Methodological guide for evaluation of pro-poor impact of small-scale agricultural projects
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Table of Contents

Introduction i

PART 1 CONCEPTUAL FRAMEWORK
Background 2
General Introduction 4
Conceptual Framework 6

PART 2 MODULES
Modules 12
Module 1 Ex-ante Impact Appraisal 15
Module 2 Baseline 16
Module 3 Participatory Monitoring and Evaluation 18
Module 4 Adoption 21
Module 5 Impact on Adopters 23
Module 6 Impact on Non-Adopters 24

PART 3 TOOLBOX
The Tools 26
Tool 1 Innovation Impact Assessment 27
Tool 2 Pro-poor Impact Assessment 31
Tool 3 Characterization of the community and service providers 34
Tool 4 Community mapping 36
Tool 5. Transect mapping 38
Tool 6. Participatory wealth ranking 42
Tool 7. Seasonal calendars 46
Tool 8. Participatory budgeting 49
Tool 9. Questionnaires 53
Tool 10. Semi-structured interviews 55
Tool 11. Adoption characterization 58
Tool 12. Community (or group) summary 60
Tool 13. PITA summary 62
Tool 14. Identification of local Participatory Monitoring and Evaluation (PM&E) systems 64
Tool 15. Collective concept building 65
Tool 16. Envisioning and objective setting 68
Tool 17. Identification of local indicators 71
Tool 18. Activity planning 73
Tool 19. Monitoring/evaluation formats 76
Tool 20. Selection of the PM&E committees 80
Tool 21. Information recording 81
Tool 22. Use of the PM&E information 85
Impact evaluation provides important evidence to justify investments in rural development initiatives. However, it does not always show whether an intervention has helped accomplish the ultimate objective of poverty reduction. Thus although production and yields of many agricultural commodities have increased over the past few decades, with better product availability and improved market opportunities, poverty persists in many rural areas in developing countries. At the same time there is increasing emphasis on effective use of limited resources of developing countries, such that effectiveness in poverty reduction has become a major measure of success or failure of projects, programs and policies of governments, research centers, and international development agencies. Priorities have shifted from a focus on simply producing more food to ensuring that research and extension benefit the poorest in particular, and there is increased questioning of the effectiveness of agricultural research and technology transfer in promoting poverty reduction.

This shift towards poverty reduction as an explicit focus of technology change in agriculture presents new and complex challenges, requiring not only the development of new capacities and tools but also new ways of understanding and fostering technological innovation as an effective tool for poverty reduction. These challenges are being addressed by some agencies, such as international research centers. There has been less attention, however, to the development of methodological tools for use by national research and extension systems in local agricultural development programs and projects, or to the building of capacity to develop and apply such tools in these agencies.

These issues pose an important set of challenges to the Bolivian Agricultural Innovation System (SIBTA), which presently faces strong demands to improve and demonstrate the effectiveness of its interventions in poverty reduction. These demands arise from internal pressures to meet its own goals, framed in the context of national policies for poverty reduction, and from external pressures...
to contribute to wider poverty reduction goals of international donors, on whom it is heavily dependent for funding. The sustainability of SIBTA therefore depends significantly on its ability to demonstrate both its contribution to poverty reduction in Bolivia and the implementation of monitoring and evaluation systems to increase its effectiveness in promoting innovations that benefit the poor.

SIBTA’s general objectives are the reduction of poverty through modernization of the agricultural sector; supporting the development of agro-productive chains; and generating, validating and transferring technology for production, transformation and commercialization. The system operates with two types of project:

a) National Strategic Innovation Projects (PIENs) develop sectoral and national policies

b) Applied Technological Innovation Projects (PITAs) promote technology development and adoption in local communities and are implemented through four regional foundations (FDTAs): Altiplano, Valles, Trópico and Chaco.

In 2004 the UK Department for International Development (DFID) funded the ‘Facilitating Innovative Technology’ (FIT) initiative to strengthen SIBTA with an international call for projects to provide research and development services to support SIBTA. This document arises from the work of one of these projects (FIT 7), “Lesson learning and sharing towards pro-poor impact of agricultural innovation”, led by Imperial College London.
General Introduction

“A comprehensive evaluation is defined in the literature as an evaluation that includes monitoring, process evaluation, cost-benefit evaluation, and impact evaluation. Yet each of these components is distinctly different. Monitoring will help to assess whether a program is being implemented as was planned. A program monitoring system enables continuous feedback on the status of program implementation, identifying specific problems as they arise. Process evaluation is concerned with how the program operates and focuses on problems in service delivery. Cost-benefit or cost-effectiveness evaluations assess program costs (monetary or non monetary), in particular their relation to alternative uses of the same resources and to the benefits being produced by the program. And finally, impact evaluation is intended to determine more broadly whether the program had the desired effects on individuals, households, and organizations and whether those effects are attributable to the program intervention. Impact evaluations can also explore unintended consequences, whether positive or negative, on beneficiaries.”

Project impact evaluation has to address three related problems: problems of establishment of the counterfactual scenario, of attribution of the project impact and of unpredictable periods of time needed for innovation and impact processes to occur.

The counterfactual scenario refers to the course of events in the absence of the intervention, and is the analytical base of impact evaluation. The construction of a realistic and precise counterfactual scenario is difficult, since the agricultural sector is dynamic with or without a particular innovation process and is influenced by multiple external factors such as government policies, conflicts, market changes, social changes and climate variability. Changes following (in time) from the introduction of a particular technological innovation and the comparison of ‘before’ and ‘after’ scenarios cannot, therefore, be assumed to result from the introduction of the innovation so that the before, or ex-ante, situation cannot be taken as the counterfactual scenario or best estimate of what would have happened if the innovation had not been introduced.

Framed in these terms, the ‘counterfactual problem’ is a particular case of the ‘attribution problem’ – the difficulty in attributing any observed changes as resulting from a particular intervention. The attribution problem cannot be overcome without the use of a rigorous experimental design, an option with substantial ethical, political, practical and cost difficulties. A cheaper and simpler approximation to this is to conduct a ‘longitudinal comparison’ of communities or areas with and without a particular project intervention. The validity of impact evaluation using this approach, however, depends upon the ‘control’ and ‘project’ groups having broadly similar characteristics. An alternative, more qualitative way of addressing the attribution problem is to use case studies to examine the processes of change during and following an intervention. This, however, can be very complex, particularly where the adoption of an innovation and its subsequent effects on the livelihoods of the poor take place over a long period. Tracing out effects over a long period can be

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costly, and the longer the period over which a particular change occurs, the more difficult it is to separate out its effects from other changes, with which it may interact. It also becomes difficult to determine when impact evaluations should be conducted (the third evaluation problem discussed above, of timing).

This guide outlines a broad methodological approach for process and impact evaluation of agricultural innovation projects. The guide is divided into three parts. This first part provides the background to the guide, introduces the methodology and then (below) describes a conceptual framework for evaluation of poverty impacts of innovation interventions (although the conceptual framework has wider relevance to appraisal and assessment of poverty impacts of other types of intervention). The second part of the guide describes six ‘modules’ derived from the conceptual framework to structure appraisal and evaluation activities at different stages in project appraisal, implementation and evaluation. The third part then describes particular tools which may be used in the implementation of these modules.
The conceptual framework for this methodology was developed for interventions promoting technological innovation, in particular the PITAs (local technology development and uptake projects) financed by SIBTA. In these projects, clients (technology user groups) contract with service providers (research and extension agencies) and with FDTAs (funding agencies working on behalf of SIBTA) to work together on the adaptation and uptake of particular technical or institutional innovations by clients. The first stage in developing a methodology to assess innovations’ impacts on the poor is to identify (a) the different processes by which innovations affect the poor and (b) factors affecting these processes.

Agricultural innovation impacts: a conceptual framework

The figure above sets out a simple schema of four elements, steps or processes by which a PITA impacts on different members of a rural community. The PITA (joint activities of the client group and service provider) undertakes a range of experimentation, adaptation, capacity building, and organizational development activities (1). These then lead to a process of innovation adoption by

2In this guide the term ‘institution’ is used to describe formal or informal rules or systems which affect the way that people and organizations relate to each other. ‘Institutions’ therefore include, for example, market systems, land tenure systems, and farmer organizations.
PITA members and by others in the community (2). Adoption then results in ‘direct impacts’ on the livelihoods of these adopters (for example in increasing their incomes, reducing their vulnerability to shocks, or improving food security) (3). Changes in the productive activities and livelihoods of these adopters will then have indirect positive and/or negative impacts on non-adopters (4). These indirect impacts will be discussed in more detail later, but examples of pro-poor impacts may include increased local demand for labour and hence employment opportunities and wages, and increased production and local supplies of food, with reduced food prices. Examples of negative impacts on the poor might be increased demand for limited natural resources, or mechanization leading to reduced demand for labour, reduced employment opportunities, and reduced wages.

### Critical technology, actor and community characteristics affecting innovation uptake and impacts

<table>
<thead>
<tr>
<th>Processes</th>
<th>Characteristics of the technology</th>
<th>Characteristics of the actors</th>
<th>Characteristics of the community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation adoption</td>
<td>Complexity (number of necessary messages), relevance (perception), familiarity (traditional/non traditional), link between direct impact and the options and objectives pursued, services/institutions required, perceptions regarding direct and indirect impact, etc.</td>
<td>Objectives pursued and livelihoods (pathways, existing activities), network membership, knowledge, education, gender, risk aversion, wealth, need and availability of resources (labor, capital, land), perceptions regarding direct and indirect impacts, power relations, ability to link the requirements of the PITA with local organizations, etc.</td>
<td>Networks, local organizations, association, demographics, (population density, distribution, age structure), roads, telecommunications, gender relations &amp; other norms, education facilities, other services, past experience, price tendencies, natural and local resources, etc.</td>
</tr>
<tr>
<td>Direct impacts</td>
<td>Profitability, productivity, quality, uses (commercialization or subsistence), resource requirements (labor, capital, land, skill (type/quality)), variability, prices (qualitative evaluation of sensitivity for investment/ cash and credit flow), services/institutions required, livelihood contributions, tradable and non-tradable goods, use of surplus, etc.</td>
<td>Livelihoods, activities (crops/cattle), roles and purposes of the activities, capital (financial, social, natural, physical and human) holding and access, vulnerability, other risks and uncertainty, social relations and roles, gender, etc.</td>
<td>Local organizations, access to markets, labor market integration, roads, presence of innovators, other services, telecommunications, prices and salaries trends and their vulnerability, alternative opportunities, economic growth/ stagnation (by social levels), etc.</td>
</tr>
<tr>
<td>Indirect impacts</td>
<td>Requirements for skilled/ unskilled labor &amp; for inputs &amp; services for production, for ‘upstream’ inputs and ‘downstream’ processing; profitability (for reinvestment &amp; consumption expenditure); tradable or non-tradable products, etc.</td>
<td>Adopters and their relation with the labor market, investment and consumption patterns (tradable and non-tradable goods)</td>
<td>Local market size, labor market integration, elasticity and structure of the labor market, investment opportunities, local supply of non-tradable goods, income distribution, general consumption patterns (tradables &amp; non-tradables), etc.</td>
</tr>
</tbody>
</table>
The figure on page 6 also identifies, in addition to the feedback links between them, three broad sets of factors affecting the processes of PITA implementation, innovation uptake, direct impacts and indirect impacts. These are the characteristics of the technology, of the actors and of the community. These characteristics are listed in more detail in the table on page 7, against the processes of innovation uptake, direct impacts, and indirect impacts.

The development of a methodology to investigate the processes of innovation adoption and of direct and indirect impacts requires consideration of how these processes change over time, and therefore of what needs to be investigated at different stages in these processes. The illustration below therefore sets out in more detail the ‘impact pathways’ or sequence of processes needed for indirect impacts to affect non-adopters. This shows (from the bottom of the figure) how, following from the appraisal and selection of a project and building on the ‘baseline’ situation, the implementation of a PITA (or other innovation intervention) should lead to adoption (through learning cycles involving adaptation and knowledge and attitude change) and then to direct impacts on production and on adopters’ livelihoods. These direct impacts should then lead to wider market and social changes with indirect impacts on non-adopters. These processes are strengthened and deepened by scaling up and scaling out to involve other organizations.
There are **five main types of indirect impact** which must be considered in evaluating an innovation process:

a. Changes in prices and improvement opportunities in the livelihoods of the target group as a result of their own technological innovation;

b. Adoption or adaptation of the technological innovation by others outside the target group;

c. Changes in prices and improvement opportunities in the livelihoods of others as a result of adoption of the technological innovation by the target group;

d. Structural changes in infrastructure or institutions leading to changes in general access to resources and services.

e. Environmental changes affecting bio-diversity, productivity, resilience or the quality of natural resources

We discuss each of these in turn.

a. **Changes in prices and improvement opportunities in the livelihoods of the target group as a result of their own technological innovation:** An example of this could be when the adoption of a new variety or crop leads producers to enter new market relationships and these lead to new and better commercial arrangements in the marketing of other varieties or crops.

b. **Adoption or adaptation of the technological innovation by others outside the target group:** This refers mainly to processes of ‘scaling out’ and ‘scaling up’. Scaling up is when other organizations adopt innovations and replicate them (so that overall there is an increased scale of external intervention promoting an innovation), and scaling out occurs when an innovation spreads naturally to other communities (for example by farmer to farmer contacts). Both processes lead to wider adoption and also to possible changes in the market and social context.

c. **Changes in prices affecting the livelihoods of others outside the target group as a result of adoption of the technological innovation by the target group:** This occurs when the innovation is adopted on a wide enough scale to change product or other prices in the local economy. Such changes may have beneficial or damaging effects on the livelihoods of the poor depending on the characteristics of the product(s) involved, the innovation, of the actors and of the community (see above table and impact pathways figure). There are six types of these market linkages: production, upstream, downstream, consumption, cost of living and investment linkages.

The first three types of market linkage (production, upstream, and downstream linkages) arise when widespread innovation adoption increases demands for local services and labor in production, in the supply of inputs for production and in product processing respectively. Consumption linkages arise when increases in the income of adopters lead to increases in their consumption of and demand for local goods and services, increasing the demand for labor in the community. These four types of linkage
increase local demands for labour and hence can increase both the opportunities for poor people to hire out their labour and the wages they can earn for their labour.

Cost of living linkages occur when the adoption of the innovation reduces production costs and, increases supply of the product in the local market so that local prices fall. If people spend a significant proportion of their incomes on this product then reduced prices lead to reduced expenditure and hence more income is available to spend on other goods and services: this can then lead to ‘consumption linkages’ (as discussed earlier) from the increased ‘real incomes’ of these people. ‘Cost of living’ linkages are strongest for products that are produced and consumed locally and where markets are not well integrated so that local supply and demand are major determinants of prices. Finally investment linkages occur when increased incomes of adopters permit them to save and invest in activities that benefit the local economy.

d. **Structural changes in infrastructure or institutions leading to changes in general access to resources and services.** Innovation adoption can affect the existing infrastructure and institutions by generating (or eliminating) livelihood opportunities for the poor in the local economy. Service and infrastructure linkages arise when investments associated with the adoption of innovations lead to the development of new infrastructure in a community (for example, roads) or new services (for example credit or market services) and these services and infrastructure lower the development and/or operation cost of other activities that benefit others in the population. Institutional linkages emerge when widespread adoption of an innovation leads to changes in the institutions governing, for example, work contracts, land ownership, water and grazing rights, relationships between producers, input supply systems or the relationship between producers and buyers. These changes can, of course, be beneficial or damaging to the poor. Institutional changes affecting men and women differently, or the elderly and children differently (gender and generational effects) are frequently overlooked but can be particularly important in the effects on the livelihoods of the poor.

c. **Environmental changes affecting bio-diversity, productivity, resilience or the quality of natural resources.** Adoption of innovations (involving chemicals or intensive livestock production for example) may lead to pollution, reduce biodiversity (for example through the introduction of new varieties), or land degradation (for example through encouraging cultivation or more intensive grazing of fragile lands). On the other hand improved livelihood opportunities may reduce land pressure and degradation, and some innovations may lead to improved protection of natural resources or promote biodiversity. Such changes have implications for the livelihoods and living conditions not just of adopters but of all members of a community, and may affect different people in different ways.

All these linkages can nurture each other and lead to a virtuous circle of benefits from widespread innovation adoption with, for example, consumption linkages arising from increased incomes not
only of adopters but also of beneficiaries of production and cost of living linkages. However these same processes can be weakened or indeed have negative effects on the poor if the innovation depresses labour demand or if the characteristics of the innovation, actors or community lead to substantial ‘leakages’. These can occur if innovations are capital intensive and reduce rather than increase demands for labour\(^3\), if incomes and benefits from adoption are highly inequitable and are not well spread within the community, if increased incomes are not spent on local but on imported good and services, if suppliers of local goods and services cannot increase supply to respond to increased demand, or if innovations cause environmental degradation which adversely affects the livelihoods of some groups in the community. Conversely, linkages are strengthened where production, upstream inputs, downstream processing and goods and services that people consume all use large amounts of unskilled local labour.

The indirect impacts of innovation uptake in a community are difficult to predict quantitatively, but they often affect poor people more than the direct impacts of innovation uptake: they must therefore be carefully considered in both ex-ante appraisal and in ex-post analysis of innovation effects on poor people’s livelihoods. This requires careful assessment of the likely and actual scale of adoption (in ex-ante and ex-post analysis respectively) and, where this is large, careful analysis of the characteristics of the innovation, community and actors. As discussed above, such analysis should pay particular attention to the livelihoods and expenditure and investment patterns of different actors in the community, to trade outside and within the community, and to access to and use of local land, labour, and capital by different technologies and in the production of different goods and services. The next section of this guide describes ‘modules’ which outline information and analysis needed at different project stages if ‘pro-poor impacts’ of innovation projects are to influence the selection, implementation and evaluation of these projects.

\(^3\) An exception to this occurs if poor people are very short of labour and are consequently unable to cultivate their land as in these circumstances the introduction of ‘labour saving’ technology may enable them to use their land more effectively without depressing the demand for their labour.
The Modules

There are three critical stages of impact evaluation: appraisal before the project is implemented (or ex-ante); assessment while the project is ongoing (or ex-intra); and evaluation when the project has finished (or ex-post). A series of six modules describes a methodology for applying the concepts developed in the previous section. The first module describes how to appraise the possible impact of an intervention. The second module covers the establishment of the baseline of the intervention. Module three promotes empowerment, participation and the appropriation of the project by beneficiaries, by their inclusion in the process of development and evaluation. The remaining modules are applicable once the project has concluded.

The modules were designed to be implemented independently, although there are strong interactions between them. Modules 1, 2 and 3 need to be conducted at specific times prior to project selection, at project commencement, and during project implementation, respectively. Modules 4, 5, and 6 must be carried out after project termination and when there has been sufficient time for impact processes to be (largely) completed. The modules do not provide detailed formulae for conducting assessments but suggest broad information needs at different stages in the determination of project impact. One or more practical tools for collecting and analyzing information are suggested for each module. These tools are described in section 3 of this guide, but other tools not listed here may also be used and may be more effective in some circumstances. Tools should be selected for use in each module and adapted to match the nature of the innovation, the characteristics of stakeholders, and impact assessment resources and objectives.
Two Approaches

Two complementary approaches to monitoring and evaluation have been incorporated in the methodology. Modules 2, 4, 5 and 6 focus on impact evaluation whereas module 3 is concerned with participatory monitoring and evaluation. The two approaches are designed to complement each other but can also work independently so that impact evaluation can be carried out if participatory monitoring and evaluation is not conducted during project implementation, and conversely participatory monitoring and evaluation can be carried out independently of impact evaluation. Both of these can be conducted independently of ex-ante impact assessment or appraisal (module 1).

The modules and tools set out in this guide provide basic information needed for impact evaluation, but do not attempt to provide a comprehensive guide for the collection of all possible information requirements. Thus the baseline study (module 2), for example, can be designed to gather other information considered useful and necessary for subsequent monitoring and evaluation. Several tools may be used in more than one module. The table below summarizes the basic information required for each module and possible tools for obtaining this information.

<table>
<thead>
<tr>
<th>Modules</th>
<th>Information</th>
<th>Possible Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ex-ante impact appraisal</td>
<td>Characteristics of the product and innovation, of potential service users and of the community, including characteristics of the poor and of poverty.</td>
<td>1 – Innovation impact appraisal/evaluation 2 - Pro-poor impact assessment</td>
</tr>
<tr>
<td>2. Baseline</td>
<td>Production, agro-ecological, socio-economic and technological conditions and factors. Livelihood &amp; holding characteristics, access to and use of resources</td>
<td>3 - Characterization of the community and service providers 4- Community mapping 5 - Transect mapping 6 - Participatory wealth ranking 7 - Seasonal calendars 8 - Participatory budgeting 9 - Questionnaires 10 - Semi-structured interviews</td>
</tr>
<tr>
<td>3. Participatory monitoring and evaluation</td>
<td>Quantitative and qualitative assessment of implementation of the PITA</td>
<td>14 – Identification of local Participatory Monitoring and Evaluation (PM&amp;E) systems</td>
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<td>------------------------------------------</td>
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<td></td>
<td>15 - Collective concept building</td>
<td>16 - Envisioning and objective setting</td>
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<td>17 - Identifying local indicators</td>
<td>18 - Activity planning</td>
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<td></td>
<td>19 - Monitoring/evaluation formats</td>
<td>20 - Selection of the PM&amp;E committee</td>
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<td></td>
<td>21 - Information recording</td>
<td>22 – Use of PM&amp;E information</td>
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<tr>
<td>4. Technology adoption</td>
<td>Technology adaptations</td>
<td>11 - Adoption characterization</td>
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<td></td>
<td>Adopter characteristics</td>
<td>5 - Transect mapping</td>
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<td></td>
<td>Rates and scales of adoption</td>
<td>9 - Questionnaires</td>
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<tr>
<td></td>
<td></td>
<td>10 - Semi-structured interviews</td>
</tr>
<tr>
<td>5. Impact on adopting group</td>
<td>Enterprise impacts</td>
<td>1 – Innovation impact</td>
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<tr>
<td></td>
<td>Livelihood impacts for adopters</td>
<td>appraisal/evaluation</td>
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<td></td>
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<td>7 - Seasonal calendars</td>
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<td>8 - Participatory budgeting</td>
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<td></td>
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<td>9 - Questionnaires</td>
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<tr>
<td></td>
<td></td>
<td>10 - Semi-structured interviews</td>
</tr>
<tr>
<td>6. Impact on non-adopters</td>
<td>Changes in market conditions and socio-economic environment</td>
<td>2 - Pro-poor impact assessment</td>
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<td></td>
<td>Livelihood impacts on non-adopters</td>
<td>6 - Participatory wealth ranking</td>
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<td>7 - Seasonal calendars</td>
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<td>9 - Questionnaires</td>
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<td></td>
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<td>10 - Semi-structured interviews</td>
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<tr>
<td></td>
<td></td>
<td>12 – Community (or group) summary</td>
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<td></td>
<td></td>
<td>13 – PITA summary</td>
</tr>
</tbody>
</table>
Ex-ante Impact Appraisal

In this initial stage of the innovation process, the technical proposal is the main source of information for impact appraisal. Recommendations for project approval, rejection or modification will be made on the basis of estimates of likely impacts. This module has been designed to support professional (technical and administrative) judgments of ex-ante impact appraisal based on analysis of product and innovation, actor and community characteristics.

Relevance, use and applicability
Consideration of project impact should be an integral part of project design from the moment a project is conceived, but this is rarely the case. Project proposals tend to stress the advantages of new technology and technical change, without sufficient consideration of adoption or impact.

This module is important in that it not only establishes mechanisms for ex-ante appraisal of adoption and impact by those responsible for funding decisions, but it should also influence and guide the initial formulation of project proposals by service providers, and encourage more attention to adoption and impact issues during project design. The structure of the two appraisal sheets used as tools in this module allows for the appraisal of the proposal on both technical and socio-economic criteria, and consequently also provides evidence of the service provider’s knowledge of local context and its fit with the proposed innovation.

Information requirements
This module consists of two parts. The first evaluates direct impact and requires basic information about the product, innovation and actor (users or target group) characteristics. It aims to identify direct, or first order, impact on future adopters. The second part addresses questions about poverty reduction—how innovation adoption is expected to affect the poor. It goes beyond users and adopters towards the analysis of others affected by the process, taking account of possible indirect, or second order, impacts. The two tools are designed to be used by assessors based on information available in the project proposal. The tools provide a check list and format for organizing information about socio-economic and technical characteristics of the process with a scoring system to allow some assimilation and aggregation of information across different processes.

Tools
Two tools have been designed for collecting information for ex-ante impact appraisal of a project proposal:

Tool 1
Innovation impact appraisal/evaluation

Tool 2
Pro-poor impact assessment
Once the project proposal has been approved and is on its way to implementation, the next step in evaluation is to describe in detail the situation before the intervention. This is the ideal stage to collect information exhaustively, since at this stage the target group, the community and the service provider should have a good disposition to cooperate with data collection activities, something which may not be present once the project is finished. This situation must be taken advantage of, to generate an important information base for subsequent modules.

**Relevance, use and applicability**

The baseline serves several functions. Firstly constructing the baseline involves an in-depth analysis of socio-economic and production issues that will be addressed by the project interventions, and this may reveal the need for a redesign of the project. The baseline study should (1) identify and quantify the variables which will be affected directly by the innovation process (2) identify other processes that will influence these variables (and also identify other variables that can be indirectly affected) (3) provide benchmarks against which variables’ behavior can be monitored during project implementation (with the design of contingency measures if necessary) and (4) serve as the main input to the ex-post impact evaluation once the project has finished.

Ideally the baseline survey is also carried out in communities not involved in the project but with similar characteristics to those involved in the project. This allows a ‘double-difference’ comparison of ‘before and after’, ‘with and without project’ situations to provide an approximate counter-factual scenario for ex-post evaluations, provided that it is clear that the ‘with’ and ‘without’ project areas do not influence each other.

**Information requirements**

The first task is to identify and characterize the communities that fall within (and outside) the project’s area of intervention. Representative communities should then be chosen and field work should begin.

The most important information requirements in constructing the baseline are 1) the state of the production system in general and the product in question; and 2) the socio-economic situation. These must be understood in relation to policies and market tendencies, which are beyond the reach of the project but will influence the innovation process.
Tools
A number of tools may be used for collecting information for the baseline of a project:

**Tool 3**
Characterization of the community and service providers

**Tool 4**
Community mapping

**Tool 5**
Transect mapping

**Tool 6**
Participatory wealth ranking

**Tool 7**
Seasonal calendars

**Tool 8**
Participatory budgeting

**Tool 9**
Questionnaires

**Tool 10**
Semi-structured interviews
During implementation, the project team, with the evaluation team where appropriate, must work to ensure that the intervention accomplishes the expected outcomes. Quality control, which considers mainly the perceptions and satisfaction of the target group, must be integrated in the project. Participatory monitoring and evaluation begins with the identification of the aspirations and needs of the target group, as identified by them. This includes the generation of alternative solutions to their development problems, planning of activities, measuring results and proposing solutions that redirect the project towards the desired outcomes and the full satisfaction of the target group.

Relevance, use and applicability
Participatory monitoring and evaluation is a continuous process that helps with planning and implementation of the project, and it can lead to adjustments to the project. In this context, it serves the following functions:

1. It increases the commitment of the target group to the project or development initiative, through their active participation in decision-making from the initial identification of the problem to be addressed by the project.
2. It improves knowledge exchange by providing the different groups with a space to share their points of view.
3. It enables the early identification of problems and difficulties, and the generation of contingency measures for the adjustment and adaptation of the project.

Ideally Participatory Monitoring and Evaluation is carried out with local organizations to design the project, plan its implementation in terms of outputs, indicators and activities. Later on it accompanies the process of implementation and evaluates project outputs and outcomes. Finally it provides a basis for new ideas for future activities based on the needs of local organizations.

Information requirements
Although there is no strict formula for establishing PM&E systems, there is a series of suggested steps, as follows:

Knowledge and diagnosis of the context where PM&E will be implemented. This permits the intervention to be adapted to local context.

Identification of the local systems of M&E, to adjust the PM&E so it contributes to the local system instead of replacing it.

---

This module was drafted by Vivian Polar and Edson Gandarillas.
Conceptualization of terms (monitoring, evaluation, participation, indicators, etc.)

Determination of the goal or vision of the future of the local organization

Identification or formulation of local indicators

Identification of activities

Monitoring/evaluation formats design

Assignation of a monitoring and evaluation committee

Information recording and analysis

Use of the PM&E results

The first two steps coincide with the collection of information for the baseline of Module 2.

In the last stage, local organizations should generate information regarding the completion of activities and their quality, indicators and achievement of outcomes from their own perspective. The most important information generated during this stage is the evaluation of results and the recommendations by the final users of the technology, through formats designed specifically for this purpose. These formats will also contain cause and effect information regarding adoption.

Tools

A selection of tools from the following are recommended for implementing the P&ME system:

**Tool 6**
Participatory wealth ranking

**Tool 9**
Questionnaires

**Tool 10**
Semi-structured interviews

**Tool 14**
Identification of local P&ME systems

**Tool 15**
Collective concept building

**Tool 16**
Envisioning and objective setting

**Tool 17**
Identification of local indicators

**Tool 18**
Activity planning
**Tool 19**  
Monitoring/evaluation formats

**Tool 20**  
Selection of the PM&E committee

**Tool 21**  
Information recording

**Tool 22**  
Use of the PM&E information

Note: if tool 6 was already developed in Module 2 (baseline), it may not need to be repeated in this module.
Adoption

Once the project has concluded, the team of evaluators has three concrete challenges. The first is that adoption and adaptation or rejection are the result of learning cycles not necessarily synchronized with project implementation, which has a pre-established beginning and end. This poses the problem of when *ex-post* evaluation should be carried out. The second challenge is to be able to define if adoption has really taken place, if adoption is still underway or if, simply, there will be no adoption. The third challenge relates to the quantification of adoption, which can be a simple or complex task depending on the number of components in the suggested innovation and their nature. For example, the introduction of a new variety is a simple innovation and may involve only one component which cannot be adapted, as compared with land use or integrated pest management innovations, each of which has multiple and adaptable components—making complicating and blurring definitions of ‘adoption’ and ‘non-adoption’.

Organizational strengthening and training, on the other hand, are processes which are not the best measures of impact. They are necessary but not sufficient steps in modifying the behaviour of organizations and trainees.

Relevance, use and applicability

Adoption is a necessary but not sufficient condition to generate impact. The study of adoption determines whether it is useful to continue with the process of evaluation in subsequent modules addressing later steps in the impact pathway. If there is no evidence of significant adoption then there cannot be impact on production and adopters, much less on non-adopters (unless the project has led to other positive or negative impacts in the community, not associated with adoption of recommended innovations).

Information requirements

The earliest time that Module 4 can be implemented as part of the *ex-post* impact evaluation process is during the first production cycle following the end of the project. However this may be too soon to capture steady but slow uptake of an innovation by a community, in which case there would ideally be some delay in starting the *ex-post* evaluation process. If this is not possible, then module 4 should incorporate some assessment of likely further adoption after project completion. *Ex-post* evaluations should not be delayed too long otherwise community members memory of project activities and effects may fade, and it may be difficult to track down and learn from stakeholders.

The study of adoption demands considerable flexibility in design, depending on the degree of complexity of the innovation. Quantitative assessments of adoption are needed, but there must be qualitative information to provide explanations for adoption, adaptation or rejection of an innovation. Module 4 should answer three basic questions relative to the adopting families in their community context, and in the extended context if necessary:
1. How many families have included components of the innovation to the production of the product in question?

2. What components of the innovation have been incorporated by the families in producing the product in question?

3. What proportion of the family production has components of the innovation?

The answers to the questions related to the target group and the community will define:

1. The adoption ratio: what is the ratio of adopters relative to the total number of the families in the community, differentiated by socio-economic levels.

2. Characterization of the innovation: what characterizes the innovation relative to the components adopted and/or adapted and not adopted.

3. The degree of adoption: refers to the percentage of the product produced with components of the innovation.

These three questions must be explained in relation to the target group and the community to determine the samples, that is, the cases that will be studied in depth through interviews and questionnaires for the study of impact on adopters (module 5) and impact on non-adopters (module 6).

**Tools**

These are the tools recommended for collecting information on adoption.

- **Tool 11**
  Adoption characterization
- **Tool 5**
  Transect mapping
- **Tool 9**
  Questionnaires
- **Tool 10**
  Semi-structured interviews
If there has been significant adoption, the evaluation team at this stage must then determine the adoption impact on production and on adopters.

This module is in general a quantitative study on production and income and a quantitative and qualitative study on how adopters manage increased income.

Relevance, use and applicability
Impact on adopters is the measurement of the effectiveness of the project and it may also lead to indirect impacts on non-adopters.

Information requirements
This study looks for information on changes in production, in prices for products, in production costs, etc. These changes must be examined for their effects on income, but the study should also look beyond income into wider changes in livelihood of adopters (including, for example, changes in asset holdings, investments, hiring in or out of labour, and expenditures).

Depending on how significant these changes have been, it may also be necessary to look at direct impacts on prices and market structures, for example, which costs have been reduced, how the increased income is being used, etc. Module 5 covers all of these.

Tools
These are the tools recommended for the collection of information in this module:

Tool 1
Innovation impact appraisal/evaluation

Tool 7
Seasonal calendars

Tool 8
Participatory budgeting

Tool 9
Questionnaires

Tool 10
Semi-structured interviews

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The innovation impact appraisal/evaluation tool is used in module 1 for ex-ante appraisal of the project proposal. In module 5, at the ex-post stage, it is used to guide the collection of information and for analysis of impact on adopters, based on data collected and information analyzed in modules 2 to 5.
Impact on Non-Adopters

If there has been significant impact on production and the adopting group, it is likely that other actors in the community have been affected. The effect on non-adopters is determined by the effects of direct impacts on ‘indirect impact’. For example, if a widely adopted innovation significantly reduced labour use in an enterprise and demand for hired labour, then it is important to know how the labour market has reorganized. Similarly if prices have changed, how has this affected the demand and supply for consumers and other (perhaps poorer) producers, etc. Innovations can have multiple positive and/or negative indirect impacts, and these must be considered and weighed against each other to determine overall impacts on the poor.

Relevance, use and applicability

This module is instrumental for analyzing impact on poverty, focusing on indirect impacts. Poverty reduction through technological innovation can be achieved either through (1) innovations promoting wider economic growth through direct gains to the non-poor, with the intention that this will lead to positive indirect impacts on the poor, or (2) innovations intended to directly improve the livelihoods of poor people. In both cases there can be indirect impact which must be studied to understand the net impact.

Information requirements

The information required for this module is directly related to the linkages described in the conceptual framework in section 1 of the guide:

1. production linkages
2. upstream linkages
3. downstream linkages
4. consumption linkages
5. cost of living linkages
6. investment linkages
7. infrastructure linkages
8. institutional linkages
9. gender and generational linkages
10. environmental linkages
Tools
These are the tools recommended for collecting information required for this module:

**Tool 2**
Pro-poor impact evaluation

**Tool 6**
Participatory wealth ranking

**Tool 7**
Seasonal calendars

**Tool 9**
Questionnaires

**Tool 10**
Semi-structured interviews

**Tool 12**
Community (or group) summary

**Tool 13**
Guide for the presentation of PITA results

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3 The pro-poor impact assessment tool is used in module 1 for *ex-ante* appraisal of the project proposal. In module 6, at the *ex-post* stage, it is used to guide the collection of information and for analysis of impact on non-adopters, based on data collected and information analyzed in modules 2 to 6.
The Tools

This section contains 22 tools aimed at generating information in the six modules. Some (Tools 1, 2, 3, 5, 11, 12 and 13) were designed specifically for this methodological guide while others (4, 6, 7, 8, 9 and 10) were adapted from existing rapid rural appraisal tools.

Tools 14 to 22 for module 3 (Participatory Monitoring and Evaluation) were produced in collaboration with the FOCAM (Promoting Change) project. All the tools have been tested and modified during pilot work with 8 Bolivian System of Agricultural Technology (SIBTA) projects.

Some tools are used in more than one module, and content and usage may vary according to the context, informants and the stage the tools are used (ex-ante, ex-intra and ex-post). The use of the tools in different stages is important for comparative analysis of change. For example, tools 1 and 2 are guides for collecting and presenting information. The first tool explores direct impact and the second, indirect impact. Tools 9 and 10 are not specific tools themselves but are guidelines for designing questionnaires and interviews which should be tailored to the specific characteristics of the product and the innovation, the participants and the community in a particular project. Tools 12 and 13 are guides for summarizing the information of all the modules and for presentation of impact results. For example, if the investigation shows that there has been no significant adoption (module 4) or no significant impact on adopters (module 5), these two tools will help in reporting the conclusion.
Innovation Impact Assessment

Introduction

What are the characteristics of the community? What are the characteristics of the service users? What are the characteristics of the product in question and the proposed innovation? Are there compatibilities and incompatibilities between these characteristics? These are the issues considered when using this tool. It consists of a check list or set of questions to be used in ex-ante and ex-post analysis, in the first case in appraising the project proposal and in the second case assimilating information and summarizing direct impacts and effects. The questions are organised and listed below by main topic. The answers to these questions should then provide information which enables judgements to be made about the compatibility and suitability of the innovation with and for the clients and community, using a simple scoring system. Note that if there are more than one innovation or community in the Applied Technological Innovation Projects (PITA) and these have different characteristics then this tool has to be applied separately to each.

Uptake appraisal and base information questions

Community characteristics: poor/not poor? (how poor is the community? For example, are basic services available, such as school, sanitary post, electricity, water for irrigation and drinking, non-farming activities, etc.)

Remote: yes/no (is the community remote or not in relation to its access and distance to important markets, local or regional?)

Agroecological potential: (yes/no) (is the community located in an area with natural resources with good agroecological potential for the innovation?)

Non-agricultural economy: pull/push (are there non-farming activities in the community and how important are they? Are these growing and pulling people out of agriculture or is lack of agriculture opportunities pushing people into low paid or low return non-farm activities?)

Agricultural dependence: low/medium/high (how much does the community depend on farming activities?)

Product and innovation characteristics

Enterprise: e.g., crop, product, etc.

Description of the innovation(s): briefly describe the key technical, institutional, or other change involved in this innovation.

Benefits to adopters: what benefits are expected from adoption? (e.g. higher yields, increased productivity, higher incomes, higher prices, lower risk, lower costs, etc.)

Asset requirement: what assets are required for adoption of the innovation?
• **Natural:** for example land, water, etc.

• **Physical:** for example machinery, implements, equipment, etc.

• **Social:** for example market relations, formal and informal organization membership, etc. Are there special characteristics that mean this is more likely to be considered a responsibility for men or women?

• **Human:** for example special skills, literacy, etc.

• **Financial:** for example credit, cash, start-up capital, etc.

### Innovation complexity

• **Trialability:** how easy/difficult is it to try this innovation and out on a small scale?

• **Observability:** how easy/difficult is it to observe the results/benefits from adoption?

• **Similarity to existing practice, and who uses it:** how similar is the innovation to existing practice? Does it require important changes from current local practice?

• **Number of elements, their complexity and independence/interdependence:** does the innovation have many elements that need to be adopted? Is it a complex technology package? Are the different elements interrelated and dependent on each other for yielding benefits?

• **Minimum scale of adoption:** is there a minimum scale of adoption? (For example, if the innovation is equipment, how many users can it service, what is the minimum amount of land or produce for it to be profitable?)

• **Institutional demands:** Does the innovation have special demands, e.g., new markets, information, land rights, finance, services, organization, etc.

• **Adoption risks:** what are the risks in adopting the innovation? Are there new production risks (for example pests and diseases, weather, input supplies, etc?)

• **Livelihood contribution:** in what way does it contribute to the livelihoods of adopters--for example in stepping out, hanging in, stepping up?

**PITA uptake process:** how is the development of the innovation process planned? What strategies, tools, methods, etc. will be used?

**Market prospects and risks:** Is there a market for new or increased production, or for improved quality? Where? How will new products be marketed? What marketing costs will there be? How will new production affect prices? What prices can be expected? What price and demand risks are there?
Client’s characteristics (service users)

**Note:** if there are different kinds of clients or service users in the PITA then this needs to be recognized by describing the characteristics of each in the questions below.

**Poor/non-poor:** are the users poor or do they belong to a group with a better economic standing compared to the rest of the community? Are there differences between men and women clients?

**Assets:** what assets do the service users have?

- **Natural:** land, water, etc.
- **Physical:** machinery, tools, equipment, etc.
- **Social:** market relations, formal and informal organization membership, etc.
- **Human:** special skills, literacy, knowledge regarding the innovation etc.
- **Financial:** credit, cash, start-up capital, etc.

**Livelihood strategy:** what are the main livelihood strategies and activities of the clients, and how do these relate to their farming and non-farming activities? *Note: it is common to have a combination of hanging in, stepping up and stepping out strategies.*

**Compatibility of innovation with client and community characteristics**

Here we consider the compatibility of the innovation with the characteristics of the clients. To aid in this, six aspects of compatibility are listed below, and compatibility scores should be estimated for each, using a scale of 0 to 10, where 10 indicates very high compatibility.

<table>
<thead>
<tr>
<th>60 points</th>
<th>Score (/10)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Asset requirements and availability (whether the requirements of the innovation are available in the community and from the service users)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Complexity (whether the service users can manage the innovation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Minimum scale of adoption (is this appropriate to clients’ interests, activities and resources?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Institutional requirements and availability (are the institutional requirements of the innovation available in the community or will they be provided reliably in the PITA?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Acceptable risks (are the risks of adoption acceptable?)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Benefits and livelihood contribution (will the innovation make a significant contribution to achievement of the clients' livelihood strategies?)

The scoring above will assist in appraisal judgements about likely sustained and significant uptake of the innovation—where high scores are associated with likely uptake and low scores indicate unlikely uptake. It may also suggest issues where modification of the proposed innovation or uptake promotion proposals are needed.
Introduction

This tool addresses questions about the ways in which innovations may impact on poor people in the community: Who are the poor in the community? What are their characteristics? What proportion of the community is poor? Will or does the project benefit the poor directly, or does/will it benefit them indirectly and in what ways? Like tool 1, this tool can be used in both ex-ante and ex-post analysis, in the first case for appraising the project proposal and in the second case for evaluating impact. There are close relationships between this tool and tool 1.

Characteristics of the poor

Available resources: detailed description of the resources available to the poor

Natural: land, water, etc.

Physical: machinery, tools, equipment, etc.

Social: market relations, formal and informal organization membership, etc.

Human: special skills, literacy, knowledge regarding the innovation etc.

Financial: credit, cash, start-up capital, etc.

Main activities and income sources: description of the main activities carried out by poor people, by gender and by season.

- Men: ________________________________________________
- Women: _______________________________________________
- Children: _____________________________________________

Vulnerability: what are the main risks and threats to poor people

Livelihood strategies: what are the main activities associated with hanging in, stepping up and stepping out strategies and aspirations?

Note: Main activities, vulnerability and livelihood strategies may be organized in a table with activities listed in the rows in the left hand column, with a further subdivision by gender, and vulnerability and livelihood strategies described for each activity and gender in columns on the right hand side.

Direct impacts on adopters with likely indirect impacts on non-adopters: examine and describe those direct impacts of the adoption of the innovation which will lead to indirect impacts. This should be done for each type of adopter and innovation, taking account of the extent or scale of
adoption. It should consider the direct adopter impacts in each of the following (in order to inform judgements about direct and indirect impacts on the poor in the table):

- Resource use by adopters (e.g. land, labour, purchased inputs)
- Production
- Price of the product
- Net income of adopters

Please see a sample table in the next page.
Scoring of likely direct and indirect impacts on the poor, taking account of direct impacts on adopters, likely adoption by the poor, and indirect impacts on poor non-adopters

What are the market & social impacts of likely uptake? How do these affect the poor?

<table>
<thead>
<tr>
<th>(Scoring of overall impact: highly beneficial +5; no impact 0; highly damaging -5)</th>
<th>Social and market changes</th>
<th>Impact on the poor</th>
<th>Score (+/-5)</th>
</tr>
</thead>
</table>

**Direct benefits/losses**

Have sales increased the net income of poor adopters?

**Indirect benefits**

1. On-farm employment linkages: increased seasonal labor demand?
2. Upstream/downstream employment opportunities?
3. Consumption linkages—general economic activity?
4. Cost of living linkages (a) Prices of purchases by the poor?
5. Cost of living linkages (b) Food security impacts?
6. Investment linkages—local investment in labour intensive businesses?
7. Services and infrastructure linkages—improved access to markets, transportation, education, health and information?
8. Institutional changes: right and terms of access to land, water, grazing lands, etc.? Access to markets and market exchange?
9. Changes in the natural/physical environment that may affect the poor?
10. Changes that affect men and women, old and young differently?

**Overall effects:** Impact on the poor?

A. Positive
   1. Insignificant

B. Negative
   2. Medium
   3. Significant
Characterization of the Community and Service Providers

Introduction

Community characterization helps determine the domains of recommendation which in turn influence the domains of evaluation. The domains initially defined will be modified over time as in-depth knowledge of the communities develops.

Informants

Team of evaluators, innovation service providers, service users’ representatives, other experts in the area of project intervention

Materials

Primary and secondary information regarding the area of intervention (municipalities, etc.)

Steps

In order to develop a characterization of the community and of groups within it, criteria for separating and grouping among people must be decided. Depending on the specific circumstances of the project, some criteria will be more dominant than others in different situations. The following criteria are listed for reference—in any particular project some of these could probably be omitted, while others not listed here might also be necessary and would need to be added.

- **Socio-economic and cultural**: what kinds of service users are there in the community (for example indigenous people, tenant farmers, small businesses)?

- **Agroecology**: are there agroecological differences between the communities? What are they? How do they affect service users or potential service users?

- **Distance and access to commercial centres (e.g. product and service markets)**: are there significant differences within and between the communities in relation to distance and access to markets? Can some be classified as relatively remote, intermediate and accessible? Are there communities with bad, good or average access throughout the year in relation to infrastructure and transportation?

- **Market / non market uses for the product in question**: is the product mainly sold or kept for domestic consumption by different people?

- **Technological and knowledge gap in reference to the productive system of the product in question**: Are there different types of production system and existing technology in the communities? Do the opportunities for the technological innovation differ, considering available resources? To what degree is the adoption of the innovation feasible for different types of producers, in relation to its dependence on external resources?
• **Production systems’ relationship to the product in question:** how important is the inclusion of the product in the productive system of the community? Does this vary between communities?

• **Size of the community and number of families:** Is the community small, average or big in relation to others in terms of the number of families that live in it?

**Example**

**Domains of evaluation of the project for the improvement of productivity and commercialization of Apícola Cuenca Cruceña honey**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Socio economic groups</th>
<th>Beekeeping System</th>
<th>Production size</th>
<th>Degree of specialization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Native farmer Tenant Farmer Small business</td>
<td>Stationary Migrant Family Small Medium Large</td>
<td>Low Medium High</td>
<td></td>
</tr>
<tr>
<td>Evaluation domain (agro-ecologies) Portachuelo</td>
<td>- 5 15</td>
<td>14 6</td>
<td>5 10 2 3</td>
<td>5 10 5</td>
</tr>
<tr>
<td>Yapacani</td>
<td>- 30 3</td>
<td>32 1</td>
<td>- 12 20 -</td>
<td>5 24 3</td>
</tr>
<tr>
<td>Lomerío</td>
<td>25 - -</td>
<td>25 -</td>
<td>24 1 - -</td>
<td>22 3 -</td>
</tr>
<tr>
<td>El Torno</td>
<td>- 18 4</td>
<td>20 2</td>
<td>12 10 - -</td>
<td>18 4 -</td>
</tr>
<tr>
<td>Sub- total</td>
<td>25 53 22</td>
<td>91 9</td>
<td>42 33 22 3</td>
<td>51 41 8</td>
</tr>
<tr>
<td>Service Users</td>
<td>100</td>
<td>100 100</td>
<td>100 100</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** The characterization was done by the GAIA SRL (project provider), FDTA Trópico and FIT 7 teams for the evaluation process. In this case the service users’ criteria matched the agroecological zone, so the evaluations were done with small business owners in Portachuelo, settlers in Yapancani and natives in Lomerío. The agroecological differences were important, mainly relative to the bees’ main sources of food and water.
Community Mapping

Introduction
Community mapping is a participatory tool frequently used by rural development projects. It is simple to use and very participatory, and its greatest potential is achieved when used and improved throughout the duration of the project. The tool extracts important information regarding the location of families’ residences, and, depending on the degree of detail, it can evolve throughout the project to include other data such as size of the productive plots, size of family units, holdings and access to land, resources and services, location of adopting and non-adopting families and demonstration plots, socio-economic groups, etc. One of the main incentives for participation is the map itself, which should remain in the community, to be used by the community and other institutions once the project is finished.

Informants
For this activity, it is ideal to have the participation of a wide range of people, but it is important to work with community leaders, who generally know the characteristics of the community and the families well.

Materials
Chart board, markers, complete listings of the community’s families

Steps
If possible, the team of evaluators should do a preliminary walk through the community to make a start in producing a draft of the map, catalyzing participation and comprehension of the exercise. Photos can be a strong element for this activity, mainly panoramic views of the community if possible. The basic elements are main roads; important infrastructure and topography; farming, forest and grazing areas; names of families and location of their homes; etc. The activity should begin with an explanation of objectives and expected outcomes, followed by the exercise.
Example

Map of the community of Sarcobamba, Cochabamba

Note. The map shows roads, cultivated areas and family homes. The distinction between owners and renters of animal-pulled implements is color coded (not shown in black and white reproduction).

Other sources of information


\(^1\)This publication is available in electronic format at http://www.livelihoods.org/info/tools/Spanishppn.html
Tool 5

Transect Mapping

Introduction

Transect mapping is adapted from the well known transect method. It involves walking along transects, measuring distances between edges of fields crossed, and recording what one sees in those fields. Data is afterwards entered and analyzed in a spreadsheet such as Excel. It is a quick way to produce quantitative data on land use and the adoption of technologies that can be observed in the field. It is an excellent method for triangulation of adoption and land use information generated by other tools. Because of the time taken to walk and record, the tool is most appropriate for use in relatively small areas (up to 10km$^2$).

Key Informants

Technicians working for service providers and/or knowledgeable community members to identify what is important to measure. A knowledgeable community member is needed during the field work to help identify crops, cropping patterns and provide other pertinent information.

Materials

Compass, data sheets, large measuring tape (50 m or more) and calculator are needed for data collection.

Steps

1. Design the data sheet (see the data sheet below for an example).

2. Go to the centre of the study area and mark a centre point corresponding to a landmark that will be easy to see from a distance. Then fix five landmarks corresponding roughly to S, SW, NW, NE and SE.

3. Face the direction of the first landmark. This will be your first transect. Record in the first line of the data sheet is the relevant details about the land use immediately in front of you. This may be a field, road, irrigation ditch, etc. If it is a field, remember to check the information recorded with the key informant.

4. Walk in a straight line towards the first landmark. Stop when you reach the first boundary or change in land use. Measure with a tape the distance from the centre point to this boundary and record this distance in the column headed “width” on the first line of the data sheet.

5. Record in the first column on the second line of the data sheet the boundary number (in this case 1) and then on the right hand side details of the land use now in front of you (after the boundary), then walk to the next boundary or change of land use. Measure and record the width of that land use, record the land use, and so on. TIP: The colleague who is holding the tape measure behind you can also help make sure you follow a straight line.
6. When you reach the edge of the area of study, repeat steps 3 to 5 above for each direction or landmark, to give you 5 transects.

7. Once you have finished the data collection, enter the data into a spreadsheet like Excel. After the column that records the distance walked between land use borders or boundaries (Width) insert formulae to calculate first the cumulative distance walked ($D_1$), second the cumulative distance walked up to the previous border ($D_o$), and third the proportional area coefficient to which the observation applies. Calculate this coefficient using the formula

$$\pi(D_1^2 - D_o^2)/5 = 0.628(D_1^2 - D_o^2).$$

The number 5 in the first formula refers to the number of transects (assuming that you are doing S, SW, SE, NW and NE transects), but if you used four transects you would divide by 4, for example.

8. From this data (see table below) it is then possible to sum area coefficients for different crops to produce pie charts (see pie chart overleaf), other types of graph or summary tables showing proportional area under different uses. Other analyses are possible such as identifying areas under particular crop varieties (e.g. Mizque onion in the example below) or areas under different crop growth stages depending upon the nature of the innovations and farming systems in the project.

### Data collection and processing spreadsheet for one transect (actual analysis would be based on five transects)

<table>
<thead>
<tr>
<th>Number</th>
<th>Width</th>
<th>$D_1$</th>
<th>$D_o$</th>
<th>Area Coefficients</th>
<th>Type</th>
<th>Crop</th>
<th>Variety</th>
<th>Crop growth stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre</td>
<td>13.8</td>
<td>13.8</td>
<td>0</td>
<td>119.2</td>
<td>Plot</td>
<td>Onion</td>
<td>Mizque</td>
<td>$V\ 2\ EU$</td>
</tr>
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<td>$V\ RT$</td>
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<tr>
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<td>$V\ 1\ EU$</td>
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<td>124.6</td>
<td>86.9</td>
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<td>$V\ 2\ EU$</td>
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<td>6</td>
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<td>171.5</td>
<td>124.6</td>
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<td>Mizque</td>
<td>$V\ 1\ EU$</td>
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<tr>
<td>7</td>
<td>34.9</td>
<td>206.4</td>
<td>171.5</td>
<td>8256.1</td>
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<td>F</td>
</tr>
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<td>8</td>
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<td>226.2</td>
<td>206.4</td>
<td>5362.0</td>
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<td>Mizque</td>
<td>$V\ 1\ EU$</td>
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<td>9</td>
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<td>226.2</td>
<td>5883.6</td>
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<td>273.9</td>
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<td>273.9</td>
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<td>Onion</td>
<td>Mizque</td>
<td>$V\ 1\ EU$</td>
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</table>

**Sum**  341 | 73070

**Key for crop growth stages:**
- V RT: Recently transplanted
- V 1 EU: First Earthing up
- V 2 EU: Second Earthing up
- F: Flowering
Example of analysis results

Land use in Parotani

Note: Transect mapping results in the community of Parotani, Cochabamba May 3rd, 2005.

Vegetative state, Mizque onion

Note: Transect mapping results in the community of Parotani, Cochabamba May 3rd, 2005.
GPS Transect Mapping

It saves time and is more convenient to use a Geographic Positional System (GPS) to set the transects and measure distances in the field. We include a brief description of how to use a GPS for anyone who is already familiar with the operation of a GPS, and wishes to use this option.

Any Garmin GPS with data download is suitable (we have used Garmin eTREX or Venture). To set the transects, go to the centre of the area to be surveyed and “mark” a “waypoint” (i.e., take the co-ordinates) in the format hddd.dddddd. Write these coordinates on a piece of paper and then add the numbers shown in the table below to create the five transect “GoTo” points. Enter these co-ordinates into the GPS by marking five more waypoints and then editing them, one by one. To follow the respective transect lines use the “GoTo” function on the GPS, making sure your position is over the GoTo line when standing at the boundary between different land uses.

### Table of numbers to add to create five transect “GoTo” points

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<td>S</td>
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<td>0</td>
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<tr>
<td>SW</td>
<td>0.034117</td>
<td>0.08495</td>
</tr>
<tr>
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<td>-0.071617</td>
<td>0.0556</td>
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<tr>
<td>NE</td>
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<td>-0.052733</td>
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<tr>
<td>SE</td>
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<td>-0.0864</td>
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</table>

Mark waypoints as you cross land use boundaries. Write the waypoint numbers in the data sheet, and then record on that line the field data in front of that waypoint. Measure distances of less than 5m with a tape measure. When finished, download the data onto a computer and use the MapSource program (provided with Garmin GPS) to calculate distances between waypoints. Enter these distances into the Excel spreadsheet described above.

**Other sources of information**

The transect mapping method is relatively new and not yet well documented. Please contact Rodrigo Paz or Boru Douthwaite (authors of the guide) for further information.
Introduction

Participatory wealth ranking is a well known and commonly used tool. However, it rarely fulfils its true potential in practice. The identification of the socio-economic structures the community is comprised of, and the understanding of poverty and wealth from the local perspective, can be used for example in the identification of limitations to technological innovation, in the socio-economic contextualization of the project target group, and in the identification of possible direct and indirect impacts of (proposed) innovations.

The relative weight of each socio-economic group is important for evaluating innovation impacts on poverty when complemented with information on resource holding and use. The results can also provide an easy identification of representative families with whom description of socio-economic categories and productive systems may be done through in-depth interviews and questionnaires.

Informants

It is best to have representatives from people of different ages and gender. It is also important that communal leaders are present, and that the group is not too big.

Materials

Chart boards, markers and cards (with complete listings of the names of the community’s families)

Steps

The idea is for the participants to differentiate families into groups according to local concepts of poverty and wealth levels. In general, without the intervention of the facilitators, 3 to 4 groups per community\(^2\) will be obtained. Once the participants have defined the groups and have classified the families in each group, the next step is to find out what differentiation criteria\(^3\) were used, and to investigate in as much detail as possible the variables and the variable indicators in a quantitative form. The basic criteria that an evaluation team should normally take into account to support the analysis are listed here:

- Land use and holding size (crops cultivated and average area)
- Livestock holding
- Property holding (both within the community and outside)

\(^2\) If only two groups were obtained, it is possible that some other types of differentiation (of origin and belonging, for example) influenced the grouping, and it will be necessary to investigate further and re-categorize.

\(^3\) The facilitators should take notes during the classification regarding the criteria used, for the discussion in the second part of the exercise.
• Ownership of vehicles, machinery and equipment; means of transportation
• Where children live and study
• Main sources of income and subsistence
• Hiring in and out of labor
• Main place of residence of the family
• Membership of local producers’ associations

Example

Participatory wealth ranking of the community of Tierras Nuevas, Yacuiba, Tarija

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 families (8%)</td>
<td>24 families (14%)</td>
<td>121 families (72%)</td>
<td>8 families (6%)</td>
</tr>
</tbody>
</table>

Almost all are from Chuquisaca and Quechuistas

<table>
<thead>
<tr>
<th>Have tractors</th>
<th>Do not have tractors</th>
<th>Do not have tractors</th>
<th>Do not have tractors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have transportation</td>
<td>Do not have transportation</td>
<td>Do not have transportation</td>
<td>Do not have transportation</td>
</tr>
<tr>
<td>Brick and tin roof house</td>
<td>Adobe and wood house</td>
<td>Adobe and wood house</td>
<td>Adobe and wood house</td>
</tr>
<tr>
<td>Most arrived together in 1975, and are the longest residents</td>
<td>Most arrived after 1985</td>
<td>Most arrived after 1998</td>
<td>Have also been resident for a long time but have concentrated on other activities, land rental, internal and external migration, bakers, builders</td>
</tr>
<tr>
<td>Big families (three generations in the community)</td>
<td>Two generations in the community</td>
<td>Young families with small children</td>
<td></td>
</tr>
<tr>
<td>Most experienced</td>
<td>Less experienced</td>
<td>Less experienced</td>
<td>Less experienced</td>
</tr>
<tr>
<td>Have been trained in courses and workshops</td>
<td>Have been trained in courses and workshops</td>
<td>Have not received training</td>
<td>Have not received training</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>------------------------------------------</td>
<td>---------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Most local leaders directives belong to this group</td>
<td></td>
</tr>
<tr>
<td>Own land</td>
<td>Own land but small</td>
<td>Do not own land in the community, recently acquired land in Pananti, Las Abras y Sachapera through MST</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Some own land but rent it to group three</td>
<td></td>
</tr>
<tr>
<td>Have cattle</td>
<td>Do not have cattle</td>
<td>Do not have cattle</td>
<td>Do not have cattle</td>
</tr>
<tr>
<td>Have children who attend Santa Cruz and Tarija universities, or are professionals</td>
<td>Some have children studying and living mainly in Tarija</td>
<td>Children study only elementary school in the community</td>
<td>Children live elsewhere</td>
</tr>
<tr>
<td>All live in the community</td>
<td>All live in the community</td>
<td>Live in the community and work in others</td>
<td>Don’t live in the community permanently</td>
</tr>
<tr>
<td>Some have houses in Yacuiba</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanized production</td>
<td>Partially mechanized production</td>
<td>Manual production</td>
<td></td>
</tr>
<tr>
<td>Average holding</td>
<td>Average holding</td>
<td>Only some own land and the rest rent</td>
<td></td>
</tr>
<tr>
<td>40 to 200 has</td>
<td>10 to 20 has</td>
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<tr>
<td>Soybean 35 to 150 has</td>
<td>Soybean 6 to 10 has</td>
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<tr>
<td>Get credit from companies that buy the production</td>
<td></td>
<td></td>
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<tr>
<td>Corn 20 to 80 has</td>
<td>Corn 4 to 6 has</td>
<td>Corn 3 has</td>
<td></td>
</tr>
</tbody>
</table>
Peanuts 5 to 15 has  Peanuts  2 to 5 has  Peanuts 3 to 5 has

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Livestock</th>
<th>Livestock</th>
<th>Livestock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bovines 25 to 300</td>
<td>Bovines 0</td>
<td>Bovines 0</td>
<td></td>
</tr>
<tr>
<td>Pigs  15 to 50</td>
<td>Pigs 5 to 20</td>
<td>Pigs 5 to 10</td>
<td>Pigs 5 to 10</td>
</tr>
<tr>
<td>Sheep 10 to 15</td>
<td>Sheep 20 to 30</td>
<td>Sheep 5 to 10</td>
<td></td>
</tr>
<tr>
<td>Goats 15 to 20</td>
<td>Goats 40 to 60</td>
<td>Goats 15 to 20</td>
<td></td>
</tr>
<tr>
<td>Hens 30 to 50</td>
<td>Hens 30 to 50</td>
<td>Hens 20 to 40</td>
<td>Hens 10 to 20</td>
</tr>
</tbody>
</table>

Note: The activity was done as part of impact evaluation by FIT 7.

Sources of further information


4This publication is available in electronic format at http://www.livelihoods.org/info/tools/Spanishppn.html
Introduction

Seasonal calendars are one of the oldest methods used in Participatory Rural Diagnosis. They were developed based on the crop calendars that have been used for a long time in agrosystems research and analysis. They can present a great variety of diverse information by showing in a diagram the activities, limitations and opportunities facing people across a year.

Seasonal calendars are used to develop a better understanding of the local production systems, to try to identify difficult and vulnerable months and other variables that may have significant impact on peoples’ lives. They can also help in identifying conflicts and limitations, and potential opportunities for starting new activities. Finally, and for the specific purposes of this methodology, seasonal calendars can provide important information about how the new technology may fit into the general productive system, for example how it would affect family and hired labour in the community.

Key informants

Families belonging to different socio-economic levels in the community

Materials

Chart boards, markers

Steps

Seasonal calendars often take the form of bar charts or matrices. In the most popular method, months are listed at the top of the diagram and the activities or events are listed on the left. In a less common variation, the months/seasons are written on the side of the diagram, with activities listed across the top.

The first step is to choose months or seasons that all participants are familiar with. This is not always easy, since it may be difficult to establish local names for months or seasons. Sometimes it is more appropriate to start with the beginning of a season, the beginning of a planting season or an important holiday instead of a month of our traditional calendar. It has been suggested that seasonal patterns can be seen more clearly if the calendar is extended to 18 months instead of 12, but in practice calendars almost always cover the traditional 12 months.

Participants are divided into focal groups according to their socio-economic level.

Depending on the dynamics of the group and the information needs, different elements can be included in the analysis to show what is happening for different people at different times of year. Issues addressed may include:
Annual timetable of activities by crop

- Crop: preparation, planting, cultivation, harvest, processing, marketing, and consumption
- When is it done? Who does it? How is it done?

Annual timetable of activities by livestock

- Species: purchase, breeding, feeding, marketing, and consumption
- When is it done? Who does it? How is it done?

Income and expenditure by season, by crop and livestock, whether for market or subsistence

- How much is consumed? How much is sold? Where is it sold? How much is earned?

Other agriculture and non-agriculture activities, family income and expenditures

- Migration, labor sales, handicrafts, education, etc.
- What do you do? When do you do it? Who does it? For how long? How much do you make?

These are the basic elements for a seasonal calendar. However other elements considered important may be introduced. It is, for example, a good idea to investigate gender and age aspects; men, women, and children’s roles; and how they can be affected by the technological innovation. The same applies to understanding the management of family resources and family and paid labor.
### Basic Seasonal Calendar

<table>
<thead>
<tr>
<th>Activity</th>
<th>Gender</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
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<tbody>
<tr>
<td>Hybrid maize</td>
<td>Male</td>
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<td>Traditional maize</td>
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<td>Potato</td>
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<td>Minor livestock</td>
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<td>Cooking</td>
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<tr>
<td>Housekeeping, children</td>
<td>Male</td>
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</tbody>
</table>

**Sources of further information**


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5This publication is available in electronic format at http://www.livelihoods.org/info/tools/Spanishppn.html
Introduction

It is fundamental to know the production costs of the project in question. Although this would have been investigated in the project’s technical proposal, the topic must be investigated in more depth during impact analysis, with the objectives of improving the project team’s knowledge regarding production issues, of tapping into local knowledge, and of starting a dialogue regarding the possibilities and the real expectations for the innovation.

Informants

Families belonging to different socio-economic levels in the community.

Materials

Chart boards, markers

Steps

This being a participatory tool, it is important that work be done in focal groups, with each group formed by participants of the same socio-economic level, with the objective of capturing the production system variables. The facilitator must have sufficient knowledge of costs, cost determination and the local production system.

Each group estimates production costs with reference to a fixed and standard unit of scale of production (for a crop, for example, this may be the most common enterprise size in hectares). Costs of inputs are discussed for each stage of production to build up a budget of costs, and production and income are also estimated. The inclusion of family labor costs in the analysis presents some difficulties. If this is costed at hired labour wage rates then the budgets often show very low, even negative, profits or income. It is often better to budget only actual payments to hired labour as labour costs, and then divide the net family income by the number of family labour days to get an estimate of the return per family labour day.

Lots of details can be collected in this participatory work. The facilitators must be prepared to clearly explain the activities, answer questions and facilitate the activity adequately to obtain the desired results but they must not get overloaded by interesting but non-essential information.

It is also important that information on production costs be followed by a sensitivity analysis, so the risk and uncertainty factors can be understood. A sensitivity analysis should cover 5 to 10 years, working backwards from the year that has been used as typical for the budgeting. Each year will then be identified as a good or bad year regarding production, average earnings and sales prices, with the reason for the situation and its effects on the enterprise budget. This should provide important information about risks and vulnerability grouping production.
Examples:

Production information of three participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Production</th>
<th>Sales</th>
<th>Price</th>
<th>Who sells to</th>
<th>Subsistence</th>
<th>Seed</th>
<th>Hens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrique O.</td>
<td>15@</td>
<td>12@</td>
<td>45 Bs/@</td>
<td>F. El Puente</td>
<td>1@</td>
<td>1@</td>
<td>1@</td>
</tr>
<tr>
<td>Jaime M.</td>
<td>17@</td>
<td>13@</td>
<td>45 Bs/@</td>
<td>F. El Puente</td>
<td>1@</td>
<td>2@</td>
<td>1@</td>
</tr>
<tr>
<td>Octavio S.</td>
<td>25@</td>
<td>22@</td>
<td>45 Bs/@</td>
<td>F. El Puente</td>
<td>2@</td>
<td>1@</td>
<td>0</td>
</tr>
</tbody>
</table>

Production information of three participants of the group

<table>
<thead>
<tr>
<th>Name</th>
<th>Surface planted last cycle</th>
<th>Amount of seed used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrique O.</td>
<td>1/2 ha</td>
<td>1@</td>
</tr>
<tr>
<td>Jaime M.</td>
<td>1/2 ha</td>
<td>1@</td>
</tr>
<tr>
<td>Octavio S.</td>
<td>1/2 ha</td>
<td>1 ½ @</td>
</tr>
</tbody>
</table>

Detail of daily fixed expenses (DFE) by unit in Bolivianos

<table>
<thead>
<tr>
<th>Detail</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit price</th>
<th>Total Bs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coca</td>
<td>Pound</td>
<td>0.25</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Leija</td>
<td>Unit</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cigar</td>
<td>Bundle</td>
<td>0.5</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Chicha</td>
<td>Bucket</td>
<td>0.5</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Food</td>
<td>Lunch</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>12.5</strong></td>
</tr>
</tbody>
</table>

Lejia: Tradicional ash and potato mass to be chewed with coca leaves
Chicha: Tradicional alcoholic drink made from maize

Note:
1@=12.5 Kg
<table>
<thead>
<tr>
<th>Production Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Detail</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>PLOUGH</strong></td>
</tr>
<tr>
<td>Oxen</td>
</tr>
<tr>
<td>Guide</td>
</tr>
<tr>
<td>Hired labour expense</td>
</tr>
<tr>
<td><strong>Seeding</strong></td>
</tr>
<tr>
<td>Seed</td>
</tr>
<tr>
<td>Seeder</td>
</tr>
<tr>
<td><strong>Seed coverage</strong></td>
</tr>
<tr>
<td>Oxen</td>
</tr>
<tr>
<td>Guide</td>
</tr>
<tr>
<td>Hired labour expense</td>
</tr>
<tr>
<td><strong>WEEDING</strong></td>
</tr>
<tr>
<td>Day laborer</td>
</tr>
<tr>
<td>Hired labour expense</td>
</tr>
<tr>
<td><strong>HARVEST</strong></td>
</tr>
<tr>
<td>Cutting</td>
</tr>
<tr>
<td>Hired labour expense</td>
</tr>
<tr>
<td>Truck</td>
</tr>
<tr>
<td>Loading and unloading</td>
</tr>
<tr>
<td>Hired labour expense</td>
</tr>
<tr>
<td>Threshing with tractor</td>
</tr>
<tr>
<td>Hand Threshing</td>
</tr>
<tr>
<td>Hired labour expense</td>
</tr>
<tr>
<td>Grain bagging</td>
</tr>
</tbody>
</table>
## COMMERCIALIZATION

<table>
<thead>
<tr>
<th></th>
<th>@</th>
<th>0</th>
<th>0</th>
<th>18</th>
<th>1.5</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produce transport</td>
<td></td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>1.5</td>
<td>27</td>
</tr>
<tr>
<td>Owner trip</td>
<td>Person</td>
<td>0</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Loading and unloading</td>
<td>Wages</td>
<td>0</td>
<td>0.5</td>
<td>0</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>7</td>
<td>13.5</td>
<td></td>
<td>691</td>
<td></td>
</tr>
</tbody>
</table>

### Grain sales

<table>
<thead>
<tr>
<th>Production (@)</th>
<th>Price (BOB/@)</th>
<th>Total Revenue (BOB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>45</td>
<td>810</td>
</tr>
</tbody>
</table>

### Straw sales

<table>
<thead>
<tr>
<th>Production (trucks)</th>
<th>Price (BOB/t truck)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

**TOTAL revenue (BOB)** 910

### Profit (return to family labour & investment)

**BOB** 219

---

**Notes:**
1. Seed has not been counted as a cash cost since this is taken from family stocks.
2. Hired labour: expenses for food etc supplied to workers.
3. Family labour costs excluded from cash costs.
4. 1@=12.5 Kg
**Introduction**

Questionnaires are used to collect a range of different types of information in different modules (see table below). The content of questionnaires varies with the nature of the topic being studied and the context in which it is being used. Since the nature of innovations and people’s livelihoods differ between PITAs, new questionnaires generally need to be defined for different topics in different PITAs. Questions and designs from a questionnaire that is successfully used in one situation can also often be used, with modifications, in other situations. However, there are some general principles that can be followed in the design of questionnaires. Here we briefly enumerate some general principles in questionnaire design.

1. Questionnaires should be short and focused. They should only collect information that is directly relevant to the subject of the study to avoid wastage of respondents’ and enumerators’ time in data collection, and unnecessary analytical work.

2. The layout of questionnaires should be clear, spacious and easy for enumerators to read and record answers. The layout should be reader-friendly to facilitate checking and data processing and analysis. Each questionnaire should have a cover page with the following information: project name, respondent, date and location of interview, and name of enumerator. Provision should also be made for a respondent identification code. It is also a good precaution, against losing parts of questionnaires, if a page number and respondent identification code is placed at the top or bottom right hand corner of each page of the questionnaire.

3. Questions need to be carefully selected and included only if they are directly relevant to the study. They should be short. They should only be asked if respondents are likely to know the answers and allowances should be made if they do not know the answers. This requires careful selection of respondents within households (there are often important gender and age considerations here).

4. The way questions are phrased is very important. They must be clear and unambiguous, allowing for any translation that may be necessary, and must be precise in terms of the information being gathered. In asking questions about innovation adoption, for example, there are very important issues regarding the definition of innovation and adoption (to differentiate between adaptation, partial adoption and testing). Closed questions (with a choice between specified answers) are easier for analysis but need more careful design and coding. In answering all questions there must be clear distinctions made between missing information and a zero answer.

5. Questions should be carefully sequenced and must be logical, often starting with general factual questions followed by more specific questions, e.g. why or how particular conditions arise or why certain practices are done.
6. Questionnaires must always be tested before they are used. This is necessary to make sure that the questions are clear to respondents, that respondents are able and willing to answer them, and that they provide reliable, useful and sufficient information to meet survey objectives.

7. Finally, it is important that questionnaire-based interviews are conducted by trained enumerators who have good interviewing skills. They of course need local language skills and an understanding of local culture, and should give due respect to respondents. In some circumstances it may be important that female or male enumerators conduct particular questionnaires with women or men respondents. Finally, it is important to recognize that respondents have rights to privacy, to confidentiality of information, and to know the purpose of the questionnaire and how their answers will be used.

Example of application in the modules

<table>
<thead>
<tr>
<th>Modules</th>
<th>Information</th>
<th>Informant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 2</td>
<td>Production of crops or livestock to be affected by the innovation</td>
<td>Representative sample of the target group and of different socio-economic levels</td>
</tr>
<tr>
<td>Module 3</td>
<td>Livelihood details</td>
<td>Representative sample of the target group</td>
</tr>
<tr>
<td>Module 4</td>
<td>Adoption of innovation components (partial or majority, testing, adaptation)</td>
<td>Adopters</td>
</tr>
<tr>
<td>Module 5</td>
<td>Changes in income, prices and opportunities of livelihood improvement due to technological innovation</td>
<td>Representative sample of adopters according to socio-economic levels</td>
</tr>
<tr>
<td>Module 6</td>
<td>Changes in income, prices and opportunities for livelihood improvement of non-adopters as a result of livelihood and production changes among adopters</td>
<td>Representative sample of community non-adopters according to socio-economic levels</td>
</tr>
</tbody>
</table>
Semi-structured Interviews

Introduction

Semi-structured interviews with key informants are used in a wide range of situations in different modules. They are important in all modules as a means of gathering information directly and in obtaining information to guide the design and use of other tools (such as questionnaires, transect mapping, or innovation characterization). Like questionnaires, semi-structured interviews involve respondents’ sharing information with interviewers, and there are thus many parallels between good practice in questionnaire design and use on the one hand and semi-structured interviewing on the other. However, the emphasis on flexibility in semi-structured interviewing contrasts with the need for standardized information in surveys using questionnaires, and this leads to some important differences between the use of questionnaires and semi-structured interviews. Semi-structured interviews may also be conducted with groups of people, as well as with individual key informants. Group interviews pose some special challenges and need some specific skills. We briefly set out some general principles in semi-structured interviewing.

1. Many of the principles specified in tool 9 for the design and use of questionnaires also apply to semi-structured interviews, but adjustments must be made to allow for flexibility. Semi-structured interviews should be focused and must be used to collect information directly relevant to the subject of the study. However, they should also allow key informants to introduce topics or issues that the latter consider relevant. Similarly informants should be asked about topics on which they have the necessary breadth and depth of knowledge, and they should be carefully selected on the basis of this knowledge. It may also be necessary to interview key informants with different perspectives or interests, such as service providers and users, other members of the community, municipalities, women, etc.

2. During interviews it is important that questions are carefully sequenced and phrased, as with questionnaires. However, questions must be open ended and designed to encourage key informants to define and explain issues relevant to the study. Conducting such interviews requires skills that include both broad professional knowledge of the topic under study and social skills that encourage key informants to share relevant information openly and to raise new issues, but at the same time prevent conversation straying too far from the focus of the interview. Local language skills and sensitivity to local culture and knowledge are an important aspect of this. Recognition of informants’ rights to privacy, confidentiality of information, and informed choices about their participation in answering questions are also essential. Interviewers also need to develop observation and note taking skills. If the interview is going to be recorded it is important to obtain the respondent’s previous approval.

3. During group interviews, interviewers must be focused, observant, flexible, and creative. It is important that they pay careful attention to ensuring balanced participation and unbiased information sharing. Bias to be avoided includes gender bias and power/wealth bias in group interactions, and interviewing bias through, for example, leading questions or the imposition of predetermined criteria. It may also sometimes be necessary to change the
interviewing approach to maintain interest and participation in the group, for example by splitting into two groups (if there is more than one person conducting the interview). In group interviews notes should be made about the process of participation and information sharing, the reliability and sources of information, as well as about its content.

4. An important aid in semi-structured interviewing is the interview guide. This must be carefully designed during the planning of field work. This consists of a list of topic headings to be addressed during an interview, with more detailed lists of particular items of information that should be obtained during the interview. The interview guide should be planned to follow a natural flow of discussion and should allow for initial discussion that encourages people to relax, develop interest, and participate. It should cover major information items identified as important during earlier planning of the study.
**Guide for application in the modules: Semi-structured interviews**

<table>
<thead>
<tr>
<th>Modules</th>
<th>Information</th>
<th>Informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 2</td>
<td>History of the community (historic relation: founding, projects, agricultural production, migration, local organizations, etc.)</td>
<td>Elders, leaders, influential members of the community,</td>
</tr>
<tr>
<td>Module 3</td>
<td>Characteristics of social organization, presence of organizations</td>
<td>A good representation of the community--(taking into account gender and age group considerations, levels of well-being) and participation of leaders and representatives.</td>
</tr>
<tr>
<td>Module 4</td>
<td>Perceptions about the adoption process and about the effective inclusion of innovation components, problems, potential and trends</td>
<td>A good representation of adopting families based on the characterization of the innovation and socioeconomic groups as well as the target group Service provider</td>
</tr>
<tr>
<td>Module 5</td>
<td>General perception of the changes produced as a result of own innovation.</td>
<td>A good representation of adopting families based on the characterization of the innovation and socioeconomic groups Women, service provider, merchants, local production organizations</td>
</tr>
<tr>
<td>Module 6</td>
<td>General perception of the changes produced in the community as a result of innovation adoption</td>
<td>A good representation of non-adopters that module 5 has identified as harmed or benefited indirectly Women, service provider, merchants, local production organizations</td>
</tr>
</tbody>
</table>
Adoption Characterization

Introduction

The characterization of an innovation aims to determine if: (1) there has been adoption or not and to what extent; (2) there has been adaptation or not and to what extent; (3) there is evidence that an adoption process is underway; and (4) a certain technology has been rejected or simply was never tested.

Innovation uptake processes are very variable and adoption depends on a great number of factors ranging from the individual's psychology to the state of the market.

Information for this characterization will be gathered through quick questionnaires with representative adopting or partially adopting families of each socioeconomic group in the target group. It is likely that the questionnaire results would show that some families have effectively included one, some or all of the innovation components partially or to a great extent, and that others are testing the innovation. The characterization of the innovation is in summary the description of the adoption process across the community at a certain moment in time.

Informants

Families that are currently employing some components of the innovation

Materials

Questionnaires and semi-structured interviews

Steps

The analysis of the information contained in the interviews will be used to fill in the following table, which summarizes how many families are using what components and how much. The questionnaires must be designed based on the three questions asked in Module 4, and in accordance with the characteristics of the innovation in question.

<table>
<thead>
<tr>
<th>Innovation Characterization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>Total families</td>
</tr>
</tbody>
</table>
Determining that an innovation is on trial, partially used or used to a large extent will depend on the extent it was used. If, for example, the totality of the dairy herd has been vaccinated against a certain sickness, the use of that component is extensive. If a new planting system has been put to use in 10% of the farms, we can say this is a trial.

Each cell will contain the number of families using each component and to what extent. The cells relative to the most significant adaptation will contain a narrative text and not a specific number of families.
Community (or Group) Summary

Purpose
To provide a summary across the community or group of possible outcomes and of how these are achieved by gathering information together from the different modules and tools.

Method
The questions here should be filled in using information from tools 1 and 2 in modules 5 and 6.

1. Pro-poor impacts achieved to date
   1.1. Direct impacts: Major negative, minor negative, none, minor positive, major positive
       Specify:

   1.2. Indirect impacts: Major negative, minor negative, none, minor positive, major positive
       Specify:

2. Likely future achievement of pro-poor impacts:
   2.1. Direct impacts: Major negative, minor negative, none, minor positive, major positive
       Specify:

   2.2. Indirect impacts: Major negative, minor negative, none, minor positive, major positive
       Specify:

3. Constraints limiting planned pro-poor impacts:
   3.1. Adoption?
3.2. Direct pro-poor impacts?

Specify:

3.3. Indirect pro-poor impacts?

Specify:

4. Major factors contributing to success or failure:

Specify:

5. Most significant changes in the community (or group) since project establishment:

5.1. Not a result of project activities:

Specify:

5.2. Associated with or a result of project activities:

Specify:
Purpose
To gather information from different communities, to provide an overview of outcomes and how they are achieved in the PITA or project as a whole

Method
The questions here should be filled in using information from tool 12 on impacts in all the communities (or groups) studied in the PITA or project and this information should be compared with information from tools 1 and 2 in module 1 (PITA impacts anticipated at the time the project was approved).

1. Pro-poor impacts planned / expected at the start of PITA or project:
   1.1. Direct impacts
   1.2. Indirect impacts

2. Pro-poor impacts achieved to date:
   2.1. Direct impacts: Major negative, minor negative, none, minor positive, major positive
   Specify:
   2.2. Indirect impacts: Major negative, minor negative, none, minor positive, major positive
   Specify:

3. Likely future achievement of pro-poor impacts:
   3.1. Direct impacts: Major negative, minor negative, none, minor positive, major positive
   Specify:
3.2. Indirect impacts: Major negative, minor negative, none, minor positive, major positive

Specify:

4. Constraints limiting planned pro-poor impacts:

4.1. Adoption?

Specify:

4.2. Direct pro-poor impacts?

Specify:

4.3. Indirect pro-poor impacts?

Specify:

5. Major factors contributing to success or failure:

Specify:

6. Most significant changes in the communities since project establishment:

6.1. Not as a result of project activities:

Specify:

6.2. Associated with or as a result of project activities:
Identification of Local Participatory Monitoring and Evaluation (PM&E) Systems

Introduction
There are generally local M&E systems that exert some influence over activities of the local community or organization and over external interventions or initiatives. The purpose of identifying a local M&E system through semi-structured interviews is to find out about the culture, traditions and social order. This can provide an idea of the structure and information flows within the local or community organization.

Informants
The ideal is to have representatives from different gender, age and socioeconomic groups. Consider the inclusion of community leaders.

Steps
The interview begins with a narrative of the community or organization and its characteristics. The following questions, or variations of them when needed, can be asked:

1. What actions have we taken as members of a group or organization?
2. Did we do monitoring and evaluation (control) of the actions taken by the group of which we are part?
3. If the last answer is affirmative, how did we do the monitoring? Who were responsible?
4. If the answer was negative: why didn’t we?

Sources of further information


Introduction

The purpose of collective concept building is to unify the understanding of different individuals regarding certain concepts, based on local knowledge and perceptions.

Informants

Participation of representative groups is ideal, taking into account gender, economic and age criteria. Local leaders and executives of the organization must be present. If the groups are too big, work can be done in sub-groups.

Materials

Chart boards, markers, explanatory posters, drawings, exercises and any other materials needed

Method

The exercise is explained once the group is complete. The objective of this activity is to jointly define terms important to the M&E process. A useful order could be:

- Visualize the concept through drawings, dramas, puppets, group dynamics and others. The term must not be specifically defined, but should be implicit in the visualization.

- Identify the term and construct a definition by brainstorming synonyms, local examples, etc.

- Write a consensual definition based on the brainstorming session.
Example of a visualization: ‘Indicators’

**Brainstorming results on ‘Indicators’**

- It is a sign
- It is a guide
- It shows us where we are going
- It tells us where we have to go
- It shows us where we are
- It tells us what is happening
- It indicates if we will be able to get where we want to go
Consensual definition of ‘Indicators’

Indicators are signs that indicate to us if we are on our way to achieving what we want, if we are on the right direction and how far away are we from our goal.

Sources of further information


Envisioning and Objective Setting

Introduction

Indicators are signs that show us if we are on our way to achieving what we want, if we are on the right direction and how far away are we from our goal.

The purpose of this tool is to allow us to know the aspirations and dreams of the group, as well as understand their vision of development.

Informants

It is ideal to have representatives from all sectors, considering gender, age, and economic criteria. Local leaders and administrators of the organization must be present. If the groups are too big, work can be done in sub-groups.

Materials

Chart boards, markers, cards, posters, and any other material needed

Methods

The exercise is explained once the group is complete. The objective of this activity is to visualize the present situation and to describe the desired future situation based on brainstorming. A useful order could be:

- Visualize the present situation and the desired future situation through drawings, dramas, puppets, group dynamics and others. The objectives or visions must be implicit in the visualization.

- Identify the ideal future situation and the objectives by brainstorming synonyms, local examples, etc. The following question can be asked: Where do we want to go as members of this group (organization, union, CIAL, etc.) in x months/years?

- Consolidate the visions by writing a consensual objective based on the brainstorming. This objective must be attainable, clear, easy to understand and measurable. At the same time, it is recommended that this objective is described sequentially according to the period of time it will take to reach. Formulate a general objective which can then be subdivided into specific objectives.
Example of a visualization

PRESENT AND FUTURE SITUATIONS

Low milk production on the farm
Present situation
Where we are now

Our Path

Good milk production in the farm
Future situation
Where we want to go

Brainstorming results

- Improve our production
- Sell our products at a better price
- Have markets where we can sell our products at a better price
- Improve our quality of living
- Have better technological activities to improve products
- Produce high quality products
- Compete with products of other zones, regions and countries producing good quantity and quality products
- Have information about productive technological innovations
- Transform our products to sell at higher prices
- Have more money
- Have more technical assistance and establish contacts with development institutions
**Consensual objective**

With our organization strengthened, improve our production both in quality and quantity, through new technological alternatives; keep up with information about innovations and improve our products; strengthen contacts with institutions to improve marketability of our products; have more money and improve our quality of life.

**Sources of further information**


Identification of Local Indicators

Introduction

The purpose of this tool is to measure changes through time through the beneficiaries’ vision of development indicators. These indicators will allow the beneficiaries to demand accountability based on where they are and where they are going relative to their values and objectives.

Informants

The ideal is to have the participation of different gender, age and socioeconomic groups. Local leaders and executives of the organization must be present. If the groups are too big, work can be done in sub-groups.

Materials

Chart boards, markers, cards, posters, and any others considered necessary

Methods

Explain the exercise once the group is complete. The objective of this activity is to visualize the present situation and to describe the desired future situation based on brainstorming. This can be done after the consensual definition of “indicator” (see tool 15). A useful order could be:

- Do a visualization of the usefulness of indicators through drawings, dramas, puppets, group dynamics and others. This visualization must be based on local knowledge, traditions or information generated during the collective construction of the term “indicator”.

- Identify the indicators for both the general and specific objectives, ensuring that the indicators are not too many and that you have them both for the process and the results. The following questions can be asked: how do we know that we are going to accomplish or that we have accomplished our objective? What are the signs that we are in the right direction to accomplish the objective, or that we have accomplished it?

- Write down the indicators, making sure that they express specific criteria, with the elements of quantity, quality, and time. Write it down simply using local criteria and notions.
Example of a motivation

<table>
<thead>
<tr>
<th>Story of the Leque Leque</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do we know if it is going to be a dry or wet year? Since the time of our grandparents it is known that when the Leque Leque (Andean bird) nests in low areas of the plains, it is going to be a humid year, and it is protecting its nest from the possible flooding of the aquifer. So if at the beginning of the year we see the Leque Leque built its nest in the high zones… what can we conclude?</td>
</tr>
</tbody>
</table>

Whatdoes it indicate to us?

Indicators identification

Specific Objective

Improve the health of our llamas

Indicator

That fewer newborn llamas die of kiwchacururo (onfaloflevitis), because now about 4 out of 10 of our llamas die of kiwcha.

Indicator writing

Reduce the incidence of kiwchacururo in newborn llamas from 40% to 10% by the end of the project.
Introduction
The purpose of this tool is to define the most important activities for completing the objectives. At the same time, it is possible to define roles, responsibilities and other details.

Informants
Ideally, representatives of different gender, age and socioeconomic groups must participate. Local leaders and administrators of the organization must be present. If the groups are too big, work can be done in sub-groups.

Materials
Chart boards, markers, cards, posters, and any others needed.

Methods
Explain the exercise once the group is complete. The aim is to identify and plan activities conducive to the completion of the desired objectives. A useful order could be:

- Identify activities according to local context.
- Identify activities for attaining each objective. The following questions can be asked: How will we reach this objective? What must we do to accomplish this?
- Consolidate the identification of activities by defining roles, responsibilities, schedules and other particulars.

Example of a story, skit, or explanatory graphic as a motivational tool

Fixing the irrigation ditch
Don Juan wants to fix his irrigation ditch before irrigation time begins. But at the same time he has a lot of work pending on his land. He decided to write a list of the things he had to do, when and how to do them. He has to do the following things:

1. Fix his tools
2. Fix the irrigation ditch at the entrance to his land
3. Repair some damaged ditches in his land

So he can get these things done in time, he decided to make a schedule and assign who is responsible for each thing.
Activity identification and information listed
Summary of planned activities for the PITA association of chili and peanut producers of Padilla (APAJIMPA)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Expected Outputs</th>
<th>Dates</th>
<th>Person in charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Training of community promoters of the peanut Project in crop handling technology</td>
<td>• 24 promoters trained</td>
<td>• 19/04/04</td>
<td>• Technical team of peanut project PROINPA</td>
</tr>
<tr>
<td></td>
<td>• 2 training events per planning cycle</td>
<td>• To be defined</td>
<td>• PROINPA technician assigned to the community</td>
</tr>
<tr>
<td>• Training of community partners of the peanut project in crop handling technology</td>
<td>• One training course per month</td>
<td>• Date and number vary according to community</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Number of trained farmers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Technical assistance in the field</td>
<td>• # visits per month*</td>
<td>Each month</td>
<td>• PROINPA technician assigned to the community</td>
</tr>
<tr>
<td></td>
<td>• # farmers visited</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Calcium sulfate Technology validation plots</td>
<td>10 plots established</td>
<td>May June evaluation tests</td>
<td>• Technical team of PROINPA peanut project</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• APAJIMPA director’s team</td>
</tr>
<tr>
<td>Mass media training reinforcement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Radio Programs</td>
<td>• 5 radio programs</td>
<td>• 1 programme a month (starting in April)</td>
<td>• Technical team of PROINPA peanut project</td>
</tr>
<tr>
<td></td>
<td>• # of times each program is repeated</td>
<td></td>
<td>• Technical team of PROINPA peanut project</td>
</tr>
<tr>
<td>• Farmers Bulletins</td>
<td>• 5 bulletins</td>
<td>• 1 bulletin a month</td>
<td>• Technical team of PROINPA peanut project</td>
</tr>
<tr>
<td></td>
<td>• 500 copies of each bulletin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Details</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Preliminary Implementation of sheller and toaster in Padilla</td>
<td>Installed facility</td>
<td>June/04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>depending on time availability</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Technical team of PROINPA peanut project</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lic. Pablo Moya</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact with potential buyers</td>
<td>• Contacts established with at least 3 organizations</td>
<td>Abril/04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• At least 2 meetings between producers and potential buyers</td>
<td>May/04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PROINPA peanut project team</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• APAJIMPA directors’ team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transformation</td>
<td>• Peanut processing line identified</td>
<td>July/04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Idea presented before relevant groups</td>
<td>April/04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Technical team of PROINPA peanut project</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• APAJIMPA director’s team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participatory diagnosis in the organization</td>
<td>Diagnostics done</td>
<td>May/04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Strategic plan written</td>
<td>May/04</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Strategic plan for the peanut project in APAJIMPA, updated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 5 APAJIMPA partners trained</td>
<td>18/04 (list)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Directors APAJIMPA peanut project team</td>
<td>Nov/04 end</td>
<td></td>
</tr>
</tbody>
</table>

* The number of visits for each community varies according to the number of partners participating in the peanut project. For example, the community of la Ciénega will be visited three times since the number of partners in the peanut Project is 47 and the technician must see each farmer at least once.

**Sources of further information**


Monitoring/Evaluation Formats

Introduction
The purpose of these tools is to collect information regarding the activities done, their quality and progress in terms of indicators and products. The activities are easily understandable and farmers use the tools themselves.

The design and type of the form used depends on the kind of activity, indicators and product to be evaluated, as well as the user group. Its complexity will depend directly on the literacy level of the target group.

Informants
Participation from representatives of various groups including those of different gender, age and economic levels is ideal.

Materials
Chart boards and markers

Methods
Explain the exercise once the group is complete. The objective is to design forms based on the activities, listed chronologically. The following information should be included in the forms:

- Beneficiaries, community, zone and/or application area
- Name of local facilitator
- Name of technician in charge
- Product, indicator or activity and evaluation criteria
- Date of evaluation and/or date of completion
- Quality of the event, graded on a fixed scale
- Positive aspects observed
- Negative aspects observed
- Suggestions and recommendations
- Agreements reached after evaluation (if applicable)
When designing the forms, make sure that everyone understands the content and knows the purpose of the forms and how they will be used. In case of low literacy levels use drawings and if there is more than one language spoken, use the local language.

**Examples**

**Evaluation formats used by the Oruro Dairy Association**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Expected outputs</th>
<th>Module/Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community training in forage conservation</td>
<td>3 practical training events in each of the 27 modules of the association</td>
<td>Module 1- Representative for the module: Timoteo Cheque</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Module 2- Representative for the module: Juan Terceros</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Module 3- Representative for the module: Facundo Perez</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Module n- Representative for the module:</td>
</tr>
</tbody>
</table>

With this format the dairy farmers would monitor the number of training courses in each dairy module, and grade the quality of the events through happy and sad faces.

**Evaluation formats for training in the Association of fruit cultivators of Moro Moro (AFRUMO)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Did you learn the topic?</th>
<th>Why?</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>20/05/04</td>
<td>Course on grafting fruit trees</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Agreements
Training evaluation format in the association of chili and peanut producers of Padilla (APAJIMPA)

Community ___________________________
Activity _______________________________ Date: ___________________
Person in charge ______________________
Indicator: ______________________________
Number of participants: Women: ________ Men: ______________

<table>
<thead>
<tr>
<th>Why?</th>
<th>Suggestions/ Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>😞</td>
<td></td>
</tr>
<tr>
<td>😞</td>
<td></td>
</tr>
<tr>
<td>😊</td>
<td></td>
</tr>
</tbody>
</table>

Total

Monitoring and Evaluation of the handling of fruit trees by the AFRUMO producers

Places visited: _____________________ Date ___________________
Farmers: __________________________
Technician and promoter in charge: ___________________________
Indicators: __________________________________________________

<table>
<thead>
<tr>
<th>Good</th>
<th>Average</th>
<th>Bad</th>
<th>Positive aspects observed</th>
<th>Negative aspects observed</th>
<th>Suggestions/ Recommendations</th>
</tr>
</thead>
</table>
Monitoring and Evaluation of the handling of fruit trees by the AFRUMO producers

Date __________________________

Technician and promoter in charge ___________________________________________

Indicators: Degree of adoption and application of proper technological handling ____________________________

Person in charge of collecting the information _________________________________________________________

<table>
<thead>
<tr>
<th>Visit No.</th>
<th>Farmers visited</th>
<th>G</th>
<th>A</th>
<th>B</th>
<th>Suggestions/Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total

These formats are used for monitoring and evaluation of activities under direct responsibility of the technicians or of the farmers themselves.

Sources of further information


Selection of the PM&E Committee

Introduction

PM&E activities require time and organization for their completion, therefore a specific group of people should be assigned to establish the system. These members must be democratically chosen by the group. This committee should ideally come from different groups, considering gender and age criteria. Committee selection and the delegation of responsibilities are a group decision.

Informants

Informants must ideally come from different gender, age and socioeconomic groups. Local leaders and executives of the organization must be present to confirm whether a new committee has been chosen or responsibilities are assigned to existing groups or members of the organization.

The results of the construction of the PM&E system (objectives, identified local indicators, activities and formats) are presented, to emphasize the need to have a group in charge of collecting information and filling out the forms. The information is presented to all participants to facilitate decision-making.

It is recommended that the committee be formed by three or four people, but in case of a big group, community delegates may be chosen.

Sources of further information


Introduction

Monitoring and evaluation forms are filled in during events specifically scheduled for this purpose. This allows collection of information on the quality and progress of the activities. The activities are easily understandable and farmers use the tools themselves.

Informants

It is ideal to have representatives from various gender, age and socioeconomic groups. Local leaders should be advised not to influence the group decision on the criteria to be used.

Materials

Chart boards, markers and, if needed, chips or voting ballots or paper and pens

Methods

- Explain the exercise to the individual or the group. The objective of this activity is to fill in the forms based on the perceptions on the activities or the process. Once the activity has been completed or the technological innovation applied, schedule a meeting for filling in the forms.

- It is important that farmer representatives, preferably members of the PM&E committee, be put in charge of the facilitation.

Examples

Evaluation formats used by the Dairy association of Oruro

<table>
<thead>
<tr>
<th>Activity</th>
<th>Expected outputs</th>
<th>Module/Name</th>
<th>Courses and Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community training in forage conservation</td>
<td>3 practical training events in each of the 27 modules of the association</td>
<td>Module 1 - Representative for the module: Timoteo Choque</td>
<td>☹ ☺ ☺</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Module 2 - Representative for the module: Juan Terceros</td>
<td>☹ ☹ ☺</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Module 3 - Representative for the module: Facundo Perez</td>
<td>☹ ☺ ☺</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Module n - Representative for the module:</td>
<td>☹ ☺ ☺</td>
</tr>
</tbody>
</table>

With this format the dairy farmers would monitor the number of training courses in each dairy module and grade the quality of the events through happy and sad faces.
### Evaluation formats for training in the Association of fruit cultivators of Moro Moro (AFRUMO)

**Place:** La higuera  
**Promoters name:** Sixto Soto  
**Technician in charge:** Jorge Vargas  

**Process indicator:** Had the participants learned the topic by the end of the workshop?

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Did you learn the topic?</th>
<th>Why?</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>20/05/04</td>
<td>Course on grafting fruit trees</td>
<td>XXXX XXXX</td>
<td>+ I learned to graft</td>
<td>Bring more grafting knives so everyone can practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X</td>
<td>- There weren’t enough grafting knives to practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>XXXX</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>XXXX</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Agreements**
A new course will be taught in two weeks so all can learn to graft. The technician will bring enough knives so everyone can practice.

### Evaluation formats for training in the association of chili and peanut producers of Padilla (APAJIMPA)

**Community:** Padilla  
**Activity:** Organizational strengthening workshop  
**Date:** 17/05/04

**Number of participants:** 24  
**Women:** 3  
**Men:** 21

<table>
<thead>
<tr>
<th>Why?</th>
<th>Suggestions/Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>×</td>
<td>Explain in more detail what was done with the DOFA cards</td>
</tr>
<tr>
<td>+ We learned a new planning methodology</td>
<td></td>
</tr>
<tr>
<td>- I didn’t understand well</td>
<td>Have us participate more</td>
</tr>
<tr>
<td>- The DOFA procedure was</td>
<td>Use simpler terms</td>
</tr>
<tr>
<td>too fast</td>
<td></td>
</tr>
<tr>
<td>- It wasn’t very participatory</td>
<td></td>
</tr>
</tbody>
</table>
Monitoring and Evaluation of the handling of fruit trees by the AFRUMO producers

Places visited: **La Higuera community**
Farmers: José Pérez, Felipe Álvarez, Juan García, Félix Choque, Hugo Pinto
Technician and promoter in charge: Jorge Vargas and Israel Pardo
Indicators: **Degree of following and application of proper technological handling**

<table>
<thead>
<tr>
<th>Good</th>
<th>Average</th>
<th>Bad</th>
<th>Positive aspects observed</th>
<th>Negative aspects observed</th>
<th>Suggestions/Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>xxxxx</td>
<td>xxxxxx</td>
<td>xxx</td>
<td>All did the winter phytosanitary treatment properly</td>
<td>Hugo Pinto did not trim in time</td>
<td>Trim in June-July, the next trimming season</td>
</tr>
<tr>
<td>xxx</td>
<td></td>
<td></td>
<td></td>
<td>Felix Choque did not use the proper tools (saws) for trimming</td>
<td>Use curved saws, properly sharpened</td>
</tr>
<tr>
<td>xxx</td>
<td></td>
<td></td>
<td></td>
<td>José Perez did not apply Dormex as we were taught</td>
<td>Apply Dormex ten days after deep irrigation</td>
</tr>
</tbody>
</table>

Monitoring and Evaluation of the handling of fruit trees by the AFRUMO producers

Date ______________________________
Technician and promoter in charge: ______________________________________________
Indicators: **Degree of following and application of proper technological handling**
Person in charge of collecting the information: _____________________________________

<table>
<thead>
<tr>
<th>Visit No.</th>
<th>Farmers visited</th>
<th>G</th>
<th>A</th>
<th>B</th>
<th>Suggestions/Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>José Pérez, Felipe Álvarez, Juan García, Félix Choque, Hugo Pinto</td>
<td>5</td>
<td>12</td>
<td>13</td>
<td>Trim in June-July, the next trimming season</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Use curved saws, properly sharpened</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Apply Dormex ten days after deep irrigation</td>
</tr>
<tr>
<td>2</td>
<td>Álvaro Pérez, María Morales Ángel Alba, Gustavo Núñez,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

83
M&E is not only done to activities that are the responsibility of the service provider, but it also contributes in the proper development of activities that producers are responsible for. In this case their work can be verified and evaluated by the farmers themselves, and can be done with the help of the technician from the service provider. This monitoring system, together with technical assistance and training in weak aspects detected during visits to the plots contributes greatly to the adoption of technological innovation by producers.

**Sources of further information**


Use of the PM&E Information

Introduction

Information collected through the process of PM&E should remain not only with the people who facilitate its collection but must be shared with the actors involved in the innovation process. For this purpose, channels of communication must be established so the various partners can act on the information in a constant cycle of *experience-action-reflection*. This tool details a series of suggested steps for sharing information.

Informants

Participation of representatives from different gender, age and socioeconomic groups is important. Local leaders and executives of the organization must be present.

Steps

There are a number of steps in sharing the information collected. The first step is at the group level, with the organization that collected the information and the facilitation of local representatives or the PM&E committee. As an introduction, the information is summarized. Then an exchange of criteria for agreements or needed adjustments (when necessary) should be encouraged. Next, the results are presented to the board of directors of the organization. The same process is followed to generate agreements or adjustments when needed. Then another presentation is made to the service provider, and finally to the donors or potential donors of development initiatives. At this level the information is presented briefly, as an introduction, along with the process of construction of the PM&E system. Then the agreements or adjustment measures developed are also presented. Finally, requests, demands or suggestions based on the information are presented to the donor or potential donor.

Sources of further information
