ValueLinks Module 11

Monitoring and Managing Impact

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ValueLinks **Module 11**

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What this Module is about

Public chain promotion projects use tax funds to create new jobs, increase the income of poor producers and stimulate further economic growth. Because their expected development impact is the only justification for spending tax money, value chain projects have to make sure they achieve these results to the greatest extent possible. Impact monitoring is the management tool which makes sure that a project stays on course.

Given the dynamic evolution of markets and of the overall business environment, the activities needed to facilitate chain upgrading have to be continuously assessed. Impact monitoring asks whether the public investment is still likely to yield the expected benefit. Typical questions include: Are the promotion activities used and supported by the value chain actors? Is upgrading actually taking place? Is the upgrading vision still realistic, or should the money better be invested in another value chain? The answers to these questions guide project implementation. The main function is to facilitate the upgrading effort. Therefore, impact monitoring is not a function at project end; rather, it should start at the beginning of any value chain project – i.e. when the product and chain to be promoted are selected.

At the same time, projects have to account for the money entrusted to them. Impact monitoring generates the necessary data for reports and allows a case to be constructed for continuing (or stopping) public investment in chain development. It also provides the data for final project evaluations.

This module presents the main principles of monitoring in value chain promotion. It concludes the cycle of modules addressing the tasks of facilitators, so that from selecting a value chain for promotion (Module 1) to facilitating the process (Module 4), we finally arrive at results monitoring. An important step in creating the basis for impact monitoring is the formulation of the upgrading vision and strategy (see Module 3). In fact, the upgrading strategy implicitly contains the major impact hypotheses and provides the core element of the chain promotion monitoring system.

Whether or not the value chain actors are able to realise their market potential depends to a large extent on the general business conditions in a particular value chain as well as in the economy as a whole. Monitoring also has to cover the business environment to provide guidance on the possibility of achieving significant results with the least interventions.

Tasks in monitoring the impact of value chain promotion projects

Monitoring the impact of value chain promotion projects includes a whole series of tasks. In the following, the steps in an impact monitoring system are structured into three major tasks.

- (Task 11.1) Formulating impact hypotheses of value chain promotion
- (Task 11.2) Verifying the impact hypotheses
- (Task 11.3) Managing for development results

The first two tasks are to formulate, operationalize and assess an impact model of the value chain promotion project. They include the methodological issues of how to create a picture of the ongoing process of chain promotion and upgrading. The third section concentrates on the impact monitoring as a management task. Monitoring information is used to serve the very purpose of a project – to enhance the prospects for achieving impact.

Basic considerations on monitoring chain promotion impact

Monitoring is a management function that can refer to different tasks of project management. This module concentrates on impact and outcome monitoring. The approach can be classified as a tool for ´results-based management´ (RBM), a concept that focuses on the output, outcome and achievements of a project rather than the inputs and activities. Hence, financial and activity monitoring are left aside in the following.

The point of departure in designing *any* impact monitoring system is the utilization of the information it generates. Generally, impact monitoring performs two functions: One is project steering which needs a management information system to prepare decisions. Monitoring data guide project implementation and allow adjusting the strategy if necessary. The second function is to account for the use of funds vis-a-vis the funding institution by showing to what extent the project is achieving its objectives and contributes to the Millenium Development Goals (MDG), especiall the MDG 1 and 2 that are relevant for chain promotion. The monitoring information is used to prepare reports and provide the foundation for project evaluations.

Box 11.1 summarizes the main elements of a typical impact monitoring system.

Box 11.1 Template: Generic elements of an impact monitoring system

The impact monitoring system of GTZ includes six steps:

1. Defininig system boundaries and impact model / results framework
2. Clarifying interests and expectations concerning the monitoring system
3. Determining important fields of observation
4. Formulating indicators and operationalising indicators
5. Data collection and interpretation of data
6. Presentation of results, reporting und use of data

Source: GTZ

The impact monitoring system constitutes a management cycle that start with the planned results (planned output and expected outcomes and impact). Planned results are systematized in a “results framework” or “impact model”. The latter term is used in the following. Monitoring compares planned results with actual results. Depending on the assessment, managers get back to reviewing the initial targets. After completing each cycle is starts over again, either at step 1 or 2 by revising the impact model, expectations and indicators, or at step 5 by entering a new round of (annual) data collection. This model is fairly general. It applies to *any* kind of development project.

The following sections aim at substantiating the general monitoring system by applying it to the *ValueLinks* framework and know-how. The basic principles of impact monitoring are not specific to value chain promotion projects and will not be repeated here. What makes a monitoring system specific is the formulation of the impact model of a particular project, the indicators and specific data sources.

(Task 11.1)
Formulating impact hypotheses of value chain promotion

Impact monitoring starts by anticipating the economic and social change a value chain promotion project is supposed to generate. In our case, the anticipated change is pro-poor growth: One dimension of pro-poor growth is the increase in the total value generated by the value chain, i.e. the turnover at the final sales point (sales prices * final sales volume). The other is the creation of additional jobs and income for poor people. As has been discussed earlier (in *ValueLinks* module 1), at least part of the additional value added should stay with poor people, i.e. the producers and/or employees being integrated into the chain. Therefore, the public promotion of value chains does not pursue just any kind of growth but only growth in those value chains where poor people have a chance to participate. Under the condition that poor people capture part of the value added, increased value addition is the decisive change sought after.

Impact monitoring has the task to verify whether that change actually happens and whether the activities of a support programme contribute to it. In order to achieve this task, project managers have to understand the process that eventually leads to value addition and higher income of the poor. Conventionally, results are structured into a sequence proceeding from ´project outputs´ to ´outcome´ and on to direct and indirect ´impacts´. The sequence entails causal linkages (´if-then relationships´).

Applying this terminology to value chain promotion delivers a very general impact model as shown in box 11.2. The sequence also includes an intermediary step (´use of output´) that is used in the monitoring format of GTZ. The impact model should be read from the bottom up: Facilitation activities (project output) are supposed to induce a change in the behaviour of chain actors (use of output), who, in turn, work to improve the functions of the chain (technology and business operations), the capacity and organization of chain operators, their relations, and the final market outlets. This outcome is tantamount to a greater competitiveness of the value chain as a whole and will translate into an increased value addition and higher overall income – the final impact. Depending on the number of poor and their participation in the value chain, part of the additional income will go to the poor. The income increase is a contribution to poverty alleviation. At the start, this logic is entirely hypothetical.

Box 11.2 Template: Levels of an impact model for value chain promotion

Stages	***Levels of impact in VC promotion***
Indirect impact	• Poverty alleviation
Impact	• additional income for poor operators and employees • increased value added
Outcome	• greater competitiveness of the VC • upgrading of technology, linkages, horizontal cooperation, standards, service arrangements etc. • more producers integrated
Use of Output	• Chain operators (micro), chain supporters (meso), and policy makers (macro) take action to improve the VC
Output	• Facilitation and support activities of VC promotion projects

Source: own concept

The generic impact model in box 11.2 summarizes the major steps explaining how interventions may lead to pro-poor growth in principle. For the purpose of practical monitoring this model has to be applied and adjusted to fit the particular case of the value chain in question. Every case of value chain promotion requires a particular impact model.

The point of departure formulating the impact model for any concrete case of value chain promotion is the vision and upgrading strategy agreed earlier in the project (see module 3).

Ideally, the upgrading strategy is derived from a vision of chain development and contains implicit assumptions about the expected impact. Therefore, constructing an impact model uses the upgrading strategy as a reference. In fact, impact monitoring is closely related to visioning and strategy building. It can be understood as updating the information that provided the basis for the formulation of the strategy in the first place.

Project managers can build the impact model by reversing the upgrading strategy. While the forumulation of an upgrading strategy starts from the vision to arrive at specific aspects of the value chain to be transformed, e.g. technical improvements or new market outlets, the impact model follows the opposite logic. Project outputs are supposed to lead to technical improvements that in turn result in reduced cost or improved products. In formulating the impact model, the implicit assumptions of the upgrading strategy have to be made explicit. This is a relatively easy task provided chain actors have a clear vision of the future. If this is not the case, establishing an impact model can help to clarify and inform the upgrading strategy. The following box provides an idea of how to operationalize the generic impact model. The first task is to identify the parameters describing the expected change. Typical parameters are given in the third column of box 11.3.

A second task may be to differentiate the main stages into intermediate steps, i.e. two or three impact or outcome levels. This helps to describe the advancement more precisely. Conventionally, the project objective is to generate impact and not just outcomes. Differentiating these levels is a way of precisely determining the level at which project objectives shall be located. In fact, there is a certain amount of flexibility in defining a particular level as either outcome or impact. Box 11.4 shows that projects objectives vary with regard to what is specified as the impact (=objective) level.

Box 11.3 Template: Impact model for value chain promotion – parameters of change

Stages	***Levels of impact in VC promotion***	***Key parameters of change***
Indirect impact	• Poverty alleviation	• Wealth / poverty status of producers and employees and their families • Economic & social conditions in the environment
Impact	• Additional income for poor operators and employees	• Number of new jobs in the value chain • Number of new jobs of external service providers • Income of poor operators
Impact / Outcome 2	• Increased value added	• Value chain turnover (prices, volume) in previously existing market channels and in new market channels / outlets
Impact / Outcome 1	• Realization of chain upgrading solutions	• Productivity parameters (production per ha, per labour day, unit cost) • Product quality / product innovation • Production capacity per day or per year
		• Types and number of vertical business linkages • Use of improved production technology • Existence of a standard regulating product quality and actual compliance with the standard • Types and numbers of operators integrated into the value chain
Use of Output	• Chain actors take action to improve the VC	• Behaviour change of chain actors (investment rates, participation in events, self organization) • Services provided and received • Funding of services • Policy formulation
Output	• Facilitation and support activities of value chain promotion projects	Activities and support services such as • Information and studies, facilitation of events • Investment aid, PPP

Source: own concept

Another way of differentiating the impact model further is by splitting outputs, use of outputs and some of the outcomes according to the fields of action (e.g. services or business linkages) or according to partners (e.g. at micro or meso levels). A generic impact model that follows this logic is presented in *ValueLinks* module 3 (see box 3.14). A concrete example can be found in box 11.6.

It is important to note that the parameters in box 11.3 are purely illustrative in nature. The major strategic orientations of chain upgrading such as product quality improvement or cost reduction do not provide blueprints of change. In reality, the pathways towards growth vary considerably. Hence, for every product and final market, the technology, services, volume of investment and time horizon need to be specified further. Do not copy the templates but construct a specific model for every value chain project at stake!

The following box 11.4 provides an overview of the objective level of 16 selected projects supported by GTZ in the year 2007, each promoting several value chains. The left column presents keywords that appear in the formulation of objectives and objective indicators. They have been clustered into groups of similar concepts. The keyword that represents the highest level of expected impact is used to classify development programmes in the second column. It can be seen that the typical objective level corresponds to increased income, higher profits of small and medium enterprises and farms, and the creation of additional employment.

Box 11.4 Cases: Objective levels in chain promotion projects supported by GTZ

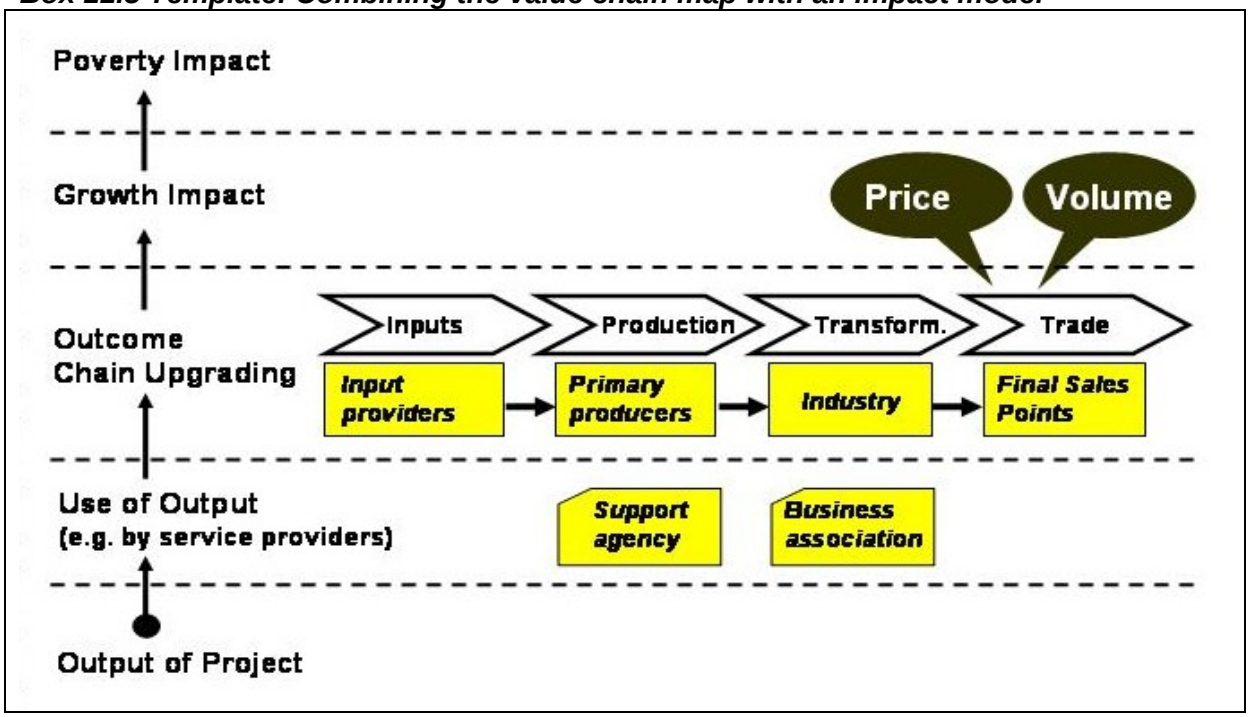
Keywords used in the formulation of objectives and objective indicators	*number of programmes targeting the respective impact level*
• reduced share of poor households	1
• higher income, higher profit of SME, additional employment, improved food subsistence level	9
• higher turnover, trade and export volume, • higher production output, greater market shares	4
• better productivity, lower cost of production, reduced energy consumption • additional investment • better management qualification • improved technology and production processes • existence of product standards • Improved sector policies and support initiatives	1
• better access to improved services • functioning private service market • better services of chambers and business organizations • vocational training offered	1

Source: own compilation

The outcome and impact levels shown in box 11.3 can be related to the value chain map and analyses. Box 11.5 shows the relationship between the value chain and the impact model in graphical form. Some parameters of change can be directly derived from value chain mapping. Hence, value chain analyses provide a good basis for impact monitoring.

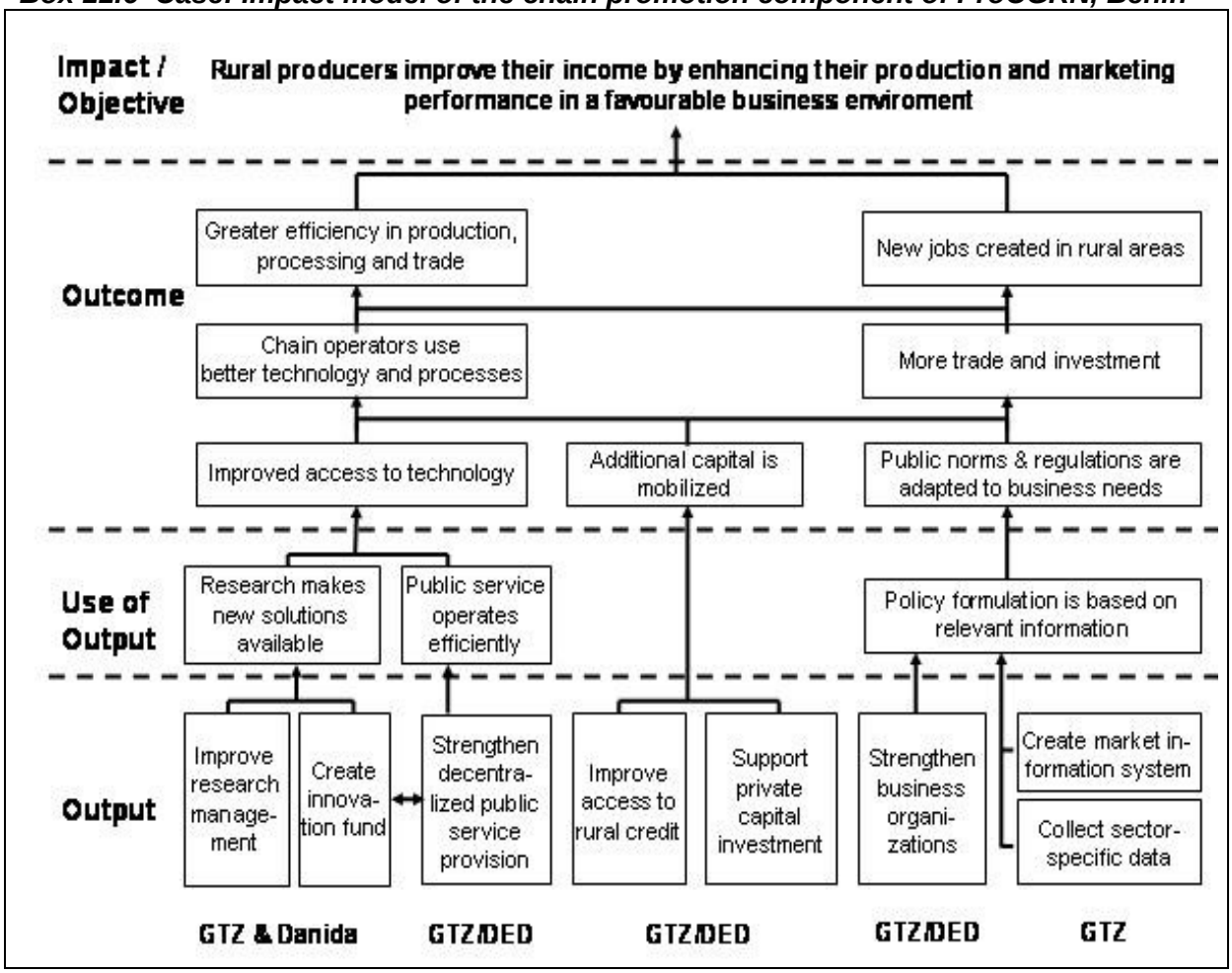
The impact model of each value chain promotion project has to be constructed anew. The following box 11.6 presents the example of an impact model designed for the second component of the “Programme for the Protection and Management of Natural Resources” (ProCGRN) in Bénin. The component has the title “agricultural sector policy and agricultural value chains“. It pursues the objective to increase the productivity and value added of selected agricultural value chains (rice and cashew nuts).

Box 11.5 Template: Combining the value chain map with an impact model



Source: own concept

Box 11.6 Case: Impact model of the chain promotion component of ProCGRN, Bénin



Source: adapted from ProCGRN, Bénin

The impact model of the component is reproduced in box 11.6 in simplified form. The complete version includes two additional outputs which also contribute to the impact. One concerns community investment in land and water management supported by the development bank KfW, the other the regulation of property rights in land use. The impact model shows how different support agencies contribute to the achievement of objectives in parallel.

The change in a value chain can only be regarded as impact, if we assume causal linkages between the different levels of the impact model. Assessing the change at each level is not enough. Impact monitoring also has to produce plausible arguments why and how the change has happened. This is not only an issue in reporting. Project managers have to conduct a chain promotion project with a strategic perspective always keeping the expected final impact in mind. As long as the upgrading goes on, the causal linkages of the impact model remain hypothetical. It is of great importance to make them transparent and to check on impact hypotheses regularly. Monitoring does not only include observing indicators, it also means reviewing the upgrading strategy - and thus the project strategy. This is done by verifying the impact hypotheses. If necessary, impact hypotheses have to be revised as a consequence.

Box 11.7 presents generic impact hypotheses for chain promotion projects that can be used as a starting point for making the project (and upgrading) strategy transparent. The sequence of impact hypotheses tells the anticipated story of the project. It is recommended to take this step consciously and carefully making sure the story is realistic.

Box 11.7 Template: Formulating impact hypotheses

Generic impact hypotheses

Impact hypothesis 1 (Causal link between project output and use of output)
Support activities and interventions of the chain promotion project are actually taken up by value chain actors.

Impact hypothesis 2 (Causal link between use of outputs and upgrading outcome)
The partners and clients of the chain promotion project invest into value chain upgrading, both individually and as a business community achieving improvements in the different fields of chain upgrading.

Impact hypothesis 3 (Causal link between upgrading and value addition / growth)
The upgrading translates into an improvement of value chain competitiveness and leads to greater value addition and a higher overall income of chain operators.

Impact hypothesis 4 (Causal link between between growth and the income of the poor)
Poor producers and employees get a share of the increased overall income and thus become able to move beyond the poverty line.

Source: own concept

While the link between project output and the use of output by partners in the value chain is comparatively strong, the subsequent impact hypotheses are subject to the influence of an increasing number of other factors. Hence, impact hypotheses entail assumptions. It is useful to make the important assumptions transparent, too.

(Task 11.2) Verifying impact hypotheses

Impact monitoring means verifying the impact hypotheses. This includes recognising and measuring change at each level of the impact model and attributing the change to the prior activities of the chain promotion project. Change becomes impact only if it can be attributed to the inital activities of a chain promotion project.

Monitoring and evaluating the impact of value chain promotion faces the same challenges as projects in other fields of social and economic development. One is the dynamics of economic development: It is important to note that neither the chain actors nor any support projects can fully control the evolution of the value chain: Consumer demand changes, new competitors emerge and the conditions of production in agriculture vary from year to year. Because of the dynamic environment it is extremely difficult to distinguish the impact generated by a support project from the change resulting from market forces and the business environment. The higher the level of the impact model the more intervening factors have to be taken into account.

The second challenge is attribution: As the promotion of a particular value chain does not exclude any particular enterprises, it is practically impossible to single out a control group that would not have benefitted from external support action. Chain operators invest at their own risk and hence bear the responsibility for chain upgrading. To this adds the fact that often several agencies support chain development in parallel. Which of them is the most influential is hard to judge.

Given these fundamental constraints to measuring impact, the impact hypotheses should be treated as a flexible guideline. While it is absolutely necessary to establish the project logic managers should be prepared to change the logic over time if necessary. The task is not to produce hard evidence that the chain promotion project is fully responsible for the progress made. Rather, monitoring means observing the ongoing change, delivering information to all chain actors and drawing conclusions for further upgrading. Even if the achievements can not be fully attributed to the promotion project, impact monitoring shows the role of external facilitators. The very fact that external facilitators monitor change, interact with chain operators and adjust their interventions accordingly demonstrates their impact orientation – and enhances their credibility.

In order to verify the different impact hypotheses, they have to be operationalized by defining fields of observation and formulating measurable indicators. For each level, two aspects should be considered. One is the observation of the ongoing change, the answer to the question whether and to what extent change is actually taking place. The second aspect refers to attribution: Can the evolution of the value chain at each level be traced back to earlier changes and, ultimately, to the external support activities? Interpreting the ongoing change as impact is only possible using and verifying the impact hypotheses as well.

The following boxes present generic criteria for the verification of impact hypotheses listed above. They refer to both the observation of change and the attribution question. The criteria are not formulated as complete indicators because the specific indicators differ from value chain to value chain. The major source of information on the criteria is the value chain analysis and the value chain map in particular. In most cases, the value chain analyses provide a baseline for monitoring as well. Even a relatively simple value chain map shows the functions performed, the types of operators and their relations, and the final sales points. Thus, a straightforward possibility of conducting impact monitoring is updating the value chain map.

The detailed specifications of indicators and the respective qualitative and quantitative measures have to be formulated anew in each case – based on the data of the value chain analysis. A few hints on how to formulate indicators follow in section 11.3, below.

Impact hypothesis 1: Usefulness of support activities and interventions

Monitoring starts at the lowest level of the impact model. Unless the outputs of the project – support activities and interventions – are actually used by partners and clients, none of the chain development can eventually be attributed to the project.

Monitoring the impact hypothesis 1 refers to the use that the partners of a chain promotion project (companies, associations and/or meso-level agencies) make of the facilitation and support activities. The fact that chain actors actively pursue upgrading objectives collaborating with external facilitators is an important achievement in itself. It shows that the development project operates demand driven and performs its support functions well. As project managers have a high influence on this first level of results, the monitoring information is directly useful for conducting project activities.

Whether or not operators and support service providers engage in upgrading may be verified by talking to partners at the occasion of meetings and stakeholder workshops. Another possibility is to draw on reports of joint activities, and the own reports of service providers and enterprises.

Box 11.8 Tool: Monitoring the use of project services and interventions

Criteria for observing the ongoing change:

- Operators, service providers and meso-level organizations engage in upgrading activities
- Chain actors collaborate with the chain promotion project in realizing upgrading activities

Criteria for attributing change to chain promotion projects

- Client satisfaction with support services and interventions
- Partners make own efforts to initiate collaboration with the chain promotion project and actively ask for support

Source: own concept

To what extent can the investment behaviour of operators and service providers be attributed to previous interventions of a chain promotion project? This question may be answered by obtaining feed back from participants at stakeholder workshops and meetings organized by the project. The keyword is “client satisfaction” with project services.

Box 11.9 Case: Monitoring use of output and impact in the PEC Program, Thailand

Project objectives and impact model

The Thai-German Program for Enterprise Competitiveness (PEC) supports 7 sub-sectors or value chains (longan fruits, vegetables, Saa paper products, shrimps for export, palmoil, tapioca products and bioplastics). In each value chain the project strategy envisages targeted ´competitiveness enhancing interventions´ (= output) aimed at influencing either the demand, supply or enabling environment of service markets for small and medium enterprises (SME). The output is used by the service providers (public agencies, business membership organi-zations or private service enterprises). It results in improved service arrangements and better access of SME to services. Service providers are expected to continue service for the target group in a sustainable way once the assistance is finished (= outcome). The improved access to services is supposed to result in an enhanced competitiveness of the SME (= direct impact) that will finally lead to greater employment and incomes (= indirect impact).

Monitoring the utility of interventions and their impact on SME competitiveness

The monitoring system is based on the follow-up of the ´competitiveness enhancing interventions´ of which there are around 40-50 in total (up to 14 per value chain). For each intervention, an “intervention report” is prepared using the following monitoring tools:
- a survey to assess changes in the service market: Questions include whether SMEs buying more services than before, whether they are more aware of the services, and whether more services are available now, etc).

- collection of baseline data from the intended target group (SME). This is done through small stratified sample surveys with no more than 30 respondents. Questions include, e.g. whether the service had an impact on your business, whether you would use it again etc.).
- follow up surveys of SME target groups to measure the changes or lack of changes in competitiveness and service markets. The programme measures competitiveness in terms of market performance, productivity, innovation and environmental sustainability of enterprises in the respective sector.

The individual intervention reports are aggregated into ´sub-sector strategy progress reports´ which are used to account to funding agencies and political partners.

Source: Thai-German Programme for Enterprise Competitiveness, Thailand

Impact hypothesis 2: Chain upgrading

The easiest way verifying whether upgrading is actually taking place is by observing the structural change in the value chain. Many changes are “discrete”, that is one-time structural improvements. For example, the introduction of a new product, the opening of a new marketing outlet or the founding of a producer association are all changes that can be easily observed. Only one or few observation data are sufficient to verify whether these changes have actually occurred. Similar elements of chain upgrading include the introduction of standards, a major capital investment or the creation of service enterprises.

Other changes such as a gradual product quality improvement, improved productivity parameters or reduced production cost have to be described in more detail but may still be easy to register by asking typical enterprises who participate in the upgrading effort. In small business communities it should not be too difficult to identify such farms and enterprises.

Box 11.10 Tool: Monitoring chain upgrading

Criteria for observing discrete change

- New outlets for the products exist (e.g. export).
- A new or different technology is in use (in lead companies).
- New or improved products are sold to final costumers.
- Product standard has been agreed upon and is being implemented.
- A new producer association or BMO has been founded.

Criteria for observing gradual change (time series)

- Change in productivity parameters or cost of production in typical enterprises
- Number of producers / enterprises using critical inputs and services
- Percentage of produce sold in different channels of the value chain

Criteria for attributing the change to chain promotion projects

- The upgrading is in line with a strategy that has been agreed upon in the framework of the project.
- The improvements have been realized by firms and associations who either cooperate with the chain promotion project directly, or receive support services from project partners.

Source: own concept

The sources of information to monitor chain upgrading basically are the same as in the initial value chain analyses. Essentially, monitoring is a continuation of previous chain studies. The better the value chain is organized, the easier information can be generated by talking to representative bodies - business associations, meso-level support organizations, core groups and stakeholder meetings.

Observing improvements in large and weakly organized (mostly agricultural) chains with many operators is more challenging. In theory, the technological change and business behaviour of a large number of farmers and small enterprises could be captured by a baseline and follow-up surveys. However, surveys are costly and survey data do not tell the

whole story unless they are combined with an analysis of the structural change in the value chain. A less demanding and more elegant approach to assess the upgrading in large chains relies on indirect information obtained from chain actors holding a critical position in the value chain. These may be

- important chain operators at bottlenecks (such as important producers associations, processing companies, exporters and big traders) who are handling a large share of the product flow,
- providers of critical equipment or improved inputs selling to a large number of operators
- providers of critical services, e.g. technical advice, and
- financial institutions serving a large number of clients.

Box 11.11 presents an example, in which producer associations included in PPP agreements realize upgrading activities and monitor the progress themselves.

Box 11.11 Case: Monitoring upgrading outcome at PAC, Ecuador

Project objectives and impact model

The PAC programme has the objective to increase the income of poor cocoa and coffee farmers in Ecuador. This presupposes higher product prices and a bigger volume of coffee and cocoa exports (impact). In order to achieve this, the following variables of both the cocoa and the coffee value chains have to be improved: a) production costs; b) product quality and certification; c) production volume; d) new products and e) new markets (outcome).

Indicators operationalizing upgrading outcome

The variables are operationalized by specific indicators that allow measuring advances, based on initial baseline values documented in a database. These are examples of indicators for the five variables:

a) Cost reduction: “Increase of the average productivity per hectare of cocoa from 400 to 600 pounds”
b) Production volume: “Increase of the organic coffee plantation area from 500 to 750 hectares”
c) Quality: “Certified cocoa farms (organic, fair-trade & rainforest-alliance) up from 2000 to 3000”
d) New products: “Introduction of at least 5 new coffee products into special markets”
e) New markets: “At least 5 new commercial agreements to enter special markets”

Monitoring the indicators by collaborating with associations and PPP partners

The indicators are measured in the context of cooperation agreements with PPP partners who implement the upgrading strategy in coordination with GTZ. As upgrading projects are generally co-financed by GTZ, indicators are integrated into the project agreements with the ´local executors´, often associations. Usually they have to be more detailed specifying targets to be achieved. Examples of an agreement with a producer assocation are:

Production volume: “Pruning practices allow the rehabilitation of at least 100 hectares of cocoa and also an increase of the production volume of the association of small producers XY from 75 metric tons (2006) to 150 metric tons (2007). Verification instrument: Pruning reports; purchase register of the main gathering center.”

New products and markets: “Through the implementation of a new marketing strategy, the association of small producers XY has established a new commercial agreement with duration of at least one year and the launch of a new product to the organic coffees market. Initial situation: 1 effective commercial agreement, 2 products on the market, none of them organic. Verification instrument: Implementation report of the commercial strategy, signed commercial agreement, pictures of the new products”

During project execution the cooperation partners report periodically – for example every 6 months – on project progress according to the indicators. Further payments are made only, if reports fulfill the requirements and deliver the data agreed.

Source: GTZ PAC Project, Ecuador

The decisive point is to recognize the systemic nature of value chain upgrading. The different aspects of upgrading are interlinked. For example, technical improvements can only be realized if new and better services are used. Improved quality and new products have to show up at market outlets at some stage.

Box 11.12 Case: Monitoring selected agribusiness subsector parameters in Peru

Project objectives

In its second component, the PDRS programme pursues the objective to integrate small farmers into national and export oriented value chains. To raise the export volume not only productivity and product quality have to improve, but new export channels should be opened and the portfolio of exportable products should increase.

Monitoring value chain upgrading

Statistical figures show that the export volume of products supported by the programme has multiplied in the period 2003-2005, for example in organic coffee from the San Martin region which increased from 66 tons in 2003 to 384 tons in 2005 or beans from Piura (from 9 tons to 234 tons). The increasing percentage of exports shows in subsector parameters, e.g.
- the increase in the share of total production commercialized outside the region (up by 8,3%)
- the increase in number of export contracts with producer associations (from 2 to 8)
- the reduction of the rejection rates for export goods at assembly points (by 40%)

Source: GTZ Peru

The upgrading of a value chain is subject to important external factors, especially the development of market demand and trade policy. Therefore, another important task of impact monitoring is verifying the initial assumptions and preconditions for upgrading to actually produce the expected economic growth. Hence, project management also has to observe the economic and political environment of the value chain promotion project.

Impact hypothesis 3: Economic Growth

Ultimately, the upgrading should result in greater value added. There is one single parameter measuring sustainable growth, i.e. the total value added or value chain turnover, defined as the sales price of the final product multiplied by number of units sold. According to the scope of the value chain project, several product variants and outlets may have to be added up. Although this indicator is clear-cut, measuring it is not as straightforward as it appears. One problem is that the value chain turnover may be subject to fluctuations over time. In agricultural and food value chains this is a particularly critical issue as production volumes vary with climatic conditions. Therefore, a one-time increase is not convincing. To be rated as a lasting impact, the value added should show an upward trend over several years. However, complete time series of market data are not always available and chain promotion projects often end before a new data series can be completed.

There are two possible answers to this challenge. One is to focus on data from key companies. The number of export companies is normally small enough to obtain complete data on export volume and value of a particular product. Sales value on the domestic market may be inferred from the turnover of important processors or traders.

Second, data collection can concentrate on those product variants and marketing channels that have been added as a result of upgrading. For example, in a case where the upgrading vision is to commercialize high-value vegetables in hotels or supermarkets, the evolution of sales at selected outlets stands for the overall value added.

Another option is supporting the public agencies responsible for producing economic statistics, i.e. the competent government departments, the statistics office and customs authorities asking for the relevant data in return.

An example for the second option is the impact of promoting organic cashew in Cambodia, presented in box 11.14.

Box 11.13 Tool: Monitoring value added / economic growth

Criteria for observing change (time series)

- Increase in value added - volumes and final product price paid at defined selling points
- Turnover in market channels that have been opened anew – as a result of the upgrading

Alternative criterion for observing change

- Increase in turnover of lead firms and/or exporters

Criteria for attributing change to chain promotion projects

- Structure of the increase in VC turnover: The observed increase in prices and/or volumes is in line with the type of upgrading that has been taking place.

Source: own concept

The growth in total value added is distributed along the value chain and to external operators providing inputs and services. Hence, it is the basis for any increases in income generated by upgrading the value chain. Therefore, the increase in value chain turnover is an indicator of income increase at the same time.

Box 11.14 Case: Increase in sales value of organic cashew kernels, Cambodia

Background

Cambodia exports most of its cashew production. 95% of exports go to Vietnam in the form of raw nuts. Demand and sales volumes are growing. However, value addition is low, as only 1% of cashew is processed into kernels in the country. The upgrading vision is to obtain higher end prices by (a) increasing processing, and (b) switching to organic cashew. The strategy was to build up a new value chain for processed organic cashew, including organic certification, organization of producers and new export linkaes to international wholesalers.

Measuring impact on sales value

750 organic cashew farmers have been certified (internally) and started exporting organic cashew. As organic cashew is a new product and value chain, the value created equals the total value of organic kernels exported. In the first year of export 120 tons (8 containers) of organic kernels could be exported earning about 700.000 US$. The volume is equivalent to 1% of cashew exports. However, the price per unit of product is almost double, as the organic variant receives a markup of 30 %, and processed nuts have a 60% higher sales value per unit. If organic cashew kernels replace the conventional raw cashew, the value-added increases by 80%. The availability of the new product attracts international investors. If a planned foreign direct investment is realized, processing capacity will go up to 5000 tons.

These figures are easy to find, as there are only 1 or 2 exporters in the value chain.

Source: C.T.A. Trade Promotion Project, Cambodia

Impact hypothesis 4 Income and poverty alleviation

As long as value added is growing, it is fair to assume that the income of operators and service providers is also growing. The question is how the additional income is distributed along the value chain and whether poor people get a share of it. This is a matter of numbers in the first place. The total number of poor producers and employees participating in the value chain is a first indication of the poverty alleviation that can be *potentially* achieved. However, sheer numbers are not suffcient. They need to be complemented by separate studies showing how much of the value added is actually captured by poor operators and employees.

Besides a higher household income, other benefits of chain upgrading are also relevant for poor people, such as enhanced food security, stabilization of revenues and the intra-household distribution of cash income between men and women.

Box 11.15 Tool: Monitoring impact on income and poverty

Criteria for observing change

- Total number of poor enterpreneurs / farms (below e.g. 2 USD/day) benefitting from value chain upgrading
- Number of poor (below e.g. 2 USD/day) having been integrated into the value chain as employees
- Change in income of poor moving them beyond the poverty line (e.g. 2 US$/day)

Methods for attributing change to chain promotion projects

- Case studies and model calculations of small enterprise or farm income
- Case studies on the poverty status of particular groups participating in the value chain

Source: own concept

Box 11.16 complements box 11.11 which refers to the same programme. Here, the issue is the monitoring of small farm income using a case study methodology.

Box 11.16 Case: Monitoring income increase of cocoa and coffee farms, Ecuador

Case studies on farm income incease

Small cocoa and coffee producers belong to poverty groups within their respective value chains in Ecuador. Income monitoring therefore focuses on the development of these groups. GTZ uses a case study method in which data are collected from selected farms benefitting from the programme. Variables include productivity per ha, labour utilization, cost of production, production volume, and the structure of family income and expenditures.

The structure of family income is an interesting variable: It shows the relative importance of the income from principal crops (cocoa or coffee) related to the value chain vis-a-vis income from other crops and, more importantly, via-a-vis other sources of household income, especially wage labour and remittances. To the extent that the other sources recede, the income improvement can be traced back to the upgrading in the principal crop.

Monitoring results

Case studies conducted with producers of UNOCACE, an association of 920 small organic cacao growers, have been monitoring the families since 2004 and have shown a family income increase of 43% between 2004 and 2006 generated through program activities. A similar study conducted in FAPECAFES, an association of small specialty coffee producers with around 1000 affiliates, shows an increase of the income of these families of 70% between 2004 and 2006.

Source: GTZ PAC Project, Ecuador

Another example of income and poverty monitoring comes from Cambodia. The case presents a survey method to assessing poverty impact.

Box 11.17 Case: Monitoring income and poverty impact in the rice chain, Cambodia

Background

The goal of the Rural Development Programme Kampot/Kampong Thom, Cambodia (RDP) is to contribute to poverty alleviation and economic development in two provinces of Cambodia. One of the major fields of work is the establishment and qualification of service providers in key areas of rural development, in particular in the field of agricultural subsistence and market production. Rice is the most important agricultural product in the RDP area, both in terms of food security and economic value. The key hypothesis of the programme is that supporting a rice specialty - organic rice - will generate income for poor farmers and improve subsistence levels at the same time. The main fields of upgrading have been technical services, the formation of farmer cooperatives, the introduction of organic certification and support of the rice trade.

…continued

Survey Method

After 3 years of promoting the value chain, the programme conducted an assessment survey of members of organic rice cooperatives in 2006. The survey assessed the following aspects:

- satisfaction with service delivery of cooperatives
- farmers capability to sell their organic produce
- general farm income and
- impact on household level.

The survey used a 10% sample of the farmer's association membership population and was designed to reveal change over time. No control groups were interviewed. Farmers were asked to rank the quality of the services received, the relative importance of their different economic activities, and the additional advantages they get from participating in the organic rice initiative. Answers give an indication about the factors determining farm development. In addition, the study included a model calculation of the additional income per hectare and per household.

Results

The survey shows that farmers have experienced a stabilization of their livelihood and incomes. Based on average figures the additional annual income from organic rice production is around US$ 28 per household. Compared to the average labour wage per day for work in paddy fields or construction sites, this is equivalent to almost 24 labour days. Other social benefits frequently stated include the acquisition of new skills and know how, motivation and increased feeling of self-esteem; and a greater experience of solidarity and team spirit among the members of cooperatives.

Source: GTZ Cambodia

The cases show that income increases can indeed be attributed to value chain upgrading, if the groups benefiting keep within manageable limits and/or the chain operators are well organised.

As soon as large numbers of beneficiaries are concerned, the change can only be captured by statistical methods. Unfortunately, business and income statistics are not very reliable in most poor countries.

(Task 11.3) Managing for development results

Managing for development results (MDR) is emerging as the conceptual foundation for designing and running M&E systems in development cooperation. At an international roundtables of donor agencies in Marrakech Iin 2004, a series of principles for MDR have been formulated. According to the agreement "…the principles of MDR are

- Focusing the dialogue on results at all phases of the development process
- Aligning programming, monitoring and evaluation with results
- Keeping measurement and reporting simple
- Managing for, not by, results
- Using results information for learning and decision making" (OECD, 2006, p.3).

The Development Assistance Committee (DAC) of the OECD has published a sourcebook on the management for development results (OECD, 2006) elaborating on these principles. Earlier, the DAC also stipulated quality criteria for aid evaluation (see OECD, 1991). The results framework and monitoring tools for chain promotion have been treated in the preceding sections 11.1 and 11.2. This last section presents know-how on the management and organizational aspects of impact orientation.

Using monitoring data for managing value chain promotion projects

Impact monitoring is an instrument of project management. It has to be built into a management cycle that starts by clarifying the information needs of managers, and ends with the use of the information to perform management tasks and take decisions. The management needs ultimately determine which level of the results framework to focus on and which monitoring tools to use.

The use of impact monitoring data for managing chain promotion projects can be classified into three categories: M&E feeds into

- Short-term operational management
- Strategic management, and
- Reporting

Short-term management mainly needs information about the use of outputs. The information generated here is used to improve the delivery of services to partners. Other instruments are activity and financial monitoring.

Strategic Monitoring needs information about the different levels of the results framework so as to update impact hypotheses and adjust the project strategy if necessary. Of particular relevance is the monitoring of upgrading outcome. In a dynamic environment, project managers have to make sure the upgrading vision is realistic and the project keeps track.

The preparation of reports taps into all monitoring data telling the story of the project. It uses the results famework to show the ongoing change at each level. Accounting for funds received uses monitoring data of the impact level.

Finally, project managers and decision makers in economic development should use monitoring information to prepare evaluations, compare the different project approaches and learn for the future.

Organizing the monitoring function

To avoid that impact monitoring becomes a burden, it has to be organized as efficiently as possible. The first consideration here is cost. There is an upper limit to the cost of monitoring. A general recommendation says that the expenditures for impact monitoring should amount

to 5% of the total public investment on average. Depending on the scope of promotion a maximum of 6-8% should not be exceeded. Box 11.18 shows a real example, the cost calculation for impact monitoring in the case of an SME promotion program in Vietnam. The budget amounts to about 5% of the total annual budget of the programme.

Box 11.18 Case: Cost of Monitoring in the SME promotion programme, Vietnam

Personnel costs 1 Programme M&E Advisor (share of 70 percent) 5 Advisors of Programme Components (share of 5 percent) 4 local staff in provinces (share of 5 percent)	*30,000 €* (running cost per year)
Baseline and follow-up studies Fruit & Vegetable Baseline Study Rattan Baseline Study Catfish Baseline Study Domestic Investment Baseline Report	*80,000 €* (in first and last year of the four-year programme phase)
Other indirect costs Costs of documentation & communication etc.	*1,000 €* (running cost per year)
Total monitoring costs	***51,000 €*** **average cost per year**

Source: GTZ Vietnam

Given the narrow budget restrictions, the monitoring task has to be organized as efficiently as possible. Designing an efficient impact monitoring system for value chain promotion projects should observe the following principles:

- The formulation of indicators should take the initial value chain analyses as a baseline. To the extent possible, indicators should use existing sources of information.
- Data collection should be should be shared between external facilitators and value chain actors. At each level of the results framework, other chain actors have to be involved in the monitoring effort. As upgrading is mainly done by operators and chain actors and they have to follow up their own activities, monitoring data can often be taken from the records of collaborating firms and partner organizations.
- Bundling of monitoring tasks across value chains: While it is indispensable establishing separate impact models for all value chains covered by a development programme, the monitoring tasks at output and outcome level can sometimes be combined. For example, access to microfinance and other services may be relevant in different value chains.
- Collaboration with other agencies active in the respective chain. Several donors investing in parallel need the same or very similar information on the upgrading process and the value added created. Hence, value chain promotion is an ideal opportunity for conducting collaborative monitoring involving different development agencies.

The following box summarizes some important features of the monitoring system employed in the SME promotion programme supported by GTZ in Vietnam.

Box 11.19 Case: Monitoring system of the SME promotion programme, Vietnam

The Monitoring system of the SME programme

The programme pursues the objective to “significantly improve the competitiveness of private small and medium enterprises in Vietnam”. Its value chain component promotes the fresh fruit, vegetable, rattan and fisheries subsectors. The monitoring system can be divided into “strategic monitoring“ and “operative monitoring“. Strategic monitoring includes monitoring the system boundaries, the results framework (impact model), indicators and budget. In turn, the operative monitoring supervises activities, milestones (output and use of output), annual plans of operation, and costs. The monitoring activities are organized into an annual cycle of activities, of which the Strategic Planning & Monitoring (SPM) meeting in October is the most important event. At this occasion, achievements are reviewed and new milestones set. The

monitoring system is closely linked to knowledge management in the programme which encourages active sharing and exchanging of experience and information.

Monitoring tools and sources of information

The monitoring information is documented in

- the Operational Plan, that is the overview of the annual activities of the programme (organized by programme components),
- a table with milestones providing staff with detailed annual objectives and tasks,
- the MS Excel® table "indicator impact monitoring", which is organized by outcome and impact indicators and used to record data on indicator values over time. This is the core document which collects all information gathered. It allows combining different variables flexibly so as to substantiate cause-effect relationships.
- a separate MS Excel® "training and workshop monitoring sheet" performing this function for the respective programme outputs.

The most important sources are statistical data of Vietnamese government organizations, data of the cooperating private partners and business associations, own reports, commissioned studies and studies of other development agencies, such as World Bank.

Responsibilities

The M&E Advisor bears the chief responsibility for coordinating the monitoring system and for making results available. On the one hand, she cooperates with programme advisors and local staff and consultants who collect the data. On the other hand, she closely cooperates with programme leadership interpreting the results. The Chief Technical Advisor uses the information to review and update the project strategy together with Vietnamese partners. He also has the task to promote the impact orientation of the team as a whole.

Source: based on internal reports of the SME promotion programme (also see www.sme-gtz.org.vn)

Impact monitoring in the SME development programme in Vietnam is the example of a system of routine procedures and responsibilities designed to achieve maximum efficiency in generating monitoring data. It is not specific of value chain promotion as such.

Utilizing synergies between monitoring and project implementation

Value chain development is not a stable target. Hence, it may not always be possible to specify precise objectives, at least at the beginning of chain promotion and under conditions of weak economic structure and unpredictable market change. Both planning and monitoring become difficult and, above all, costly.

One way of dealing with this condition is to directly link promotion activities with monitoring. For example, chain promotion projects use business meetings and stakeholder workshops to generate the results framework and formulate indicators. Workshops and meetings serve a double purpose, strengthing the awareness and capacity of chain operators on one side, and generating information to be used in building the monitoring function on the other.

Similarly, strengthening the management capacity of collaborating partner can be combined with using their planning and monitoring capacity. In the case of companies and business associations the information generated to manage business operations would also be made available for the purpose of impact monitoring. The meso level support organizations and public service providers have to perform an information function anyway. Strengthening their capacity includes collaborating in regular monitoring as well.

References and Weblinks

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Weblinks

Links to Literature and websites in different fields of evaluation: www.mande.co.uk/specialist.htm

Monitoring business service development: www.bds-forum.net/m+e.htm

Linklists to evaluation sources: www.policy-evaluation.org