



Agribusiness  
Concept

Version 09/2007

## Reader: Pro-Poor Services in Value Chain Promotion

Imprint

Editor:

Paul-Mathias Braun

Authors:

Carmen Hess (Mail@carmen-hess.de)

Andreas Springer-Heinze (Andreas.Springer-Heinze@gtz.de)

Wolfgang Bertenbreiter (Wolfgang.Bertenbreiter@gtz.de)

Peter Jarchau (Peter.Jarchau@gtz.de)

Paul-Mathias Braun (Paul-mathias.braun@gtz.de)

Published:

Deutsche Gesellschaft für

Technische Zusammenarbeit (GTZ) GmbH

Postfach 5180, 65726 Eschborn

Internet: <http://www.gtz.de>

Contact:

Paul-Mathias Braun

T (+49 61 96) 79 1443

F (+49 61 96) 79 7162

E [paul-mathias.braun@gtz.de](mailto:paul-mathias.braun@gtz.de)

I <http://www.gtz.de/agriservice>

Commissioned by:

German Federal Ministry for Economic Cooperation and Development (BMZ)

Division 314 – Rural Development; Global Food Security

Postfach 120322, 53045 Bonn, Germany

T (+49 228) 535-0

I [www.bmz.de](http://www.bmz.de)

Eschborn 2007

<b>I Introduction (C. G. Hess and P. - M. Braun)</b> .....	<b>4</b>
1. Value Chain Promotion and Service Development (C. G. Hess) .....	5
1.1 What is a value chain? .....	5
1.2 What does pro-poor VCP mean? .....	6
1.3 What is typical of VCP? .....	6
1.4 Which value chains and markets seem to benefit poor operators? .....	7
2. Options for pro-poor value chain development .....	8
2.1 What is the role of the public sector in VCP? .....	9
2.2 The role of the private service sector .....	9
2.3 The role of development programmes in VCP .....	12
2.4 How can pro-poor services for VCP become sustainable? .....	12
2.5 What can be done to lower service costs? .....	12
<b>II Contribution One: Selected parts from ValueLinks Module 2 - Analyzing a value chain (Andreas Springer-Heinze)</b> .....	<b>14</b>
1. Basic considerations on the methodology of chain analysis .....	15
1.1 Chain mapping .....	17
1.2 Mapping value chain functions and operators (the micro level) .....	17
1.3 Mapping sub value chains (channels) .....	21
1.4 Mapping chain governance .....	23
1.5 Mapping chain supporters (meso level) .....	24
1.6 Organizing chain mapping workshops .....	25
2. Quantifying and analyzing value chains in detail.....	26
2.1 Quantifying the basic chain map .....	27
2.2 Zooming in: Mapping chain elements and segments.....	28
3. Special chain studies.....	28
<b>III Contribution Two: Selected parts from ValueLinks Module 7 - Strengthening services in value chains (Andreas Springer-Heinze)</b> .....	<b>31</b>
1. Tasks in strengthening VC services .....	31
2. Basic considerations on service provision in value chains.....	31
3. Assessing service needs and service markets.....	32
3.1 Analyzing the provision of operational services .....	32
3.2 Problems of market failure delivering operational services.....	34
3.3 Problems with private funding and provision of support services .....	35
3.4 The problem of client and demand orientation in public service agencies.....	35

---

4.	Strengthening private service markets and arrangements.....	36
4.1	Creating and supporting markets for contracted operational services .....	37
4.2	Facilitating embedded service arrangements.....	39
4.3	Supporting service provision of business associations to their members .....	43
<b>IV Literature and Links .....</b>		<b>46</b>

**List of figures**

<b>Box I-1 Elements of a Basic Value Chain .....</b>	<b>5</b>
<b>Box I-2 Trade in fresh fish in Morobe Province, Papua New Guinea (Peter Jarchau, GTZ).....</b>	<b>11</b>
<b>Box II-1 Tool: Analytical methods to inform value chain promotion projects.....</b>	<b>16</b>
<b>Box II-2 Concept / template: Elements of a basic linear value chain map .....</b>	<b>18</b>
<b>Box II-3 Practical hints: How to proceed in basic chain mapping .....</b>	<b>19</b>
<b>Box II-4 Case: Conventional honey for export in the Yucatán region, Mexico.....</b>	<b>20</b>
<b>Box II-5 Case: Jute products value chains in Bangladesh.....</b>	<b>22</b>
<b>Box II-6 Case: Value chain for exporting cotton bed sheets from Ethiopia to the EU...23</b>	
<b>Box II-7 Case: Traditional finished sheep and goat leather value chain in Ethiopia Mapping of chain supporters (meso level) .....</b>	<b>25</b>
<b>Box II-8 Practical Hints: Participatory chain mapping .....</b>	<b>26</b>
<b>Box II-9 Case: Quantifying growth rates in Kenyan fresh milk value chain .....</b>	<b>28</b>
<b>Box II-10 Practical hints: Some information sources for value chain studies .....</b>	<b>30</b>
<b>Box III-1 Concept: Categories of operational services .....</b>	<b>32</b>
<b>Box III-2 Tool: Table characterizing demand for operational services .....</b>	<b>33</b>
<b>Box III-3 Tool: Table characterizing supply of operational services .....</b>	<b>33</b>
<b>Box III-4 Template: Chain upgrading and related operational and support service needs.....</b>	<b>34</b>
<b>Box III-5 Case: Privatizing veterinary services in Mongolia .....</b>	<b>38</b>
<b>Box III-6 Concept: Types of embedded service arrangements.....</b>	<b>40</b>
<b>Box III-7 Concept: The warehouse receipt system .....</b>	<b>40</b>
<b>Box III-8 Case: Training in quality management for fish traders in Papua New Guinea</b>	<b>42</b>
<b>Box III-9 Case: Farm extension embedded in seed trade in West Africa .....</b>	<b>43</b>
<b>Box III-10 Case: Services of the sheep and goat breeders association in Morocco .....</b>	<b>45</b>

---

## I Introduction (C. G. Hess and P. - M. Braun)

New donor concepts for rural development recommend a strong market-orientation of small-scale farming with an emphasis on income generating activities (see Neuchâtel Initiative 2006 and forthcoming). The provision of market-oriented services to small-scale farmers is usually difficult due to obstacles such as poor infrastructure and scattered settlements. These difficulties lead to high transaction costs for service provision while farmers often lack cash to pay for the services. Public services, like agricultural research, extension or veterinary services had once been subsidised but have been phased out or became re-oriented. Private service providers are somewhat hesitant to approach a cash-poor clientele, especially if located in remote areas. In the meantime, NGOs have taken over a large share in rural service provision but are often little experienced with business and value chain promotion. Sometimes, embedded services can be provided by traders or lead companies, but they are thematically limited to the products they sell. In addition, the digital divide is even more pronounced in rural areas than in urban ones. Development projects often provide substitute services in the absence of existing providers, but these services are unsustainable. All in all, there is a distinct service gap that calls for a comprehensive, systemic approach for developing high quality service provision to small-scale farmers (see Reader: Reforms of Rural Services).

In the context of development cooperation, market-oriented advisory services need to be pro-poor. Providers of advisory services need to assist small-scale and medium-scale farmers in analysing and solving the most pressing problems as autonomously as possible. They also need to provide adequate knowledge and introduce applied technologies to the farmers. Furthermore, providers should assist farmers in improving business and management skills as well as their efficacy as actors in value chains (Neuchâtel Initiative 2006 and forthcoming). Thus, farmers need quality services, which will improve productivity and product quality, lower transaction costs, help to upgrade products and identify profitable markets.

There are basically two approaches to advance farmers' success in commercial markets: one approach is territorial and based on the development of districts and regions; the other one concentrates on value chain promotion in specific sub-sectors. In practice, both approaches represent the ends of a continuum because value chains are often regionally limited and much regional development focuses on a few commodities only. However, in this Reader we deal mainly with value chain promotion, since it is a widespread approach while the basic ideas are as valid for promoting regional development.

## 1. Value Chain Promotion and Service Development (C. G. Hess)

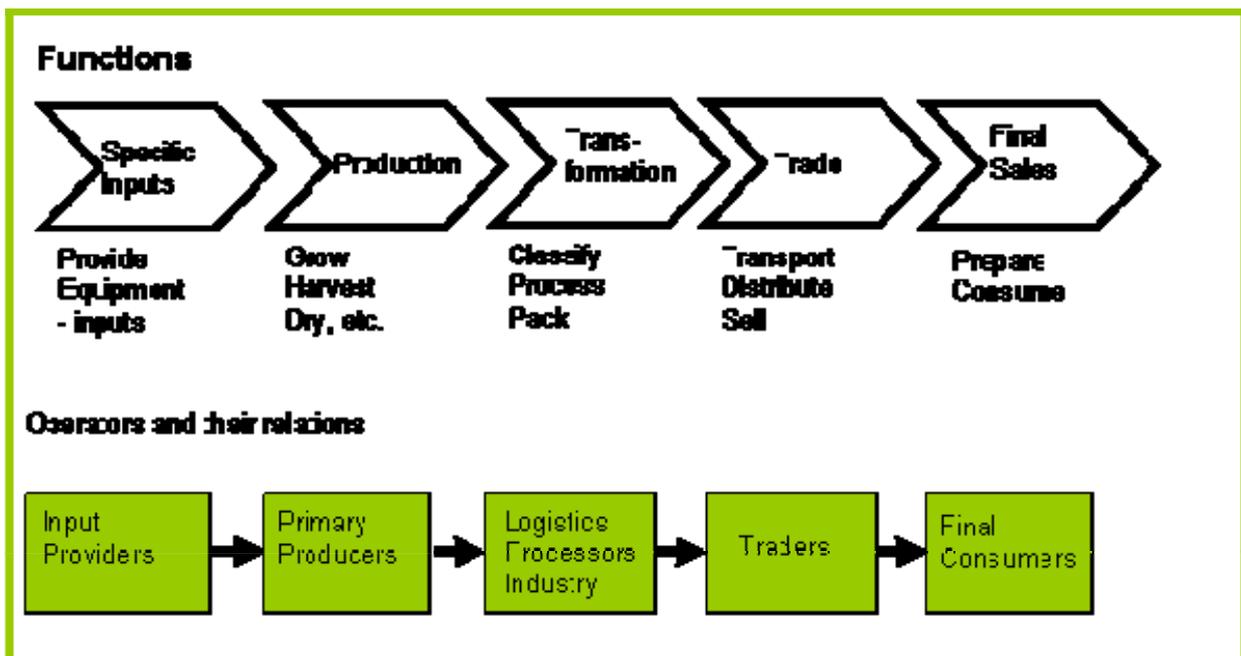
### 1.1 What is a value chain?

GTZ has recently published *ValueLinks* (2007) which addresses important issues of value chain promotion (VCP). *ValueLinks* is a manual that is based on field experiences. The manual *ValueLinks* 2007, Module 2, defines a value chain as:

- a *sequence of related business activities (functions)* from the provision of specific inputs for a particular product to primary production, transformation and marketing, up to the final sale of the particular product to the consumer;
- a *set of enterprises (operators)* that performs these functions, i.e. the producers, processors, traders and distributors of a particular product. Enterprises are linked by a series of business transactions in which the product is passed on from primary producers to end consumers;
- a *business model* for a particular commercial product. This business model allows defined customers to be reached using a particular technology and a particular way of coordinating production and marketing between several enterprises.

Box I-1 contains an illustration of a simple value chain. The upper chain indicates the stages at which value is added to an agricultural product (functions). The lower chain indicates the respective operators and actors in the chain.

Box I-1 Elements of a Basic Value Chain



Source: ValueLinks 2007, Module 2

## Services for Rural Development

### Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

---

In the case of the value chain of mangoes, input dealers sell tools, agrochemicals, or seedlings to the primary producers of mango, who plant, cultivate, protect the trees and harvest the fruits. The mangoes are then transported to a warehouse where they become classified. Next they may be processed (e.g. cooked and tinned). They are sold to traders, who package and ship the product. The fruits reach European markets and are distributed to supermarkets, where they are sold to the final consumer. At each stage and function value is added by different operators in the chain.

The main target groups of VCP are small-to-medium-scale farmers who shall benefit economically. VCP is an approach to business development in rural areas. It holds promise for those farmers with a business mentality and relatively good connections to commercial markets. Seemingly, VCP has less to offer to asset-poor farmers with weak links to markets and little talent as businessmen. Yet, as the principal objective of development cooperation is to reduce poverty, this introduction pursues the issue of service development in pro-poor VCP.

#### 1.2 What does pro-poor VCP mean?

Pro-poor VCP aims at improving business and income opportunities of poor, small-scale operators (e.g. farmers and small processing plants). It builds-up existing or emerging economic potentials of small-scale operators. It is not a stand-alone approach but should be combined with other pro-poor development approaches. Its main objective is to generate additional income for poverty groups by making sure that

- their income grows faster than the income of non-poor groups (relative growth rate); or
- their income increases above the poverty line (absolute growth rate) (*Value Links* 2007, Module 0).

#### 1.3 What is typical of VCP?

VCP is based on participatory and systemic analyses of

- the selected value chain;
- indispensable operational and support services;
- managing service provision.

At the beginning, it is necessary to specify the product and value chain as well as the target group(s) for VCP. There are basically two ways to proceed:

- Donor agencies or governments support market research for detecting value chains with pro-poor growth potentials. If the value chain is identified, the next step is to determine the target group that has abilities to satisfy customer demands on the product.

## Services for Rural Development

### Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

- If the target group is predetermined, a participatory workshop with important representatives of the target group will lead to the identification of the most promising local product to which value can be added.

Once target group and value chain have been selected, a participatory **value chain analysis** must be carried through (see Contribution One). All relevant operators in the chain must be invited for in-depth reflection and planning during a workshop. The process must be structured and guided by professional facilitators. The mapping of the chain is an important starter of the workshop. Main functions and operators have to be described; leverage points at which value is added have to be identified and value-added quantified. Problems of operators must be understood by all and solutions sought. New ideas about value-creation must be thoroughly discussed. The value chain analysis is mainly a useful instrument for improving mutual understanding, communication and cooperation between the operators. Agreements on solutions must be documented and later followed-up.

The **specification of important services** and their adequate provision is another objective of the value chain analysis. If well done, the analysis provides a clear picture of service requirements. As there are always too many service requests, it will be necessary that small-scale operators select the most crucial ones and specify them as precisely as possible. In some cases, participants will detect service gaps. These service gaps represent business opportunities for prospective providers. The operators must think creatively about *how to encourage enterprises to offer the needed services in the future*. The workshop shall close with defining realistic, quantifiable impacts on the income situation of the target group.

Service arrangements will become sustainable only on a solid financial base. Services may be fully or partially subsidised, fully or partially paid by the target group, or financed on a shared basis. However, services need to produce significant value-added to become attractive and payable by the clients. Binding agreements between the provider and the clients on respective responsibilities and commitments by the clients will consolidate service arrangements (see Reader: Quality Management in Development Cooperation).

#### 1.4 Which value chains and markets seem to benefit poor operators?

We refer to Stamm (2006) and his review of value-added chains for addressing this question. This author differentiates four kinds of value-added chains:

- global value chains with high entry barriers
- local-globalised value chains
- global value chains with low entry barriers
- local-traditional value chains

A global value chain with high entry barriers is characterised by high demands on food quality and safety. International agribusiness between developing countries and European and North American markets belongs to this type of value chain (see Reader: Quality Management in Development Cooperation, esp. Introduction and Contribution Six).

A local-globalised value chain sells to supermarkets and hotels within national boundaries. However, demands on food safety, proof of origin, timely delivery, fixed quantities and quality slowly emulate international standards. Therefore, Stamm labels these value chains as “local-globalised” ones. Moreover, he observes that entry-barriers to local-globalised value chains increase successively, eventually becoming to high for poor producers.

In contrast, global value chains with low entry barriers and local-traditional value chains may offer better chances to small-scale producers. Quality demands on food imports to India and China are usually lower than to European and North American markets. Also, local and regional markets are somewhat more tolerant of uneven product quality. We emphasize that small-scale operators may find better opportunities on domestic markets. In African countries, for example, export development reveals a flat growth rate while urban markets are growing at a rate of 6 to 10% each year (see Reader: Agribusiness and Value Chains).

Pro-poor VCP has to select a value chain from which small-scale producers can profit. We will consider two basic options for increasing the income of farmers: the first option is to launch a “new” product, and the second one is to add value to an “old” product. Adding value to a product is also called “upgrading”.

## **2. Options for pro-poor value chain development**

This following list illustrates some commercially interesting topics for VCP but it is certainly not complete.

1. Identify the potential of a “new” product and “new” customers:

- Identify a profitable niche product, e.g. spices, dry fruits, flowers, honey, silk, meat or dairy product.
- Screen products of which smallholders have unique knowledge, e.g. oils, non-synthetic pesticides or chemicals, exotic fruits, medical plants, herbs, essences for cosmetic uses, ethnic foods.
- Identify wild species for domestication and promotion: e.g. sea horses, butterflies, crocodiles, West African grass cutter (Thryonomis).

## Services for Rural Development

### Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

---

2. Up-grade an established product:

- Identify a product to which value can be added by additional labour inputs by sorting, grading (e.g. seed selection), processing (e.g. roasting coffee beans), packaging (e.g. potato bags), or transport.
- Up-grade an established product by organic farming (e.g. cocoa, banana, coffee).
- Target new or better-off customers by offering fresh products such as goat milk, cheese, herbs, or flowers.
- Improve the quality of a product which is appropriate for sale in supermarkets or for export; (certification is one way of quality assurance)
- Up-grade ethnic foods such as llama meat or guinea pigs by improving their image as high quality food.
- Lower production costs, on the one hand, and increase productivity of a commercial product, on the other.
- Lower transaction costs by improving information and communication flows between interdependent operators.

#### 2.1 What is the role of the public sector in VCP?

In our Reader about Reforms of Rural Services, we explained the reasons for separating public financing of services from public service provision. Today, the role of the government is seen mainly as one of facilitating, regulating and managing

- pro-poor policies and their enactment;
- services of public interest (regulation and inspection of food quality and safety);
- public funds for services of public interest (e.g. water management, natural resource protection, poverty alleviation);
- basic infrastructure (vehicle-access roads, electricity).

If these public responsibilities are fulfilled, transaction costs for agricultural production as well as for service provision to agricultural producers would decrease.

#### 2.2 The role of the private service sector

NGOs, private firms, establishments for agricultural education and training, or consultancies shall provide support and operational services, which have been specified by farmers and their organisations. There are three options for farmers and farmer groups to receive private services:

- by private contract and payment (fully or partially);
- by obtaining services due to membership in a producer or business association;
- by embedded services.

**Services for Rural Development  
Reader: Pro-Poor Services in Value Chain Promotion – Concept**

**Version 09/2007**

---

Embedded services are usually part of business transactions such as the sale of agricultural inputs. Service delivery makes use of existing networks of input dealers, intermediaries and traders, contracted advisers or inspectors of lead companies. These people already entertain commercial relationships with large numbers of farmers. They can be trained for providing additional and effective product- or input-related information to their clientele. In other words, they receive training on particular issues, which are important for up-grading an agricultural value-chain-product. Then they deliver the received information and knowledge to their clients while doing their own business too (see Contribution Two).

Embedded services are restricted to simple information and knowledge transfers: e.g. market information, prices, costs of inputs, application of straightforward treatments, or quality criteria for a product. Box I-2 provides an example of embedded services which upgraded the communication between small-scale fishermen and traders by making the correlation between fish quality and prices more transparent.

**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

---

**Box I-2 Trade in fresh fish in Morobe Province, Papua New Guinea (Peter Jarchau, GTZ)**

Fish trade in Papua New Guinea is usually done through middlemen, due to the small quantities traded by scattered villages. The buyers in the provincial capital Lae used to assess fish according to personal criteria, such as size, visual appearance, and market situation. No generally recognized quality criteria existed, on which pricing would be based. Supply was erratic. There was not enough ice for cooling and the potential of internal markets was not tapped. As buyers in Lae wanted to open new markets in the north of the country they needed fresh, high quality fish plus a reliable supply. However, it was difficult both for fishermen and intermediate traders to meet buyers' demands in terms of quality and steady supply.

*Embedded qualification services improving the marketing of fresh fish*

The project "Promotion of Coastal Fisheries in Morobe province" builds private market infrastructure and services (supply of ice), supports the organization of fishermen and develops quality standards for fresh fish. Building the foundation of a transparent trading system, the project facilitated the development of a quality assessment system. With the help of specialists, traders and fishermen developed basic visual quality criteria for fish and agreed on a shared common criteria catalogue. Prices were categorized accordingly.

In order to introduce the new market regulation, practically all local traders had to be informed and trained. This service is made available in an embedded arrangement, linking service provision to the fish trade: Provincial buyers received an initial training and now act as service providers to local traders who, in turn, pass on the know-how to fishermen. In the first step, buyers train their suppliers in assessing the quality standards for fresh fish and provide information on production and transport requirements. On their part, traders give training to fishermen in improved practices according to the rules specified before and enable them to evaluate the quality and price of the fish right in the village. This arrangement is much cheaper than the organization of trainings for many scattered fishermen by an extension service. What's more, the project contributes to a common understanding of quality, a higher level of transparency between traders, middlemen and fishing groups, efficient private input logistics, a steady supply of fish and above all, access to a new market – without building parallel structures. The transparent pricing agreement also helps to build trust between local traders and fishermen.

Source: Value Links 2007, Module 7, Box 7.13

The limitations of embedded services are that only simple messages can be delivered and that the information may become biased due to the commercial interests of traders or dealers. Complex skills development, for example, on Integrated Pest Management (IPM), needs to be conducted by other

## Services for Rural Development

### Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

---

service providers. The main advantage of embedded services is that knowledge and information can be distributed through the network of the traders or dealers, thus lowering transaction costs.

#### 2.3 The role of development programmes in VCP

Development programmes aim at poverty reduction. They support existing and emerging service providers by providing technical and methodological knowledge, business and organisational skills. Development programmes and projects aim at encouraging, strengthening and institutionalising private service provision to farmers. Agricultural Training Centre (ATC) des Cooperative College of Kenya (COCK) in Kenya is an example of GTZ efforts to establishment training services for small-scale farmers (see Contribution Three). Although development projects often fill service gaps temporarily, they need to strengthen local service providers for offering important services to acceptable prices and quality.

#### 2.4 How can pro-poor services for VCP become sustainable?

Pro-poor services become sustainable only if they are based on authentic farmers' demands and if they have a secure financial basis. However, it is illusory to assume that poor small-scale farmers can pay fully service costs, which are high due to deficient infrastructure and communication (roads, internet/email, mobile phones). On the other side, income generated by agricultural products is often relatively low due to low volumes and productivity.

Contribution Four provides an estimate of transaction costs for a small-scale coffee growers' association in Ecuador by Bode. The result is that costs consume roughly 26 % of farmers' income from coffee, although services are still considered deficient. An improvement of services would further increase these costs which may then well outstrip the benefits. This dilemma seems typical of much small farming business. Pro-poor VCP has therefore to determine the most crucial service needs together with the respective farmer groups. Selectivity means to define those services with the strongest positive impact on income generation. But even then, service provision will probably require public subsidies (see Reader: Reforms or Rural Services, which provides ideas about publicly financed but privately delivered services).

#### 2.5 What can be done to lower service costs?

1. The government improves basic infrastructures for communication and connectivity to product and service markets: vehicle-access roads, electricity, telephone lines, etc.
2. Market-oriented small-scale farmers set up producer groups, either by forming interest groups for a specific product (e.g. tomato production and sale), or by setting up formal associations and cooperatives (e.g. coffee growers' associations). This way, service demands can be

**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

---

bundled and – at least – partly financed by membership fees. However, the founding of organisations requires considerable investments, especially at the beginning.

3. Producer organisations are able to acquire collectively quality inputs (seed/seedlings, fertiliser) and advice (handling knowledge, embedded services) at lower costs.
4. Select an agricultural produce to which significant value can be added locally.
5. Encourage the establishment of private service providers close to the target group. They should speak the same language and entertain trustful and respectful relationships.
6. In some cases, contract farming offers an increase in income to small-scale farmers. If agricultural companies contract smallholders for producing a particular product (e.g. coffee, banana, tea, rice), they offer a secure market and often also provide inputs, credit, operational and extension services. Farmers usually have to pay for these services but they also gain access to good quality services (see Reader: Extension and Research Approaches, Contract Farming).

The following four contributions explain key issues, which could be dealt with only in brevity in this introduction:

- Value chain analysis;
- Service needs and provision;
- VCP in Kenya;
- Transaction costs of a coffee grower association in Ecuador.

## II Contribution One: Selected parts from ValueLinks Module 2 - Analyzing a value chain (Andreas Springer-Heinze)

Value chain analysis consists of several steps such as mapping, quantifying, and describing value chains as well as economic analyses of value chains, and market research.

**Mapping value chains** means drawing a visual representation of the value chain system, identifying chain operators and their linkages, chain supporters and their functions within the value chain as well as government and other public organizations responsible for the political and legal framework conditions enabling or hindering chain development. Chain maps are the core of any value chain analysis and therefore indispensable.

**Quantifying and describing value chains in detail** includes attaching numbers to the basic chain map, e.g. numbers of actors, the volume of produce or the market shares of particular segments in the chain. Depending on the specific interest, specific chain analyses “zoom in” on any relevant aspect, e.g. characteristics of particular actors, services, or the institutional and legal conditions for the business in question.

**Economic analysis of value chains** is the assessment of chain performance in terms of economic efficiency. Cost of production and transaction costs determine the competitiveness of the chain compared to competing chains. The most efficient competitors constitute a cost benchmark.

**Market research** is not included as a task in this module, but treated separately (see Value Links 2007, module 1, task 1.3). The assessment of demand conditions has to be taken up at the very beginning of any chain promotion project - even before a value chain is selected for promotion. However, market research is closely linked to value chain analyses, the mapping of market channels and economic analyses being important inputs into market research.

The **constraints analysis** prepares the formulation of an upgrading strategy and is treated in (see Value Links 2007, module 3, task 3.2).

## 1. Basic considerations on the methodology of chain analysis

Value chain analysis is not an end in itself, but its results feed into the decisions on the value chain vision, upgrading strategy, supportive actions as well as into the formulation of indicators. Overly ambitious chain studies at the outset can be quite counterproductive as they consume time and money and involve the risk of “analysis paralysis”. Experience shows that initial surveys usually produce large databanks while often enough not even generating the information relevant for the decisions on the agenda. Often, the need for in-depth analyses only arises as ideas for market development and upgrading emerge in the process. Therefore, the question which type of analysis is useful, how to generate the data, and how to use them is no less important than the methodological issues as such. Box II-1 presents an overview of the kinds of information products and their use for different decision and planning tasks in value chain upgrading.

Box II-1 shows how closely chain analysis is connected to chain promotion. Generating information and using it have to be treated as iterative steps. In any case, value chain analysis is part of the larger process of value chain upgrading, the principles of which are treated separately (see Value Links 2007, module 4).

**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

**Box II-1 Tool: Analytical methods to inform value chain promotion projects**

Tasks in value chain upgrading and promotion	Tools to guide participatory analysis & decision making	Topics of in-depth studies prepared by experts
Selecting a value chain (see Value Links 2007, 1.1)	<ul style="list-style-type: none"> <li>• Checklist or decision matrix with selection criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Market research (see Value Links 2007, tools for task 1.3)</li> </ul>
All following tasks	<ul style="list-style-type: none"> <li>• Basic value chain map (see Value Links 2007, 2.1)</li> </ul>	
Agreeing on a vision (see Value Links 2007, 3.1)	<ul style="list-style-type: none"> <li>• Strategy matrices</li> <li>• Basic value chain map locating the change anticipated in the vision (see Value Links 2007, 3.1)</li> </ul>	<ul style="list-style-type: none"> <li>• Market research (see Value Links 2007, tools for 1.3)</li> <li>• Economic analyses and benchmarking (see Value Links 2007, tools for 2.3)</li> </ul>
Setting objectives for value chain upgrading and preparing action (see Value Links 2007, 3.2 and 3.3)	<ul style="list-style-type: none"> <li>• Attaching statements on constraints to elements of the basic value chain map</li> <li>• Basic chain map indicating points of leverage</li> <li>• SWOT analysis</li> <li>• Problem trees</li> <li>• Impact model showing anticipated path of chain development</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed chain maps:               <ul style="list-style-type: none"> <li>- quantifying basic map</li> <li>- detailed thematic maps</li> </ul> </li> <li>• Special studies on:               <ul style="list-style-type: none"> <li>- chain governance</li> <li>- conditions of marginal operators</li> <li>- conditions of the business environment</li> </ul> </li> </ul>
Value chain promotion in different fields of action (modules 5-10)	<ul style="list-style-type: none"> <li>• see tools in modules 5-10</li> </ul>	Special studies and detailed thematic maps
Monitoring (see Value Links 2007, 11.1)	<ul style="list-style-type: none"> <li>• Impact model (see Value Links 2007, 3.5)</li> <li>• Basic chain map showing indicators</li> </ul>	

## 1.1 Chain mapping

Chain mapping is the core of VC analysis. It serves both an analytical purpose and a communication purpose, as maps reduce the complexity of economic reality with its diverse functions, multiple stakeholders, interdependencies and relationships to a comprehensible visual model. Depending on the purpose maps look differently. Mapping always starts with a “basic map” providing an overview of the value chain. This basic map can be differentiated to show “sub value chains” according to product variations or distribution channels. Describing a value chain in detail produces a series of “thematic maps” covering particular aspects (see Value Links 2007, task 2.2). In fact, it is possible to arrive at a sort of value chain “atlas” in the end. The most important thing is to keep the maps focused on the purpose and easily understandable.

The basic value chain map visualizes

- the sequence of production and marketing functions performed
- the value chain operators taking these functions
- vertical business links between the operators (arrows)
- chain supporters at the meso level

The first three elements represent the *micro level* of the chain, at which the value-added is generated. It is at the micro level, where economic growth and its distribution across enterprises show. Value chain supporters represent the *meso level* of the chain. Because of their direct relation with chain operators they can and should also belong in a basic map. Government and other public organizations responsible for framework conditions constitute the *macro level* of the value chain. This level should rather be visualized in a thematic map and does not necessarily belong in a basic map.

If conducted in a participatory fashion, chain mapping is not only an analytical but a communication instrument as well: It helps to build trust between groups of operators, facilitates client-oriented services and improves the understanding of policy makers of private sector needs. Throughout this manual, a particular set of standard symbols is used for mapping value chains. The use of standards symbols has the advantage of facilitating the communication between the actors (see the directory of visual symbols).

## 1.2 Mapping value chain functions and operators (the micro level)

At the centre of the chain map is a product’s production, processing and distribution path showing the productive processes (functions) defining the stages of the value chain. The sequence of functions is visualized by a series of hollow arrows. Box II-2 shows generic categories of segments in a linear chain leading from the provision of the *specific* inputs for a particular product to primary production,

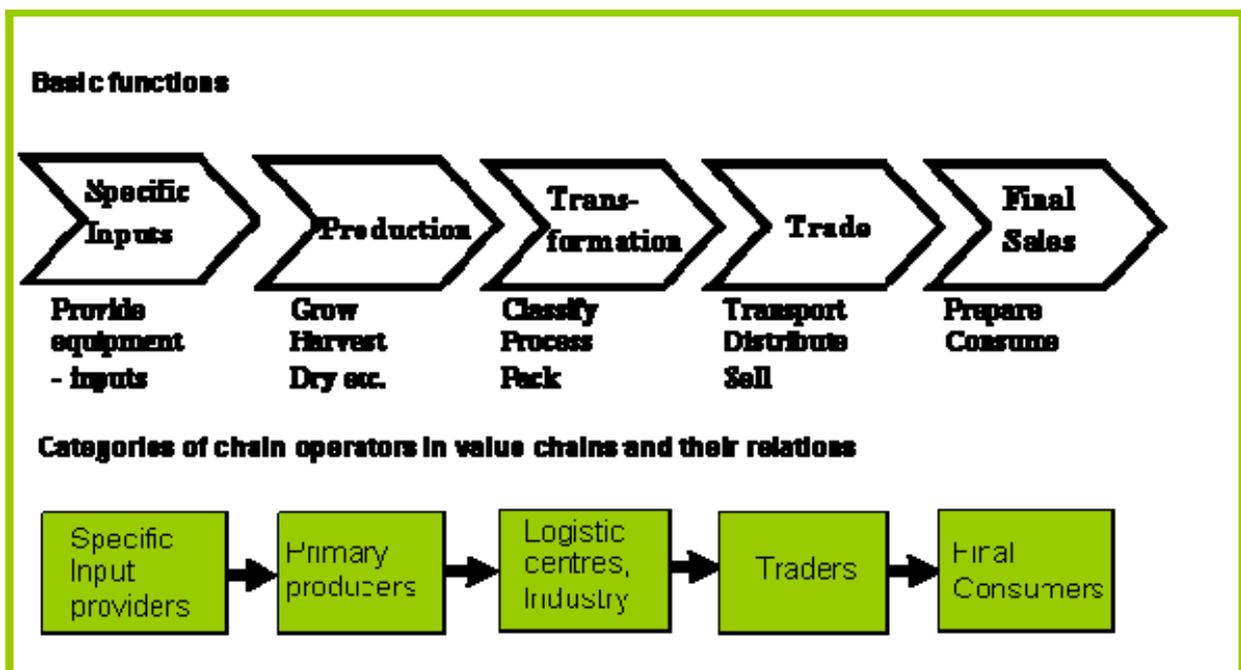
**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

transformation and marketing up to final consumption. The second part of the map assigns the functions to categories of chain operators, visualized by yellow rectangles. Although the generic map in box II-2 shows a perfect correspondence between the chain stages and different groups of operators this will not always be the case in reality. Often, the same operators may cover two or even more stages.

The separation of functions and operators is useful for understanding the evolution of the chain. Institutional change, e.g. a closer integration between operators, can be distinguished from technical change, e.g. when new functions are added.

Box II-2 Concept / template: Elements of a basic linear value chain map



Source: own design

The map shown in box II-2 is a generic model. Applying it in a concrete case means establishing the most appropriate sequence of segments and identifying the categories of operators. Box II-3 explains the procedure of creating a basic chain map.

---

**Box II-3 Practical hints: How to proceed in basic chain mapping**

- (a) The first step is the definition of final products (markets). The final sales point (outlet on the domestic market, or exporter) is indicated by an oval box.
- (b) Second, the activities (functions) currently performed to generate the final product are listed. It makes sense to start from the downstream end of the chain to make sure production and marketing activities actually
- (c) The list of activities needs to be aggregated establishing a sequence of 4 to no more than 7 or 8 steps - from providing specific technical inputs up to the final sales point, indicating a border line in the case of an export product.
- (d) As a matter of principle, mapping input delivery and services at the upper end of the chain (before primary production) is restricted to highly specific inputs, making sure to clearly distinguish between the *specific* technology inputs - needed *only* for this product - and other inputs and services of a generic type. The latter are not included in the basic map but added later.
- (e) After establishing the functional sequence, the main chain/channel is drawn first by indicating the types of operators. This delivers a linear progression from stage to stage (i.e. no arrows bending left and right). Secondary channels are drawn later, branching off from the main one. The procedure is different in the case of production networks in manufacturing sectors (see below)
- (f) If operators take more than one function, the box representing them is enlarged to cover the two or more functional stages they are in.

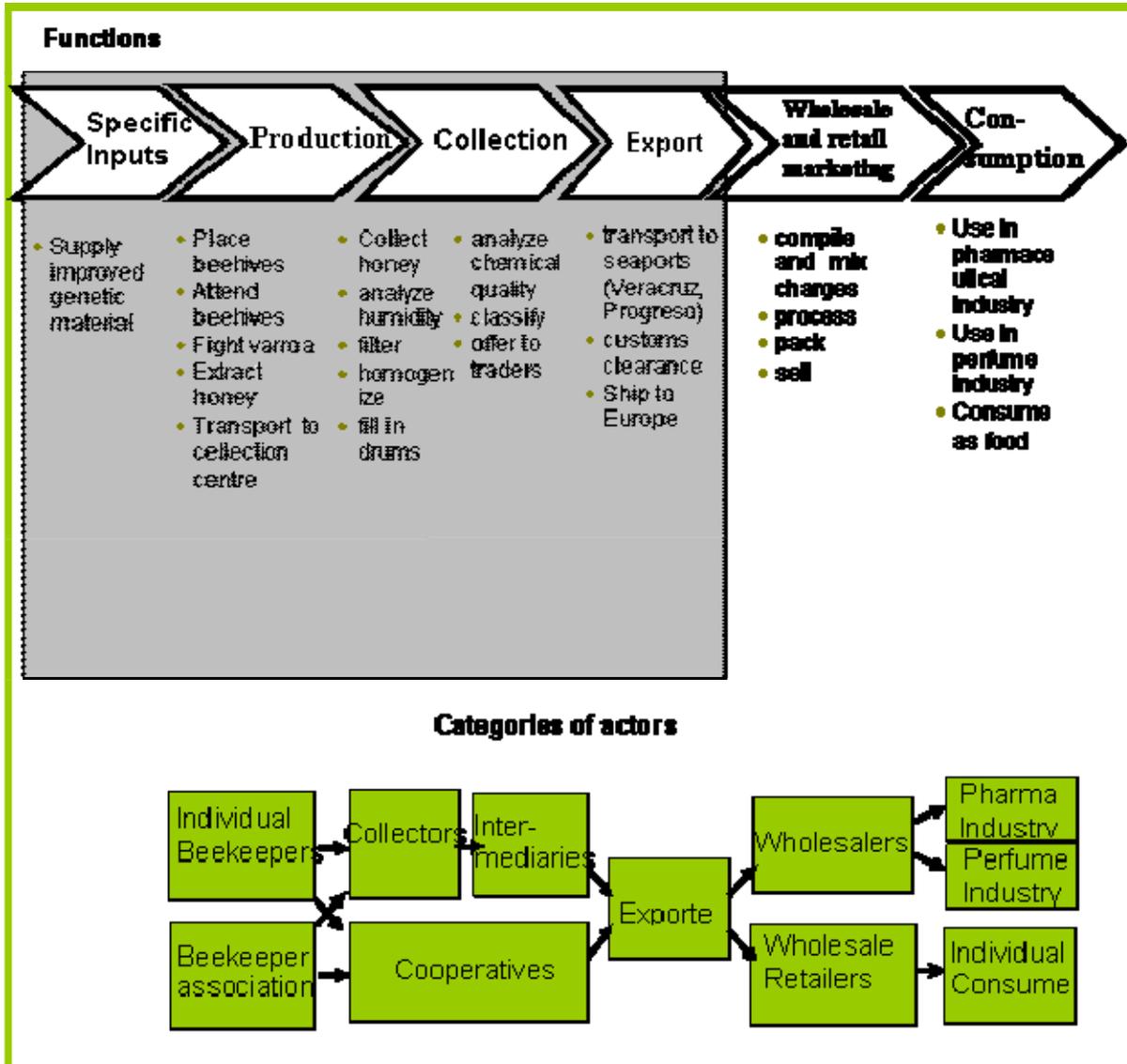
Source: own compilation

Box II-4 presents the example of the chain map for conventional honey production in the Yucatán region, Mexico, designed according to the principles set out above.

Services for Rural Development  
 Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

Box II-4 Case: Conventional honey for export in the Yucatán region, Mexico



Source: own design

The map in box II-4 is conceived to provide an overview and hence does not go into great detail. Apart from the basic functions and actors it shows two different forms of producing and collecting the honey. The primary production is either done by individual beekeepers or by associations. The collection of the honey is partially taken over by honey cooperatives which also analyze and classify grades, or else by self-employed collectors who leave the quality control and sorting to intermediaries. The map also shows which part of the value chain is located in Mexico (the shaded area).

Depending on the particular interest, this map could be differentiated further on the international marketing side, which might deliver hints on how to differentiate the market and specific qualities in the future.

### 1.3 Mapping sub value chains (channels)

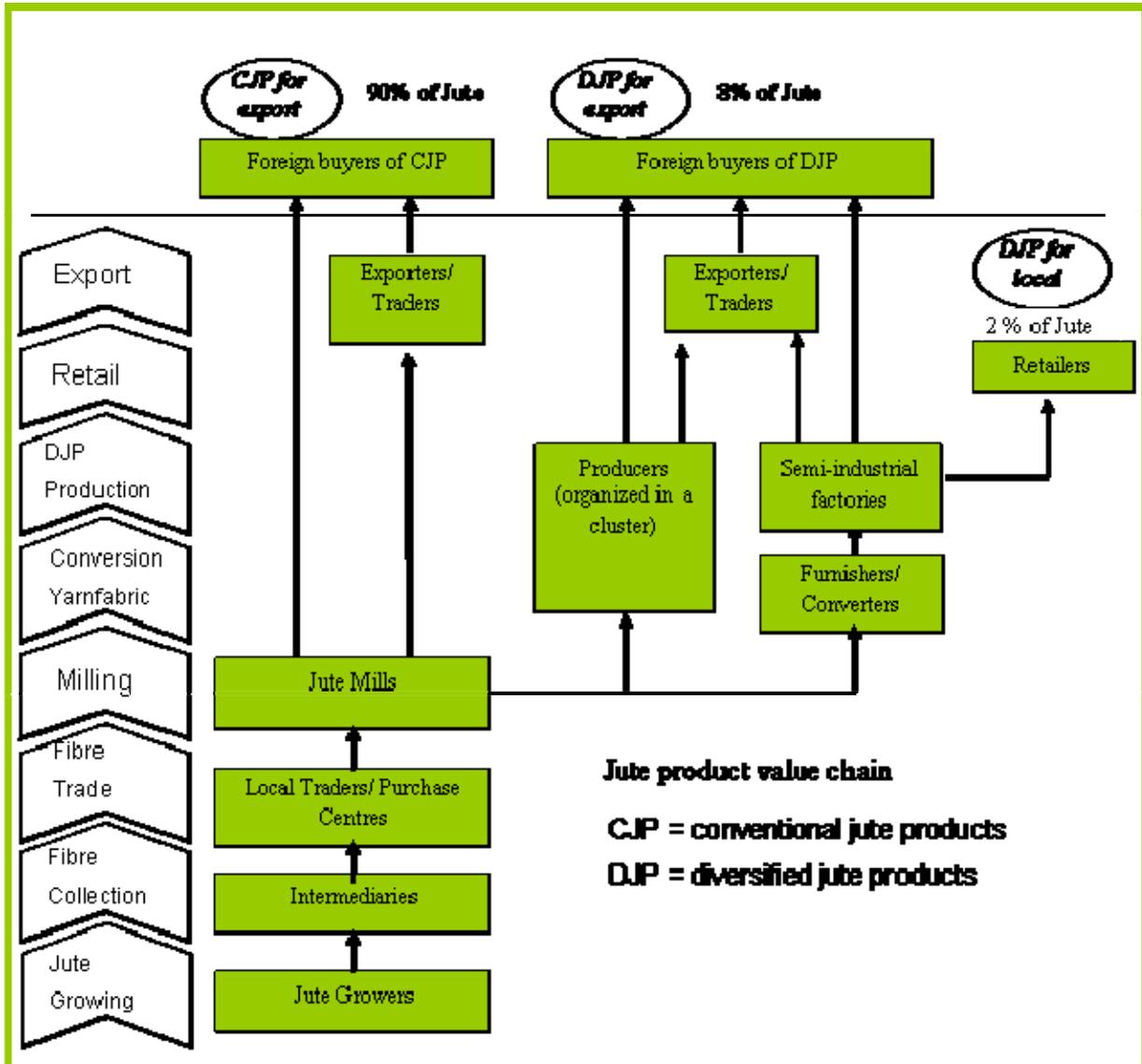
The honey chain map already contains two versions of how the production and collection process is being organized. In fact, in many cases it will in fact be useful to differentiate a value chain in the analysis. Obviously, this depends on the level of aggregation with which the analysis has started in the first place (see Value Links 2007, task 1.1 on levels of aggregation).

Showing parallel channels in the same value chain map is only useful if some part of the value chain is identical in all variants. Often this applies to the primary production stage remaining the same while different types of processing follow. Depending on market outlets, the sub value chains can branch out further into an even greater variety of marketing channels. Box II-5 presents the example of the jute products value chain being differentiated into two lines of jute products, “conventional” and “diversified”, serving both the domestic and the export market. Note that the sequence of functions remains the same, with some functions only being relevant in one of the sub value chains. Hence, the variation is visualized at the level of operators and not by adding parallel functional sequences. Wherever functional sequences are fundamentally different, a separate chain map has to be constructed.

Services for Rural Development  
 Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

Box II-5 Case: Jute products value chains in Bangladesh



Source: GTZ Bangladesh, PROGRESS Program

The jute example shows how a new sub value chain branches off from the main, traditional sequence. It also shows different marketing channels of the jute products. This value chain map is oriented in vertical direction. In which direction the mapping is done, either vertically or horizontally, depends on pragmatic considerations. In presentations projected by a beamer or in participatory workshops it is more convenient to use the horizontal direction.

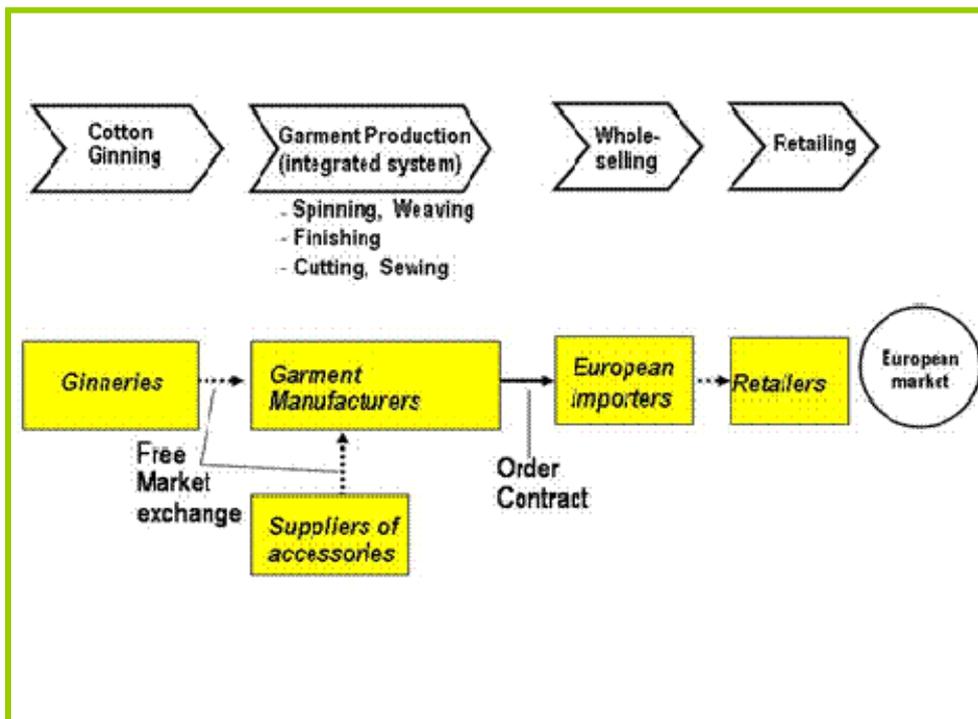
**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

**1.4 Mapping chain governance**

“Chain governance” refers to the way in which the coordination of chain operators is achieved along the chain stages, be it through free market exchange or through binding contracts made in advance. The type of linkages between operators depends on the quality and sophistication of the final product. Generally, un-coordinated transactions (“spot markets”) are efficient in local markets, or in markets for products with few quality traits. Wherever final consumers ask for high and consistent quality, the control of supplies becomes a factor of competitiveness. As a consequence, the linkages between suppliers and buyers have to be more stable and tend to become formalized in contracts. Hence, a basic distinction has to be made between uncoordinated free market transactions (“arms-length” relationships), persistent contract relationships and, at the other extreme, vertical integration between suppliers and buyers. The different kinds of relations can easily be visualized in a chain map, as illustrated in box II-6. The order contract between Ethiopian garment manufacturers and European exporters is shown as a single line, while the free sourcing of raw material and accessories is depicted as a dotted line. A detailed treatment of the different types of business linkages (arrows) in value chains follows in module 5 (Value Links 2007).

**Box II-6 Case: Value chain for exporting cotton bed sheets from Ethiopia to the EU**



Source: ECBP/GTZ 2006: Value Links Training workshop in Addis, Ethiopia, October 2006.

### **1.5 Mapping chain supporters (meso level)**

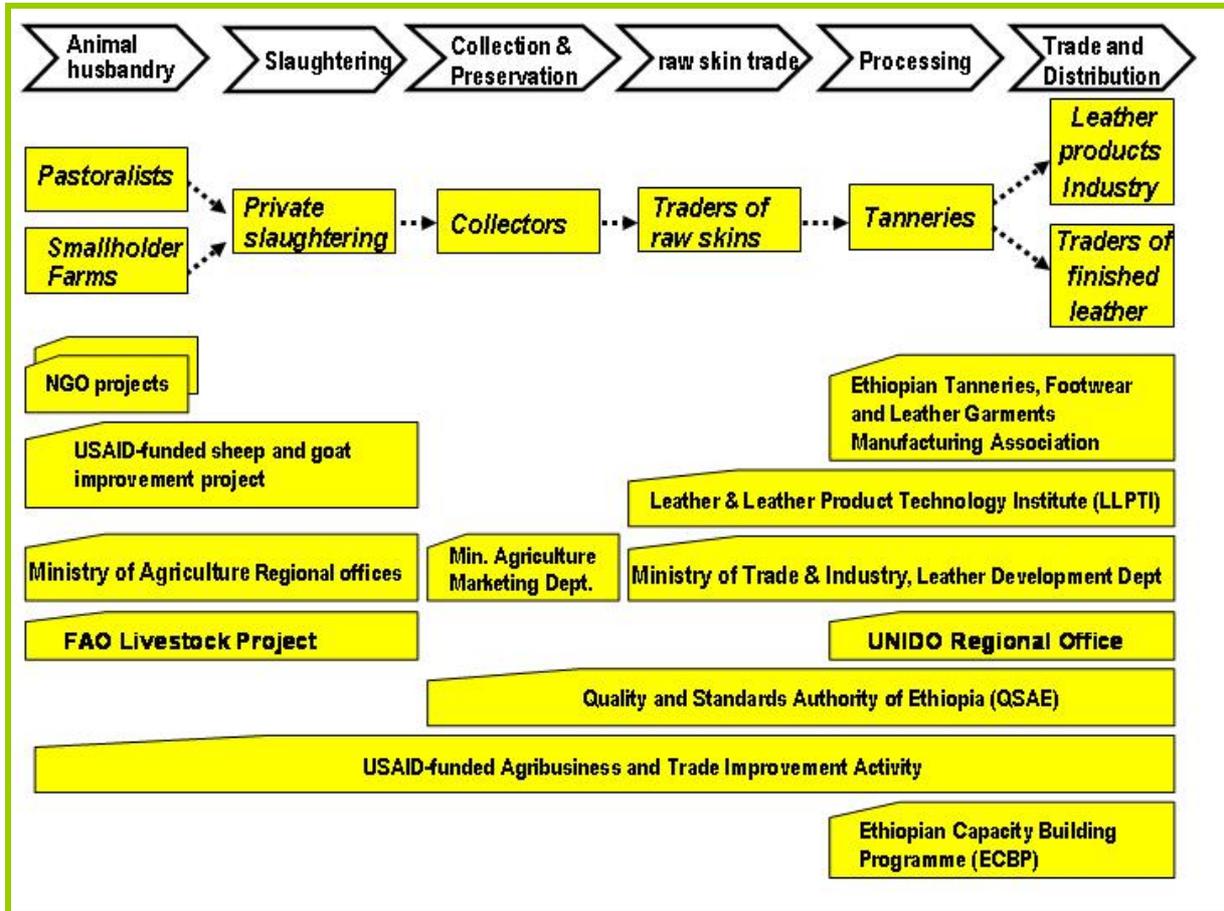
A basic chain map also should contain information on the organizations supporting the chain operators. Chain supporters include business and industry associations, sector-specific agencies such as technology or training institutes, specialized departments or units in the public administration, foundations or development programs. All these organizations have in common that they provide support services to the whole value chain and/or represent the common interests of the chain actors. Often, chain supporters cover several value chains, so that the mapping of the meso level cuts across different value chains. Therefore, it is useful to be specific about the tasks and clientele of each organization.

Box II-7 presents the most important meso level actors of the traditional finished leather value chain in Ethiopia. The graphic indicates which segments of the chain are covered by the different support organizations. This form of visualization can be used in workshops and documents alike but may quickly run into the limits of pin board space. As the analysis gets into more details, the picture in box II-7 can be developed into a matrix enumerating the functions of each organization. In this case, most of them will cover commercial value chains (commercial breeders and abattoirs) and the cow leather value chains as well.

**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

**Box II-7 Case: Traditional finished sheep and goat leather value chain in Ethiopia**  
 Mapping of chain supporters (meso level)



**1.6 Organizing chain mapping workshops**

Chain mapping can be done by planners as a desk study. However, it is often more efficient to produce chain maps in a group exercise, in which private operators and chain supporters participate jointly. The following box resumes important steps in the procedure of participatory chain mapping.

---

**Box II-8 Practical Hints: Participatory chain mapping****Procedures and visualization techniques in chain mapping****Procedure**

- briefly present VC theory, preliminary chain map
- present further information on the specific VC (results of market, economic and service assessments);
- design a preliminary basic chain map in plenary
- discuss in plenary (if not exceeding 20 persons) or split into groups to further improve the preliminary Chain Map;
- discuss in plenary (if not exceeding 20 persons) or split into groups to complement the Chain Map with
  - (i) constraints according to VC functions and/ or VC stakeholders,
  - (ii) opportunities according to VC functions and/ or VC stakeholders,(both including their causes and effects);
- identify information gaps and decide on priority information needs;
- formulate key questions for detailed chain analyses
- jointly select the most critical leverage points and discuss alternative solutions to addressing them (link to Module 3).
- identify quick-start projects (as a means to gain stakeholders' commitment).

**Visualization techniques**

- use metaplan techniques (pinboards and cards) to visualize the chain map and for facilitating exchange and focused discussions
- switch between powerpoint and pinboards using the standardized set of *ValueLinks* symbols

Source: own compilation

## 2. Quantifying and analyzing value chains in detail

The basic chain map is a descriptive conceptual model of the value chain. To become useful for decision making and planning, the value chain map has to be complemented by information that allows comparing the current state of the chain with potential alternative states. Therefore, the elements of the chain map are treated as variables which are changing over time. For example, functions may be performed more efficiently, the number and sizes of operators may increase, contractual relations be formalized, and chain supporters may change their behavior. Many of these

chain elements can be influenced by the (collaborative) action of enterprises and support agencies. In order to assess the potential impact of the different alternatives for upgrading, a “baseline” of the current state of the value chain needs to be established (also Value Links 2007, module 11 on the elaboration of indicators). A straightforward method for characterizing the chain is to attach qualitative statements about any current deficiencies, such as insufficient services, technical constraints or coordination problems to the chain elements (functions and operators) concerned. Preparing a list of constraints and visualizing them in the chain map helps to indicate the direction for improving the chain and provides the basis for an upgrading strategy (see Value Links 2007, module 3 on constraints analysis).

In the following, the focus is on complementing the chain map with quantitative information and detailed analyses of particular aspects. Further chain analyses are useful wherever particular elements or segments of the value chain become important for the upgrading strategy – always provided that the additional information is directly relevant for preparing action or verifying its effectiveness.

In the following, a few options for in-depth chain analyses are presented:

- Quantifying the basic chain map
- Zooming in on the basic chain map to generate “thematic chain maps”
- Special studies on the stakeholder groups relevant for *pro-poor* growth

Analyzing the competitive position of the value chain is particularly important for the formulation of upgrading objectives and strategy. The respective analyses are treated in module 1 and 2 (Value Links 2007):

- Market research in point 1.3
- Economic analysis of value chain activities and benchmarking, see below.

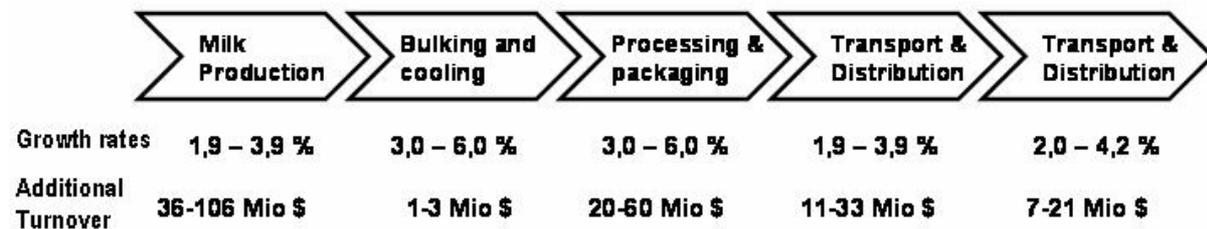
## **2.1 Quantifying the basic chain map**

Conceptually, quantifying the basic chain map is quite straightforward. Quantification means attaching numbers to the elements of the chain map, e.g.

- Number of operators (possibly differentiating size of farms and enterprises)
- Number of jobs and employees for each category of operators (according to gender)
- Prices paid at each chain link between stages
- Volumes and turnover in each chain stage
- Shares of product flow of the different sub-chains / distribution channels
- Market share of the value chain (or sub value chain) defined as percentage of the sales value in the overall market.

Box II-9 Case: Quantifying growth rates in Kenyan fresh milk value chain

Estimated annual growth rates of turnover in different segments of the milk value chain in Kenya and expected growth in production value:



Source: Technoserve 2004: Dairy in Kenya – can it drive economic growth?, presentation.

Each type of information produces another perspective, an “overlay” of quantitative information on the same basic chain map (quote Gemini guide). Quantification obviously depends on the availability and reliability of secondary data, especially statistics. Data therefore need to be cross-checked from different sources. This is particularly true for information based on statistics, which in many countries are just not reliable. Cross-checking will allow at least rough estimates, which are usually good enough for taking decisions.

2.2 Zooming in: Mapping chain elements and segments

The descriptive analysis can be elaborated in more detail by specifying particular parts of the basic chain map creating detailed maps. This is a matter of map scale: While the basic chain map provides the overview, detailed maps focus on specific chain segments or distribution channels. It is generally useful to produce a series of chain maps instead of including too much information in just one. Another type of thematic chain map shows categories of operational service providers and their interaction with value chain operators (see Value Links 2007, module 7).

3. Special chain studies

Any aspect of value chains can become the subject matter of specialized chain studies. The following topics are typical areas of concern for facilitators of chain development.

- Analysis of business linkages and governance

The forms of chain governance range from spot market to vertical integration of the entire value chain (see Value Links 2007, module 5 and the explanation of the forms of business linkages). Analyzing the

## Services for Rural Development

### Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

---

existing business linkages includes to judge the intensity and sustainability of cooperation, the existence of lead firms and their attitude and commitment. A related point is the analysis of conflicts arising from differences in negotiation power, asymmetric information and competition for resources between VC operators. Business linkage studies also include the degree of sector organization, especially the capacity of business associations (e.g. producer groups and associations, professional organizations and important support service providers).

- “Stakeholder analysis”

Each category of operators and service providers has characteristics that may be relevant for their ability to participate in an upgrading project. A stakeholder analysis is particularly important in the case of poor and weak market participants. A relatively straightforward criterion is the number of VC operators classified as “micro”, “small” or “medium”. In the case of agricultural producers, important aspects include off-farm income, number of household members, food security situation and the competition of cash crops for farm labour and cash resources. Addressing their capacity to contribute to and benefit from upgrading also includes to analyse technical, entrepreneurial and marketing competence, current market access and capacities for horizontal and vertical cooperation.

- Framework conditions at the macro level

The assessment of the macroeconomic and legal framework of chain development includes studying the relevant national and international trade policies and the existing legal provisions for the market in question. Attention should also be paid to the social and cultural factors determining business behaviour. The influence of trust, the behaviour and willingness of operators to cooperate are decisive factors. However, social norms are often excluded from the discussion since they are difficult to analyze and bear conflict potential. Research on the influence of social norms in business networks is quite new, even in industrialized countries. Some indications may be found in the proceedings of the conference on “Trust and Risk in Business Networks” (see references).

**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

---

**Box II-10 Practical hints: Some information sources for value chain studies**

According to analytical focus and the availability of information, the spectrum stretches from brief expert discussions and workshops to rapid appraisal methods and in-depth surveys. Action-oriented, participatory methods eliciting the knowledge of chain actors should be given preference over expert surveys wherever possible.

**Desk research assessing secondary information:**

official statistical data, country/ sub-sector studies, best practice examples, databanks and Internet;

**Empirical research: Participatory and rapid appraisals:**

- key informant interviews to mobilize local knowledge (e.g. farmers, local businesses and traders, researchers, extension staff), focus group discussions/expert fora (for instance by VC stage such as farmer groups or industry associations or groups of researchers and service providers etc.), stakeholder workshops;
- field visits/observations (e.g. observation of negotiation techniques/ power in rural markets, consumer attitudes in retail markets, transport problems on the road, enforcement of standards by market management);
- polls / questionnaires (e.g. producers, processors, households, service institutions).

Source: own compilation

### III Contribution Two: Selected parts from ValueLinks Module 7 - Strengthening services in value chains (Andreas Springer-Heinze)

This module provides guidelines on how to strengthen current and new services for operators to improve chain efficiency. The task of external facilitators is to advise on the most appropriate service arrangements, work on service market failures and build the capacity of service providers without distorting service markets.

#### 1. Tasks in strengthening VC services

Value chain upgrading regularly implies better access to services. The first step in upgrading service supply is to identify the operational and support services that need to be improved or added in order to reduce production costs, lower transaction costs, and/or improve product quality. Based on the service analysis, development support refers to strengthening service delivery in its different forms. We distinguish private operational services, the provision of (mostly public) support services and the temporary delivery of “substitute services”, i.e. contributions by development programmes replacing currently unavailable operational or support services. Accordingly, we can distinguish the following tasks:

- Assessing service needs in view of the upgrading objectives
- Strengthening private service markets and arrangements
- Improving the responsiveness of public service providers
- Strategic use of temporary external services

Intervention strategies make use of the concept of a three-pronged “service system”: interventions can address the supply side (service provider), the demand side (clients), the rules ruling supply and demand (service arrangement) or all three elements at the same time. The basic understanding of a service system is explained in the first section.

#### 2. Basic considerations on service provision in value chains

A functioning service relationship can be conceptualized as the interrelation of three elements:

- *Service clients* demanding and receiving services. Service clients are the chain operators (farmers, craftsmen, companies etc.) receiving services, either individually, as groups of enterprises (e.g.: farmers associations) or as the entire community of actors in a particular value chain.
- *Service providers* delivering the service products. The service providers include private enterprises as well as public service agencies.

## Services for Rural Development

### Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

- *Service arrangements*, the rules governing the relationship between service demand and supply, i.e. the form of organizing service delivery. The main types of service arrangements are the private service market, services embedded in the value chain, and public support services delivered in the interest of operators or in the public interest. These arrangements can include third parties funding, regulating or supervising service provision.

### 3. Assessing service needs and service markets

Improving and developing services requires information about the current status of service provision in the value chain. Service needs can be derived from the value chain analysis and the development of a chain upgrading vision and strategy (see Value Links 2007, module 3). These needs refer to the operational (micro level) and support (meso level) services likewise.

#### 3.1 Analyzing the provision of operational services

At the micro level, the first issue is the provision of operational services required for efficient production and marketing. Box III-1 provides an overview of the categories of operational services. The financial services are treated in Value Links 2007, module 8.

#### Box III-1 Concept: Categories of operational services

##### **Value chain specific operational services:**

- Specific technical, market and business advice
- Specific technical training
- Input procurement
- Technical services (engineering, maintenance, equipment lending, packaging, lab testing of safety parameters etc)
- Mechanized (agricultural) operations against payment
- Provision of returnable packaging material (in fresh produce chains)
- Product and process certification to fulfil market requirements

##### **Generic business services:**

- Transport, shipment and handling
- IT Services (telecommunication, information services)
- Insurance
- Management consultancy (business development, accounting and legal advice)
- Advertising and marketing

Source: own compilation

**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

Technical training can be classified as an operational service if it is specific for the production and marketing functions of enterprises. Vocational training and generic farmer or micro-entrepreneur training is considered to be a support service (see further below).

The question is whether operators have access to these services, at affordable prices and in the right quality. Often times, service markets fail to supply the services, especially to small enterprises. Whether there is a problem of market failure, can be found out in a service market analysis. The procedure is to go through the value chain stages and specify those services already in demand and those for which outsourcing could make economic sense. The characterization of the services in terms of volume and frequency of demand, and the ability of operators to pay indicate reasons for an incompatibility of service demand and supply (see the structure of the analytical table in box III-2).

**Box III-2 Tool: Table characterizing demand for operational services**

Groups of chain operators along the value chain	Service needs of the groups of operators	Characterization of the services needed	Ability of operators to pay for services

Source: own concept

On the supply side, the question is which services are actually provided – and by whom. This shows to what extent demand is satisfied – and whether public service providers take over the function (box III-3).

**Box III-3 Tool: Table characterizing supply of operational services**

Service needs, specifying effective demand	Services (public as well as private) currently provided to satisfy the needs	Private service providers with offers covering the demand	Service gaps (no offers made by private providers)

(taken over from the table in box III-2)

Source: own concept

Service gaps refer to those needs for which there are no equivalent (market or public) offers. The second issue in the analysis of services at the micro level is the demand for *new* operational services that are needed to satisfy the upgrading requirements. Chain upgrading regularly means

**Services for Rural Development  
Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

introducing new technology, improving and managing product quality, and engaging in new business linkages and distribution channels. These changes can only be achieved, if operators can rely on services for assistance. Some of the services can be adjusted to the new needs, but in many cases new service content (skills and information) and even entirely new types of services (quality certification) may be required. Here, the question is, which set of coordinated operational and support services is needed in order to upgrade processes and diversify into higher value products. Box III-4 shows how service requirements may be derived from upgrading objectives.

**Box III-4 Template: Chain upgrading and related operational and support service needs**

Upgrading strategy	Services required
Identification of new markets (“Blue Ocean Strategy”)	Market intelligence, business matchmaking Management consultancy Information and communication (ICT services)
Product innovation	Research and technology development Supply of technical inputs and equipment
Process innovation to enhance reduce cost and/or improve quality (“Red Ocean Strategy”)	Technical advice and training Technical services
Quality management and assurance	Advice on quality management systems Product and process certification
Expansion of productive capacity	Financial services: New credit lines
Organization of producers	Organizational development advice

Source: own compilation

**3.2 Problems of market failure delivering operational services**

The basic arrangement for the delivery of operational services is the private service market, in which services are contracted and paid for by the operators. In functioning service markets there is no need to care about the access to services. Depending on market incentives, they will become available as economic development advances.

However, under the conditions of value chains with many weak operators and little capital, private service provision frequently fails. In many developing countries the range of contracted services on offer is fairly narrow and hardly differentiated enough to support value chain upgrading. Analysing the question at the outset of the constraint analysis, delivers several factors responsible for the failure of service markets, namely:

## Services for Rural Development

### Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

---

- *Weakness and fragmentation of demand:* The delivery of services for scattered rural producers and processors is expensive. Unless there is a critical mass of clients, services have to be offered at prohibitively high commercial rates. Generally, poor producers do not have enough cash income to pay for services.
- *Low market transparency:* Often, operators are not aware that the required service exists in their neighbourhood. Even if they know, the potential benefits may not be directly visible to them.
- *Market distorting practices of public agencies:* As public agencies or donor-funded programmes subsidize services or offer them for free, many poor producers are not used to the idea of paying for services. Rural areas often lack a commercial service culture.
- *High start-up cost of services:* Some services e.g. quality certification, need to be internationally recognized. This involves start-up costs and high entry barriers for newcomers.

The consequence of service market failure is that enterprises are not able to outsource production and marketing functions and hence lose efficiency.

### 3.3 Problems with private funding and provision of support services

Although support services benefit value chain operators, they are not always able or willing to pay for them. Strong value chain communities with large revenue will pay for support services themselves and work with private agencies, while weak chains depend on public money and government or NGO provision. Typical problems of private support service provision include:

- *Low degree of value chain organization:* Producers and enterprises in traditional markets, especially in agriculture and other natural resource products are rarely organized to demand, let alone pay for support services. Income often is too low to support collective action.
- *Free riding:* Often, individual enterprises have no interest to invest in collaboration - everyone is waiting for others to move ahead.

### 3.4 The problem of client and demand orientation in public service agencies

As a consequence, we find that support services are regularly funded and provided by government. In any case, there are strong arguments for the public funding of support services, not least because of the public benefit in terms of jobs and a broader tax base. However, the public funding of support services has the disadvantage that operators are not in full control of the service provision. In a situation where the client of a service is not paying, the service arrangement includes at least three (if not more) parties – the service clients, service providers, and the (public) funders of the service. This ‘service gap’ implies a series of problems typical of public support service provision:

## Services for Rural Development

### Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

---

- *Little accountability towards operators:* Public providers of support services are primarily accountable to their public financiers and much less to their private clients. Public administrations or research institutes do not easily understand business needs and keep distance to private companies. The result is a marked supply-side orientation.
- *Inconsistent support policies:* Public agencies (as well as donor-funded programmes) often apply inconsistent subsidy policies. Service offers and modes of delivery follow political conditions rather than needs.
- *Limited capacity of service providers:* There is a general undersupply of support services for small producers as public agencies find it difficult responding to weaker market partners. In weak subsectors and marginal locations often hardly any public service agencies are active. As a consequence, support service provision is rather dominated by international aid programmes and NGOs which may involve a problem of sustainable funding.
- *Low image of government:* Justified or not, public service providers often suffer from an image of low efficiency.

Hence, the problem of support services is not just their availability, but also rests in their adequacy for the upgrading strategy at stake and for weak market partners in particular.

#### 4. Strengthening private service markets and arrangements

Operational services can be made available in three ways: They can be purchased (contracted) from private firms or agencies, be made available as (embedded) part of existing business linkages between value chain operators, or they can be provided by associations of operators. Accordingly, there are three types of private service arrangements in value chains:

- Markets for contracted operational services
- Embedded service arrangements (part of vertical business linkages)
- Services provided by business associations to their members

Services improvement as part of value chain upgrading is achieved by developing one or several of these service arrangements. The basic principle in any private service arrangement is that the service is fully paid by the operators. The volume of service delivery is limited by the overall chain revenue. Therefore, operational services develop along with the value chain. Only if the market for the final product grows, covering additional service costs, the private market for operational services can grow as well. This is true for all three arrangements. Following are some guiding principles and examples for the development of private service arrangements. They mostly apply to micro, small and medium enterprises as service clients.

#### **4.1 Creating and supporting markets for contracted operational services**

The market for contracted services involves a ‘closed relationship’ (see Huppert and Urban 1998: 24) between just two parties, the client and the service provider. The clients, i.e. the operators in the value chain, demand, consume and pay for the services delivered in cash. The coordination of demand and supply is regulated by market prices. This is the most common form of business services delivery. Promoting the service market becomes necessary if chain upgrading implies an expansion of service demand or the creation of entirely new services. Another reason is the withdrawal of the state from service provision.

**Conditions for the functioning of service markets:** An obvious and basic condition for private service markets to work is a sufficient demand volume and purchasing power of clients. Operators need to be integrated into the market and receive cash income to pay for services – a condition that is often missing in weak markets. The service in question must be crucial for operators and not easily available from other than private sources.

**Action to articulate service demand:** In the case of small producers, the formation of associations can lower the barriers to service access for clients. As bulking of produce and joint marketing is a strategy to improve business linkages, forming groups is a way forward to foster private services (see module 5 for horizontal collaboration).

**Action to create or strengthen the service arrangement:** The development of a value chain opens new business opportunities for service providers. The process can be sped up by assisting the creation of new service enterprises in the context of the upgrading project. There are two options: One is to develop a new service business idea to satisfy the service needs emerging as in the upgrading project. Facilitators actively involve interested service enterprises linking them to the growing market in the value chain. An important new type of private service is quality certification (see Value Links 2007, module 9). The second possibility for strengthening the arrangement is the privatization of hitherto public services, handing over business responsibility to the newly founded agency, and supporting its start-up phase.

**Action to upgrade service supply:** This includes the creation of new service enterprises and/or the support to existing ones in line with the evolving service market. Typical support measures include strengthening the service providers with business training courses, on the job training and the mentoring of start-up service enterprises. Since service providers depend on successful survival in the market, the support measures should be directed at all private providers, thus avoiding market distortion.

Box III-5 provides a case the case of promoting a private service market in Mongolia.

#### Box III-5 Case: Privatizing veterinary services in Mongolia

##### **Point of departure: The privatization of animal husbandry in Mongolia**

Mongolia is a livestock country with a socialist past. In 1993, the collectively managed herds were privatised and 90% of the rural population became private livestock owners again. About 187.000 nomadic families are herding 175 animals, on average. The herds are composed of 20% large stock and 80% small ruminants as a rule. In a second move to privatization in 1998, the public veterinary and livestock breeding stations and services followed and were privatised (auctioned) as well. Before 1998, all veterinary services were offered to the collective holdings by the public Mongolian Veterinary Service free of charge. As a result of privatization, 500 veterinarians lost their public employment. The privatization left a void, aggravated by the complicated nomadic way of life, seasonal production and service demand, large distances and little cash income.

##### **Strategy and contributions of the project „Privatisation of Veterinary Services”**

In its first phase (1998-2002) the project pursued the objective to promote reforms and assure the supply of (mostly private) veterinary services in the most important sector of the Mongolian economy. Besides the support to private veterinarians, other private actors were supposed to take over service functions as well, especially the veterinary association and the veterinary co-operatives of nomads themselves. The project took a ‘systemic approach’ co-operating with actors at all levels.

##### **Strengthening of private veterinary service providers (individuals and cooperatives)**

The most important activity was training in “management of private veterinary practice” and in “veterinary economy”. Another was the introduction of management tools for private veterinary practices such as commercialisation and marketing of services. 340 formerly public vets were able to purchase private veterinary stations (practices). Complementing private cash income, the project helped to develop varying modes of payment and cost recovery, such as establishing revolving funds for inputs in veterinary co-operatives. Some services are indirectly funded from public sources, e.g. training courses for nomads.

##### **Enabling nomads to make own contributions to the veterinary service system**

Important activities include the promotion of nomad groups (internal organisation, empowerment) so that they become able to organize their demand vis-à-vis service providers. Part of the services is provided locally by assistants guided by veterinarians.

##### **Building the capacity of the Mongolian Veterinary Association**

This is a professional organization and a private actor as well. The project advised the association on organisational development and helped to develop a country-wide training programme for private veterinarians and vet assistants.

#### **Adjusting the tasks of public organizations to private service delivery arrangements**

Complementing the activities with the private sector, the project also helped to prepare and adapt the respective laws and regulations. This included the definition of new tasks of the remaining public agencies and the exchange of information and experiences related to the development of the new veterinary system.

Source: G. Kleemann 2000: Privatization of veterinary services in Mongolia, mimeo, Eschborn.

#### **4.2 Facilitating embedded service arrangements**

In an embedded service arrangement operational services are delivered in combination with a basic business transaction (the sale of products or a loan) by one operator to another. Operational services are coupled with (embedded in) business transactions, e.g. information coupled with the sale of inputs or technical advice coupled with the purchasing of raw produce by processing industries. The decisive point is that the embedded service is funded as part (mark-up) of the underlying business transaction thus relieving the cash needs of clients. A classical example is the technical service provided by dairy plants to their supplying milk producers. Embedded service arrangements have the advantage that they use the existing linkages and networks between service providers and clients. They have the disadvantage of having a commercial bias.

Combining sales of equipment with maintenance services is a standard form of service embedding. More important forms of embedded arrangements for chain upgrading include complete service packages, e.g. supplier training, lab services or organizational support. These embedded arrangements are more complex and often include professional service providers as additional partners. They include three or even more parties. From the perspective of clients, services can be embedded into three types of business links as shown in box III-6.

**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

**Box III-6 Concept: Types of embedded service arrangements**

Embedded services according to the basic transaction / business link they are linked to:

*(a) Sourcing of inputs and equipment (backward business link)*

- Services provided by input dealers to farmers or small enterprises

*(b) Sales of products (forward business link)*

- Services supplied by professional providers to farmers or small enterprises, and paid for by the buyers of products
- Financial services (inventory credit) based on warehouse receipts (box III-7)
- Services supplied by buyers as part of contract farming, contract production or outgrowing contracts (see Value Links 2007, module 5)

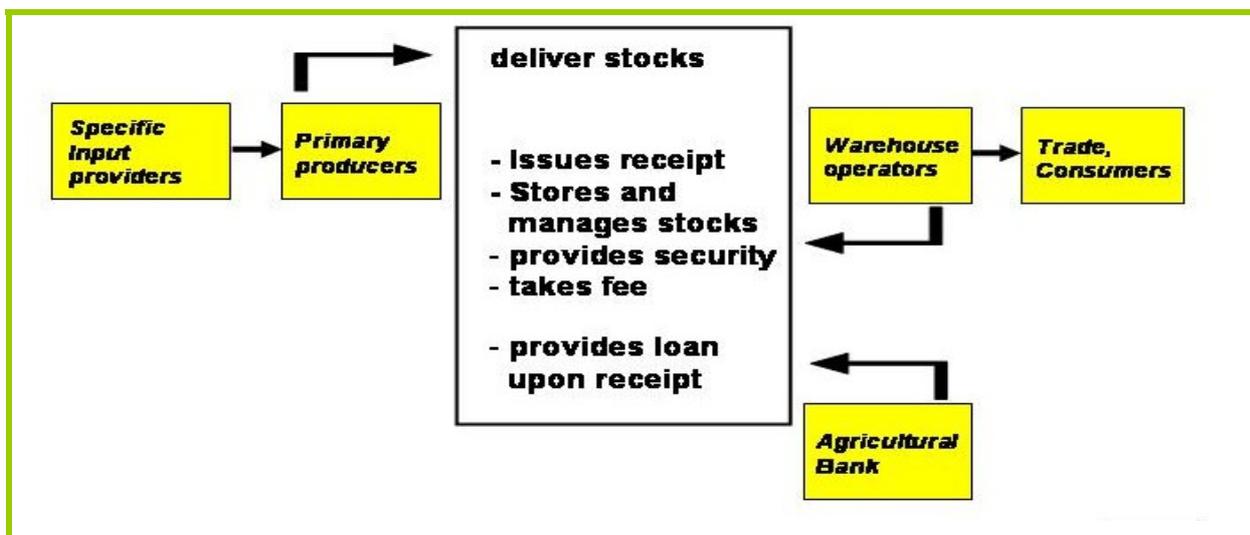
*(c) Loans*

- Services supplied by professional providers and funded as part of a loan (interlinked financial arrangement, also see Value Links 2007, module 8)

Source: own compilation

One example is the ‘warehouse receipt system’ that involves three partners, i.e. primary (agricultural) producers as service clients, warehouse operators and a financial service provider, such as an agricultural bank. Warehouse operators provide secure storage of products financed by fees that are deducted from the sales price. The agricultural bank provides inventory credit with the produce as collateral.

**Box III-7 Concept: The warehouse receipt system**



Source: own concept

**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

---

**Conditions for embedded service arrangements to work:** Embedded services are closely tied up to important firms of the chain, especially input providers, banks, processors or traders who have the interest, capacity and funds to set up a service for their smaller business partners and suppliers in the chain. Unless such firms exist, there are little chances of using this arrangement. The main incentive for firms to become engaged is the need to secure their own supply or sales. For this to be the case, market integration has to be strong.

**Action to articulate service demand:** As in the other private service arrangements, organizing service clients into associations often is an important aspect. Client organizations lower costs and enhance the possibilities to set up embedded services.

**Action to create or strengthen embedded service arrangements:** The main type of support action is the facilitation of the service arrangement, explaining advantages to partners, providing solutions and lowering the risk on both sides. Frequently, third parties have to be brought in. It is advisable to keep the primary business relationship and the service provision aspect apart, so that the division of tasks and the funding mechanism are transparent. As embedded services are tied up with companies, an important external intervention is the cooperation with the lead firm, e.g. as part of a public-private partnership (PPP) (see Value Links 2007, module 6).

**Action to upgrade service supply:** The most important action is the training of the operators who take up a new service function. An example is training of input dealers so that they become able to provide advice on the use of the input they sell (e.g. knowledge about the application of agrochemicals or the use of seed varieties). In the case of industrial buyers providing services or paying for them, action involves delivering the service know-how. Facilitators can support service provision with information and advisory materials.

---

**Box III-8 Case: Training in quality management for fish traders in Papua New Guinea**

**Point of departure: Trade in fresh fish in Morobe Province, Papua New Guinea**

Fish trade in Papua New Guinea is usually done through middlemen, due to the small quantities traded by scattered villages. The buyers in the provincial capital Lae used to assess fish according to personal criteria, such as size, visual appearance, and market situation. No generally recognized quality criteria existed, on which pricing would be based. Supply was erratic. There was not enough ice for cooling and the potential of internal markets was not tapped. As buyers in Lae wanted to open new markets in the north of the country they needed fresh, high quality fish plus a reliable supply. However, it was difficult both for fishermen and intermediate traders to meet buyers' demands in terms of quality and steady supply.

**Embedded qualification services improving the marketing of fresh fish**

The project "Promotion of Coastal Fisheries in Morobe province" builds private market infrastructure and services (supply of ice), supports the organization of fishermen and develops quality standards for fresh fish. Building the foundation of a transparent trading system, the project facilitated the development of a quality assessment system. With the help of specialists, traders and fishermen developed basic visual quality criteria for fish and agreed on a shared common criteria catalogue. Prices were categorized accordingly.

In order to introduce the new market regulation, practically all local traders had to be informed and trained. This service is made available in an embedded arrangement, linking service provision to the fish trade: Provincial buyers received an initial training and now act as service providers to local traders who, in turn, pass on the know-how to fishermen. In the first step, buyers train their suppliers in assessing the quality standards for fresh fish and provide information on production and transport requirements. On their part, traders give training to fishermen in improved practices according to the rules specified before and enable them to evaluate the quality and price of the fish right in the village. This arrangement is much cheaper than the organization of trainings for many scattered fishermen by an extension service. What's more, the project contributes to a common understanding of quality, a higher level of transparency between traders, middlemen and fishing groups, efficient private input logistics, a steady supply of fish and above all, access to a new market – without building parallel structures. The transparent pricing agreement also helps to build trust between local traders and fishermen.

Source: own compilation by Peter Jarchau, GTZ

---

**Box III-9 Case: Farm extension embedded in seed trade in West Africa**

Inefficient input use is one of the bottlenecks in the production of small farmers in Western Ghana. Government extension coverage has always been insufficient and is decreasing further. No private extension for small-scale market-oriented farmers exists. Agricultural input dealers are one of the few sources for extension and market information left to farmers.

The project “Promotion of seed production and marketing in West Africa” worked on embedded production advice in cooperation with the International Fertilizer Development Cooperation (IFDC), an international NGO with links to the fertilizer industry. The objective was to build up a viable seed network in West African countries to improve quality seed production and marketing. At present twelve West African countries are members of the seed network. The project selected about 450 seed dealers, roughly half of all registered input dealers in the region. Together with the IFDC they were trained in business development, marketing, organisational development, product quality management, seed production and in how to give technical advice to their customers. The participants of the courses received a certificate of participation; compliance to determined criteria is inspected and if necessary the certificate is removed. Basic training was free of charge, whereas advanced courses have to be partially financed by the participants. The technical information provided, such as seed rate, sowing date, fertiliser and proper pesticide use, are standard national research recommendations. The combination of business development with embedded extension services for customers of agricultural inputs is rather unique: It helps input dealers to become more professional, to develop and maintain high quality products (seeds) and to increase their competitiveness compared to non-organised dealers.

Participating farmers get relevant extension information at the time of sale. They can choose the maize variety with a good yield level, get to know the main production and storage practices, and receive whom to sell it afterwards. With this embedded service, the seed dealer forges linkages with his/her clients, secures the market for certified seeds and knows more about the expectations of the clients. However, the standard recommendations of dealers may not always be optimal for the agro-climatic conditions of specific locations and dealers’ recommendations can be biased.

Source: own compilation by Wolfgang Bertenbreiter, GTZ

#### **4.3 Supporting service provision of business associations to their members**

Organizing demand and supply of operational services within a producer association is a classical arrangement in the agricultural, rural and handicrafts subsectors with many small farmers and enterprises. In its simplest form, members of groups organize services in the form of mutual self-help. In a more formal sense, service provision means hiring specialized staff. In rural associations this often involves the formation of second-tier associations (federations of producer groups). Services are

## Services for Rural Development

### Reader: Pro-Poor Services in Value Chain Promotion – Concept

Version 09/2007

---

either paid for by membership fees and/or the proceeds of own business operations of the association, such as joint marketing or processing.

**Conditions for association-based service arrangements:** An obvious condition is the existence of associations and business membership organizations within the chain, e.g. marketing cooperatives. Whether or not these associations are able to take over service functions depends on their size and the type of service. Market information can be provided more easily than technical support. Nevertheless, several hundred paying members are necessary to render service supply by associations economical.

**Action to articulate service demand:** Most producer associations are created for the very purpose of serving their members. Either service provision has already been the motive behind creating the association, or the demand for services is latent and can easily be made transparent.

**Action to create or strengthen the service arrangement:** Supporting and facilitating the development of a service function for members implies the organizational development of the association to provide services, clarifying financial and staff management issues. The support needed for association building as such is an issue in module 5 (see Value Links 2007, task 1).

**Action to upgrade service supply:** This is the key intervention area because the capacity of many producer associations to actually render services is trailing behind needs. Hence, facilitators invest into the qualification and training of association staff. The following box III-3 provides an example that is representative for other associations as well.

---

**Box III-10 Case: Services of the sheep and goat breeders association in Morocco**

**The ‘Association Nationale Ovine et Caprine’ of Morocco (ANOC)**

ANOC is a private non profit organisation with 2500 members, most of them medium size sheep farmers. ANOC members are organised in 32 local groups and a total of six regional associations. A small central office is located in the capital, Rabat. ANOC members own 650,000 sheep equivalent to 4% of the national sheep herd. (All data refer to the year 2000.)

ANOC offers a comprehensive package of services to its members including vaccination and parasite treatment, selection and performance testing of animals, supply of animal feed and technical advice. The association has two categories of staff, (a) the honorary staff, elected by the members and (b) the 66 professional staff members recruited on the labour market and receiving a salary. Services are provided by the professional staff, of which eight work at the central level (ANOC head office), six are regional co-ordinators, and 52 are field staff. Each local group has their own field agents. Funding is provided by the own income of the association (63%), allocations by government and fees for services of local groups. Each group has its own bank account and pays a part of the field agents’ costs.

**Service improvement approach of the GTZ/DLG Agriservice project “Strengthening the National Sheep and Goat Breeders Association”:**

The GTZ/DLG project contributed to the service provision capacity of ANOC at all levels: Capacity building at local (group) level included the clarification of the role and responsibilities of staff, the introduction of cost controlling and the self-organization of groups. Professional staff received training in the fields of communication and didactics, development planning and monitoring, as well as in technical subjects. At regional level, the support project introduced activity planning and performance indicators, established an electronic data base of members and field staff activities and set up a regional co-ordination committee. At central level, the project undertook an organisational review, contributed to the development of commercial activities (feed supply, organisation of animal shows, marketing etc.) and reviewed staff management instruments (performance bonus and social security).

Source: J. Heinkele 2000: “Strengthening a breeders association in Morocco”, mimeo, Eschborn.

## **IV Literature and Links**

Albrecht, H.; Bergmann H., Diederich, G.; Grosser, E.; Hoffmann, V., Keller, P.; Payr, G.; Suelzer, R. 1989: Agricultural Extension, Volume 1 and 2. GTZ Schriftenreihe and CTA, Eschborn.

Agricultural Training Centre, <http://www.atc.co.ke/>.

Birner, R.; Davis, K; Pender, J.; Nkonya, E.; Anandajayasekeram, P.; Ekboir, J.; Mbabu, A.; David J. Spielman, D.J., Horna, D, Benin, S. 2006: From “Best Practice” to “Best Fit”: A Framework for Analyzing Pluralistic Agricultural Advisory Services Worldwide. IFPRI, Washington. <http://www.ifpri.org/pubs/ib/rb04.asp>.

Braun, P. - M. 2006: GTZ Interim Debriefing: Promotion of Private Sector Development in Agriculture, Kenya (PSDA). Eschborn, GTZ.

ECBP/GTZ 2006: ValueLinks Training workshop in Addis, Ethiopia, October 2006.

Ehret at al. (editors) 2005: Conceptual framework for rural service reform processes: a guide for planning, aligning, implementing and monitoring, Anglophone Africa. GTZ, Eschborn; [www.gtz.de/agriservice](http://www.gtz.de/agriservice).

Gereffi, G. 1994: “The Organization of Buyer-driven Global Commodity Chains: How United States retailers shape overseas production networks”. In G. Gereffi and M. Korzeniewicz (eds), Commodity Chains and Global Capitalism. Westport, CT, Praeger, pp.95-122.

Gereffi, G. and Memedovic, O. 2003: The Global Apparel Value Chain. What Prospects for Upgrading by Developing Countries? Vienna, UNIDO.

GTZ 2007: Reader: Agribusiness and Value Chains. GTZ, Services for Rural Development, Sector Project “Knowledge Systems in Rural Areas”.

GTZ 2007: Reader: Extension and Research Approaches. GTZ, Services for Rural Development, Sector Project “Knowledge Systems in Rural Areas”.

GTZ 2007: Reader: Quality Management in Development Cooperation. GTZ, Services for Rural Development, Sector Project “Knowledge Systems in Rural Areas”.

**Services for Rural Development**  
**Reader: Pro-Poor Services in Value Chain Promotion – Concept**

Version 09/2007

---

GTZ 2007: Reader: Reforms of Rural Services. GTZ, Services for Rural Development, Sector Project "Knowledge Systems in Rural Areas".

Huppert, W. and Urban, K. 1998: Analysing Service Provision. Schriftenreihe der GTZ, # 263, Eschborn; 103 pp.

Kleemann, G. 2000: Privatization of veterinary services in Mongolia, mimeo, Eschborn.

Rivera, W.; Alex, G. (editors) 2004: Demand-Driven Approaches to Agriculture Extension. Case Studies of International Initiatives. Agriculture and Rural Development Discussion Paper 10 Extension Reform for Rural Development. Vol. 3, World Bank, Washington.

Springer-Heinze, A. 2007: *ValueLinks* Manual. The Methodology of Value Chain Promotion. GTZ, Eschborn, Division 45 and Division 41. CD ROM, Version 06/2007. <http://www.value-links.de/manual/index.html>.

Stamm, A. 2006: Förderung von Wertschöpfungsketten und Ansätze der lokalen und regionalen Wirtschaftsförderung im Rahmen einer armutsorientierten TZ. Eschborn, GTZ.

Technoserve 2004: Dairy in Kenya – can it drive economic growth?, presentation.

The Neuchâtel Initiative, 2006: Demand-driven Agricultural Advisory Services. [www.neuchatelinitiative.net](http://www.neuchatelinitiative.net).

The Neuchâtel Initiative, forthc. (2007): Market-oriented Agricultural Advisory Services. [www.neuchatelinitiative.net](http://www.neuchatelinitiative.net).

Deutsche Gesellschaft für  
Technische Zusammenarbeit (GTZ) GmbH

Dag-Hammerskjöld-Weg 1-5  
65726 Eschborn  
T: +49 61 96 79-0  
F: +49 61 96 79-11 15  
E: [info@gtz.de](mailto:info@gtz.de)  
I: [www.gtz.de](http://www.gtz.de)

