differential perspectives, roles, practical needs, and strategic interests of women and men in the household, community, project area, region, economy, and in natural resource management.
- Social relations between women and men pertaining to their access to, and control over resources, benefits and decision-making processes.
- The potential differential impact of project interventions on women and men.
- Social and cultural constraints, opportunities, and entry points for reducing gender inequalities and promoting more equal relations between women and men.
- The capacity of institutions, the private sector and other organizations to program for gender equality in order to assess IDE's role in addressing these issues.

### Gender Awareness in PRISM

Every component of PRISM should be implemented with gender awareness, which requires that at each stage of program development and implementation, program staff gather women's perspectives and data/information specific to women, and that program design and implementation seek to benefit women. Where stakeholder involvement is important, strategies may need to be developed to ensure women's participation (e.g. timing meetings so that they are convenient to women, providing childcare, holding meetings within the home, etc.). For example, gender awareness in the process of subsector selection involves collecting information and data regarding the role, perspectives, and strategic interests of women in different subsectors, understanding relations between men and women pertaining to involvement and decision-making in the subsectors under consideration and to access to and control over the potential benefits of subsector development. A specific subsector might be selected if it is deemed to increase household income, decrease women's workload and allow women to work at home with their children.

### Specific gender programming

Gender programming entails designing and implementing measures that specifically benefit women, including:

- Promote equal access to and control of land and other productive resources.
- Enhance women's opportunities for employment and income.
- Increase women's control over discretionary income generated from project interventions.
- Increase skills training and capacity development opportunities for women.
- Improve access to and control over credit, training, and services for women entrepreneurs.
- Reduce women's workloads.
- Increase women's participation in decision- and policy-making in the private sector and participation in decision- and policy-making in the household.
- Strengthen the capacity of partner institutions, governments and civil society to promote, design and implement policies, programs and projects that reflect the needs, priorities and interests of women.

## Partnership Development

### Objective

To develop a consortium of partnering organizations that contribute complementary or synergistic expertise and provide necessary services, both in facilitation and direct provision in a number of areas (technology, finance, information, policy) and at multiple levels (input, on-farm, output), to the development of pro-poor smallholder markets. This is critical for geographic expansion, for replicating the PRISM model to achieve the goal of poverty alleviation, and for linking support services to smallholders to enable them to compete with agro-industry because more than one organization is needed to perform all functions necessary to facilitate sustainable smallholder market systems within a project area and to take a leadership role in new regions. Additional objectives include developing partnerships to ensure that indigenous knowledge and experience is fully incorporated into the project design, to encourage local organizations to understand and take ownership of the PRISM process, and to build local capacity to continue applying the PRISM approach in the future.

The role of IDE in this context is the formation and maintenance of “platforms” upon which participating organizations can work together toward a common goal of sustainable market participation by the rural poor. Such platforms for collaboration and coordination will generate synergy by combining the efforts of numerous players in a deliberate, determined and targeted fashion.

### Methodology

The methodology for fostering partnerships is flexible, integrated within other PRISM components and evolving. The procedure for partnership development is highly flexible in order to respond to local needs and capabilities. It is also integrated within other PRISM components. The Initial Rapid Assessment conducted prior to developing an intervention examines partnership possibilities and develops an outline for establishing partnerships in a target area based on these needs and capabilities. Each PRISM component is then evaluated in terms of partnership possibilities. For example, organizations in the target area may have information needed to conduct a gender analysis within the project area, as well as the expertise required to develop the Gender Strategy component.

The methodology for Partnership Development is evolving. Advancing this manual is an initial step in establishing a methodology that can be tested, refined and developed further. Expanding on this section with written case examples of successful and unsuccessful partnerships related to each key area of work that is relevant to IDE will assist in developing this methodology significantly.

The following are considerations related to the Partnership Development methodology.

### Terminology

A distinction is made between two types of partners, Direct Service Providers and Facilitators, as explained below, although the distinction between the two types is not always obvious. Different partner types and different partner organizations may be brought into the PRISM process at different points of the project cycle and partners may participate to a greater or lesser extent in individual project formulation and implementation activities. Implementer partners will tend to be involved earlier and in a broader range of activities, while Direct Service Providers will tend to be involved later and in more specialized areas.

- *Direct Service Providers* are market actors aligned with the project objectives who receive support from the project to increase their efficiency and effectiveness in their roles within the smallholder market system. These actors will remain in the project area and continue to function within the smallholder market system providing affordable, appropriate, and sustainable goods and services to smallholders. These partners primarily consist of local organizations, including private enterprises, micro-finance institutions, business associations, farmer groups, and government agencies.
- *Facilitators* assist in the development of smallholder markets by supporting Direct Service Providers. Support may take the form of training, research and development, establishing market and information

linkages, awareness raising, demand creation, and policy advocacy. Facilitator partners will include organizations that provide facilitation services outside of IDE's areas of expertise. Some of these will receive strategic support from the project during the start-up phase. The role of facilitators is time limited; they will phase-out their activities as market systems begin to function on their own. Facilitators may be national, regional, or global in scope and may include NGO, government, donor, or research organizations. IDE's approach to program implementation is, in most respects, facilitation rather than direct implementation.

### Partner Identification and Selection

Potential partners may include government, civil society, donors, and/or private enterprises. Selecting partners is largely dependent on local needs and capabilities. Careful selection of partners will ensure that the full range of identified constraints are adequately resolved to develop sustainable smallholder market systems, and that the process of smallholder market development will become self-sustaining over time. Partners may be selected based on a search of options against a specific set of expertise or experience required. They may also appear opportunistically in the context of a given initiative. Potential partners may also be identified through networking, workshops, or tender. The task is to judge whether they are suitable, will add value to the whole and whether they bring new opportunities.

A simple process for identifying partners is to list the key aspects of identity, strategy, expertise, goals, capacity, financial security, etc. of each organization and judge whether there is an overlap - which can encourage shared thinking as well as duplication - or a complementary linkage. The partnership can then be built on the features that bring the organizations together and processes built to manage the characteristics that may drive them apart. A partnership involving more than two organizations has additional factors and greater needs for complementarity.

### Define and Structure Partner Relationship

It is important to outline clearly what each partner is bringing to the relationship and to structure it to ensure that this happens – and is seen to be happening. Key issues relating to definition and structure of the partner relationship are listed and explained below.

- Clear purpose and objectives for partnership. It is important to understand the benefits of the partnership to each organization *individually* because attaining these benefits will be a key factor in sustaining the partnership relationship. The nature of the benefits varies according to the specific component of the PRISM process or production/market value chain that the initiative is addressing.
- Responsibilities and tasks for each partner. Identifying and writing responsibilities and tasks for each partner clarifies roles and responsibilities prior to project intervention. It is also important to institute monitoring and review processes at more than one level to ensure that each partner fulfills these responsibilities and tasks, the partnership is moving in the right direction, barriers are overcome, etc. Procedures for clarifying roles, responsibilities and tasks may include informal, MoU, joint proposal, or sub-contractor.
- Assets of each partner.
- Overlap and complementarity.
- People to be involved – relationship building. Although a partnership is defined very much in the context of material and technical aspects - money, skills, information, technology, etc. - in reality, it will be a partnership between defined people in those organizations. Any effort to structure it in a way that does not recognize this, e.g. by allowing unlimited replacement of the individuals responsible, will damage the process of partnership development. At the early stages, key people need to be identified and processes instituted to enable productive and trusting relationships to be built. Any obvious incompatibility needs to be identified and managed to ensure that a key partnership between two organizations does not disintegrate due to the selection of people. Development of internal communication and decision-making rules and procedures, as recommended above, assists in managing the process of necessary changes in people in the partnership.
- Space for growth.
- Structures and disciplines for decisions.

- Internal communication procedures. It is important to establish procedures for internal flow of information and communication between different key people and offices, following a defined structure and discipline.
- Problem solving mechanisms.

## **Intervention Design**

### **Objective**

To design an intervention that meets PRISM objectives and principles by integrating Phase 2: Program Formulation components (Boundary Definition, Market Opportunities, Smallholder Opportunities and Constraints, Water Strategy, Environmental Strategy, Gender Strategy, and Partnership Development).

### **Methodology for Intervention Design**

A broad, comprehensive intervention that addresses PRISM goals and principles must weave together each of the components of Phase 2: Project Formulation. The process for designing such a comprehensive intervention is complex, requiring an iterative approach to reviewing each PRISM component and assessing methodologies to integrate each component into one comprehensive intervention. Therefore, although the section below is written as separate pieces to clarify each step in the process, each of these pieces must be woven together and fully integrated within the intervention design.

### Design an Intervention

The Intervention Design should include the following ingredients:

1. Objectives and principles of the intervention
2. Boundary Definition
3. Business Services strategy to address key constraints and opportunities
4. Water strategy
5. Environmental strategy
6. Gender strategy
7. Partnership development strategy
8. Proposed methodology to integrate all of the above into one coherent intervention
9. Budget, timetable, and personnel requirements
10. Procedures for monitoring and evaluation

### **Implementation**

Details of the Implementation Component depend on the results of the program formulation and intervention design phase.

## Monitoring, Evaluation and Revision

### Objective

To monitor and evaluate the intervention in order to:

- Assess the impact of the intervention to determine progress towards goals
- Revise the intervention as necessary in order to improve the intervention design and implementation methodology
- Document best practices
- Report to donors

### Methodology

IDE is in the process of revising the methodology for Monitoring, Evaluation and Revision. As new procedures are developed, this component will be revised.

### Monitoring and Evaluation Plan

A monitoring and evaluation plan is incorporated into the Intervention Design. This plan addresses: **Monitoring**, which involves regular updates regarding whether the intervention is implemented in accordance with the objectives, timetable and budget established in the Intervention Design component. **Evaluation**, which is used as a tool for project learning and for revising the intervention design and implementation methodology. It requires in-depth assessments of the short- and longer-term impacts of the intervention, whether the methodology is a cost-effective means to attain PRISM's poverty alleviation goal, and whether the methodology should be revised based on new learning.

The Monitoring and Evaluation plan includes the following elements:

- Stakeholder/partner role. Where appropriate, involve stakeholders and partners in monitoring, evaluation and program revision, as they are often able to identify different strengths and weaknesses in program design and implementation than those identified by project staff.
- Scale of monitoring (e.g. household, village, project, aggregate, landscape level) addressed in monitoring and evaluation.
- Timing: What is the length of time and frequency for monitoring each identified aspect?
- Data and information needs and sources to monitor each aspect.
- Specific aspects of the intervention that will be monitored and/or evaluated. Time and cost constraints require focusing monitoring and evaluation processes on the most important aspects of the intervention. *Annex D: Tools for Monitoring and Evaluation, E1: Monitoring* provides information on levels that be monitored, how and why. Generally these aspects are determined by the goals of the intervention and may include:
  - **Impact.** Evaluating the impact of the program, including how changes in business practices - caused by business services - help businesses improve, create wealth for smallholders, and contribute to broader development goals such as job creation, economic development, gender equity, environmental protection, etc.
  - **Outreach.** Assessing the number of smallholders, including women, reached directly or indirectly through the intervention.
  - **Sustainability.** Assessing sustainability of the Business Development services, increasing profits to smallholders, partnerships developed, and the natural resource base.
  - **Cost-Effectiveness.** Appraise the cost-effectiveness of program activities.

### Review and Revise the Intervention

The intervention design is adjusted and refined on the basis of the monitoring and evaluation results. In addition, documentation of the process of evaluation and revision is important to develop the PRISM methodology further and to improve learning through this cycle of implementation, review and revision.

## **PRISM Program Management**

The success of interventions depends largely on the institutional capacity of the facilitating organization. Even if constraints and opportunities are successfully identified within targeted subsectors, they will remain unchanged unless the facilitating organization has the skills to address them.

Two categories of organizational skills are important in this context:

- Internal organizational skills (e.g. development of internal controls, such as budgetary, accounting, personnel and management; development of accounting/reporting systems capable of distinguishing activities from different funding sources; cost recovery strategies are implemented).
- Service delivery skills (e.g. services are tailored to the needs of specific groups, programs are developed where immediate and real business opportunities exist; market-driven approaches are used; cost-effective, leveraged interventions are identified<sup>5</sup>; effective partnerships are developed and maintained; environmental and gender priorities are addressed)

Through the process of applying and refining the PRISM methodology, PRISM program management requirements will become more apparent. This section will further develop program management needs specific to PRISM, including staff skill development and appropriate management tools and technologies.

---

• <sup>5</sup> GEMINI Working Paper No 10

## **Annex A: Tools for Boundary Definition**

## A1: Data Collection Needs for Boundary Definition

Below are possible criteria for the selection of project areas, with data collection requirements indicated for each of these criteria.

Potential Criteria for Boundary Selection	Detailed Criteria	Data Collection Needs for Criteria
Agricultural Potential for Smallholders	Water Availability, Access and Quality	<ul style="list-style-type: none"> <li>• Percentage of area with “good access” to ground water</li> <li>• Average depth of groundwater</li> <li>• Quality of water for agricultural purposes</li> <li>• Rainfall accumulation and dispersion</li> <li>• Percentage of year with adequate ground water</li> <li>• Percentage/number of farmers with year-round access to surface water</li> <li>• Percentage of area that would need access to ground water at least 33 percent of the year</li> <li>• Percentage of year that surface water is accessible to at least 50 percent of farmers</li> <li>• Average cost of digging wells in the area</li> <li>• Cost of water to small farmers</li> <li>• Current water conservation techniques</li> <li>• Water replenishment rates</li> </ul>
	Land Availability, Access and Quality	<ul style="list-style-type: none"> <li>• Land availability</li> <li>• Land use patterns (including land clearing and land alteration practices)</li> <li>• Access to land with agricultural potential</li> <li>• Soil types, quality and fertility</li> <li>• Average farmer plot size and number of plots</li> <li>• Percentage of irrigable land</li> <li>• Current soil management practices and sources of degradation</li> <li>• Land tenure rights (ownership, tenancy, landless)</li> </ul>
	Physical Environment Can Support High-Value Crops Without Environmental Degradation	<ul style="list-style-type: none"> <li>• Number of high value crops possible without negative environmental impact</li> <li>• Number of high value crops possible but not grown</li> <li>• Number of (all) crops currently grown in the area</li> <li>• Percentage of farmers using drip irrigation</li> <li>• Percentage of farmers using treadle pumps</li> <li>• Percentage of farmers doing bucket farming</li> <li>• Current farming techniques (e.g. pest management, crop diversification, use of inputs)</li> <li>• Projected impact on land, water and soils of current agricultural practices</li> </ul>
Market Opportunities	Linkages to larger markets	<ul style="list-style-type: none"> <li>• Access to markets that currently or potentially serve export markets</li> </ul>
	Sufficient market size/number	<ul style="list-style-type: none"> <li>• Percentage/total population linked to markets by surfaced roads</li> <li>• Number of markets in each area</li> </ul>
	Adequate infrastructure linking markets	<ul style="list-style-type: none"> <li>• Miles/kilometers of paved roads and road conditions</li> <li>• Average time/distance from household farms to markets</li> <li>• Average distance from farms to paved roads</li> <li>• Transport facilities</li> <li>• Average cost for farmers to transport crops (50 kg) to market</li> <li>• Availability/access to refrigeration and/or storage facilities</li> </ul>

	Sufficient market sector for agriculture	<ul style="list-style-type: none"> <li>• Percentage of environmentally possible high value crops currently sold in the area markets</li> <li>• Number of wholesale/retail points of sale for technology and inputs</li> <li>• Size of the manufacturing base capable of producing irrigation components that is linked to a market</li> <li>• Number of manufacturers capable of producing irrigation equipment that have plants located in the area marketshed</li> <li>• Number of distributors of manufactured goods in the marketshed</li> <li>• Size of the agricultural input production base linked to the market</li> <li>• Percentage of the market devoted to agriculture (number of sellers, number of buyers, percentage of sales volume)</li> <li>• Availability of credit and/or subsidies</li> </ul>
Socio-Economic / Demographic Factors	Average household income in the marketshed not too high or too low	<ul style="list-style-type: none"> <li>• Average household income (percentage of income from farm, percentage of income from non-farm sources)</li> </ul>
	Sufficient household literacy rates	<ul style="list-style-type: none"> <li>• Literacy rate (percentage of households with at least one literate member)</li> </ul>
	Sufficient average landholding size	<ul style="list-style-type: none"> <li>• Average size of smallholder farms</li> </ul>
	Sufficient number of farming households in the marketshed	<ul style="list-style-type: none"> <li>• Percentage of households with livelihoods in agriculture</li> </ul>
	Ethnic / caste / religious groups accept and succeed with market-based interventions	<ul style="list-style-type: none"> <li>• Ethnic/caste/ religious composition and attitudes towards market-based interventions</li> </ul>
	Potential to positively benefit women	<ul style="list-style-type: none"> <li>• Different roles, attitudes, and interests of women and men in agriculture and the market economy</li> <li>• Social relations between women and men pertaining to their access to, and control over resources, benefits and decision-making processes</li> <li>• Different perspectives of women and men toward potential interventions</li> </ul>
	Sufficient human labor potential	<ul style="list-style-type: none"> <li>• Human labor potential available for agriculture (including migration rate, disease rates, rates of child-headed households, etc.)</li> <li>• Total population of the area and population density</li> <li>• Average daily wage for rural labor, demand for rural labor and labor capacity</li> <li>• Household family size (average range)</li> </ul>
Enabling Environment	Host government priorities, policies, support project	<ul style="list-style-type: none"> <li>• Government policies that affect small farmers and small-scale irrigation, including land use, land access and land tenure policies, water use and access policies, marketing of appropriate technologies, agricultural commodity pricing, subsidies, etc.</li> </ul>

	intervention	<ul style="list-style-type: none"> <li>• Legal differences between women and men in the agricultural sector (e.g. land ownership and tenure rights, taxation)</li> </ul>
	National, regional and local political processes enable project intervention	<ul style="list-style-type: none"> <li>• National, regional and local political systems and informal decision-making structures and processes, including legal aspects of registering and working as an NGO.</li> </ul>
	Donor priorities and policies agreeable to project intervention	<ul style="list-style-type: none"> <li>• Donor priorities and policies that impact on project area selection</li> </ul>
	National and local security stable	<ul style="list-style-type: none"> <li>• National and local security history and trends, including travel restrictions and/or security concerns</li> </ul>
Other	Potential for collaboration	<ul style="list-style-type: none"> <li>• Which donors (bilateral, multi-lateral) are active in the area and what are their activities and attitudes?</li> <li>• What NGOs/CBOs are active in the area, what are their activities, what is the potential for collaboration?</li> <li>• Government extension and agricultural university organizations that conduct relevant research or educational programs</li> </ul>
	Logistics of project implementation feasible	<ul style="list-style-type: none"> <li>• Educational level of national staff</li> <li>• Banking system</li> <li>• Availability of housing and rental rates</li> <li>• Cost and availability of vehicles</li> <li>• Quality of communications networks in the region</li> </ul>

## Annex A2: Attractiveness Matrix

The Attractiveness Matrix is a simple method to compare potential options when there are only two important selection criteria. For cases where there are more than two selection criteria, the Weighted Ranking method should be used (Annex A2).

The methodology for the Attractiveness Matrix is:

1. Rank each potential option high, medium, or low in terms of how well the option meets Criteria 1.
2. Rank each potential option high, medium, or low in terms of how well it meets Criteria 2.
3. Plot each option within the Attractiveness Matrix as shown in the figure below.

The options appearing in the upper right hand portion of the matrix are the “attractive” options. Those placed toward the lower left are considered “not attractive.” In the Illustrative Example provided below, green beans and dairy best satisfy the two selected criteria.

**Attractiveness Matrix**

<b>Criteria 2</b>	High		<b>Attractive</b>	
	Medium			
	Low	<b>Not Attractive</b>		
		Low	Medium	High

**Criteria 1**

**Illustrative Example of Attractiveness Matrix**

<b>Criteria 2: Potential to Increase Smallholder Income</b>	High		Handicrafts	Green beans Dairy
	Medium	Avocados Beef		Tourism
	Low		Poultry Building Wood furniture	
		Low	Medium	High

**Criteria 1: Potential Market Demand**

### **A3: Weighted Ranking Methodology**

At several points in the application of the PRISM approach, it is necessary to make choices between a range of possible options. The Weighted Ranking methodology provides a systematic way to compare such options. The method does not offer any “magic,” it merely facilitates the decision process by forcing all assumptions to be clearly stated, allowing the incorporation of both qualitative and quantitative assessments, and revealing the sensitivity of the final outcome to the various assumptions and assessments made in the analysis.

Within PRISM, Weighted Ranking can be used to select project areas, high-value crops, appropriate water strategies, partner organizations, and project market interventions. The example below uses hypothetical data (Table A2) to assess potential project areas in the Boundary Definition component of the PRISM methodology.

#### **Assess the Relative Importance of Each Criterion**

Each criterion selected in the Boundary Definition process is assigned a weight. The weight assigned to each criterion is based on project staff assessment of how important that criterion is to the selection of project areas. The weights to be assigned to the criteria are as follows:

Very Important = 5, Somewhat Important = 4, Neither Important nor Unimportant = 3  
Unimportant = 2, Almost no Importance = 1, Completely Unimportant = 0

(Note that any criteria to which project staff assign a weight of “0” should be dropped since, by definition, it is completely unimportant.)

Example Weights:

1. Maximum annual depth of water table: 5
2. Average literacy rate: 1
3. Average time to get to nearest urban market: 3
4. Availability of transport connections to international export market: 0
5. Number of days/year when temperatures are below freezing: 3
6. Existing local facilities that offer microcredit to smallholders: 4
7. Percentage of households that earn their livelihood from agriculture: 5

#### **Assess How Well Each Area Satisfies Each Criterion**

For each criterion, assign a value to every candidate area according to how well that area satisfies the criterion. This value, or “score,” represents the extent to which each area offers project success, as defined by that criterion alone. Scores are assigned as follows:

Very Well = 5, Fairly Well = 4, OK = 3, Poorly = 2, Very Poorly = 1

Example Area Values for the Criterion: *Average time to get to nearest urban market*:

- 1 Area A (time = 1.5 hours): 3
- 2 Area B (time = 0.25 hours): 5
- 3 Area C (time = 1.8 hours): 3
- 4 Area D (time = 0.75 hours): 4

Note that project staff judge how well each area offers project success as defined by each criterion. In the above example, staff judged the time to access urban markets for each of the four areas and decided that Area B (0.25 hrs travel time) satisfies “access to urban markets” very well (score =5) and Area C (1.8 hr travel time) satisfies this criterion at an “OK” level (score =3).

#### **Calculate Results for Each Criterion**

Project staff calculate results for each criterion by multiplying the weight assigned to each criterion by the score for how well each area satisfies that criterion. In the example provided below, the criterion *Average time to get to nearest urban market* was assigned a weight of 3 (Neither important nor Unimportant). Area A, with a travel time of 1.8 hours, scored 3 (“OK”) for this criterion. To determine the results for Area A, the weight of 3 is multiplied by the score of 3, for a result of 9 for Area A.

- 1 Area A:  $3 \times 3 = 9$
- 2 Area B:  $3 \times 5 = 15$

- 3 Area C:  $3 \times 3 = 9$
- 4 Area D:  $3 \times 4 = 12$

The example below focuses on the criterion *Percentage of households that earn their livelihood from agriculture* (weight = 5). The scores for this criterion are the percentage of the population working in agriculture in the different areas. The result for each area is calculated by multiplying the weight for each criterion by the percentage of the population that fits that criterion.

Example calculation for *Percentage of households that earn their livelihood from agriculture* (weight = 5)

1. Area A (% = 85):  $5 \times 4 = 20$
2. Area B (% = 20):  $5 \times 1 = 5$
3. Area C (% = 95):  $5 \times 5 = 25$
4. Area D (% = 65):  $5 \times 3 = 15$

### Calculate the Total Score for Each Area

In order to compare the different areas, results for each area from the above step are added together for a total score. In the example below, the Area A result for the criterion *Average time to get to nearest urban market* (Result = 9) is added to the Area A result for the criterion *Percentage of households that earn their livelihood from agriculture* (Result = 20), for a total score of 29 for Area A.

Example total scoring for each area:

- 1 Area A:  $9 + 20 = 29$
- 2 Area B:  $15 + 5 = 20$
- 3 Area C:  $9 + 25 = 34$
- 4 Area D:  $12 + 15 = 27$

### Rank Areas and Review Results

Rank the areas highest to lowest according to Total Score calculated above. The higher the Total Score for an area is, the more preferable that area will be for a project intervention that satisfies the selected criteria.

Example ranking:

- 1 Area C: Total Score = 34 (highest rank)
- 2 Area A: Total Score = 29 (2<sup>nd</sup> ranking)
- 3 Area D: Total Score = 27 (3<sup>rd</sup> ranking)
- 4 Area B: Total score = 20 (4<sup>th</sup> ranking)

After completing these calculations, project staff review the rankings to assess whether the results seem reasonable. This “reality check” is useful to ensure that an arithmetic procedure does not produce unrealistic results. If this does occur, project staff should review the assignment of criteria weights and scores, and repeat the necessary steps of the procedure.

Table A1 includes the example data used throughout this discussion and Table A2 provides an example worksheet that can be used to implement this procedure. This example worksheet is limited to four criteria and four potential project areas, but it can be expanded as needed.

**A4: Boundary Definition Methodology Example Data**

Area	Criteria							
	Criterion 1: Average distance to nearest urban market (km)	Criterion 2: Average time to nearest urban market (hours)	Criterion 3: Average annual water table depth (meters)	Criterion 4: Percentage of households whose primary livelihood is agriculture	Criterion 5: Population (thousands)	Criterion 6: Extent of paved roads (km)	Criterion 7: Households currently using drip irrigation (%)	Criterion 8: Number of high value crops sold in local and urban markets
Area A	10	1.5	15	85	35	55	20	5
Area B	0.5	0.25	2.5	20	80	150	45	10
Area C	35	1.8	35	95	20	75	15	2
Area D	15	0.75	5	65	45	100	30	5

**A5: Boundary Definition Methodology: Suggested Worksheet**

Area	Criterion 1 Weight	Area Score 1	Product: Criterion 1 x Area Score 1	Criterion 2 Weight	Area Score 2	Product: Criterion 2 x area Score 2	Criterion 3 Weight	Area Score 3	Product: Criterion 3 X area Score 3	Criterion 4 Weight	Area Score 4	Product: Criterion 4 X area Score 4	Sum of shaded columns (Total Score)
Area 1													
Area 2													
Area 3													
Area 4													

Ranking Order

- District 1: \_\_\_\_\_
- District 2: \_\_\_\_\_
- District 3: \_\_\_\_\_
- District 4: \_\_\_\_\_

## **Annex B: Tools for Market Opportunities**

**B1: Possible Criteria for Subsector Selection**

<b>Criteria</b>	<b>Description of Criteria</b>	<b>Information Needed</b>
1. Market demand and growth potential	<ol style="list-style-type: none"> <li>Evidence of strong effective demand for products being produced</li> <li>Demand for products exceeds supply</li> <li>Unmet demand from municipal authorities or large public works projects</li> <li>Potential competitiveness of the subsector in relation to the world market</li> </ol>	<ul style="list-style-type: none"> <li>Information on location, size, and potential for growth</li> <li>Opinions and data from key informants on market trends and subsector competitiveness</li> <li>Information from existing statistics/studies</li> <li>Examples of businesses that have problems meeting demand</li> <li>Comparisons within the region (based on opinions from key informants of market information)</li> <li>Number of business development service providers (current and potential)</li> <li>Seasonality – assessment of price fluctuation by season</li> <li>Gender roles</li> </ul>
4. Potential increase in income	<ol style="list-style-type: none"> <li>Potential for increased revenues at all levels of the subsector</li> <li>Projected increases in sales, profits or returns to labor</li> </ol>	<ul style="list-style-type: none"> <li>Increased potential for income generation of MSEs (smallholders) and BDS providers (disaggregated by gender)</li> <li>Capital investment costs</li> <li>Number of business development service providers (current and potential), disaggregated by gender</li> <li>Seasonality – assessment of price fluctuation by season</li> </ul>
5. Opportunities for upstream and downstream linkages	<ol style="list-style-type: none"> <li>The number and volume of transactions that take place among domestic market actors in the subsector</li> <li>Potential forward/backward linkages between large and small enterprises</li> <li>Large buyers overlook micro-, small-, and medium scale enterprises as a source of supply or are unable to organize them to meet their demands</li> <li>High value-added processing potential</li> </ol>	<ul style="list-style-type: none"> <li>Description of the different kind of transactions that place among domestic market actors in the subsector</li> <li>General description of the volume and number of these transactions between a given number of firms</li> </ul>
6. Potential for employment generation	<ol style="list-style-type: none"> <li>Potential for enterprises (large and small) to create new employment opportunities as the subsector develops or expands</li> </ol>	<ul style="list-style-type: none"> <li>Current employment statistics, disaggregated by gender</li> <li>Estimates of employment projects, disaggregated by gender</li> </ul>
7. Number of market participants (current and potential)	<ol style="list-style-type: none"> <li>Number of current market participants and number expected to operate in the subsector</li> </ol>	<ul style="list-style-type: none"> <li>Current number of business development service providers, disaggregated by gender</li> <li>Potential number of business development service providers, disaggregated by gender</li> </ul>
8. Value added potential	<ol style="list-style-type: none"> <li>Potential for enterprises to add value to raw materials and gain higher earnings</li> </ol>	
9. Potential for increases in productivity	<ol style="list-style-type: none"> <li>Potential for technologies or management systems that increase the productivity/earnings of enterprises in the subsector</li> </ol>	

International Development Enterprises

10. Benefit/cost ratio	1. Benefits to smallholders outweigh the costs of facilitating support services. This includes quantifiable benefits (net financial benefits compared to program costs) and non-quantifiable benefits (e.g. social benefits, policy benefits)	
11. Benefits women	<ol style="list-style-type: none"> <li>1. Increases women's access to and control over productive assets/processing/marketing</li> <li>2. Increases skills training and capacity development opportunities for women</li> <li>3. Increases income</li> <li>4. Decreases women's workloads</li> <li>5. Maintains or improves social relations within the household and the community</li> </ol>	<ul style="list-style-type: none"> <li>• Current and potential number of women who are self-employed, own businesses or work as employees of other firms in the subsector</li> <li>• Differential perspectives, roles, practical needs, and strategic interests of women and men in the subsector, household, economy, and project area.</li> <li>• Social relations between women and men pertaining to their access to, and control over resources, benefits and decision-making processes.</li> </ul>
12. No negative environmental impact	1. Subsector development does not have significant negative impacts on the natural resource base or the environment in general	<ul style="list-style-type: none"> <li>• Potential environmental impacts (direct and indirect impacts at the input, on-farm and output levels)</li> </ul>
13. Benefits smallholders	<ol style="list-style-type: none"> <li>1. Benefits accrue to smallholders who own between .05 and 2.5 acres of land</li> <li>2. Smallholders can be organized and assisted (e.g. capital, credit, technology, information systems) to compete effectively with industry</li> </ol>	<ul style="list-style-type: none"> <li>• Number of smallholder farmers involved (current and potential)</li> <li>• Potential agro-industrial competitors</li> <li>• Potential capital, credit, technology available to smallholders</li> <li>• Potential to effectively and efficiently organize smallholders</li> <li>• Identification of high-value crops where smallholders have advantage</li> </ul>
14. Potential partners	1. Potential partners are available and interested in partnership to develop business service support program	

## **Annex C: Tools for Smallholder Opportunities and Constraints**

## C1: Subsector Market Assessment Questionnaires

### 1. Questionnaire for Sub-sector Analysis BDS Market Assessment

Name of Sub-Sector: \_\_\_\_\_

Respondent		Date	
Location/ detail address		Enumerator	
Telephone		Time in Business	
Type of Business		Activities/ Products/Services	
		Number of Employees	

Describe your business operation			
<b>Description</b>	<b>Constraint/Opportunity</b>	<b>Service that Address Constraint/Opportunity</b>	
<b>MARKET ACCESS</b>			
1. To whom do you sell your product/service?			
2. Is there a strong demand for your product or service? (justify)			
3. If demand is strong, what is preventing buyers from buying more or giving a better price?			
4. How do you determine the price for your goods and services?			
5. What do you do to promote the sale of your products or services?			

<b>TECHNOLOGY/PRODUCT DEVELOPMENT</b>		
1. What kind of machines, equipment and/or tools do you use and why?		
2. Is there equipment that you know of that would improve your business? If yes, explain.		
3. What have you done recently to improve your product or service?		
4. What technical skills do you use in the business?		

International Development Enterprises

5. What new skills do you need to improve your business?		
--	--	--

**MANAGEMENT / ORGANIZATION**

1. Do you manage all aspects of your business? If not, who manages what?		
What can you do to better manage your business?		
What management skills would you like to acquire to enhance your business?		

**INPUT SUPPLY**

1. What raw materials do you use?		
2. Where do you obtain your raw materials or merchandise?		
3. Are there constraints to getting them? Explain.		
4. Have you ever purchased raw materials together with another business? Explain.		

**FINANCE**

1. Where do you go when you need money for your business?		
2. What trading arrangements do you have with your buyers/seller (credit, transport, etc)		

**POLICY**

1. Are there any policies or regulations that are beneficial to businesses like yours?		
2. Are there any policies or regulations that are constraints to businesses like yours?		
3. What policies or regulations do you think are needed to support businesses like yours?		

**OPERATING ENVIRONMENT**

1. What are the biggest constraints that your business - or those who buy from or sell to you - faces in areas such as road, electricity, water, telephone, communication, warehouse, marketplaces, etc.?		
---	--	--

International Development Enterprises

2. In your view what can be done to address these problems?		
---	--	--

**TRADE ASSOCIATIONS**

1. Do you belong to any network or trade association?		
What are the main functions and benefits of the association?		

<b>Overall what would you say are the major constraints to running your business?</b>		
---	--	--

**2. Questionnaire for Demand Side of BDS**

Respondent		Date	
Location/ detail address		Enumerator	
Telephone		Time in Business	
Type of Business		Activities/ Products/Service	
		Number of Employees	

Related comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Questions:

1. Who do you know that provides \_\_\_\_\_?  
(ask them to describe the provider and give contact information)
2. Have you acquired \_\_\_\_\_?  
(If "Yes", from whom? (If "No" go to question 9)
3. How often?
4. What percentages of businesses like yours are aware of \_\_\_\_\_?
5. Describe how you acquired \_\_\_\_\_?
6. How did you pay for \_\_\_\_\_?  
(fee, embedded, free, etc.)
7. If for fee, what price was paid? Do you feel that this is a fair price given what you receive?
8. Were you satisfied with the \_\_\_\_\_?

International Development Enterprises

Explain, how could the \_\_\_\_\_ be improved?

9. Why haven't you acquired \_\_\_\_\_?

**3. Questionnaire for Supply Side of BDS**

Respondent		Date	
Location/ detail address		Enumerator	
Telephone		Time in Business	
Type of Business		Activities/ Products/Service	
		Number of Employees	

Service: \_\_\_\_\_

Related comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

1. How many provide \_\_\_\_\_ (service) to \_\_\_\_\_ (Sub-Sector participant)?  
(get contact information)
2. What \_\_\_\_\_ (Sub-Sector participant) do you provide \_\_\_\_\_ (service)?  
(get profile)
3. What constraints do you face in providing \_\_\_\_\_ (service) to \_\_\_\_\_ (Sub-Sector participant)?
4. What supports do you need to develop your capacity to address these constraints?
5. Describe how you provide \_\_\_\_\_ (service) to \_\_\_\_\_ (Sub-Sector participant)?
6. How do you cover your costs of providing \_\_\_\_\_ (service) to \_\_\_\_\_ (Sub-Sector participant)?
7. How many people do you think can use (and acquire/pay for) \_\_\_\_\_ in the area you operate in?

#### 4. Key Informants Interview Guide

Name of the Business/Organization : \_\_\_\_\_

Name and Title of Respondent : \_\_\_\_\_

Address : \_\_\_\_\_

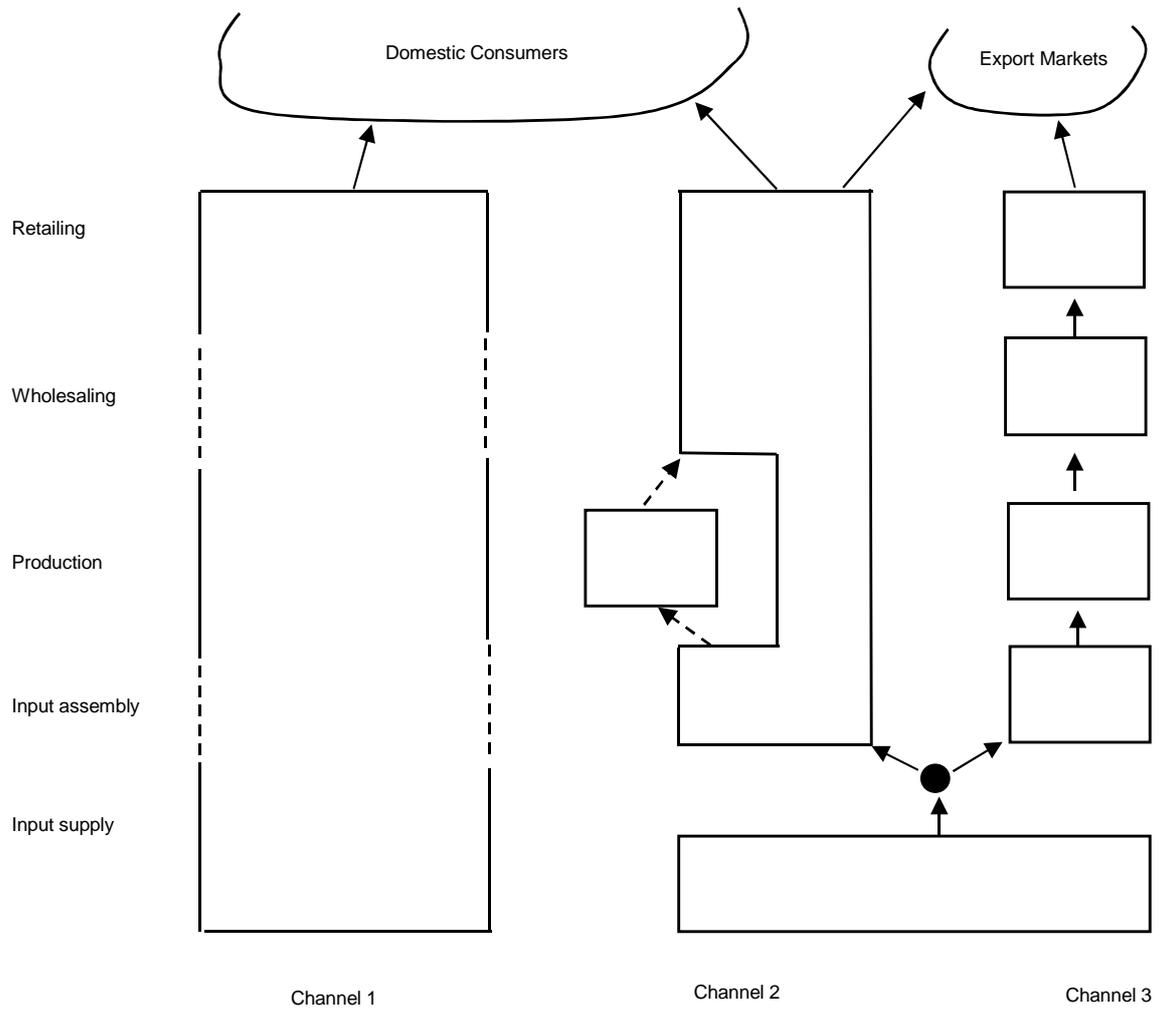
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone : \_\_\_\_\_

E-mail : \_\_\_\_\_

1. Overview of the activities of the organization
2. Specific activities related to sub-sector
3. Constraints/opportunities related to the sub-sector
4. What is needed to address constraints/opportunities in the sub-sector
5. Who are useful contacts to talk to in the sub-sector (referrals)?
6. Do you have any recent studies/statistics to share with us?
7. Invitation to the workshop?

**Figure 1 -- Subsector Mapping Conventions**



- |  |   |   |   |
|--|---|---|---|
| <p><b>Location</b></p> <p>● = assembly point</p> | <p><b>Participants</b></p> <p>□ = enterprise type</p> <p>⋮ = skipped or implicit function</p> | <p><b>Coordinating mechanisms</b></p> <p>↖ = spot market sale</p> <p>↖- - = contract sale</p> | <p><b>Common Overlays</b></p> <p>N = number of firms<br/>                 S = sales<br/>                 L = employment<br/>                 V = volume</p> |
|--|---|---|---|

## Worksheet 1 -- Evaluating Subsector Dynamics and Potential Interventions

	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5
a. What channels are growing most rapidly?	_____	_____	_____	_____	_____
b. What driving forces (+) and constraints (-) are responsible?					
• market demand	_____	_____	_____	_____	_____
• technological change	_____	_____	_____	_____	_____
• input supply	_____	_____	_____	_____	_____
• profitability	_____	_____	_____	_____	_____
• large firm behavior	_____	_____	_____	_____	_____
• barriers to entry	_____	_____	_____	_____	_____
• policies	_____	_____	_____	_____	_____
c. Where can smallholders most effectively compete?	_____	_____	_____	_____	_____
d. What is required to enable this transition?	_____	_____	_____	_____	_____
e. Who can supply this service most cost effectively?	_____	_____	_____	_____	_____

**Figure 2 -- Diagnostic Procedures for Identifying Leveraged Interventions**

**A. Understand Dynamics**

Usual suspects

- market demand
- technological change
- input supply
- profitability
- large firm behavior
- barriers to entry
- policies

1. Driving forces  
Channel 1, 2, ...

2. Constraints  
Channel 1, 2, ...

3. System dynamics and potential interventions  
a. thriving channels and niches  
b. waning channels  
c. opportunities for smallholders  
d. what's required to get them there?  
e. who can supply those requirements most cost effectively?

**B. Identify Sources of Leverage**

4. Sources of leverage  
· large-firm intermediaries  
· clustering  
· policies

**C. Convergence Identifies Opportunities for Leveraged Interventions**

5. Opportunities for leveraged interventions  
· policies  
· large-firm intermediaries  
· partner institution provides  
· direct provision?  
· non-intervention

**Examples of Business Services that Address Key Constraints**

<b>Type of Constraint</b>	<b>Business Service</b>
1. Technology/product development	<ul style="list-style-type: none"> <li>• Access to information on new technologies</li> <li>• Product research and development for new technology/product development</li> <li>• Access to vocational training</li> <li>• Access to machine and equipment rental services</li> </ul>
2. Market Access	<ul style="list-style-type: none"> <li>• Identification of new markets</li> <li>• Providing linkages to buyers</li> <li>• Provision of market research services</li> <li>• Access to export services</li> <li>• Access to information services</li> </ul>
3. Input supply	<ul style="list-style-type: none"> <li>• Access economies of scale in supply purchasing</li> <li>• Access to material inputs</li> <li>• Brokerage of linkages with suppliers</li> </ul>
4. Finance	<ul style="list-style-type: none"> <li>• Provide linkages with financial institutions</li> <li>• Training in procedures/requirements for accessing credit</li> <li>• Access to supplier credit</li> </ul>
5. Policy	<ul style="list-style-type: none"> <li>• Training in advocacy</li> <li>• Policy/advocating for improved regulatory environment</li> <li>• Access to policy studies</li> </ul>
6. Management and organization	<ul style="list-style-type: none"> <li>• Training in management and business skills</li> <li>• Access to development of business plans</li> <li>• Provision of accounting services</li> <li>• Developing management information systems</li> </ul>

Each of the business services identified above may require additional detailing. For example, to address the “Input supply” constraint, one potential business service listed is accessing economies of scale in supply purchasing. Additional details on how to accomplish this can include:

- Provide advice on the formation of groups of smallholder enterprises, including trade group associations, in order to group purchases and gain more favorable prices and/or create new supply sources.
- Assist the enterprises to conduct market research, organize participants, and/or negotiate financing terms with the banks and/or wholesalers<sup>6</sup>.

<sup>6</sup> Section 2, GEMINI Working Paper No 10

## **Annex D: Tools for Monitoring and Evaluation**

## International Development Enterprises

### **D1: Monitoring**

#### **Level to be Monitored**

Micro- and small-enterprise level (Client impact)

Business service level – market development

Program level – institutional performance

#### **What is Monitored**

Impact on enterprises or “consumers” of the service  
Monitor in terms of satisfaction with services, how services have changed business practices, and changes in performance (e.g. sales, profitability)

Sustainability of the supply and demand of the service

Measured, for example, by the price and quality of services available, satisfaction with SEs

Cost-effectiveness of facilitation  
Includes outreach, cost effectiveness, sustainability

#### **Why**

They are the target beneficiaries

Ensure that services are sustainable

Ensure appropriateness and cost-effectiveness of program  
Compare with other programs/approaches